

MOTIVATIONAL CLIMATE IN PHYSICAL EDUCATION
AND YOUTH SPORT

A Paper
Submitted to the Graduate Faculty
of the
North Dakota State University
of Agriculture and Applied Science

By

Alison Leigh Prichard

In Partial Fulfillment
for the Degree of
MASTER OF SCIENCE

Major Program:
Health, Nutrition, and Exercise Sciences

May 2012

Fargo, North Dakota

North Dakota State University
Graduate School

Title
MOTIVATIONAL CLIMATE IN PHYSICAL EDUCATION

AND YOUTH SPORT

By

Alison Leigh Prichard

The Supervisory Committee certifies that this *disquisition* complies with North Dakota State University's regulations and meets the accepted standards for the degree of

MASTER OF SCIENCE

SUPERVISORY COMMITTEE:

Dr. Joe Deutsch

Chair (typed)

Dr. Bryan Christiansen

Chair (signature)

Dr. Thomas Barnhart

Dr. Thomas Hall

Approved by Department Chair:

5/2/12

Date

Margaret Fitzgerald

Signature

ABSTRACT

The purpose of this paper was to gain an understanding of how the motivational climate can affect children in the context of Physical Education (PE) and youth sport. In an effort to combat the increase in overweight and obesity rates, creating an environment in which children enjoy and develop positive habits related to physical activity has become a priority. The constructs of PE and youth sport have been identified as opportunities to reach children and instill healthy habits and attitudes regarding exercise that extend into adulthood. The motivational climate is a key structure for the proper facilitation and development of these cognitions.

TABLE OF CONTENTS

ABSTRACT.....	iii
CHAPTER 1. INTRODUCTION.....	1
CHAPTER 2. BRIEF REVIEW OF LITERATURE.....	4
CHAPTER 3. ARTICLE 1: THE EFFECTS OF MOTIVATIONAL CLIMATE ON STUDENTS IN PHYSICAL EDUCATION CLASSES	8
CHAPTER 4. ARTICLE 2: THE EFFECTS OF MOTIVATIONAL CLIMATE ON YOUTH SPORT PARTICIPANTS.....	21
REFERENCES.....	39

CHAPTER 1. INTRODUCTION

It is widely believed that both in the classroom and on the athletic field, individuals in leadership roles can create an environment that is associated with the success or failure of those they lead (Ntoumanis & Biddle, 1999). In response to trends of declining physical activity and a rapidly growing prevalence of weight issues among both children and adults, the effectiveness of leaders in the constructs of Physical Education (PE) and youth sport are receiving increased attention. In the interest of alleviating this troublesome health epidemic, calculated reflection has led to the emergence of clear standards and goals for these programs. Robertson-Wilson, Baker, Derbyshire, and Côté (2003) assert that habits and attitudes relating to physical activity (PA) developed during youth are associated with habits in adulthood. Thus, providing opportunities that reach the maximum number of children and facilitate positive experiences related to PA is a key to systematically reversing the trend of idleness in adulthood. The motivational climate created by classroom and team leaders has been identified as a construct that can significantly influence cognitive and developmental processes in both the PE and youth sport environments.

The concept of the motivational climate refers to an individual's reasons for approaching a task in an achievement setting. Two classifications have been identified in this context. A performance-oriented motivational climate supports task engagement for the purpose of demonstrating ability. In a performance climate, individuals focus attention on achieving normatively defined success. Ability is viewed as a predetermined, non-malleable entity, and is demonstrated by achieving superiority. This can be done either through outperforming peers or surpassing normative-based standards. Thus, in a performance climate, a limited number of children receive positive achievement feedback (Dweck, 1986). A mastery-oriented climate promotes achieving success based on personal improvement and effort. The focus is on

controllable outcomes such as developing new skills and valuing the learning process. Since achievement is based on self-referenced standards, the opportunity for success related feedback is available to all children, regardless of ability level (Ames, 1992).

The purpose of this paper was to gain an understanding of how the motivational climate can affect children in the context of Physical Education and youth sport participants. The first article specifically examines the influences mastery and performance motivational climates have on children in a PE classroom. In this context, a mastery-oriented climate is overwhelmingly associated with positive experiences for students. These results include positive influences on attitudes towards physical activities and a preference for more challenging tasks (Morgan & Carpenter, 2002). The second article focuses on effective manipulation of the motivational climate in the context of youth sport. To address the high attrition rate in organized athletics, creating a mastery climate has been shown to be an effective approach to foster the enjoyment (Seifriz, Duda, & Chi, 1992) and psychosocial personal developments (MacDonald, Côté, Eys, & Deakin, 2011) required for optimal growth and continued participation.

Significance of study

As a collective society, both children and adults are guilty of engaging in an increasingly sedentary lifestyle. Innovations and convenience seem to be enabling physical laziness to flourish. The result has been a drastic and consistent increase in overweight and obese individuals over recent decades, and these trends have become an acute worldwide health and financial concern (Preidt, 2011). The most effective approach is to target youth by instilling habits and enjoyment of physical activity at an early age. Despite the opportunity for PE classes and youth sports to motivate involvement in regular exercise habits, the two constructs have been largely unsuccessful. Creating a mastery-oriented motivational climate is an area that deserves

increased attention from educators and coaches for its potential to curb the bludgeoning aversion to physical activity.

Paper organization

This paper has been organized in the following manner: Chapter 1 is the Introduction, which presents the paper's purpose and content. Chapter 2 is a brief overview of the existing literature on motivational climate in PE and youth sport contexts. Chapters 3 and 4 are in article format and explore the relationships between motivational climates and effects on a variety of cognitions and psychological cognitions in the context of PE and youth sport, respectively. Each of these articles includes its own references. The final segment is the final reference section which contains a comprehensive list of cited items from all chapters.

CHAPTER 2. BRIEF REVIEW OF LITERATURE

Physical Education (PE) and youth sport have been essential resources for promoting physical activity (PA) among young people for decades, but both constructs are receiving increased scrutiny in light of the national and worldwide obesity epidemic. In an effort to reverse this concerning health trend, PE and youth sport are being called upon to empower the next generation of children toward a more health-conscious lifestyle. One of the key elements in achieving this societal transformation is improving habits and attitudes regarding (PA). PE classes and youth sport offer access to unmatched numbers of children, but the recommended amount of PA cannot be achieved during PE classes and weekly sport practices alone. Therefore, these classes and environments should aim to motivate young people to participate in exercise activities beyond the structured class and practice times in order to achieve the desired effect of promoting lifelong involvement in PA (Prochaska, Sallis, Slymen, & McKenzie, 2003).

Motivational climate has been identified as an influential construct for determining and developing student motivation in PE and youth sport. Two distinct climates have been identified in this literature: a mastery-oriented climate and a performance-oriented climate. A mastery climate is characterized by focus on individual improvement, effort and cooperative learning. Alternatively, a performance climate is highlighted by competition, outperforming others, viewing mistakes as failures, and the achieving success with minimal effort (Ames, 1992). Epstein (1989) first proposed a multi-dimensional model called TARGET, an acronym that stands for tasks, authority, recognition, grouping, evaluation, and time; these are structures used for identifying and adjusting key elements of the learning environment to promote a desired motivational climate. In a mastery climate, children work at their own level on a variety of tasks. They are actively involved in decision-making and work in small, mixed-ability groups.

Instructors and coaches privately recognize and give feedback related to effort and improvement. Opportunities for maximum practice time are provided, which offers flexibility based on varying proficiency levels among children. In a performance climate, tasks are absent of variety and completed independently or in ability-based groups. The instructor or coach controls all decision-making power and fosters social comparisons by recognizing those who outperform others (Ntoumanis & Biddle, 1999).

There are a number of significant and helpful ways to adapt the TARGET structures to ensure clarity when attempting to create the intended motivational climate. Ames and Archer (1988) outline the principal distinctions between a mastery and performance climate:

- Definition of success (personal improvement versus comparison to peers)
- Value (on effort, learning, and improvement versus natural ability)
- Reasons for satisfaction (maximum effort versus outperforming others)
- View of mistakes (part of the learning process versus failure)
- Reasons for effort (learning processes versus attempt to show superiority)
- Evaluation criteria (making progress versus comparison to peers).

An overwhelming majority of existing literature suggests that perceptions of a mastery climate have positive results among youth in the context of PA. In previous studies, students who perceived a mastery climate also reported numerous advantageous psychosocial cognitions, including higher enjoyment and satisfaction during PA (Ntoumanis & Biddle, 1999); high perceived competence and beliefs that effort leads to success (Cury et al., 1996); increased persistence and preference for challenging tasks (Morgan & Carpenter, 2002); and plans to be active in the future (Ntoumanis & Biddle, 1999).

The goals of youth sport are threefold, as asserted by Côté and Fraser-Thomas (2007). First, sports can contribute to a child's physical health and development by providing youth with opportunities to be active. Second, youth sport can also facilitate appropriate psychosocial development as children learn important life skills such as teamwork, discipline, leadership, sportsmanship, and self-control. Third, children learn motor skills that build a foundation for successful lifetime participation in athletics, from future professional athletes to recreational weekend warriors. Not surprisingly, the importance of promoting a mastery climate has been shown to have success in youth sport. Furthermore, a performance-oriented climate has been linked to adverse cognitive effects in young athletes, including lack of enjoyment and diminished quality of social cohesiveness and friendship among team members (Ommundsen, Roberts, Lemyre, & Miller, 2005).

Participation in youth sport is voluntary, making it fundamentally different from PE. Youth sport is considered the most popular structured activity in the country, boasting an estimated 45 million yearly participants (Mahoney, Larson, Eccles, & Lord, 2005). Just as children are able to choose to join a youth sport team, they may also choose to discontinue their participation. In order to cultivate lasting positive attitudes toward sport and retain participants long enough to make important psychosocial developments, the ideal length of participation should extend far into adolescence (Eccles & Barber, 1999).

In order to avoid drop out and ensure positive sport experiences, it is important to examine children's reasons for participating as well as their reasons for discontinuing involvement. Having fun, improving skills, and being exposed to social opportunities have been identified as popular reasons for participation (Seefeldt, Ewing, & Walk, 1992). When these aims are not met, children are significantly more likely to drop out of sport. Fostering a mastery

climate aids in addressing these needs by promoting environments in which all athletes have an equal opportunity to achieve individual and collective success. Focusing on effort and improvement includes all children, regardless of skill or ability, in a dynamic learning experience in which success is within their control. A performance climate has alienating effects, rewarding only those of the highest skill level and making damaging social comparisons salient for the majority of youth team members (Smith, Smoll, & Cumming, 2007).

Conclusion

In both PE classes and youth sport team environments, the adults in leadership roles greatly influence the formation and salience of the motivational climate. Thus, teachers and coaches have a unique opportunity to impact the quality and nature of the sport experience for youth (Smith et al., 2007). This is especially relevant to the processes that affect the enjoyment and satisfaction experiences of children, as those have been shown to be related to the lasting attitudes and future intentions to engage in PA (Walling, Duda, & Chi, 1993). Manipulating the TARGET structures to support the development of a mastery-oriented motivational climate (Bowler, 2009) and communicating goal priorities to youth participants (Duda & Hall, 2001) have also been shown to significantly impact the motivational climate. These cognitive and experiential effects on those they lead can have lasting influences on habits and attitudes regarding participation in sport or physical activity. Exercise is recognized as a key pillar in achieving a healthy lifestyle for both children and adults, so fostering intention for future participation should be one of the top priorities for PE teachers and youth sport coaches.

CHAPTER 3. ARTICLE 1: THE EFFECTS OF MOTIVATIONAL CLIMATE ON STUDENTS IN PHYSICAL EDUCATION CLASSES

Introduction

The statistical explosions in both youth and adult obesity have been well publicized over the last several years, and it is no surprise that one of the main culprits of these trends is a sedentary lifestyle. The Centers for Disease Control and Prevention (2010) reported that overweight children and adolescents in the United States have more than tripled since 1980, and over two-thirds of adults are considered overweight or obese. Preidt (2011, para. 2) reports that the total cost of obesity in the United States is approaching \$300 billion yearly. These expenses include medical treatment, decreased worker production associated with higher rates of death, and a loss of productivity due to total disability. These staggering figures clearly demonstrate that obesity is both a serious health and fiscal concern. High profile organizations are becoming involved and targeting youth in hopes of popularizing an active lifestyle and reversing this trend. Programs such as the National Football League's "Play 60" movement, which encourages kids to be active for 60 minutes a day, and First Lady Michelle Obama's "Let's Move" initiative, are examples of campaigns encouraging an abundance of physical activity on a daily basis.

School Physical Education (PE) has been identified as the key resource for promoting physical activity (PA) among children (Chow, McKenzie, & Louie, 2008), in part because most schools incorporate PE classes into the daily curriculum. To take full advantage of this opportunity, PE classes must strive to accomplish more than simply keeping kids active during class time. PA habits developed during youth have been associated with habits in adulthood (Robertson-Wilson, Baker, Derbyshire, & Côté, 2003), so creating a learning environment that fosters satisfaction and enjoyment in PA at an early age is crucial to developing a healthier and more weight-conscious generation.

Achievement goals

Research on achievement goals began in the late 1970s; Carol Ames, Carol Dweck, Marty Maehr, and John Nicholls explored individuals' purposes for engaging in behavior in an achievement situation. Their research was conducted independently, but the four psychologists also exercised a collaborative effort that led to the identification of two separate types of achievement goals: performance goals and mastery goals. The goals represent two distinct reasons for approaching and participating in achievement tasks as well as different conceptions of success and outcomes (Ames, 1992).

Performance goals are based upon ability and sense of self-worth; ability is believed to be non-malleable and is demonstrated by outperforming others, surpassing normative based standards, or by achieving success with little effort (Dweck, 1986). Public recognition of superiority is especially important to performance-oriented achievement. When an individual adopts a performance goal, that person's self-worth is determined by his or her ability to perform and achieve the normative standard of success; consequently, expending effort can threaten an individual's self-image when the outcome may be construed as "failure" (Ames, 1992).

In contrast, the purpose of behavior when mastery goals are salient is to develop competence and work towards task mastery. In this mindset, individuals are oriented toward developing new skills, improving their competence, or achieving mastery based on self-referenced standards. The focus of attention is on the intrinsic value of learning and maximizing effort (Nicholls, 1989). Within the context of mastery goals, "failure" can be construed as helpful information in the process of learning and mastering a task (Elliot, 2005).

Motivational climate

The nature of achievement goals is influenced by different environmental or instructional demands. Research indicates that classroom structures can influence the salience of a particular goal orientation and lead to its adoption (Ames, 1992). Called the motivational climate, an environment that promotes the salience of performance goals is fittingly called a performance-oriented motivational climate; an environment that supports mastery goals is referred to as a mastery-oriented motivational climate. Epstein (1989) suggests there are six achievement structures that help teachers organize classroom dynamics to promote either a performance or mastery oriented motivational climate: Tasks, Authority, Recognition, Grouping, Evaluation, and Time. The first letters of these six structures create the acronym TARGET. These structures have been shown to influence the effort, persistence, cognitions, emotions, and behavior of individuals in PE (Ntoumanis & Biddle, 1999). Not only are these structures highly controllable by the classroom leader, but the effects of their adjustment can be significant.

TARGET descriptions

Tasks

Designing the tasks and learning activities is a key facet in the formation of the classroom environment. Students' perceptions of tasks influence their approach to learning as well as impact how they use their time. Tasks that are challenging and diverse foster a willingness to put forth effort. When students perceive meaningful reasons for engaging in a task or activity (such as developing an understanding of the activity), they are more willing to pursue learning in a manner consistent with a mastery goal. Variety in task structure is simply more engaging and does not allow for complacency, which also allows less opportunity to engage in social

comparison. This is advantageous because performance differences among peers are less likely to translate into perceived ability differences and threaten competence cognitions (Ames, 1992).

Authority

Authority refers to the locus of responsibility in the classroom; in a climate that promotes mastery goals, students are given decision-making opportunities and leadership roles. An environment in which the teacher controls all decision-making is supportive of performance goals. Using rewards or other external sources of motivation to encourage students to engage in a particular activity or achieve certain results is also indicative of a performance-oriented motivational climate. Even if improvement is demonstrated or ability is perceived to be high upon completion, the reasons for participation are likely not intrinsic, but rather a means to an end (Ames, 1992). To achieve the long term goal of continued preference for PA, this instant gratification is insufficient and ineffective. Suggestions to involve students in decision-making include requesting input regarding prioritization of tasks and ideas for lessons or practice sessions. However, this delegation of responsibility must come with proper support for the preparation and application of a lesson or practice plan (Ryan, Connell & Deci, 1985). Without this support, the experience of added responsibility and autonomy can be discouraging and counter-productive for children.

Recognition

Environments in which students are recognized privately and praised for their improvement and efforts are characteristic of a mastery-oriented motivational climate. Making social comparisons or recognizing normative performances in front of an audience will most certainly contribute to a performance-oriented climate (Ntoumanis & Biddle, 1999). For most students, receiving praise for improvement and effort helps to reemphasize the importance of the

learning process. Using the reward of public recognition as an extrinsic motivator is believed to steer children towards valuing the outcome over the process and emphasizing ability as a predetermined quality.

Grouping

Grouping students with the intent to promote cooperative learning and peer-interaction must be done regardless of ability in order for the climate to be perceived as mastery. If groups are formed based on ability, students are more likely to adopt performance goals and engage in maladaptive motivational responses. Such responses include attribution of failure to lack of ability or learned helplessness; these responses to failure are based on the child's perception that the opportunity to succeed is not within their control (Dweck & Leggett, 1988).

Evaluation

The ways in which students are evaluated is one of the most influential factors on their motivation (Ames, 1992). Depending upon how evaluation is structured (i.e. standards, criteria, methods, frequency of evaluation), students may be oriented toward different goals and elicit different motivational approaches (Ames & Ames, 1984). In particular, social comparison has been associated with the development of performance goals. Comparing scores, times or accomplishments between students in a PE classroom can have detrimental effects on an individual's motivation. Children's self-evaluations regarding their ability are significantly more negative when they are focused on winning, outperforming their peers, or reaching a normative standard compared to when they are focused on giving maximal effort, improving their personal performance, or just participating (Ames 1984). In classrooms where students focused on self-improvement rather than comparison with their peers, they displayed superior recall of material (Graham & Golan, 1991). The authors concluded that focus on comparison standards may

interfere with strategies that allow deep levels of information processing which lead to more effective learning.

Time

Whenever possible, allowing flexibility and ample opportunity to practice and complete a task increases the likelihood that children will form mastery goals (Ntoumanis & Biddle, 1999). On the other hand, allocating a uniform length of time for learning or completing a task supports the salience and formation of performance goals. Not completing a task in the allotted time can be interpreted as failure to meet the “normative” or set standard and can also naturally lead into social comparisons.

Positive effects of mastery climates

In theory, creating a mastery oriented motivational climate for children in PE classes logically levels the playing field for all students to experience success. Children are in critical developmental stages during their elementary and middle school years as they make rapid intellectual, physical, emotional, and social growth under the guidance of adults in prominent leadership roles (e.g. parents, teachers). The benefits of mastery goal salience go beyond philosophical assumptions. Studies have demonstrated a variety of important effects, including increased student enjoyment and satisfaction, willingness to exert maximum effort and preference for more challenging tasks.

Immediate effects on activity levels have been associated with a mastery climate in children as young as four. Parish, Rudisill, and Onge (2007) compared heart-rates and energy expenditure in preschool-aged children who participated in a physical play session. The leaders of the experimental group purposefully structured the environment to be characteristic of a mastery climate. The control group intentionally did not provide any structure to the play

session, allowing the toddlers to play freely. Children in the experimental group recorded significantly higher heart-rates and played more vigorously compared to children in the non-structured play session. Due to the increased prevalence of overweight and obese children, creating environments that increase activity levels consistently is a short term benefit that carries relevance and value.

Favorable changes in cognitions and affects have been associated with long-term mastery climate intervention programs. Morgan and Carpenter (2002) orchestrated a mastery-oriented intervention program for elementary school PE classes over a seven week period. In the experimental group, each teacher was given instructions regarding advantageous manipulation of the TARGET elements to create a strong mastery orientation in the classroom: the tasks were multidimensional and designed for inclusion; students were involved in the decision-making process by designing their own practice lessons and corresponding rules; recognition was contingent upon effort and improvement; the groups were small and comprised of students of mixed abilities working together toward task improvement; personal journals were given to each student to record their performance and self-evaluation of effort and improvement at the conclusion of each lesson; and the lessons were structured in a multidimensional way to ensure each student had numerous attempts at every task and waiting time was minimized.

Not surprisingly, students in the control group reported no change in cognitions or attitudes from the pre-test to the post-test. However, students whose teacher implemented the mastery climate adjustments reported numerous positive changes. The experimental group showed greater preference for challenging tasks, increased satisfaction as well as a more positive attitude towards PA after the seven weeks had elapsed. Since high levels of satisfaction and

cultivating positive attitudes toward PA in children are predictive of their attitudes in adulthood (Robertson-Wilson et al., 2003), the gains made in this area are particularly meaningful.

Detrimental nature of performance climates

Evidence overwhelmingly suggests that creating a mastery climate in PE classes will yield significant cognitive and affective benefits in youth, but does that mean that educators who create a performance climate could potentially encumber their students? The answer appears to be: possibly. If the focus of learning is on social comparison and evaluation is based on normative standards, students in PE classes are likely to perceive a performance oriented climate and are more likely to show ineffective motivational responses, decreased motivation and enjoyment. Several studies support this assertion by uncovering adverse reactions to the presence of performance climate structures.

A study by Marsh and Peart (1988) demonstrated detrimental effects of a performance climate on young females' self-image and perceived physical ability. Adolescent females were split into two groups for a 14 session aerobic program in their PE classes; one group was a cooperative intervention program that focused on creating a mastery climate, while the other intentionally fostered a performance climate by making intra-class comparisons salient and publicly recognizing top performers. Individuals from both groups demonstrated equally significant physical aerobic improvement, and members of the mastery intervention group reported cognitions that mirrored these physical gains. Students in this group expressed an enhanced self-image as well as an increase in their perceived physical ability. However, those in the performance intervention program expressed an overall belief that their physical fitness levels had decreased and reported a decline in the perception of their physical appearance (Marsh & Peart, 1988). This discrepancy raises a major red flag. In a situation where individuals' self-

image should reflect their enhanced fitness level, the opposite occurred. Especially during adolescence, when sensitive self-esteem issues can influence a plethora of other assessments and cognitions, this result could have serious long-term effects relating to attitudes toward organized PA.

The potentially damaging effects of a performance motivational climate were also evident in a study conducted by Solomon and Lee (1997). Over 800 elementary and middle school PE students were asked about the climate they perceived during class time, as well as their efficacy perceptions and other psychological cognitions. Once again, there was a disturbing correlation between a perceived performance climate in PE class and important psychological factors. Students who perceived a performance climate reported lower confidence-efficacy, decreased attention/concentration toward lesson material, and a reduced desire to participate compared with those who perceived the climate as mastery-oriented (Solomon & Lee, 1997). These cognitive outcomes do not bode well for projected future voluntary involvement in PA. Logically, a child would want to avoid future efficacy threats if given the choice, especially if the activity is not interesting appealing to them.

Implications for PE instructors

As the expanding body of research indicates, a mastery oriented motivational climate can foster beneficial cognitive responses in a PE setting, which may help achieve the goals of educating youth and guiding them to become physically active adults. The good news for educators is that the motivational climate is remarkably controllable. With this knowledge comes a responsibility to help children develop an enjoyment of PA that will help them make health-conscious decisions and incorporate exercise into their daily routine both as children and adults.

In the effort to achieve a healthy, confident and well-developed generation, PE is an important building block and must be utilized effectively by educators.

Living in a society that increasingly values winning, it is crucial for PE instructors to promote the values of effort and improvement to lay the proper foundation for the enjoyment of PA. In order for classroom climates to have permanent effects on goal orientations and attitudes regarding PA, the mastery climate must be consistent across years, as the effects tend to lessen or be lost if students are reintroduced to a typical class structure that is oriented toward performance goals and standards. Clearly, educators must be on the same collective page regarding the environment they strive to create. Suggestions to successfully create a mastery oriented motivational climate in each PE classroom across the country include attention to and appropriate manipulation of the TARGET structures. The two TARGET factors that have the greatest impact on perceptions of the climate are how students are evaluated and recognized (Morgan, Sproule, Weigand, & Carpenter, 2005), so working to minimize social comparison and emphasizing individual improvement and progress should be considered top priority. Asking students to rate their effort in a journal is a progressive way to cultivate self-reflection and awareness. Journaling also helps develop accountability and presents opportunities for personal growth that is not ability-dependent. With proper support and guidance, allowing students to shoulder responsibility in developing lessons and practice sessions is an excellent way to engage them the decision-making process while simultaneously guaranteeing diversity in the nature of tasks.

A significant amount of responsibility falls squarely on the shoulders of PE teachers to address the alarming trend of overweight and obese children and adults. In most cases, a portion of each school day in the formative years is devoted to PE class, so the opportunity to develop

habits and attitudes is achievable. Ideally, efficient and effective education for PE teachers will increase understanding and influence their classroom structures, leading to improved experiences for students and fostering enjoyment in PA that will extend into adulthood.

References

- Ames, C. (1984). Competitive, co-operative, and individualist goal structures: A motivational analysis. In R. Ames & C. Ames (Eds.), *Research on motivation in education* (pp. 177-207). New York, NY: Academic Press.
- Ames, C. (1992). Classrooms: Goals, structures, and student motivation. *Journal of Educational Psychology, 84*, 261-271.
- Ames, C. & Ames, R. (1984). Systems of student and teacher motivation: Toward a qualitative definition. *Journal of Educational Psychology, 76*, 535-556.
- Centers for Disease Control and Prevention. (2010). *Overweight and obesity*. Retrieved from <http://www.cdc.gov/obesity/data/adult.html>.
- Chow, B., McKenzie, T., & Louie, L. (2008). Children's physical activity and environmental influences during elementary school physical education. *Journal of Teaching in Physical Education, 27*, 38-50.
- Dweck, C. (1986). Motivational processes affecting learning. *American Psychologist, 41*, 1040-1048.
- Dweck, C. & Leggett, E. (1988). A social-cognitive approach to motivation and personality. *Psychological Review, 95*, 256-273.
- Elliot, A. (2005). A conceptual history of the achievement goal construct. In A. Elliot & C. Dweck (Eds.), *Handbook of competence and motivation* (pp. 52-72). New York, NY: Guilford Press.

- Epstein, J. (1989). Family structures and student motivation: A developmental perspective. In C. Ames & R. Ames (Eds.), *Research on motivation in education* (pp. 259-295). San Diego, CA: Academic Press.
- Graham, S. & Golan, S. (1991). Motivational influences on cognition: Task involvement, ego involvement, and depth of information processing. *Journal of Educational Psychology*, 52, 187-194.
- Marsh, H. & Peart, N. (1988). Competitive and cooperative physical fitness training programs for girls: Effects on physical fitness and multidimensional self-concepts. *Journal of Sport and Exercise Psychology*, 10, 390-407.
- Morgan, K. & Carpenter, P. (2002). Effects of manipulating the motivational climate in physical education lessons. *European Physical Education Review*, 8, 207-229.
- Morgan, K., Sproule, J., Weigand, D., & Carpenter, P. (2005). A computer-based observational assessment of the teaching behaviors that influence motivational climate in Physical Education. *Physical Education and Sport Pedagogy*, 10, 83-105.
- Nicholls, J. (1989). *The competitive ethos and democratic education*. Cambridge, MA: Harvard University Press.
- Ntoumanis, N. & Biddle, S. (1999). A review of motivational climate in physical activity. *Journal of Sports Sciences*, 17, 643-665.
- Parish, L., Rudisill, M., & Onge, P. (2007). Mastery motivational climate: Influence on physical play and heart rate in African American toddlers. *Research Quarterly for Exercise and Sport*, 78, 171-178.
- Preidt, R. (2011, January 12). Cost of obesity approaching \$300 billion a year. *USA Today*. Retrieved on April 13, 2012 from <http://www.usatoday.com/yourlife/health/medical>.

Robertson-Wilson, J., Baker, J., Derbyshire, E., & Côté, J. (2003). Childhood physical activity involvement in active and inactive female adults. *Avante*, 9, 1-8.

Ryan, R., Connell, J., & Deci, E. (1985). A motivational analysis of self-determination and self-regulation in education. In C. Ames & R. Ames (Eds.), *Research on motivation in education* (pp. 13-51). San Diego, CA: Academic Press.

Solomon, M. & Lee, A. (1997). Development of an instrument to access cognitive processes in physical education classes. *Research Quarterly for Exercise and Sport*, 68, 152-160.

CHAPTER 4. ARTICLE 2: THE EFFECTS OF MOTIVATIONAL CLIMATE ON YOUTH SPORT PARTICIPANTS

Introduction

There is little doubt that we are a world infatuated by sports. We watch them, we analyze them, we argue about them, we spend money on them, and we encourage our kids to play them. Not surprisingly, youth sport is the most popular structured activity in the country, with an estimated 45 million American children enrolled in an organized program or team in 2005 (Mahoney, Larson, Eccles, & Lord, 2005). Attention has been devoted to maximizing this access and determining effective ways to use the popularity as a tool in youth development. Researchers Côté and Fraser-Thomas (2007) identified three major developmental goals youth sport should ideally accomplish. First, sports can contribute to a child's physical health and development by providing youth with opportunities to be active. Second, youth sport can also facilitate appropriate psychosocial development as children learn important life skills such as teamwork, discipline, leadership, sportsmanship, and self-control. Third, children learn motor skills that build a foundation for successful lifetime participation in athletics, from future professional athletes to recreational weekend warriors.

Few would disagree that sport participation offers significant opportunities for health betterment. The potential physical benefits of exercise are numerous and have been well researched. Weight control, cardiovascular health, muscle and bone development and flexibility are just a few of the important physical developments associated with youth participation in sport (Wankel & Berger, 1990). In addition, habits associated with physical activity in youth have been linked to exercise habits in adulthood (Robertson-Wilson, Baker, Derbyshire, & Côté, 2003), so developing these positive tendencies toward sport and physical activity in childhood

are critical for continued involvement. Physically active adults are significantly less likely to develop diseases such as obesity, diabetes, depression, cancer, heart disease, and osteoporosis (Berger & Owen, 1988). Also, participation in youth sport is associated with the development of key character elements such as citizenship, leadership skills, positive peer relationships, and teamwork (Côté & Hay, 2002). Individuals who participated in organized athletics growing up are also more likely to attend college and experience career success (Eccles & Barber, 1999).

While the potential for positive outcomes relating to youth sport participation is undeniably existent, involvement does not guarantee these effects will automatically occur. Despite youth sport participation being at an all-time high, so too is the frequency of childhood obesity (Tremblay, Katzmarzyk, & Willms, 2002). Furthermore, although the potential for positive psychosocial developments exists, some youth sport participants have reported negative cognitions related to their involvement. These feelings include reported lack of enjoyment, decreased self-confidence, and high levels of performance anxiety. The most common offenders responsible for these adverse changes include feeling excessive pressure to win, low perception of abilities, feelings of unattachment to one's team, and vulnerability in the presence of their teammates (Martens, 1993). Lastly, a telling statistic is that attrition rates are extremely high, as around 25% of youth sport participants between 10 and 17 years old withdraw from organized sport programs yearly (Hedstrom & Gould, 2004). Clearly, a considerable disparity exists between the ideal outcomes of youth sport and the actual results. Identifying key aspects to ensure a favorable experience for youth sport participants has been the goal of many psychologists, educators and researchers. One variable that has received a substantial amount of attention for its potential omnipotence in youth sport context is the motivational climate.

Achievement goals

Research on achievement goals began in the late 1970s; Carol Ames, Carol Dweck, Marty Maehr, and John Nicholls explored individuals' purposes for engaging in behavior in an achievement situation. Their research was conducted independently, but the four psychologists also exercised a collaborative effort that led to the identification of two separate types of achievement goals: performance goals and mastery goals. The goals represent two distinct reasons for approaching and participating in achievement tasks as well as different conceptions of success and outcomes (Ames, 1992).

Performance goals are based upon ability and a sense of self-worth; ability is believed to be non-malleable and is demonstrated by outperforming others, surpassing normative based standards, or by achieving success with little effort (Dweck, 1986). Public recognition of superiority is especially important to performance oriented achievement. Attention is directed toward achieving normatively defined success. When an individual adopts a performance goal, that person's self-worth is determined by his or her ability to perform and achieve the normative standard of success; consequently, expending effort can threaten their self-image when the outcome may be construed as "failure" (Ames, 1992).

In contrast, the purpose of behavior when mastery goals are salient is to develop competence and work towards task mastery. In this mindset, individuals are oriented towards developing new skills, improving their competence, or achieving mastery based on self-referenced standards. The focus of attention is on the intrinsic value of learning and maximizing effort (Nicholls, 1989). Within the context of mastery goals, failure can be construed as helpful information in the process of learning and mastering a task (Elliot, 2005).

Motivational climate

The nature of achievement goals is influenced by different environmental or instructional demands. Research indicates that practice structures and coaches' behavior during training and games can impact the salience of a particular goal orientation and lead to its adoption (Ames, 1992). Called the motivational climate, an environment that promotes the salience of performance goals is fittingly called a performance-oriented motivational climate; an environment that supports mastery goals is referred to as a mastery-oriented motivational climate. Epstein (1989) suggests relevance of six achievement structures that can be modified to promote either a performance or mastery-oriented motivational climate: Tasks, Authority, Recognition, Grouping, Evaluation, and Time. The first letters of these six structures create the acronym TARGET. These structures have been shown to influence the effort, persistence, cognitions, emotions, and behavior of individuals in youth sport (Ntoumanis & Biddle, 1999). Not only are these environmental structures highly controllable by the coach, but the effects of their adjustment can be significant.

TARGET descriptions

Tasks

Designing the tasks and learning activities is a key facet in the formation of the motivational climate in youth sport. Children's perceptions of tasks influence their approach to learning as well as impact how they use their time. Tasks that are challenging and diverse foster a willingness to put forth effort. When children perceive meaningful reasons for engaging in a task or activity (such as developing an understanding of the activity), they are more willing to pursue learning in a manner consistent with a mastery goal. Variety in task structure is simply more engaging and does not allow for complacency, which also allows less opportunity to

engage in social comparison. Thus, performance differences among teammates are less likely to translate into perceived ability differences (Ames, 1992).

Authority

Authority refers to the locus of responsibility on a team. In a climate that promotes mastery goals, athletes are given decision-making opportunities and leadership roles; an environment in which the coach controls all decision-making power supports performance goals. Using rewards or other external sources of motivation to encourage children to engage in a particular activity or achieve certain results is also indicative of a performance-oriented motivational climate. In these cases, even if improvement is demonstrated or ability is perceived to be high upon completion, the reasons for participation are not likely to be intrinsic, but rather a means to an end as structured by the coach (Ames, 1992). To achieve the long term goal of enjoyment leading to continued preference for athletic participation, this instant gratification is insufficient and ineffective. Suggestions to involve youth athletes in decision-making include requesting input regarding prioritization of tasks and the pace or methods of learning. However, this delegation of responsibility must come with proper support from the coach for the preparation and application of a plan of action (Ryan, Connell & Deci, 1985). Without this support, the experience of added responsibility and autonomy can be discouraging and counter-productive for children.

Recognition

Environments in which athletes are recognized privately and praised for their improvement and effort are characteristic of a mastery-oriented motivational climate. Making social comparisons or recognizing normative performances in front of an audience will certainly contribute to a performance-oriented climate (Ntoumanis & Biddle, 1999). For most athletes,

receiving praise for improvement and effort helps to reemphasize the importance of the learning process. Using public recognition as a reward serves as an extrinsic motivator and is believed to steer children towards valuing the outcome over the process and emphasizing ability as a predetermined quality. Thanks in part to the increasing media coverage of sports and the adoration of “winners” in competitive athletics, the behavior of coaches to minimize this type of recognition among youth sport participants may be challenging, but to do so at a young age when developmental processes are malleable is of high importance.

Grouping

Grouping youth sport participants with the intent to promote cooperative learning and peer-interaction must be done regardless of ability in order for the climate to be perceived as mastery. If groups are formed based on ability, children are more likely to adopt performance goals and engage in maladaptive motivational responses. Such responses include attribution of failure to lack of ability or learned helplessness; these responses to failure are based on the child’s perception that the opportunity to succeed is not within their control (Dweck & Leggett, 1988).

Evaluation

The ways in which children are evaluated is one of the most influential factors on motivation (Ames, 1992). Depending upon how evaluation is structured (i.e. standards, criteria, methods, and frequency of evaluation), young athletes may be oriented toward different goals and elicit different motivational approaches (Ames & Ames, 1984). In particular, social comparison has been associated with the development of performance goals. Comparing scores, times or accomplishments within a team can have detrimental effects on athletes’ motivation. Children’s self-evaluations regarding their ability are consistently more negative when they are

focused on winning, outperforming their peers, or reaching a normative standard compared to when they are focused on giving maximal effort, improving their personal performance, or just participating (Ames 1984).

Time

Whenever possible, allowing flexibility and ample opportunity to practice and complete a task increases the likelihood that children will form mastery goals (Ntoumanis & Biddle, 1999). On the other hand, allocating a uniform length of time for learning or completing a task supports the salience and formation of performance goals. Failure to complete an exercise in the allotted time can be interpreted as failure to meet the “normative” standard and can naturally lead into social comparisons.

Motivational climate and sport participation and enjoyment

Kids participate in sports for a multitude of reasons. Mahoney, Larson, Eccles, and Lord (2005) estimated that there were close to 45 million youth between the ages of 4 and 18 participating in organized sports in the United States. This makes it the most popular structured activity for youth participation. Over 10,000 kids responded to a national survey asking why they participated in sports. The data collected revealed that the top two reported reasons for participation were to “have fun” and to “improve skills” (Seefeldt, Ewing, & Walk, 1992). Youth sport participants also frequently report social reasons for involvement. The development of close social relationships and having fun with others was found to be strongly correlated with adolescents reported level of interest and enjoyment in sport (Allen, 2003).

Coaches of youth sports strongly influence the nature and the quality of the sport experience. They contribute to the creation of the motivational climate by the goal priorities they promote, the attitudes and values they transmit, and the way they treat the members of their

team. Coaching behaviors can have important effects on how children define success, which can be linked to the enjoyment and satisfaction they experience and influence the attitudes they form toward sport. The sizeable body of research on motivational climate in youth sport indicates that the development of a mastery oriented motivational climate will cultivate maximum enjoyment, satisfaction and intent for continued participation in children of all ability levels. As previously stated enjoyment is a result of great importance to youth and effects their satisfaction and influences their intent for future participation.

Smith, Smoll, and Cumming (2007) conducted a study in which 20 youth basketball coaches attended a 75 minute motivational climate workshop before the start of their season. The training session presented coaches in the experimental group with behavioral guidelines and instructions to create a mastery-oriented climate among their teams. Coaches in the control group did not receive any training or instruction. At the end of the season, children who played for the coaches in the experimental group reported decreased anxiety, whereas athletes who played for coaches in the control group reported an increase in anxiety as the season progressed.

Performance anxiety has been associated with damaging effects, such as high levels of autonomic arousal, worry, and negative self-oriented cognitions. These stress responses have been shown to disrupt attentional processes and other cognitive functions (Smith, Smoll, & Passer, 2002). Perhaps the most alarming consequences of performance anxiety are high frequencies of organized sport avoidance, athletic burnout, and attrition. Based on this research, it appears that a mastery climate may minimize performance anxiety, therefore making it a viable tool to work towards high attainment rates in youth sport.

Support for the creation of a mastery climate is corroborated by a number of other studies. For example, tennis players who perceived a mastery-oriented climate in their training

also reported increased perceptions of ability and greater satisfaction with level of play (Balaguer, Duda, & Crespo, 1999). Seifriz, Duda, and Chi (1992) examined the perceptions of high school basketball players and concluded that athletes who perceived a mastery climate on their team reported greater enjoyment of basketball. These athletes also expressed the belief that hard work and cooperation with teammates are affiliated with success in sport. Interestingly, the relationship between the perception of the mastery climate and the positive beliefs did not change across win-loss records. In this instance, enjoyment and satisfaction were not dependent upon winning games. This is an encouraging finding because it appears that youth do not require normative-based “winning” outcomes to experience sport enjoyment.

The long term effects of cultivating enjoyment and prolonged participation in sport are also seen in relation to academic achievement. Eccles and Barber (1999) conducted a longitudinal study that followed over a thousand individuals from sixth grade to age 25. After years of data collection, the results showed that 10th and 12th graders involved in organized sport reported a stronger enjoyment of school than non-athletes. Further, individuals who participated in sports were significantly more likely to be enrolled in college at age 21 than their nonparticipating counterparts. In order for these young adults to participate in high school organized athletics, an enjoyment of sport was presumably developed in their youth and propelled their continued involvement. The authors concluded that the development of traits such as self-esteem, cooperation, discipline, work ethic, and perseverance likely contributed to the resulting academic pursuit, enjoyment and achievement. These results are important regarding the formation of favorable attitudes towards sport and the intent for continued participation as well as implications for career success.

Just as mastery climates can foster positive developments in youth sport participants, perceptions of a performance climate have been associated with negative experiences. A study by Ommundsen, Roberts, Lemyre, and Miller (2005) surveyed over 1700 adolescent Norwegian soccer players and examined their perceptions of the motivational climate and elements of social cohesiveness with their teammates. The authors found relationships between a perceived performance climate and a reduced quality of peer relations as well as decreased feelings of friendship with teammates. The implications of these findings indicate that an environment in which intra-team rivalry is emphasized, a de-emphasis on collaborative effort and cooperation among team members can cause relations and friendship to suffer. Considering that two of the strongest factors that influence a child's desire to participate in sport is the development of close social relationships and having fun with others, a climate that negatively effects friendships and peer interactions would likely result in future avoidance of organized athletics (Allen, 2003).

Walling, Duda, and Chi (1993) examined the perceptions of motivational climates among 169 youth baseball, basketball, softball, and soccer participants. Athletes were administered questionnaires to determine the perceived motivational climate and related cognitive effects. The results showed that a performance-oriented climate was associated with decreased satisfaction regarding team membership and increased performance anxiety. In all likelihood, a young athlete who is not experiencing satisfaction with his or her team membership is far more apt to discontinue their involvement. After all, it is likely that the pursuit of a fun experience or time with friends initiated involvement in the first place. If his or her participation continues despite this lack of enjoyment, it is possible that the dissatisfaction may evolve and grow into even stronger negative attitudes, ultimately resulting in extreme negative feelings towards organized sport participation.

Concerns about youth sport attrition

The actual attrition rate brings to life the fears that an ineffective climate can have detrimental results on youth sport participation. Hedstrom and Gould (2004) reported that by age 15, an estimated 70% of children have quit participating in organized sports in the United States, with the yearly attrition rate around 25%. In Seefeldt et al.'s (1992) survey results, the majority of feedback children gave for quitting sports was directly related to the coach and the environment he or she created (e.g. "I was not having fun," "The coach played favorites," "Too much emphasis was placed on winning."). As mentioned previously, many children seek membership of a sports team in order to have fun and experience feelings of enjoyment, satisfaction, and accomplishment. It should come as no surprise that when their experiences do not match their emotional and social needs, they discontinue involvement. In order to address the discouraging attrition rates in youth sport, it appears it may be advisable to focus on creating a climate that supports maximum enjoyment for the athletes. This notion may seem outdated in a society that has become increasingly obsessed with championships and record-breakers, but the fact of the matter is that kids want to have fun when they are playing sports. The vast majority will not make their living by competing professionally, so creating an environment suitable to train the next Michael Jordan or Mia Hamm alienates the children who simply want to enjoy being active, learning new skills, or developing meaningful relationships with their teammates. Instead, supporting continued participation through a climate that nurtures a desire to learn and rewards hard work is one of the most important roles of a coach.

Motivational climate and personal development

In addition to cultivating the enjoyment and satisfaction necessary for prolonged sport participation, another primary goal of youth sport is to promote optimal psychosocial

development. Ideally, personal development through sport participation “enables individuals to lead a healthy, satisfying, and productive life as youth, and later as adults, because they gain the competence to earn a living, to engage in civic activities, to nurture others, and to participate in social relations and cultural activities” (Hamilton, Hamilton, & Pittman, 2004, p. 3). However, there is a shortage of research effectively linking youth sport participation and relevant personal development. MacDonald, Côté, Eys, and Deakin (2011) postulated that this may be in part due to the extremely recent development of a valid tool to measure personal development in sport participants: Youth Experience Survey for Sport (YES-S), adapted by MacDonald, Deakin, Eys, and Côté (2009).

In a study that was the first of its kind, MacDonald et al. (2011) used the recently developed YES-S to survey over 500 youth sport participants ages 9-19 in school or non-elite community leagues across a variety of team sports. These sports included baseball, basketball, curling, football, lacrosse, rowing, softball, synchronized swimming, and volleyball. The intent was to identify associations between perceptions of motivational climates and positive or negative personal developments. These developments included self-knowledge, goal-setting, effort, time-management, emotional regulation, teamwork, social skills, leadership and diverse peer relations. The data suggests that the most important predictors supporting growth in these areas are all related to a mastery-oriented motivational climate: positive affiliation with peers, maximum effort expenditure and self-referenced competency. The strongest predictor of negative personal development was explicitly stated as the salience of a performance climate. These findings indicate that the climate created can be polarizing, having the potential for significant positive or negative developmental effects (MacDonald et al., 2011). This study was the first to specifically link a mastery climate with the development of personal skills in youth of

varying ages and sport affiliations. As discussed previously, the body of research linking enjoyment and mastery climate with prolonged participation in sport has been well documented; however, in order to build a more conclusive body of literature, the authors recommend further research to identify the specific effects a mastery climate may have on particular areas of personal development (MacDonald et al., 2011).

Recommendations for youth coaches

Research conclusively indicates that a mastery-oriented motivational climate can foster beneficial cognitive and affective responses in youth sport participants, which may help achieve the goals of appropriate physical and psychosocial development. In situations in which a mastery climate is created, children have reported greater enjoyment and satisfaction, increased perceptions of efficacy, reduced anxiety levels, and fulfilling social interactions. Implementing a mastery climate appears to be an effective and proven strategy toward achieving higher attainment rates in youth sport, a key step toward nurturing a healthy, confident, and well-developed generation.

The good news for coaches is that the motivational climate is remarkably controllable, and a significant amount of responsibility falls squarely on their shoulders to reverse the alarming trend of dissatisfied youth sport dropouts. Ideally, efficient and effective education will increase coaches' understanding and influence their actions. As mentioned previously, a one-time, 75 minute instructional coaching session that addressed ways to form a mastery climate resulted in impactful results that lasted an entire season for youth basketball players (Smith et al., 2007). Educational opportunities will unquestioningly help coaches grow, but a gentle reminder that most kids are playing sports for reasons other than grooming their skills for a career as a professional athlete may go a long ways. Kids want to have fun. Kids want to feel good about

themselves. All kids, regardless of skill level, deserve these opportunities in a sport context. Creating a mastery climate presents an environment where each team member is able to feel competent and successful because their effort is within their control. Supporting the pursuit of enjoyment and love of sports may be an easy but meaningful adjustment towards improved experiences for youth athletes. Perhaps this small change can lead to extended participation and even greater developmental benefits for the next generation.

References

- Allen, J. (2003). Social motivation in youth sport. *Journal of Sport and Exercise Psychology, 25*, 551-567.
- Ames, C. (1984). Competitive, co-operative, and individualist goal structures: A motivational analysis. In R. Ames & C. Ames (Eds.), *Research on motivation in education* (pp. 177-207). New York, NY: Academic Press.
- Ames, C. (1992). Classrooms: Goals, structures, and student motivation. *Journal of Educational Psychology, 84*, 261-271.
- Ames, C. & Ames, R. (1984). Systems of student and teacher motivation: Toward a qualitative definition. *Journal of Educational Psychology, 76*, 535-556.
- Balaguer, I., Duda, J., & Crespo, M. (1999). Motivational climate and goal orientations as predictors of perceptions of improvement, satisfaction and coach ratings among tennis players. *Scandinavian Journal of Medicine and Science in Sports, 9*, 381-388.
- Berger, B. & Owen, D. (1988). Stress reduction and mood enhancement in four exercise models: Swimming, body conditioning, hatha yoga, and fencing. *Research Quarterly for Exercise and Sport, 59*, 148-159.

- Côté, J. & Fraser-Thomas, J. (2007). Youth involvement in sport. In P. Crocker (Ed.), *Introductions to sport psychology: A Canadian perspective* (pp. 266-294). Toronto, ON: Pearson Prentice Hall.
- Côté, J. & Hay, J. (2002). Children's involvement in sport: A developmental perspective. In J. Silva & D. Stevens (Eds.) *Psychological foundations of sport* (pp. 484-502). Boston, MA: Allyn & Bacon.
- Dweck, C. (1986). Motivational processes affecting learning. *American Psychologist*, *41*, 1040-1048.
- Dweck, C. & Leggett, E. (1988). A social-cognitive approach to motivation and personality. *Psychological Review*, *95*, 256-273.
- Eccles, J. & Barber, B. (1999). Student council, volunteering, basketball, or marching band: What kind of extracurricular involvement matters? *Sport, Education and Society*, *7*, 151-166.
- Elliot, A. (2005). A conceptual history of the achievement goal construct. In A. Elliot & C. Dweck (Eds.), *Handbook of competence and motivation* (pp. 52-72). New York, NY: Guilford Press.
- Epstein, J. (1989). Family structures and student motivation: A developmental perspective. In C. Ames & R. Ames (Eds.), *Research on motivation in education* (pp. 259-295). San Diego, CA: Academic Press.
- Hamilton, S., Hamilton, M., & Pittman, K. (2004). Principles for youth development. In S. Hamilton & M. Hamilton (Eds.), *The youth development handbook: Coming of age in American communities* (pp. 3-23). Thousand Oaks, CA: Sage.

- Hedstrom, R. & Gould, D. (2004). *Research in youth sports: Critical issues status*. Retrieved April 22, 2012 from <http://edweb3.educ.msu.edu/ysi/project/CriticalIssuesYouthSports.pdf>.
- MacDonald, D., Côté, J., Eys, M., & Deakin, J. (2011). The role of enjoyment and motivational climate in relation to the personal development of team sport athletes. *Kinesiology and Physical Education*. Retrieved from http://scholars.wlu.ca/kppe_faculty/8.
- MacDonald, D., Deakin, J., Eyes, M., & Côté, J. (2009). Psychometric properties of the Youth Experience Survey with young athletes. Paper presented at the Canadian Society for Psychomotor Learning and Sport Psychology, Toronto, ON.
- Mahoney, J., Larson, R., Eccles, J., & Lord, H. (2005). Organized activities as developmental contexts for children and adolescents. In J. Mahoney, R. Larson, & J. Eccles (Eds.) *Organized activities as contexts of development*, (pp. 3-22). Mahwah, NJ: Lawrence Erlbaum Associates.
- Martens, R. (1993). Psychological perspectives. In B. Cahill & A. Pearl (Eds.), *Intensive participation in children's sports*, (pp. 9-18). Champaign, IL: Human Kinetics.
- Nicholls, J. (1989). *The competitive ethos and democratic education*. Cambridge, MA: Harvard University Press.
- Ntoumanis, N. & Biddle, S. (1999). A review of motivational climate in physical activity. *Journal of Sports Sciences*, 17, 643-665.
- Ommundsen, Y., Roberts, G., Lemrye, P., & Miller, B. (2005). Peer relationships in adolescent competitive soccer: associations to perceived motivational climate, achievement goals, and perfectionism. *Journal of Sport Science*, 23, 977-989.

- Robertson-Wilson, J., Baker, J., Derbyshire, E., & Côté, J. (2003). Childhood physical activity involvement in active and inactive female adults. *Avante*, 9, 1-8.
- Ryan, R., Connell, J., & Deci, E. (1985). A motivational analysis of self-determination and self-regulation in education. In C. Ames & R. Ames (Eds.), *Research on motivation in education* (pp. 13-51). San Diego, CA: Academic Press.
- Seefeldt, V., Ewing, M., & Walk, S. (1992). *Overview of youth sports programs in the United States*. Washington, DC: Carnegie Council on Adolescent Development.
- Seifriz, J., Duda, J., & Chi, L. (1992). The relationship of perceived motivational climate and beliefs about success in basketball. *Journal of Sport and Exercise Psychology*, 14, 375-391.
- Smith, R., Smoll, F., & Cumming, S. (2007). Effects of a motivational climate intervention for coaches on young athletes' sport performance anxiety. *Journal of Sport and Exercise Psychology*, 29, 39-59.
- Smith, R., Smoll, F., & Passer, M. (2002). Sport performance anxiety in children and youth. In F. Smoll & R. Smith (Eds.), *Children and youth in sports: A biopsychosocial perspective* (pp. 501-536). Dubuque, IA: Kendall/Hunt.
- Tremblay, M., Katzmarzyk, P., & Willms, J. (2002). Temporal trends in overweight and obesity in Canada, 1981-1996. *International Journal of Obesity and Related Metabolic Disorders*, 26, 538-543.
- Walling, M., Duda, J., & Chi, L. (1993). The perceived motivational climate in sport questionnaire: Construct and predictive validity. *Journal of Sport and Exercise Psychology*, 20, 476-489.

Wankel, L. & Berger, B. (1990). The psychological and social benefits of sport and physical activity. *Journal of Leisure Research*, 22, 167-182.

REFERENCES

- Allen, J. (2003). Social motivation in youth sport. *Journal of Sport and Exercise Psychology, 25*, 551-567.
- Ames, C. (1984). Competitive, co-operative, and individualist goal structures: A motivational analysis. In R. Ames & C. Ames (Eds.), *Research on motivation in education* (pp. 177-207). New York, NY: Academic Press.
- Ames, C. (1992). Classrooms: Goals, structures, and student motivation. *Journal of Educational Psychology, 84*, 261-271.
- Ames, C. & Ames, R. (1984). Systems of student and teacher motivation: Toward a qualitative definition. *Journal of Educational Psychology, 76*, 535-556.
- Ames, C. & Archer, J. (1988). Achievement goals in the classroom: Students' learning strategies and motivation processes. *Journal of Educational Psychology, 80*, 260-267.
- Balaguer, I., Duda, J., & Crespo, M. (1999). Motivational climate and goal orientations as predictors of perceptions of improvement, satisfaction and coach ratings among tennis players. *Scandinavian Journal of Medicine and Science in Sports, 9*, 381-388.
- Berger, B. & Owen, D. (1988). Stress reduction and mood enhancement in four exercise models: Swimming, body conditioning, hatha yoga, and fencing. *Research Quarterly for Exercise and Sport, 59*, 148-159.
- Centers for Disease Control and Prevention. (2010). *Overweight and obesity*. Retrieved from <http://www.cdc.gov/obesity/data/adult.html>.
- Chow, B., McKenzie, T., & Louie, L. (2008). Children's physical activity and environmental influences during elementary school physical education. *Journal of Teaching in Physical Education, 27*, 38-50.

- Côté, J. & Fraser-Thomas, J. (2007). Youth involvement in sport. In P. Crocker (Ed.), *Introductions to sport psychology: A Canadian perspective* (pp. 266-294). Toronto, ON: Pearson Prentice Hall.
- Côté, J. & Hay, J. (2002). Children's involvement in sport: A developmental perspective. In J. Silva & D. Stevens (Eds.) *Psychological foundations of sport* (pp. 484-502). Boston, MA: Allyn & Bacon.
- Cury, F., Biddle, S., Famose, J., Goudas, M., Sarrazin, P., & Durand, M. (1996). Personal and situational factors influencing intrinsic interest of adolescent girls in school physical education: A structural equation modeling analysis. *Educational Psychology, 16*, 305-315.
- Duda, J. & Hall, H. (2001). Achievement goal theory in sport: Recent extensions and future directions. In R. Singer, H. Hausenblas & C. Janelle (Eds.), *Handbook of sport psychology* (pp. 417-443). New York, NY: Wiley.
- Dweck, C. (1986). Motivational processes affecting learning. *American Psychologist, 41*, 1040-1048.
- Dweck, C. & Leggett, E. (1988). A social-cognitive approach to motivation and personality. *Psychological Review, 95*, 256-273.
- Eccles, J. & Barber, B. (1999). Student council, volunteering, basketball, or marching band: What kind of extracurricular involvement matters? *Sport, Education and Society, 7*, 151-166.
- Elliot, A. (2005). A conceptual history of the achievement goal construct. In A. Elliot & C. Dweck (Eds.), *Handbook of competence and motivation* (pp. 52-72). New York, NY: Guilford Press.

- Epstein, J. (1989). Family structures and student motivation: A developmental perspective. In C. Ames & R. Ames (Eds.), *Research on motivation in education* (pp. 259-295). San Diego, CA: Academic Press.
- Graham, S. & Golan, S. (1991). Motivational influences on cognition: Task involvement, ego involvement, and depth of information processing. *Journal of Educational Psychology*, 52, 187-194.
- Hamilton, S., Hamilton, M., & Pittman, K. (2004). Principles for youth development. In S. Hamilton & M. Hamilton (Eds.), *The youth development handbook: Coming of age in American communities* (pp. 3-23). Thousand Oaks, CA: Sage.
- Hedstrom, R. & Gould, D. (2004). *Research in youth sports: Critical issues status*. Retrieved April 22, 2012 from <http://edweb3.educ.msu.edu/ysi/project/CriticalIssuesYouthSports.pdf>.
- MacDonald, D., Côté, J., Eys, M., & Deakin, J. (2011). The role of enjoyment and motivational climate in relation to the personal development of team sport athletes. *Kinesiology and Physical Education*. Retrieved from http://scholars.wlu.ca/kppe_faculty/8.
- MacDonald, D., Deakin, J., Eys, M., & Côté, J. (2009). Psychometric properties of the Youth Experience Survey with young athletes. Paper presented at the Canadian Society for Psychomotor Learning and Sport Psychology, Toronto, ON.
- Mahoney, J., Larson, R., Eccles, J., & Lord, H. (2005). Organized activities as developmental contexts for children and adolescents. In J. Mahoney, R. Larson, & J. Eccles (Eds.) *Organized activities as contexts of development*, (pp. 3-22). Mahwah, NJ: Lawrence Erlbaum Associates.

- Marsh, H. & Peart, N. (1988). Competitive and cooperative physical fitness training programs for girls: Effects on physical fitness and multidimensional self-concepts. *Journal of Sport and Exercise Psychology, 10*, 390-407.
- Martens, R. (1993). Psychological perspectives. In B. Cahill & A. Pearl (Eds.), *Intensive participation in children's sports*, (pp. 9-18). Champaign, IL: Human Kinetics.
- Morgan, K. & Carpenter, P. (2002). Effects of manipulating the motivational climate in physical education lessons. *European Physical Education Review, 8*, 207-229.
- Morgan, K., Sproule, J., Weigand, D., & Carpenter, P. (2005). A computer-based observational assessment of the teaching behaviors that influence motivational climate in Physical Education. *Physical Education and Sport Pedagogy, 10*, 83-105.
- Nicholls, J. (1989). *The competitive ethos and democratic education*. Cambridge, MA: Harvard University Press.
- Ntoumanis, N. & Biddle, S. (1999). A review of motivational climate in physical activity. *Journal of Sports Sciences, 17*, 643-665.
- Ommundsen, Y., Roberts, G., Lemrye, P., & Miller, B. (2005). Peer relationships in adolescent competitive soccer: associations to perceived motivational climate, achievement goals, and perfectionism. *Journal of Sport Science, 23*, 977-989.
- Parish, L., Rudisill, M., & Onge, P. (2007). Mastery motivational climate: Influence on physical play and heart rate in African American toddlers. *Research Quarterly for Exercise and Sport, 78*, 171-178.
- Preidt, R. (2011, January 12). Cost of obesity approaching \$300 billion a year. *USA Today*. Retrieved on April 13, 2012 from <http://www.usatoday.com/yourlife/health/medical>.

- Prochaska, J., Sallis, J., Slymen, D., & McKenzie, T. (2003). A longitudinal study of children's enjoyment of physical education. *Pediatric Exercise Science, 15*, 170-178.
- Robertson-Wilson, J., Baker, J., Derbyshire, E., & Côté, J. (2003). Childhood physical activity involvement in active and inactive female adults. *Avante, 9*, 1-8.
- Ryan, R., Connell, J., & Deci, E. (1985). A motivational analysis of self-determination and self-regulation in education. In C. Ames & R. Ames (Eds.), *Research on motivation in education* (pp. 13-51). San Diego, CA: Academic Press.
- Seefeldt, V., Ewing, M., & Walk, S. (1992). *Overview of youth sports programs in the United States*. Washington, DC: Carnegie Council on Adolescent Development.
- Seifriz, J., Duda, J., & Chi, L. (1992). The relationship of perceived motivational climate and beliefs about success in basketball. *Journal of Sport and Exercise Psychology, 14*, 375-391.
- Smith, R., Smoll, F., & Cumming, S. (2007). Effects of a motivational climate intervention for coaches on young athletes' sport performance anxiety. *Journal of Sport and Exercise Psychology, 29*, 39-59.
- Smith, R., Smoll, F., & Passer, M. (2002). Sport performance anxiety in children and youth. In F. Smoll & R. Smith (Eds.), *Children and youth in sports: A biopsychosocial perspective* (pp. 501-536). Dubuque, IA: Kendall/Hunt.
- Solomon, M. & Lee, A. (1997). Development of an instrument to assess cognitive processes in physical education classes. *Research Quarterly for Exercise and Sport, 68*, 152-160.
- Tremblay, M., Katzmarzyk, P., & Willms, J. (2002). Temporal trends in overweight and obesity in Canada, 1981-1996. *International Journal of Obesity and Related Metabolic Disorders, 26*, 538-543.

- Walling, M., Duda, J., & Chi, L. (1993). The perceived motivational climate in sport questionnaire: Construct and predictive validity. *Journal of Sport and Exercise Psychology, 20*, 476-489.
- Wankel, L. & Berger, B. (1990). The psychological and social benefits of sport and physical activity. *Journal of Leisure Research, 22*, 167-182.