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Authoritative Coaching: Building Youth Through Athletics

Christian S. Brinton

A thesis submitted to the faculty of
Brigham Young University
in partial fulfillment of the requirements for the degree of
Master of Science

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December 2015

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ABSTRACT

Authoritative Coaching: Building Youth Through Athletics

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The purpose of this study was to determine the existence and extent of the relationship of coaching styles and adolescent athletes in terms of Self Determination Theory (SDT). Specifically, this study adapted Baumrind's parenting styles of authoritative, authoritarian, and permissiveness to coaching styles and examined the relationship between each coaching style and the tenets of SDT, namely competence, autonomy, and relatedness. This study also examined the effect of the number of years an athlete participated in a chosen sport, the number of years played on a specific team, and the number of years played for a particular coach. The sample consisted of 194 Brigham Young University students who had participated in either club or high school level sports for at least one year while in high school. Study participants completed the Basic Needs Sports Satisfaction Scale (BNSSS) and a sports-adapted version of the Parenting Authority Questionnaire (PAQ). Results from block entry method linear multi-regression analysis suggested Baumrind's Parenting Typology could in fact be successfully applied to adolescent sports and that coaching style could impact athletes' levels of perceived autonomy, and competence. Results revealed that an authoritative coaching style was a significant predictor of athlete autonomy and competence while an authoritarian coaching style was a significant negative predictor of athlete autonomy levels. Results hold practical implications for coaches, athletes, parents, and league administrators.

Keywords: autonomy, competence, relatedness, adolescent sports, coaching, authoritative, authoritarian, permissive

ACKNOWLEDGMENTS

I would like to first and foremost thank my beautiful bride Natalie. She has earned this accomplishment every bit as much as I have. Over the time I have worked on this degree she has held my hand and cared for our two children while I have been kept away from home, often until late at night during five action-packed years which included student seminary teaching, two career changes, two time-consuming church callings, and much more. She has been my motivating force to finish. I would also like to thank Andi and Holly who have been patient (most of the time) with daddy leaving home once again after only being home for an hour after work.

I would like to thank Brian Hill for his continued patience while going through the same hectic 5 years my family experienced, but waiting for my return in his office rather than in our home. He has been a great resource, mentor, and most of all a wonderful friend through everything. I will miss our talks about youth, church, life, search and rescue and family most of all. I would also like to thank my committee members Peter Ward and Neil Lundberg for their friendship and support throughout the whole process. Both of them have had a positive impact on me during my graduate studies experience.

Lastly, I would like to thank my Heavenly Father for answering my prayers one fateful night and guiding me down the road toward the master's in Youth and Family Recreation program which has altered my life's path forever. I am grateful most of all for His patient guidance as He mentors me in becoming the man, husband, and father He has created me to be and in blessing His children.

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Authoritative Coaching: Building Youth Through Athletics

Christian Summersett Brinton

Authoritative Coaching: Building Youth Through Athletics

Introduction

The number of youth committing to year-round, intense involvement in athletics has steadily increased (Anderson et al., 2000). An estimated 41 million youth around the United States participate in athletics each year, and average team sizes would suggest millions of coaches interact with these athletes on a daily basis (Hilgers, 2006). It has been found that coaches often serve as more than just teachers of sports skills, but that they teach life skills that remain with athletes throughout their lives (Walton, 1992). Because of this potentially lasting influence, society has an urgent need to understand not only the effect these coaches have on the psychological development of adolescent athletes, but also the best practices for fostering self-directed behaviors, also known as self-determined motivation.

Scholars have utilized Self-Determination Theory (SDT) to better understand coaches' roles in athlete motivation (Amorose & Anderson-Butcher, 2007; Feltz, Hepler, Roman, & Paiement, 2009; Matosic & Cox, 2014; Mourtadis, Lens, & Vansteenkiste, 2010). SDT identifies three psychological needs, which if met, contribute to self-determined motivation: competence (feeling one has the skills necessary to be successful at a given endeavor), autonomy (feeling one has influence over what happens or a feeling of freedom), and relatedness (feeling connection with other people) (Ryan & Deci, 2000).

Results from past research have indicated a coach's style or approach to coaching can significantly predict athletes' levels of perceived autonomy, competence, and relatedness (Amorose & Anderson-Butcher, 2007). For example, much of the existing research employing SDT has focused on autonomy-supportive (less controlling) coaching styles (Almagro, Saenz-Lopez, & Moreno, 2010; Amorose & Anderson-Butcher, 2007; Gillet, Vallerand, Amoura, & Baldes, 2010; Mageau & Vallerand, 2003; Matosic & Cox, 2014; Mourtadis et al., 2010; Ramis,

Torregrosa, Viladrich, & Cruz, 2013). When a coach implements autonomy-supportive methods, athletes participate in sports through more self-determined motives, perform better at their chosen sport, tend to persist in a given sport, and display higher levels of individual well-being (Almagro et al., 2010; Amorose & Anderson-Butcher, 2007). Athletes even have stronger positive motivational experiences when coaches use autonomy-supportive coaching styles (Matosic & Cox, 2014).

Autonomy is important, but it must be accompanied by structure and support in order to meet all three psychological needs (Mageau & Vallerand, 2003). Autonomy-supportive behaviors without structure and support may be insufficient to instill competence and relatedness, which are both pertinent components of self-determination (Mageau & Vallerand, 2003). Mageau and Vallerand (2003) suggest their autonomy-supportive coaching style (which was designed to meet all three needs) is similar to the authoritative parenting style in Baumrind's Parenting Typology (Baumrind, 1966, 1978, 1991).

Baumrind (1966) developed a parenting typology including three parenting styles—permissive, authoritarian, and authoritative. Authoritative parents enact rules and regulations in a supportive manner, provide rationale for decisions, and encourage verbal give and take (Baumrind, 1966). Such a parent values both structure and autonomy while supporting children in their individual needs and personal endeavors. By extension, an authoritative coach would provide athletes the structure necessary to effectively learn a sport and gain competence, the freedom for athletes to take ownership for their behavior, and the support to help athletes build connection with others (Mageau & Vallerand, 2003). Though Mageau and Vallerand have proposed their idea of authoritative coaching style, research has yet to adapt and apply Baumrind's Parenting Typology to adolescent sports and find any potential relationship between

the typology and SDT. Therefore, the purpose of this study was to adapt Baumrind's Parenting Typology to a coaching typology and examine the relationship between authoritative, authoritarian, and permissive coaching styles and athletes' levels of perceived autonomy, competence, and relatedness levels.

Review of Literature

The impact coaching styles have on adolescent athlete motivation has been an important consideration for scholars interested in adolescent athletics over the past decade (Adie, Duda, & Ntoumanis, 2010; Becker & Wrisberg 2008; Becker, 2009; Boardley, Kavussanu, & Ring, 2008). Research has utilized Self-Determination Theory (SDT) to better understand the effect coaching styles have on athlete motivation (Amorose & Anderson-Butcher, 2007; Feltz et al., 2009; Myers et al., 2005). SDT focuses on motivational orientation and the conditions that affect it.

Self-Determination Theory

Self-Determination Theory postulates the existence of a motivation continuum reflecting several levels of motivation from which people act. This continuum ranges from amotivation on the low end of the motivational spectrum (characterized by passive compliance) to intrinsic motivation on the high end of the spectrum (characterized by a high internal desire to participate apart from any influence from outside sources) (Ryan & Deci, 2000). Between these two extremes are four levels of motivation based on their level of self-determination. These levels are external regulation, introjected regulation, identified regulation, and integrated regulation. SDT maintains that engaging in an activity through higher levels of self-determination creates physical, emotional, and psychological benefits. These benefits include a greater interest in a given activity, increased intent to remain physically active in the future, increased excitement and confidence, less pressure and tension while participating in a chosen activity, more

creativity, better conceptual learning, a more positive emotional tone, a higher level of persistence, enhanced performance, increased periods of moderate-to-vigorous physical activity, and fewer periods of sedentary activity (Almagro et al., 2010; Deci & Ryan, 1987; Ryan & Deci, 2000; Fenton et al., 2014; Gillet, Berjot, & Gobance, 2009; Gillet et al., 2010). SDT proposes that when immersed in environments meeting all three basic psychological needs, people tend to act in more self-determined ways (Ryan & Deci, 2000). These basic needs are autonomy, competence, and relatedness.

Autonomy. Autonomy is one of three psychological needs presented in SDT. Having a sense of autonomy means “being the perceived origin or source of one’s own behavior” (Deci & Ryan, 2002, p.7). An individual having a sense of autonomy feels one’s own actions emanate from within and are of personal volition void of outside influence (Deci & Ryan, 1987). Much of the research utilizing SDT in a sports context has studied the effect an autonomy-supportive coaching style has on athletes’ motivational orientation. Results have shown an autonomy-supportive coaching style is significantly related to athletes’ perceived autonomy levels and higher levels of self-determination (Almagro et al., 2010; Amorose & Anderson-Butcher, 2007; Felton & Jowett, 2013; Fenton et al., 2014; Gillet, Berjot, & Gobance, 2009; Gillet et al., 2010; Isoard-Gautheur, Guillet-Descas, & Lemyre, 2012; Mageau & Vallerand, 2003; Matosic & Cox, 2014; Mourtadis et al., 2010; Ramis et al., 2013; Readdy, Raabe, & Harding, 2014; Wu, Lai, & Chan, 2014).

Autonomy-Supportive Coaching. Coaches exhibiting an autonomy-supportive coaching style positively influence athletes’ self-determined behavior (Almagro et al., 2010; Amorose & Anderson-Butcher, 2007; Gillet et al., 2010). This is evident in the United States as well as in other parts of the world including Canada, England, Spain, Mexico, and Belgium

(Almagro et al., 2010; Gillet et al., 2010; Boardley et al., 2008; Lopez-Walle et al., 2012; Mourtadis et al., 2010). Almagro et al. (2010), for instance, engaged SDT to test the findings of researchers in the United States against a youth sample in Spain. Results found that if adolescents in Spain felt their coaches exhibited coaching styles allowing them choice, their perception of autonomy increased, as did their level of self-determined behavior. While much of the autonomy-supportive research has focused primarily on autonomy, Mageau and Vallerand (2003) developed an autonomy-supportive model to study all three needs.

Mageau and Vallerand (2003) developed autonomy-supportive coaching characteristics that, unlike many in the past, added structure and support in order to meet all three psychological needs. Mageau and Vallerand defined seven characteristics of autonomy-supportive coaches. These characteristics are:

- (a) providing as much choice as possible within certain guidelines, (b) providing reasons for decisions, (c) asking for and considering other's thoughts and feelings, (d) allowing others to take initiative, (e) providing non-controlling competence feedback, (f) avoiding guilt, statements of control, and tangible rewards, (g) and preventing ego-involvement (Mageau & Vallerand, 2003, p. 886).

Extending these characteristics into an example may demonstrate how an autonomy-supportive coaching style may look. An autonomy-supportive soccer coach may gather team members before practice and state the focus of the practice including rationale for the focus. The coach may then allow the team to choose the first of several drills implementing the daily focus and select two team members to organize and run the drill. This coach might address athletes when they make mistakes, but also provide corrective feedback in an empathic manner with

obtainable options for correcting the behavior (Carpentier & Mageau, 2013; Mourtadis, Lens, & Vansteenkiste, 2010). The next basic need addressed in SDT is competence.

Competence. Competence is another basic psychological need presented in SDT. Competence is “feeling effective in one’s ongoing interactions with the social environment and experiencing opportunities to exercise and express one’s capabilities” (Deci & Ryan, 2002, p.7). Thus, an athlete might feel a sense of competence when his or her capabilities are sufficient to meet the demands of the sport given his or her level of competition. A high school basketball player, for example, would likely feel a high sense of competence while participating in a recreational basketball game on a playground with elementary school students. This same athlete, however, would certainly feel a low sense of competence while competing in a game against professional basketball players due to the higher success requirements of the environment. Certain coaching behaviors lead to athletes’ increased sense of competence (Almagro et al., 2010; Isoard-Gauthier et al., 2012; Mageau & Vallerand, 2003; Matosic, 2014).

Coaches may provide athletes both on-field and off-field structure in various ways in order to help foster a sense of competence. Some examples of on-field structure may be specific position assignments allowing athletes to specialize and build competence in particular positions, expectations about attitude and effort levels while practicing and playing in games, and organized practices. Coaches may also develop structure through off-field activities by implementing personal conditioning schedules to enhance athletes’ fitness, developing individual drill requirements to help develop individual skill, and diet plans to foster fitness. Without structure and instruction from a coach, athletes lack the guidance, knowledge, and skills helpful to learning and progressing in their chosen sport (Mageau & Vallerand, 2003). Performance feedback based on the provided structure also assists to instill a sense of competence.

Athletes invariably deviate from performance expectations at one time or another. The way in which a coach provides corrective feedback when these performance deviations occur affects athletes' sense of competence (Carpentier, & Mageau, 2013; Mageau & Vallerand, 2003; Mourtadis et al., 2010). A coach delivering performance-correcting feedback poorly can convey messages of low competence and thus affect athletes' motivation and well-being (Mourtadis, 2010). Providing corrective feedback in an autonomy-supportive (non-controlling) manner, however, is correlated with an increased sense of competence in athletes (Mageau and Vallerand, 2003). Targeting behaviors that are under the athletes' control, conveying high, but realistic expectations, showing empathy (taking into account the athlete's needs), providing tips on how to improve future performance, and using a considerate tone of voice all support athletes' development of a sense of autonomy, competence, and relatedness (Carpentier & Mageau, 2013; Mageau & Vallerand, 2003; Mourtadis, 2010). Relatedness is the final basic need presented by SDT.

Relatedness. Relatedness is the final of three needs presented by SDT that when met lead individuals to act in self-determined ways (Deci & Ryan, 1985, Ryan & Deci, 2000). Relatedness refers to “feeling connected to others, caring for and being cared for by others” (Deci & Ryan, 2002, p.7). In a sports realm having a sense of relatedness could mean feeling connected to a coach, teammates, or supporters such as friends, family, or fans. While SDT presents autonomy, competence, and relatedness as all necessary to predicting intrinsic and self-determined levels of motivation, Cognitive Evaluation Theory (a sub-theory of SDT) primarily focuses on the importance of environments fostering autonomy and competence, with much of the coaching research following suite (Deci & Ryan, 1985; Ryan & Deci, 2000). Thus, research often mentions all three needs, but for the most part has failed to focus on relatedness

independent of autonomy and competence. The available research, however, has shown a coach's style is linked to an athlete's sense of relatedness while considered with one or both of the other needs (Mageau & Vallerand, 2003; Wu et al., 2014).

One way in which a coach supports athletes in developing a sense of relatedness is his or her feedback style (Carpentier & Mageau, 2013). A few of the characteristics of effective feedback for developing all three needs may relate specifically to athletes developing a sense of relatedness (Mageau & Vallerand, 2003; Matosic, 2010; Wu et al., 2014; Carpentier & Mageau, 2013). A coach may use corrective feedback to support an athlete in developing a sense of relatedness by taking the athlete's needs and desires into account and by providing feedback in a considerate voice (Carpentier & Mageau, 2013). Doing so may help athletes feel safe while in the potentially vulnerable situation of having someone correct their behavior. Delivering feedback promptly and privately might also help build a feeling of trust between athletes and coaches by sending the message that the coach will in fact communicate when issues arise and that the coach will refrain from embarrassing the athlete in front of his or her peers (Carpentier & Mageau, 2013). In addition to delivering corrective-feedback in a certain way, a coach may also assist athletes to develop a sense of relatedness by intentionally scheduling and encouraging opportunities for teammates to interact and work with one another.

Coaches may be able to promote a sense of relatedness between team members by providing opportunities for them to interact with one another and work together in both sport related activities and by encouraging out-of-sport interactions. A coach at practice may, for example, design drills requiring team members to work together and communicate, rather than having players focus on individual skill development activities. A coach may also support athletes in building a sense of relatedness with one another by initiating opportunities for athletes

to associate outside of practice or game situations. A coach, for example, may organize team socials in order to encourage athletes to interact in a non-sports context. Doing so may help teammates develop a sense of relatedness each other on a deeper level than can be reached purely through sport interaction. Whether through corrective feedback, teamwork-based drills, or activities outside of practice, coaches have multiple methods for supporting athletes as they develop a sense of relatedness.

As has been shown, coaching styles are linked not only to athletes' perceived relatedness, but also autonomy and competence. Pragmatic coaching models focusing on all three needs, such as Mageau and Vallerand's autonomy-supportive coaching model, are needed to better understand methods through which coaches impact athletes' perceived autonomy, competence, and relatedness levels (Mageau & Vallerand, 2003). Mageau and Vallerand suggest Baumrind's authoritative parenting style is similar to their autonomy-supportive coaching style and may provide such a model to meet all three needs.

Baumrind's Parenting Typology

Baumrind (1966) described three parenting styles (permissive, authoritarian, and authoritative) based on the tenets of demandingness and responsiveness. Demandingness "refers to the claims parents make on children to become integrated into the family whole, by their maturity demands, supervision, disciplinary efforts, and willingness to confront the child who disobeys" (Baumrind, 1991, p. 61-62). A parent high in demandingness has lofty but achievable expectations for a child's behavior, and provides the structure necessary for the realization of those expectations. Responsiveness is "the extent to which parents intentionally foster individuality, self-regulation, and self-assertion by being attuned, supportive, and acquiescent to children's special needs and demands" (Baumrind, 1991, p. 62). A parent high in responsiveness

takes into consideration the child's needs and desires and supports the child in his or her endeavors whether individual or family related. Baumrind's Parenting Typology describes parents whose parenting styles fall into each of the three areas and the effects each parenting style has on children.

Permissive. Low levels of regulation but high levels of responsiveness characterize permissive parents. These parents do not enforce rules, but respond to their children in a caring manner (Baumrind, 1966, 1978, 1991). A permissive parent also does not necessarily strive to be an example for the child to follow, but more of a resource for support (Baumrind, 1966). DeHart et al. (2006) found that children reared by permissive parents tended to have low self-esteem due to a lack of learning self-regulation often found through parents' teaching and examples. Lamborn et al. (1991) also found that adolescents with permissive parents tended to have a higher likelihood of substance abuse and behavioral issues in school than those with authoritative parents. Applying Baumrind's Parenting Typology to sports suggests a coach may take on characteristics similar to those of a permissive parent.

A permissive coach might be akin to a permissive parent in many ways. A permissive coach might support athletes regardless of what the athletes decide. In order to avoid exerting pressure on the athletes, a permissive coach might not provide structure or rules. These coaches would be more akin to friends than mentors (Baumrind, 1966). A permissive coach, for example, may arrive at practice and allow athletes to choose what they do for the day without any sort of guidance for their behavior. A permissive coaching style would allow a high level of freedom, and thereby may satisfy the need for autonomy in athletes. A permissive style might also provide the personal connection necessary to instill a sense of relatedness in athletes. It would, however, lack the structure necessary to instill a sense of competence. Without rules and

performance expectations, athletes would have a difficult time progressing in their sport.

Authoritarian is another parenting style presented in Baumrind's Parenting Typology that may be adapted to a sport context.

Authoritarian. Authoritarian parents are high in demandingness, but low in responsiveness. They set arduous rules and expectations for their children, but do not take into account children's needs or offer reasons for their rules or expectations. These parents are the "do it just because I said so" type of parents. Adolescents from homes with authoritarian parents were found to lack individuation, social consciousness, autonomy, and tended to have an external locus of control (Baumrind, 1991). Applying an authoritarian parenting style to a sport context would suggest an authoritarian coach would have strict rules for behavior, but would not provide rationale for the rules or support for the athletes as they strove to meet the coach's expectations. Authoritarian coaches may make athletes run excessively without any stated or apparent reason. An authoritarian coach may provide the structure necessary to instill competence in athletes, but not freedom enough to provide a sense of autonomy, or responsiveness enough to instill a sense of relatedness within athletes. An authoritative parent is similar to an authoritarian parent with regards to demandingness, but demonstrates a high level of responsiveness lacking in the authoritarian parent (Baumrind, 1991).

Authoritative. Authoritative parents display high levels of demandingness and responsiveness (Baumrind, 1991). These parents enforce house rules and expectations for their children, but also show concern for their children's needs and desires. They also provide rationale for their rules and expectations. Baumrind (1991) indicated adolescents who had authoritative parents, when compared to their peers, were "individuated, mature, resilient, optimistic, and perceived their parents as influential and loving" (p. 72). These children were

also found to be more competent than their peers (Baumrind, 1991). As is the case with permissive and authoritarian parenting styles, authoritative parenting characteristics may be applied to coaching styles.

An authoritative coach would be the type of coach who expected the most out of athletes, but also supported them in achieving their goals. This coach would provide rationale for the tasks he or she asked of athletes, and would be open to verbal give and take. Based on the inherent characteristics of the authoritative parenting style, the suggested authoritative coaching style holds the potential for meeting all three needs of autonomy, competence, and relatedness (Mageau & Vallerand, 2003).

Demonstrating both demandingness and responsiveness may allow an authoritative coaching style to meet all three psychological needs presented in SDT. A high level of demandingness might provide the structure necessary to enable athletes to learn a sport effectively and thereby support a sense of competence. Based on the definition of responsiveness— “the extent to which parents (coaches) intentionally foster individuality, self-regulation, and self-assertion by being attuned, supportive, and acquiescent to children’s special needs and demands” (Baumrind, 1991, p. 62) an authoritative coaching style may also foster a sense of autonomy in athletes. Finally, responsiveness could also provide athletes with the personal support they need to feel a sense of relatedness. By taking into account and responding to the needs of athletes, an authoritative coach could develop a sense of connection with athletes, and enable them to develop relatedness with one another. Individuality, self-regulation, and self-assertion are all closely related to autonomy. Thus, Baumrind’s authoritative parenting style adapted to coaching holds the potential to meet all three needs of autonomy, competence, and relatedness.

Gaps in the Literature

While researchers have applied SDT to better understand the effect coaching styles have on athletes' needs, opportunities exist to address gaps in the research as it relates to athletic coaching. Mageau and Vallerand (2003) argued Baumrind's authoritative parenting style as adapted to a coaching style may provide a model for coaches to follow in order to foster an environment in which all three needs of autonomy, competence, and relatedness are met. Research has yet to adapt and apply Baumrind's Parenting Typology in order to test this idea. Thus, the purpose of this study was to apply Baumrind's Parenting Typology to the realm of adolescent sports in order to analyze the relationship permissive, authoritarian, and authoritative coaching styles had with athletes' needs of autonomy, competence, and relatedness.

Methods

Data Collection Procedures

The majority of the test participants were recruited through Recreational Management and Exercise Science classes at Brigham Young University with a few other participants coming through online posts. Professors in Recreational Management and Exercise Science departments distributed an online survey via email to their students. Participants were asked to select one specific coach for whom they had played for at least one year during their high school tenure. Students completed the 67-question survey, which included demographic questions, questions through which athletes rated their coaches based on coaching styles, and questions through which athletes appraised their personal autonomy, competence, and relatedness levels. Participants were asked a few questions regarding sports participation including the number of years they engaged in their selected sport, the number of years playing for a particular coach, and the number of years participating on the team about which they were reporting. They were asked

these questions to see if these factors impacted results. Finally, the questionnaire included two free-response questions to shed more light on how athletes felt coaches impacted them.

Limitations due to poor memory recall, misunderstanding of a question's meaning, and a fairly homogeneous demographic were all considered and understood in advance.

Study Sample

The sample for this study was a convenience sample drawn from student volunteers currently enrolled at Brigham Young University. No effort to perform a random sampling methodology was employed. The sample consisted of 194 participants, with the majority (75.3%) being female. Ages ranged from 17 to 28 with a mean of 21.19 ($SD = 1.98$). The number of years spent in the sport ranged from 1 to 20 with a mean of 6.86 years ($SD = 4.84$). Years with the chosen coach ranged from 1 to 14 with a mean of 2.58. The number of years on the team ranged from 1 to 14 with a mean of 3.14 years.

Instrumentation

The current study used The Basic Needs Satisfaction in Sport Scale (BNSSS) (Ng, Lonsdale, & Hodge, 2010), to measure study participants' perceived autonomy, competence, and relatedness levels. An adapted version of the Parental Authority Questionnaire (PAQ) (Buri, 1991) was used for participants to measure their coaches' authoritative, authoritarian, and permissive coaching styles.

The Basic Needs Satisfaction in Sport Scale (BNSSS). The BNSSS (see Appendix B) is a five-factor (20 item) Likert scale ranging from 1 to 7 with 7 being high in the construct it measures. The BNSSS measures participants' levels of autonomy, competence, and relatedness (Ng, Lonsdale, & Hodge, 2010). Competence and relatedness have five items each, and autonomy is a compilation of three sub-scales: choice, volition, and internal perceived locus of

causality (IPLOC). Choice and IPLOC were the only autonomy subscales used in the current study. The items from these subscales were summed to compute the autonomy scale. The autonomy scale had an α coefficient of .934. The competence scale had an α coefficient of .904, and the relatedness scale had an α coefficient of .944.

Adapted Parental Authority Questionnaire (Adapted PAQ). The Adapted PAQ (see Appendix B) is a coaching adapted version of the Parental Authority Questionnaire PAQ (Buri, 1991). The Adapted PAQ is a 30-item Likert scale ranging from 1 to 5 with 5 being high in the construct it measures. The scale measures authoritative, authoritarian, and permissive coaching styles. The authoritative coaching scale has 10 questions and an α coefficient of .896. The authoritarian coaching scale has 10 questions and an α coefficient of .849. The permissive coaching scale has 10 items with an α coefficient of .718.

The PAQ was chosen for the adaptation based on its being written in first person from the standpoint of the child. This made its adaptation into a coaching style scale simple thus maintaining the integrity of the instrument. An example of the adaptation is as follows:

Original- My mother always encouraged verbal give-and-take whenever I felt that family rules and restrictions were unreasonable.

Adapted- This coach always encouraged verbal give-and-take whenever I felt that team rules and restrictions were unreasonable.

Data Analysis

Data were analyzed using Statistical Package for Social Sciences (SPSS) Version 23.0 computer software. Data were first imported into SPSS from the Qualtrics website and cleaned by eliminating surveys with missing responses. Descriptive statistics were performed on the socio-demographic questions, which computed average age, years in sport, years with coach, and

years on the team. All variables were reported for analysis at the bivariate and multivariate levels.

Block-entry method linear multiple regression analyses were performed for each of the three dependent variables (autonomy, competence, and relatedness). The model for each dependent variable comprised three blocks. Using the block entry method, the first block held the three coaching styles (authoritative, authoritarian, and permissive). Researchers added the years in sport variable into the second and third blocks with the years with coach and years on team variables being loaded in the third block of each model. The models were then examined using linear regression analyses with a significance level at a p-value of .05. In the significant models, the standardized regression coefficient (Beta) was examined to identify the contribution of each variable.

Results

Results from this study supported the idea that Baumrind's parenting typology could be applied to adolescent sports. Furthermore, results showed significant relationships between authoritative and authoritarian coaching styles and the tenets of Self-Determination Theory. This chapter will cover results found through bivariate and linear multiple regression analyses.

Bivariate Analyses

Zero-order correlations were used to examine bivariate relationships between coaching styles and athletes' perceived autonomy, competence, and relatedness levels. Results showed an authoritative coaching style had a positive correlation with autonomy ($r = .623$) and a moderately positive correlation with competence (.200). An authoritarian coaching style had a negative correlation with autonomy ($r = -.517$). A permissive style had a moderately positive correlation with autonomy ($r = .332$).

Multivariate Analyses

Multivariate analyses were computed with block-entry method linear multiple regressions to examine the relationship between the authoritative, authoritarian, and permissive coaching styles and athletes' perceived autonomy, competence, and relatedness levels. A Permissive coaching style was not significant when considering any of the dependent variables and was removed from further analyses. The years in sport variable was added to blocks two and three of each model, and the years with coach and years on team variables were added to block three for each model in order to see the impact each had on the dependent variables. The information below highlights the most pertinent results from the study. Tables included at the end of the study display all results.

In the model for autonomy ($n=189$) (see table 1), the first block containing authoritative and authoritarian variables explained a significant portion of the variance in athletes' autonomy scores ($R^2 = .410, p < .001$). In this block both authoritative ($\beta = .645, p < .001$) and authoritarian ($\beta = -.297, p = .004$) coaching styles were significant predictors of athletes' perceived autonomy levels. In this model each block showed a statistically significant change in variance when compared with the previous block. Authoritative and authoritarian coaching styles were significant predictors of athletes' perceived autonomy levels in each block. The number of years in the sport variable was a significant predictor of athletes' perceived autonomy levels in both block two ($\beta = 6.342, p = .004$) and block three ($\beta = 4.342, p = .04$). The number of years with the chosen coach was also a significant predictor of athletes' perceived autonomy levels ($\beta = 3.589, p = .001$).

In the model for competence ($n=189$) (see Table 2), the first block containing authoritative and authoritarian variables explained a significant portion of the variance in

competence scores ($R^2 = .037, p = .037$). In this block, an authoritative coaching style was a significant predictor of athletes' perceived competence levels ($\beta = .153, p = .024$). An authoritative coaching style was found to be significant in the second block. The number of years in the sport variable was also a significant predictor of athletes' competence in block two ($\beta = 4.431, p = .005$) and block three ($\beta = 3.078, p = .042$).

Discussion and Implications

The purpose of this study was to adapt and apply Baumrind's Parenting Typology to adolescent sports, and examine the relationship between each coaching style and the tenets of Self-Determination Theory. Results suggested Baumrind's Parenting Typology could in fact be successfully applied to adolescent sports. Furthermore, results showed authoritative and authoritarian coaching styles were significant predictors of certain tenets of SDT while permissiveness as a coaching style failed to show significance. This section will discuss the most significant results from the study, practical implications for these findings, limitations of the current study, and recommendations for further research.

Authoritative Coaching

Results from this study indicated a significant positive relationship between an authoritative coaching style and athletes' perceived autonomy and competence levels. Thus a coaching style implementing rules and regulations while also supporting the needs of athletes was a positive predictor of athletes' perceived needs of autonomy and relatedness. This significant relationship may exist for a few reasons.

One potential explanation for a significant relationship between an authoritative coaching style and athletes' perceived autonomy levels might be the responsiveness element of an authoritative coaching style. As a reminder, Baumrind (1991) defined responsiveness as "the

extent to which parents (coaches) intentionally foster individuality, self-regulation, and self-assertion by being attuned, supportive, and acquiescent to children's special needs and demands" (p. 62). Results support the idea that a coaching style providing individuality, self-regulation, and self-assertion is closely related to athletes' perceived autonomy levels. One adapted authoritative survey item read, "This coach always encouraged verbal give-and-take whenever I felt that team rules and restrictions were unreasonable." Thus, a coach offering athletes the opportunity to give input on team decisions provides them with a sense of autonomy as these athletes have a chance to influence decisions or outcomes on the team. Results from the current study support past SDT research and provide a new model for instilling a sense of autonomy. An authoritative coaching style also had a positive significant relationship with athletes' perceived levels of competence.

Results show that an authoritative coaching style has a positive significant relationship with athletes' perceived competence levels. Based on one of the defining characteristics of an authoritative parent (demandingness), an authoritative coaching style inherently includes rules and behavior expectations. Thus, these results support the idea that rules and behavior expectations provide the structure necessary for athletes to learn to play a sport proficiently and thus gain an increased sense of competence. One survey item measuring an authoritative coaching style read:

My coach gave me direction for my behavior and activities as I was part of the team and he or she expected me to follow his or her direction, but he or she was always willing to listen to my concerns and to discuss that direction with me (see Appendix B).

This survey item shows an authoritative coaching style inherently has regulations and behavior expectations. Without rules and regulations, a coach would demonstrate more of a permissive

than an authoritative coaching style. Results suggest a permissive coaching style would not instill a sense of competence in athletes. An authoritarian coaching style also had a significant relationship with athletes' perceived level of autonomy.

Authoritarian Coaching

Results revealed that an authoritarian coaching style held a significantly negative relationship with athletes' sense of autonomy. These results supported previous research showing that athletes immersed in a controlling atmosphere (like that of an authoritarian coaching style) reported lower levels of autonomy (Matosic & Cox, 2014). Findings would suggest that the often-prevalent controlling coaching style not only does not help but may also negatively predict athletes' perceived levels of autonomy. Diminished autonomy may lead one to assume competence and relatedness would be diminished as well, but this study found an authoritarian coaching style was not a significant positive or negative predictor of athlete competence as might be expected.

While the authoritarian coaching style was not a significant positive or negative predictor of athlete competence, "years in sport" was a significant predictor of athletes' perception of competence level. It seems reasonable that an athlete engaging in a sport over an extended period of time is more likely to become proficient in a sport and thus gain a sense of competence than one participating in the sport for a year or two. This result may bring a ray of hope to athletes and parents of athletes with authoritarian coaches. It supports the notion that longevity in a sport may overcome some of the negative effects of an authoritarian coach. While authoritative and authoritarian coaching styles showed significant results, a permissive coaching style did not.

Permissive Coaching

Permissiveness was not found to be a significant predictor of athlete autonomy, competence, or relatedness. This was not surprising based on the level of sport participation in which the study participants engaged. Study participants reported on their experiences that were either club or high school level rather than recreation league level sports. The high school and club level of competition diminished the likelihood of athletes reporting on a coach who used a permissive coaching style. This may be because athletes need the structure inherently void in a permissive coaching style if they are to learn and progress in a sport enough to compete on a high level. Recreational level sports may be more apt to include coaches utilizing a permissive coaching style due to a focus on recreation rather than a high level of competition. These results do not necessarily show that a permissive coaching style is not related to athletes' perceived autonomy, competence, and relatedness levels, but rather that there was not enough data to find significance.

Practical Implications

Results from this study hold practical implications for coaches, parents, adolescent athletes, and league administrators. One implication for coaches is the knowledge that an authoritative coaching style is positively related with athlete's perceived autonomy and competence. Outcomes from this study did not support the effectiveness of the often-prominent controlling culture of an authoritarian coach. Thus, a coach wanting to foster an athlete's sense of autonomy and competence can employ an authoritative coaching style in order to do so rather than resorting to a controlling style. The findings from this study hold the potential to shift sports culture from a controlling coaching style to one more supportive of athletes' individual needs.

Results from this study could be used in educating parents and adolescents regarding the effect coaches have on athletes. Findings from this study provide parents and adolescents a model to use for selecting coaches based on the parents' and athletes' desired outcomes. In the sporting world many people hold the belief that coaches need to be hard on athletes in order to teach them to play a sport well. This study suggests, however, that this is not the case. Results show that a coaching style combining high demands with a high level of responsiveness (authoritative) is not only a predictor of athletes' perceived autonomy levels, but also perceived competence levels. Thus, parents being selective about the coaches to whom they expose their adolescent athletes may support a cultural shift in athletics from a prevalent controlling style to a style that supports athletes' needs, because coaches employing controlling coaching styles will lose (or never attract) the athletes they seek.

Lastly, league administrators and club owners can use the findings from this study to not only create coach-selecting criteria, but also to create evaluation and training material. Administrators can be more educated in coaching psychology and thereby more intentional with their sports programming.

Limitations and Recommendations for Future Research

This study provided evidence that Baumrind's Parenting Typology can be successfully applied to adolescent sports. Furthermore, results demonstrated a positive relationship between an authoritative coaching style and athlete autonomy and competence levels. It also showed a significant negative relationship between an authoritarian coaching style and athlete autonomy. This study, however, was a pioneer study in the application of Baumrind's Parenting Typology to sports, and had limitations.

The lack of recreational level sport representation was one limitation of the study. Researchers intentionally excluded recreational level sports from the study due to the high rate of coach and team turnover. Recreational teams often switch coaches each season and thus recreational athletes may not have had enough experience with a coach to provide the data reliability the research required. Additionally, the presence of volunteer coaches in recreational leagues brings into question the knowledge and level of expertise necessary to coach a sport effectively. A coach with minimal coaching skill may not be able to instill a level of competence high enough to show significance. A low level of athlete competence due to a lack of coaching ability rather than coaching style may have skewed the results. Club or high school level coaches, however, tend to have a certain level of training and aptitude in order to teach athletes to compete on a high school or club level. Another limitation of this study was sample size.

A smaller than desired sample size was another limitation of the study. The researchers chose a target sample size of 250 participants based on the sample sizes of similar previous studies. Recruiting efforts produced 263 responses. Upon cleaning the data, the number of incomplete and unusable responses brought the sample size down to 194. The researchers were unable to recruit more respondents due to time restrictions. Having a larger sample size of 250 to 300 or even 400 respondents may have either solidified current results or shifted the results of those variables that were trending toward significance. A final limitation of the study the researchers will address is it not directly measure intrinsic or self-determined motivation, but purely relied on measuring the athletes needs levels.

Future research may benefit by directly measuring intrinsic or self-determined motivation along with the basic needs levels. A desire to minimize participant burden prompted the decision to exclude an intrinsic or self-determined motivation scale. Researchers felt the instrument

utilized for this study was long enough to be burdensome to test participants as it was, including another instrument could have prompted a higher drop-out rate. Doing so, however, excluded the ability to show results regarding self-determined motivation.

A final recommendation for further research is to study the application of Baumrind's Parenting Typology to sports from the standpoint of coaches. The current study considered only the athletes' perception of coaches' styles. Flipping the coin to analyze the coaches' perspectives of their own coaching styles may shed more light on the relationship between Baumrind's Parenting Typology and perceived basic needs levels of athletes.

The current study answered specific questions regarding the applicability of Baumrind's Parenting Typology to SDT in adolescent sports. The attempt to combine two vastly researched theories created an opportunity for future research to adapt and expand both the methodologies and the results of this study. Opportunities for furthering this line of research are expansive and hold the potential for further shifting the adolescent coaching culture to favor an authoritative rather than authoritarian coaching style. With over 41 million youth participating in sports in the United States on an annual basis (Hilgers, 2006), coaches, parents, adolescents, and league administrators deserve to know the most effective ways in which to build championship youth in addition to championship teams. This research holds potential answers to questions concerning the best way forward.

References

- Adie, J. W., Duda, J. L., & Ntoumanis, N. (2008). Autonomy support, basic need satisfaction and the optimal functioning of adult male and female sport participants: A test of basic needs theory. *Motivation and Emotion*, 32, 189–199.
- Adie, J.W., Duda, J.L., & Ntoumanis, N. (2010). Achievement goals, competition appraisals, and well- and ill-being of elite youth soccer players over two competitive seasons. *Journal of Sport & Exercise Psychology*, 32(4), 555-579.
- Almagro, B. J., Saenz-Lopez, P., & Moreno, J. A. (2010). Prediction of sport adherence through the influence of autonomy-supportive coaching among Spanish adolescent athletes. *Journal of Sports Science and Medicine*, 9, 8-14.
- Amorose, A. J., & Anderson-Butcher, D. (2007). Autonomy-supportive coaching and self-determination motivation in high school and college athletes: A test of self-determination theory. *Psychology of Sport and Exercise*, 8, 654-670.
- Anderson, S. J., Greisemer, B., Johnson, M., Martin, T., McLain, L., Rowland, T., & Small, E. (2000). Intensive training and sports specialization in young athletes. *Pediatrics*, 106(1), 154-157.
- Baumrind, D. (1966). Effects of authoritative parental control on child behavior. *Child Development*, 37, 857-907.
- Baumrind, D. (1978). Parental disciplinary patterns and social competence in children. *Youth and Society*. 9(3), 239-276.
- Baumrind, D. (1991). The influence of parenting style on adolescent competence and substance use. *The Journal of Early Adolescence*, 11, 56-95.

- Becker, A.J., & Wrisberg, C.A. (2008). Effective coaching in action: Observations of legendary coach Pat Summitt. *Sports Psychologist*, 22(2), 197-211.
- Becker, A. J. (2009). It's not what they do, it's how they do it: Athlete experiences of great coaching. *International Journal of Sports Science & Coaching*, 4(1), 93-119.
- Boardley, I.D., Kavussanu, M., & Ring, C. (2008). Athletes' perceptions of coaching effectiveness and athlete-related outcomes in rugby union: An investigation based on the coaching efficacy model. *Sport Psychologist*, 22(3), 269-287.
- Buri, J. (1991). Parental authority questionnaire. *Journal of Personality Assessment*, 57(1), 110-119.
- Carpentier, J., & Mageau, G. A. (2013). The role of coaches' passion and athletes' motivation in the prediction of change-oriented feedback quality and quantity. *Psychology of Sport and Exercise*, 15(4), 326-335.
- Carpentier, J., & Mageau, G. A. (2013). When change-oriented feedback enhances motivation, well being and performance: a look at autonomy-supportive feedback in sport. *Psychology of Sport and Exercise*, 14, 423-435.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York: Plenum.
- Deci, E. L., & Ryan, R. M. (1987). The support of autonomy and the control of behavior. *Journal of Personality and Social Psychology*, 53(6), 1027-1037.
- DeHart, T., Pelham, B. W., & Tennen, H. (2006). What lies beneath: Parenting style and implicit self-esteem. *Journal of Experimental Social Psychology*, 42, 1-17.

- Felton, L., & Jowett, S. (2013). "What do coaches do" and "how do they relate": Their effects on athletes' psychological needs and functioning. *Scandinavian Journal of Medicine & Science in Sports*, 23(2), e130-e139.
- Feltz, D. L., Hepler, T. J., Roman, N., & Paiement, C. (2009). Coaching efficacy and volunteer youth sport coaches. *Sport Psychologist*, 23(1), 24-41.
- Gillet, N., Berjot, S., & Gobance, L. (2009). A motivational model of performance in the sport domain. *European Journal of Sport Science*, 9(3), 151-158.
- Gillet, N., Vallerand, R. J., Amoura, S., & Baldes, B. (2010). Influence of coaches' autonomy support on athletes' motivation and sport performance: A test of the hierarchical model of intrinsic and extrinsic motivation. *Psychology of Sport and Exercise*, 11(2), 155-161.
- Hilgers, L. (2006, July 3). Re: Youth sports drawing more than ever [CNN U.S. online website]. Retrieved from http://articles.cnn.com/2006-07-03/us/rise.kids.sports_1_youth-sports-tennis-lessons-kids?_s=PM:US.
- Isoard-Gauthier, S., Guillet-Descas, E., & Lemyre, P. N. (2012). A prospective study of the influence of perceived coaching style on burnout propensity in high level young athletes: Using a self-determination theory perspective. *Sport Psychologist*, 26(2), 282-298.
- Lamborn, S. M., Mounts, N. S., Steinberg, L., & Dornbusch, S. M. (1991). Patterns of competence and adjustment among adolescents from authoritative, authoritarian, indulgent, and neglectful families. *Child Development*, 62(5), 1049-1065.
- Lopez-Walle, J., Balaguer, I., Castillo, I., & Tristan, J. (2012). Autonomy support, basic psychological needs and well-being in Mexican athletes. *Spanish Journal of Psychology*, 15(3), 1283-1292.

- Mageau, G. A., & Vallerand, R. J. (2003). The coach-athlete relationship: A motivational model. *Journal of Sports Sciences*, 21(11), 883-904.
- Matosic, D., & Cox, A. E. (2014). Athletes' motivation regulations and need satisfaction across combinations of perceived coaching behaviors. *Journal of Applied Sport Psychology*, 26(3), 302-317.
- Mouratidis, A., Lens, W., & Vansteenkiste, M. (2010). How you provide corrective feedback makes a difference: The motivating role of communicating in an autonomy-supporting way. *Journal of Sport & Exercise Psychology*, 32(5), 619-637.
- Myers, N. D., Vargas-Tonsing, T. M., & Feltz, D. L. (2005). Coaching efficacy in intercollegiate coaches: Sources, coaching behavior, and team variables. *Psychology of Sport and Exercise*, 6(1), 129-143.
- Ng, J. Y. Y., Lonsdale, C., & Hodge, K. (2010). The basic needs satisfaction in sport scale (BNSSS): Instrument development and initial validity evidence. *Psychology of Sport and Exercise*, 12(3), 257-264.
- Ramis, Y., Torregrosa, M., Viladrich, C., & Cruz, J. (2013). Coaches, peers and parents' autonomy support and its predictive capacity on young athletes' self-determined motivation. *Anales De Psicologia*, 29(1), 243-248.
- Readdy, T., Raabe, J., & Harding, J. S. (2014). Student-athletes' perceptions of an extrinsic reward program: A mixed-methods exploration of self-determination theory in the context of college football. *Journal of Applied Sport Psychology*, 26(2), 157-171.
- Reeve, J., Nix, G., & Hamm, D. (2003). Testing models of the experience of self-determination in intrinsic motivation and the conundrum of choice. *Journal of Educational Psychology*, 95, 375-392.

- Reinboth, M., & Duda, J. L. (2006). Perceived motivational climate, need satisfaction and indices of well-being in team sports: a longitudinal perspective. *Psychology of Sport and Exercise*, 7, 269-286.
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55, 68-78.
- Walton, G. M. (1992). *Beyond winning: The timeless wisdom of great philosopher coaches*. Champaign, IL: Human Kinetics 1.
- Wu, A. M. S., Lai, M. H. C., & Chan, I. T. (2014). Coaching behaviors, satisfaction of needs, and intrinsic motivation among Chinese university athletes. *Journal of Applied Sport Psychology*, 26(3), 334-348.

Table 1

Summary of Blocked Regression Equations: Autonomy

Variables	<i>B</i>	SE <i>B</i>	β	<i>p</i>
Autonomy (N=177)				
Block 1 $R^2 = .410$ ($p = .001$)*				
Authoritative	0.645	0.094	0.494	0.001*
Authoritarian	-0.297	0.102	-0.211	0.004*
Block 2 $R^2 = .454$ ($p = .004$)				
Authoritative	0.628	0.093	0.481	0.001*
Authoritarian	-0.330	0.100	-0.234	0.001*
YIS2	-1.552	1.304	-0.070	0.236
YIS3	2.213	1.567	0.084	0.160
YIS4	6.342	2.167	0.171	0.004*
Block 3 $R^2 = .519$ ($p = .001$)*				
Authoritative	0.587	0.089	0.449	0.001*
Authoritarian	-0.318	0.094	-0.225	0.001*
YIS2	-2.305	1.250	-0.092	0.105
YIS3	1.622	1.485	0.062	0.276
YIS4	4.342	2.094	0.117	0.040*
YWC1	3.589	1.100	0.192	0.001*
YOT1	2.228	1.132	0.118	0.051

Note. * $p < .05$

Table 2

Summary of Blocked Regression Equations: Competence

Variables	<i>B</i>	SE <i>B</i>	β	<i>p</i>
Competence (N=178)				
Block 1 $R^2 = .026$ ($p = .037$)*				
Authoritative	0.153	0.067	0.210	0.024*
Authoritarian	0.026	0.072	0.033	0.719
Block 2 $R^2 = .116$ ($p = .002$)				
Authoritative	0.153	0.066	0.205	0.026*
Authoritarian	0.026	0.071	0.005	0.953
YIS2	-1.095	0.919	-0.089	0.235
YIS3	2.167	1.113	0.147	0.053
YIS4	4.431	1.540	0.214	0.005*
Block 3 $R^2 = .208$ ($p = .001$)*				
Authoritative	0.119	0.063	0.165	0.061
Authoritarian	0.014	0.067	0.018	0.830
YIS2	-1.465	0.885	-0.120	0.100
YIS3	1.796	1.063	0.122	0.093
YIS4	3.078	1.499	0.148	0.042*
YWC1	1.912	0.783	0.184	0.016*
YOT1	2.008	0.802	0.191	0.013*

Note. * $p < .05$

Table 3

<i>Summary of Blocked Regression Equations: Relatedness</i>				
Variables	<i>B</i>	SE <i>B</i>	β	<i>p</i>
Relatedness (N=178)				
Block 1 $R^2 = .024$ ($p = .115$)*				
Authoritative	0.121	0.073	0.115	0.097
Authoritarian	-0.002	0.079	-0.002	0.980
Block 2 $R^2 = .064$ ($p = .068$)				
Authoritative	0.114	0.079	0.146	0.121
Authoritarian	-0.020	0.073	-0.024	0.797
YIS2	-0.834	1.200	-0.063	0.415
YIS3	1.390	1.236	0.087	0.262
YIS4	3.588	1.709	0.160	0.037*
Block 3 $R^2 = .519$ ($p = .001$)*				
Authoritative	0.095	0.073	0.121	0.194
Authoritarian	-0.015	0.078	-0.018	0.845
YIS2	-1.089	1.016	-0.082	0.287
YIS3	1.120	1.224	0.070	0.362
YIS4	2.674	1.727	0.119	0.123
YWC1	1.378	0.901	0.122	0.128
YOT1	1.232	0.925	0.109	0.185

Note. * $p < .05$

Appendix A

Prospectus

Authoritative Coaching: Building Youth Through Athletics

On a warm May evening in 1995, I sat as a freshman member of a high school soccer team gathered under a set of bleachers for a “pep talk” during half-time of a state quarterfinals game we were losing. Disappointment permeated the group, and frustration was evident on the head coach’s face. As a team, we discussed possible strategy adjustments for the second half. An assistant coach chimed into the conversation proposing to place one of our team’s taller players at the center halfback position, as the other team’s center halfback was tall and dominating the head balls. The head coach’s frustration turned to rage as the assistant coach concluded her recommendation. The muscles in his jaw tautened, the veins on his temples pulsated, and his face turned crimson. He then smashed his clipboard to the floor, removed his jacket and flung it against the chalkboard, and in a proliferation of profanity demanded we all instantly grew taller.

Being a freshman on the shorter side at 5’3” and weighing a meager 118 pounds, I stood in the back corner of the room overwhelmed with trepidation. The only source of comfort I found during the tirade came in the fact the upperclassmen, who were the ones receiving the barrage, were situated between myself and the seething coach. We went on to lose that night, crushing our dreams of a state championship.

Another team meeting followed approximately two years later. This gathering was a parents’ meeting for the Highland Rugby team. Now a junior in high school and of a slightly bulkier physique, I sat listening and questioning my decision to engage in the rough sport of rugby. I had always been a sports enthusiast. I had relished the camaraderie, the thrill of competition, and the exultation of victory. But adverse experiences with previous coaches had weakened my confidence and left me somewhat skittish. This uneasiness faded as Larry Gelwix,

the team's head coach, delineated his coaching philosophy. He felt youth carried enough stress in life due to school, family, and social activities and that sports were meant to lift rather than mar athletes. For this reason Larry refused to cut players from the team. He outlined his arduous expectations in a way ensuring players and parents alike they would be fully supported in their pursuit of success. Larry exuded a sense of love and concern for players that was absent in previous coaches I had encountered. The team meeting brought a renewed enthusiasm for sports founded on my belief that if Gelwix implemented the principles he professed, my experience with the Highland Rugby team would prove to be substantially more positive than others I had faced. This perception proved to be accurate. Playing for Larry Gelwix and the Highland Rugby Team renewed much lost confidence and taught me about character, love, and integrity.

I often think of the difference between my experiences playing for Larry Gelwix and other coaches I had known. My soccer coach seemed to motivate through fear and intimidation. I remember few, if any accolades, and frequently playing hard to avoid a verbal lashing rather than from a desire to succeed or a love for the sport. At times I felt my performance suffered due to a paralysis of fear.

The behavior demonstrated during the "motivational speech" of my soccer coach was arguably a behavior that should have had him disciplined. Neighbors may have called hotlines to report child abuse if he were a parent speaking to a child. Yet, due to the culture of athletics in the United States today, society often not only accepts but also expects this type of behavior to occur either in locker rooms or on the sidelines of athletic arenas.

While playing for Gelwix I strove for excellence, and did so more out of love than fear. I knew Gelwix loved and respected me as a player and as a person. I knew he expected his players to try their best for their own benefit, not for his glory as a coach. While playing for Gelwix, I

felt the game of rugby was more about building me as an individual than winning a national championship. While Gelwix's primary focus was placed more on building championship boys than on building championship teams, one should not assume he did not care about winning or being successful. The Highland Rugby team with Gelwix at the helm won 392 games and lost a mere nine, realizing a staggering 98% win record. Highland Rugby claimed the National High School Rugby Title 20 of 27 years between the years of 1985 and 2011 (Brief History of Highland Rugby, 2012).

I personally experienced the variance between two coaching styles. I know some of the impact each had on my performance, confidence, and desire to play for the corresponding coach. An estimated 41 million youth around the nation participate in athletics each year with millions of coaches interacting with those athletes (Hilgers, 2006). Neither my experience under the bleachers at halftime, nor my experience with Larry Gelwix, was unique to me. With millions of coaches impacting tens of millions of youth on a daily basis, society has an urgent need to understand the effect these coaches have on athletes and best practices for building athletes and adolescents.

Research has considered coaching motivation in adolescent athletics (Adie, Duda, & Ntoumanis, 2010; Becker & Wrisberg, 2008; Boardley, Kavussanu, & Ring, 2008). Self-Determination Theory (SDT) is one theory utilized to better understand coaching motivation (Amorose & Anderson-Butcher, 2007; Becker, 2009; Feltz, Hepler, Roman, & Paiement, 2009; Myers, Vargas-Tonsing, & Feltz, 2005). SDT identifies three basic psychological needs which, when satisfied, lead people to act in a self-determined manner. These psychological needs are competency (feeling one has the skills necessary to be successful at a given endeavor), autonomy

(feeling one has influence over what happens or a feeling of freedom), and relatedness (feeling connection with other people) (Ryan & Deci, 2000).

Much of the existing coaching research employing SDT has examined autonomy-supportive coaching styles (Almagro, Saenz-Lopez, & Moreno, 2010; Amorose, & Anderson-Butcher, 2007; Fenton, Duda, Quested, & Barrett, 2014; Gillet, Vallerand, Amoura, & Baldes, 2010; Mageau & Vallerand, 2003; Matosic & Cox, 2014; Mourtadis, Lens, & Vansteenkiste, 2010; Ramis, Torregrosa, Viladrich, & Cruz, 2013). This research has found the more autonomy-supportive style a coach utilizes, the more athletes will participate through self-determined motives, perform better at their sport, intend to persist in a given sport, and display higher levels of individual well-being (Almagro et al., 2010; Amorose & Anderson-Butcher, 2007). Matosic & Cox (2014) found the more a coach displayed autonomy-supportive (and less controlling) behaviors, the more positive their motivational experience. Providing athletes with a sense of autonomy encourages them to be more intrinsically motivated (Mageau & Vallerand, 2003). If, however, autonomy is not accompanied with structure or support, a more permissive leadership style may ensue and decrease intrinsic motivation more so than the implementation of a controlling leadership style.

Scholars have found one way to satisfy all three psychological needs suggested by Ryan and Deci's (2000) SDT may be to implement a coaching style similar to Baumrind's authoritative parenting style (Baumrind, 1966; Mageau & Vallerand, 2003). Baumrind's Parenting Typology proposes four parenting styles based on levels of demandingness and responsiveness. The four parenting styles are neglectful, permissive, authoritarian, and authoritative. Neglectful parents have low levels of both demandingness and responsiveness. These parents neither have high expectations for their children, nor demonstrate a high level of

responsiveness. Neglectful parents typically give limited direction or feedback regarding their children's choices leaving them to regulate their own lives. Permissive parents demonstrate a high level of responsiveness but a low level of demandingness. They support their children while providing little structure or guidance on decision making. Authoritarian parents act through a high level of demandingness, but display little responsiveness. A parent employing this parenting style will tell a child to do something without providing rationale for their request. Authoritarian parents often do not give praise when a child has performed well or completed a task. Authoritative parents are characterized by having a high level of demandingness, or rules and expectations, and a high level of responsiveness, or love and concern. Authoritative parents have high expectations for their children, but also support and interact with them as they strive to meet expectations (Baumrind, 1991).

Mageau and Vallerand (2003) argued that a coach who exhibits a coaching style similar to Baumrind's authoritative parenting style not only allows athletes autonomy, but also provides competence by offering guidelines and exhibiting support to athletes as they strive to meet expectations. They propose this coaching style may better satisfy the needs of athletes leading to higher self-determined motivation and increased overall performance. While Mageau and Vallerand have proposed their idea of an authoritative coaching style, the authors of the current study were unable to find any research supporting the idea or the adaptation of instruments to measure it.

Statement of the Problem

The problem of this study is to explore the relationship between coaching styles and athlete motivation. Furthermore, this study will work to adapt and apply Baumrind's parenting typology to coaching styles. Doing so will model a relationship between coaching responsiveness and

demandingness and adolescent athletes' autonomy, competence, and relatedness experience.

This study will focus on the following research questions:

1. Can Baumrind's Parenting Typology be applied to a coaching style typology?
2. Can Baumrind's Parenting Typology instruments be effectively adapted to a coaching context?
3. Does a relationship exist between coaching authoritative, authoritarian, and permissive behaviors and adolescent athletes' psychological needs of autonomy, competence, and relatedness?

Purpose of the Study

The purpose of this study is to adapt Baumrind's Parenting Typology to a coaching style typology. By extension it will explore the relationship between authoritative, authoritarian, and permissive coaching styles and the psychological needs of Self-Determination Theory—autonomy, competence, and relatedness—among University students that have played high school or club athletics.

Need for the Study

An estimated 41 million youth participate in competitive sports in the United States on an annual basis (Hilgers, 2006). Based on typical team sizes, these 41 million youth interact with millions of coaches. Many adolescents have demanding school schedules including 7-8 hours of school each day. They will frequently then attend athletic practice a couple of hours a day. On top of school and athletics, many youth load other scholastic and extra-curricular activities during the school year. With such hectic schedules, adolescents are prone to spend more time with teachers and coaches than with their parents. This being the case, adults other than an adolescent's own parents are influencing him or her in significant ways. Scholars studying

various roles specific individuals (i.e. friends, parents, and coaches) play in adolescent athletes' lives have found coaches tend to fulfill the roles of instruction and leadership more so than the athletes' parents (Keegan, Harwood, Spray, & Lavallee, 2014). Their results showed parents often filled moral and emotional support roles in the lives of their children.

Coaches spending a significant amount of time with, and influencing adolescent athletes, creates the need for society to better understand the impact these coaches are having on youth. Information gained through this study will allow coaches and society to better understand this impact. Therefore, coaches will be able to engage in motivational styles that not only affect athletic performance, but also affect psychological needs and motivation in the athletes they coach. Insight gained through this study holds the potential of shifting the culture of adolescent athletics from one often riddled with intimidation, to one of love and support. This study will also allow future researchers another method for analyzing all three psychological needs of autonomy, relatedness, and competence rather than merely studying autonomy-supportive coaching styles, as has much of the previous research.

Delimitations

This study was given the following delimitations:

1. The study sample will contain 200 students attending Brigham Young University.
2. Participants will be ages 18-25 years old.
3. Data will be gathered starting March 2015 and lasting until 200 responses have been gathered.
4. Participants will complete The Basic Needs Satisfaction in Sport Scale (Ng, Lonsdale, & Hodge, 2010) (see appendix B) to measure their individual autonomy, competence, and relatedness.

5. Participants will complete a sports adapted version of the Parent Authority Questionnaire (PAQ) (Buri, 1991 (see appendix C) to measure various coaching motivational styles.

Limitations

The scope of the study is limited by the following:

1. The ability of the athletes to recall their thoughts and feelings from high school and club athletic participation.
2. Due to the study's correlational nature, the study will not be able to determine causality.
3. The diversity of the sample is limited due to the highly homogenous nature of the Brigham Young University student body with regards to religious beliefs, ethnic background, and socio-economic status.

Assumptions

The success of the study will be based on the following assumptions:

1. Study participants will do their best to and be able to recall their coach's style, their autonomy, competence and relatedness levels.
2. The adapted PAQ will accurately measure a coach's motivational style.
3. The BNSSS will accurately measure athlete individual levels of autonomy, competence, and relatedness.

Hypotheses

The study was designed to test the following hypotheses:

H₀₁: There will be no statistically significant relationship ($p < .05$) between an authoritative coaching style and athlete autonomy scores.

H₀₂: There will be no statistically significant relationship ($p < .05$) between an authoritarian coaching style and athlete autonomy scores.

H₀₃: There will be no statistically significant relationship ($p < .05$) between a permissive coaching style and athlete autonomy scores.

H₀₄: There will be no statistically significant relationship ($p < .05$) between an authoritative coaching style and athlete competence scores.

H₀₅: There will be no statistically significant relationship ($p < .05$) between an authoritarian coaching style and athlete competence scores.

H₀₆: There will be no statistically significant relationship ($p < .05$) between a permissive coaching style and athlete competence scores.

H₀₇: There will be no statistically significant relationship ($p < .05$) between an authoritative coaching style and athlete relatedness scores.

H₀₈: There will be no statistically significant relationship ($p < .05$) between an authoritarian coaching style and athlete relatedness scores.

H₀₉: There will be no statistically significant relationship ($p < .05$) between a permissive coaching style and athlete relatedness scores.

H₁₀: There will be no statistically significant relationship ($p < .05$) between an authoritative coaching style and athlete basic needs scores.

H₁₁: There will be no statistically significant relationship ($p < .05$) between an authoritarian coaching style and athlete basic needs scores.

H₁₂: There will be no statistically significant relationship ($p < .05$) between a permissive coaching style and athlete basic needs scores.

Definition of Terms

1. *Authoritarian coach*- A coach demonstrating high levels of demandingness, but low levels of responsiveness or love and concern for players.
2. *Authoritative coach*- A coach who demonstrates high levels of expectation and demandingness and a high level of concern and responsiveness to athletes.
3. *Autonomy*- Being the perceived origin or source of one's own behavior (Deci & Ryan, 2002, p.7).
4. *Cognitive Evaluation Theory*- A sub-theory of SDT explaining the roles of autonomy, competence, and relatedness in regulating self-determined behavior.
5. *Competence*- "Feeling effective in one's ongoing interactions with the social environment and experiencing opportunities to exercise and express one's capabilities" (Deci & Ryan, 2002, p.7).
6. *Demandingness (regulation)*- The claims parents make on children to become integrated into the family whole, by their maturity demands, supervision, disciplinary efforts and willingness to confront the child who disobeys (Baumrind, 1991, p.61)
7. *Extrinsic motivation*- Performing an activity due to an external source of pressure such as the promise of a reward or the threat of a punishment (Ryan & Deci, 2000).
8. *Intrinsic motivation*- An activity done out of a genuine interest in the activity without pressure from outside sources (Ryan & Deci, 2000).
9. *Relatedness*- Feeling connected to others, caring for and being cared for by others (Deci & Ryan, 2002, p.7).

10. *Responsiveness*- “The extent to which parents intentionally foster individuality, self-regulation, and self-assertion by being attuned, supportive, and acquiescent to children’s special needs and demands” (Baumrind, 1991, p. 62).
11. *Self-Determination Theory*- A theoretical framework developed by Ryan & Deci (2000) used to understand the psychological locus of motivation in individuals.

Chapter 2

Review of Literature

The purpose of this study is to explore the relationship between coaching motivational styles and adolescent athlete motivation. Specifically, this study will seek to understand if the parenting styles presented in Baumrind's Parenting Typology (1991) apply to an adolescent sports coaching context. This chapter will review previous research covering the following topics: (a) Self-Determination Theory, (b) intrinsic motivation, (c) Cognitive Evaluation Theory, (d) general coaching research, (e) coaching motivational methods, (f) autonomy-supportive coaching, and (g) Baumrind's parenting model. This chapter will conclude by looking at gaps in the previous literature.

Self-Determination Theory

SDT postulates the existence of a motivation continuum rating the level of motivation from which humans act. This continuum ranges from amotivation (characterized by passive compliance) on the low end of the motivational spectrum, to intrinsic motivation (characterized by engagement in an activity stemming from an internal desire to participate in a given activity void of influence from outside sources) on the upper end (Ryan & Deci, 2000). Ryan and Deci define intrinsic motivation as "the inherent tendency to seek out novelty and challenges, to extend and to exercise one's capacities, to explore, and to learn" (p.70). Between the extremes of amotivation and intrinsic motivation exist four levels of extrinsic motivation. Ryan and Deci define extrinsic motivation as the performance of an activity in order to attain an outcome independent of the joy and incentive inherent in participating in the activity itself. The three causes of motivation on the left side of the chart are external in nature, while the three on the

right are self-determined in nature. SDT maintains intrinsic motivation is the most self-determined form of motivation from which someone can operate.

Intrinsic Motivation

Ryan and Deci (2000) stated, “Perhaps no single phenomenon reflects the positive potential of human nature as much as intrinsic motivation” (p. 70). Research applying SDT to physical activity has indicated that when people act through intrinsic motivation, they exhibit greater interest in a given activity, intent to remain physically active in the future, increased excitement and confidence, less pressure and tension, more creativity, better conceptual learning, a more positive emotional tone, persistence, enhanced performance, higher levels of moderate-to-vigorous physical activity, and lower levels of sedentary activity (Almagro, Saenz-Lopez, & Moreno, 2010; Deci, & Ryan, 1987; Ryan, & Deci, 2000; Fenton et al., 2014; Gillet, Berjot, & Gobance, 2009; Gillet et al., 2010). A sub-theory of SDT, Cognitive Evaluation Theory (CET), postulates when individual autonomy, competence, and relatedness needs are met, people tend to act in a self-determined way.

Cognitive Evaluation Theory

Deci and Ryan (1985) showed an individual’s environment holds the potential of either increasing or diminishing self-determined behavior. This discovery spurred the development of a sub-theory of SDT titled Cognitive Evaluation Theory. CET postulates environmental circumstances conducive to individual perceived competence, autonomy, and relatedness contribute to self-determined or intrinsically motivated behavior (Ryan & Deci, 2000). Thus, when individuals are immersed in an environment in which they feel a sense of competence, autonomy (or control), and relatedness with those around them, they act intrinsically and thereby enjoy enhanced self-determined behavior, mental health, interest in what they are doing,

confidence, and excitement. Research has applied CET to better understand coaching motivation with a primary focus on autonomy-supportive coaching.

Autonomy-Supportive Coaching

Researchers have employed SDT to better understand coaching motivation in athletics, particularly autonomy-supportive coaching (Almagro, Saens-Lopez, & Moreno 2010; Amorose & Anderson-Butcher, 2007; Felton & Jowett, 2013; Fenton et al., 2014; Gillet, Berjot, & Gobance, 2009; Gillet et al., 2010; Isoard-Gauthier, Guillet-Descas, & Lemyre, 2012; Mageau, & Vallerand, 2003; Matosic & Cox, 2014; Mouratidis, Lens, & Vansteenkiste, 2010; Ramis et al., 2013; Readdy, Raabe, & Harding, 2014; Wu, Lai, & Chan, 2014). Results have revealed coaches exhibiting an autonomy-supportive coaching style positively influence athlete self-determined behavior (Almagro, Saenz-Lopez, & Moreno, 2010; Amorose & Anderson-Butcher, 2007; Gillet et al., 2010). This research on autonomy-supportive coaching has reached beyond the United States to include studies in Canada, England, Spain, Mexico, and Belgium (Almagro et al., 2010; Gillet et al., 2010, Kavussanu et al., 2008; Lopez-Walle et al., 2012; Mouratidis, Lens, & Vansteenkiste, 2010). Almagro et al. (2010), for instance, used SDT to test the findings of researchers in the United States against a youth sample in Spain. They found if adolescents in Spain felt their coaches exhibited coaching styles allowing them choice their perception of autonomy increased as did their level of self-determined behavior. Research has developed characteristics of autonomy-supportive coaches to better understand how they do what they do.

Mageau and Vallerand (2003) gave seven characteristics of autonomy-supportive coaches. They include (a) providing as much choice as possible within certain guidelines, (b) providing reasons for decisions, (c) asking for and considering other's thoughts and feelings, (d) allowing others to take initiative, (e) providing non-controlling competence feedback, (f)

avoiding guilt, statements of control, and tangible rewards, and (g) preventing ego-involvement. Other scholars have also discussed the way in which coaches provide autonomy-supportive feedback.

Mourtadis, Lens, and Vansteenkiste (2010) found a significant positive correlation between autonomy-supportive feedback and both the athlete's intent to continue to participate in their sport and his or her general well-being. Coaches delivering corrective feedback (feedback given to improve behavior after mistakes) in an autonomy-supportive manner strengthened athlete self-determined behavior. Results from Carpentier and Mageau (2013) also found when coaches provided change-oriented (corrective) feedback in an empathic manner, with autonomy to choose a solution containing attainable objectives in a considerate tone of voice, athlete self-determined behavior increased. Coaches gave autonomy-supportive corrective feedback by taking the perspective of the athletes, allowing choice about how to overcome weakness, and suggesting rationale for the suggested corrections.

While researchers have focused on autonomy-supportive coaching styles leading to increased self-determined behavior, they have failed to fully consider models by which coaches might meet all three psychological needs—autonomy, competence, and relatedness. Mageau and Vallerand (2003) discussed the need for modalities implemented to meet all three needs. They suggest that parenting styles such as those included in Baumrind's Parenting Typology (especially authoritative parenting) could be applied to coaching, but the notion has not been tested empirically.

Baumrind's Parenting Typology

Baumrind (1991) described three parenting styles (authoritarian, authoritative, and permissive), with a fourth style (neglectful) added to the typology later. The parenting styles

were based on the tenets of regulation and responsiveness. Baumrind's Parenting Typology describes parents who fall into each of the four quadrants and the effects of each parenting style.

A description of each style with an application to sports is as follows:

Neglectful parents exhibit behavior low in both regulation and responsiveness. These parents neither provide rules nor respond or seem to care about the consequences of children's actions. A neglectful coach might arrive at practice and read a book while team members chased each other around the field.

Permissive parents are low in regulation but high in responsiveness. These parents do not enforce rules, but respond to their children in a caring manner. A permissive coach might support athletes no matter what they decide, but will not provide structure or rules in order to avoid causing pressure. These coaches are more akin to friends than coaches.

Authoritarian parents set high regulations and expectations for their children, but do not respond to their needs or offer reasons for the instructions. An authoritarian coaching style is similar to the behavior of the soccer coach from the introduction. This coach will make athletes run for no apparent reason, and not provide a cause.

Authoritative parents have high regulations and responsiveness. These parents have house rules and expectations for their children, but also show concern for their children and provide rationale for their expectations.

As Mageau and Vallerand (2003) point out, an authoritative coach is similar to an autonomy-supportive coach outlined in their research. An authoritative coach is the type who expects the most out of his or her players, but supports them in achieving their goals. This coach will provide reasons for the tasks they ask of the athletes, and are open to opposing views as

were autonomy-supportive coaches. Based on Baumrind's Parenting Typology research, an authoritative coach would have positive effects on athletes as did authoritative parents.

Baumrind (1991) indicated adolescents who have authoritative parents, when compared to their peers, were "individuated, mature, resilient, optimistic, and perceived their parents as influential and loving" (p. 72). Adolescents from homes with authoritarian parents were found to lack individuation, social consciousness, autonomy, and had an external locus of control. Children raised by permissive parents can have low self-esteem due to a lack of learning self-regulation often found through parents' teaching and example (DeHart et al., 2006). Additionally, adolescents with permissive parents tend to have a higher likelihood of substance abuse and behavioral issues in school (Lamborn et al., 1991).

Gaps in the Literature

While researchers have applied SDT to better understand coaching motivation, opportunities exist to address gaps in the research as it relates to athletic coaching. Amorose and Anderson-Butcher (2007) stated, "Despite the general acknowledgement that coaches play a crucial role in motivating athletes, surprisingly little research has specifically tested the process by which various coaching behaviors influence motivation" (p. 655). Mageau and Vallerand (2003) argued Baumrind's Parenting Typology as applied to coaching motivational psychology may provide clarity on how coaches influence athlete motivation and thereby fill in some of the gap in the literature. The Parenting Typology offers a framework to examine the process by which coaches may be supportive and foster self-determined behavior (Baumrind, 1991). Thus, the purpose of this study is to apply Baumrind's Parenting Typology to the realm of coaching. Furthermore this study will see if an authoritative coaching style meets athletes' needs of competence, autonomy, and relatedness which research has shown lead people to act in a

self-determined manner. This study holds the potential of simplifying research into a couple of simple principles rather than having a laundry list of actions to follow.

Chapter 3

Methods

The problem of the study is to determine if Baumrind's Parenting Typology has application to the world of athletic coaching. More specifically, this study will apply Baumrind's Parenting Typology to SDT to see if an authoritative coaching style will meet athletes' individual needs of autonomy, competence, and relatedness. The format of the study will include the following procedures: (a) study sample; (b) instrumentation; (c) design of study; (d) data collection procedures; and (e) data analysis.

Study Sample

The sample for this study is a convenience sample drawn from students currently enrolled at Brigham Young University. No effort to perform a random sampling methodology will be employed.

All subjects will be volunteers from Brigham Young University currently enrolled in Recreation Management and Exercise Sciences classes, or contacted through the Marriott School of Management Behavioral Lab. Participants must fit the following criteria: (a) be 18-25 years old, (b) have participated in high school or club individual or team sports for at least one year during the years they were enrolled in high school, and (c) have to have played for the coach they are reporting on for at least one calendar year.

The investigators seek athletes who were more involved in competitive sports and, thereby, may have had more interaction with coaches than athletes who were not as involved. Recreational leagues often switch teams and coaches each season, whereas club and high school teams stay intact longer with consistent coaches. A shorter duration of athlete-coach interaction may decrease an athlete's ability to be influenced by a coach's style. Recreational teams often

practice once a week with one game, whereas club and high school sports practice several times a week often having more than one game. This increased practice and game time allows more meaningful interaction with a coach. Club sports also tend to attract coaches with more coaching experience than those in recreational sports due to the volunteer nature of recreational coaching. Increased coaching experience brings a more consistent coaching style.

The selection criterion of at least one year is utilized intentionally to find athletes with a variety of athletic tenure. Those who played for one year may have discontinued due to a bad coaching experience. Those playing for multiple years may have had a better experience with their coach.

By selecting a sample of Brigham Young University students, variance due to religious belief can be held constant to a certain extent. Having a sample of college students will allow study participants to be close enough to their adolescent athletic experiences to recall experiences with coaches.

Study participants provide implied consent by completing the questionnaire. A statement informing them of their implied consent will be included in the introduction to the questionnaire.

Instrumentation

Multiple researchers have created instruments in order to measure the tenets of SDT (Ng, Lonsdale, & Hodge, 2010; Martens & Webber, 2002; Pelletier et al., 1995). For the purpose of this paper, the researchers will use The Basic Needs Satisfaction in Sport Scale (BNSSS) (Ng, Lonsdale, & Hodge, 2010). The BNSSS will be utilized to measure the tenets of SDT including competence, autonomy, and relatedness. This particular instrument was chosen because of its application to the sports domain, and the fact it measures all three basic needs of SDT.

The Basic Needs Satisfaction in Sport Scale (BNSSS) (see Appendix B) is a five-factor (20-item) scale testing participants' levels of autonomy, competence, and relatedness (Ng, Lonsdale, & Hodge, 2010). Competence and relatedness have five items each, and autonomy is a compilation of three sub-categories—choice, volition, and internal perceived locus of causality (IPLOC). The authors of the BNSSS originally designed a three-factor model with choice being the only measure of autonomy. The three-factor model was found to be a good fit with α coefficients ranging from .80-.87. Upon appraising the three-factor model, reviewers suggested the authors add items for IPLOC and volition because they felt these constructs were missing yet important and distinct aspects of autonomy (Reeve, Nix, & Hamm, 2003). This feedback brought about the creation of the five-factor model and the addition of six items to the instrument. Testing the five-factor model displayed α coefficient levels of Competence ($\alpha = .77$), Autonomy-Choice ($\alpha = .82$), Autonomy-IPLOC ($\alpha = .76$), Autonomy-Volition ($\alpha = .61$), and Relatedness ($\alpha = .77$). Further analysis showed the estimated correlation between volition and IPLOC to be strong ($r = .81$). Reeve, Nix, and Hamm (2003) suggested combining volition and IPLOC due to the similarity of the constructs. Reinboth and Duda (2006) studied choice and IPLOC as aspects of autonomy, but did not include volition. Due to volition's α coefficient approaching unacceptable ($\alpha = .61$), the strong correlation between volition and IPLOC ($\alpha = .81$) showing ample overlap, and a desire to reduce participant burden due to the use of multiple instruments, the researchers decided to leave the volition sub-scale out of the scale.

Multiple researchers have developed instruments to measure Baumrind's Parenting Typology (Buri, 1991 Robinson, Mandleco, Olsen, & Hart, 2001). For the purposes of this study, researchers will use an adapted version of the Parental Authority Questionnaire (PAQ) (Buri, 1991). The PAQ will be adapted to measure Baumrind's Parenting Typology (i.e.

permissive, authoritarian, and authoritative coaching styles). The researchers selected this instrument because it was written in first person from the standpoint of the child making necessary adaptations simple and maintaining the integrity of the instrument. An example of the adaptation is as follows:

Original- My mother always encouraged verbal give-and-take whenever I felt that family rules and restrictions were unreasonable.

Adapted- This coach always encouraged verbal give-and-take whenever I felt that team rules and restrictions were unreasonable.

The Parenting Authority Questionnaire (see Appendix C) is a 30-item scale measuring authoritative, authoritarian, and permissive parenting styles. Factor one, authoritative parenting styles, has an α score of .85. Factor two, authoritarian parenting styles, has an α score of .87. Factor three, permissive parenting styles, has an α score of .74. Careful development of these instruments followed standard practices for assuring validity and reliability.

Design of the Study and Data Collection Procedures

Professors from larger sections of Recreation Management and Exercise Science classes will be approached about allowing their students to participate in this study. Professors who agree to participate will be provided an introductory email with a link to a Qualtrics-based questionnaire. They will forward the email to the students in their class. Reminder emails will be sent in the same manner until 200 questionnaires are completed. If 200 completed questionnaires are not obtained from the initial set of courses, professors of other classes in these departments or across the university will be approached and asked to participate. The Marriott School Behavioral Lab and psychology research labs might also be used to obtain the desired numbers of questionnaires. Using these data collection procedures guarantees the anonymity and

confidentiality of all subjects since no identifying information will be gathered in the survey. It is the intention of the researcher to complete these questionnaires before the end of Winter Semester 2015.

Data Analysis

Data will be imported from a Qualtrics Internet survey into the statistical software package SPSS for data analysis. Once data has been imported into SPSS, it will be cleaned to remove potential errors due to incorrect or missing data. Researchers will run descriptive statistics in order to ensure a normal curve void of excessive kurtosis. Correlations will be run to make sure there are not any inter-variable issues. Both bivariate and multiple regression analysis will be utilized to see correlations and test the null hypotheses in order to fully understand the relationship the variables hold with regards to one another.

References

- Adie, J., Duda, J., & Ntoumanis, N. (2010). Achievement goals, competition appraisals, and well- and ill-being of elite youth soccer players over two competitive seasons. *Journal of Sport & Exercise Psychology, 32*(4), 555-579.
- Almagro, B. J., Saenz-Lopez, P., & Moreno, J. A. (2010). Prediction of sport adherence through the influence of autonomy-supportive coaching among Spanish adolescent athletes. *Journal of Sports Science and Medicine, 9*, 8-14.
- Amorose, A. J., & Anderson-Butcher, D. (2007). Autonomy-supportive coaching and self-determination motivation in high school and college athletes: A test of self-determination theory. *Psychology of Sport and Exercise, 8*, 654-670.
- Baumrind, D. (1966). Effects of authoritative parental control on child behavior. *Child Development, 37*(857-907).
- Baumrind, D. (1978). Parental disciplinary patterns and social competence in children. *Youth and Society, 9*(3), 239-276.
- Baumrind, D. (1991). The influence of parenting style on adolescent competence and substance use. *The Journal of Early Adolescence, 11*, 56-95.
- Becker, A. J. (2009). It's not what they do, it's how they do it: Athlete experiences of great coaching. *International Journal of Sports Science & Coaching, 4*(1), 93-119.
- Becker, A.J., & Wrisberg, C.A. (2008). Effective coaching in action: Observations of legendary coach Pat Summitt. *Sports Psychologist, 22*(2), 197-211.
- Boardley, I.D., Kavussanu, M., & Ring, C. (2008). Athletes' perceptions of coaching effectiveness and athlete-related outcomes in rugby union: An investigation based on the coaching efficacy model. *Sport Psychologist 22*(3), 269-287.

- Buri, J. (1991). Parental authority questionnaire. *Journal of Personality Assessment*, 57(1), 110-119.
- Carpentier, J., & Mageau, G. A. (2013). The role of coaches' passion and athletes' motivation in the prediction of change-oriented feedback quality and quantity. *Psychology of Sport and Exercise*, 15(4), 326-335.
- Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. New York, NY: Plenum.
- Deci, E. L., & Ryan, R. M. (1987). The support of autonomy and the control of behavior. *Journal of Personality and Social Psychology*, 53(6), 1027-1037.
- DeHart, T., Pelham, B. W., & Tennen, H. (2006). What lies beneath: Parenting style and implicit self-esteem. *Journal of Experimental Social Psychology*, 42, 1-17.
- Felton, L., & Jowett, S. (2013). "What do coaches do" and "how do they relate": Their effects on athletes' psychological needs and functioning. *Scandinavian Journal of Medicine & Science in Sports*, 23(2), 130-139.
- Feltz, D. L., Hepler, T. J., Roman, N., & Paiement, C. (2009). Coaching efficacy and volunteer youth sport coaches. *Sport Psychologist*, 23(1), 24-41.
- Fenton, S., Duda, J., Quested, E., & Barrett, T. (2014). Coach autonomy support predicts autonomous motivation and daily moderate-to-vigorous physical activity and sedentary time in youth sport participants. *Psychology of Sport and Exercise*, 15(5), 453-463.
- Gillet, N., Berjot, S., & Gobance, L. (2009). A motivational model of performance in the sport domain. *European Journal of Sport Science*, 9(3), 151-158.
- Gillet, N., Vallerand, R. J., Amoura, S., & Baldes, B. (2010). Influence of coaches' autonomy support on athletes' motivation and sport performance: A test of the hierarchical

- model of intrinsic and extrinsic motivation. *Psychology of Sport and Exercise*, 11(2), 155-161.
- Highland Rugby Website. (2012). *Brief History of Highland Rugby*. Retrieved from <http://highlandrugby.net/index.php/breif-history>
- Hilgers, L. (2006). *Re: Youth sports drawing more than ever* [CNN U.S. online website]. Retrieved from http://articles.cnn.com/2006-07-03/us/rise.kids.sports_1_youth-sports-tennis-lessons-kids?_s=PM:US.
- Isoard-Gauthier, S., Guillet-Descas, E., & Lemyre, P. N. (2012). A prospective study of the influence of perceived coaching style on burnout propensity in high level young athletes: Using a self-determination theory perspective. *Sport Psychologist*, 26(2), 282-298.
- Keegan, R. J., Harwood, C. G., Spray, C. M., & Lavalley, D. (2014). A qualitative investigation of the motivational climate in elite sport. *Psychology of Sport and Exercise*, 15(1), 97-107.
- Lamborn, S. M., Mounts, N. S., Steinberg, L., & Dornbusch, S. M. (1991). Patterns of competence and adjustment among adolescents from authoritative, authoritarian, indulgent, and neglectful families. *Child Development*, 62(5), 1049-1065.
- Lopez-Walle, J., Balaguer, I., Castillo, I., & Tristan, J. (2012). Autonomy support, basic psychological needs and well-being in Mexican athletes. *Spanish Journal of Psychology*, 15(3), 1283-1292.
- Martens, P., & Webber, S. (2002). Psychometric properties of the sport motivation scale: An evaluation with college varsity athletes from the U.S. *Journal of Sport & Exercise Psychology*, 24, 254-257.

- Matosic, D., & Cox, A. E. (2014). Athletes' motivation regulations and need satisfaction across combinations of perceived coaching behaviors. *Journal of Applied Sport Psychology*, 26(3), 302-317.
- Mageau, G. A., & Vallerand, R. J. (2003). The coach-athlete relationship: A motivational model. *Journal of Sports Sciences*, 21(11), 883-904.
- Mouratidis, A., Lens, W., & Vansteenkiste, M. (2010). How you provide corrective feedback makes a difference: The motivating role of communicating in an autonomy-supporting way. *Journal of Sport & Exercise Psychology*, 32(5), 619-637.
- Myers, N. D., Vargas-Tonsing, T. M., & Feltz, D. L. (2005). Coaching efficacy in intercollegiate coaches: Sources, coaching behavior, and team variables. *Psychology of Sport and Exercise*, 6(1), 129-143.
- Ng, J., Lonsdale, C., & Hodge, K. (2010). The basic needs satisfaction in sport scale (BNSSS): Instrument development and initial validity evidence, *Psychology of Sport and Exercise*, 12(3), 257-264.
- Pelletier, L., Fortier, M., Vallerand, R., Briere, N., Tuson, K., Blais M. (1995). The sport motivation scale (SMS-28). *Journal of Sport & Exercise Psychology*, 17, 35-53.
- Ramis, Y., Torregrosa, M., Viladrich, C., & Cruz, J. (2013). Coaches, peers and parents' autonomy support and its predictive capacity on young athletes' self-determined motivation. *Anales De Psicologia*, 29(1), 243-248.
- Readdy, T., Raabe, J., & Harding, J. S. (2014). Student-athletes' perceptions of an extrinsic reward program: A mixed-methods exploration of self-determination theory in the context of college football. *Journal of Applied Sport Psychology*, 26(2), 157-171.

- Reeve, J., Nix, G., & Hamm, D. (2003). Testing models of the experience of self-determination in intrinsic motivation and the conundrum of choice. *Journal of Educational Psychology*, 95, 375-392.
- Reinboth, M., & Duda, J. (2006). Perceived motivational climate, need satisfaction and indices of well-being in team sports: a longitudinal perspective. *Psychology of Sport and Exercise*, 7, 269-286.
- Robinson, C., Mandleco, B., Olsen, S., & Hart, C. (2001). The parenting styles and dimensions questionnaire (PSQD). In B. F. Perlmutter, J. Touliatos, & G. W. Holden (Eds.), *Handbook of family measurement techniques: Vol. 3. Instruments & index* (pp. 319 – 321). Thousand Oaks, CA: Sage.
- Ryan, R. M., & Deci, E. L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55, 68-78.
- Ryan, R. M., & Deci, E. L. (2002). Overview of self-determination theory: An organismic-dialectical perspective. In E. L. Deci, & R. M. Ryan (Eds.), *Handbook of self-determination research* (pp. 3-33). Rochester, NY: The University of Rochester Press.
- Wu, A. M., Lai, M. H., & Chan, I. T. (2014). Coaching behaviors, satisfaction of needs, and intrinsic motivation among Chinese university athletes. *Journal of Applied Sport Psychology*, 26(3), 334-348.

Appendix B

Instruments

Basic Needs Satisfaction in Sports Scale (BNSSS)**Competence**

Comp1 I can overcome challenges in my sport.

Comp2 I am skilled at my sport.

Comp3 I feel I am good at my sport.

Comp4 I get opportunities to feel that I am good at my sport.

Comp5 I have the ability to perform well in my sport.

Choice

Choice1 In my sport, I get opportunities to make choices.

Choice2 In my sport, I have a say in how things are done.

Choice3 In my sport, I can take part in the decision-making process.

Choice4 In my sport, I get opportunities to make decisions.

Internal perceived locus of causality (IPLOC)

IPLOC1 In my sport, I feel I am pursuing goals that are my own.

IPLOC2 In my sport, I really have a sense of wanting to be there.

IPLOC3 In my sport, I feel I am doing what I want to be doing.

Relatedness

Relate1 In my sport, I feel close to other people.

Relate2 I show concern for others in my sport.

Relate3 There are people in my sport who care about me.

Relate4 In my sport, there are people who I can trust.

Relate5 I have close relationships with people in my sport.

Adapted Parental Authority Questionnaire (PAQ)

Instructions: For each of the following statements, circle the number of the 5-point scale (1 = strongly disagree, 5 = strongly agree) that best describes how that statement applies to you and your coach. Try to read and think about each statement as it applies to you and your coach during your years of on the team. There are no right or wrong answers, so don't spend a lot of time on any one item. We are looking for your overall impression regarding each statement. Be sure not to omit any items.

1 = Strongly disagree

2 = Disagree

3 = Neither agree nor disagree

4 = Agree

5 = Strongly Agree

1. While I was part of the team my coach felt that on a well-run team the athletes should have their way on the team as often as the coach does.	1	2	3	4	5
2. Even if his or her athletes didn't agree with him or her, my coach felt that it was for our own good if we were forced to conform to what he or she thought was right.	1	2	3	4	5
3. Whenever my coach told me to do something as I was part of the team, he or she expected me to do it immediately without asking any questions.	1	2	3	4	5
4. As I was part of the team, once team policy had been established, my coach discussed the reasoning behind the policy with the athletes on the team.	1	2	3	4	5
5. My coach has always encouraged verbal give-and-take whenever I have felt that team rules and restrictions were unreasonable.	1	2	3	4	5
6. My coach has always felt that what his or her athletes need is to be free to make up their own minds and to do what they want to do, even if this does not agree with what their coaches might want.	1	2	3	4	5
7. As I was part of the team my coach did not allow me to question any decision he or she had made.	1	2	3	4	5
8. As I was part of the team my coach directed the activities and decisions of the team members through reasoning and discipline.	1	2	3	4	5
9. My coach has always felt that more force should be used by coaches in order to get their athletes to behave the way they are supposed to.	1	2	3	4	5
10. As I was part of the team my coach did not feel that I needed to obey rules and regulations of behavior simply because someone in authority had established them.	1	2	3	4	5

11. As I was part of the team I knew what my coach expected of me, but I also felt free to discuss those expectations with my coach when I felt that they were unreasonable.	1	2	3	4	5
12. My coach felt that wise coaches should teach their athletes early just who is boss on the team.	1	2	3	4	5
13. As I was on the team, my coach seldom gave me expectations and guidelines for my behavior.	1	2	3	4	5
14. Most of the time as I was part of the team my coach did what the athletes on the team wanted when making team decisions.	1	2	3	4	5
15. As the team members on my team were playing together, my coach consistently gave us direction and guidance in rational and objective ways.	1	2	3	4	5
16. As I was part of the team my coach would get very upset if I tried to disagree with him or her.	1	2	3	4	5
17. My coach feels that most problems on a team would be solved if coaches would not restrict their athletes' activities, decisions, and desires as they are playing on the team.	1	2	3	4	5
18. As I was part of the team my coach let me know what behavior he or she expected of me, and if I didn't meet those expectations, he or she punished me.	1	2	3	4	5
19. As I was part of the team my coach allowed me to decide most things for myself without a lot of direction from him or her.	1	2	3	4	5
20. As I was part of the team my coach took the athletes' opinions into consideration when making team decisions, but he or she would not decide for something simply because the athletes wanted it.	1	2	3	4	5
21. My coach did not view himself or herself as responsible for directing and guiding my behavior as I was part of the team.	1	2	3	4	5
22. My coach had clear standards of behavior for the athletes on our team as I was, but he or she was willing to adjust those standards to the needs of each of the individual athletes on the team.	1	2	3	4	5
23. My coach gave me direction for my behavior and activities as I was part of the team and he or she expected me to follow his or her direction, but he or she was always willing to listen to my concerns and to discuss that direction with me.	1	2	3	4	5

24. As I was playing on the team my coach allowed me to form my own point of view on team matters and he or she generally allowed me to decide for myself what I was going to do.	1	2	3	4	5
25. My coach has always felt that most problems on a team would be solved if we could get coaches to strictly and forcibly deal with their athletes when they don't do what they are supposed to as they are a part of the team.	1	2	3	4	5
26. As I was part of the team my coach often told me exactly what he or she wanted me to do and how he or she expected me to do it.	1	2	3	4	5
27. As I was growing up my coach gave me clear direction for my sports related behaviors and activities, but he or she was also understanding when I disagreed with him or her.	1	2	3	4	5
28. As I was part of the team my coach did not direct the behaviors, activities, and desires of the athletes on the team.	1	2	3	4	5
29. As I was playing on the team I knew what my coach expected of me and he or she insisted that I conform to those expectations simply out of respect for his or her authority.	1	2	3	4	5
30. As I was on the team, if my coach made a decision on the team that hurt me, he or she was willing to discuss that decision with me and to admit it if he or she had made a mistake.	1	2	3	4	5