

COACH-CREATED MOTIVATIONAL CLIMATE AND
YOUTH SOCCER PLAYER SELF-EFFICACY AND SELF-TALK

by

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by

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Bachelor of Individualized Studies
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DEDICATION

I dedicate this work to my loving and supportive parents, Edward and Claire Ciampa.

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I wish to thank my parents, my family, and my friends who supported and gave me inspiration throughout this project. I would like to thank my advisor, Dr. Winsler, who without his guidance this would not have been possible. I also want to thank the members of my committee for their invaluable input: Dr. Tim Curby, Dr. Chris Green, and Dr. Adam Winsler. Finally, I would like to show appreciation for the Applied Developmental Psychology lab space and all the extremely friendly and supportive lab mates who helped me along the way.

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LIST OF ABBREVIATIONS AND SYMBOLS

Vienna Youth Soccer	VYS
George Mason University	GMU
Motivational Climate Scale in Youth Soccer.....	MCSYS
Automatic Self-Talk Questionnaire for Sports-Short Version.....	ASTQS-S
Self-Talk Questionnaire for Sports	S-TQ
Self-Talk Use Questionnaire.....	STUQ
Achievement Goal Scale for Youth Sports	AGSYS
Regression Coefficient.....	<i>b</i>
Probability.....	<i>p</i>
Proportion of Variance.....	<i>R</i>

ABSTRACT

COACH-CREATED MOTIVATIONAL CLIMATE AND YOUTH SOCCER PLAYER SELF-EFFICACY AND SELF-TALK

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George Mason University, 2023

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Youth sports offer children a learning environment that can promote beneficial developmental experiences. Examples of these experiences include safe conditions for physical play with their peers, emotional maturation via executive functioning, and behavioral responses such as effort and concentration. The purpose of this study is to examine the relation between player perception of the coach-created motivational climate and player self-efficacy and usage of self-talk. Motivational climates are an inherent aspect of the psychological environment created by social agents that contribute to the athletic achievement-related experiences of the participants. For this thesis, participants were recruited from Vienna Youth Soccer, a non-profit soccer organization, and were aged between 10-13 years old. A total of 67 parents and players completed the survey with the average age of players being 11.55 years ($SD = 1.11$). Participants completed the survey which measured player perceptions of the coach-created motivational climate,

soccer self-efficacy, and self-talk use. The hypotheses included; players perceiving more of an ego-oriented motivational climate would have lower self-efficacy; players perceiving more of an ego-oriented motivational climate would use more negative self-talk; players who use much positive self-talk would have higher soccer self-efficacy; players with low self-efficacy and/or high in negative self-talk would show less interest in continuing to play soccer in future seasons; perception of motivational climate would be similar between the House and Travel soccer programs.

Findings from correlational and multiple regression analyses revealed several significant relations between the variables but most of the hypotheses were not supported. Significant correlations were found between self-efficacy and three self-talk dimensions: motivational self-talk, positive self-talk, and negative self-talk. Females rated a higher perception of ego-oriented motivational climate and used less negative self-talk compared to males. White participants had higher levels of soccer self-efficacy than non-White participants. The child's own mastery-oriented motivation was marginally correlated with self-efficacy. Players who used much positive self-talk also used a lot of motivational and cognitive self-talk. Players use of self-talk was related to how much their coach encouraged them to use self-talk. Boys expected to continue longer in soccer than girls. There were no differences in motivational climate, self-efficacy, and self-talk use between the House and Travel players.

The results from the multiple regressions controlling for race, gender, program type and age, however, indicated there no significant relationships between perception of coach motivational climate and soccer self-efficacy, motivational climate and use of self-

talk, nor between player self-efficacy and self-talk. The limited results might be explained by the small sample size and relatively low internal consistency reliability scores on a few of the measures. Coaches and soccer clubs should continue to be mindful of how they create their soccer environments and further research is needed.

MOTIVATIONAL CLIMATE AND YOUTH SOCCER PLAYER SELF-EFFICACY AND SELF-TALK

Sport is a multidimensional developmental vehicle for young children. Not only does sport offer the opportunity for children to engage in physical play with their peers (Furley, 2021), it can provide positive development in emotional regulation and socialization skills (Woods, 2012). According to the National Youth Sport Parent Survey conducted by the Aspen Institute in 2021, children age 9-18 years spend an average of 11.9 hours per week at practice or in games. If children are spending a substantial amount of time on the field every year practicing their sport, and these environments host many potential benefits, enhancing the experiences of youth athletes not only makes sense but should be a priority. The field of sport psychology focuses on this by identifying psychological variables within sports and competition that affect performance and athlete well-being (APA, 2022). Additionally, coaches, players, and parents benefit from understanding the impact of psychological strategies and concepts - visualization and growth mindset, respectively - to help maximize player and team positive development (Johnson et al., 2004; Marjanović et al., 2019; Papaioannou et al., 2004; Thelwell et al., 2010). Psychological strategies applied during sport provide youth athletes a pathway to develop healthy mental and physical behaviors during competition while simultaneously benefiting the athlete's mental and physical behavior off the field, i.e. self-regulation (O'Rourke et al., 2014).

One dimension of sport psychology that has gained attention in the last few decades by researchers is motivational climate, primarily coach-created motivational climates (Zourbanos et al., 2016). Research shows that coach-created motivational climates can influence goal striving motivations (Nicholls, 1984), social interactions (Chicau Borrego et al., 2021), and the cultivation of personality traits, i.e. perfectionism (Ommundsen et al., 2007). Attention has also been given to constructs such as self-efficacy (Dweck, 1986, Kavussanu & Roberts, 1996; Zourbanos et al., 2016) and goal-setting (Papaioannou et al., 2004). These constructs have been investigated in a myriad of sports including soccer (Curran et al., 2015; Larkin et al., 2016; Moles, 2018; Ommundsen et al., 2005; Saville et al., 2014; Zourbanos et al., 2016) basketball (Seifriz et al., 1992), golf (Turner et al., 2018), and tennis (Thibodeaux & Winsler, 2018). Each of these sports has their own unique structure, rules, and requirements to play – with soccer being no exception. Research conducted in these unique sports will help to explain the significant role psychological constructs (e.g. motivational climate) have within various contexts - especially regarding its application and effectiveness in differing athletic environments such as individual-based and team-based sports.

In the pages that follow, the research literature regarding motivational climate, self-talk, and self-efficacy will be discussed. These studies highlight the importance of these constructs for athletic and personal development. The benefits of mastery-oriented motivational climates and the drawbacks of ego-oriented motivation climates are then detailed along with the additional components that comprise these environments including achievement goal theory and intrinsic/extrinsic motivation. Later, this

introduction details the importance of studying motivational climate within the younger ages (10-13 year old) by examining previous research that has studied male and female athletes from varying sports and ages. Finally, my thesis project aims to fill existing research gaps, and answer research questions and hypotheses in relation to the previous findings in this area of psychology.

ACHIEVEMENT GOAL THEORY

Achievement goal theory, established by Nicholls in 1984, is a framework that delineates two separate forms of achievement motivation. These two achievement motivations are task-involvement and ego-involvement (Chicau Borrego et al., 2021). Task-involvement centers the individual's focus on learning and mastery. The individual who is based in task-involvement spends high effort to reach higher mastery. Ego-involvement centers on competition and requires an external comparison to a normative standard. For individuals high in ego-involvement, their perception of ability relies on competition. Additionally, for ego-oriented individuals, high degrees of effort needed to accomplish a task are perceived as a sign of lower ability. This is grounded in the idea that someone who is highly skilled should not have to use high effort to win or accomplish their goals (Moles, 2018).

Nicholls' (1984) achievement motivation framework provides a clear distinction for how an individual seeking to accomplish a goal might approach said goal. In terms of generating the ideal motivational climate for youth athletes, these distinctions are essential to understand how environmental cues and expectations shape an athlete's perception of success. In team sports, it is undeniable that inter-team competition and

rivalries will emerge. The mere presence of peers and competition guarantees that some comparison will emerge.

MOTIVATIONAL CLIMATES

Motivational climates are created by the social agents that partake directly and indirectly in sports (i.e. parents, coaches, and peers). An athlete's perception of the motivational climate they participate in has been directly connected with the athlete's development of their goal-involvement (i.e. task vs ego) and subsequent motivation (Dweck & Leggett, 1988). For example, an athlete that perceives the motivational climate to be ego-oriented will be more likely to be extrinsically motivated compared to an athlete that perceives the motivational climate to be mastery-oriented (Seifriz et al., 1992). In contrast, athletes who perceive their motivational climate to be mastery-oriented tend to be intrinsically motivated (Seifriz et al., 1992). Intrinsic motivation derives from the pursuit of a goal or involvement of an activity void of external rewards. Intrinsic motivation is associated with mastery-oriented motivational climates due to the emphasis of task-involvement and the necessity for athletes to self-assess and identify personal growth excluded from external rewards (Kavussanu et al., 1996).

Task-orientation (mastery-orientation) and ego-orientation (performance-orientation) are two types of motivational climates found in sport. A mastery-oriented motivational climate centers on the improvement of the athlete's individual skills and highlights the importance of effort, cooperation, and learning (Newton et al., 2000). An ego-oriented motivational climate emphasizes the importance of team member rivalry,

punishment for making mistakes, and player favoritism by the coach (Newton et al., 2000).

Mastery-oriented climates have been shown to have a positive effect on athlete physical self-worth, enjoyment, and effort (Vazou et al., 2006). Athletes partaking in mastery-oriented environments tend to exhibit adaptive behaviors such as higher confidence, dedication, enthusiasm, and vigor (Curran et al., 2015). Additional beneficial outcomes from mastery-oriented climates include higher levels of task cohesion, or the ability for team members to cooperatively work together on a task, and social cohesion, or the strength of the relationships within the group (Chicau Borrego et al., 2021). Ego-oriented motivational climates on average show evidence of athlete disengagement from their sport which can lead to long-term attrition (Duda & Hall, 2001). Additionally, ego-oriented motivational climates tend to produce maladaptive outcomes including hyper competitive inter-team rivalry, social comparisons resting on normative abilities, and fear of failure induced by the coach punishing the athlete for mistakes (Zourbanos et al., 2015).

Motivational climates are established primarily by coaches although other significant social agents such as team members and parents generate motivational climates that also influence the actions of the athlete. Coaches influence the motivational climate in a variety of ways. This includes establishing team objectives, emphasizing team collaboration or team competitiveness, and the values instilled in the team culture. Some of the effects found in mastery-oriented environments include increased dedication, enthusiasm, and vigor (Curran et al., 2015), increased effort, perceived competence, and

self-efficacy (Ntoumanis & Biddle, 1999) and higher levels of intrinsic rewards associated with learning (Kavussanu & Roberts, 1996). Conversely, ego-oriented motivational climates tend to increase intra-team competition, creating more social comparison, which can have a negative effect on the participating athletes (Ntoumanis & Biddle, 1999).

Regardless of whether the motivational climate is mastery or performance based, evidence in the literature highlights the unavoidable impact of the coach in curating player motivation. Møllerlækken et al. (2017) found that from a sample of 256 soccer players and 17 different coaches, perceptions of motivational climates differed between coaches and players, with coaches believing the motivational climate they created was mastery-oriented while players believed the motivational climate to be more performance-oriented. Responding to the Perceived Motivational Climate in Sports Questionnaire (PMCS-Q) (Fry et al., 1993), coaches reported higher levels of mastery-orientation and lower levels of performance-orientation compared to their players. Given the presented evidence of potential benefits and adaptive behaviors from motivational climates, this divergence of perspective is important to consider when educating coaches on how to create a motivational climate. Part of the challenge in coach-created motivational climates rests on the fact that coaches are simply unaware of the effects their actions cause or that they are unable to escape the pressures of winning that subsequently places pressure on the athletes to perform via ego-involvement (Zourbanos et al., 2015). While a coach may believe he/she has created a master-oriented climate, the players may

think otherwise. Additionally, in order for players to perceive the motivational climate as mastery-oriented, coaches may have to be overly positive and mastery focused.

Coach-created, parent-created, and peer-created motivational climates all contribute to the growth and development of the athlete in their sporting environment (Atkins et al., 2015). Athlete behavior and mindset are affected via the interpersonal communications and behaviors of the coach (Saville et al., 2014). Team members, or peers, influence the dynamics of the group by establishing cultural norms, beliefs, and attitudes expected to be seen in the group (Garcia-Calvo et al., 2014). Parents of athletes aged 9-14 were found to have a more significant effect on their child's self-esteem, self-regulation, and anxiety levels compared to the child's coach, presumably due to more overall years of input (O'Rourke et al., 2014). An athlete's environment is comprised of multiple influencers with contributions of influencers also varying based on age and gender. Regarding age differences, Dunn et al. (2021) found that early and mid-adolescent athletes are more dependent on parents for feedback while late adolescent and adult athletes are less open to parent feedback and become more reliant on and impacted by their coaches' feedback. Dunn et al. (2021) focused on multi-sport environments in Canada with athletes participating in a variety of sports including football, golf, volleyball, intercollegiate teams, and more. Regarding gender, Correia and Rosado (2019) found that female athletes were more prone to general sport anxiety including concentration disruption. While considering the varying factors of age and gender, each social agent (coach, parent, and peer) will have a unique contribution to the motivational climate and the individual athletes within it.

Vazou et al. (2006) investigated perceived coach-created motivational climate and peer-created motivational climate and their impact on athlete behavior, affect, and cognition. There were 493 participants (124 female) involved in this cross-sectional study of athletes aged 12 to 17 years old. Participants were athletes that played in a variety of individual and team-based sports including rugby, soccer, basketball, hockey, netball, and swimming. The researchers hypothesized that a mastery-oriented environment would be positively associated with physical self-worth, enjoyment, and effort. It was also hypothesized that ego-oriented environments would positively associate with increased trait anxiety. A variety of constructs were measured using scales including perceived coach-created motivational climate (PMCSQ-2; Newton et al., 2000), perceived peer-created motivational climate (PeerMCYSQ; Ntoumanis & Vazou, 2006), physical self-worth (Children Physical Self-Perception Profile; Whitehead, 1995), enjoyment (Intrinsic Motivation Inventory; McAuley et al., 1989), trait anxiety (Sport Anxiety Scale; Smith et al., 1990), and an abbreviated effort scale (Teacher Rating of Academic Achievement Motivation Questionnaire – TRAAM; Stinnett et al., 1991). Questionnaires were passed out to the athletes prior to the beginning of practice and took roughly 15 to 20 minutes to complete. Results from hierarchical regression analysis showed similarities with findings from existing literature. For example, peer-created task-involving motivational climates was the only significant predictor for positive physical self-worth. Other similar findings showed that mastery-oriented motivational climates were a significant predictor of enjoyment when compared to ego-oriented motivational climates.

As previously mentioned, other researchers have found results in line with Vazou et al. (2006). When athletes perceived their team's motivational climate to be task-involved, they experienced higher enjoyment, better physical self-worth perceptions, and were more effortful in tasks (Curran et al., 2015; Ntoumanis & Biddle, 1999). Independent of perceived coach-created motivational climate, athletes that scored high on perceived peer-created task-involved motivational climate were found to have a higher physical self-worth compared to their peers who indicated a more ego-oriented motivational climate (Vazou et al., 2006). The findings from this study highlight the importance of peer-created motivational climate perception. While the focus of this study is on coach-created motivational climates and the influence on player self-efficacy and self-talk, peer-created motivational climate is another variable that is an integral part of any sporting environment and deserves attention in future research.

As has been shown, coaches and teammates are integral social agents involved in a sporting environment that influence motivational climate. Parents are a third social agent that play a significant role in the development of the athlete. O'Rourke et al. (2014) investigated the relation between parent-and coach-created motivational climate and youth swimmer athletes' self-esteem, anxiety, and intrinsic-extrinsic motivation. In terms of sporting commitment and talent level, these athletes were highly invested in their swim program with families spending substantial time and money toward practices and competitions. The questionnaire was filled out by 238 swimmers (97 boys), aged 9 to 14 years old, at the end of their 32-week competitive swim season. The questionnaire included scales measuring parent-created motivational climate (Parent-Initiated

Motivational Climate Questionnaire-2 – PIMCQ-2; White, 1998), coach-created motivational climate (Climate Scale for Youth Sports – MCSYS; Smith et al. 2008), self-esteem (Washington Self-Description Questionnaire – WSDQ; Smoll et al. 1993), and anxiety (Sport Anxiety Scale-2 – SAS-2; Smith et al. 2006).

A hierarchical regression analysis indicated that coach-created motivational climate did account for a significant portion of variance for self-esteem, performance trait anxiety, and motivation, but that parent-created motivational climate far exceeded the influence of the coach. Similar to the findings from Vazou et al. (2006) that identified peer-created motivational climate as an important predictor of athlete's physical self-worth, enjoyment, and effort, research is needed regarding the influence of parent-created motivational climates. While coaches play an important role in directing, educating, and guiding youth athletes, parental figures are typically a constant force in youth athlete's lives interacting with them in several other life domains, especially at younger ages (Dunn et al., 2021). While the focus of this study is on coach-created motivational climates, both parents and peers are important facets of the sporting environment that are worth mentioning.

SELF-EFFICACY

A necessary component of goal achievement that is impacted by motivational climate is self-confidence. Self-confidence is defined as “*a person's perceived capability to accomplish a certain level of performance*” (Bandura, 1977, as cited in Feltz & Öncü, 2014, p. 418). Like intrinsic and extrinsic motivation, self-confidence is affected by goal-involvement. Athletes that participate in perceived mastery-oriented climates have a

higher level of self-confidence as the environment typically utilizes task-based exercises that focus on personal development (Kavussanu et al., 1996). Athletes that participate in ego-oriented motivational climates more often rely on external feedback such as peer-comparison to evaluate their own self-confidence, leaving their confidence susceptible to instability of external factors (Dweck & Leggett, 1988).

Another primary driver in physical activity domains is self-efficacy. Self-efficacy is a specific and situational form of self-confidence. Self-efficacy differs from self-confidence in that it is the individual's perception of their confidence to perform a particular behavior or physical task, i.e. an athlete's belief in their own sport ability rather than a general confidence in the self (Kavussanu & Roberts, 1996). More importantly, self-efficacy is believed to be an essential mediating factor from the execution of a coach's instructional techniques and the athletes' performance quality (Kavussanu & Roberts, 1996).

Kavussanu and Roberts (1996) investigated the relationship between perceived motivational climates, intrinsic motivation, and self-efficacy in a sample of 285 male and female college students. The sample of students were split into 17 tennis classes. Data were collected over the course of a full year (fall, spring, and summer). Students filled out various questionnaires surveying their *perception of the motivational climate* of their academic-based tennis course (Perceived Motivational Climate in Sport Questionnaire – PMCSQ) (Fry et al., 1993), *goal orientation*, (Perception of Success Questionnaire – POSQ) (Roberts et al., 1998), *perceived normative ability* through a one-item question asking athlete's to rate their level of ability compared to their classmates, *intrinsic*

motivation (Intrinsic Motivation Inventory - IMI) (Ryan & Deci, 2000), and *self-efficacy* which was surveyed through a 14-item questionnaire that the researchers specifically created for this study. Mastery and performance were the two subcomponents of motivational climate. Task and ego were the two subcomponents of goal-orientation. Finally, under intrinsic motivation, there were four subcomponents measured including interest, effort, competence, and tension.

Kavussanu and Roberts (1996) found several significant relations between the focus variables, but the strength of these effects was only found to be moderate. Students who perceived their academic-based tennis course to be more mastery-oriented were found to be higher in interest, effort, perceived competence, and low in tension. Contrasting results were found in students who perceived their tennis class to emphasize an ego-orientation. Individuals in the performance motivational climates were found to have higher levels of tension compared to those in the mastery motivational climates. One of the findings from this study suggests that individuals who have low self-efficacy might benefit the most from partaking in a mastery-oriented climate.

According to the current motivational climate literature, in general, ego-oriented climates have a higher tendency to produce maladaptive behaviors and lower self-efficacy (Kavussanu & Roberts, 1996). There is the case for some subtlety in different contexts or environments related to ego-oriented climates, but these cases are the exception and not the rule. For example, Dweck (1986) found that athletes with high self-efficacy that participate in performance-oriented climates display the same level of

adaptive behaviors as those who took part in the mastery-oriented academic-based tennis course.

SELF-TALK

According to Johnson et al. (2004), self-talk is any form of overt or covert intrapersonal communication that an individual engages in. There are multiple dimensions of self-talk that are elaborated on throughout the sports literature including positive and negative self-talk (Zourbanos et al., 2015) rational and irrational self-talk (Turner et al., 2018), and motivational and instructional, or mastery, self-talk (Johnson et al., 2004). Motivational self-talk can help an athlete to get “pumped up” and to initiate or re-engage an action (Johnson et al., 2004). This technique particularly helps in latter parts of competition when physical fatigue can set in. Additionally, using motivational self-talk during athletics can help to increase drive and arousal levels (Thelwell et al., 2014). Athletes utilize instructional or mastery self-talk to hone their attention on motor coordination tasks while also ignoring miscellaneous noise or factors in the environment (Thelwell et al., 2014). Instructional self-talk appears to help athletes focus on the specifics of a task, whereas motivational self-talk focuses on regulating mood through self-affirmations and other motivational phrases or mantras.

One study to investigate the effect of self-talk in a team-based environment was conducted by Johnson et al. (2004). A sample of four elite youth female soccer players aged 13 years old participated in a single-subject, multiple-baseline, across-individuals design that tested for the athlete’s shooting accuracy. Three of the athletes were given the self-talk intervention sequentially throughout the test cycle with one player not receiving

the intervention acting as the control. Players were given instructional self-talk cue words such as “down” and “lock” to focus on the technical requirements to perform accurate shots. Each player participated in the test in the last 20 minutes of the training session taking about 4-5 minutes each to perform the test. The results from the study indicate that all four players saw improvement in their shot accuracy following the self-talk intervention. The three players that received the intervention showed clear improvement, not only with their shot accuracy, but also in how they rated their level of confidence in utilizing self-talk as a tool to improve their performance (Johnson et al., 2004). One limitation of the study was the lack of true replication of the competitive sport environment. Participants were tested in isolation from opponents and the rigors of the competitive game. While the results indicate improvements in self-efficacy through self-talk, further research is needed to identify the importance and applicability of self-talk in a full competitive game of soccer.

Papaioannou et al. (2004) employed a similar testing procedure to measure the effects of self-talk. The study sampled four adult male soccer teams – one professional and three semi-professional. The four teams were placed into conditions as (1) self-talk, (2) goal setting, (3) self-talk and goal setting, and (4) “do your best” control condition, respectively. The professional team was placed as the “do your best” control and received no instruction or guidance on self-talk or goal setting. The results from this study showed the benefits of self-talk on motor coordination and physical tasks. There was a limitation found in this study that was similar to Johnson et al. (2004). The absence of competition, or defensive opponents, reduces the applicability of these findings to actual game

performance. Performing a skill in a controlled environment is entirely different than performing a skill with opponents present in a real game setting thus the experiment can be said to be testing a technique of the sport but not the actual sport itself. That said, this study, along with Johnson et al. (2004), shows the potential benefits of utilizing self-talk in sport. Even more so, the application of multiple sport psychology strategies simultaneously may prove to be even better than utilizing only one at a time.

Thibodeaux and Winsler (2018, 2019, 2021) examined self-talk in tennis players in three separate studies. Their study in 2018 observed tennis players usage of self-talk on the court and compared these observations with the tennis players' self-report.

Thibodeaux and Winsler followed up this study in 2019 by identifying the relation between self-talk usage and on-court performance from 28 tennis players aged 9 to 17 years old from a Mid-Atlantic region competitive tennis camp. In 2021, using the same data set, Thibodeaux and Winsler examined athlete motivation in their perceived motivational climate and the effect of coach encouragement on self-talk. Motivational climate was measured through Motivational Climate Scale for Youth Sports (MCSYS, Smith et al., 2008). Self-talk was measured through the Automatic Self-Talk Questionnaire for Sports (ASTQS, Zourbanos et al., 2009). ASTQS consists of 40 questions – 21 regarding positive self-talk and 19 regarding negative self-talk.

One of the initial findings from Thibodeaux and Winsler was that in order to validate findings from self-talk measurements, the self-report scores must be compared to real-world observations. Of note, they found that positive self-talk was typically used more often on points that were won and that other types of self-talk, including negative

and instructional, were used on points that were lost. Regarding motivational climate, results from the MCSYS indicated that, in general, players reported having a mastery-orientation with tennis. Additionally, the players reported their sport environment to be more of a mastery climate ($M = 4.3$ out of 5) than an ego climate although ego climate was reported only slightly below the midway point ($M = 2.1$ out of 5) (Thibodeaux & Winsler, 2021). Furthermore, findings indicate that tennis players found their coach to provide encouragement to use self-talk. For self-talk, they found that self-report and observed self-talk yielded a mix of both negative and positive responses with overt self-talk being more positive, and internal self-talk leaning more towards more negative and reactive speech/thoughts. In terms of the relation between self-talk and motivational climate, they found a positive link between coach motivational climate and positive self-talk but did not find any link between coach motivational climate and negative self-talk. Finally, coach encouragement of self-talk correlated with more athlete usage of self-talk in practice (Thibodeaux & Winsler, 2021).

It is clear from the current self-talk literature that further research is required to better understand how motivational climate, self-efficacy, and self-talk affect athletes in their respective sport. There are numerous studies that detail the influence of motivational climate in populations of athletes aged 12 years or older but little evidence has been reported on the influence of motivational climate on 12 years or younger. Given the findings from the current motivational climate literature, it is surprising that more attention has not been placed highlighting the younger age groups. There is a staggering percentage of youth athletes that quit their sport. According to the National Alliance for

Youth Sport, approximately 70% of children will dropout from their sport before they turn 13 (Nays, 2015). Additionally, according to a systemic review and meta-analysis conducted by Møllerlækken et al. (2015), the annual dropout rate for youth soccer players equals roughly one fourth of the active population throughout the 10-19 year old age groups (21% for males, 26% for females) (Møllerlækken et al. (2015). Examining the impact of coach-created motivational climates for youth athletic experience, specifically how it influences self-efficacy and self-talk, will potentially illuminate an explanation on these dropout rates. Another existing gap in the literature is the need for more team-centric motivational climate research. While individual-based sports like tennis and golf have garnered attention amongst psychologists studying self-talk in sport (Thibodeaux & Winsler, 2018; Turner et al., 2018), further research is necessary to better understand how team-centric athletes compete and perform in these environments. Further testing is required to understand how these mechanisms and strategies, such as positive self-talk and motivational orientations, are applicable in a real team game setting. One additional data point to consider is athlete interest in future commitment to their sport, e.g. retention. For player retention, analyzing the relation between player commitment and motivational climate may be indicative of a potential predictor as to why players decide to enroll the following year, change programs or clubs, or dropout and quit.

THE CURRENT STUDY

This study assessed the perceptions of coach-created motivational climates in male and female youth amateur soccer players aged 10-13 years old at Vienna Youth Soccer (VYS), a youth amateur soccer non-profit organization dedicated to providing soccer experiences for players of various skill levels between ages of five to 18 years old. This age range was selected for a few reasons. Firstly, the primary author of this thesis is an employee at VYS and is a head coach for their 15- and 16-year-old boys Travel team. Selecting a younger age range prevented any conflict for the players participating. Secondly, a second study by a student from GMU was being conducted at VYS at the same time. The age range for this second study was from 7-12 years old. The 10-13 age range provided some separation from this second study and fit with the original objective of this study to investigate motivational climate perceptions in the younger ages. Participants in the sample consisted of two athletic categories – Travel (elite) and House (recreational). Recruitment for the study began in mid-October of 2022 for the Travel program players and November 1st for the House program players. The delay in recruitment for the two programs was to allow players from the different programs ample and equal time in the environment to be able to adequately assess their coach. The Travel program began practice on August 1st while the House program did not begin until the end of August. Along with the initial email to the parents of the players with the specified

age-groups, there were several additional follow up emails, approved by the IRB, that encouraged the parents and players to complete the survey. In early January of 2023, the survey was officially closed.

This study aims to answer the five questions listed as follows, with hypotheses below -

Q₁: To what extent is youth soccer athlete's perception of coach motivational climate related to their soccer self-efficacy?

H₁: Youth soccer athletes that perceive themselves to be playing in an ego-oriented motivational climate will score lower on self-efficacy compared to their peers who perform in perceived mastery-oriented motivational climates.

Q₂: To what extent is youth soccer athlete's perception of coach motivational climates related to athlete use of self-talk?

H₂: Youth soccer players participating in a perceived ego-oriented motivational climate will score higher in negative self-talk compared to their peers that perceive their motivational climate to be mastery-oriented.

Q₃: Is soccer athlete use of self-talk related to their soccer self-efficacy?

H₃: Youth soccer athletes who score high in positive self-talk will score higher in self-efficacy compared to soccer athletes that use less positive self-talk, regardless of motivational climate status.

Q₄: To what extent are coach motivational climate, self-efficacy and athlete self-talk related to their intention to continue playing soccer?

H₄: Athletes who score low in self-efficacy and/or score high in negative self-talk will show less interest in continuing to play soccer for the next season.

Q₅: To what extent do soccer athlete perceptions of motivational climate, self-efficacy and self-talk vary depending on being in the house versus travel league?

H₅: Athlete perception of motivational climate will show little to no difference between house and travel soccer settings.

METHOD

PARTICIPANTS

There were 70 participant survey responses from VYS. In total, there were 91 responses collected in Qualtrics – the survey platform used. There were 660 total players enrolled in the boys and girls House program from U11 to U14 during the 2022-2023 season (316 girls, 344 boys). On the Travel side, there were 303 total players enrolled from the U11 to U14 (145 girls, 158 boys). The total participation rate from the current sample from VYS U11 to U14 House and Travel program was thus 7.26%. Of these 91 responses, 21 were thrown out based on the response being blank or vastly incomplete. Parents were given the opportunity to provide an email address to enter a raffle to win one of four \$50 gift cards to Dick’s Sporting Goods and of the 70 surveys used in the analysis 12 of the participants provided no email address. Additionally, of the 70 survey responses used, 8 of these responses only had the parent section completed and no player section input.

Player participants were both male and female, aged 10-13 years old, and involved in either the elite “Travel” program or the recreational “House” program within the youth soccer club. The age group divisions within the club are based on birth year. Thus, for clarification, the labels equate to the following: 10 years old = U11, 11 years old = U12, 12 years old = U13, 13 years old = U14. The U11-U14 Travel program enrolls

approximately 159 players in the boy's program and approximately 144 players in the girl's program. The House program enrolls approximately 344 players in the boys U11-U14 age groups and 348 in the girls U11-U14 age groups.

Of the 70 participants to fill out the survey, only 62 players responded to their section of the survey. Total player participant details are listed in the following paragraph and can be found in further detail in Table 1. In terms of age of the player ($M = 11.55$, $SD = 1.11$), there was one nine years old, 12 ten years olds, 16 eleven years olds, 18 twelve years olds, and 15 13 years olds, with eight responses missing. In terms of school grade, there were three in 4th grade, 13 in 5th grade, 18 in 6th grade, 19 in 7th grade, and 9 in 8th grade, with eight responses missing. In terms of gender of the player, there were 40 males and 27 females with three responses missing. As shown in Table 1, the sample was predominantly White participants with most of the sample consisting of boys. Of the 70 parents to fill out the survey, 39 were mothers, 25 were fathers, and six were filled out by both parents together. The total number of actual responses from the survey was 89 with 19 responses being discarded from the data analysis. Responses were discarded if they were completely blank or very incomplete i.e. 1-3 parent responses on only demographics with no player responses.

Of the 54 travel players (77%), 38.9% always played in the travel program and 61% switched from the House program to the Travel program at some point. Of the 16 House players, all 16 reported to have "always played in House" with no players from Travel changing back to House. Of the 16 players currently playing in the House program, two intend to change to Travel, nine did not intend to change, and five were

“unsure”. Of the 54 current players in the Travel program, none said they intended to change, but 10 responded “unsure.” There were 47 players (77%) who responded that this was their first year with their head coach 15 players who responded this was their second year with their head coach, four players who responded this was their third year with their head coach, two players who responded this was their fourth year with their head coach, and two players responded this was their fifth or more year with their head coach.

Both parent and player filled out a demographic section. They were asked the same question for ethnicity, player gender, player age, player school grade, reasons for playing soccer or having their child play soccer, interest in continuing to player soccer at VYS, and how many more years they would like to play soccer or have their child play soccer. Players were asked questions and filled out measures based on their “current head coach,” but no questions were asked that allowed the player to reveal the identity or name of their coach.

The primary difference between a House and Travel coach is that House coaches typically volunteers, while Travel coaches are paid professionals. As an organization, VYS strives to provide opportunities for children living in and near Vienna to participate in a high-quality soccer experience. Part of their mission is to develop players through “Positive Coaching” (Vienna Youth Soccer, 2023). The competitive difference in age groups at VYS can be found between the younger ages (U9-U14) and the older ages (U15-U19). At the younger ages, the focus is typically on skill acquisition and overall development. At the older ages, winning is a larger metric of success while still maintaining a high level of overall development.

As can be found in the demographic section in Table 1, parent ethnicity included roughly 12% Asian/Pacific Islander, about 2% Black/African American, 9% Hispanic/Latino, roughly 71% White/Caucasian, and 6% Multiracial/Biracial/other. Player responses for ethnicity slightly differed in percentages from parental responses but this was due to the difference in the total responses collected from both populations (Parent ethnicity $N = 67$, Player ethnicity $N = 62$). For both parent and player participants there were no responses for Native American. In terms of family household income levels, 63% of the sample responded earning more than \$200,000 with 3% responding at the lowest income level of \$30,000 to \$60,000. In terms of education for parent #1, the average educational level was earning a bachelor's degree with parent #2 responding at the same level.

The current sample's demographics are roughly in line with the US Census for the community of Vienna, VA. For household income, 73% of the participants responded '\$200,000 or more' which is on par with the U.S. Census median household income of \$200,938 (U.S. Department of Commerce, 2021). Educational level in the sample was marginally higher with 52% of participants responding with a graduate degree, compared to the 44.9% of graduate degree earners between the ages of 25 years and older in the US Census report. The number of White participants in the sample is nearly identical to the US census while the other ethnicities were underrepresented. Due to the low responses in ethnicity other than White, the ethnicity variable was collapsed into two categories – White and other. Further, when compiling each variable, the player's response was

prioritized. When player responses were blank for these variables, the responses from the parents were used.

PROCEDURES

Recruitment for the House program began on September 4th with emails sent to the parents of the U11-U14 age group players via Playmetrics – the club’s communication platform. Recruitment for the Travel program began one month later on October 4th. The content in the message included a brief description of the survey and the Qualtrics survey link. The one-month gap in recruitment was due to the different starting dates for both programs. The Travel program began their Fall season on August 1st while the House program did not begin practice until the end of August. In order to maintain consistency between programs, we gave both groups at least one month in their respective environments to be able to gain a better perception of their coach’s motivational climate. The initial email to the potential participants was approved by the IRB and the technical director of Vienna Youth Soccer and was sent through the House program admin. For the next three months, reminder emails were sent to both the House and Travel groups reminding the parents and players that the survey was still available to be taken. Both parents and players filled out separate parts of the same survey online via Qualtrics. The survey included a click-through parental consent form, parent demographics, a click-through child assent form, child demographics, and scales for measuring the child’s responses related to motivational climate, self-efficacy, and self-talk. At the end of the parental demographic section, parents were given the option of providing their email to be entered into a raffle lottery to win one of four \$50 digital gift

cards to Dick's Sporting Goods. On completion of their demographic section, parents gave the device to their child with the instructions of allowing the players to choose the questions themselves as independently as possible from the parent.

MEASURES

The survey consisted of six measures to collect data on the player's perception of the coach-created motivational climate, player self-efficacy, and player self-talk. Each of the six measures are displayed under the Appendices. The *Motivational Climate Scale in Youth Sports* (MCSYS, Smith et al., 2008) was used to capture the player's perception of the coach-created motivational climate. The MCSYS is comprised of 12 items, has been used in multiple previous studies (Ortiz-Marholz et al., 2016; Thibodeaux & Winsler, 2018), and has been validated for players aged 9-14 years old (Smith et al., 2008). MCSYS has two subscales dedicated to identifying ego and mastery. Both subscales have six items. Internal reliability for the MCSYS measure in Thibodeaux and Winsler (2018) and Ortiz-Marholz et al. (2016) was acceptable for mastery climate ($\alpha = .71$; $\alpha = .78$) and for ego climate ($\alpha = .70$; $\alpha = .74$). Internal consistency reliability for the current sample showed a higher mastery-oriented Cronbach alpha ($\alpha = .76$), while the ego-oriented subscale alpha was lower ($\alpha = .63$).

Item examples for the mastery-oriented subscale are as follows, "The coach made players feel good when they improved a skill," "The coach encouraged us to learn new skills," "The coach told players to help each other get better," "The coach told us that trying our best was the most important thing," "Coach said that teammates should help each other improve their skills," and "The coach said that all of us were important to the

team's success." Item examples for the ego-oriented subscale are as follows, "Winning games was the most important thing for the coach," "The coach spent less time with players who weren't as good," "The coach told us which players on the team were the best," "The coach paid most attention to the best players," "Players were taken out of the games if they made a mistake," and "Coach told us to try to be better than our teammates." In VYS, there is only one head coach per team. Players were provided instructions that specifically asked them to answer questions based off their main/head coach of their current team. Preliminary data exploration found an outlier in the mastery composite score (MCSYS). Upon investigation, one of the player's was found to have left an answer blank. This blank answer was filled in by averaging all their other scores for that player on the scale items.

Self-efficacy in soccer (Zourbanos et al., 2015) was used to capture self-efficacy and consists of 10 questions. This measure was used in a study that tested soccer players aged 10-15 years old (Zourbanos et al., 2015). The internal consistency reliability from Zourbanos et al. (2015) *Self-efficacy in soccer* scale was found to be adequate ($\alpha = .88$). The alpha for *Self-Efficacy in Soccer* in the current sample ($\alpha = .83$) was similar to that of Zourbanos et al. (2015). The items for the soccer self-efficacy variable are as follows, "My confidence in my ability to dribble past an opponent," "My confidence in my ability to pass the ball accurately," "My confidence in my ability to challenge an opponent for the ball," "My confidence in my ability to trick an opponent," "My confidence in my ability to protect the ball," "My confidence in my ability to head the ball accurately," "My confidence in my ability to recover the ball," "My confidence in

my ability to provide support under pressure,” “My confidence in my ability to drive the ball,” “My confidence in my ability to instigate and take a foul.”

Three measures were used to capture self-talk: *Automatic Self-Talk Questionnaire for Sports-Short Version* (ASTQS-S; Zourbanos et al., 2015), *Self-Talk Questionnaire for Sports* (S-TQ; Zervas et al., 2007) and the *Self-Talk Use Questionnaire* (STUQ; Hardy et al., 2007). The Cronbach alpha coefficients for ASTQS-S in the Zourbanos et al. (2015) study was .72 for positive self-talk and .69 for negative self-talk. ASTQS-S contains eight items in total with both positive and negative self-talk having four items each for their subscales. In the current sample, the Cronbach alpha for the ASTQS-Q positive self-talk subscale was found to be higher ($\alpha = .76$) while the negative self-talk subscale was found to be lower ($\alpha = .64$). The items for the positive self-talk ASTQS subscale are as follows, “You had thoughts to psych up yourself; e.g., Do your best,” “You had thoughts to control your feelings; e.g., Calm down,” “You had thoughts to gain more confidence; e.g., I can make it,” “You had thoughts to concentrate; e.g., Concentrate on your game.” The items for negative self-talk ASTQS subscale are as follows, “You had thoughts related to worry; e.g., I am not going to make it,” “You had thoughts related to drop; e.g., I want to stop,” “You had thoughts related to fatigue; e.g., “I am tired,” You had irrelevant thoughts regarding soccer; What will I do later tonight.”

The S-TQ was initially used in a study with 16-36 year old participants with 11 questions - seven of the questions focused on motivational self-talk and four of the questions on cognitive self-talk. The measure seemed appropriate enough to try to use with our sample of younger children. Internal reliability for the S-TQ was also found to

be adequate (α for motivational self-talk items = .91, α for cognitive self-talk = .84).

Reliability alpha for the motivational subscale in this sample (α = .89) was similar to that of Zervas et al. (2007) while the cognitive self-talk subscale (α = .65) was lower. The seven items for the motivational subscale are as follows, “I talk to myself to enhance my self-confidence,” “I talk to myself to motivate myself,” “I talk to myself to increase my effort,” “I talk to myself to encourage myself,” “I talk to myself to strengthen a positive thought,” “I talk to myself to stop negative thinking,” “I talk to myself in order to help myself to relax.” “The four items for the cognitive subscale are as follows, “I talk to myself in order to be able to concentrate more fully on the competition,” “I talk to myself about the technical elements of the competition,” “I talk to myself to give directions,” and “I talk to myself to correct my mistakes.”

Along with the two self-talk measures listed above, the player-based self-talk portion of the survey included several items used previously by Thibodeaux and Winsler (2020) with language adjusted to fit with soccer. For example “*How often do you talk to yourself while playing soccer?*” The two items used from STUQ are as follows, “How often do you talk to your self while playing soccer?” and “How often does your coach tell you to talk to yourself during your practice or game.” All measures except for the STUQ scale (only one item was selected from STUQ) were analyzed with subscales. Based on previous literature usage of these measures, all subscales were the compilation of the participants responses to the particular subscale i.e. motivational climate – mastery-oriented and ego-oriented. The *Self-Efficacy in Soccer* measure was compiled into one variable by averaging the participants scores across all of the 10 items. Higher scores for

all six measures and their respective subscales indicated a stronger perception or association towards the construct. For example, the *Self-Efficacy in Soccer* scale was based on a scale from 1-100 with 100 being the most confident. All details and information regarding these measures can be found at the end of paper in the Appendices.

A survey that measures athlete goal-orientation – *Achievement Goal Scale for Youth Sports (AGSYS)* was also included. This measure has been validated for ages 9-14 years old. AGSYS has been used previously by Cumming et al. (2008) and more recently by Thibodeaux and Winsler (2021). AGSYS is a 12-item scale that asks a player what their goal for playing sport is. Responses are based on a 1-5 Likert scale (Not at all true, Somewhat True, and Very True). The Cronbach alpha for the mastery-oriented and ego-oriented motivational climate questions are .78 and .88, respectively. The two subscale alphas for AGSYS in the current sample was lower for the mastery subscale ($\alpha = .63$) but relatively higher for the ego subscale ($\alpha = .91$). Item examples for the mastery-subscale are as follows, “My goal is to learn new skills and get as good as possible,” “The most important thing is to improve my skills,” “I work hard to become the best I can be,” “I feel successful when I learn new skills,” “I feel successful when I do my best,” and “My goal is to master the skills in my sport. Item examples for the ego-subscale are as follows, “The most important thing is to be the best athlete,” “My goal is to improve so I am better than others,” “I want to be better than others at my sport,” “To me, success means being better than others,” “I want to show that I am better than others,” “My goals is to be better than others in my sport.”

The demographic questions for the parents included which parent was filling out the form, how many years their child had participated in soccer, which program their child played for (house/travel), whether their child always played in that program, the child's level of competition if they played travel, how long the player had been with their head coach, whether they planned on changing programs, whether they planned on registering their child again at VYS, what their goals were for their child in soccer, how old their child was, school grade, whether their child took private soccer lessons, ethnicity, educational level, and family income.. The demographic portion of the player's part of the survey included their gender, age, ethnicity, what the gender of their coach was, and what their goals were for playing soccer. Both parents and players filled out their goals for soccer items separately. There were seven options within the item and participants were asked to rank them in order of most important to least important. The seven options are as follow: 'To have fun', To socialize with friends', To become a better soccer player/athlete', To play competitive soccer in high school', To stay physically active', To play soccer in college with/without a scholarship', and 'To play professional.' Demographic information included in the correlation analysis include player age, player school grade, player gender, player and parent ethnicity, level of parental education, and parental report of family household income.

RESULTS

This section discusses the analysis and findings from the data that was collected through the online parent-player survey. Correlations within and across covariates and demographics are detailed within the preliminary analysis. The primary analysis looks at the Pearson's correlation coefficients between the specific dependent and independent variables along with linear multiple regressions. There were also independent sample T-Tests and One-Way ANOVAs used depending on the nature of the measure X variable. The exploratory analysis section includes any additional findings or insights that I captured along the way that were not pertinent to the initial objectives.

The constructs within the survey that were provided to the player include the player's perception of the coach-created motivational climate, self-efficacy, and self-talk. Motivational climate is the umbrella term to describe the achievement-based environment and within motivational climate there are two distinct types of climates – mastery-oriented motivational climate and ego-oriented motivational climate. Additionally, within self-talk there were 6 dimensions/scales provided to the players: positive self-talk, negative self-talk, motivational self-talk, cognitive self-talk, player self-talk frequency, and instructed or suggested frequency of self-talk by their head coach. There were 25 demographic questions, 18 for the parent and 7 for the player, that collected information

on the player. The covariates included player gender, ethnicity, ethnicity, age, family income, and parental education, among others.

PRELIMINARY ANALYSIS

Descriptive statistics on the covariates and outcomes were run (Table 2). The MCSYS mastery-oriented subscale, on a scale from 6-30, showed a relatively high response score ($M = 25.69$) while the MCSYS ego-oriented subscale, on a scale from 6-30, showed a relatively low response score (on average $M = 11.20$). This means that players in this sample, on average, saw their coaches as being quite mastery oriented and not so ego involved. The coach-suggested self-talk variable mean score was around ‘sometimes’ ($M = 3.34$, $SD = .93$). Mean scores for the other variables showed that U11-U14 House and Travel players at VYS ranked themselves at 71% on soccer self-efficacy on a scale of 1-100 ($M = 71.12$, $SD = 13.58$) and had high usage of positive self-talk which was on a scale of 4-20 ($M = 14.18$, $SD = 3.60$).

The covariates used in the regression analysis were selected based on their level of correlation with the measures. As seen in Table 3, parental education and family income were included in the correlation coefficient analysis but showed no significant correlation to the outcomes or other key predictors. Thus, parental education level and family income were not included in the models run. The Pearson correlation coefficient between gender/male and ego motivational climate was marginally significant, with females rating a higher perception of an ego-oriented motivational climate, $r = -.22$, $p = < .10$. Males reported marginally significant higher levels of negative self-talk (ASTQS) compared with females, $r = .21$, $p = < .10$. Player gender was also found to be correlated

with cognitive self-talk. The relationship was negative and was marginally significant, $r = -.23, p = < .10$. Thus, gender was included as a covariate in the models run. Additionally, the MCSYS mastery-and-ego oriented subscales were significantly negatively correlated, $r = -.49, p < .00$. Players who thought their coach is mastery-oriented tended to say that they were low in ego-orientation.

White participants had marginally higher levels of self-efficacy, $r = .22, p = < .10$. White participants were also found to use higher levels of positive self-talk (ASTQS), $r = .27, p = < .05$, compared to non-White participants. The cognitive composite score for S-TQ was correlated with player's age. The relationship was positive and marginally significant, $r = .22, p = < .10$. For these reasons, age, gender, and ethnicity/race were included as covariates moving forward. There were several significant relationships found when the self-talk measures were compared to each other that can be found in Table 4. Players who indicated higher levels of positive self-talk also used more motivational self-talk ($r = .75, p = < .01$), cognitive self-talk ($r = .56, p = < .01$), and overall use of self-talk ($r = .30, p = < .05$), and they perceived more encouragement from their coach suggesting to use self-talk ($r = .30, p = < .05$). Motivational self-talk was correlated positively with cognitive self-talk ($r = .65, p = < .01$) and overall frequency of self-talk ($r = .49, p = < .01$).

PRIMARY ANALYSIS

There were five questions set to explore the relations between player perception of motivational climate, self-efficacy, and self-talk. Each question was examined by first

looking at the correlations between the measures and, following that, the appropriate statistical analysis.

Four of the questions include a regression with the fifth question using an independent sample t-test to determine the differences between house and travel program players in relation to their perception of the coach-created motivational climate, self-efficacy, and self-talk. Additionally, ANOVA tests were run to see the relation between player ethnicity and outcome. From the ANOVAs, there were only two variables found to be either marginally significant or significant with the measures.

Q1: To what extent is youth soccer athlete's perception of coach motivational climate related to their soccer self-efficacy?

Prior to running the regressions, Pearson's correlation coefficients were run to determine the relation between the various outcomes. There were no significant correlations found between motivational climate measures and soccer self-efficacy, which can be found in Table 5. Additionally, there were no significant correlations found between motivational climate and self-talk which are also included in Table 5 but will be discussed later.

As shown in Table 6, a multiple linear regression was run to determine the relation between coach motivational climate and player soccer self-efficacy. The regression included both MCSYS subscales, ethnicity, club program (House = 1, Travel = 0), age, and gender, to see if either the perception of mastery-oriented climate or ego-oriented climate was related to self-efficacy while controlling for the covariates. The results from the regression model showed that player perception of the coach created

motivational climate was not significantly related to self-efficacy, $R^2 = .31$, $F(6, 54) = .96$, $p = .46$. Contrary to my hypothesis, neither mastery-oriented climate nor ego-oriented climate had any correlation with player self-efficacy. Mastery-oriented climate was insignificant in predicting self-efficacy, $b = .26$, $t(61) = .44$, $p = .66$. Ego-oriented climate was also insignificant in predicting self-efficacy, $b = .50$, $t(61) = .86$, $p = .40$. While no significant relationship was found between motivational climate and self-efficacy the betas did indicate a positive direction in higher self-efficacy for both mastery- (as predicted) and-ego oriented climates (not predicted).

Q2: To what extent is youth soccer athlete's perception of coach motivational climates related to athlete use of self-talk?

As shown in Tables 7-12, a multiple linear regression was run to determine the relation between coach motivational climate and player report on all six dimensions self-talk. The results from the linear regression model showed that player perception of the coach created motivational climate had no significant relation to any of the self-talk dimensions. This was true for both the mastery-oriented subscale and ego-oriented subscale. The lack of significance between the outcomes indicates that the hypothesis for players and self-efficacy did not hold true.

Motivational climate did not significantly predict positive self-talk, $R^2 = .15$, $F(6, 53) = 1.60$, $p = .17$. The betas indicate that players who perceived an ego-oriented climate trended more positively toward higher self-efficacy. Ethnicity was the only covariate linked to positive self-talk, $b = 2.46$, $p = .02$. This score aligns with the Pearson correlation coefficients as mentioned earlier.

Player perception of the coach-created motivational climate was not found to have a relation with player negative self-talk, $R^2 = .10$, $F(6, 53) = .93$, $p = .48$. Betas indicate that both mastery-and-ego oriented climate had a similar direction with negative self-talk. None of the covariates had any significant impact on the model outcome.

Motivational climate was also found to have no significant relationship with motivational self-talk, $R^2 = .09$, $F(6, 53) = .84$, $p = .55$, nor cognitive self-talk, $R^2 = .12$, $F(6, 50) = 1.09$, $p = .38$. The betas for the motivational self-talk regression showed a negative direction for players perceiving an ego-oriented climate and a positive trend for those perceiving a mastery-oriented climate. Cognitive self-talk showed no relations with both mastery-and-ego climate perceptions, $b = .00$, $p = .99$, $b = .00$, $p = .99$, respectively.

Similarly, motivational climate did not predict either frequency of self-talk $R^2 = .07$, $F(6, 54) = .68$, $p = .67$, or how often the coach suggested self-talk, $R^2 = .10$, $F(6, 54) = 1.10$, $p = .37$. Their betas, $b = .05$, $p = .32$ and $b = .02$, $p = .62$, indicated a very minor positive direction.

Q3: Is soccer athlete use of self-talk related to their soccer self-efficacy?

Pearson's correlation coefficients (Table 13) showed significant correlations between self-efficacy and three of the six self-talk dimensions. Motivational self-talk (S-TQ) and self-efficacy were found to be significantly correlated, $r = .32$, $p = < .05$. Those with higher soccer self-efficacy reported using more motivational self-talk. Positive self-talk (ASTQS) and self-efficacy were also found to be significantly correlated, $r = .37$, $p = < .01$. Players that used more positive self-talk on the field also rated themselves higher in soccer self-efficacy. Lastly, while marginally significant, a correlation between

negative self-talk and efficacy was found, $r = -.21$, $p = < .10$. Players that used more negative self-talk tended to have lower soccer self-efficacy.

There were six, separate, multiple linear regressions run to relate each self-talk measure with soccer self-efficacy while controlling for the various covariates. The linear regressions on negative self-talk, cognitive self-talk, frequency of self-talk, and coach suggested self-talk did not predict soccer self-efficacy so these outcomes were not reported. The linear regressions for positive self-talk and motivational self-talk showed that there were significant relationships with soccer self-efficacy. Positive self-talk usage predicted the level of soccer self-efficacy, $R^2 = .21$, $F(5, 54) = 2.88$, $p = .02$ (Table 14). Additionally, motivational self-talk marginally significantly predicted soccer self-efficacy levels, $R^2 = .18$, $F(5, 51) = 2.27$, $p = .06$ (Table 15).

Q4: To what extent are coach motivational climate, self-efficacy, and athlete self-talk related to their intention to continue playing soccer?

A bivariate correlation analysis was run to see if there was any relationship between player responses on years of expected continuation in soccer, the primary measures, and covariates. There were two marginally significant correlations found. There was a correlation found between coach-suggested self-talk and years of expected continuation ($r = .22$, $p < .10$) as well as a correlation between gender and years of expected continuation, with boys expected to continue longer than girls ($r = .23$, $p < .10$) (Table 16).

Q5: To what extent is soccer athlete perceptions of motivational climate, self-efficacy and self-talk vary as a function of being in the house versus travel league?

Based on independent samples T-tests with parental response on club type (house/travel) as the independent variable and motivational climate, self-efficacy, and self-talk measures as the dependent variable, there were no significant differences between House and Travel in motivational climate, self-efficacy, nor self-talk. The results from this test hold true to the hypothesis set at the beginning which was that there would be little to no difference between House and Travel players. See Table 17 for the full list of means and standard deviations. Additionally, an independent samples T-test comparing player age and soccer program showed that there were no significant differences in age between the House and Travel program.

ADDITIONAL EXPLORATORY ANALYSES

There were three items in the survey that pertained to more general interest from the researchers that did not find their way into the primary analysis. These items included player and parent goals, the gender of the player's coach, and whether the player participated in private training lessons outside of VYS. Additionally, the Achievement Goal Scale for Youth Soccer (Cumming et al., 2008), was a measure included to gauge the player's individual motivation for the sport but was not used in the primary analysis. This section of the results highlights the various interesting findings that emerged. Parent and player goal responses were examined to see what their primary goals were for playing soccer, and to explore if there were any differences between the parent and player reasons ranked for playing soccer. The average ranking for each of the seven potential options (1 being highest priority) can be found in Table 16. The top three parent reasons for enrolling their child in soccer were 'To have fun,' 'To stay physically active,' and 'To

play competitive soccer in high school.’ In comparison, the top three ranked reasons for playing soccer from the player were ‘To stay physically active,’ ‘To have fun,’ and ‘To become a better soccer player/athlete.’ Parent and player responses showed similarity with the reason to have fun and to stay physically active and differed with the parent indicating interest in their child playing competitive soccer in high school and the player indicating interest in becoming a better player. One inference to be taken from this is the mastery-oriented vs ego-oriented difference between parent and player. Making a team might be seen more so as an ego-oriented whereas playing to become a better player would be mastery-oriented highlighting a potential difference in outlook between player and parent approaches to the sport in this sample.

AGSYS

There were several findings from the Pearson’s correlation coefficient analysis done with the AGSYS scale pertaining to the players own motivational orientation toward soccer. The mastery-oriented AGSYS composite score was found to have a marginally significant correlation with the *Self-Efficacy in Soccer* scale, $r = .22$, $p < .10$. Additionally, the child’s ego-oriented composite scores (AGSYS) was correlated .46 with the child perception of their coach’s ego orientation (MCSYS) ($p < .01$). The self mastery-and-ego-oriented motivational climate composite scores were completely uncorrelated with each other, $r = .00$. Finally, there was a marginally significant ethnicity difference in relation to the ego composite score for AGSYS, with white participants reporting a higher level of personal ego motivational climate compared to the non-white participants ($p = .09$).

DISCUSSION

Motivational climate is an inherent part of the psychological environment that can be found in sport (Duda et al., 1993). A player's perception of the coach-created motivational climate can have a major impact on that player's athletic experience. In this thesis, I looked at how youth soccer player's perception of the coach-created motivational climate might be related to their self-efficacy and use of self-talk on the field. The scientific literature on motivational climate has been largely explored in older age groups and typically has been studied in individual sport settings (Thibodeaux & Winsler, 2018). This study aimed to investigate the links between the coach-created motivational climate and motivations and self-talk in younger ages within a team-based (soccer) sporting environment.

Prior to data collection, there were five questions and hypotheses set. The questions were primarily centered on the influence of the motivational climate on player self-efficacy and self-talk but also looked at the relationship between self-efficacy and self-talk along with motivational climate implications for retention in soccer, and potential differences between the house and travel programs in the soccer club. Overall, there were few significant relationships found between the constructs with the current sample. Neither mastery-oriented nor ego-oriented coach motivational climate perceived by the player predicted self-efficacy nor self-talk. This was surprising as the literature has

often indicated that players perceiving a mastery-oriented environment will typically generate higher self-efficacy compared to players who perceive an ego-oriented environment (Kavussanu et al., 1996).

Similarly, it was expected that players perceiving a mastery-oriented climate would use more self-talk and different types of talk over their ego-oriented perceiving peers. Although some correlations were in the expected direction, differences between players that perceived a mastery-oriented climate compared to players that perceived an ego-oriented climate on self-talk use were not evident. The contrast between the results from the current study and previous literature might be explained by several points. One reason may be based on the age of the population studied. Younger children have been shown to be more reliant on their parents in relation to their self-esteem, self-regulation, and anxiety levels (Dunn et al., 2022). O'Rourke et al. (2014) found this to be the case within their sample where the parents had a more significant effect on the players, aged 9-14, when compared to the player's coach. Additionally, the difference in reliability between the two subscales, mastery-oriented ($\alpha = .76$) and ego-oriented ($\alpha = .63$), may help explain some of the difference in correlations.

Two significant correlations were found between the positive self-talk and soccer self-efficacy and motivational self-talk and soccer self-efficacy. Players with higher soccer self-efficacy tended to use more positive self-talk and more motivational self-talk. Zourbanos et al. (2015) point out that the relationship between self-talk, self-efficacy, and perceptions of motivational climate can be complex. For example, a player's perception of the motivational climate can have a direct influence on their use of self-talk

(Marjanović et al., 2019). Athletes that perceive an ego-oriented motivational climate tend to use more negative self-talk. If a player has high soccer self-efficacy, then the link between motivational climate and self-talk use may be weakened.

Two significant relationships were found between the self-talk dimensions and soccer self-efficacy in the multiple regression analyses. Positive self-talk use significantly predicted a higher level of self-efficacy and motivational self-talk use marginally significantly predicted higher soccer self-efficacy. The lack of significant relationships for negative, cognitive, frequency, and coach-suggested self-talk may be explained by the age of the player and the influence their parents likely have on how they talk to themselves, both overtly and covertly. Soccer, being a team sport, creates a vastly different experience for an athlete compared to individual sports like tennis or golf. The presence of teammates and opponents, which can vary anywhere from 14-30 players on the field at one point at these ages, may cause the player to speak more outwardly and directed towards their peers. Intercorrelations between the self-talk dimensions indicate that players who used certain dimensions of self-talk were likely to use other types of self-talk. Positive self-talk was correlated with motivational and all other self-talk dimensions except for negative self-talk. Negative self-talk on the other hand was unrelated to the other self-talk dimensions.

We also asked about how long players planned to continue with soccer. Interestingly, motivational climate, self-efficacy, and self-talk variables were unrelated to the player's future decision to enroll in VYS the following year nor how many years they planned on playing. Players may have felt some form of pressure, or hesitation to reply

truthfully, given that there were zero 'No' responses. With the study being generated directly through the VYS communication channels, players may not have wanted to answer 'No' in fear of being penalized by the organization. Related to retention, players were also asked how much longer they would like to continue playing soccer with the average answer being 8 years and the vast majority answering 10+ years. Soccer, like other sports, sees a large dropout rate on an annual basis. While dropout rates have been shown to impact all age groups, a notable dropout cut off point occurs around age 12 to 13 years old (Aspen Institute, 2021). Players at this age may still be attached to the sport, or have parents that pressure them to play, so they don't see quitting as a possibility. In total, these points may explain why no significant relationship was found between the outcomes and retention. Still, the clear interest in continuation of soccer from the participants is a good sign indicating that the players are enjoying their time in their respective programs.

The mean score for MCSYS mastery-oriented subscale was 25.69 (out of a total scale of 30) while the MCSYS ego-oriented subscale was 11.20 (out of a total scale of 30). This indicates that the VYS House and Travel program from U11 to U14 are led by fairly mastery-oriented coaches. This is great news for VYS. Further research is needed in the U9, U10, and U15-U19 age groups to determine the overall coach-created motivational climate of VYS. Additionally, there were no significant differences found between House and Travel players perception of the motivational climate, self-efficacy, or use of self-talk. This result holds true to the original hypothesis. This is a good finding for VYS as it indicates that neither the House or Travel program are more ego-oriented

than the other. The accuracy of this hypothesis may be due to its neutrality. On reflection, given the rather homogeneous quality of the sample in Vienna, a more neutral approach may have been taken with the other questions given that the sample came from the same concentrated and wealthy geographic area.

LIMITATIONS

There were several limitations within the study. Prior to data collection, the hope was that the sample size would reach or exceed 150 players from both the House and Travel program. Given that there are nearly 3,000 players enrolled in VYS – roughly 800 players in Travel and roughly 2,000 players in House – the level of participation was clearly less than ideal. This may be explained by a few reasons – parents’ trepidation to complete a survey centered on their own soccer club, parent disinterest or lack of time to complete the survey, or parents simply may have not received or did not see the many emails/messages. Additionally, communication and advertising of the survey could have been extended by handing out physical brochures or finding another medium to generate more interest and hopefully connect with more participants.

Our intent was to recruit a split sample with half of the sample being from the House program and half of the sample being from the Travel program. We were also hoping to get a mixture of players from the different ability level teams within the Travel program. From the 70 participants, only 16 were House players and 54 were Travel players. Additionally, the Travel program participants consisted of 29 Red team players (top tier), 14 Black team players (second tier), 8 White team players (third tier), and 3 Silver team players (fourth tier). This trend indicates a potential causation between who

participated in the study and their motivation to complete it. Both Travel players, and top-tier Travel players, were the majority within their subgroups to complete the survey. A potential explanation of this may be the difference of competitiveness or commitment to the sport from the parent who ultimately was the driving force in completing the survey. The sample age range may also have been a limiting factor. In the younger age groups at VYS, the head coach's focus is not primarily on winning but on development. From an objective standpoint, this focus is shown in division of playing time between players where each player is given roughly 50% of game time, assuming that they are also attending practices. This is not necessarily a formal VYS rule written on their website, but rather a rule enforced by the directors onto the head coaches. This developmental approach for the younger ages may have restricted the range to the lower end of ego-orientation. Both the House and Travel program follow this rule of thumb for this age range (U11-U14).

There were several incomplete responses in the data set that likely contributed to the outcome. There were 5 responses collected that only had the parent section completed with the player section absent indicating that the parent completed the form and forgot or decided not to give the survey to the player, or the player never completed it on their own. From the 62 player participants, several did not complete every item which also may have impacted the results.

Coaches aren't the only social agent to influence motivational climate. Teammates and parents are also significant contributors to the motivational climate and subsequent outcomes of athletes (Atkins et al., 2015). A player's head coach can play a

role in their sport experience, but the presence of parents and teammates is likely just as influential in the developmental outcomes for athletes. Identifying the influence from teammates and parents is likely required to gain a better understanding of the overall sport experience for individuals.

Lastly, the internal consistency reliability for several of the measures was lower than expected based off the previously validated studies. Ego-oriented MCSYS, ego-oriented ASTQ-S, cognitive self-talk S-TQ, and mastery-oriented AGSYS were all below the research articles studied prior to selecting these measures and fell between $\alpha = .60$ -.70. The alphas for each of these measures were: MCSYS ego-oriented subscale ($\alpha = .63$), ASTQS-S negative self-talk subscale ($\alpha = .64$), S-TQ cognitive self-talk subscale ($\alpha = .65$), and AGSYS mastery subscale ($\alpha = .63$). These reliability scores fell below prior research. Previous research on these constructs highlighted earlier in this paper used similar age ranges - MCSYS ($M = 12.2$; $SD = 1.3$) (Ortiz-Marholz et al., 2016), ASTQS-S ($M = 11.63$ years, $SD = 1.55$) (Zourbanos et al., 2015), and AGSYS ($M = 12$, $SD = 1.35$) (Cumming et al., 2008). While the measures were validated by previous researchers for the intended age groups, some of the questions may have been too conceptual or abstract for the younger players. One of these self-talk measures, S-TQ, for example had only been validated for 16- to 36-year-old participants (Zarves et al, 2007) but was deemed comprehensible enough for the younger players by the current researchers. The lack of significant relations in this study may be due to lower reliability of some of the scales for this age group. Another potential explanation for this could be due to the lack of heterogeneity in this high income and predominantly White sample. Ethnicity differences

were also found to be significant with White participants displaying marginally higher levels of self-efficacy and higher usage of positive self-talk.

IMPLICATIONS

Given the various correlations found between the outcomes, coaches, parents, and clubs should take care with how they create their sporting environments. Self-efficacy, one of the primary drivers in an athlete's career, was seen to have a direct correlation with both motivational and cognitive self-talk. How we speak to the players and how we teach the players to speak to themselves may play a large role in the player believing in themselves. While the player's perception of the coach-created motivational climate in this sample did not predict either self-efficacy or self-talk, the research in this area of psychology unanimously points to motivational climate being a major influence on a child's sporting experience. The literature in general shows that a mastery-oriented motivational climate tends to produce adaptive behaviors such as higher self-efficacy (Zourbanos et al., 2015) whereas players participating in an ego-oriented motivational climate tend to often exhibit more maladaptive behaviors such as increased performance anxiety (O'Rourke, 2014). Soccer players, and athletes in general, show a higher likelihood of thriving in mastery-oriented environments. Even though we did not find many relationships in the current sample, no findings indicated anything to refute the current consensus in the general literature.

The uniformity of the data highlights opportunity for future researchers. Given that children drop out of sport or switch sports on an annual basis, especially at younger ages, it is important that more clarity is brought to these younger athletes to figure out

how their perception of the athletic environment impacts their person. Additionally, it would be helpful to know more about the parents influence on the child's perception compared to their coach. Compiling more data and clear answers on these questions would help to better serve this population, educate parents on their role in their child's sporting experience, and help coaches to understand the dynamic between themselves and the player and parent.

Table 11 Sociodemographic Characteristics of the Participants

Player Characteristics	<i>n</i>	%	<i>M</i>	<i>SD</i>
<i>Gender</i>				
Boys	40	59.7		
Girls	27	40.3		
Age of player			11.55	1.11
House Program	16	22.9		
Travel Program	54	77.1		
Expected Continuation	61		8.87	2.57
Staying at VYS	52	83.9%		
Unsure of VYS	10	16.1%		
<i>Parent Characteristics</i>				
<i>Education Level (Parent #1)</i>				
Some High School	2	3.0		
High School Diploma	5	6.0		
Some College	0	0		
Bachelors Degree	23	41.8		
Masters Degree	23	34.3		
Doctoral Degree	10	14.9		
<i>Education Level (Parent #2)</i>				
Some High School	3	4.6		
High School Diploma	6	9.2		
Some College	0	0		
Bachelors Degree	22	33.5		

Masters Degree	22	33.5
Doctoral Degree	12	18.5

Total Family Income

Less than \$30,000	0	0
\$30,001 – 60,000	2	3
\$60,001 – 90,000	2	3
\$90,001 – 120,000	3	5
\$120,001 – 150,000	4	6.5
\$150,001 – 200,000	12	19.4
More than \$200,000	39	62.9

Parent

Mother	39	55.7
Father	25	35.7
Two parents	6	8.6

together/other

Note. N=70. Missing responses: Parent ethnicity (3), kid ethnicity (8), player gender (3), player age (3), edu parent #1 (3), edu parent #2 (5).

Table 22 Descriptive Statistics on Covariates and Outcomes

	<i>N</i>	<i>M</i>	(<i>SD</i>)	Min	Max	Scale
Mastery Climate	62	25.69	(3.45)	14	30	6-30
Ego Climate	62	11.20	(3.61)	6	26	6-30
Soccer Self-Efficacy	61	71.12	(13.58)	33	93	10-100
Freq. of Self-Talk	61	3.34	(0.93)	2	5	1-5
Coach-Suggested Self-Talk	61	1.82	(1.03)	1	5	1-5
Positive Self-Talk	60	14.18	(3.60)	4	20	4-20
Negative Self-Talk	60	8.12	(2.94)	4	17	4-20
Motivational Self-Talk	57	22.56	(6.24)	7	35	7-35
Cognitive Self-Talk	57	12.53	(3.19)	6	19	4-20
Mastery Achievement Goal	62	26.71	(2.50)	18	30	6-30
Ego Achievement Goal	62	18.48	(6.45)	6	30	6-30

Table 33 Correlations of Covariates and Outcomes

	Player age	Male	White/other	Parent Education	Family Income
Mastery Climate	-0.03	-.10	-.09	-0.13	-0.20
Ego Climate	0.16	0.16	0.03	0.16	0.11
Mastery Goals	-0.06	-.02	.05	.14	.01
Ego Goals	0.07	0.16	0.21+	0.15	0.06
Self-Efficacy	-0.00	0.09	0.25+	0.14	0.00
Positive Self-Talk	0.12	-0.09	0.31*	0.04	-0.02
Negative Self-Talk	0.03	-0.20	-0.15	0.11	-0.13
Motivational Self-Talk	-0.00	-0.20	0.17	-0.12	-0.13
Cognitive Self-Talk	0.22+	-0.23+	0.14	0.16	-0.13

Note. * Correlation is significant at the .05 level (2-tailed), + Marginal correlation is significant at <.10 (2-tailed).

Table 44 Intercorrelations of Self-Talk

	Positive Self- Talk	Negative Self- Talk	Motivational Self-Talk	Cognitive Self-Talk	Freq. of Self- Talk	Coach- Suggested Self-Talk
Positive Self-Talk	.	.08	.75**	.56**	.30*	.30*
Negative Self-Talk	.08	.	.12	.13	.14	-.09
Motivational Self-Talk	.75**	.12	.	.65**	.49**	.22
Cognitive Self-Talk	.56**	.13	.65**	.	.61**	.19
Freq. of Self-Talk	.30*	.14	.49**	.61**	.	.07
Coach- Suggested Self-Talk	.30*	-.09	.22	.19	.07	.

Note. * Correlation is significant at the .05 level (2-tailed), ** Correlation is significant at the 0.01 level (2-tailed), + Correlation is marginally significant at <.10 (2-tailed).

Table 55 Correlations of Motivational Climate with Self-Efficacy and Self-Talk

	Mastery Climate	Ego Climate
Self-Efficacy	-.02	.13
Positive Self-Talk	-0.02	.16
Negative Self-Talk	.10	.00
Motivational Self-Talk	0.10	-.06
Cognitive Self-Talk	0.04	.01
Frequency of Self-Talk	-.15	.08
Coach Suggested Self-Talk	0.15	-.03

Table 66 Regression Model of Soccer Self-Efficacy on Motivational Climate (and Covariates)

Model	Unstandardized		Standardized	<i>T</i>	<i>Sig.</i>
	<i>B</i>	<i>S.E.</i>	<i>Beta</i>		
(Constant)	6.55	5.28		1.24	0.22
Mastery Climate	0.08	0.16	0.08	0.52	0.61
Ego Climate	0.18	0.15	0.18	1.23	0.23
White/other*	2.45	1.00	0.32	2.45	0.02
House/Travel	0.96	1.18	0.12	0.81	0.42
Age	0.18	0.43	0.06	0.43	0.67
Male	-0.99	0.96	-0.13	-1.03	0.31

Table 77 Regression Model of Motivational Climate on Positive Self-Talk (and Covariates)

Model	Unstandardized		Standardized	<i>t</i>	<i>Sig.</i>
	<i>B</i>	<i>S.E.</i>	<i>Beta</i>		
(Constant)	6.55	5.29		1.24	0.22
Mastery Climate	0.82	0.16	0.08	0.52	0.61
Ego Climate	0.16	0.15	0.18	1.23	0.23
White/other*	2.46	1.00	0.32	2.45	0.02
House/Travel	0.96	1.18	0.10	0.81	0.42
Age	0.18	0.43	0.06	0.43	0.67
Male	-1.00	0.96	-0.13	-1.03	0.31

Table 88 Regression Model of Motivational Climate on Negative Self-Talk (and Covariates)

Model	Unstandardized		Standardized	<i>t</i>	<i>Sig.</i>
	<i>B</i>	<i>S.E.</i>	<i>Beta</i>		
(Constant)	7.92	4.46		1.78	0.08
Mastery Climate	0.11	0.13	0.12	0.79	0.43
Ego Climate	0.10	0.13	0.12	0.77	0.44
White/other	-.90	0.85	-0.14	-1.06	0.29
House/Travel	-1.27	1.00	-0.17	-1.28	0.21
Age	-0.1	0.36	-0.00	-0.04	0.97
Male	-1.05	0.81	-0.17	-1.29	0.20

Table 99 Regression Model of Motivational Climate on Motivational Self-Talk (and Covariates)

Model	Unstandardized		Standardized		
	<i>B</i>	<i>S.E.</i>	<i>Beta</i>	<i>t</i>	<i>Sig.</i>
(Constant)	15.41	9.58		1.61	0.11
Mastery Climate	0.19	0.30	0.09	0.62	0.54
Ego Climate	-0.03	0.30	-0.02	-0.10	0.92
White/other	2.53	1.83	0.19	1.39	0.17
House/ Travel	1.67	2.13	0.11	0.79	0.44
Age	-0.16	0.82	-0.03	-0.19	0.85
Male	-2.54	1.75	-0.20	-1.46	0.15

Table 1010 Regression Model of Motivational Climate on Cognitive Self-Talk (and Covariates)

Model	Unstandardized		Standardized		
	<i>B</i>	<i>S.E.</i>	<i>Beta</i>	<i>t</i>	<i>Sig</i>
(Constant)	9.98	4.83		2.07	0.04
Mastery Climate	0.00	0.15	0.00	0.00	0.99
Ego Climate	0.00	0.15	0.00	0.02	0.99
White/other	0.76	0.92	0.11	0.83	0.41
House/ Travel	0.42	1.07	0.05	0.39	0.70
Age	0.61	0.41	0.21	1.48	0.15
Male+	-1.53	0.88	-0.24	-1.74	0.09

Note. + Correlation is marginally significant at <.10 (2-tailed).

**Table 1111 Regression Model of Motivational Climate on Frequency of Self-Talk
(and Covariates)**

Model	Unstandardized		Standardized		
	<i>B</i>	<i>S.E.</i>	<i>Beta</i>	<i>t</i>	<i>Sig.</i>
(Constant)	4.23	1.40		3.02	0.00
Mastery Climate	-0.05	0.04	-0.17	-1.10	0.28
Ego Climate	0.00	0.04	0.02	0.11	0.91
White/other	0.23	0.27	0.12	0.86	0.39
Program	0.01	0.32	0.01	0.04	0.97
Age	0.07	0.12	0.09	0.63	0.53
Male	-0.29	0.26	-0.15	-1.13	0.26

Table 1212 Regression Model of Motivational Climate on Coach Suggested Self-Talk (and Covariates)

Model	Unstandardized		Standardized		<i>Sig.</i>
	<i>B</i>	<i>S.E.</i>	<i>Beta</i>	<i>t</i>	
(Constant)	0.60	1.51		0.40	0.69
Mastery Climate	0.05	0.05	0.15	1.00	0.32
Ego Climate	0.02	0.04	0.08	0.51	0.62
White/other	0.09	0.29	0.04	0.33	0.74
Program	-0.24	0.34	-0.09	-0.70	0.49
Age	0.13	0.13	0.14	1.03	0.31
Male	-0.44	0.28	-0.21	-1.57	0.12

Table 1313 Correlations of Self-Efficacy with Motivational Climate and Self-Talk Dimensions

	Self-Efficacy
Mastery Climate	-0.02
Ego Climate	.13
Positive Self-Talk	.40**
Negative Self-Talk	-.25
Motivational Self-Talk	.34**
Cognitive Self-Talk	.16
Freq. of Self-Talk	.15
Coach-Suggested Self-Talk	.17

Note. ** Correlation is significant at the 0.01 level (2-tailed), + Correlation is marginally significant at <.10 (2-tailed).

Table 1414 Regression Model of Positive Self-Talk on Soccer Self-Efficacy (and Covariates)

Model	Unstandardized		Standardized		<i>Sig.</i>
	<i>B</i>	<i>SD</i>	<i>Beta</i>	<i>t</i>	
(Constant)	44.99	11.00		4.09	0.00
Positive Self-Talk	1.28	0.48	0.34	2.65	0.01*
White	5.85	3.72	0.20	1.57	0.12
Program	2.10	4.14	0.06	0.51	0.61
Age	-0.49	1.49	-0.04	-0.33	0.74
Male	2.42	3.39	0.09	0.71	0.48

Note. *Correlation is significant at the .05 level (2-tailed)

Table 1515 Regression Model of Motivational Self-Talk on Soccer Self-Efficacy (and Covariates)

Model	Unstandardized		Standardized		<i>Sig.</i>
	<i>B</i>	<i>SD</i>	<i>Beta</i>	<i>t</i>	
(Constant)	45.12	11.79		3.83	0.00
Motivational Self-Talk	0.68	0.29	0.31	2.37	0.02*
White	6.69	3.74	0.23	1.79	0.08 ⁺
Program	2.06	4.24	0.06	0.49	0.63
Age	-0.02	1.60	-0.00	-0.01	0.99
Male	2.62	3.58	0.10	0.73	0.47

Note. * Correlation is significant at the .05 level (2-tailed), ⁺ Correlation is marginally significant at <.10 (2-tailed).

Table 1616 Correlations of Expected Retention (Years Planning to Continue Soccer)

	Years Planning to Continue Soccer
Mastery Climate	-.066
Ego Climate	-.025
Self-Efficacy	.126
Freq. of Self Talk	.114
Coach-Suggested Self-Talk	.223 ⁺
Positive Self-Talk	.200
Negative Self-Talk	-.113
Motivational Self-Talk	.148
Cognitive Self-Talk	-.010
Age	-.178
Male	.225 ⁺
White/other	.201
House/Travel	.201

Note. ⁺ Correlation is marginally significant at <.10 (2-tailed).

Table 1717 T-Tests, Means, and Standard Deviations for Program on Outcomes

	Program	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t</i>	<i>df</i>	<i>p</i>
Mastery Climate	House	13	25.08	(4.96)	-0.72	60.00	0.47
	Travel	49	25.86	(2.98)	-0.54	14.38	0.60
Ego Climate	House	13	10.5	(3.59)	-0.79	60.00	0.44
	Travel	49	11.39	(3.63)	-0.79	19.04	0.44
Self-Efficacy	House	12	68.03	(14.25)	-0.88	59.00	0.38
	Travel	49	71.88	(13.46)	-0.85	16.16	0.41
Positive Self-Talk	House	12	13.5	(3.97)	-0.73	58.00	0.47
	Travel	48	14.35	(3.53)	-0.68	15.64	0.51
Negative Self-Talk	House	12	9.08	(2.35)	1.28	58.00	0.21
	Travel	48	7.88	(3.04)	1.49	21.25	0.15
Motivational Self-Talk	House	12	21.58	(6.64)	-0.61	55.00	0.55
	Travel	45	22.82	(6.18)	-0.58	16.45	0.57
Cognitive Self-Talk	House	12	12.58	(3.18)	0.07	55.00	0.95
	Travel	45	12.51	(3.23)	0.07	17.58	0.95
Freq. of Self-Talk	House	12	3.42	(1.17)	0.30	59.00	0.77
	Travel	49	3.33	(0.88)	0.25	14.19	0.81
Coach-Suggested Self-Talk	House	12	2.08	(1.08)	0.99	59.00	0.32
	Travel	49	1.76	(1.01)	0.95	16.02	0.36

Table 1818 Parent and Player Goals in Soccer Means and Standard Deviations

Parent Goals (n=63)	<i>M</i>	<i>SD</i>
To have fun	2.21	(1.38)
To stay physically active	2.41	(1.15)
To play competitive soccer in high school	3.27	(1.74)
To socialize with friends	3.84	(1.62)
To become a better soccer player/athlete	4.17	(1.19)
To play soccer in college with/without a scholarship	5.48	(1.13)
To play professional soccer	6.62	(1.13)
Player Goals (n=60)		
To stay physically active	2.05	(1.17)
To have fun	2.57	(1.78)
To become a better soccer player/athlete	4.10	(1.78)
To play competitive soccer in high school	4.18	(1.55)
To socialize with friends	4.72	(1.69)
To play soccer in college with/without a scholarship	4.95	(1.44)
To play professional soccer	5.43	(1.98)

Note. Item scores for Goals in Soccer were ranked 1 (Most Important Goal) to 7 (Least Important Goal)

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