Parent-Initiated Motivational Climate and Young-Child Enjoyment and Commitment in Year-Round Swimming

by

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Many factors potentially influence a young athlete's sport enjoyment and commitment. Social agents, such as parents, explain a large part of the variance in youth sport experiences. While research suggests the environment created by parents' impact athlete sport experiences, it is unknown if this is true for young children in the early stages of sport participation (5-8 years of age). Previous research has failed to address the reasons why parents are initially enrolling their children in youth sport which could be associated with parent-initiated motivational climate and child enjoyment and commitment to year-round swimming. The purposes of this study were to: a) to determine the reasons parents enroll their children in year-round competitive swimming, b) to examine the relationship between parent-initiated motivational climate and child's swim enjoyment and commitment, c) to study the relationship between parent-initiated motivational climate and parent's motive for enrolling their child in year-round swimming, and d) to study the relationships between parent motives for enrollment in year-round swimming and child enjoyment and commitment to swimming. Forty parent-child dyads were recruited from registered USA Swimming club teams in Southeast United States. Parents completed questionnaires to measure parent and child demographics, child swim history, parent motives for year-round swim team enrollment, and parent-initiated motivational climate. Children completed a questionnaire assessing their enjoyment and commitment to year-round swimming. Overall, the

primary reason parents enrolled their child in year-round swimming was for fitness benefits (M = 4.54 ± .45). The highest-rated parent-initiated motivational climate was a learning (mastery) climate (M = 3.72 ± .28). Children, on average, year-round swimming was rated very enjoying (M = 4.35 ± .65) and commitment was also rated high (M = 4.29 ± .89). Pearson-product correlations uncovered notable relationships. No relationships were found between any of the parent-initiated climates and child enjoyment and commitment in year-round swimming (p > .05). No significant relationships were found between a parent-initiated learning climate or parent-initiated worry-conducive climate and any of the seven parent motives for year-round swimming enrolment (p > .05). A success-without-effort climate was strong and moderately negatively associated with the fitness (r = -.50, p < .01) and skill/mastery of skill (r = -.38, p < .05) motives, respectively. Lastly, the only statistically significant relationship observed in respect to parent motives and child enjoyment and commitment was between the fun/excitement parent motive and child commitment to swimming (r = .43, p <.01). The current findings illustrate why parents enroll younger children in year-round swimming and help explain the relationships between the parent motives for enrollment and child enjoyment and commitment to swimming. Thus, research suggests that between ages five and eight years of age, a parent-initiated motivational climate may not be related to a child's enjoyment and commitment to swimming. Understanding parent motives for enrollment could be associated to the type of climate the parent is likely to create but may not necessarily be associated with child enjoyment and commitment in the first years of year-round swimming participations. The overarching goal is for parents and coaches to understand how motives for enrollment and motivational climates may associate with enjoyment and commitment to year-round swimming in young athletes.

PARENT-INITIATED MOTIVATIONAL CLIMATE AND YOUNG CHILD ENJOYMENT AND COMMITMENT IN YEAR-ROUND SWIMMING

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Chapter I. Introduction

An estimated 40 million youth participate in at least one organized sport team or club between the ages of six and 18 in the United States (Brenner, 2007; Matzkin & Garvey, 2018). One of those is swimming, and not only is it a lifetime sport, but has steadily grown in population since 1986. Over 300,000 youth (ages five to 18 years) enroll in year-round swimming programs (2018 USA Swimming Membership Demographics Report). Currently it is unclear why parents enroll their child in youth sport. Parents play a key role in promoting physical activity in their child's life, so it would be important to better understand the factors influencing parent's enrollment in sport and specifically swimming.

Given the popularity of swimming and youth sport in general, it is not fully understood why physical activity decrease from childhood throughout adolescence and young adulthood. The current physical activity recommendations for youth are 60 minutes of moderate-to-vigorous physical activity (MVPA) per day (2018 Physical Activity Federal Guidelines). However, less than 50% of children between the ages of six and 11 years, are meeting the physical activity recommendations, and as a child reaches adolescent years and young adulthood, the prevalence drops to nearly 10% (Troiano et al., 2008). Youth sport participation may keep children active for a longer time if they enjoy their sport and are committed to participation (The Aspen Institute Project Play, 2019).

Sport participation increases the likelihood of youth meeting physical activity guidelines (Dodge & Lambert, 2009). Herbet et al. (2015) compared elementary-aged children who participated in an organized sport to those who did not. The data showed youth athletes were more likely to spend less time in sedentary behavior, more time engaged in MVPA, and were more likely to meet physical activity guidelines (Herbet et al., 2015). In addition, youth sport

also predicts physical activity levels in adulthood (Alfano et al., 2002). The association between youth sport participation and meeting physical activity guidelines is significant. However, other factors may contribute to whether or not a youth athlete will be an active adult in the future. It is possible that if a youth athlete has a positive sport experience, they will participate longer and therefore choose to remain active into their adulthood once sport has ended.

Sport participation not only helps children meet physical activity recommendations, but it is also associated with youth development and positive health outcomes. Youth sport participation is associated with increased social developmental skills (Anderson-Butcher et al., 2008; Reverdito et al., 2017; Super et al., 2014) and improved mental health (Hamer et al., 2008; Swan et al., 2018). Further, sport participation in high school-aged students is associated with positive health outcomes as an adult (Alfano et al., 2002). Sport, however, is not a universally positive experience as there can be negative consequences of sport participation. Whatman et al. (2018) found over 50-60% of athletes between the ages of 11-18 years reported that they felt the pressure to continue participation when injured during a competition. Further, Purdy et al. (1981) reported in 11-12-year-old year-round swimmers that 53% percent of the youth swimmers had symptoms of insomnia, 29% loss of appetite, and 28% physical sickness before a competition. The stress and pressure young athletes endure from external sources such as coaches, peers, and parents (The Aspen Institute Project Play, 2019). Moreover, parents and coaches underrated the degree to which their child felt pressure and stress leading up to competition compared to the child's self-reported levels of pressure and stress. Coaches, peers, and parents might negatively influence children's sport experiences (Chan et al., 2012; Mollerlokken et al., 2017; Smith et al., 2010).

Many factors can potentially impact the quality of youth sport experiences. Chan et al. (2012) showed that the social agents of sport (parents, coaches, and peers) explained a large part of the variance in 400 year-round swimmers sport experience. Social agents accounted for 57% variance for effort, 43.1% for enjoyment, 35.1% for anxiety, and 24.9% for competence. These findings support the need to study social agents of sport and how these social agents contribute to positive sport outcomes such as effort, enjoyment, anxiety, and competence. Chan et al. (2012) also reported that of the social agents measured, a mother's positive reinforcement showed the greatest, significant, positive association with child (ages 9-12) effort and enjoyment levels in sport. However, the same was not true with adolescents (ages 12-19) as a mother's positive reinforcement showed almost no relationship with their enjoyment and effort levels in sport. The researchers suggested that as a child ages, the social influence on their sport experience changes. Compared to adolescent sport participants, less research has examined social agents' influences on young athletes' sport experiences. In swimming alone, youth athletes under the age of nine account for over 8% of the total USA membership population. Still, there is not enough research on the early years of sport.

Because coaches, parents, and peers account for a large portion of the variance in the youth sport experience, it is essential to understand which motivational climate these influencers create for a positive sport experience. According to Achievement Motivation Theory (Nicholls, 1989), a mastery climate, also known as a learning climate, is one that defines success for athletes based on their personal growth, development, and improvement of the sport. A performance climate, also known as a success-without-effort climate and a worry-conducive climate, defines success on one's performance compared to others (winning or losing; Miulli & Nordin-Bates, 2011).

Past research has explicitly examined how parent-initiated motivational climates are associated with higher levels of positive sport experiences compared to coach- and peer-initiated motivational climates. Curran et al. (2015) surveyed over 250 male and female soccer players between the ages of 11 and 18. They found that a perceived parent-initiated mastery climate showed a stronger positive association with athlete engagement defined by confidence, dedication, enthusiasm, and vigor compared to a perceived parent-initiated performance climate. Given a parent-initiated mastery climate was associated with greater sport engagement, the researchers suggested that a parent-initiated mastery climate increases the likelihood of a positive sport experience for youth athletes (Babkes & Weiss, 1999; Leff & Hoyle, 1995; Scanlan et al., 1993). Further, O'Rourke et al. (2014) reported that a parent-initiated motivational climate had a stronger association with self-esteem, trait anxiety, and motivation in nine to 14-year-old youth swimmers compared to coach-initiated motivational climates.

The motivational climate parents create has also been found to have positive associations between a parent-initiated mastery climate and overall sport enjoyment and commitment in athletes ages 11 to 18 years (Gardner et al., 2017; Sanchez-Miguel et al., 2013; Scanlan et al.,1993). While research suggests that the environment a parent creates is related to a child's sport experience, there are gaps in the literature describing child experiences in the beginning ages of sports (five to eight years). In 2008, McCarthy et al. recognized potential discrepancies in the way young athletes may conceptualize and rate sport enjoyment based on age. The researchers' findings showed older athletes (> 11 years old) rated enjoyment significantly higher than younger athletes (< 11 years old). The researchers concluded older athletes might understand the competitive process, their abilities, and can self-evaluate their progress better than younger athletes who may consider a well-rounded sport experience the most crucial factor in

sport enjoyment. The researchers also suggested that there are differences in child enjoyment in sport, based on age, so findings from past studies that survey older child athletes cannot be applied to younger athlete populations, thus the need for continued research in younger child athlete populations. Based on the research in older children it appears that the higher a child's enjoyment and commitment, the more likely the child will want to continue in his/her sport (Calvo et al., 2010; Gardner et al., 2017); however, it is unknown if this is also true for younger children.

Research in older youth has indicated that parent's influences their child's sport enjoyment and commitment through the motivational climate they create. Previous studies have not examined why parents initially enroll their child in competitive sports and how parent motives for enrollment influence child sport enjoyment and commitment in the first few years of sport participation. Parent movies for enrollment may also be associated with parent-initiated motivational climates presented in the first few years of sport and, therefore, also associated with young-child enjoyment and commitment to sport. Research is needed to understand better the significance of parent-motives for enrolling their child in sport and the relationships it has with parent-initiated motivational climates and young child enjoyment and commitment to sport, thus clarifying whether or not parent-motives for enrollment are a first measurement of understanding young child enjoyment and commitment to the sport and later influencing child continuation with sport.

Due to the paucity of research studying the influence of social agents specifically parents, in children ages five to eight years old, a better understanding the relationships between parent-initiated motivational climates, parent motives for enrollment in sport and child enjoyment and commitment to sport in the early ages of sport can be used as educational tools for coaches and

parents to better understand how to keep their child enjoying and committed to the sport in later childhood, adolescence, and teenage years. The longer a child enjoys and is committed to a sport, the higher the chance that the child continues playing the sport, thus, increasing the likelihood the child maintains daily physical activity recommendations. Therefore, more research is needed on how social agents are associated with early sport participation experience (Chan et al., 2012).

Significance of the Study

The current literature fails to study the first years of sport participation. Many of the psychological studies among youth athletes primarily focus on athletes between the ages of 9-18 years; however, sport demographics reports show that the athletes begin sport participation before the age of eight. In year-round swimming alone, the eight-and-under age category accounts for more than 8% of the total membership population (USA Swimming). The significance of this study is to research in the younger athlete population to determine the relationships between parents' motives for competitive sport enrollment, parent-initiated motivational climates, and youth athletes' initial sport participation experiences.

Purposes & Hypotheses

Purpose 1: To determine the reasons parents enroll their child in year-round competitive swimming

Hypothesis 1: Parents enroll their child in year-round swimming primarily for fitness-related benefits

Purpose 2: To study the relationship between parent-initiated motivational climate and child's enjoyment and commitment to swimming.

Hypothesis 2: A parent-initiated learning climate and child enjoyment/commitment will show a positive association, and parent-initiated performance climates will show no

association with child enjoyment and a negative association among children enrolled in year-round swimming.

Purpose 3: To study the relationship between parent-initiated motivational climate and parent's motive for enrolling their child in year-round swimming

Hypothesis: Parents who present a stronger learning climate will enroll their child in year-round swimming for primarily skill/mastery of skill benefits, and parents who present stronger performance climates will enroll their child in year-round swimming for primarily the recognition motive.

Purpose 4: To study the relationship between parent motives for enrollment in year-round swimming and child enjoyment and commitment to swimming

Hypothesis: Parents who enroll their child in year-round swimming for primarily fun/excitement or skill/mastery of skill motives will be positively associated with child enjoyment and commitment to year-round swimming, and parents who enroll their child in year-round swimming for primarily recognition and competitiveness/ego motives will be negatively associated with child enjoyment and commitment to year-round swimming.

Delimitations

1. Child participants between the ages of 5 and 8 years-old
2. Child enrolled in USA Year-Round Swim Club

Definitions of Terms

Motivational Climate: individuals' composite views concerning the situation emphasized goal structures operating in an achievement setting (Duda, 2001 p.144)

- **Mastery Climate:** an environment is created for an individual to enjoy and seek challenges, persist in the face of obstacles, and measures success by focusing on

improvement. Whereas, failings are due to lack of effort or poor use of strategy rather than to lack of ability. A mastery climate is measured on a learning climate subscale (Harwood et al., 2014).

- **Performance Climate:** an environment is created for an individual with a focus on winning a game or achieving superior status in a social comparison. A performance climate is measured on two sub-climate subscales. First, a success-without-effort climate is when a social agent views success as doing better than others without hard effort. Second, a worry-conducive climate is when a social agent worries about failure because failure is considered bad (Harwood et al., 2014).

Achievement Motivation Theory: the factors and/or influencers that contribute to a person's measured success by way of motivational climate (Nicholls, 1989).

Sport Enjoyment: The positive affective response to a sport experience that reflects generalized feelings of joy (Scanlan et al., 2016).

Enthusiastic Commitment: The psychological construct representing the desire and resolve to persist in a sport overtime (Scanlan et al., 2016).

Chapter II. Review of Literature

The following section will explore the literature on youth sport participation. Specifically, the literature review will explain the benefits and consequences of youth sport participation, how parents, coaches, and peers contribute to a child's sport experience (Achievement Motivation Theory).

Benefits of Sport Participation

There are three primary needs for well-being across a lifespan: social, mental, and physical, which make up the health triangle (Kent, 2009). Sport participation is one way to help support all three needs of the health triangle for overall well-being (Kent, 2009). While the support of physical health through sport participation is directly related to an increase in activity levels, sport can also impact the mental and social aspects of health. The following sections will highlight each of the three primary needs for health and how sport is a positive contributor to youth health development; starting with the social development benefits.

Social Development Benefits. Social skills are one of the many developmental benefits potentially gained through youth sport participation. Having healthy social capabilities is required for a balanced life in terms of the health triangle model, so it is important to understand how sport participation supports social skill development over time. Sport-based Positive Youth Developmental (PYD) programs integrate PYD practices into sport context by teaching social and life skills during sport participation and competition. In 2018, Anderson-Butcher, Matin, Paluta, and Gould aimed to understand how changes in youth development occur through participation in a sport-based camp experience and if there are lasting impacts from participation. LiFEsports was a university- and sport-based PYD program with the goal to foster social competence in youth through their involvement in sport, fitness and educational activities. The

LiFEsports program was a four-week summer day-camp where the youth participate in six hours of sports programs, and one hour of Chalk Talk where they focus on play-based social skill instruction. All activities of the program promote the four components of social competence: self-control, effort, teamwork, and social responsibility. The researchers studied 231 youth (143 boys and 88 girls) between the ages of 9 and 14 years (10.71 ± 1.48 years) who participated in LiFEsports and returned for participation the following summer. The participants were identified as either "at-risk" or "high-achieving" based on their perceptions on the social construct measured. The researchers measured self-control, effort, teamwork, and transfer at four different time points: summer 1 (2013) pre-camp, summer 1 post-camp, summer 2 (2014) pre-camp, and summer 2 post-camp to determine the campers' initial growth and maintenance of skills over two summer sessions. The results indicated that at the measured time points, youth who were "at-risk" experienced an increase in self-control over the time they were in camp (summer 1 pre-test to post-test, and summer 2 pre-test to post-test) and maintained the increase over time (summer 1 post-test to summer 2 pre-test) ($p < .001$). Effort was reported to be significantly higher in those youth who were "high achievers" ($T_1 = 4.43 \pm .48$, $T_2 = 4.49 \pm .66$, $T_3 = 4.24 \pm .73$, $T_4 = 4.32 \pm .65$) compared to the "at-risk" youth ($T_1 = 3.40 \pm 74$, $T_2 = 3.73 \pm .87$, $T_3 = 3.92 \pm .74$, $T_4 = 4.14 \pm .70$) across all four timepoints measured ($p < .001$). Teamwork results showed that, in general, youth in the high achieving group experienced a decrease in teamwork while youth in the at-risk group experienced increases in teamwork from summer 1 pre-test to summer 2 post-test ($p < .0001$). As a whole, participants did not experience any differences in self-reported transfer at any of the four time points; however, "High achievers" had higher levels of perceived transfer ($T_1 = 4.34 \pm .65$, $T_2 = 4.47 \pm .71$, $T_3 = 4.25 \pm .82$, $T_4 = 4.23 \pm .78$) compared to those youth who were classified as being "at-risk" ($T_1 = 3.33 \pm .87$, $T_2 = 3.66 \pm .95$, $T_3 = 3.63 \pm .96$, $T_4 = 3.82 \pm$

.92) at all four time points ($p < .05$). In sum, this research showed that PYD based in sport settings are beneficial to improving social constructs among youth, especially in "at-risk" youth, and can be maintained over time.

Sport programs that promote PYD is beneficial for social development in youth participants; however, few researchers have examined the developmental benefits that stem from the involvement in structured sport in developing countries. In Brazil, the government promotes PYD through sports programs; specifically targeted to disadvantaged youth. Segundo Tempo (Second Time) is a program that supported over three-million participants. Reverdito et al. (2017) studied the benefits these Brazilian youth gained, developmentally, from participating in the extracurricular sporting activities. The researchers measured Developmental Assets Profile (DAP) and Human Development Index (HDI) in 614 adolescents (427 males, 187 females) between the ages of 12 to 15 years (13.1 ± 1.07 years). The results showed that the number of years a youth participated in the sport program and their HDI were significant predictors of the social support they had in their lives (OR : .18, 95% CI: .03 - .33; $p = .02$). The years they participated in the program was positively associated with their commitment to learning ($p = .06$). A participants' HDI was a significant predictor of positive identity (OR : -.13, 95% CI: -.24, -.01; $p < .01$). The researchers concluded that youth participation in sport programs, with PYD as a goal, was correlated with significant increases in social support, commitment to learning, and positive identity; all of which built a youth's social development and made them well-rounded young adults.

Researchers have also taken what is known about PYD through sports participation and found these benefits are transferable to youth who have been diagnosed with social development issues. Super, Hermens, Verkooijen, & Koelen (2014), studied youth ages 12 to 23 years who

were seeking treatment for existing problems in their personal development. The participants were asked questions to quantify their developmental outcomes, such as behavior, school performance, subjective health, well-being and their sport involvement. Based on their sport involvement levels the participants were grouped into a level of sport participation (Frequency: did not do sport, one or two times a week, three or more times a week; Duration of Sport: did not do sport, less than one-half hour, between half hour and one hour, between one and two hours, between two and three hours, longer than three hours; Membership of Sports/Fitness Club: no, yes). The most popular sports played among the youth were soccer, swimming, and boxing. Seventy percent of the youth participated in at least one sport a week in the month prior to answering questionnaires, and of those, 61.3% continued to participate during the 6-month period between the initial and post questionnaire. The main finding of the study was for pro-social behaviors, the high-sport group (7.68 ± 1.88) scored significantly higher than the non-sport group (6.92 ± 1.99) (p = .004). There was a main effect of sex for pro-social behavior, F(1, 175) = 4.713, p = .013, n2 = .026, and effort, F(1,129) = 4.490, p = .036, n2 = .034, where girls scored higher than boys. Sense of coherence, however, did not show a significant difference from the high-sport group (34.53 ± 7.71) to non-sport group (31.11 ± 8.02) (p = .139), but did show a significant difference between the moderate-sport group (36.30 ± 7.27) and non-sport group (31.11 ± 8.02) (p = .001). There was a main effect of age for planning, F(1,128) = 6.036, p = .015, n2 = .045, and monitoring F(1,127) = 7.522, p = .007, n2 = .056, where older youth scored higher. The Mantel-Haenszel test of trend showed a significant positive association between sport participation and subjective health (r = .29, p < .001) and well-being (r = .18, p = .013) which supports the belief that PDY through sport is beneficial for those who have social development issues, specifically impacting younger female youth. The research from the study

concluded that there is a positive relationship between children who patriciate in sport and their accumulation of positive developmental outcomes. Youth sport participation could be a way of means for youth to develop positive skills.

Given the popularity of youth sport, psychology research has started to focus on the positive and negative youth developments gained from sport participation. The theory that sport outcomes are associated with developmental assets were tested empirically by Strachan, Côté, and Deakin in 2009. The researchers sampled 123 participants (31 male and 92 female) between the ages of 12 and 16 years (13.9 ± 1.5 years) to determine which developmental assets may predict occurrences of enjoyment in youth sport. All participants had been involved in sports for a minimum of 3 years; the mean age they started sport was 6.4 ± 2.6 years, and they were currently participating in a sport for 15.7 ± 6.3 hours per week. To measure the athlete's development, the researchers used the Developmental Assets Profile (DAP; Search Institute, 2004) which provides a quantitative score for each of the eight categories: support, empowerment, boundaries and expectations, constructive use of time, commitment to learning, positive values, social competencies, and positive identity. Source of enjoyment was measured via the Sources of Enjoyment in Youth Sport Questionnaire (SEYSQ) that assess the athlete's source of enjoyment by one of three categories: self-referenced competency, competitive excitement, or affiliations with peers. The results showed the highest rated developmental assets gained from sport were empowerment (25.19 ± 3.39), support (24.97 ± 4.09), and boundaries and expectations (24.67 ± 4.23). The lowest rated developmental asset was positive values (22.15 ± 4.04). A correlation analysis showed there was a significant negative correlation between reduced accomplishment and each of the DAP subscales: support (r = -.39), empowerment (r = -.51), boundaries and expectations (r = -.32), commitment to learning (r = -.31), positive identity

(r = -.63), social competencies (r = -.47), and positive values (r = -37). In terms of the SEYSQ, the results showed a significant positive correlation between self-referenced competence with empowerment (r = .33) and positive identity (r = .37). Empowerment was positively correlated with competitive excitement (r = .30). The researchers concluded that there is a linkage between enjoyment and developmental assets that can be gained from youth sport. To create an enjoyment climate, the sport environment and context should be designed to promote positive identity, empowerment, and support in mind as the lessons learned through sport can be applicable to many areas of life long after sport is over.

Another asset to gain from youth sport participation falls under the concept of character building. In psychology, this is referred to as prosocial and antisocial behaviors. Previous studies have found that the way youth athletes connect with one another in the sport context influences how they treat another teammate, thus promoting either a pro-social or anti-social character. In 2018, Herbison, Vierimaa, Cote, and Martin studied athletes' interactive behavior with one another and determined if athlete connection at the beginning of the season could predict observable teammate prosocial and antisocial behavior towards the end of the season. The researchers studied 43 competitive volleyball players (15.86 ± 1.17 years of age) from four female and one male teams. The average level of playing experience was 3.84 ± 2.14 years. The team's season lasted for five months and athletes attended practice twice per week. The researchers measured connection and character. Connection was measured via a peer nomination questionnaire that measured athlete's sociometric status. Participants were classified as one of the following five categories based whom the athletes enjoyed participating with: popular (high number of positive nominations), rejected (high number of negative nominations), neglected (fewest number of positive or negative nominations), controversial (high positive and high

negative nominations), or average (participants did not meet the threshold). Character was measured with the Athlete Behavior Coding System to observe the athlete's prosocial and antisocial behaviors directed towards their teammates. Behaviors were recorded by frequency according to pro-social and anti-social behaviors and communications. Data collection was taken at the beginning and end of the season. The results showed there was a significant difference in sociometric status based on the time of data collection (beginning of the season versus the end) ($p < .001$). A significant positive correlation was seen between the popular sociometric group (measured from Time 1) and their observed prosocial behaviors (measured at Time 2) ($r = .324$, $p = .034$) which expressed that those who were rated are more popular at the beginning of the season were more likely to show prosocial behaviors at the end of the season. There were no other significant findings in sociometric status and end of season character measured. The findings of the study suggest that there is increased interaction between teammates and, as a result, athletes were categorized as either popular or rejected. Being noted as popular was associated more with expressing prosocial behaviors at the end of the season than being noted as rejected, neglected, or average which showed no significance. The more coaches and athletes understand how being a teammate that is popular, or enjoyable to participate with, the more likely it is that they will develop prosocial behaviors throughout the duration of their sports participation. Prosocial behaviors, that are gained through sport participation, support one of the three main health constructs: social health.

Social health is the first of three health components mentioned in this review of literature. As previously found, social health is a key component for a balanced health triangle and should be supported throughout an individual's life. Youth sport participation is a valid option for

obtaining social development at a young age. The benefits of youth sport on social development include an increase in effort, pro-social behaviors, well-being, and commitment to learning.

Mental Health Benefits. Sport participation, and general physical activity, is also beneficial for supporting the second component to an overall healthy and well-balanced life: mental health. Physical activity is associated with increased mental health and psychological well-being. Mental health is recognized as a person's condition with regard to their psychological and emotional well-being, and research supports the use of physical activity to increase a positive mental health (U.S. Department of Health and Human Services, 2018). Sport has not been studied like physical activity has to understand the impact sport has on mental health; however, some research supports positive mental health through positive sport experiences. Swan et al. (2018) recognized the potential benefits sport participation has for supporting mental health and studied 55 adolescent males between the ages of 12 and 17 years (14.73 ± 1.67 years). The boys played basketball, soccer, football, swimming, cricket, or tennis. The researchers put together focus groups of younger and older adolescents to discuss the participants' perception on organized youth sport as a context for supporting mental health. The discussion centered around the following topics: (a) knowledge, beliefs and perceptions about mental health, (b) the role of organized youth sports as a vehicle of supporting mental health, (c) perceived needs regarding mental health, and (d) preferences and perceptions regarding interventions to promote mental health through sports. The key findings of the study were that the males perceived sport could be engaging for supporting mental health compared to other settings such as school. The males considered coaches, family, and elite athletes to be key individuals in supporting mental health. Sport participation was overall rated to be positive in the sense that it is therapeutic which helps mental health, but the males did note the stress that comes

with being a committed athlete that could be diminishing to mental health. Overall, the research findings supported sport context for promoting a positive mental health but lacked the ability to identify how much and what types of activities were more supportive of the athletes' mental health.

Hamer, Stamatakis, & Steptoe (2008) studied the dose-response relationship between a variety of physical activity, including sports, and mental health in adolescents. Specifically, they hoped to discover the association of different types and amounts of physical activity with current psychological distress using the 12-item General Health Questionnaire (GHQ-12). The researchers used data from the Scottish Health Surveys on 19,842 respondents (53.9% female, 46.1% male) ages 16 years and older (45.2 ± 15.5 years). The data reveled information regarding the participants' height and weight measurements, demographics, and health related questions. Mental health was assessed via GHQ-12 which enquires about general level of happiness, experience of depressive and anxiety symptoms, and sleep disturbances for the previous four weeks. The physical activity interview enquired about activity participation in the previous four weeks. Physical activity was assessed across three domains: leisure time sport (cycling, swimming, running, aerobics, dancing, football, and tennis), walking for any purpose, and domestic physical activity (heavy housework, home improvement activities, manual and gardening work). Of the sample, 3,200 (16%) adolescents were found to have psychological distress. Of those with psychological distress, 32% did one or less physical activity session per week that lasted at least 20 minutes (not including domestic activities). Adolescents with higher activity levels had lower GHQ-12 scores. All types of activity were associated with lower levels of psychological distress (OR = .27, 95% CI: .16-.47), although a dose-response relationship was only present with sports (33% reduction) and overall activity. Those who participated in sport

activity one to three days per week had significantly lower rates of psychological stress (OR = .66, 95% CI: .59-.73) compared to those who participated in sport activities less than one day per week. Those who participated in four or more days of sport activity per week reported significantly lower psychological destresses compared to those who did one to three or fewer than one day per week (OR = .53, 95% CI: .43-.64). These findings suggest that sport participation is beneficial to decrease and/or prevent psychological distress from a person's life.

Though the previous studies support the mental health benefits from participating in sport, they fail to mention how mental health constructs impact sport participation which could be critical in determining why youth participate in sports. Vella et al. (2016) studied the bidirectional associations between adolescent sport involvement and mental health. The study sample was recruited from The Longitudinal Study of Australian Children which is a biennial study of the social, environmental, and economic influences on the health and development of Australian children. The researcher recruited participants in Wave 5 and Wave 6 of the study who were at age 12 and 14, respective per Wave. There were 2,400 participants that completed the interview and questionnaire at both Wave 5 and Wave 6 (roughly 50% male, 50% female). Face-to-face interviews were conducted with the child's primary parent (96% mothers) in which they reported their child's time spent in sport participation (Wave 5: 2.59 ± 3.36 hours/week, Wave 6: 2.45 ± 3.53 hours/week). The child completed a Strengths and Difficulties Questionnaire that qualified the child's psychological difficulties. The questionnaire uses two subscales to measure internalizing problems (i.e., emotional and peer problems), externalizing problems (i.e., conduct and hyperactivity/inattention problems) while also measuring for overall mental health. The research showed that sport participation can impact mental health and/or mental health can impact sport participation. The results reported that as sport participation at

age 12 increased there was a decrease in mental health problems at age 14 (beta coefficient= -.039, 95% CI: -.059 to -.019), and as mental health problems at age 12 was increased, there was a decrease with sport participation at age 14 (beta coefficient= -.085, 95% CI: -.132 to -.037). The findings suggest that sport participation was associated with a decrease in poor mental health from 12 to 14 years of age, and that if a 12-year-old displayed poorer mental health they were less likely to participate in sport at 14 years. As sport participation increased at age 12 there was a negative association with internalizing problems at age 14 (beta coefficient= -.071, 95% CI: -.101 to -.042), which suggests that those who participated in sport were better at internalizing problems when they got older compared to those who did not participate in sport. Internalizing problems at age 12 were negatively associated with sport participation at age 14 (beta coefficient= -.076, 95% CI: -.111 to -.041). Externalizing problems at age 12 predicted total hours of sport participation at age 14 (beta coefficient= -.041, 95% CI: -.074 to -.009), but total sport participation did not predict externalizing problems at age 14 (beta coefficient= -.024, 95% CI: -.051 to .004). In conclusion, the study revealed that sport participation is not just a predictor of mental health in future years, but mental health is a predictor for sport participation. This study supports the idea that the psychosocial constructs (i.e., internalizing and externalizing problems) gained in the youth age could be from sport participation. Other evidence strongly supports the mental health benefits associated with youth sport participation.

In 2009, Doge and Lambert studied the positive self-beliefs of young adults whom had previously participated in adolescent sports. Using data from the National Longitudinal Study of Adolescent Health over eight months (September 1994 to April 1995), 8,152 respondents (3,804 male and 4,348 female) students from the 80 high schools and their feeder schools completed a self-administered questionnaire. All students were used as a sampling group for in-home

interviews where a researcher interviewed the adolescent in the presence of a caregiver. A follow-up was done on the in-home interview sample one year later, and then six years later. Positive self-beliefs were assessed during the one-year follow-up while the behavioral outcomes of physical activity and subjective health were assessed at the six-year follow-up. Sport participation was noted during the initial questionnaire during adolescents where the participant checked off the sport they participated in during the school year: baseball, basketball, field hockey, ice hockey, football, soccer, swimming, tennis, track, volleyball, and wrestling. Subjective health was measured using a 5-point Likert scale from 1 (poor) to 5 (excellent). Finally, positive self-beliefs were measured with an 11-item questionnaire that assessed positive beliefs about the self-esteem. The participants responded to the questionnaire on a 5-point Likert scale ranging from 1 (strongly agree) to 5 (strongly disagree). The results showed that 57% of adolescents were currently or were planning on participating in sport during that school year. They did not separate the results for the two sport participation responses. Sports participation was found to be a predictor of exercise in adulthood (beta coefficient= .99, $p < .01$), subjective health (beta coefficient= .17, $p < .01$), and positive self-beliefs (beta coefficient= .13, $p < .01$). The overall findings of the study concluded that adolescent sport participation was associated with increased levels of positive self-beliefs and higher ratings of subjective health in young adulthood. The positive mental health outcomes from sport participation are critical to enhancing the mental health component of the health triangle model and research suggests that mental health can be a predictor to a youths continued sport participation in the future which is known to contribute to many physiological benefits the longer they participate in sport.

Given that physical activity is commonly known for improving mental health, it is reasonable for researchers to study the impact sport participation has on mental health in youth

athletes. The findings of the research studies indicate that sport participation maybe a way to improve mental health by means of increasing positive self-beliefs, internalizing and externalizing problems, and decreasing psychological stressors. Thus, the conclusion can be made that not only is youth sport participation a valuable resource for improved social health and development, but it is also valuable for improving and/or preserving one's mental health.

Physiological Benefits. Physical activity during childhood could lead to physiological health benefits. There is an abundance of research that supports physical activity engagement in children which positively impacts their physiological health: the third component of the health triangle. Sport participation is beneficial for social and mental well-being, and previous research also supports youth sport participation as means of achieving physical health benefits.

In 2016, Howie et al. studied the effect organized sports participation had on youth athletes from their childhood years through adolescents (ages five to 20 years). The authors' aim of the longitudinal study was to identify trajectories of organized sport participation which were suspected to lead to an increase in physical health outcomes in young adulthood. The trajectory labels were: sport participators, sport dropouts, sport nonparticipators, and sport joiners. Research data was collected from The Western Australian Pregnancy Cohort (Raine) Study. Mother's registered for the Raine study during pregnancy. For this particular investigation data were from follow-ups at ages five, eight, 10, 14, 17, and 20 years. To be included in analysis the child must have participated in four out of five follow-up periods. Eight hundred and twenty-four girls and 855 boys were included to data analysis. The researchers assessed organized sport participation and young adulthood health variables at each of the follow-ups by parental report. Organized sport was measured via a "yes" or "no" response as to whether or not their child participated in organized sport outside of school hours. When the child participants were 20

years of age, they provided measures of their body composition, and general health. Body composition was measured using a whole-body dual-energy X-ray absorptiometry scan. Percent body fat, absolute lean mass, and body mass index were used in analysis. Health and well-being were assessed via Short Form 12-Item Health Survey version 2. The results showed that sport participation increased from ages five to eight years and decreased at age 17. Girls were classified as one of the three trajectory labels: sport participators (47.5%), sport dropouts (34.3%) and sport nonparticipators (18.1%). Female sport dropouts (OR : -1.9; 95% CI: -3.6 to -.2) had a significantly lower health and well-being scores compared to those who were constantly active. Further, female sport nonparticipators had lower lean body mass (OR : -2.3 kg; 95% CI: -3.6 to -.9), body mass index (OR : -.5; 95% CI: -.9 to -.02), and lower health and well-being (OR : -2.9; 95% CI: -4.8 to -1.1) compared to those females who were constant sport participators. Boys were classified as one of three trajectory labels: sport participators (55.2%), sport dropouts (36.9%), and sport joiners (8.1%). Boys classified as sport dropouts had higher percent body fat (3.5%; 95% CI: 1.5-5.6), lower lean body mass (-4.2 kg; 95% CI: -6.0 to -2.4), and lower body mass index (-1.0; 95% CI: -1.4 to -.5) compared to the consistent sports participators. The researchers concluded that organized sport participation throughout childhood and adolescents was associated with increased perceived health and well-being and lean body mass among girls, while active boys showed a decrease in body fat percentage, and an increase in lean mass, and perceived physical health and well-being. Although sport participation decreases with age, participation in sport provides significant physiological health benefits.

One of the main benefits of physical activity, including sports participation, is to gain health benefits related to decreases prevalence of disease. Metabolic risk has risen as the prevalence of childhood obesity has also increased over time. Werneck et al. (2018) proposed

that early exposure to activity, such a sports practice, can increase the adherence to an active lifestyle which, in-turn, has long-term benefits for health. The aim of their study was to examine direct and indirect pathways to the association between sports practice in childhood and metabolic risk in adolescence. The participants for the study were 991 adolescents (579 girls and 412 boys) between the ages of 10 and 17 years. The researchers measured the metabolic risk for the participants via waist circumference, blood pressure, blood glucose, high-density-lipid cholesterol, and triglycerides. Sport participation in childhood was collected through a "yes"/"no" questionnaire that involved supervised sport for at least one year between the ages of seven years and 10 years. Cardiorespiratory fitness was measured via Leger and Lambert 20-meter shuttle-run test to estimate VO2 peak. Adiposity was measured via body mass index. The findings indicated that sports practice in childhood was significantly correlated with a reduced metabolic risk (r = -.222, p < .001) and adiposity indicators (r = -.244, p < .001), but only among girls. Sports practice was weakly correlated with cardiorespiratory fitness activity in both boys (r = .123, p < .05) and girls (r = -.237, p < .001). The main finding of the study was that sports participation decreased the child's metabolic risk. Thus, supporting the role of sport participation as a way to obtain physiological health benefits.

Physical activity is a known modifiable factor that can affect peak bone mass during adolescent ages. Vlachopopulos et al. (2017) conducted a longitudinal study to examine the effect of sport participation on bone mass among various athletes from football, swimming, and cycling. The participants of the study were 116 males (13.1 years ± 1.0) who participated in football (n = 37), swimming (n = 37), and cycling (n = 28) for more than three hours per week for the previous three years. Finally, there was a control group of 14 males who were not engaged in the sports for the previous three years for three or more hours per week. A variety of

bone mineral content measurements were taken at baseline in autumn/winter, then one year later using dual-energy X-ray absorptiometry. The findings showed that after one year, football players significantly increased bone mineral content in their lumbar spine (49.27 g) and femoral neck (5.00 g) compared to cyclist (46.03 g, 4.76 g, respectively, $p < .05$) and control (46.48 g, 4.87 g, respectively, $p < .05$). Swimmers (46.10 g, 4.89 g, respectively) showed similar bone mineral content in the lumbar spine and femoral neck as the controls (46.48 g, 4.87 g respectively) and cyclists (46.03 g, 4.76 g respectively), but lesser than that of football players (46.10 g, 4.89 g, respectively, $p < .001$). In regard to bone geometry acquisition, football players had significantly higher trabecular bone score compared with swimmers (1.423 vs 1.365, $p < .05$), but the scores were similar compared to cyclists (1.423 vs.1.366). Football players also showed greater cross-sectional moment of inertia (11088.7mm^4, $p < .05$), and cross-sectional area (144.5mm^2, $p < .05$) compared to the cyclist (10063mm^4 and 146.6mm^2, respectively), but similar to the controls. Swimmers had similar cross-sectional moment of inertia (10301.7 mm^4) and cross-sectional area (148 mm) compared with the controls (10284.3mm^4, 147mm^2, respectively) and cyclists (10063mm^4, 146.6mm^2, respectively). The researchers concluded that one year of football participation (a sport that involves greater impact on the bones) is beneficial for bone acquisition over a one-year period. Sports without osteogenic components (lack of gravity in water, and low-impact of cycling) do not propose any bone health benefits. This, however, is not to say that sport participation in activities such as cycling, and swimming are not beneficial to other health aspects.

The health benefits obtained from sport participation in school-aged children and youth are carried over into adulthood as research shows those who were active and healthy at a younger age are more likely to be active and healthy at an older age. In 2002, Alfano, Klesges, Murray,

Beech, & McClanahan had 486 adult women aged 18-39 years recall their past sport participation and the intensity at which they played to see if adolescent sport activity levels impacted adult-life weight-related health. Sixty-three percent of the adults participated in at least one sport for at least one year in high school. The results showed a significant negative association for past sports participation and body mass index (BMI, as calculated by height and weight) ($p < .001$). A 1-unit increase in sport participation was associated with a .41-unit decrease in adult BMI ($t(1) = -2.040$, $p = .042$). The study nicely coincides with the other research that examines the benefits of youth sports. This study shows the impact sport participation during youth ages can influence health in women as adults.

Sport, as a type of physical activity, incorporates various modes of training. Endurance and high intensity intervals are common across many sport training and competitions; both of which have been found to have health-related benefits. In 2012, Corte de Araujo et al. studied the health benefits obtained from obese children who participated in endurance and high-intensity interval training. The researchers studied 39 outpatient children between the ages of 8 and 12 years, with a BMI = 95^{th} percentile, no pharmacological treatment, and no evidence of metabolic, hormonal, orthopedic, and cardiovascular disease, no participations in a regular exercise training six months prior to the study. The participants were randomly assigned into either the endurance training (ET) group or the sprint interval training group (HIIT). Physiological measurements were taken at baseline and after 12-weeks of the exercise intervention. Measurements included aerobic fitness (modified Balke treadmill test), body composition (bioelectrical impedance) and metabolic parameters (blood samples). Children were provided with generic counseling by a professional nutritionist but there was no intervention for eating habits. The training protocol for the participants was to exercise via running/walking on a treadmill twice a week on alternate

days for 12 weeks. The ET group performed 30-minutes continuous exercise at 80% peak heart rate and progressed their program by 10-minutes every three weeks until they reached a total of 60-minutes. The HIIT group did repeated efforts of 60-seconds at 100% peak velocity followed by a 3-minute active recovery at 50% peak velocity. Training progression was done by adding one bout of exercise every three week (first week 3 bouts, last week 6 bouts). The findings of the study showed that VO2peak was significantly increased in both groups (ET: 13.1%, HIIT: 19.0%). Insulinemia (ET: 29.4%, HIIT: 30.5%) and HOMA-index (ET: 42.8%, HIIT: 37.0%) were significantly lower for each group at the end of the intervention. Body mass was only significantly lower in the HIIT group (2.6%), but not in the ET group (1.2%); however, both groups significantly lowered their BMI (ET: 3.0%, HIIT: 5.0%). The researchers concluded that both groups were effective in showing physiological fitness benefits over the 12-week intervention period. Thus, one can infer that sports which require either endurance or high intensity interval training for at least 30-minutes two-days per week over twelve weeks can expect to see physiological benefits.

Sport participation throughout childhood and adolescents is beneficial for many physiological benefits. Research shows how sport participation decreases body mass index, improve body composition, decrease risk of metabolic disease and increase bone health. The benefits a child gains from sport participation is potentially contingent on the type of sport participated in, the level of intensity, and the frequency of participation.

Physical Activity Level Benefits. Aside from the three components that make up the health triangle (social, mental, physical), youth sport participation also promotes physical activity levels in children which has been found to be a positive influence on adulthood activity levels. Given that research supports physical activity as a preventative measure to physiological

stresses and health-concerns, it is important to evaluate the influence sport participation has on meeting physical activity guidelines. Dodge and Lambert (2009) examined the way sport participation aided in youth for meeting physical activity guidelines. Physical activity was measured via self-reported items that were based on the seven-day physical activity recall. The questionnaire asked specifically on the frequency and intensity level of the activities recently experienced by the participant. The average frequency and intensity of physical activity in young adulthood provided an average from one to five on how often they engaged in participated in moderate-to-vigorous activity (4.52 ± .13) and they felt they were in overall good health (4.01 ± .1) which not only supports the idea of sport participation as means to achieving physical activity recommendations, but sports are also a way for youth to obtain more physical activity compared to those youth who do not participate in sport.

Research done by Marquest, Ekelund, and Sardinha (2014) examined whether organized sport participation was related to achieving the physical activity recommendations in youth. A sample of 973 Portuguese children (427 boys, 546 girls) and adolescents between the ages of 10 to 18 were taken (14.1 ± 2.4 years). The researchers measured physical activity, physical fitness, and weight. Participants psychological measurements were taken, and then they were asked about the involvement in organized sport. The researchers defined organized sport as sport activities guided by a coach or adult. Physical activity was measured via GT1M Actigraph accelerometer for at least three days with a minimum of 600 minutes wear time was used for analysis. More than one-third of the participants participated in organized sport (37.5%), and significantly more males (n = 219) participated compared to females (n = 146) ($p < .001$). Of the boys, 28.3% met physical activity guidelines of 60 minutes of moderate-to-vigorous physical per day. Of the girls, 7.7% met the physical activity guidelines; this was significantly less compared

to the boys ($p < .001$). Overall, the boys who reported participation in sport were more likely to meet physical activity guidelines than the boys who did not participate ($p < .001$). The same was not found to be true for the girls ($p = .315$). However, boys and girls who reported being involved in organized sport spent significantly more minutes in moderate physical activity (4.1 ± 5.3 min/day), vigorous activity (40.7 ± 25.4 min/day) compared to those with did not report any sports participation (moderate: 2.5 ± 3.5 min/day, vigorous 32.5 ± 22.6 min/day) ($p < .001$). In sum, the children who participated in organized sport met physical activity guidelines ($p = .008$), spent more time in moderate physical activity ($p = .002$), vigorous physical activity ($p < .001$). The findings from the study support the notion that organized sports participation is associated with youth and adolescents meeting physical activity guidelines which are critical to living a well-balanced and healthy life.

Other research, such as the work done by Herbet et al. (2015), agree with previous research on utilizing sport as a means of achieving physical activity levels in children and youth. The researchers studied organized sport and physical activity levels of 1026 children from two elementary schools in Denmark. Physical activity was measured via Actigraph GTX3 accelerometer for seven consecutive days. The children reported participating in no sport (58%), soccer (20.7%), handball (11.2%), gymnastics (8.3%), basketball (1.1%), and volleyball (.8%). The results showed that sport participation was associated with lower sedentary behavior (b[95% CI] = -1.08[-2.12, -.03] to -4.54[-6.83, -2.24]) and higher moderate-to-vigorous physical activity daily (b [95% CI] = .66[.20,1.13] to 2.44[1.44,3.44]) compared with those who were not participating in sport at all. Depending on sport frequency, these changes in time equate to 9 to 36 minutes/day less sedentary time and 5 to 20 more minutes of moderate-to-vigorous physical activity per day. The children playing soccer and handball were found to have the greatest effects

on sedentary behavior and time spent in moderate-to-vigorous physical activity. Among children who played handball three or more times a week spent 20 minutes less in sedentary behavior per day (beta coefficient= -2.51, 95% CI: -4.13 to -.90). The associations between other sports and physical activity levels were inconsistent. Further after controlling for sex, grade level, and school, there was a significant trend between the association of either soccer or handball participation and meeting physical activity level guideline concordances ($p < .001$). Children playing soccer at any frequency level were three (95% CI: 1.49-6.19) to 15 (95% CI: 1.97-106.56) times more likely to achieve the guidelines of 60 minutes of moderate-to-vigorous physical activity per day compared to children not in organized sport. Similar results were found for children playing handball three days a week (OR = 11.79, 95% CI: 3.58 - 38.84). The findings of the study highlighted the potential importance of sport, as a way help child meet physical activity guidelines.

Alfano et al. (2002) found that sports participation in youth is not just a predictor of youth physical activity levels, but it can be used as a predictor for adulthood physical activity levels in women. The researchers assessed the participant's level of past sport participation and the intensity at which they played to see if adolescent sport activity levels impacted adult-life physical activity and weight-related health. They compared the participant's high school sport participation to current physical activity levels. Sport participation was positively related to the total level of current physical activity ($F(2,417) = 23.780$, $p < .001$) with no significant cofounders. Past sport participation was associated with a .154-unit increase in current sport activities ($t(1) = 5.069$, $p < .001$) which agrees with the previous research studies that sport participation at youth age is associated with future physical activity levels and sport participation in the future.

In 2018, Kokko et al. studied sports club participation and the relationship with physical activity in children and adolescents on a larger scale. The researchers, who came from six different European countries, used data from Sports Club for Health working group Europe to analyze findings from six different countries. The key identifiers were sports club participation, and overall moderate and vigorous physical activity among children and adolescents between the ages of 11 to 15 years. The results from the data analysis from the various counties was that 60-90% children and adolescents participated in sports club activities, and similar to previous research, boys (61-71%) were more active in sports than girls (49-66%). Sports participation also decreased based on age. Physical activity recommendations (60 minutes of moderate-to-vigorous physical activity in a week) were met by 12-42% of all children and adolescents. Those who participated in sport were more likely to meet the physical activity recommendations (OR = 2.0 - 6.4; 95% CI: 1.8-8.2) compared to those who did not do sport. In regard to vigorous physical activity, 30-62% of all children and adolescents engaged in vigorous physical activity at least four times per week. Again, those who participated in sports were more likely to participate in vigorous activity (OR = 2.8-5.0; 95% CI: 2.5-6.0) compared to the non-sport participants. In all, the researchers concluded that in many countries children and adolescents who were participating in sport were more likely to meet physical activity recommendations compared to their counterparts who were not participating in sport. This supports sports participation as a means of meeting daily physical activity recommendations which are vital to staying healthy and preventing chronic diseases, thus children and adolescents should be encouraged to participate in sport.

The benefits of these studies show how involvement in organized sport, regardless of frequency, can help children reach the daily recommendations for physical activity. Not only is

sport participation beneficial for meeting physical activity recommendations in youth and adolescents, but it acts as a predictor for future physical activity participation which is vital for a healthy life.

Summary. Humans need to support their health triangle to insure overall health and well-being. This includes activities that supports physical, mental, and social health. Research supports youth participation in sport for a variety of health-related benefits. Not only does sport participation increase the likelihood of meeting daily physical activity recommendations which are translated into increased physical health, but research supports sports participation for increasing social and mental health at a young age.

Negative Consequences of Sport Participation

Participation in sport is not universally a positive experience. Although there are many positive benefits to be gained, one must also consider the possible negative consequences of youth sport participation. While sport participation has a clear positive association with an increase in social, mental, and physical health, it should not go unnoted that sport participation can lead to negative impacts on one's mental and physical health including sport-related injuries, stress, and decreased future sport participation.

Injuries in Youth Sport. Emery (2003) noted that sport related injuries are the number one reason youth seek medical attention. Sport injuries impact a youth's ability to play in sport, thus leading to decreased activity level, and could even prevent a child from returning to play. Whatman, Walters, & Schluter (2018) highlighted the impact sport-related injuries can have on youth, and how coaching influences can be hurtful to players. The research targeted coaches and players involved in a secondary school sport (netball, football, and basketball). Participants (N = 343) responded to the questionnaires (117 coaches and 226 players) which included a

questionnaire that focused on situations where players were injured and had to make the decision to continue to play and why they made that decision. Of the coaches who responded, 70% reported having a sport related first-aid/injury prevention course, which would mean they are certified to prevent, treat, and make the appropriate decisions for injuries to prevent athlete from further damage. Even with the majority of coaches having this training, 87% of coaches reported seeing players play on when they thought they should not, meaning they went against their knowledge on injury training and prevention to allow and athlete to keep playing, regardless of the potential consequences. Of the 226 players who responded, 87% reported hiding or downplaying an injury during a game. Twenty-six percent of those reported this often or very often. Only 20-30% reported this was a rare occurrence, and 10% of players reported never seeing this happen during their sport. Players continued to play because the pain was bearable (31%), they wanted to keep playing (23%), or they continued for the sake of the team (21%). Similarly, coaches believed a player continued to play when injured because they did not want to let the team down (35%), the player lacked an understanding of the seriousness of an injury and its long-term consequences (20%), the desire to win (12%), and loving the sport too much to quit (13%). Both players and coaches (50-60%) agreed that there it too much pressure from coaches, parents, and other players to continue to play when injured. Overall, the researchers found that youth players continue to play while injured and that the coaches influence plays a large factor, despite the coach's knowledge in sport injury prevention and treatment. Being injured does put a damper on practice and competition, especially when in-season, and there are serious negative consequences from participating in sport while injured due to the pressure and stress to perform well.

The social pressure parents feel for their child to excel at sport starts at a very young age, thus the reason many youths begin to play competitively at very young ages. Because youth are starting competitive sport at an early age, there is the risk of developing overuse injuries from consistent practice and competition. Leppanen et al. (2017) studied the prevalence of overuse injuries in 387 (176 female and 211 male) youth basketball and floorball players (15.7 ± 1.7 years). This was a three-year cohort study and when the athlete entered the study baseline questionnaires were completed to quantify injury history. Then each week, a physician contacted the participating teams to record any new injuries. Although all injuries were tracked, only overuse injuries were used for data analysis. The authors defined an overuse injury by Fuller et al.'s (2006) definition: an injury caused by a repetitive microtrauma and had no single identifiable event causing the injury. Injuries that caused full or partial absence from sport were collected. Injury severity was classified by the length of absence: minimal (one to three days missed), mild (four to seven days missed), moderate (eight to 28 days missed), and severe (greater than 28 days missed). The results from the three years of data collection concluded that 146 players (38%) sustained at least one overuse injury. The data demonstrated a relationship between overuse injuries incidences and characteristics. Per 1000 hours of sport exposure there was an increased risk of overuse injury (OR = 1.51, 95% CI: 1.35–1.78). Most of the overuse injuries involved the knee (OR = .54, 95% CI: .42-.67) and the lower back (OR = .32, 95% CI: .22-.42). The average time loss from an overuse injury was 50 ± 69 days. Of the overuse injuries reported, 44% were severe. The researchers concluded from the study that over time, consistent sports participation is associated with an increase in overuse injuries. Given that sports are meant to be fun and active, sustaining an overuse injury is a negative consequence if one chooses to participate in competitive sport.

In sport, the relative age effect has been found to be an indicator of injury in prepubescent athletes. The relative age effect is when a child is born in, or right after, a critical age cutoff month. This relative age effect gives the child an advantage, particularly in sports. In 2015, Stracciolini et al. researched the relative age effect on sports injuries in a cohort of young athletes with the expectation to see that younger athletes sustain an injury longer than the older athletes. The researchers reviewed data from the sports medicine division of a children's hospital over the course of nine years. The patient's injuries included: acute traumatic, nontraumatic, and overuse. In order for the participants data to be used they must follow the inclusion criteria: a) the injury sustained as a result of physical activity that involved athletic competition, and b) clear medical record about the activity that caused the injury. In total, the researchers examined the data from 1997 patients between the ages of five to seventeen years. The researchers separated the patients by age: prepubescent (five to 13 years) and pubescent (14-17 years). The results of the study showed that in the prepubescent athletes there was a higher risk of injury when they were the youngest compared to their older peers ($p < .001$). This was noted to be due to physical and emotional developmental differences. On the other hand, pubescent aged athletes showed a reverse effect. As children age, those who were older tend to show more injuries as they were the ones who continue to play, thus being more exposed to sport participation which increases the risk (and prevalence) of injury ($p < .001$). Organized sport is not always safe as children do not always compete against children of the same physical, emotional, and cognitive development as themselves, and as they reach adolescents the talented older athletes get more sport exposure, thus increasing the risk of injury.

In summary, the research on youth athletes indicates that there is an association between sports participation and injuries. Young athletes are put into sports without the consideration of

physical and developmental age. Small, young athletes competing with big, older athletes of their competition age range are exposed to the risk of becoming injured more frequently. Young athletes feel pressure to perform well and be a good teammate, athletes consistently downplay injuries during sport practice and competition which can lead to further implications if not treated properly. To perform well, athletes commit many hours to training which has shown to be detrimental to the body, increasing the odds of injury.

Mental Health. Sport in America has become so organized and competitive that it has robbed participants of their childhood (Deveraux, 2001). Children experience extraordinary pressure to succeed from their parents and coaches. Chronic stress, related to sport performance, can lead to negative health benefits such a poor eating habits, sleep deprivation, and physical illness (Purdy, Haufler, & Eitzen, 1981). Purdy et al. (1981) investigated the amount of stress reported among child athletes and the degree to which their parents and coaches were aware. The study focused on 105, 11 and 12-year-old boys and girls in an age-group swimming program, their parents and their coaches. The coaches were interviewed and administered the survey to their swimmers. Parents were then selected for interviewing. The questionnaire asked if the swimmers were negatively affected in any of these ways by tension associated with an upcoming meet: trouble sleeping, trouble eating, and/or physical sickness. Parents and coaches were asked their perception of their child for each indicator of stress. Results found that 59% of parents underestimated the amount of stress their child experiences, while 24% of coaches expected the child was under more stress than found to be true. The more visible the sickness was, the more likely a parent and coach was to recognize a problem. Parents, however, were found to ignore the stress in their child, as stress was harder to identify when it did not propose physical symptoms, while coaches saw stress in their athletes that did not exist. Overall, the data from the study

revealed that 53% of the swimmers experienced insomnia, 29% experienced loss of appetite, and 28% experienced physical sickness before competition with the assumption that stress caused the negative consequences. Between stress and injuries, coaches and parents are not always on the same page as the athlete in understanding what their child is going through under the pressures to succeed in sport. In many cases, the pressure is not just on the young athlete to perform well, but the performance of the athlete reflects back on the parents and coaches. Thus, there is an increase in involvement from the parents of the child athletes to insure they are performing well.

In 2014, Salla and Michel studied 201 competitive tennis players in France between the ages of seven and 11 years. The researchers provided questionnaires to the children that assessed anxiety and perceived parental sport over-involvement. Parents were asked to complete a questionnaire on parental sport over-involvement practices. The children's perceived parental sport over-involvement predicted a significant increase in anxiety symptoms (beta coefficient= .23, $p < .005$). The researchers concluded that there was an association between over-involved parents and their child athlete's mental health in terms of anxiety.

Given the investment parents make for the child to do sport, both through finances and time, it is understandable why parents become over-involved in their child's sport participation, thus inducing the pressure and performance anxiety in their child athlete. Dunn, Dorsche, King, and Rothlisberger (2016) studied the impact of family financial investment on a youth athletes' perceived parent pressure, enjoyment and commitment of the sport. A total of 163 parent-child dyads were surveyed (78 fathers, 85 mothers). The 163 children (126 males, 37 females) who participated in the study were from a variety of fourteen different sports. The researchers aimed to sample participants between the recreational and competitive participation levels. The researchers measured family financial investment into their child's sport as a percentage of the

family's total gross income. Parents reported an average yearly investment of $1,583.89 ± $2,214.49 on their child's sport participation. The child's perspective of parent pressure, particularly pertaining to their parents' pressure in organized youth sport, was measured with the pressure subscale of the Parental Involvement in Activities Scale. Pressure was positively correlated with parent investment of the sport ($r = .20$, $p < .05$). Sport enjoyment was measured with the Enjoyment subscale of the Sport Commitment Model. Enjoyment was negatively correlated with family investment ($r = -.21$, $p < .05$) and pressure ($r = -.53$, $p < .001$). Finally, the child's commitment to sport was measured with the commitment subscale of the Sport Commitment Model. Commitment was negatively correlated with investment ($r = -.8$, $p < .05$), pressure ($r = -.45$, $p < .001$), and positively associated with commitment ($r = .75$, $p < .001$). The researchers concluded that even though parents invested one to 10% of their gross annual income on their child's sport, there was an indirect association between investment and enjoyment via pressure. The financial cost of sport is enough for parents to put pressure on their child to make the most out of their financial investment which then, in turn, reduces the child's enjoyment and commitment to sport.

In summary, sport participation can act as an additional life stressor in a youth's life. Given the competition and pressure from coaches and parents to perform well, youth athletes are experiencing negative consequences of participating in competitive sport at a young age. As the pressure and stress to participate and do well in sport increases, there is a decrease in enjoyment and commitment. Children can perceive the pressure from parents as being over-involved which then increases performance anxiety. These negative consequences can ultimately lead to discontinuation of sport completely, or worse, sport burnout.

Dropout and Burnout. When the negatives of sport participation begin to outweigh the positives, it is no surprise to see the number of athletes decrease. This could be due to dropout which is withdrawing from sport participation before the athlete peeks (premature dropout) (Cox, 2002). Dropout is common in youth sports as children lose interest or discontinue one sport to continue on with another. On the other hand, sport burnout is a state of emotional, physical, and mental exhaustion from sport participation. Sport burnout is typically derived from excessive training and pressure to perform well over a long period of time (Cox, 2002). Burnout does not necessarily lead to dropping out and dropping out of sport is not always caused by burnout. Both of these situations can have a negative denotation to them. Dropout means the athlete is no longer participating in that specific organized sport, which could mean a decrease in daily physical activity if they have discontinued sport all together. Some athletes however, dropout from one sport to pick-up another, or to specialize in their primary sport of choice. Burnout can cause psychological distress that is detrimental to mental health. If an athlete is tracking towards either dropout or burnout, some of the common factors will be seen as the athlete pushes the away from sport: performance climate, individual personality characteristics, outcome orientations, and participation motives.

Motivational climate is an important factor for the athlete's perception of their sport environment. When the perception is that their sport environment is performance-based, meaning that success is based on comparing one's performance to another's, there is a greater chance of burnout. In 2015, Vitali, Bortoli, Bertinato, Robazza, and Schena studied the motivational climate in 87 (46 girls and 41 boys) adolescent (15.92 ± 1.12 years) basketball (n = 45) and volleyball (n = 42) players. The participants completed The Perceived Motivational Climate in Sport Questionnaire that categorized their perception into either a mastery climate or a. Burnout

was assessed with the Athlete Burnout Questionnaire which determined the degree to which the athlete was burnt out of their sport on three subscales: emotional/physical exhaustion, reduced sense of accomplishment, and sport devaluation. The results showed that a performance climate was moderately and positively associated with emotional and physical exhaustion ($r = .24$, $p < .05$), reduced sense of accomplishment ($r = .25$, $p < .05$), and sport devaluation ($r = .31$, $p < .01$). A mastery climate was significantly and negatively associated with emotional and physical exhaustion ($r = -.37$, $p < .01$), reduced sense of accomplishment ($r = -.42$, $p < .01$), and sport devaluation ($r = -.47$, $p < .01$). The researchers concluded that the athletes who perceived having a performance climate in their sport context were associated with higher levels of burnout on all three subscales. Coaches, parents, and peers all contribute to the type of climate that is created within sport, thus all acting as important influencers in an athlete's potential to burnout. However, the athlete, themselves, is too responsible for their burnout level.

An athlete's personality characteristics is a factor that can predispose an individual to being more susceptible to burning out from sport. Jowett, Hill, Hall, and Curran (2016) studied perfectionism characteristics in youth athletes and how it related to burnout. The researchers surveyed 222 junior athletes (98 males, 124 females) from a variety of sports. The athletes were 16.01 ± 2.68 years of age with competition experience of 7.21 ± 3.53 years. The Athlete Burnout Questionnaire was used to assess the athletes' burnout level. Three subscales were used to indicate perfectionistic concerns ("If I fail in competition I feel like a failure as a person") and perfectionistic strivings ("I hate being less than the best at the things in my sport"). The data showed that there was a moderate negative association between perfectionistic strivings and athlete burnout ($r = -.26$, $p < .001$), but a strong positive association between perfectionistic concerns and athlete burnout ($r = .36$, $p < .001$). The authors discuss how perfectionistic

qualities in an athlete might not be bad, as seen in the data for perfectionistic striving. However, athletes can fall under the pressure of having to perform well and develop perfectionistic concerns which are associated with burnout symptoms.

An athlete's personality contributes to the athlete's participation motives. The reason an athlete participates in sport is associated with predicting sport dropout. Ryska, Hohensee, Cooley, and Jones (2002) studied various motives, both intrinsic and extrinsic, for sport participation in youth gymnasts. In a sample of 349 youth gymnasts ages 9 to 18 (14.5 ± 3.2 years) registered with the Australian Coaching Council, participation motives were collected using the Motives for Participating in Gymnastics Scale. Seven motives were measured: competition (e.g. "like to compete"), action (e.g. "like the excitement"), fitness (e.g. "stay in shape"), team atmosphere (e.g. "like the teamwork"), new situation (e.g. "something to do"), social recognition (e.g. "feel important)", and challenge (e.g. "learn new skills"). The athletes reported an average of 5.9 ± .71 years of competitive gymnastics experience. The researchers then followed-up with the Australian Coaching Council the following year to determine the number of continuing athletes (n = 149) and dropouts (n = 132). The authors then looked at the original motives of the gymnasts who had continued for another season, and those who had dropped out. Compared to those who dropped out, the continuing participants rated fitness (M = 3.52 ± .44, M = 4.29 ± .51, respectively), team atmosphere (M = 3.92 ± .39, respectively), and personal challenge (M = 3.21 ± .41, M = 4.32 ± .40, respectively) significantly higher as motives for sport participation ($p < .01$). Those who dropped-out had rated new situation (M = 3.54 ± .32) and social recognition (4.12 ± .47) more significantly than those who continued participation (M = 2.48 ± .29, M = 3.37 ± .46, respectively) ($p < .01$). The researchers concluded that the athletes' motives predicted dropout (account for 84.4% of variance). An athlete with more

extrinsic motives, such as looking for something to do and recognition from others based on performance, can predict sport dropout. An athlete with more intrinsic motives for sport participation, such as personal challenge and enjoyment of being a part of a team, is related to sport retention. Understanding athlete motives can help coaches, parents, and the athletes know what to look for in terms of either premature sport discontinuation or long-term sport retention.

Sport retention is based on factors such as motivational climate, personality characteristics, and motives for sport participation. It is important that coaches, parents, and athletes attend to the needs of the athlete in a way that promotes long-term sport participation to prevent sport dropout and even prevent sport burnout. With the knowledge of these factors, youth can participate in sport, enjoy their experience, and remain an active life longer.

Sport Specialization. The negatives of sport participation for the average athlete are exacerbated when a youth athlete becomes specialized. Sport specialization is common in today's youth sports, due to the increased pressure from parents and coaches for a young athlete to perform well. At a very young age, youth are committing to year-round training in a single sport (Matzkin and Garvey, 2018). Post et al. (2017) studied the association between adolescent sport specialization and injury history. The researchers asked the 2,011 participants (989 females, 1,022 males; 13.7 ± 1.6 years) to complete a questionnaire that measured sport participation, specialization classification, and injury history. Of the 2,011 athletes, females were more likely to report being highly specialized (53.8%) compared to males (46.2%, $p = .011$). In regard to injury history, 295 (14.7%) athletes reported history of lower extremity overuse injuries, 118 (5.9%) reported history of upper extremity overuse injuries, and 161 (8%) reported history of concussions. The most common injury locations were the knee ($n = 91$), shoulder ($n = 73$), ankle ($n = 66$), and hip ($n = 58$). Those who were highly specialized were more likely to

have an acute injury of any kind (OR = 1.58, 95% CI: 1.24-2.00; $p < .001$), upper extremity acute injury (OR = 1.43, 95% CI: 1.09-1.88; $p = .011$), and lower extremity acute injury (OR = 1.41, 95% CI: 1.07-1.85; $p = .015$) compared to those who reported low specialization. The researchers concluded that high levels of sport specialization in adolescents was associated with a history of injuries, thus suggesting that there is a high risk of adolescent athlete injuries due to early sport specialization.

Given the popularity of sport specialization, there is evidence exploring just how much sport is too much in terms of mental health and well-being. Merglen, Flatz, Belanger, Michaud, and Suris (2013) studied adolescent athletes to determine the effect of weekly sport practice on well-being. The researchers conducted surveys among 1245 (50.4% male, 49.6% female) athletes between the ages of 16 to 20 years (17.95 ± 1.40 years). Well-being was measured via WHO-5 Well-Being Index which a score of 13 or less indicated poor well-being. The average well-being score was 17.08 ± 3.81. Weekly sports practice was classified as low (0-3.5 hours), average (3.6-10.5 hours), high (10.6-17.5 hours), and very high (>17.5 hours). Of the total participants, 35.2% were classified as low, 41.5% average, 18.5% high, and 4.8% very high. Well-being was found to be significantly different among sport practice level: low (index score: 15.95), average (index score: 17.58), high (index score: 18.13), and very high (index score: 17.00), demonstrating an inverted "U" shaped association between sports practice frequency and well-being. Adolescents in the very high practice group showed a higher risk of poor well-being (OR = 2.29, 95% CI: 1.11-4.72; $p < .001$) compared to the average group. The same was found with those in the low practice group (OR = 2.33, 95% CI: 1.58-3.44; $p < .001$) compared to the average group. However, those in the high practice group had a lower risk of poor well-being (OR = .46, 95% CI: .23-.93; $p = .03$) compared to the average practice group. The authors

concluded that though average and high sport participation adolescents scored high on the well-being survey, a very high practice level was shown to be detrimental to the adolescent's well-being. This research indicates that there is possible a negative effect to too much practicing, which commonly happens in athletes who specialize at a young age.

It is possible that early youth sport specialization, specifically when an athlete's self-determination is compromised, can lead to a decrease in future sport participation. Russell (2014) sampled 200 (93 males, 107 females) undergraduate participants through a university with an average of 19.09 ± 1.26 years. The researcher measured demographics, which included: youth sport specialization and current sport participation classification (competitive, recreational, do not participate). Of the participants, 56% specialized in youth sport, and of those, 89% indicated they specialized before adolescents (71% specialized before the age of 10). More than half of the respondents (51.5%) reported currently participating in no sport, 33.5% recreationally, and 15% competitively. Those who no longer participated in sport and who specialized as a youth, said it was due to lack of time (n = 17), loss of interest (n = 12), and lack of fun (n = 10). Nonspecializers reported not participating in sport because they lost interest (n = 10) and had a lack of time (n = 8). The researcher concluded that youth sport specialization can have a negative effect on long-term sport participation.

With an increase pressure for children to perform exceptionally well in sport at a young age, sport specialization is becoming a common choice for many families. However, specializing in one sport comes with the negative consequences of increased risk of injury due to overload of practice hours, decrease in enjoyment of activity due to high stress and pressure of competition, and a decrease motivation to continue sport participation due to physical and mental exhaustion.

Though sport specialization is beneficial in older ages, young, prepubescent athletes, have much to lose from sport specialization, including a decrease in sport participation altogether.

Summary. There are significant negative consequences to sports participation. Sport participation involves a lot of practice, active minutes, and repetition of movements. This commonly leads to an increase in overuse injury, particularly as sport participation time increase. Mentally, sport participation induces added stress and pressure to perform well, be the best, and make parents and coaches proud. This can lead to an overall decreased well-being. Sport specializing, a common phenomenon in youth sports today, increases the risk of physical and mental negative consequences of sport participation. The more time spent focused in on one sport at a young age, the greater the consequences.

Achievement Motivation Theory in Youth Sport

Achievement Motivation Theory includes the factors and influencers that contributes to an athletes' success in their sport (Nicholls, 1989). In sport, peers, coaches, and parents all contribute to an athlete's sport experience. Peers, coaches, and parents create what is called a motivational climate for an athlete. A motivational climate is the psychological atmosphere in which the athlete is training and competing (Miulli and Nordin-Bates, 2011). There are two major motivational climates that can exist alone or in combination of each other: performance climate and mastery climate. Achievement Motivation Theory explains that a performance climate is when the athlete's success is dependent on their performance compared to others (i.e., a swimmer is only successful if they are faster than another swimmer), while a mastery climate is when success of the athlete is defined by their self-improvement and individual effort (i.e., a swimmer is successful when they are faster than his/her previous time) (Nicholls, 1989). The following section will discussion how through Achievement Motivation Theory peers, coaches,

and parents create these motivational climates for an athlete and the impact it has on enjoyment, commitment, overall development, stress and performance-dissatisfaction.

Peers. This sub-section is not a comprehensive literature review but highlights the impact peer influences have on sport experience. Youth sport provides the opportunity for young athletes to build relationships with their peers. Athlete peers can influence each other's sport experience and motivation based on the peer motivational climate. Smith, Gustafsson, and Hassmen (2010) studied the association between perceptions of peer-created motivational climate and athlete burnout in high school students from Sweden. A total of 206 athletes (17.2 ± 1.0 years), who were involved in regular training and competition of sport, represented a variety of 22 sports (n = 102 team sports, n = 1-2 individual sports, n = 2 did not report sport) participated in the study. On average the athletes participated in 9.7 ± 3.6 hours of training per week. The researchers surveyed the athletes to measure perceived stress, perceived peer-created motivational climate, and burnout. The findings were broken down by subscales of each of the questionnaire for further examination of the relationship between motivational climate, stress, and burnout. A mastery peer motivational climate was associated with a decrease in perceived stress by means of improvement (r = -.24, p < .01), relatedness support (r = -.23, p < .01), and effort (r = -.24, p < .01). The mastery peer motivational climate also was associated with a decrease in burnout exhaustion (r = -.15, p < .01), reduced accomplishment (r = -.33, p < .01), and sport devaluation (r = -.29, p < .01). A performance peer motivational climate was associated with an increase in perceived stress by means of intra-team conflict (r = .14, p < .01). Further, a perceived performance peer motivational climate was associated with an increase in exhaustion (r = .22, p < .05), reduced accomplishment (r = .22, p < .01), and sport devaluation (r = .26, p < .01). The authors concluded that there is a relationship between the peer

motivational climate and the athletes' level of burnout. A peer mastery climate could be protective of an athlete experiencing burnout. In contrast, a peer performance climate could increase the chances of an athlete feeling symptoms of sport burnout.

Peer motivational climate can also influence overall character development in sport. In 2018, Agans, Su, and Ettekal studied the peer motivational climate on the adolescent athlete's character development through improving self (i.e., diligence, mastery focus, performance focus), teammates (i.e., leadership and generosity), and the game (i.e., moral disengagement and honesty). The sample consisted of 655 high school athletes (16.34 ± 1.18 years) who were representative of team (74.8%) and individual (25.2%) sports including: football, soccer, track, basketball, tennis, baseball, and softball. The researchers surveyed the athlete's on peer motivational climate and effort to improve in the domains of self, teammates, and the game. The peer motivational climate mastery subscale measured the athletes' perceptions of their teammates' focus on improvement, showing support, and encouraging effort. The intra-team competition subscale measured the degree to which teammates compete with one another. And the intra-team conflict subscale measured issues that promote conflict among teammates. Effort to improve self was measured via three subscales: diligence (i.e., athletes' effort to pursue goals), mastery orientation (i.e., sport-specific measure of athlete orientation toward mastery-related success), and performance orientation (i.e., measured athletes' orientation toward performance-related sport success). Effort to improve teammates was measured by leadership (i.e., "I always try to set a good example for my teammates") and generosity (i.e., "I am willing to give up the opportunity for personal achievement to help my team succeed"). Effort to improve the game was measured by an athletes' contribution to better the game (i.e., honesty of play, moral disengagement). The findings of the study demonstrated that there was an association between

the type of motivational climate and the character qualities rated. Specifically, peers' mastery climate was positively correlated with athlete diligence ($r = .21$, $p < .01$), mastery focus ($r = .26$, $p < .01$), leadership ($r = .43$, $p < .01$), generosity ($r = .39$, $p < .01$), and honesty ($r = .16$, $p < .01$). Peers' mastery climate was negatively correlated with peers' conflict ($r = -.33$, $p < .01$), performance focus ($r = -.13$, $p < .01$), and moral disengagement ($r = -.06$, $p < .01$). Peers' performance climate was found to be positively associated with peers' conflict ($r = .37$, $p < .01$), performance focus ($r = .26$, $p < .01$), and moral disengagement ($r = .31$, $p < .01$). Peers' performance climate was negatively associated with honesty ($r = -.23$, $p < .01$). The researchers concluded that a peer-initiated mastery motivational climate is greater associated with positive self, teammate, and game development characteristics compared to peer-initiated performance climate which was associated with negative characteristics of self, teammates, and game.

Group cohesion in sport is a dynamic process that reflects unity surrounding task and social needs of the group (Carron, Brawley, and Widmeye, 1998). It is important to maintain positive group cohesion for individual and group success in sport. This is done by way of task cohesion which represents goal cohesion among the group. McLaren, Newland, Eys, and Newton (2017) believed that the sport environment must be perceived in a way that optimized group-level properties. The researchers predicted that perceptions of mastery-related peer motivational climate would be positively related to perception of both mastery and social cohesion, while a perception of performance-related peer motivational climate would be negatively associated with the cohesion dimensions. A sample of 189 youth athletes (13.12 ± 1.97 years) were surveyed from a soccer club team in Canada. The participants had been playing soccer for an average of four years. The athletes completed surveys to measure their peer-initiated motivation climate using the Peer Motivational Climate Scale for Youth Sports and group cohesion using the Child

Sport Cohesion Questionnaire. Surveys were administered both at the first and middle third of the competitive season. The teams had been practicing together for approximately three months before the first surveying session and five months as the second session. Significant results demonstrated that a mastery climate was associated with a positive task cohesion ($r = .59$, $p < .01$) and social cohesion ($r = .47$, $p < .01$). A performance climate was negatively associated with a task climate ($r = -.26$, $p < .01$) and task cohesion ($r = -.15$, $p < .01$). Task cohesion was positively associated with a mastery climate ($r = .71$, $p < .01$) and social cohesion ($r = .39$, $p < .01$) while it was negatively associated with a performance climate ($r = -.38$, $p < .01$). Social cohesion was positively associated with a mastery climate ($r = .49$, $p < .01$) and task cohesion ($r = .42$, $p < .01$) and negatively associated with a performance climate ($r = -.19$, $p < .01$). The researches not only found strong correlations between a mastery climate and positive group cohesion dimensions, but there were significant associations found between early season perceptions and midseason perceptions on climate and cohesion. Early season mastery climate was positively associated with midseason climate ($r = .56$, $p < .01$), task cohesion ($r = .35$, $p < .01$), and social cohesion ($r = .39$, $p < .01$) while being negatively associated with a midseason performance climate ($r = -.20$, $p < .01$). An early season performance climate was negatively associated with a midseason mastery climate ($r = -.23$, $p < .01$) and task cohesion ($r = -.26$, $p < .01$) while being positively associated with a midseason performance climate ($r = .66$, $p < .01$). The researchers concluded that not only does a mastery climate promote positive group cohesion, but it is also associated with positive longitudinal effects as teams move throughout a season. The groups who start out with a mastery climate showed stronger associations for a midseason mastery climate, task and social cohesion. This research supports the promotion of a mastery climate from peers to achieve better group cohesion.

Findings from peer-initiated climate studies agree with other research that supports a mastery motivational climate is best for promoting positive sport environments and experiences. A mastery climate is associated with less frequent signs of sport burnout, increased positive character development, and increased positive group cohesion among athletes. Most of the peer-initiated climate literature focuses on children in adolescents, and older years. There is little research for children under the age of 10 and their social agents of sport. Even with the lack of research in younger ages, it should be recommended for athletes to present a positive, mastery motivational climate to one another in order to create the best environment for participation and success.

Coaches. Coaches are another important influencer in sport experience. The way the coaches interact with their players, the expectations held for their athletes, and their form of communication all impact the environment for their athletes which in turn impacts their enjoyment of the sport. The question arises as to whether coaches and athletes have the same perceptions of coach-initiated motivational climate. Mollerlokken, Loras, and Pedersen (2017) studied coaches (N = 29) and soccer players (N = 256, ages 15 to 17 years) from 17 different soccer teams in Norway. The athletes completed the Perceived Motivational Climate in Sports Questionnaire -2 to determine the coach-initiated motivational climate. The results showed that both the female (M = 72.3 ± 7.5) and male (M = 70.5 ± 9.8) athletes rated their coach-initiated mastery climate lower than the coaches' rating (M = 79.1 ± 7.4). Both female (M = 36.3 ± 10.3) and male (M = 41.8 ± 11.5) athletes rated their coach-initiated performance climate higher than the coaches (M = 29.7 ± 9.1). A significant relationship was found between the athletes' and coaches' score on the mastery-oriented climate rating (r = .39, p < .05) which suggests there is a low/moderate association between the perceived climate from the athlete to the coaches'

perception. The researchers concluded that there is a discrepancy between the perceived motivational climate between the coach and athlete. Coaches believe they initiated a mastery climate, when in fact, the players view it to as a more performance based. This could be due to the high expectations and pressure coaches face based on how their athletes perform in competition.

The coach-athlete relationship is important for positive youth development through organized sport. Vella, Oades, and Crowe (2013) studied the relationship between coach transformational leadership behaviors, the coach-athlete relationship, team success, and the positive developmental experiences of youth sports participants over a single sport season. A sample of adolescent soccer players (N = 455, 15.12 ± 1.77 years) from one soccer association near Sydney, Australia took part in the study. The participants had an average soccer playing experience of 7.23 ± 3.27 years. Coaches were characterized by short-term goals, enjoyment, health-related outcomes, and winning (Cote and Gilbert, 2009). The athletes completed the Differentiated Transformational Leadership Inventory for youth sport to measure the perceptions of their coach's transformational leadership. Coach-athlete relationship was measured using the Coach-Athlete Relationship Questionnaire and was completed by the athlete. Positive developmental experience was measured with the Youth Experiences Survey for Sport which captures personal and social skills, cognitive skills, goal setting, initiative, and negative experiences. The results from the study showed that a positive association existed between the coach-athlete relationship and the youth experiences survey (r = .38, p < .01). Further, the coach-athlete relationship was positively associated with personal and social skills (r = .34, p < .01), cognitive skills (r = .06), goal setting (r = .17, p < .01), initiative (r = .28, p < .01), and negatively associated with negative experiences (r = -.25, p < .01). The differentiated

transformational leadership inventory for youth sports was also positively associated with youth experiences ($r = .33$, $p < .01$). The differentiated transformational leadership was positively associated with personal and social skills ($r = .30$, $p < .01$), cognitive skills ($r = .10$, $p < .05$), goal setting ($r = .17$, $p < .01$), initiative ($r = .23$, $p < .01$), and negatively associated with negative experiences ($r = -.19$, $p < .01$). The study concluded that all types of transformational leadership was associated with positive youth experiences in sport. This study highlights that the sport environment is a place for coaches to foster positive youth development within their athletes, which can be done through sport participation context, or through the coach-athlete relationship that develops over the course of a season.

Coaches are influential on their athletes by way of the motivational climate they present. Whether a coach presents a mastery or performance climate, could be the determination of whether or not the athletes commits to sport engagement and continues participation in the future. Leo, Sanchez, Sanchez, Amado, and Calvo (2009) studied the influence coach-created motivational climates had on sport commitment in youth basketball players. The researchers sampled 285 participants ($n = 149$ males, $n = 135$ females) between the ages of 11 to 16 years (12.87 ± 1.21 years). The athletes were asked to complete the Perceived Motivational Climate in Sport Questionnaire to determine their coaches' motivational climate, and the Sport Commitment Questionnaire to determine the athletes' level of commitment through various subscales: commitment, enjoyment, alternatives, social constraints, investments, and involvement. The data showed that more athletes reported their coaches presenting mastery climate ($4.12 \pm .71$) than a performance climate ($1.70 \pm .89$). A mastery climate was shown to be more positively associated with commitment ($r = .39$, $p < .01$), enjoyment ($r = .52$, $p < .01$), social constraints ($r = .05$), investments ($r = .39$, $p < .01$), and involvement ($r = .43$, $p < .01$). A mastery climate was only

negatives associated with alternatives (r = -.16, p < .01), which is expected because a mastery climate promotes commitment and enjoyment factors, it decreases the appeal to other sport alternatives. In contrast, a performance climate was negatively associated with commitment (r = -.12, p < .05), enjoyment (r = -.36, p < .01), investments (r = -.08), and involvement (r = -.27, p < .01). A performance climate was positively associated with two of the measured commitment subscales: alternatives (r = .36, p < .01) and social constraints (r = .27, p < .01). The researchers concluded that a coach who initiates a mastery motivational climate for their athletes is more likely to see athletes have a higher level of commitment, enjoyment, investment, and involvement in their sport participations compared to those athletes who have a performance climate presented by their coaches. This could potentially prevent dropout from sport if athletes are more committed and enjoying their sport participation because of their coach's mastery motivational climate.

Though this is not an extensive review of coach-initiated climate, this section summarizes the key findings in this research area. Similar to peers, past research has not focused on athletes in the ages of 5-8 years but rather, older children and adolescents. Coaches and athletes do not always have the same perceptions of the type of motivational climate being presented. While the perceptions may differ, a coach-created mastery climate is better suited for positive youth development through organized sport and commitment to sport itself than a coach-created performance climate. A coach that focuses on a more mastery climate is one that encourages the players to perform their best rather than a performance climate coach that would emphasize success based on being better than other athletes or teams. Similar to peers, coaches should work to implement a positive mastery climate in their sport environment to promote a positive sport participation experience.

Parents. Before examining the literature that expresses how parents influence a child's sport experience, it is necessary to understand what parents believe to be the benefits their child gains about their child's sport participation in the first place. In 2014, Neely and Holt examined parents' perspectives on the benefits of sport participation for their young child. The researchers recruited 22 parents (12 mothers and 10 fathers) of 5 to 8-year-old children who were involved in organized youth sport, including: soccer, hockey, swimming, gymnastics, skating, skiing, tennis, basketball, baseball, ringette, tae kwon do, lacrosse, golf, and dance. Semi structured interviews were conducted using guidelines from Rubin and Rubin (2012). The main focus of the interview was centered around questions that explored the parents' views on the benefits associated with sport, factors associated with acquiring these benefits, and the role of parents. Data was analyzed using interpretive description methodology. The results from the interviews indicated that three major categories were identified as benefits: personal, social, and physical. Results related to personal benefits included the following subthemes: positive self-perception, personal responsibility, and fair play/sportsmanship. Results related to the social benefits included the following subthemes: friendship, teamwork and cooperation, learning to respect authority, and engagement in school. Finally, in the third category, results that related to physical benefits included the following themes: development of fundamental sport skills and health and well-being. Based on the feedback from the parents and the common themes identified, the conceptual claim is that "parents thought their child gained a range of personal, social, and physical benefits through participating in sport because it allowed them to explore their abilities and build positive self-perceptions. Parents believed that children could acquire benefits when coaches created a mastery-oriented motivational climate and facilitated exploration. Parents played the most important role in reinforcing the benefits of sport at home" (Neely and Holt, 2014). The themes

identified by parents in this study closely mirror the health triangle needs for overall life satisfactory and well-being, so it might be assumed that because of the desire parents have for their child to have a balance life, there is a significant level of involvement between a parent and their child's sport participation. The extent of literature on why parents enroll their child in sport, specifically at young ages, is sparse. From this article alone, one might conclude that parents enroll their child in sport for a general well-rounded experience that will help their child grow in multiple areas of life. However, without much other research exploring this topic, it is hard to say exactly what about youth sport is so appealing for parents to enroll their child at a young age. The very reason a parent enrolls their child in sport, could dictate the parent's expectations and thus influence the child's sport experience overall.

In early childhood, a parent's influence can be the greatest in a child's life, especially a mother (Chan, Lonsdale, and Fung, 2012). This has been found to be no exception to a child's experience with organized sport. In 2012, Chan et al. studied the quality of youth sport experiences knowing they may have implications for psychosocial development and attitudes towards physical activity later on in life. They hypothesized that coach, father, mother, and peer's positive reinforcements would be positively associated with effort, enjoyment, and competence, and negatively related with trait anxiety. Their second hypothesis was that the age of the athlete would show a difference on the impact of social influences. Four-hundred and eight swimmers (ages 9-18 years) were recruited to take part in a survey that measured positive reinforcements from peers, coaches, and parent. The findings showed that social influences from a mother were the most important for children 9-12 years especially for effort (path estimates= .53, $p < .05$) and enjoyment (path estimates= .35, $p < .05$). Mother-positive reinforcement and mother-punishment were predictors of child's competence (path estimates = .33, $p < .5$) and

anxiety (path estimates = .38, $p < .05$). There were no significant findings for the father's influence on the child athlete. These findings support the thought that a child and adolescent's effort and enjoyment, both factors in sport continuation and success, can be influenced positively by their parents, especially mothers, at a young age. The findings of the study might be surprising, as many think peers play a major role in child enjoyment, but it is not until one is older that they might be influenced by peers during sport settings.

Despite the understanding that parent involvement in their child's sport experience can be a positive influence, there was a lack of evidence exploring the positive values between parents and children during sport settings. Danioni, Barni, & Rosnati (2017) analyzed athlete acceptance of sport values their parents tried to share with them and examined the relationship between parent involvement in their adolescent's sport and the level of acceptance they had for their parents' socialization values. They studied the following values of the athlete: moral values (contract maintenance and obedience), competence value (achievement and skill), and status values (public image and wining). The researchers hypothesized that parental involvement, characterized by support and empathy, fostered value acceptance and that a lack of support, in terms of direct behavior and pressure, contributed to reducing adolescents' willing to endorse their parents' support values. Adolescents (N = 172, ages 13-19) were recruited from volleyball (60.4%), soccer (19.8%), basketball (12.2%), and rugby (7.6%). The adolescents completed multiple surveys to assess their sport values, perceptions of parents' sport values, and their parental involvement in sport. The results of the study showed that, in general, adolescents rated competence values (achievement and showing skill) as being most important (4.14 ± .77), followed by moral values (3.79 ± .79). There was little importance attributed to status values (2.17 ± 1.36). Adolescents felt parents (fathers then mothers) wanted them to develop moral

values (3.66 ± 1.07, 3.58 ± 1.23, respectively) more so than competence (3.51 ± 1.06, 3.26 ± 1.21, respectively) and status values (1.75 ± 1.51, 1.45 ± 1.39, respectively). Adolescents perceived their parents as having behaviors characterized mostly by praise and understanding (3.64 ± .89, 3.47 ± 1.02, respectively). Parents were moderately active and directive (2.67 ± .96, 2.20 ± .85, respectively) with the involvement of their child's sport. Fathers were found to be more involved (2.74 ± .95) in the child's sport than mothers (2.58 ± .84). The study concluded that adolescents gave great importance to competence values and moral values. The athlete's view being competent and fair more important than being a leader of the group. Adolescents also perceived their parents as giving the greatest importance to moral and competence values. Finally, parental involvement in their adolescent's sport activity was a significant predictor of adolescent's sport value acceptance ($p < .01$). The study indicates that the transmission process of sport values can be affected by the quality of parents' involvement in their children's sport activities. Positive parental involvement is highly associated with the values of an adolescent athlete. An athlete's experience in sport is influenced by much more than the game itself, but rather, the people involved in their sport.

Parents are one of the major contributors to youth sport experiences. It is important to understand what the perceptions of parental support and pressure are from the young athlete's point of view, and how it is associated with their overall sport experience. In 1995, Leff and Hoyle studied the perception of parental support and pressure on 200 youth tennis athlete's burnout level, self-esteem, and enjoyment of sport. Players between the ages of six and 18 years (12.5 ± 2.5 years) were asked to participate in the study. The players responded to questions on self-reported measures of parental involvement, enjoyment of tennis, burnout and their self-esteem. The study demonstrated correlations between the perceived parental involvement in

sport and the athlete's adjustment to sports participation. The athlete's enjoyment was associated positively with mother support ($r = .27$, $p < .01$), father support ($r = .30$, $p < .01$), and there was no significant relationship between an athlete's enjoyment and mother/father pressure. Neither parental support nor parental pressure was significantly correlated with burnout; however, athlete enjoyment was negatively related to burnout ($r = -.46$, $p < .001$). Mother ($r = .31$, $p < .01$) and father ($r = .29$, $p < .01$) support were both positively associated with global self-esteem which contributes to a positive sport experience. In sum, the researchers concluded that mother and father support are positively associated with positive sport experiences, such as increased enjoyment, self-esteem, and indirectly related to sport burnout levels. Parents should work to create a positive, and supportive sport environment for their child to promote a positive youth sport experience.

In 2013, Sanchez-Miguel, Leo, Sanchez-Oliva, Amando, and Garcia-Calvo examined the relationship between parents' motivational climate and behaviors in their influence on youth players' orientation and motivational climate. A sample of 723 athletes and parents were sampled. Of the parents, the ages ranged from 36 to 49 years ($M = 46.46 \pm 2.56$ years), and of the children, the ages ranged from 11 to 16 years ($M = 12.37 \pm 1.48$ years) and were primarily male ($N = 561$). The children participated in basketball, handball, football, or volleyball teams. The researchers measured motivational orientation using the Perception of Success Questionnaire which identified the athletes' participation goals. The athletes were labeled as either mastery oriented (i.e., I feel successful when I work hard.) or performance oriented (i.e., I feel I am successful in sport if I beat others). The researchers adapted the questions to measure parents' motivational orientation. Next, parent involvement in sport practice was measured using the Parents' Involvement Sport Questionnaire which targeted four main factors: directive

behaviors (e.g., “Before the match, your parent tells you how to play”), support and comprehension (e.g., “Your parent encourage you because you performed well.”), active implication (e.g.., “Your parents speak with the coach about your improvement in the sport.”), and pressure (e.g., “Your parents press you to train better.”). To measure the parents’ responses to the questionnaire, the questions were modified as needed. The research data showed significant relationships between parent responses and motivational orientations with the athletes’ responses. Parents with high performance orientation was significantly associated with both an athletes’ performance orientation ($r = .24$, $p < .001$) and mastery orientation ($r = .12$, $p < .001$). High parent mastery orientation was significantly associated with the athletes’ mastery orientation ($r = .25$, $p < .001$). It is important to note that the correlation is stronger when the parent-athlete motivational orientation is the same. Parents’ direct behavior was associated with the athletes’ perception of directive behavior ($r = .22$, $p < .001$), and athletes’ perception of involvement ($r = .20$, $p < .001$). Parents’ pressure was significantly associated with athletes’ performance climate ($r = .29$, $p < .001$), athletes’ perception of directive behavior ($r = .21$, $p < .001$), and athletes’ perception of pressure ($r = .40$, $p < .001$). Parents’ support was associated with athletes’ mastery orientation ($r = .25$, $p < .001$), athletes’ perceived support ($r = .39$, $p < .001$), and athletes’ perceived involvement ($r = .25$, $p < .001$). Parents’ involvement was significantly correlated with athletes perceived directed behavior ($r = .21$, $p < .001$) and athletes’ perceived involvement ($r = .35$, $p < .001$). The researchers concluded that there is a strong parental influence on motivational climate in the sport setting for youth athletes. A parent’s overall involvement (i.e., pressure, support, behavior, involvement) is associated with both positive and negative outcomes for the youth athlete. Positive involvement from the parents leads to a more positive perception from the youth athlete and this is strongest when the parent-athlete

motivation climates are the same. Thus, it is important for parents to understand how impactful their role is in creating a positive motivational climate that matches the motivational orientation of the athlete.

Not only can parents help create a positive, enjoyable sport climate, but they can also have an influence on cognitive and affective response to sport practice. It is well documented that parental constructs effect a child's cognitive, affective, and behavioral responses in sport participation. In 1999, Babkes and Weiss aimed to identify the types of parental beliefs and behaviors associated with their youth athletes' perceptions of their parent's behaviors and attitudes towards their sport participation, and the athlete's perception of their own competence, enjoyment, and intrinsic motivation. The researchers surveyed youth athletes (N = 227) between the ages of 9 years and 11 years (M = 10.6 ± .54 years), mothers (n = 160), and fathers (n = 123) from a competitive select statewide soccer program. The researchers measured parental attitudes and behaviors by adapting two questionnaires to fit their research needs. Parents responded to the questionnaire which encompassed six subscales: advocacy (i.e., "I encourage my child to play soccer."), beliefs about competency (i.e., "I think my child is good at soccer."), positive contingent responses (i.e., "I congratulate my child after good soccer performances."), pressure (i.e., "I put pressure on my child to play soccer well."), involvement (i.e., "I practice or play soccer with my child."), and role modeling (i.e., "I like physical activity and exercise."). The young athletes responded to the questionnaire that encompassed the same subscales: advocacy (i.e., "My parents encourage me to play soccer."), beliefs about competency (i.e., "My parents think I am good at soccer."), positive contingent responses (i.e., "My parent congratulates me after good soccer performance."), pressure (i.e., "My parent puts pressure on me to play soccer well."), involvement (i.e., "My parent practices or plays soccer with me."), and role modeling

(i.e., “My parent likes physical activity and exercise.”). Motivation of the young soccer athlete was measured using the challenge, curiosity, mastery, judgement, and criteria subscales of the Motivational Orientation in Sport Scale. Perceived Soccer Competence was measured using the athletic competence subscales from Harter’s self-Perception Profile for Children. Enjoyment was measured using adapted questions that measured sport enjoyment. The results of the study showed a moderate relationship between the perceived mother influence and youth soccer players’ psychological constructs ($r = .40$, $p < .001$) ($\lambda = .77$, $F(20,724) = 2.92$, $p < .001$). The strongest predictors for the youth soccer players’ psychological constructs included: perceived beliefs about competency (loading = -.864), perceived positive contingent response to success (loading = -.817), and perceived role-modeling (loading = -.485). The strongest loadings were seen between perceived mother attitudes and mother behaviors and the soccer players’ enjoyment (loading = -.914), perceived competence (loading = -.535), and intrinsic motivation (loading = -.640). For fathers, there was also a significant relationship between their attitudes and behaviors and player’s psychosocial variables ($r = .37$, $p < .001$; $\lambda = .76$, $F(30,842) = 2.01$, $p < .002$). The predictor variables the contributed most to the relationship were beliefs about the child’s competency (loading = -.761), positive contingent response to success (loading = -.651), involvement (loading = -.569), pressure (loading = .497), and role modeling (loading = -.476). Fathers showed the strongest loadings for the youth soccer players’ psychological constructs for perceived soccer competence (loading = -.677), enjoyment (loading = -.755), challenge motivation (loading = -.647), and criteria motivation (loading = -.684). It was also found that the young athletes’ perceptions of their parents’ attitudes and beliefs were significant contributors to their self-perceptions, affect, and motivation (mother: $\lambda = .78$, $F(30,598) = 1.92$, $p < .15$, father: $\lambda = .70$, $F(30,450) = 1.42$, $p < .08$). The authors concluded from their findings that the strongest

role parents play in their child's sport experience (specifically enjoyment, motivation, and competence) is the perceptions their children take-away from their parents' behaviors and attitudes.

Knowing that parents have been found to be most influential to a child's sport experience (Chan et al., 2012) and that a mastery climate promotes a positive sport experience, O'Rourke et al. (2014) studied the influence parent versus coach and the two types of climates they could create: mastery or performance. Given the previous research, they hypothesized that a parent-initiated motivational climate would affect three outcomes (self-esteem, anxiety, and autonomous regulation) to a greater extent than the climate established by coaches because of the pervasive nature of interactions between a parent and child that extend over many years and beyond the sporting context (O'Rourke et al., 2014). Participants (N = 238) were selected from a USA swimming program (ages 9-14 years). Using the parent-initiated motivational climate questionnaire -2 (White, 1998), they measured the child's perception of the sport climate created by their parents. Next, the youth who were asked to complete a Motivational Climate Scale for Youth Sports (Smith, Cumming, and Smoll, 2008) to determine coach-initiated motivational climate. Finally, to measure the three outcomes: self-esteem, autonomy, and trait anxiety, three different surveys were used (one for each outcome). The results showed that both a coach- and parent-initiated mastery climate was significantly, positively correlated with self-esteem and autonomy, and negatively correlated ($p < .05$) with performance climate. A coach-initiated mastery climate was associated with a moderately significant positive correlation with self-esteem and autonomy ($r = .27$, and $r = .26$ respectively, $p < .05$), while showing a significant, but small, correlation with anxiety ($r = -.16$, $p < .05$). Compared to a parent-initiated mastery climate, the coach-imitated climate was less significant. Parent-initiated mastery climate showed

a moderately strong positive correlation with self-esteem and autonomy (r = .45, and r = .41, respectively, $p < .05$) while showing a negative moderate correlation with anxiety (r = -.24, $p <$ .05). Similar results were found for a performance climate when comparing coach- versus parent-initiated climate. A coach-initiated performance climate showed moderately strong, but negative, correlations with self-esteem and autonomy (r = -.25, and r = -.30, respectively, $p <$ .05), and a low positive correlation with anxiety (r = .19, $p < .05$). Parent-initiated performance climate showed similar results, but with stronger correlations. A parent-initiated performance climate resulted in a moderately strong negative correlation for self-esteem and autonomy (r = -.40, and r = -.48, respectively, $p < .05$) and a low positive correlation with anxiety (r = .24, $p <$ .05). The results of the study support previous research that suggests a mastery climate is associated with positive sport experiences, while a performance climate has the opposite associations. Based on the findings, the researchers suggest that although coaches play a role in a child's sport experience, a parent-initiated motivational climate is greater associated with their child's sport experience. From this study, sport coaches, parents, and athletes can better understand the possible influences social figures has in a youth's sport experience between the ages of nine and 11. However, the research did not include young-aged swimmers, though it reported that most of the children surveyed began competitive swimming at the age of 7 years (M = 7.11 ± 1.99 years), so we do not know what the motivational climate associate is at the beginning years of swimming, and sport in general.

Parents are very influential in a child's life and are a main contributor to a child's experiences. Limited research expresses that parents identified a handful of positive benefits for their child to participate in sport (mental, social, and physical health). However, there is a lack of research that explains the reasons parents enroll their child in competitive sport between the ages

of 5 and 8 (the age in which most competitive athletes start). Research does, however, show just how impactful parents are on older children's sport experiences. A child athlete interpret their parents' motivational climate and it guides their sport experience. This is translated into the child's goal orientation and becomes a predictor of sport continuation. Parents should strive to create a motivational climate for their child in which individual success is rewarded and reinforced rather than success based on comparison of others.

Summary. Parents, coaches, and peers of a youth athlete play a role in their enjoyment, effort, and values gained from sport participation. Much of the research in this area focuses on older children (≥9 years) and adolescents which fails to examine the true beginning of club-sport for many youth athletes. More research is needed on younger children (5-8 years of age) as this age is greatly influenced by adult socialization. If a young child starts sport at this age, as many research studies suggest, then it is important to know what the motivational climate that is occurring at the beginning of a child's sport career as it may set the stage for the engagement and enjoyment level in years to come.

Youth Sport Motivational Climates and Athlete Participation and Commitment Level

In sport, motivation might be considered a significant key to success. One must be motivated to attend practice, to work hard, and to overcome obstacles along the way to be the best. Motivation can be self-driven or as a result of parents, coaches, and peers in the sport setting. Young athletes are especially critical to motivate as the number of children participating in sport declines with an increase in age which ultimately might result in the decrease in physical activity levels in children and adolescents in the United States. A mastery climate is one that defines success as strong commitment, self-development, learning, and mastering tasks, while a performance climate defines success based on one's performance compared to others (Deci &

Ryan, 2000; Ryan & Deci, 2000). Researchers have studied how a child's level of involvement, commitment, and enjoyment of youth sport may be influenced by various climates which in turn might predict if a child will continue to patriciate in sport in the future.

Youth Sport Engagement, Enjoyment, and Commitment. A positive motivational climate, with the focus being mastery-based, leads to greater sport enjoyment, effort, and greater feelings of success compared to a performance-based climate (Curran, Hill, Hall, & Jowett, 2015). Youth sports contribute to enhanced motor competence, physical self-concept and self-esteem, as well as providing opportunities to learn better emotional regulation and develop peer relationships, when the motivational climate is mastery-based (O'Rourke, Smith, & Smoll, 2014; Curran et al., 2015). However, Curran et al. (2015) found that the sport experience is not always mastery-based, rather many athletes experience a performance-based sport climate at some point in time. This led to the research of understanding how a coach's behavior, encouraging either a mastery- or performance-based climate, can shape positive experiences in youth sport. The study examined relationships between motivational climate and athlete engagement (Curran et al., 2015). Coach-created motivational climate was assessed through the Perceived Motivational Climate in Sport Questionnaire-2. Athlete engagement was measured using the Athlete Engagement Questionnaire. The researchers hypothesized that a mastery climate would positively correspond with athlete engagement. On the contrary, they believed a performance climate would negatively correspond with athlete engagement. Recreational soccer players (N = 206; ages 11-16 years) were recruited and completed a multi-section questionnaire. The participating athletes rated perceptions of the coach's motivational climate, and athlete engagement was measured via confidence, dedication, enthusiasm, and vigor. The results from the questionnaire showed all dimensions of engagement (confidence r = .47, dedication r = .54,

enthusiasm r = .58, and vigor r = .58) were positively correlated with a mastery climate (p < .01). A coach-initiated performance climate demonstrated significant negative associations with athlete engagement measures: enthusiasm (r = -.14, p < .05) and vigor (r = -.16, p < .05). The researchers concluded that a mastery climate was the significant factor in determining positive athlete engagement (specifically for enthusiasm and vigor) in sport as the mastery climate showed stronger associations with positive athlete engagement compared to the athletes' engagement in association to a performance-based coach-initiated climate.

A positive sport experience, stemming from a mastery-climate, also increases likelihood a child enjoyment their youth sport participation. Early in the 1990's, Scanlan, Carpenter, Lobel, and Simons (1993) understood that enjoyment was an important factor for motivation in youth sports. The researchers aimed to discover sources of enjoyment in a large youth athlete sample. Over 1,000 (N = 1,342) youth athletes (875 male and 467 female) were surveyed from either football, soccer, or volleyball. The participants were between the ages of 10 to 19 years. The researchers developed their own enjoyment questionnaire based on an extensive review of previous literature that were related to sport enjoyment. The author's labeled six interpretable factors of enjoyment: Perceived Ability (e.g., "Are you a good player?"), Sport Enjoyment (e.g., "Do you have fun playing?"), Positive Team Interactions and Support (e.g., "Have you made new friends?"), Positive Parental Involvement, Interactions, and Performance Satisfaction (e.g., "Do your parents watch games?"), Effort and Mastery (e.g., "Have you tried hard?"), and Positive Coach Support and Satisfaction with Players' Seasonal Performance (e.g., "Is your coach pleased of the way you have played?"). The data showed that the six factors accounted for 44.8% of the variance in the enjoyment items. A multiple regression analysis was used to determine the significant predictors of sport enjoyment. The sport enjoyment items were used as

the dependent variable against the remaining five items which were found to be significant ($F(5,1336) = 236.55$, $p < .0001$), and accounted for 47% of sport enjoyment variance. The significant predictors of sport enjoyment were Positive Team Interactions and Support ($r = .22$, $p < .0001$), Positive Coach Support and Satisfaction with Players' Seasonal Performance ($r = .30$, $p < .0001$), and Effort and Mastery ($r = .32$, $p < .0001$). The researchers concluded that the more positive the sport experiences (between the players and teammates and coaches) the higher the level of enjoyment was for the surveyed athletes. The data from this study helped shape the way future researchers would study sport enjoyment and its influencing factors such as parents, coaches, and motivational climates.

Parents are a major influencing factor to a child's sport experience (Chan et al. 2012). In 2013, Sanchez-Miguel, Leo, Sanchez-Oliva, Amado, and Garcia-Calvo examined the relationship between an athletes' motivational orientation and parents' behavior with regard to their child's enjoyment and amotivation in youth sport. The researchers surveyed 723 athlete-parent dyads. The athletes were comprised of 561 males and 162 females between the ages of 11 and 16 years (12.37 ± 1.48 years). Sports represented were basketball, handball, football, and volleyball. Only the parent who was the most involved in the athlete's sport was asked to complete the questionnaire ($n = 351$ mothers, $n = 372$ fathers). The researchers measured the athletes' motivational orientation via the Perception of Success Questionnaire. Parental involvement in sport practice was measured via the Parents' Involvement Sport Questionnaire. Enjoyment of practice was measured via Sport Commitment Questionnaire by the athletes. Finally, amotivation of the athlete in sport practice was measured with the Sport Motivation Scale. Both parents and athletes were measured at the beginning of the season. Overall, the athletes' enjoyment was significantly and positively associated with the surveyed parent's

mastery orientation (r = .19, p < .05) and parents' support (r = .31, p < .05). Pressure from parents was the only variable found to be significantly associated with a decrease in athletes' rated enjoyment (r = -.19, p < .05). Athlete amotivation was positively associated with parents' pressure (r = .37, p < .05), but negatively associated with parents' support (r = -.12, p < .05). The data showed that parents' support of the child's sport participation was associated with higher levels of enjoyment and lower levels of amotivation. Athletes who perceived higher levels of pressure from their parents showed significantly lower levels of enjoyment and higher levels of amotivation. The researchers concluded that parents can have an influence on their child's level of sport enjoyment and amotivation based on the parent's levels of participation with their child's sport participation.

Though research has found that a parent's level of participation within their child's sport may predict their child's enjoyment of youth sport participation, previous research has found that this might be dependent on the child's age. In 2008, McCarthy, Jones, and Clark-Carter, examined the developmental progression of sources of enjoyment among youth sport participants. The researchers sampled 153 youth athletes (ages 8 to 15) from team sports: basketball (n = 2), football (n = 55), netball (n = 12), rounders (n = 5), hockey (n = 4), and rugby (n = 5), and individual sports: athletics (n = 10), badminton (n = 4), cricket (n = 1), cycling (n = 2), martial arts (n = 3), swimming (n = 26), tennis (n = 1), and trampolining (n = 22). The researchers measured sources of enjoyment, using Wiersma's (2001) Sources of Enjoyment in Youth Sport Questionnaire, enjoyment, mastery and performance orientation in sport questionnaire, and perceived sport competences using the Self-Perception Profile for Children. The questionnaires used a 5-point Likert scale for measurement. The data showed that there were significant differences between the age groups (older childre$n$ = 11 and up, younger

children = <11) for enjoyment sources ($\lambda = .897$, $F(6, 145) = 2.772$, $p = .014$, $= \eta^2 = .103$). A univariate ANOVA for each dependent variable in both older and younger children revealed the following significance: self-referenced competency ($p = .042$), other-referenced competency and recognition ($p = .02$), affiliation with peers ($p = .016$), and enjoyment ($p = .020$) were all statistically significant. Older children playing sports reported having significantly greater enjoyment (males: 4.73 ± .69, females: 4.57 ± .84) and other-referenced competency and recognitions (males: 3.78 ± .75, females: 3.11 ± .79) compared with younger children athletes who rated enjoyment at 4.59 ± .62 for males and 4.21 ± .97 for females, and other-referenced competency and recognition at 4.59 ± .62 for males and 4.21 ±.97 for females. The researchers explained that enjoyment might have been higher in the older children because athletes enjoy playing more while they obtain a more mature understanding on the competitive process, their abilities, and increased capacity for self-evaluation, which are factors that young athletes (under 11) might not have developed yet. Competitive excitement and other-referenced competency and recognition significantly predicted enjoyment in the older children but were not predictors in the younger athletes. A multiple regression analysis found that enjoyment was a factor of all variables for the younger group ($R^2 = .280$, $F(5,62) = 4.824$, $p = .001$), and only other-referenced competency and recognitions and competitive excitement were predictors of enjoyment in the older group ($R^2 = .169$, $F(5,78) = 3.174$, $p = .012$). The take-away message from this study is that predictors of enjoyment in youth sport may be dependent on age. The older athletes find more enjoyment in competitive excitement and other-referenced competency and recognition, meaning they find joy in competition, doing well, and showing others what they are capable of. Meanwhile, younger athletes showed that a well-rounded sport experience of feeling self-accomplishment and feeling competent by others are important to enjoyment in the game.

Motivation and enjoyment are a large predictor of whether or not an athlete will continue to participate in sport. Parents, coaches, peers, and the athletes themselves, play a role in creating an enjoyable environment and climate for the athlete. Youth athletes that report having higher level of enjoyment in sport are more likely to continue participation in the future.

Overall, research agrees that enjoyment is an important factor of youth sport participation. It can even be a predictor of future commitment to the sport and dropout. In 2017, Gardner, Magee, and Vella determined if enjoyment and intentions to continue sport could be a predictor in sport dropout at a 1-year follow-up. The researchers surveyed 327 regular sport participants (77 males, 250 female) between the ages of 11 and 15 (13.03 years). The athletes responded to questionnaires that measure enjoyment, intention to continue, and dropout. At the 1-year follow-up, there were significant differences between those who had dropped out (n = 26) and those who had continued participation (n = 247). Those who had continued participation ranked higher for enjoyment (4.76 ± .51 vs (3.75 ± 1.09), intention to continue (4.68 ± .60 vs 3.54 ± 1.24), perceived competence (2.80 ± .56 vs 2.42 ± .65), parental support (4.23 ± .65 vs 3.86 ± .82), coach-athlete relationship quality (5.74 ± 1.01 vs 4.73 ± 1.24), friendship quality (4.12 ± .58 vs 3.86 ± .64), and peer acceptance (3.00 ± .64 vs 2.53 ± .45) compared to those who had dropped out ($p < .05$). From a hierarchical logistic regression, greater enjoyment and intention to continue was found to be inversely associated with sport dropout at the 1-year follow-up (OR = .41; 95% CI: .22-.75). The researchers concluded that given the influence enjoyment and behavioral intentions has on future sport participation, that these factors should be highlighted in interventions with a focus at preventing future youths sport dropout to keeps kids playing sports longer.

Summary. Sport continuation is the key of any youth sport program; however, without the right climate and enjoyment levels being met, youth athletes no longer continue with their sport. Research supports a mastery climate created by parents, coaches, and peers to increase the likelihood a youth athlete will enjoy their sport experience and want to continue participation. There is, however, a certain level of enjoyment that must also be met for a youth athlete to want to continue in their sport.

Summary of Literature Review

This literature review has demonstrated the extensive research on youth sport participation. Specifically, the literature review explains the benefits and consequences of youth sport participation. Children who participate in youth sport are more likely to meet daily physical activity guidelines which are associated with increases in physiological, mental, and social health. Health benefits from sports participation, similar to those of meeting physical activity guidelines, transfer into increased overall health in adulthood. Sport participation, however, does not come without consequence. Overuse injuries, pressure and stress of performing well take a toll on physical and mental health of athlete, and youth sport is no exception. Achievement Motivation Theory explains how parents, coaches, and peers play a role in the type of sport environment and experience created for a youth athlete. What the literature lacks to explain is how Achievement Motivation Theory is associated with athletes in their first years of sport, and why the athletes are enrolled in sport in the first place. Many studies report athletes begin playing organized sport between the ages of five and eight, yet the research focuses on athletes between the ages of nine and 20 years. The assumption cannot be made that the associations between social-influencer motivational climates and enjoyment are the same for athletes in their first years of sport compared to athletes who have played for five or more years before being

examined. By the time the athlete is participating in these research studies, it is possible that their parents-initiated motivation climate and their personal levels of enjoyment and commitment have shifted since they first started their sport. Thus, there is a need for sport psychology research to expand on its sampling of subjects and research athletes who are exposed to organized sport at a young age (between five and eight years). The purpose of this study is to determine the reasons parents enroll their child in year-round competitive swimming and to examine the relationship between parent-initiated motivational climate and child's enjoyment and commitment in swimming in children between 5-8 years of age.

Chapter III: Methodology

The following chapter includes the methodological details of the current study. The study utilized a cross-sectional study design in which family units were recruited to answer questions about parent motivates for enrolling their child in year-round swimming, parent-initiated motivational climate, and young child swim enjoyment and commitment.

Participants

The participants were 40 family units consisting of either a mother or father and one child (ages five to eight years). Families with more than one child who met the recruitment criteria were asked to choose the child who participated in year-round swimming for the least amount of time. The study aimed to determine youth-sport experiences in the first few years of sport, so the sibling who had participated in sport for the least amount of time was of most interest. The sample size was chosen to complete a correlation analysis. A sample size too small would not show a true representation of the population, and a larger sample size was deemed difficult to obtain given population size in the area and time restraints for the study. All children were recruited from registered USA Swimming club teams in North Carolina and Georgia. The swim teams were chosen based on proximity to the study's home base. The ages of the children were selected to fill the gap in the literature that fails to address the first several years of sport competition, and most year-round swim teams do not enroll swimmers under the age of five years due to swimming ability. The inclusion criteria for the study is that the children participants must have been registered in a year-round swimming program for at least one month before data collection and be five to eight years of age.

Procedures

Before starting the study, approval from the University Institutional Review Board (IRB) at East Carolina University was obtained (Appendix A). After IRB approval was received, the primary investigator contacted the head-swim coaches with the information needed (i.e., explanation of the study, estimated procedures for conducting the study, and primary investigator contact information) in an informative email. Coaches forwarded the invitation to participate directly to the parents on the team with children ages five to eight years. The invitation to participate included a study summary, the days and time of survey collection, and the primary investigator's contact information. If a parent-child dyad was interested in participating in the study, they came to swim practice on the designated day and time (fifteen minutes before or after their child's swim practice time) to complete the questionnaire.

The primary investigator and two research assistants attended practice times for the swim teams to conduct data collection. Parents either approached the researchers to participate in the study, or parents were approached by the primary investigator or a research assistant to invite their participation in the study. Parents and children interested in the study first underwent a brief initial screening to confirm that their child was enrolled and currently practicing with a USA year-round swim program and five to eight years of age. If the parent and child were eligible for participation the primary investigator explained the purpose of the study, and the parent participant was encouraged to read the IRB approved parent permission consent document (Appendix B). The parent was encouraged to ask questions about the study procedures. If they were willing to participate and consent for their own and their child's participation, the parent signed, initialed, and dated the parent permission consent documents. A copy of the parent-permission document was given to the parent participant for their records, and the other was securely filed by the primary investigator for her records. Children participants were asked to

provide verbal assent by responding to a pre-scripted assent statement. The child was required to verbally say "yes" for them to participate. If either the parent or child did not want to either answer a question or chose to end participation, they were allowed to do so at any time without penalty.

Once consent and assent were obtained, the parents completed the survey packet either on the pool deck or in the bleachers, away from the child. The parents were given verbal and written instructions on the questionnaires that they answered and a brief explanation of how they were contributing to the study. The parents were informed that they may skip questions they were not comfortable answering, and they may cease the process at any time. The primary investigatory was with the parent to ensure they completed the questionnaires and provide clarification if needed. Parent questionnaires were completed during practice time; however, parents were instructed to answer questions based on their child's overall swimming participation (i.e., practice and competitions).

The research assistant took the children to a quiet space near the pool to complete their surveys, so the child did not feel any extraneous pressure from the parent to answer questions a certain way. The child was provided with the questionnaire instructions. Before beginning, the researcher used sample questions to ask the child for practice using the Likert-scale to increase familiarity and accuracy of use (i.e., "On a scale from 1 to 5, do you like eating vegetables more than candy?"). The child was encouraged by the researcher to answer all questions honestly and that no one, except the researcher, would see their responses. Once the child was comfortable with the Likert-scale and understood how to answer each question, the researchers began the surveying of the Sport Enjoyment and Commitment Questionnaire (Appendix C), which was adapted for swimming participation (i.e., "Exercise makes me happy" to "Swimming makes me

happy"). The researcher read each question to the child, and the child was allowed to ask questions, at any time, for clarification. The child's responses were recorded by the researcher on the questionnaire sheet. The children who participated were provided with a fun swim cap to thank them for their participation. Once the children finished and received the swim cap, they were dismissed back to their parents. Thank-you emails were sent to the swim coaches after the study to thank the parents and children for their time and inform them that the overall results from the study will be shared with the coaches to pass along to the parents interested in the study's findings.

Measures

A questionnaire packet was created for each parent and child. Each parent-child dyad was given an ID number to maintain confidentiality. The first team surveyed was coded with numbers starting at 101 to 109 (n=9), the second team was coded with numbers 201 to 212 (n=11), the third team was coded with numbers 213 to 223 (n=10), and the fourth team was coded with numbers 110 to 120 (n=10). Parent questionnaire packets were identified with the letter "P" in front of their identification number and the children's survey was identified with the letter "C" in front of their identification number. The following measurements were assessed via paper-based questionnaires during data collection.

Parent measures. Parent participants completed the following:

Demographics and child swim history questionnaires. The demographics and child swim history questionnaire were used to quantify the parent's sex and relationship to the child participant (Appendix D). The parent answered questions relative to their family's demographics and their child's swim team participation (i.e., "when was your child enrolled with the current

club team they swim for?", "how often does your child compete in competition for the year-round swim team?").

Motivation for participation in physical activity– adapted for year-round swimming participation. The purpose of the motivation for participation in year-round swimming measure was to rank-order the reasons parents reported for enrolling their child in year-round swimming (Appendix E). The original statements were in the context of exercisers stating the reasons they began physical activity. For use in the current study, statements were adapted to relate to enrolling a young child in year-round swimming participation (i.e., "Feel good when I have played well" changed to "To feel good when he/she has swum well"). This questionnaire used a 5-point Likert-scale set (1 'strongly disagree' to 5 'strongly agree') in which parents were given a list of commonly reported answers for why he/she might have enrolled his/her child in sport (year-round swimming). Each item relates to one of seven subscales: fitness (i.e., "To stay in shape"), skill/mastery (i.e., "To learn new skills"), fun/excitement (i.e., "To have fun"), affiliation (i.e., "To be with friends"), recognition (i.e., "To gain recognition"), team factors (i.e., "For the coaches"), and ego/competitiveness (i.e., "To win against others"). For each statement, the parent indicated how strongly they agreed with the reason for enrolling their child in year-round swimming or disagree using a 5-point Likert-scale (1 'strongly disagree' and 5 'strongly agree'). Once all 27 questions are answered, the results were scored separately by subscale. The subscales scores for each participant were ranked from 1 to 7 (1 being the top reason he/she enrolled his/her in year-round swimming). The original survey, in which this one was derived, was tested for reliability by McCullagh et al. in 1993 (fitness α=.93, skill/mastery α=.83, fun/excitement α= .58, affiliation α=.45, recognition α=.74, team factors α=.70, ego/competitiveness α=.61).

Parent initiated motivational climate questionnaire-2. The Parent Initiated Motivational Climate Questionnaire-2 (PIMCQ-2) was used to assess the parent-initiated motivational climate (White et al., 1992; White, 1996; White, 1998) (Appendix F). Seven items comprised the parent-initiated mastery climate scale (i.e., "I am most satisfied when my child learns something new") and nine items comprised the performance climate scales (i.e., "I say it is important for my child to win without trying hard"). Responses were given on a 1 to 4 Likert-scale from strongly disagree to strongly agree. To score this questionnaire the responses within each subscale were added together, so each participant ended with three scores: learning and enjoyment subscale score, success-without-effort subscale score, and worry-conducive subscale score. Cronbach's *alpha* was reported as .76 to .79 for the mastery climate scale and .83 to .85 for the performance climate scale. The PIMCQ-2 provides scores on three subscales: mastery climate (the learning and enjoyment-emphasis subscale) and two for performance climate (success-without-effort and worry-conducive behaviors subscales).

Child measure. Child participants completed one questionnaire with the assistance from the primary researcher or a research assistant.

The sport commitment and enjoyment questionnaire-2 – adapted for year-round swimming participation. The sport commitment questionnaire-2 was adapted from determine enjoyment and commitment in sport to determining enjoyment and commitment in year-round swimming participation (i.e., "Sport is fun" to "Swimming is fun"; Scanlan, Chow, Sousa, Scanlan, and Knifsend, 2016; Appendix B). The adapted questionnaire consisted of eleven items: five items for swimming enjoyment (i.e., "Swimming makes me happy) and six items for swimming commitment (i.e., "I am determined to keep swimming"). The questions were answered using a 5-point Likert-Scale, adapted by adding assistance from a smiley face

assessment tool (Figure 1), which ranged from 1, strongly disagree to 5, strongly agree (Fredrick et. al, 1993).

Figure 1. Smiley face assessment tool

For scoring, the questionnaire was divided into two subscales: Sport Enjoyment and Enthusiastic Commitment.

Statistical Analysis

Participants with more than 10% of missing data for any questionnaire were removed from analyses of that questionnaire. One participant exceeded 10% of missing data for Parent Motives for Year-Round Swimming Enrollment, and therefore, was not used for analyses, so the final sample size for this questionnaire was 39 participants (97.5% completion). The total population used for analyses of The Parent-Initiated Motivational Climate Questionnaire -2 was 36 participants (90% completion) due to four participants having more than 10% of missing data. One participant's data was missing a response to one question on the learning climate subscale of the Parent-Initiated Motivational Climate Questionnaire-2 and imputation of mean by the individual's learning climate subscale score was used to fill the missing data. All participants (N = 40) had completed data for Child Commitment and Enjoyment to Year-Round Swimming Questionnaire. Means and standard deviations were calculated for each subscale for all questionnaires.

Cronbach's alpha was used to determine internal consistency reliability of each subscale within a questionnaire. If necessary, subscale questions were removed from analyses to increase reliability to .70, though this was not either possible or realistic for all subscales. All questions

($N = 27$) from the Parent Motives for Year-Round Swimming Enrollment were used for analyses. The reliability data for the seven subscales was: Fitness ($n = 3$, $\alpha = .73$), Skill/Mastery of Skill ($n = 6$, $\alpha = .65$), Fun/Excitement ($n = 5$, $\alpha = .68$), Affiliation ($n = 2$, $\alpha = .68$), Recognition ($n = 3$, $\alpha = .80$), Team Factors ($n = 5$, $\alpha = .72$), and Ego/Competitiveness ($n = 3$, $\alpha = .84$). Questions for the skill/mastery of skill, fun/excitement, and affiliation were not removed because this caused the reliability of each subscale to decrease. Two questions were removed from the Parent-Initiated Motivational Climate Questionnaire ($N = 18$ to $N = 16$) from the learning subscale (questions #1 and #7) to raise alpha to .70. After removing the two questions from analysis, the learning climate mean and standard deviation were recalculated. The reliability coefficients for the three subscales are as follows: learning climate ($n = 7$, $\alpha = .70$), worry-conducive climate ($n = 5$, $\alpha = .90$), and success-without-effort climate ($n = 4$, $\alpha = .79$). All questions ($N = 11$) from the Child Enjoyment and Commitment in Year-Round Swimming Questionnaire were used for analysis and the reliability for the subscales were enjoyment ($n = 5$, $\alpha = .73$) and commitment ($n = 6$, $\alpha = .90$).

Means and standard deviations were used to calculate for the demographics and swim history questionnaire. A frequency analysis was used to determine the reasons parents enroll their child in year-round swimming (hypothesis 1). Pearson's product-moment correlation analyses were conducted to examine the relationships between a) parent-initiated motivational climate and child's enjoyment and commitment in swimming (hypothesis 2), b) parent-initiated motivational climate and motives for swimming enrollment (hypothesis 3), and c) parent motives for swimming enrollment and child's enjoyment and commitment to year-round swimming (hypothesis 4). Cohen's conventions were used to determine the size of the correlation

coefficients, where .10 is small, .3 is considered moderate, and .50 is considered large (Cohen, 1988). Statistical significance was set at $p < .05$.

Chapter IV: Results

Demographics and Swim History

The primary investigator reached out to 20 year-round USA Swimming club programs in the Southeast. A total of four teams agreed to participate (20%); one team refused participation (5%) while the remaining teams (75%) did not follow-up or respond. Of the four teams that agreed to participate, there was a potential 100 dyads that could be recruited to complete the surveys. The response rate was 40-dyads (33.3%).

Table 1 shows the demographics of the parent-child dyads. The average age of the children was 7.18 ± .93 years (*n* = 18 females, 22 males). The majority of adults who completed the questionnaires were the child's mother. The majority of the parents were Non-Hispanic White (72.5%). The majority of the families lived in a medium-size city (30,000-100,000 people) and 97.5% had a household income above $50,000.

Regarding swim history, the children started to swim for a USA year-round swim club at an average age of 6.44 ± 1.02 years and had been participating in USA year-round swim club for 8.76 ± 10.22 months (median = 5 months). They practiced 3.17 ± .65 days per week. The majority of parents surveyed had no history with USA year-round swimming (82.5%). Figures 2 and 3 demonstrate the percentage of children who have previously participated in swim meets and the percentage of those who will participate in the future. Half of the children had previously participated in swim meets, and roughly two-thirds of the children intended to participate in swim meets during the 2019-2020 swim season.

Table 1

Child and Parent General Demographics

Variable	N	%
Child General Demographics		
Age		
5-years	3	7.5
6-years	5	12.5
7-years	14	35
8-years	18	45
Sex		
Male	22	55
Female	18	45
Race		
Non-Hispanic White	29	72.5
Asian	9	22.5
Other	1	2.5
Mixed-Race	1	2.5
Parent General Demographics		
Sex		
Male	10	25
Female	30	75
Relation to Child		
Mother	29	72.5
Father	10	25
Other	1	2.5
Education		
High School/GED	2	5
Bachelor's	17	42.5
Graduate	20	50
Do Not Know/Refused	1	2.5
Martial		
Married	38	95
Living as Married	1	2.5
Divorced	1	2.5
Employment		
Yes	35	87.5
No	5	12.5
Full-Time	26	74.3
Part-Time	9	25.7
Size of City		
Large	11	27.5
Medium	24	60
Rural	4	10
Small	1	2.5

Figure 1

Child Previous Swim Meet Participation

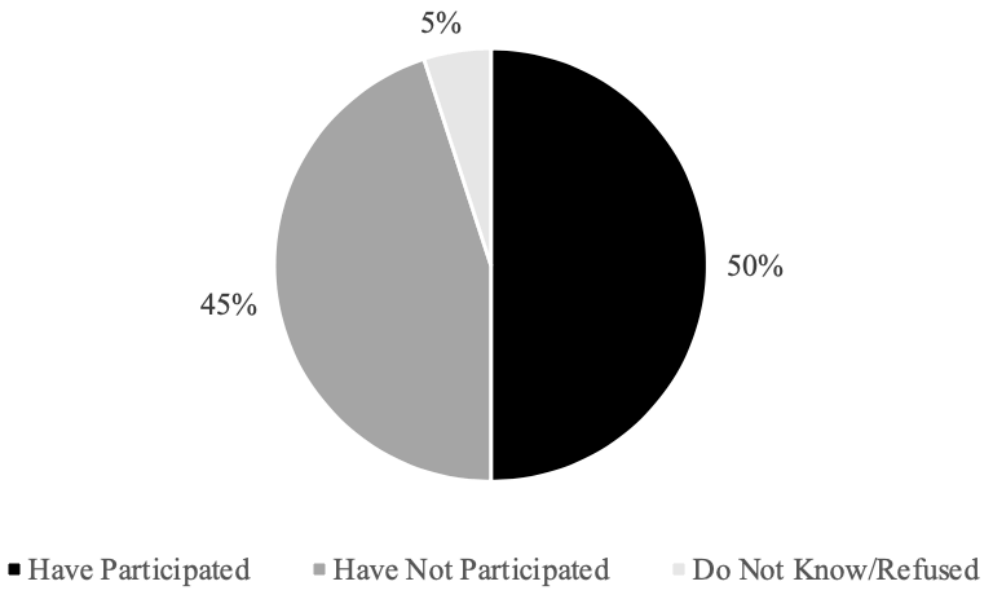
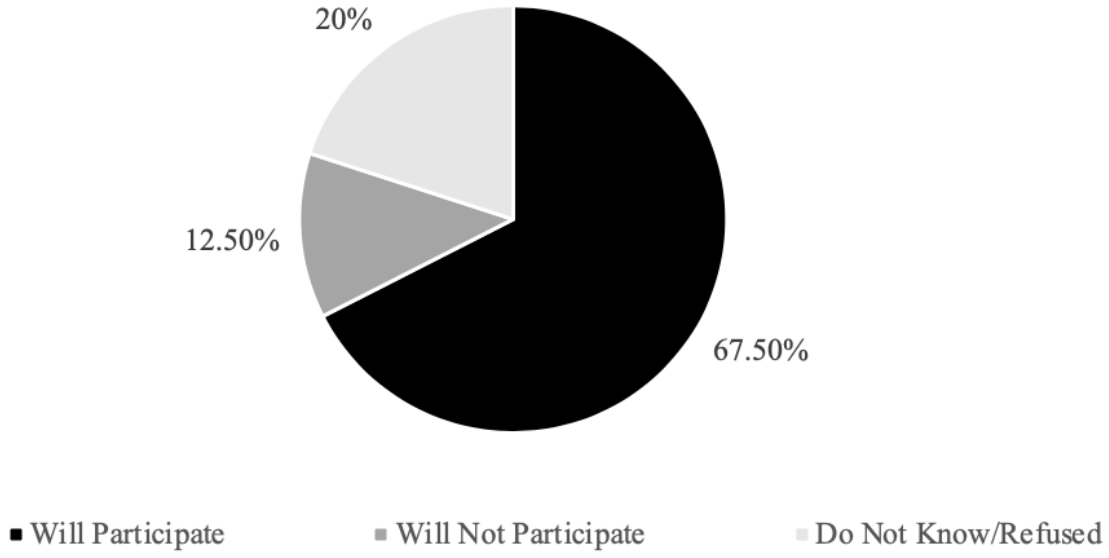


Figure 2

Child Future Swim Meet Participation



Parent Motives for Year-Round Swimming Enrollment

The data found in Table 2 indicates that, on average, the top reasons a parent enrolled his/her child in year-round swimming were for the following in rank order: Fitness, Skill/Mastery of Skill, Fun/Excitement, Affiliation, Team Factors, Ego/Competition, and Recognition.

Table 2

Parent-Motives for Child Enrollment in Year-Round Swimming by Subscale Ranking

Subscale	Ranking	Mean	SD
Fitness	1	4.54	.45
Skill/Mastery of Skill	2	4.31	.48
Fun/Excitement	3	4.10	.51
Affiliation	4	3.85	.76
Team Factors	5	3.10	1.05
Ego/Competitiveness	6	2.75	.92
Recognition	7	2.98	.69

Parent-Initiated Motivational Climate Questionnaire – 2

Table 3 shows the results of the three motivational climates. Parents scored highest for creating a learning climate. The second-highest rating was a climate that supports success-without-effort. This is a subsection of a performance climate in which a parent wants his/her child to do well without having to try hard (natural talent and skill). Lastly, the least identified climate was a worry-conducive climate, which is a subsection of a performance climate, in which a parent worries of his/her child failing. The reported mean values for both performance subscales were low (M = 1.48 ± .50, worry-conducive; M = 1.79 ± .53, success-without-effort) out of the possible 5-point Likert-scale which indicates parents did not identify as strongly with a performance climate as they did the mastery climate.

Table 3

Parent-Initiated Motivational Climate Questionnaire -2 by Subscale

Subscale	Mean	SD
Learning	3.72	.28
Worry-Conducive	1.48	.50
Success-Without-Effort	1.79	.53

Child Enjoyment and Commitment in Year-Round Swimming

Table 4 shows the results of the children's' ratings of enjoyment and commitment to year-round swimming. The average score for enjoyment and commitment indicated the swimmers had a high agreement with both the enjoyment and commitment statements.

Table 4

Child Enjoyment and Commitment Swimming by Subscale

Subscale	Mean	SD
Enjoyment	4.35	.65
Commitment	4.29	.89

Relationships Between Motivational Climates, Enjoyment, Commitment, and Motive for Enrollment

Table 5 shows the correlations between parent-initiated motivational climates and child enjoyment and commitment in swimming (N = 36). No to small non- significant relationships were found between any of the parent-initiated climates and child enjoyment and commitment in year-round swimming. A moderate non-significant relationship was found bet a learning climate and commitment.

Table 5

Relationship between Parent-Initiated Motivational Climate and Child Enjoyment and Commitment

	Enjoyment	Commitment
Learning Climate	.08	.30
Worry-Conducive Climate	.00	.21
Success-Without-Effort Climate	-.17	-.12

Table 6 shows the correlation between parent-initiated motivational climate and parent motives for child enrollment in year-round swimming (N = 36). No to small non-significant relationships were observed for a parent-initiated learning climate. Small to moderate non-significant relationships were observed for a worry-conducive climate. A success-without-effort climate had a significantly strong and moderate negative relationship with the fitness (r = -.50, p < .01) and skill/mastery of skill (r = -.38, p < .05) motives, respectively.

Table 6

Relationship between Parent-Initiated Motivational Climate and Parent Motives for Young-Child Enrollment in Year-Round Swimming

	Fitness	S/M	F/E	Affiliation	Recognition	TF	E/C
Learning Climate	.18	.05	.14	.10	.07	-.15	-.11
Worry-Conducive Climate	-.13	-.20	.12	-.06	.17	.25	.23
Success-Without-Effort Climate	-.50**	-.38*	-.26	-.17	-.01	.18	.24

Note. S/M = Skill/Mastery of Skill, F/E = Fun/Excitement, TF = Team Factors, E/C = Ego/Competitiveness
*p<.05, **p<.01

Table 7 shows the correlations between parent motives for child enrollment in year-round swimming and child enjoyment and commitment in swimming (N = 39). Small to moderate non-significant relationships were found between the seven motives for year-round swimming enrollment and child enjoyment in year-round swimming. The only statistically significant relationship observed with child commitment was strong between the fun/excitement parent motive swimming (r = .43, p < .01).

Table 7

Relationship between Child Enjoyment and Commitment in Year-Round Swimming and Parent Motives for Young-Child Enrollment in Year-Round Swimming

	Fitness	S/M	F/E	Affiliation	Recognition	TF	E/C
Enjoyment	.12	.01	.18	.30	-.14	.09	-.05
Commitment	.20	.07	.43**	.22	-.04	.06	.08

Note. S/M = Skill/Mastery of Skill, F/E = Fun/Excitement, TF = Team Factors, E/C = Ego/Competitiveness
**p<.01

Chapter V: Discussion

Swimming is a lifetime sport that can start in childhood and be maintained well into old age. In addition, it has the potential to increase physical activity levels from childhood to youth and adolescence, and into adulthood (Alfano et al., 2002). It is unknown, however, why parents initially enroll children in sports, and it is unclear how parents influence the sport experience for a child in their first years of participation. It is possible that promoting higher levels of child enjoyment and commitment to sport at a young age may lead to longevity in sport participation. The current study aimed to determine the reasons parents enroll their child in year-round competitive swimming and understand the influence parents have on child enjoyment and commitment to year-round swimming participation.

Parent Motives for Child Enrollment in Year-Round Swimming

The main reason parents enrolled their child in a year-round swimming program was for fitness benefits. This is a novel finding as minimal past research has examined the motives parents have for enrolling their child in youth sport at an early age. Parents might enroll their children in swimming for fitness-related benefits due to the desire for their child to increase his/her physical activity level and thus his/her overall fitness. Other motives (i.e., mastery of skill and fun/excitement) were ranked closely behind the fitness motive for enrollment, which suggests that there are multiple top-reasons parents enroll their child in a year-round swim program. This includes a parent wanting a child to go through the process of learning and developing new skills and enjoying the fun of being a part of a sports team. Understanding why a parent enrolls their child in a year-round competitive sport may be a first indicator of the type of motivational climate and the level of enjoyment and commitment their child will experience

through early sport participation. Additional research is needed to understand the long-term impact, if any, parental motives have on the youth sport experience.

Parent-Initiated Motivational Climates and Child Enjoyment in Swimming

The relationships between parent-initiated motivational climates and young child enjoyment in youth sport participation were examined. No relationships were observed between the two parent-initiated motivational climates and child enjoyment. This finding is in partial agreement with past research where it has been supported that when parents create a performance climate, there is no significant relationship with child enjoyment (Chan et al., 2012). In contrast, previous literature in youth swimmers between ages nine and 18 years reported positive sport outcomes, such as higher levels of enjoyment, when parents created a strong mastery climate (i.e., learning climate) (Chan et al., 2012). Past research findings would suggest the current study's mean score and variability (3.58 ± .22) for a learning climate was rated much lower and closer together compared to other findings (4.40 ± .58; Sanchez-Miguel et al., 2013) which might have contributed to the lack of a relationship between a parent-initiated learning climates and child enjoyment. One possible explanation for the difference in findings could be due to the age of the children. The current study recruited children between the ages of 5-8 years, where Chan et al. (2012) included older children and adolescents (ages 9 thru 18). McCarthy et al. (2008) noted that younger children (ages 8-10 years) rate their level of enjoyment differently than older athletes (ages >11 years). It is possible that athletes under the age of eight, too, conceptualize and rate enjoyment levels differently than older athletes and regardless of parent-initiated motivational climates. The first few years (and for some participants of the current study, the first few months) of sport may be an enjoyable experience simply because it is a new activity. Further, the young children may not have been able to fully comprehend the questions and the

use of the 5-point Likert scale for responding to questions. Previous studies that have examined young-child enjoyment of different tasks have only used a visual scale, thus removing numbers and written responses to minimize confusion (McGeown et al., 2015).

Another possible explanation for the difference in results could be due to the methods used for measuring parent-initiated climates. Past research provided surveys to the children to rate their perceived parent-initiated motivational climates. In the current study, due to the age of the children, parents completed their own perceived parent-initiated motivational climate questionnaire, which may influence their results to be more positive (i.e., higher scores on a learning climate), resulting in a social desirability bias. Additionally, the young age of the children and the early exposure to the sport environment may be related to parents not yet creating strong motivational climates in sport context though it is possible that parents create strong motivational climates in other contexts of the child's life (i.e., home and school). It is possible that there is a threshold that needs to be met related to time in the swim season, or years involved with the sport, before children to truly feel the effects of a sport context parent-initiated motivational climate; additional research is needed to determine if a threshold needs to be met.

Parent-Initiated Motivational Climates and Child Commitment to Swimming

Neither a mastery nor performance climate was associated with child commitment to year-round swimming. It was hypothesized that a parent-initiated mastery climate would be positively associated with child commitment, while a parent-initiated performance climate would be negatively associated. In older athletes, Gardner et al., (2017) reported a significant relationship between the adolescent athletes' intentions to continue sport and the level of parental support they perceived. Athletes who rated high levels of parental support (similar to parent-initiated mastery climates) had continued with sport the following year.

A parent-initiated performance climate has been associated negatively with adolescent athletes' commitment to sport (Sanchez-Miguel et al., 2013). The current study's findings of no significant association between a parent-initiated performance climate and commitment to year-round swimming may be due to the early time point in which data was collected. The year-round swim season starts after Labor Day for the child participants used in the current study. Thus, at the time of which data was collected, the season was 1-3 months into practice, and most children had not competed in a swim meet (50%). In respect to other theories, a child is more likely to want to continue doing a task when they are perceived as successful (Deci & Ryan, 1985; Deci & Ryan, 2000). Given the novelty of participating in year-round swimming and the lack of competition, the young athletes may have felt higher levels of commitment to the sport early in the season as competition for the swim season had not been in full swing yet, which could their intention to continue swimming. It is possible that once a child begins to compete in a sport and understands competition outcome status (i.e., First place compared to second-place), a child's commitment level could begin to waver. It is thought that a child who consistently out-performs others will want to continue at this young age, while those who are the last of the pack will choose another activity in which they feel they are more likely to excel.

Another explanation could be that the idea of competition outcome affecting commitment may not be seen until a child is much older (>11 years; McCarthy et al., 2008). Younger athletes (<11 years) might not conceptually be able to understand competition and outcome. If their focus is on a well-rounded sport experience that would include the fun of being on a team with friends and the excitement that revolves around practice and competition days. It may not be until the athlete is older that they can understand how their efforts in doing well are or are not paying off in competition. So, younger athletes may contentiously rate commitment high, as seen in this

study ($M = 4.39 \pm .89$), until they can better understand their performance compared to others. Finally, the timing of when the parents' perceptions were measured might have an impact on the current results. In the current study, the parents completed the climate questionnaire during practice and in past research this has been done during competition settings (White et al., 1992; White, 1996; White, 1998). It is assumed that most parents do not put an emphasis on their child performing better than others in practice, but rather, put the emphasis on their child performing well "on-stage" (i.e., at a swim meet). Therefore, the timing of the questionnaire in the current study could have resulted in low scores for the performance climate. More research is needed to determine if the climate parents create differs during practice and competition.

Parent-Initiated Motivational Climates and Parent Motives for Year-Round Swimming

Parent-initiated learning and worry-conducive climates were not associated with any of the seven motives for parents enrolling their child in year-round swimming. It was expected that, because of the similarity of the questions on the learning scale and skill/mastery of skill motives scale that there would be a strong positive association between the two. Questions closely resembled the same meanings (i.e., learning climate: "I am most satisfied when my child learns something new" vs. skill/mastery of skill motive: "I enrolled my child in year-round swimming to learn new skills") which the researcher suspected would result in significant positive associations, but rather, no relationship was found. It was predicted that a worry-conducive climate would be associated with a recognition (ego/competitiveness) given that a worry-conducive parent is one places a high level of importance on competing well compared to others (or gaining positive recognition by out-performing their competition). Given the novelty of the Parent Motives for Year-Round Swimming Enrollment, it is possible that despite question

similarity, the two are not strongly correlated. Therefore, it is possible that initial parent motives for enrollment are not important for understanding parent-initiated motivational climates.

Additionally, two significant negative associations were found between a success-without-effort parent-initiated motivational climate and the fitness and skill/mastery of skill motives. Though it was expected that a performance climate would be associated positively with motives such as recognition and ego/competitiveness motives, it was not predicted that a performance climate would be negatively associated with the seven motives. An explanation for the current findings is that parents who present a success-without-effort climate tend to focus on their children doing better than others without trying hard. This climate may take the focus away from positive sport outcomes such as fitness and mastery of skill benefits, as suggested by the strong negative associations in the current study. At a younger age, this climate may not be as harmful the child's sport experience as the child is rewarded for every success, big or small, hard work, or effortless strides. However, as children ages through adolescents and puberty, their sport performance begins to plateau. Children who perceive a parent-initiated success-without-effort may feel vulnerable to failure as the can no longer be successful without hard effort; thus, they may no longer be successful in their parents' eyes, which may contribute to overall child enjoyment and commitment in sport. Additional research is needed to understand the influence the parent-initiated success-without-effort climate has on the youth sport experience as children age.

Overall, there were few findings suggesting that parent-initiated motivational climates are strongly related to parent-motives for enrolling their child in year-round swimming. This may be explained by the top reason parents were enrolling their child in sport (1. Fitness, 2. Skill/Mastery of Skill, and 3. Fun/Excitement), which are not motives of high achievement (i.e.,

their child performing well through self-improvement or in comparison to others). Parent-initiated motivational climates are based on the way a parent interprets their child's achievement (White & Duda, 1992) Therefore, the lack of motives parents have for their child to be enrolled in year-round swimming for achievement reasons (i.e., recognition or ego/competitiveness) might explain why parent-initiated motivational climates are not strongly related to the parent motives.

Parent Motives for Year-Round Swimming Enrollment and Child Enjoyment and Commitment

The final relationships examined were between parent motives for young child enrollment in year-round swimming and child enjoyment and commitment. This novel relationship was studied with the idea that parent motives are associated with a child's level of enjoyment and commitment to youth sport participation in the early ages of participations. No relationships were found between any of the seven motives and child enjoyment. Parent motives may not be related with a child's enjoyment of the sport, meaning a child will enjoy the sport independent of the motive their parent had for enrolling them. This may be because a child enjoys sport participation due to the novelty of the sport, the engagement with teammates, or the fun that is associated with youth sport participation.

In contrast to enjoyment, the parent motive of fun/excitement was related to higher child commitment to swimming. Among older youth, a focus on enjoying the process of sport participation is associated with higher levels of commitment (Leo et al., 2009; Gardner et al., 2017). This finding extends the literature highlighting the importance of the idea that swimming is fun in children to influence commitment to the activity across all ages of children. These findings indicate that at the early stages of youth sport, few of the parent motives for enrolling

their child in sport impact a child's commitment, but not enjoyment, to sport practice (in this case, year-round swim practice).

Limitations

The current study shows opportunities for growth. First, children were assessed in groups of five to six at a time. Although either a research assistant or the primary investigator read the questions one by one with the children to ensure they understood the meaning, it was evident to the researchers the children varied greatly in their reading comprehension abilities. To the researcher's knowledge, it was not solely a matter of the child's age, but the practice and skill level they were at with their reading abilities (i.e., some five-year-aged children read and comprehended much better than some eight-year-olds). In the future, it is recommended that children be surveyed one on one with a researcher in order to allow the child the privacy to ask questions about the understanding of the questions and that questionnaires are tested for their age-appropriate reading comprehension level.

Second, the children reported their scores on a Likert-scale from 1-5 (1 being strongly disagree and 5 being strongly agree). For some children, this was a novel task, and the practice with the smiley face assessment tool did not appear to be enough time to train the children to understand how to respond to each question. Many children understood which questions associated were best rated a number 1 (strongly disagree) or number 5 (strongly agree), but had a harder time understanding numbers 2 (disagree) and 4 (agree) on the scale. Future research may consider recorded interviews with children, allowing them to answer questions feely with a yes, no, and then an explanation of their feelings. Then the interviews could be qualitatively analyzed into common themes to predict the child's level of enjoyment and commitment to the sport.

Another method to consider would be using a visual scale, thus removing numbers and written responses to minimize confusion.

Third, methods and procedures for the Parent-Initiated Motivational Climate Questionniare-2 must be considered. Questions on the survey, at times, relate directly to athlete competition which was not changed from the original version. Therefore, parents of children who had not competed and were not intending to compete in the future may have responded differently to questions in regard to competition outcomes compared to parents who had children competing. Additionally, in the current study parents answered questions about their motivational climate using the Parent-Initiated Motivational Climate Questionnaire-2. This measure was originally completed from the athlete's perceptions about sports competition performance. Given the age of the children being surveyed and the time it would take for them to sit and answer questions, it was best for the parents to respond to these questions for their perceived initiated motivational climate. Parents could potentially rate themselves how they wanted themselves to be seen, which may not reflect the true climate their child experiences (also known as social desirability bias). By changing the questionnaire to be read from the parent's point-of-view, this may have influenced the validity and reliability of the questionnaire. To prevent this from happening, a novel way to measure young child perceptions of parent-initiated motivational climates is needed to compare the agreement between the climate perceived by the parent and the climate perceived by the child.

Fourth, the use of an age range as the selection criteria for the children to participate could be a limitation to the study. While this study aimed at filling a gap in the literature by examining young children, there was a high degree of variability in the length of time (standard deviation of 8 months) the children had been involved in year-round swimming. Some children

had just started swimming (i.e., <6 months), and parents' motivational climates may not be as strongly developed in sport-context as they would be in later years of participation, which may explain the non-significant relationships between the motivational climates and child enjoyment and commitment. It would be best to survey parents and children who have been involved with the sport for at least six months and had previously competed in swim meets. Future research may also choose to compare parent motivational climate at three time points: once between ages five to eight, once between ages nine and 13, and once between ages 14 and 18. By researching at each age group level, a potential trend can be described between the years that children participate in youth sport and the impact their parent's motivational climate has on child enjoyment and commitment to sport across a period of time.

Fifth, the child measure for commitment to swimming asked the child questions about their future involvement in swimming (i.e., "I want to keep swimming in the future"). Given the young age of the child participants, it is unclear if children can envision whether or not they want to keep swimming in the future. The children could interpret the future as next week, next month, next season, or when they are a teenager. At a young elementary-school age, children's concepts of time are developing, and the more cues there are for explaining how long time helps with comprehension and the selection of an appropriate response (Miller et al., n.d.). In the current study, the child's thoughts were difficult to assess/control, so it is unclear to what extent a child believed to have been "committing" to sport in the future. To control for this in the future, "future commitment can be predefined. This way, children can be directed to a specific time point in the future in which they can envision themselves as future athletes or not.

Sixth, children were asked about their enjoyment and commitment to swimming at year-round swim practice. Depending on the day and the mood of the child that day, they could feel

more strongly about swimming compared to other days when they are tired and do not want to practice. In an attempt to minimize this effect, all children completed the survey before swim practice. Future research could also control for this by having all children complete the surveyed on a day they do not regularly have practice so that the influences from practice may not show in their scoring for enjoyment and commitment.

Finally, surveys were administered at the beginning of the year-round season, so many of the children had not yet participated in a swim meet. Over one-third of parents indicated that their child would not be competing in swim meets in the future, while the other two-thirds indicated their child will compete in the season at some point. It may be that those families who intended to not compete during the 2019-2020 season may not consider swimming an achievement-related domain, while those families who had previously competed or intended to compete during the season consider the importance of swimming as an achievement-related domain. Therefore, the two groups (families who have competed/will compete and families who have not/will not compete) may find different significance for whether or not their child enjoys or commits to the sport based on the parent-initiated motivational climate presented. Future studies could sample families that have participated in at least one swim meet.

Strengths

The current study shows strengths in its procedures and research of novel ideas in an underrepresented population. A first strength of the study is that participants between a restricted age range were specifically selected. This is a strength because past research fails to study children in their beginning years of sport. The current study fills the gap by initiating an achievement motivation theory-based study in children under the age of nine. Second, data were collected at four USA swim clubs across the Southeast. Though the family demographics were

similar across each team, this helps to apply the findings of the research to a larger scale population compared to collecting data from only on a specific club team. Third, participants completed the surveys in person so the researchers could control who was around during the time of data collection (i.e., children took the survey without coaches or parents present). This is a strength as it controlled for data collection bias of children feeling pressure from either coaches or parents to respond a certain way on the survey. Fourth, a novel measurement was used to assess parent motives for enrollment in year-round swimming. A physical activity motive questionnaire was used as the premise for developing the survey that asked parents about the motives for enrolling their child in year-round swimming. To the researcher's knowledge, a motives for sport enrollment survey has not been created or used in previous studies. This strength is beneficial to filling a gap in literature because, to the researcher's knowledge, there is no published literature on initial reason parents enroll their child in a year-round sports team and how it relates to the type of motivational climate created. Lastly, the study investigated the motives for enrolling children in year-round swimming and how this is associated with child enjoyment and commitment in the beginning years of sport. This information is beneficial because knowing how parent motives, parent motivational climate relate to child enjoyment and commitment help create future research questions to be addressed to help better understand youth sport environments and predictive longevity of participation.

Future Research

To the researchers' knowledge, previous research has not studied the motives parents' have for enrolling their child in a year-round sports program thus, and it has not been correlated with a parent-initiated motivational climate and young-child enjoyment and commitment to sport. Based on the results, additional research is needed to understand why some motives for

enrolling children in year-round swimming are associated with parental motivational climate, and others are not.

The next logical step is to monitor parent-initiated motivational climates over time with children as they age through a year-round swim program; or cross-sectionally compare the motivational climates between the three age groups in a year-round swim program (under nine, 9 to 13, and 14 to 18 years of age) and compare this to the child's commitment and enjoyment levels. As one ages, it might even be worth seeing how the child's perceptions of motivational climate importance changes from parents to coaches and peers as suggested in previous research in older children and adolescents (Chan et al., 2012; O'Rourke et al., 2014). Future research might also consider if the parent motives for enrolling a child in sport can predict parent-initiated motivational climate and child enjoyment and commitment to year-round sport participation. Finally, future research could determine if the parent motives for enrolling a child in sport moderates or mediates the relationship between motivational climate and child enjoyment and commitment to year-round sport participation.

Practical Application

The findings of the current study can be applied to year-round swimmers aged 5 to 8 years. Though previous research on achievement motivation theory would suggest otherwise, the current study suggests that focusing on parent-initiated motivational climates may not be necessary for understanding young child enjoyment and commitment in their begging months/years of year-round swimming participation. Rather, parents and coaches may choose to understand how the initial motives parents have for enrolling their child in a year-round swim program is associated with the type of motivational climate presented. If certain motives are associated with higher or lower motivational climates, parents and coaches can better understand

their potential to create that climate for their child's sport experience, which may, as previous research suggests, have an impact on the child later in sport participation (>8 years old). Lastly, parents and coaches may also choose to use the information on the initial reasons parents enroll their child is sport to understand better child levels of commitment to the sport in the beginning months/years of participation. The current study provides preliminary information on how parent motives for enrolling a child in sport may be the first step to understanding how parent motives contribute to other factors (parent-initiated motivational climates and child commitment), which could be important for future child sport experiences and intention to continue.

Conclusion

In conclusion, parents enroll their young child (aged 5 to 8) in year-round swimming for mainly fitness-related benefits. Parent-initiated motivational climates were not associated with either child enjoyment or commitment in year-round swimming. Both the fitness and skill/mastery of skill motives were negatively associated with a success-without-effort climate. Lastly, a fun/excitement motive was the only motive associated with commitment. The current findings help explain the relationships between parent motives for enrollment and child enjoyment and commitment to swimming. Thus, it can be concluded that between ages five and eight years, a parent-initiated motivational climate may not be related to a child's enjoyment and commitment to swimming. Understanding parent motives for enrollment could be associated with the type of climate the parent is likely to create but may not necessarily be associated with child enjoyment and commitment in the first years of year-round swimming participation.

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APPENDIX A

EAST CAROLINA UNIVERSITY
University & Medical Center Institutional Review Board
4N-64 Brody Medical Sciences Building· Mail Stop 682
600 Moye Boulevard · Greenville, NC 27834
Office **252-744-2914** · Fax **252-744-2284** ·
rede.ecu.edu/umcirb/

Notification of Initial Approval: Expedited

From: Social/Behavioral IRB
To: Rachel Williams
CC: Katrina DuBose
Rachel Williams
Date: 10/11/2019
Re: UMCIRB 19-001998
Parent-Initiated Motivational Climate and Young Child Enjoyment in Year-Round Swimming

I am pleased to inform you that your Expedited Application was approved. Approval of the study and any consent form(s) occurred on 10/10/2019. The research study is eligible for review under expedited category # 7. The Chairperson (or designee) deemed this study no more than minimal risk.

Changes to this approved research may not be initiated without UMCIRB review except when necessary to eliminate an apparent immediate hazard to the participant. All unanticipated problems involving risks to participants and others must be promptly reported to the UMCIRB. The investigator must submit a Final Report application to the UMCIRB prior to the Expected End Date provided in the IRB application. If the study is not completed by this date, an Amendment will need to be submitted to extend the Expected End Date. The Investigator must adhere to all reporting requirements for this study.

Approved consent documents with the IRB approval date stamped on the document should be used to consent participants (consent documents with the IRB approval date stamp are found under the Documents tab in the study workspace).

The approval includes the following items:

Name	Description
Child Verbal Assent Script	Consent Forms
Demographics and Swim History Questionnaire	Surveys and Questionnaires
IRB Recruitment Email	Recruitment Documents/Scripts
Motives for Child Sport Participation Questionnaire	Surveys and Questionnaires
Parent Initiated Motivational Climate - 2	Surveys and Questionnaires
Parent Permission Consent Form	Consent Forms
Sport Commitment Questionnaire - Adapted for Year-Round Swimming	Surveys and Questionnaires
Study Protocol	Study Protocol or Grant Application

The Chairperson (or designee) does not have a potential for conflict of interest on this study.

APPENDIX B

Parental Permission to Allow Your Child to Take Part in Research

Information to consider before allowing your child to take part in research that has no more than minimal risk.

Title of Research Study: Parent-Initiated Motivational Climate and Young Child Enjoyment in Year-Round Swimming

Principal Investigator: Rachel Williams

Institution, Department or Division: Department of Kinesiology

Address: 174 Minges Coliseum, East Carolina University

Telephone #: 678-896-9127

Study Coordinator: Dr. Katrina DuBose

Telephone #: 252-328-1599

Participant Full Name: _____Date of Birth: _____
Please PRINT clearly

Researchers at East Carolina University (ECU) study issues related to society, health problems, environmental problems, behavior problems and the human condition. To do this, we need the help of volunteers who are willing to take part in research.

Why and I and why is my child being invited to take part in this research?

The purpose of this research is to determine the relationship between a parent-initiated motivational climate and young child's enjoyment of participating in year-round swimming. You

and your child are being invited to take part in this research because they are between the ages of five and eight years old at the time of data collection, and they are registered with a registered year-round swim team. The decision for you and your child to take part in this research will also depend upon whether you and your child wants to participate. By doing this research, we hope to learn they type of climate, which a parent creates, that leads to the highest level of enjoyment in year-round swimming participation.

If you volunteer for this research, your child will be one of about 40 parent-child pairs to do so.

Are there reasons I or my child should not take part in this research?

I understand that I should not participate if I cannot read or speak English. If my child is not between the ages of 5-8 years old.

What other choices do I have if my child does not take part in this research?

You can choose not to participate.

Where is the research going to take place and how long will it last?

The research will be conducted at the location of your child's swim team practice. You will need to either come to practice 15 minutes early or stay 15 minutes afterwards for a total of one time during the study to complete the survey. The total amount of time your child will be asked to volunteer for this study is 15 minutes for a one-time survey completion. There will be space available for you to wait for your child during the research.

What will I and my child be asked to do?

You will be asked to complete three survey documents: Demographics and Swim History, Motives for Year-Round Swimming Enrollment, and Parent-Initiated Motivational Climate Questionnaire. Your child will be asked to do the following: complete a 9-question survey, with the assistance from a researcher, on their enjoyment level of participating in year-round swimming.

What might I and my child experience if we take part in the research?

We don't know of any risks (the chance of harm) associated with this research. Any risks that may occur with this research are no more than what you would experience in everyday life. While, there may not be any additional personal benefit to you, the information gained by doing this research may help others in the future.

Will I or my child be paid for taking part in this research?

We will not be able to pay you or your child for the time you volunteer while being in this study. However, if you child chooses to participate in the study, they will be compensated for their time by receiving a swim cap.

Will it cost me anything for me and my child to take part in this research?

It will not cost you any money to be part of the research.

Who will know that I and my child took part in this research and learn personal information about me or my child?

ECU and the people and organizations listed below may know that your child took part in this research and may see information about your child that is normally kept private. With your permission, these people may use your child's private information to do this research:

Any agency of the federal, state, or local government that regulates human research. This includes the Department of Health and Human Services (DHHS), the North Carolina Department of Health, and the Office for Human Research Protections.

The University & Medical Center Institutional Review Board (UMCIRB) and its staff have responsibility for overseeing your child's welfare during this research and may need to see research records that identify your child.

How will you keep the information you collect about me and my child secure? How long will you keep it?

All data is anonymous with no identifiable information. Data will be stored in Minges room 101 in a locked filing cabinet. Data will be stored for seven years.

What if I or my child decides we do not want to continue in this research?

You and your child can stop at any time after they survey has already started. There will be no consequences if he/she stops and he/she will not be criticized. You and your child will not lose any benefits that he/she would normally receive.

Who should I contact if I have questions?

The people conducting this study will be able to answer any questions concerning this research, now or in the future. You may contact the Principal Investigator at 678-896-9127 (days, between 8:00 am to 5:00 pm).

If you have questions about your child's rights as someone taking part in research, you may call the University and Medical Center Institutional Review Board (UMCIRB) at phone number 252-744-2914 (days, 8:00 am-5:00 pm). If you would like to report a complaint or concern about this research study, you may call the Director of Human Research Protections, at 252-744-2914.

I have decided that I and my child can take part in this research. What should I do now?

The person obtaining informed consent will ask you to read the following and if you agree, you should sign this form:

I have read (or had read to me) all of the above information.

I have had an opportunity to ask questions about things in this research I did not understand and have received satisfactory answers.

I know that my child can stop taking part in this study at any time.

By signing this informed consent form, my child is not giving up any of his/her rights.

I have been given a copy of this consent document, and it is mine to keep.

_____

Parent's Name (PRINT) Signature Date

By initialing in the following places, the parent/guardian and investigator indicate their opinion that the child is too young or otherwise not able to give consent/assent and the study has been verbally explained to the child.

_____ Parent/Guardian _____ Investigator

Person Obtaining Informed Consent: I have conducted the initial informed consent process. I have orally reviewed the contents of the consent document with the person who has signed above, and answered all of the person's questions about the research.

_____

Person Obtaining Consent (PRINT) Signature Date

_____

Principal Investigator (PRINT) Signature Date

(If other than person obtaining informed consent)

APPENDIX C

Sport Enjoyment and Commitment Scale

Circle the number that best reflects your feelings about year-round swim team participation					
	Disagree a lot	**Disagree**	**No opinion**	**Agree**	**Agree a lot**
1. Swimming is fun [PIMC0101]	1	2	3	4	5
2. I like swimming [PIMC0102]	1	2	3	4	5
3. I am dedicated to keep swimming [PIMC0103]	1	2	3	4	5
4. People who are important to me are there for me after I perform poorly in swimming [PIMC0104]	1	2	3	4	5
5. I am willing to overcome any obstacle to keep swimming [PIMC0105]	1	2	3	4	5
6. Swimming is very pleasurable [PIMC0106]	1	2	3	4	5
7. I am determined to keep swimming [PIMC0107]	1	2	3	4	5
8. I am very attached to swimming [PIMC0108]	1	2	3	4	5
9. I will continue to swim as long as I can [PIMC0109]	1	2	3	4	5
10. Swimming makes me happy [PIMC0110]	1	2	3	4	5
11. I am willing to do almost anything to keep swimming [PIMC0111]	1	2	3	4	5

Original Source: T.K. Scanlan et al., *Psychology of Sport and Exercise*, 22 (2016) 233-246
Form 01 1:1 Version 1 (09/20)

APPENDIX D

Demographic & Swim History

I would like to ask you about your and your child's background – age, swim history, the experience you have with year-round swimming, and the number of siblings that also swim. Please respond to questions in regards of the child completing the studies child-survey.

1. How old is your child? ____ ____ years [PIMC0201]

2. What is your child's sex? (check one) [PIMC0202]

____ 1. Female

____ 2. Male

3. What is your child's race/ethnicity? (check one) [PIMC0203]

____ 1. African American ____ 3. Hispanic ____ 5. Native American

____ 2. Non-Hispanic white ____ 4. Asian ____ 6. Other

4. What is your sex? (check one) [PIMC0204]

____ 1. Female

____ 2. Male

5. What is your race/ethnicity? (check one) [PIMC0205]

____ 1. African American ____ 3. Hispanic ____ 5. Native American

____ 2. Non-Hispanic white ____ 4. Asian ____ 6. Other

6. Which best reflects your highest level of education? (check one) [PIMC206]

____ 1. Did not complete high school

____ 2. Graduated from high school or earned GED

____ 3. Attended college or vocational school

____ 4. Earned a college degree (Bachelor's)

____ 5. Earned a graduate degree (Masters, Doctoral, Professional)

____ 6. Don't know/refused

7. Do you work for a living? [PIMC207]

___ 1. Yes

___ 2. No (go to question 12)

___ 3. Don't know/ Refused

8. Which best describes the hours you work? [PIMC208]

___ 1. Part time

___ 2. Full time

___ 3. Don't know/ Refused

9. What type of work do you do? [PIMC209]

_____

10. Which best describes your marital status? (check one) [PIMC0210]

____ 1. Married

____ 2. Living as married

____ 3. Widowed

____ 4. Divorced

____ 5. Never married/single

____ 6. Separated

____ 7. Don't know/refused

11. Which best describes the place you live? (check one) [PIMC211]

____ 1. Large city [>100,000 people; like Raleigh, NC]

____ 2. Medium city [30,000-100,000 people; like Goldsboro or Greenville, NC]

____ 3. Rural city [<30,000 people; like Havelock or New Burn, NC]

____ 4. Small city [<1,000 people; like Black Creek or Bath, NC]

____ 5. In the country, no city

____ 6. Don't know/refused

12. Which best describes your household income in the past year? (check one) [PIMC212]

____ 1. < $15,999

____ 2. $16,000 to $24,999

____ 3. $25,000 to $34,999

____ 4. $35,000 to $49,999

____ 5. $50,000 to $74,999

____ 6. $75,000 and greater

____ 7. Don't know/refused

13. What is your relationship to your child? [PIMC0213]

____ 1. Mother ____ 3. Step-Mother

____ 2. Father ____ 4. Step-Father ____ 5. Other

14. Would you say that in general your child's health is [PIMC0214]

____ 1. Excellent
____ 2. Very good
____ 3. Good
____ 4. Fair
____ 5. Poor
____ 6. Don't know/refused

15. Compared to others your child's age, is your child's health [PIMC0215]

____ 1. Excellent
____ 2. Very good
____ 3. Good
____ 4. Fair
____ 5. Poor
____ 6. Don't know/refused

16. Now, thinking about your child's physical health, which includes physical illness and injury, have there been any days in the past 30 days that your child's physical health was not good? [PIMC0216]

___ 1. No (go to question 20)
___ 2. Yes
___ 3. Don't know/ Refused

17. How many days in the past month was your child's health not good? [PIMC0217]
_____days

18. During the past 30 days, were there any days that poor physical health kept your child from doing his/her usual activities, such as going to school, doing chores, or playing with friends? [PIMC0218]

___ 1. No (go to question 20)

___ 2. Yes

___ 3. Don't know/ Refused

19. How many days in the past month was your child unable to do his/her usual activities? [PIMC02219]
_____

20. Compared with others your child's own age and sex, how do you rate your child's level of physical strength? [PIMC0220]

____ 1. Much more than others

____ 2. More than others

____ 3. About as much as others

____ 4. Less than others

____ 5. Much less than others

____ 6. Don't know/refused

21. Compared with others your child's own age and sex, how do you rate your child's level of physical activity? [PIMC0221]

____ 1. Much more than others

____ 2. More than others

____ 3. About as much as others

____ 4. Less than others

____ 5. Much less than others

____ 6. Don't know/refused

22. What age was your child when they started to swim independently? [PIMC0222]

_____ years old

23. What age was your child when they started to swim for a USA year-round swim club? [PIMC0223]

_____ years old

24. How long has your child swam for a USA year-round swim club? [PIMC0224]

_____ month(s)/ _____ year(s)

25. How many days per week does your child currently practice with a USA year-round swim club? [PIMC0225]

_____ day(s)/week

26. Has your child competed in any USA year-round swim club sanctioned meets? [PIMC0226]

___ 1. No (go to question 28)

___ 2. Yes

___ 3. Don't know/ Refused

27. How many USA year-round swim club sanctioned meets has your child competed in? [PIMC0227]

_____ meets

28. Will your child compete in a USA year-round swim club sanctioned meet during the 2019-2020 season? [PIMC0228]

___ 1. No

___ 2. Yes

___ 3. Don't know/ Refused

29. What is your history with swimming for a USA year-round swim club? [PIMC0229]

____ 1. No experience (I have never swum for a year-round swim club)

____ 2. Some experience (I have swum for a year-round swim club for less than or equal to 1 season)

____ 3. Moderate experience (I have swum for a year-round swim club for 1 to 3 seasons)

____ 4. Significant experience (I have swum for a year-round swim club for more than 3 seasons)

30. How old were you when you swam for a year-round swim club? (Choose All That Apply) [PIMC0230]

____ 1. N/A (I have never swum for a year-round swim club)

____ 2. Under 8 years old

____ 3. Between 8-11years old

____ 4. Between 12-14 years old

____ 5. Between 15-18 years old

31. Did you swim on a collegiate level team (any division) or professionally? (Choose All That Apply) [PIMC0231]

____ 1. N/A (I have never swum for a year-round swim club)

____ 2. Yes, I swam at the collegiate level

____ 3. Yes, I swam professionally

32. How many siblings does your child have? [PIMC0232]

_____ number

33. What is the age and sex for each sibling? (Please **CIRCLE** the siblings who also swim-year-round) [PIMC0233]

Sibling #1: _____ age [PIMC0233A] Sex _____ 1. Female ____ 2. Male [PIMC0233B]

Sibling #2: _____ age [PIMC0233C] Sex _____ 1. Female ____ 2. Male [PIMC0233D]

Sibling #3: _____ age [PIMC0233E] Sex _____ 1. Female ____ 2. Male [PIMC0233F]

Sibling #4: _____ age [PIMC0233G] Sex _____ 1. Female ____ 2. Male [PIMC0233H]

Thank you for completing this survey

APPENDIX E

Motives for Child Sport Participation Measure

The following is a list of reasons why people choose for their child to participate in sport. Keeping in mind your reason for wanting your child to participate in year-round swimming, respond to each question (using the scale given), on the basis of how true that response is for you.

I registered my child for year-round swimming:					
Circle the number that best reflects your feelings about why you registered your child for year-round swim team.					
	Disagree a lot	**Disagree**	**No opinion**	**Agree**	**Agree a lot**
1. To have fun [PIMC0301]	1	2	3	4	5
2. To feel good when he/she have swum well [PIMC0302]	1	2	3	4	5
3. To have a good time [PIMC0303]	1	2	3	4	5
4. For the challenge [PIMC0304]	1	2	3	4	5
5. To get exercise [PIMC0305]	1	2	3	4	5
6. To learn to new skills [PIMC0306]	1	2	3	4	5
7. To be on a team [PIMC0307]	1	2	3	4	5
8. To stay in shape [PIMC0308]	1	2	3	4	5
9. To improve skills [PIMC0309]	1	2	3	4	5
10. To do something he/she are good at [PIMC0310]	1	2	3	4	5
11. To be with friends [PIMC0311]	1	2	3	4	5
12. To be physically fit [PIMC0312]	1	2	3	4	5
13. For the team spirit [PIMC0313]	1	2	3	4	5
14. For the excitement [PIMC0314]	1	2	3	4	5
15. For the coaches [PIMC0315]	1	2	3	4	5
16. For the action [PIMC0316]	1	2	3	4	5

Original Source: McCullagh, Matzkanin, Shaw, and Maldonado, *Pediatric Exercise Science*, 1993, 5, 224-233
Form 03 1:2 Version 1 (09/20)

APPENDIX F

Parent-Initiated Motivational Questionnaire-2

Circle the number that best reflects your feelings about your child's swim-team experience

	Strongly Disagree	**Disagree**	**Agree**	**Strongly Agree**
1. I am most satisfied when my child learns something new [PIMC0401]	1	2	3	4
2. I make my child worry about failing [PIMC0402]	1	2	3	4
3. I am satisfied when my child wins without effort [PIMC0403]	1	2	3	4
4. I make my child worry about failing because it's negative [PIMC0404]	1	2	3	4
5. I pay special attention to whether my child is improving his/her skills [PIMC0405]	1	2	3	4
6. I say it is important for my child to win without trying hard [PIMC0406]	1	2	3	4
7. I make sure my child learns one thing before teaching him/her another [PIMC0407]	1	2	3	4
8. I think my child should achieve a lot without much effort [PIMC0408]	1	2	3	4
9. I believe enjoyment is very important in developing new sport skills [PIMC0409]	1	2	3	4
10. I make my child feel badly when he/she cannot do as well as other [PIMC0410]	1	2	3	4
11. I am completely satisfied when my child improves after hard effort [PIMC0411]	1	2	3	4
12. I make my child afraid to make mistakes [PIMC0412]	1	2	3	4

13. I approve of my child enjoying him/herself while trying to learn new skills [PIMC0413]	1	2	3	4
14. I tell my child to be satisfied when he/she achieves without trying hard [PIMC0414]	1	2	3	4
15. I support my child's feelings of enjoyment in developing skills [PIMC0415]	1	2	3	4

	Strongly Disagree	**Disagree**	**Agree**	**Strongly Agree**
16. I make my child worry about performing skills he/she are not good at [PIMC0416]	1	2	3	4
17. I encourage my child to enjoy learning new skills [PIMC0417]	1	2	3	4
18. I tell my child that mistakes are part of learning [PIMC0418]	1	2	3	4

Original Source: White and Duda 1993 *Adapted Physical Activity Quarterly*