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Understanding Leadership Emergence

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Abstract

Self-determination theory states that people need autonomy, competence, and relatedness in an area to facilitate intrinsic motivation and growth. Parents play a major role in the development of these three psychological needs. The current study examines whether there is a relationship between parental behavior and whether this relationship is mediated by autonomy, competence and relatedness in their sport. Undergraduate participants (n=189) were recruited from varsity athletic teams and asked to complete surveys about perceived parental control and the three psychological needs. Results showed the parental behavior can predict satisfaction of psychological needs, but only one partial mediation was found, between perceived parental autonomy support and leadership role occupancy through competence. A subset (n=8) participated in semi-structured interviews delved deeper into parental influence. Common responses showed that athletes felt that they benefitted from autonomy support, were hurt by psychological control, and that satisfaction of the needs of relatedness and competence contributed to deciding to play and keep playing their sport in college. The results provide examples of positive parental behaviors, and show that these behaviors can predict the satisfaction of the basic psychological needs needed for intrinsic motivation.

Keywords: Self-determination theory, leadership role occupancy, autonomy support, psychological control

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The present study investigates the extent that parental behavior is associated with their child's motivation, and whether this motivation can predict whether they become a leader. It also seeks to understand what parental behavior is perceived as positive and helpful, and what parental behavior is perceived as negative and hindering. To this point, no link has been established between parental autonomy support and leadership role occupancy. While the literature suggests a link between genetics and leadership role occupancy, this predictor cannot be influenced, unlike parental behavior which can be adjusted. The study also hopes to build on the body of qualitative research that has been conducted on the specific parental behaviors that athletes view as supportive or detrimental. Leadership experiences such as captaincy in college sports could not only benefit an athlete's on-field performance, but could help them develop a more mature perspective of leadership, and learn and develop leadership skills.

Literature Review

Self-Determination Theory

Motivation is a force that energizes people to act, directs this action toward goals, and sustains effort toward reaching these goals. (Steers & Porter, 1999). Self-Determination theory is the framework of motivation that seeks to explain the three universal, basic psychological needs required for humans to experience initiative and growth. It examines the relationship between the three needs, autonomy, competence, and relatedness, and the two types of motivation, intrinsic and extrinsic (Deci and Ryan, 1985). Actions that are intrinsically motivated are done for inherent enjoyment and satisfaction. People who are intrinsically motivated do not need extraneous incentives or reasons to act. Self-determination theory posits that healthy humans are

naturally curious, active, and novelty seeking. This natural motivation leads to the development of cognitive, social, and physical skills. If the natural healthy state of a human is one of intrinsic motivation, and that motivation manifests itself towards effort in the development of different types of skills, the next thing is to explain what is required to facilitate intrinsic motivation.

Cognitive Evaluation Theory (CET) is a subtheory of self-determination theory that seeks to explain the required conditions for facilitating intrinsic motivation (Ryan and Deci, 2000). CET states that high levels of competence, the need to master one's environment as well as feel in control of outcomes, will enhance intrinsic motivation. Competence, one of the three basic psychological needs, can be increased through positive feedback or satisfactory results. CET states that feelings of competence only enhance intrinsic motivation if the person also feels a sense of autonomy, another basic psychological need. Autonomy is the need to be in control of one's life, and to act in a way that is in line with one's sense of self. It is not enough for someone to believe they are good at something, they must also feel like they are in control of their choices and actions.

In research, an autonomy-supportive environment is contrasted by a psychologically controlling one. In a fully autonomy supportive environment, authority figures such as parents, teachers, and coaches provide their children, students, and athletes with support to achieve their self-determined goals (Reeve, 1998). Their primary goal is to them agency and allow them to develop skills in an autonomous way. In a psychologically controlling environment, authority figures set goals for their subjects and implement rewards and punishments to direct action towards these goals. In a psychologically controlling environment, children, students, and athletes lack control over their environment, and are not acting in a way that aligns with their sense of self, meaning the needs of competence and autonomy are not being fulfilled.

While intrinsic motivation leads to positive outcomes, many major activities in life are not intrinsically motivated (Ryan and Deci, 2000). As one gets older, societal roles and expectations limit one's freedom. School, one of the earliest and most pervasive obligations has more requirements and has greater expectations every year. One study of Canadian students between the ages of 9 and 17 found that between ages 9 and 15, intrinsic motivation decreased. (Gillet et al., 2012) They also found that the decline in intrinsic motivation stabilized and even increased between ages 15 and 17, presumably because of fewer mandatory classes and more freedom to decide what to study. Work is another domain that can inhibit intrinsic motivation. A Pew Research Center survey of over 5,000 Americans (2016) found that 47% of respondents view their job as something they just do for a living. This percentage of the sample is not intrinsically motivated to work. 51% of respondents reported that their work gives them a sense of identity. People in this portion could be doing their job for pure enjoyment and satisfaction but identifying with one's job does not necessarily imply there is intrinsic motivation.

School, sports, and work all have structure and authority figures who can influence motivation. Extrinsic motivation is what makes people act when they are not motivated by the pure enjoyment or satisfaction of doing an activity, but rather a reason attached to an external outcome. Activities that are extrinsically, as compared to intrinsically, motivated differ because an individual's autonomy is potentially reduced. People are motivated by reward or punishment, rather than innate enjoyment. Self-determination theory explains how extrinsic motivation can be split into different parts, and that the level of autonomy associated with each part differs. It also notes that just because an action is extrinsically motivated does not necessarily mean it is not self-determined. Internalization is the process by which an individual takes an external value and

aligns it with their sense of self. Internalization is thought of as continuous, with more internalized values being further integrated with one's sense of self.

The least internalized form of extrinsic motivation is external regulation. Actions that are externally regulated are done because of the prospect of reward or punishment. People who are externally regulated tend to experience a lack of control over their actions, for example an athlete participating in a sport because they want a trophy.

Next on the decreasing scale of internalization is introjected regulation. Actions that are regulated by introjection are done for pride or to avoid guilt or anxiety. Satisfying the ego is the main driver behind introjected regulation. A person who practices their sport because they would feel guilty about not being ready for a game is motivated by introjected regulation. Introjected regulation is more internal than external regulation, because an individual acts based on his or her own feelings of pride or guilt, not because of the influence of others.

The next form of extrinsic motivation is identification. This occurs when an individual sees the benefit of a behavior or activity and accepts it as something they value. Someone who practices their sport because they know it will make them better is motivated by identification.

The final, most autonomous, form of external motivation is integrated regulation. This is when activities or values are fully assimilated into one's sense of self. An athlete who plays tennis because they see themselves as a tennis player has aligned the activity with their identity.

Actions that are internally regulated are fully autonomous, similar to intrinsically motivated behavior, but differ because they are not done for pure enjoyment. They are still related to an outcome. Someone who plays tennis just because they love to play tennis is intrinsically motivated. Greater internalization is associated with better outcomes because while people can succeed whether they are trying to avoid punishment or actually see the value in a behavior, less

internalized actions can also provide feelings of guilt, anxiety, or resentment. People are more likely to have positive outcomes as well as positive feelings toward actions for which they have a greater degree of autonomy (Deci & Ryan, 2000). Self-determination theory believes that part of facilitating internalization is fostering a sense of relatedness, the third basic psychological need. Relatedness is the need to have close relationships with others. People who feel a sense of belonging and connectedness to others are more likely to assimilate behaviors and values into their sense of self. Perceived competence is also important in increasing internalization. People who feel they are good at something are more likely to find goals related to the activity more attainable and as a greater part of themselves.

Amotivation is the least self-determined level of motivation. Amotivation leads to either a lack of action, or action that is not driven at all. People who are amotivated put no value into an activity and are not even affected by rewards or punishment.

Self-Determination theory attempts to explain the different types of motivation and their associated outcomes. It identifies autonomy, competence, and relatedness as three basic psychological needs that humans need to feel that an action is a part of themselves, and therefore more internalized. Environments in which the three needs are satisfied can help maintain intrinsic motivation and lead actions to be more self-determined. Intrinsic motivation is our natural state and leads to social and cognitive development, as well as is the core to enjoyment in life.

Parental Influences on Children's Motivation

Parents can affect their children in almost every aspect of their lives. One review of the literature regarding parental influence on their children's academic outcomes found that greater parental involvement was positively correlated with intrinsic and extrinsic motivation, perceived

competence, and perceived control. (Gonzalez-DeHass et al., 2005). The authors found that when the parenting style was to offer punishment or rewards for grades or to monitor homework, students were more likely to be extrinsically motivated. On the other hand, they found that the children of parents who offered praise or encouragement were more likely to be intrinsically motivated. To explain these relationships, the authors proposed an increase in a student's perception of their control (autonomy), competence, or security and connectedness (relatedness).

Another study looked at the relationship between perceived parental control and restructuring - the ability to change one's unsatisfactory circumstances into satisfactory ones, and on leisure motivation - both autonomous motivation and amotivation in regard to one's free time. (Xie et al., 2016) In the sample of American eighth graders, the authors found that increased perceived parental control was positively associated with amotivation, and through a negative relationship with restructuring, was negatively associated with autonomous motivation. This suggests that overly controlling parents have a negative impact on their children, and that children who perceive their parents as controlling are more likely to be amotivated and worse at improving their unsatisfactory circumstances.

Another study of 122 gifted students found that high measures of parent support scales, including autonomy, competence, relatedness, and academic support were positively correlated with both intrinsic and extrinsic motivation (Al-Dhamit and Kreishan, 2016). The finding that parents who encourage autonomy, competence, and relatedness are more likely to have children who are intrinsically motivated is consistent with motivation literature. That the same relationships also exist for extrinsic motivation is less consistent with the literature, although this could be explained by the nature of the sample. In the Arabic context, obedience is a "central educational value" (Dwairy, 2004). On the other hand, disobedience often results in punishment.

This cultural difference might explain why high parental support and involvement were highly correlated with extrinsic motivation in this sample.

Parental Influences on Children's Sport Experience

The way a parent treats their child's experience with sport can result in varying levels of motivation. Especially when their children are younger, parents typically pay league fees, buy equipment, drive to and from games, and give their children feedback. They can exert considerable influence over how their child experiences their sport. Children whose parents force them to play a sport and threaten punishment if they don't are likely to feel externally regulated. This study hypothesizes that children whose parents allow them the freedom to choose their sport and how and when to practice are likely to experience integrated regulation or intrinsic motivation.

One model of parental involvement in sports identifies three situations in which parents influence their child athletes. The three components of parent socialization that are identified are parents as role models, parents as interpreters of experience, and parents as providers of experience (Fredericks and Eccles, 2004). The first component parents as role models, states that active parents are more likely to have active children. A survey of youth soccer players found that perception of parents as positive exercise role models was associated with higher levels of competence, enjoyment, and intrinsic motivation (Babkes and Weiss, 1999). The second component, parents as interpreters of experience, involves both positive and negative impact. High amounts of perceived parental pressure is associated with stress, anxiety, and burnout. Importantly, a study found that parents and their children did not agree on the quality of parental involvement (Kanters et al., 2008). They found that parents tended to perceive their behavior as having lower amounts of pressure and higher amounts of support compared to how their children

perceived them. This finding suggests that while parents could believe that they are being appropriately supportive, their actions can be seen as overinvolved, and lead to negative outcomes like stress, anxiety, and burnout. A related finding from a survey of youth soccer players and their parents found that perceived parental pressure or support was more important than actual parental behavior.

The effect of conditional versus unconditional support has also been examined. A study of coaches' perceptions of parent-child interactions found that coaches perceive unconditional parental support as the behavior, which was the most beneficial to their children (Gould, 2006). Another study looked at perceptions of parental conditional support in four domains, including sport, and found that conditional support was related to higher levels of introjected regulation (Assor et al., 2004). An explanation of this finding was that when children believe that parental praise is conditional on their performance, they are more likely to feel stress, anxiety, and pressure which, rather than enjoyment or satisfaction, is what motivates them in their sport.

The third component, parents as providers of experience has been examined many times. A study of elite Canadian tennis players found that athletes preferred when parents refrained from giving them technical advice, but instead preferred them to respect tennis etiquette, provide supportive comments, and complementing effort (Knight et al., 2010). One study found that overinvolvement, in the form of arguing with referees, complaining about their children's playing time, complaining about coaching, and doing too much for their child to the point that their autonomy was hindered were all negatively impacting their children (Ross et al., 2015). The consensus of the literature is that parental involvement is a positive thing, but that when parents get too involved it can lead to decreased enjoyment from the athlete's point of view, as well as resentment towards the parent.

One study conducted interviews nine professional tennis players, their parents, and coaches (Lauer et al., 2010). The study investigated parental behaviors during their players' early, middle, and elite years and whether they were helpful or hindering to their development. Positive behaviors included providing support, motivating, and helping keep perspective. Support came in the form of general, logistic, financial, and emotional support. Motivation was a result of both being pushed and not being pushed. Participants also responded that their parents emphasized the importance of a balanced life, and instilled that tennis was not all-encompassing. Negative behaviors included too much pressure and over pushing, being negative and critical, overemphasis on tennis, tying approval to winning, preventing the child from being independent, and conflict with coaches.

Leadership

Being a leader is an important responsibility. Leaders can influence everyone that they contact. Leaders have access to resources, can determine the goals and actions of their organizations, and possess titles that are admired by others. Leadership roles at a young age can prepare people for leadership roles later in life. Skills that people can develop include resource management, conflict resolution, developing plans to reach goals, and managing people. One study which analyzed the relationship between NHL captaincy and individual performance found that NHL captains performed better in seasons in which they were captains compared to seasons when they were not (Day et al., 2004). Another study of Division III varsity athletes found that team captains significantly learned and developed leadership skills, while non-leaders who merely participated in sports did not improve these skills (Grandzol et al., 2010). The literature suggests that early experience in leadership roles can help develop a person's leadership identity from being self-focused to being focused on the well-being of the group (Komives et al., 2005).

There is a large body of literature on the determinants of leadership role occupancy which demonstrates the importance that society places on leadership. Many studies have looked at the relationship between genetics, personality, and leadership role occupancy. A twin study found in their sample that 30% of the variability in leadership role occupancy was explained by genetics. The authors theorized that this relationship was mediated by personality traits which are inherited through genes and associated with leadership role occupancy (Arvey, 2006). Another expanded on the role genetics play in leadership role occupancy, by investigating the potential moderating role of social environment (socioeconomic status, perceived parental support, perceived conflict with parents). The study found that for genetics played a smaller role in determining leadership role occupancy for twins in enriched social environments compared to poorer social environments (Zhang et. al, 2009). Another study established a relationship between emotional intelligence and two types of motivation to lead: affective-normative, or the natural inclination to lead, and social-normative, or the inclination to lead when one feels that it is expected of them. These types of motivation to lead were then linked to leader emergence (Hong et al., 2011).

Hypotheses

H1a: Perceived Parental Autonomy Support will positively predict Autonomy in Sport

H1b: Perceived Parental Autonomy Support will positively predict Competence in Sport

H1c: Perceived Parental Autonomy Support will positively predict Relatedness in Sport

Athletes who perceive their parents as having been autonomy supportive should feel a greater sense of control in decision making (autonomy), feel greater control of outcomes and have a greater sense of mastery (competence), and more positive relationships with their parents and greater social development (relatedness).

H2a: Perceived Parental Psychological Control negatively predicts Autonomy in Sport

H2b: Perceived Parental Psychological Control negatively predicts Competence in Sport

H2c: Perceived Parental Psychological Control negatively predicts Relatedness in Sport

Athletes who perceived their parents as having been psychologically controlling are more likely to have had less freedom in decision making (autonomy), feel less in control of outcomes and have a lesser sense of mastery (competence), and less positive relationships with their parents and less social development (relatedness).

H3a: Autonomy in Sport positively predicts Leadership Role Occupancy

H3b: Competence in Sport positively predicts Leadership Role Occupancy

H3c: Relatedness in Sport positively predicts Leadership Role Occupancy

People who have their three psychological needs satisfied are likely to be intrinsically motivated or have internalized forms of extrinsic motivation. People who experience the benefits associated with these types of motivation: the development of cognitive, social, and physical skills, are more likely to occupy formal leadership roles.

H4a: Perceived Parental Autonomy Support positively predicts Leadership Role Occupancy through a positive relationship with the mediator of Autonomy

H4b: Perceived Parental Autonomy Support positively predicts Leadership Role Occupancy through a positive relationship with the mediator of Competence

H4c: Perceived Parental Autonomy Support positively predicts Leadership Role Occupancy through a positive relationship with the mediator of Relatedness

Athletes who perceive greater parental autonomy support are more likely to have greater satisfaction of the three psychological needs, which leads to the development of skills that allow them to become leaders.

H4a: Perceived Parental Psychological Control negatively predicts Leadership Role Occupancy through a negative relationship with the mediator of Autonomy

H4b: Perceived Parental Psychological Control negatively predicts Leadership Role Occupancy through a negative relationship with the mediator Competence

H4c: Perceived Parental Psychological Control negatively predicts Leadership Role Occupancy through a negative relationship with the mediator Relatedness.

Athletes who perceive greater parental psychological control are less likely to have their three psychological needs satisfied, which inhibits the development of the skills that allow them to become leaders.

Research Questions:

Research Question 1: What parental behaviors do Division III college athletes consider to have a positive influence?

Research Question 2: What parental behaviors do Division III college athletes consider negative?

Research Question 3: What do Division III college athletes consider to be reasons to play sports in college?

Research Question 4: What leadership experiences do Division III college athletes have and do they believe that sport leadership experiences will benefit them later in life?

Study 1

Method

Participants

189 participants were recruited from Division III college varsity sport teams in South California. Due to an oversight in survey construction gender and ethnicity data were not collected. Participants were recruited through their varsity sports coaches, who distributed the survey through email. Coaches were informed about the study and instructed to stress that participation was optional.

17 out of 34 varsity coaches who were contacted agreed to distribute the survey to their teams. 516 athletes from 5 colleges in Southern California received the opportunity to complete the study.

Procedure

Data collection occurred online. Participants first provided informed consent. They then answered demographic questions, including what year they were in school and how many years they had been playing their sport in college. They were asked to rate the following items on a 7 point Likert scale (ranging from 1 – strongly disagree to 7 – strongly agree): “I engage in an informal leadership role on my athletic team (e.g. encouraging, coaching, mentoring teammates, or mediating disputes on the team)” and “In general, I enjoy being a leader.” They were also asked if they held a formal leadership role on the team, such as Captain or Co-Captain. (see Table 1). They were asked to specify the parent or parental figure that had the greatest impact on their sport experience. The participants were then asked to complete two surveys, the Perceived Parental Autonomy Support Scale (P-PASS) and the Basic Psychological Needs Scale (BPNS). Upon the completion of the surveys, participants were debriefed about the purpose of the study. They were given the choice to provide their e-mail address to be entered into a raffle. They were then offered the chance to participate in the next part of the study, a semi-structured interview.

Materials

The **Perceived Parental Autonomy Support Scale (P-PASS)** (Mageau et al., 2015), shown in Appendix A, is a 24-item survey that measures Perceived Parental Autonomy-Support (will be referred to as Autonomy-Support) and Perceived Parental Psychological Control (will be referred to as Psychological Control). Each measure consisted of 12 items. Participants were asked to choose their parent or parental figure who was most involved in their sports upbringing and respond to the items based on the behavior of that person. They were also instructed to answer the questions based on what they consider their primary sport. Participants responded to the items on a 7-point Likert scale ranging from 1 (Strongly Disagree) to 7 (Strongly Agree). The

questionnaire yielded measures of Autonomy-Support ($M = 5.47$, $SD = .90$) and Psychological Control ($M = 2.78$, $SD = 1.14$). Internal reliability was calculated and found strong internally consistency, Autonomy-Support Cronbach's $\alpha = .905$, Psychological Control Cronbach's $\alpha = .894$.

The P-PASS was adapted for the present study. Rather than being asked to respond to each item twice, once for each parent, participants were asked to answer only based on the parental figure who had the greatest impact on them. They were also asked to answer the items based on their experience playing their primary sport growing up. Example items for the measure of Autonomy-Support include "My parental figure encouraged me to be myself" and "My parental figure made sure that I understood why they forbid certain things." Example items for the measure of Psychological Control include "In order for my parental figure to be proud of me, I had to be the best." and "My parental figure used guilt to control me." The measures of Autonomy-Support and Psychological Control are exact opposites of the same construct, and could theoretically combined to create one measure. The literature tends to treat them separately, so the present study does as well. They were strongly negatively correlated as expected. (see Table 1).

The **Basic Psychological Needs Scales** (BPNS) (Deci & Ryan, 2000; Gagné, 2003), shown in Appendix B, is a 21-item questionnaire that measures autonomy (7 items), competence (6 items), and relatedness (8 items). The items were adapted to be more applicable to the sport context, for example "In my life I do not get much of a chance to show how capable I am" became "In my sport I do not get much of a chance to show how capable I am." Participants responded to the items of a 7-point Likert scale ranging from 1 (Strongly Disagree) to 7 (Strongly Agree). Participants were asked to respond to the items through the lens of their

experience in their primary sport. The scale yielded scores for autonomy ($M = 4.6$, $SD = .64$), competence ($M = 5.3$, $SD = .81$), and relatedness ($M = 5.89$, $SD = .72$). Internal reliability was calculated and found good internally consistency for the measure of relatedness ($\alpha = .82$). Poor internal was found for the measures of autonomy ($\alpha = .42$) and competence ($\alpha = .67$).

Example items for autonomy included “I generally feel free to express my ideas and opinions” and “There is not much opportunity for me to decide for myself how to do things in my sport.” Items for competence included “In my sport I do not get much of a chance to show how capable I am” and “I often do not feel very capable.” Items for relatedness included “People on my team care about me” and “I consider the people I regularly interact with to be my friends.” Due to a technical error administering the survey, 13 of the 189 respondents were not shown the BPNS. The appropriate items were reverse coded.

Results

Analyses were performed to examine the relationship between the predictors, Perceived Parental Autonomy Support (AS), and Perceived Parental Psychological Control (PC) and the outcome, Formal Leadership Role. Steps were included which examined the role that the moderators, Autonomy, Competence, and Relatedness, played. The analyses followed standard procedure as explained by Baron & Kenny (1986).

Before the regressions were run, the data were checked to make sure they met the appropriate assumptions. Calculation of Mahalanobis distances identified two participants who were multivariate outliers who had extreme values in multiple variables. These data were excluded because the outlying data could have adversely affected the regressions. The other assumptions were all met.

The four sets of hypotheses made up the mediation model that the present study had theorized. The steps of the mediation will be examined in reference to the hypotheses.

Hypothesis 1: First, the independent variables were regressed onto the potential mediators. Perceived Parental Autonomy Support significantly predicted two of the basic psychological needs, competence ($F(1,172) = 5.72; p < .018$) and relatedness ($F(1,172) = 7.50; p < .007$). The third basic psychological need, autonomy, was not significantly predicted by AS ($F(1,172) = 3.298; p < .071$). Results were consistent with hypotheses 1b and 1c, which stated that AS would predict competence and relatedness. Contrary to hypothesis 1a, AS did not significantly predict autonomy.

Hypothesis 2: Perceived Parental Psychological Control significantly predicted two of the basic psychological needs, autonomy ($F(1,172) = 6.5; p < .012$) and relatedness ($F(1,172) = 12.58; p < .001$). The third basic psychological need, competence, was did not significantly predicted by PC ($F(1,172) = -1.742; p < .083$). Results were consistent with hypotheses 2a and 2c. Contrary to hypothesis 2b, PC did not significant predict competence.

Hypothesis 3: In the second step of the mediation analyses, binary logistic regressions of Formal Leadership Role Occupancy (FLRO) on the three potential mediators, autonomy, competence, and relatedness, we conducted. The results suggest that competence has a significant relationship with FLRO ($p < .002$). The relationships between autonomy and relatedness and FLRO were not significant ($p < .051$), and the relationship between autonomy and FLRO was insignificant ($p < .165$). Results were consistent with hypothesis 3b, that competence positively predicts Leadership Role Occupancy. Evidence was not found for hypotheses 3a and 3c, that autonomy and relatedness would positively predict FLRO.

Hypothesis 4: After the first two sets of regressions, only competence as a mediator of the relationship between AS and FLRO met the required levels of significance. The other five potential mediated relationships did not satisfy the steps required to run the final regressions to establish mediation. These regressions were still conducted for the purpose of experience.

In the final step of the mediation analyses, binary logistic regressions of FLRO on the predictor variables, AS and PC were conducted. A significant relationship between AS and FLRO was found ($p < .001$). An insignificant relationship between PC and FLRO was found ($p < .059$). Then, each potential mediator was individually added to these regressions. The results of the final regression of FLRO on AS and competence suggests partial mediation. The odds ratio of AS support decreased from 2.99 to 2.603 when competence was added to the regression. The other regressions were run but since the first two conditions were not met, mediation cannot be assessed.

Further analyses were conducted to investigate whether the relationships between the three basic psychological needs, autonomy, competence, and relatedness, and formal leadership role occupancy were moderated by the number of years the participant has played their varsity sport. Three sets of logistic regressions were run. First, formal leadership role occupancy was regressed on the independent variable, basic psychological need, and the potential moderator, years playing varsity sport. Next, the interaction term between the basic psychological need and the years playing the varsity sport was added to the regression. There was no evidence of moderation in any of the three sets of regressions (all interaction terms had $p > .22$).

Study 2

Method

Participants

A sample of 8 participants (2 male, 6 female; 3 formal leaders) was recruited from the 189 original participants. All participants who completed the survey had the option to participate in the second part of the study. They were informed that the interviews would last between 15-20 minutes and that they would be financially compensated \$10 for their participation.

Procedure

Participants who volunteered for the interview portion of the study were contacted by the researcher to schedule a time and place to conduct the interview. Audio of the interviews was recorded on the researcher's laptop. The participant was informed about how their anonymity was going to be maintained, and provided verbal informed consent. The interviews were based on four questions that served to guide conversation. Follow-up questions were asked and participants were asked to elaborate on responses. After the interview, the participant was given monetary compensation for their participation and told that if they wanted any of the responses to not be used, to contact the researcher.

The **semi-structured interview** consisted of four questions, partly based on semi-structured interviews of elite tennis players in a previous study (Lauer et al., 2010). The participant was informed that the interviews would be recorded, but that after the conclusion of the interviews the recording would be immediately transcribed, scrubbed for identifying information, and deleted in order to protect anonymity. They were told that they did not have to answer any questions they did not feel comfortable with, and that if they decided retrospectively that they did not want any or all responses to be used that they could contact the researcher who would delete them.

Two questions were designed to discover the parental behaviors that the participants found helpful or hindering in their sport experience. One question tried to find what specifically

motivated the participant to play sports in college, and what keeps them motivated. The final question asked about leadership experiences and if they believe these experiences will benefit them in their post-college life. The researcher asked follow-up questions and asked participants to elaborate on certain responses, with the goal of finding specific influential parental behaviors, motivators, and leadership experiences.

After all the responses were collected, the researcher created a coding scheme based on previous studies that also investigated parental behavior (Lauer et al., 2010). The coding scheme differentiated different positive parental behaviors (financial, logistic, emotional) from negative parental behaviors (Over pushy, controlling, criticizing). It also tried to discover why the participants wanted to play their sport in college, as well as to explore why they continue to play. It also tried to categorize the different skills that participants obtained or enhanced through leadership experiences, and see if they feel like these skills have been developed or will be helpful for them later in life.

Results

Following the collection of interview data, a coding scheme was created to evaluate the responses. The coding scheme was based on studies that used semi-structured interviews to gather qualitative data (Lauer et al., 2010, Ross et al., 2015). Responses from the semi-structured interviews were analyzed and common responses were identified as themes. These meaning units were then grouped together by themes. When possible, the themes reflected psychological constructs that the present study seeks to examine. These themes were then grouped into broader categories.

The categories identified were positive parental behavior, negative parental behavior, reasons to play or keep playing in college, responses related to quitting, and leadership

responsibilities and perspectives. Within the category of positive parental behavior, four themes were identified, logistic support, responses to performance, autonomy support, and participant encouragement. The category of negative parental behavior contained a theme of psychological control, with three unrelated common meaning units making up the rest of the category. The category of reasons to play or keep playing sports in college included the following themes: internal regulation, external regulation, relatedness, competence, and time investment.

Participants were also asked whether they had played all four years or plan to play all four years which was included in this category. Responses related to quitting was seen as a separate category. The final category, leadership responsibilities, was made up of the themes communication, logistic skills, supportive behaviors, and perspective about leadership.

Research question 1: Table 5 shows responses that reflect participant's beliefs about parental behavior that they find positive. The most common responses were that parents provided logistic support, which including paying team fees, buying equipment, paying for flights and hotels, as well as contributed their time to drive to and watch practices and games. In regard to logistic support, one participant said, "They were very happy to keep signing me up for things and paid way too much money for me to play travel soccer...they drove me to morning practice for swim which was big because they would wake up at 5 with me to do that."

When asked about their parent's response to their performance in games, one participant responded saying, "They were happy when I played well. When I played poorly I don't recall them ever being upset or talking down to me."

An example of autonomy support is shown by the following quote, "They understood prioritizing soccer over school sometimes. They generally let me make my own decisions about what I thought was more important."

Participants also responded saying their parents encouraged sport participation, and wanted them to be active. One athlete said, "They signed me up for a lot of different sports so I could try all of them, which I think was partially because they wanted me and my brother and sister to be tired when I got home."

Research question 2: Table 6 shows common responses that express parental behaviors that participants found negative. Responses that would constitute psychological control included parents offering external rewards, setting unrealistic goals, or putting excessive pressure. One participant responded that her mother would set an unrealistic goal saying, "It was frustrating to me when I got older and she would still offer me incentives...it was added pressure on something I was insecure about because I already wasn't the best water polo player."

Two common responses were that parents tried to coach the participant and that parents lacked knowledge about the sport. One participant said that they considered their parent coaching as helpful, but the other participants believed that their parent attempting to coach them was not helpful and annoying, especially when combined with a lack of knowledge about the sport. One participant said, "My dad would be like, 'Oh, you should do this' but I generally didn't listen because he didn't play soccer."

While not necessarily a directly negative parental behavior, some participants reported putting pressure on themselves because of their parent's commitment. One respondent said, "I think I felt bad at certain points if we had travelled for a meet, then there would be pressure for me to do better. I think I didn't want my parents to pay for a hotel just so we could go for me to swim poorly. But they wouldn't really say that, I was pressure I was putting on myself."

Research question 3: Table 7 shows reasons that participants decided to play their sport and keep playing their sport in college. Reasons that were seen as internally regulated included

enjoyment of the sport, and competition. Participants also showed integration of their sport into their sense of self, with responses expression identification with their sport and seeing sports as part of their healthy lifestyle. One participant identified strongly with their sport, saying, "Swimming has been part of my life for so many years, it's something that I'm super passionate about, I just would not want to stop here."

Half of the participants said that they played their sport to help them get admitted to college. As a reason to keep swimming in high school, an activity that they did not inherently enjoy, one participant said, "I kept swimming so that I could become captain and put that on my resume and get into a good school."

Two of the basic psychological needs, relatedness and competence, were expressed as reasons to play. Responses expressing enjoying the social aspect of the sport were considered fulfilling the need of relatedness, while participants who viewed themselves as good or improving were considered to have the need of competence satisfied. "I'm friends with a good amount of the swimmer guys, the freshman guys, and one of the said, 'You should join, it doesn't matter how good you are' so I said I'd give it a shot. And my reason for joining was that I thought that it would be cool if I got to know more people, especially upperclassmen" is an example of the desire and satisfaction of relatedness. When asked why they kept playing their sport for all four years, one participant expressed the satisfaction of competence, saying, "I was good at it and I like being good as things."

As a reason to keep playing their sport, a common response was that the time commitment helped participants manage their schedule. One participant said, "I was doing better in terms of academics after the season started because it keeps me on a better schedule."

When asked if they have played sports for all four years or plan to do so, seven out of eight participants said that they had or plan to. An underclassmen responded saying, "Definitely, I did not love swimming like I do today ever before."

Research question 4: Some participants expressed thoughts about quitting, or quit their original sports and started playing new ones. These cases show that the needs of competence (participant didn't feel good at sport) or relatedness (participant didn't like their teammates or team environment) were not satisfied by their old teams. One respondent said "I tried to quit every single year. My coach actually didn't let me. It sucked, there were girls that were really mean. It was so much time and effort." People who switched sports reported liking their new teammates more (relatedness), and playing because they enjoy it (internal regulation).

Research question 5: Table 9 shows responses related to leadership. Developing communication skills was a common response. Communication skills included listening to and helping teammates individually, as well as helping with communication between the coach and the team, as well as divided parts of the team. "I liked being someone that people could go to when they had problems with coaches, or people on the team, or just 'I have a midterm tomorrow I don't know if I can practice what I should do?' and just liked being a resource for people," is an example of the development of communication skills.

Respondents, especially the formal leaders, reported developing administrative skills including planning events and managing money. One formal leader of their administrative responsibilities, "Collect money from the team, organize it, use it to throw parties, plan the parties. There was other money to do other things like buy coaches gifts. [The coach] asked us to help plan the schedule, and lead practice."

Common responses also included learning the importance of having a positive attitude and leading cheering or motivating others. One example of this can be seen by the following response, “There was a divide between the swim team and diving team and I wanted to fix that so I’d go to swim meets and cheer for the swimmers when no other divers would do that.”

A majority of respondents felt that their experience with sports has helped them develop and enhance leadership skills, and feel that their leadership experiences will help them after they leave college and sports. An informal leader said that their sport experience helped them develop leadership skills that would be useful after college, saying, “I’ve learned to call people out on their bullshit when they need someone to call them out. [This skill] was definitely enhanced by the sport, I feel like before when I was put into a situation when I needed to call out a friend – calling out a friend is really hard and my sports experience taught me that I am not in the wrong for calling someone out and should not be feel bad.”

Consistent with survey findings, parents who created an influential autonomy supportive or psychologically controlling environment positively or negatively affected the psychological needs that must be satisfied for internal regulation and intrinsic motivation. Interviews with formal leaders revealed high levels of competence, which is also consistent with survey data.

Discussion

The present study investigated the potential mediation effects of the three basic psychological needs, autonomy, competence, and relatedness, for self-determined behavior (Ryan & Deci, 2000a) on the relationship between perceived parental behavior and formal leadership role occupancy on Division III sports teams. The study attempted to add to the list of predictors of leadership role occupancy. The interview portion of the study adds to previous work that sought to identify parental behaviors that are helpful and harmful to the motivation of

young athletes. It also explored the benefits of leadership and whether leaders at the Division III college level believe leadership experiences will help them later in life.

Analyses of survey responses suggest that perceived parental autonomy support can positively predict competence and relatedness. This suggests that parents provide their children with agency and allow them freedom to develop skills their way are more likely to have children who feel more competent and high levels of connection to people involved with their sport. On the other hand, high levels of perceived psychological control predicted lower levels of autonomy and relatedness. Parents who exhibit too much control, put excess pressure, and offer rewards and threaten punishment are more likely to have children who feel like they have less control over their sport circumstances, and feel less connected to others in their sport.

The results suggest there is not the expected relationship between the basic psychological needs and formal leadership role occupancy. Competence did predict leadership role occupancy. The direction of this relationship is not clear. It is possible that athletes who feel competent perform better and are more likely to be chosen as captains. It is also possible that athletes feel higher levels of competence because they are captains. Given the nature of the present cross-sectional research design, the possibility of reverse causality cannot be ruled out. The results suggest that autonomy does not predict leadership role occupancy.

Competence partially mediated the relationship between perceived autonomy support and leadership role occupancy. This suggests that parental behavior can predict these basic psychological needs, which can predict leadership role occupancy. Parents who treat their children in an autonomy supportive way are more likely to have children who feel more competent and become leaders in their sport.

The qualitative analysis of the interviews can be used to propose interventions for parents to exhibit more positive and fewer negative behaviors. Consistent with previous literature, parents must find a balance between being supportive and involved with the children's sport, but must avoid being overinvolved in order to ensure their children feel autonomy support. Parents could avoid negative feelings from the children if they do not try to coach their children in sports they do not know about. The data also suggests that it would be beneficial to learn more about the child's sport, so that their involvement can be more productive and meaningful. Consistent with literature, psychologically controlling behavior such as setting unrealistic goals, emphasizing external rewards, and putting too much pressure on children has the negative consequence of children resenting these behaviors.

As expected, college athletes are both internally and externally regulated. Some people compete because they love their sport, while others are motivated by the need for achievement or external benefits. Patterns of responses suggested that the satisfaction of two of the basic psychological needs, relatedness and competence, were reasons that athletes started playing and continue to play their sports. Athletes whose needs of relatedness and competence were not satisfied were more likely to consider quitting or to quit their teams. Coaches who want highly intrinsically motivated athletes should strive to create a positive social environment, and to make their athletes feel like they are good at their sport.

Formal leaders and informal leaders both reported developing leadership skills because of their Division III sports experience. These skills included communication at an individual level, at the group level, administrative skills, and appreciating the efforts of past leaders. These skills are not only enhanced by Division III sports but are seen as beneficial to life after collegiate sports. Playing sports in college can teach students skills that they can use in the real world.

Limitations

During survey construction, demographic information such as gender and race were overlooked. This meant that analyses of gender differences could not be conducted. Previous research suggests that because of gender expectations, boys have higher perceptions of sport competence, and view sports participation as more important than girls do. (Eccles et al., 1993) Given these findings were from twenty-five years ago, it would have been interesting to see if these gender differences still exist.

The Basic Psychological Needs Scale was not designed specifically for the sport domain. While the appropriate items were very minimally altered to make them more appropriate for this study, it could have affected the psychometrics of the survey. The items of the Perceived Parental Autonomy Support Scale were not changed, but the administration of the measure was slightly altered. Participants were asked to answer the items based on the parental figure they found more influential. They were also asked to answer based on their current sports team and experience. The original apparatus asks for ratings based on the mother and father separately, and does not ask about the sport domain. This could have also affected the psychometrics of the survey.

Two measures of the Basic Psychological Needs Scale, autonomy and competence, did not meet adequate levels of internal consistency. Having poor internal consistency could indicate that the items were not measuring these constructs, which could have contributed to the null results.

Since this study was non-experimental, causal relationships cannot be implied. Even though relationships between parental behavior and the basic psychological needs exist, it cannot be concluded that parental behavior affects these important aspects of intrinsic motivation.

An oversight in the development of the proposed mediation model was thought of late in the research process. The hypothesized model considers the psychological needs of self-determination theory to be the determinant of leadership role occupancy, when at the Division III varsity sports level, year in school and years on the team are often the primary factors in deciding captancy. While remaining on the team for three or four years could suggest that the athlete is intrinsically motivated and has their psychological needs satisfied, this is not necessarily the case.

The qualitative interview portion of the study only had eight participants. Responses which were not common amongst two or more people were not included, and larger sample size may have yielded more agreement with these responses. A larger sample may also have led to the identification of other common responses.

Future Research

Replication of the survey portion of the study would be beneficial. Certain probabilities were nearly significant, and replication might show that certain relationships are indeed significant.

Future research could also examine the different motivational patterns in different sports. Differences may exist between individual sports, such as swimming, golf, and tennis, and team sports such as football, soccer, and baseball. In individual sports, performance is less dependent on the performance of teammates, which can affect the psychological needs, especially competence and relatedness. As mentioned, having demographic data such as gender would allow future researchers to look for gender differences.

Conducting a similar mediation in a context in which leadership is not as closely associated with age or years of experience could result in significant mediation. In these cases,

age may be shown to moderate the relationship between the psychological needs and leadership role occupancy.

Conclusion

In the Division III sports context, the three basic psychological needs of self-determination theory do not seem to mediate the relationship between parental behavior and formal leadership. Despite a lack of evidence of mediation, autonomy support was shown to predict formal leadership, and parental behavior did predict satisfaction of the psychological needs. This adds to the body of literature that says that parents play a role in determining motivation and leadership. Interview data also suggests that college sports enhances leadership skills and may benefit student athletes in the future.

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Table 1:
Correlation Matrix

Measure	1	2	3	4	5	6	7	8	9	10	11
1. Year in School ^a	-										
2. Years in Varsity Sport	.79**	-									
3. Formal Leadership Role ^b	.55**	.48**	-								
4. Informal Leadership Role	.34**	.28**	.24**	-							
5. Enjoyment of Leadership	.05	.07	.04	.59**	-						
6. Most Influential Parent ^c	-.07	-.08	.00	-.08	-.01	-					
7. Autonomy	.07	.16*	.11	.14	.08	-.08	-				
8. Competence	.12	.14	.24**	.17*	.14	.01	.47**	-			
9. Relatedness	.10	.15*	.15*	.15*	.19*	.03	.39**	.5**	-		
10. Autonomy Support	.21**	.28**	.26**	.14	.04	-.01	.14	.17*	.20**	-	
11. Psychological Control	-.12	-.15*	-.14	-.09	-.03	.01	-.19*	-.13	-.26**	-.65**	-

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

^aYear in School includes 1 (Freshman), 2 (Sophomore), 3 (Junior), 4 (Senior), 5 (5th year Senior).

^bFormal Leadership Role includes 0 (No), 1 (Yes). ^cMost Influential Parents includes 0 (Mother), 1 (Father), 2 (Equal Influence), 3 (Grandmother), 4 (Coach), 5 (Neither), 6 (Male Family – Non-Father).

Table 2:
Descriptive Statistics

	N	Min	Max	M	SD	Skew		Kurt	
						Statistic	SE	Statistic	SE
Year in School ^a	187	1	4	2.06	1.04	.55	.18	-.901	.35
Years in Varsity Sport	187	1	5	2.19	1.15	.67	.18	-.54	.35
Formal Leadership Role ^b	187	0	1	.16	.37	1.87	.18	1.50	.35
Informal Leadership Role	187	1	7	5.49	1.49	-1.18	.18	.98	.35
Enjoyment of Leadership	187	1	7	5.76	1.18	-1.56	.18	3.5	.35
Most Influential Parental Figure ^c	187	0	6	.79	.91	2.88	.18	13.28	.35
Autonomy	174	2.86	6.00	4.60	.62	-.27	.18	.03	.37
Competence	174	2.83	7.00	5.30	.81	-.55	.18	-.07	.37
Relatedness	174	3.50	7.00	5.89	.72	-.79	.18	.36	.37
Autonomy Support	187	2.92	7.00	5.51	.84	-.63	.18	-.07	.35
Psychological Control	187	1.00	6.25	2.76	1.14	.55	.18	-.30	.35

^aYear in School includes 1 (Freshman), 2 (Sophomore), 3 (Junior), 4 (Senior), 5 (5th year Senior).

^bFormal Leadership Role includes 0 (No), 1 (Yes). ^cMost Influential Parents includes 0 (Mother), 1 (Father), 2 (Equal Influence), 3 (Grandmother), 4 (Coach), 5 (Neither), 6 (Male Family – Non-Father).

Table 3

Association of Perceived Parental Autonomy Support with possible mediators

Dependent Variables	Perceived Parental Autonomy Support (Independent Variable)			Perceived Parental Psychological Control (Independent Variable)		
	<i>R</i> ²	<i>F</i>	<i>p</i>	<i>R</i> ²	<i>F</i>	<i>p</i>
Autonomy	.019	3.298	.071	.036	6.5	.012
Competence	.032	5.717	.018	.017	3.034	.083
Relatedness	.042	7.496	.007	.068	12.577	.001

Table 4

Association of potential mediators with FLRO

Independent Variables	Formal Leadership Role Occupancy (FLRO)				
	C&S R ²	Nag R ²	Exp(B)	Wald	<i>p</i>
Autonomy	.011	.019	1.595	1.924	.165
Competence	.065	.108	2.672	9.627	.002
Relatedness	.024	.040	1.887	3.798	.051

Table 5

Hierarchical regression testing for basic psychological needs as mediators

Steps	Independent Variables	Formal Leadership Role Occupancy (FLRO)				
		C&S R ²	Nag R ²	Exp(B)	Wald	p
1	Perceived Parental Autonomy Support	.074	.127	2.99	11.254	.001
2	Perceived Parental Autonomy Support	.075	.126	2.776	9.403	.002
	Autonomy			1.354	.795	.373
1	Perceived Parental Autonomy Support	.074	.127	2.99	11.254	.001
2	Perceived Parental Autonomy Support	.114	.189	2.603	7.628	.006
	Competence			2.293	6.796	.009
1	Perceived Parental Autonomy Support	.074	.127	2.99	11.254	.001
2	Perceived Parental Autonomy Support	.08	.133	2.646	8.364	.004
	Relatedness			1.509	1.592	.207

Table 6
Positive parental behaviors

Theme	Common Responses	Total n	Formal leader n
Logistic Support	Time commitment driving/transporting to practice and games	8	3
	Time commitment watching games	7	3
Responses to performance	Parents provided financial support	7	2
	Parents praised participant after good performance	5	3
	Parents not negative after a poor performance	4	3
Autonomy Support	Parents accept when participant considered quitting or wanted to put in less effort	3	1
	Parents okay with participant not practicing	4	1
	Parents gave freedom for participant to make decisions	4	1
	Did not put excessive pressure	5	2
Participation encouragement	Encouraged participant to play sport	4	2
	Wanted participant to be active	4	1

Table 7

Negative parental behaviors

Theme	Common Responses	Total n	Formal leader n
Psychological Control	Parents offered or emphasized external rewards	2	0
	Parents set unrealistic goals	2	0
	Parent put added pressure	2	0
Other Themes	Parent tried to coach participant	5	2
	Parents lacked knowledge about sport	6	2
	Participant put pressure on themselves because of parent's commitment	2	2

Table 8
Reasons for playing sport in college

Theme	Common Responses	Total n	Formal leader n
Internal Regulation	Participant identifies with their sport	3	1
	Participant enjoys playing their sport	5	2
	Participant enjoys competition	2	1
	Participation because of health benefits	3	1
External Regulation	Participant wanted individual achievement	3	1
	Participant played sport to help with admission into college	4	2
Relatedness	Participant had a family member who played sports in college	2	2
	Participant likes their team	6	1
	Participant likes their coach	3	2
	Participant likes teammates and being on a team	6	3
Competence	Participant kept getting better	2	1
	Participant wants to get better	2	0
	Participant enjoys being good at something	3	1
Time investment	The sport was something to do	3	2
	Benefited by time management	3	0
Other Theme	Participant has competed for all four years or plans to	7	3

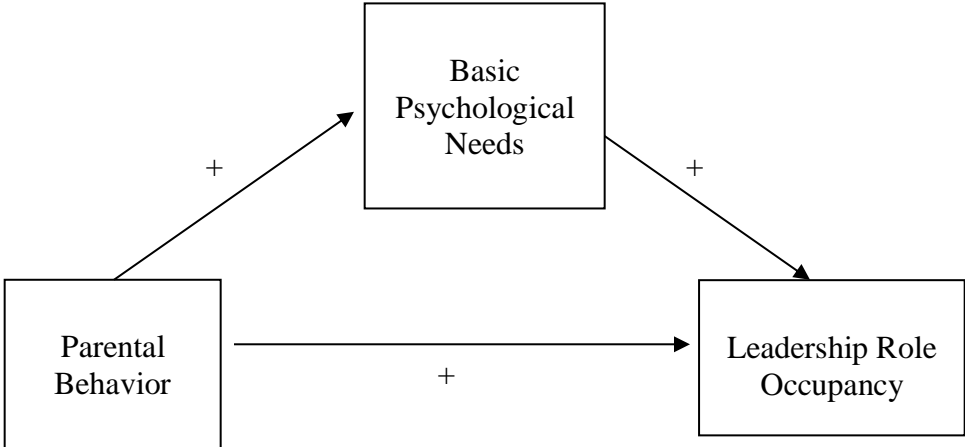
Table 9
Responses related to quitting

Theme	Common Responses	Total n	Formal leader n
Responses related to quitting	Participant thought about quitting/tried to quit	3	1
	Participant has switched sports in college	3	0
	Participant stopped because they didn't like the coach	1	0
	Participant stopped because they didn't like team	1	0
	Participant felt like they were better at new sport	2	0
	Participant no longer liked old sport	2	0

Table 10
Leadership Responses

Theme	Common Responses	Total n	Formal leader n
Leadership Perspective	Participant sees themselves as a role model	3	2
	Participant developed more respect for past captains	2	2
	Participant wants to lead team to success	2	2
	Participant learned the importance of having a cohesive team	4	2
	Participant feels that leadership experiences will help after college	6	2
	Participant feels that their experience in sports has helped develop leadership skills	5	1
	Participant has lead cheering or has helped motivate others	2	1
Supportive Behaviors	Participant learned the importance of having a positive attitude	3	1
	Participant responsible for planning or scheduling practices or competitions	2	2
Administrative Skills	Participant has planned team bonding events	4	3
	Participant manages team budget	2	2
	Participant has had to deal with difficult people	2	1
Communication	Participant helps individuals with their problems	4	1
	Participant has communicated with the team in an official capacity (meetings, emails)	3	2
	Participant has learned to listen to teammates	3	1
	Participant learned when to speak up	2	0
	Participant has told others what to do	3	1
	Participant serves as a liaison between the coach and the team	3	3
	Participant helps with conflict resolution	3	2

Figure 1. Mediation Model



Appendices

Appendix A:

Perceived Parental Autonomy Support Scales

Please select and specify the parent or parental figure who had the greatest impact on your experience in your sport. Please answer the following questions about that person's behavior when it came to your participation in your sport while you were growing up.

Using the scale bellow, please indicate the extent to which you agree with each of the statements regarding your parental figure.

Do not agree at all	Hardly agree	Slightly agree	Somewhat agree	Agree	Strongly agree	Very strongly agree
1	2	3	4	5	6	7

While growing up playing my sport...

1. My parental figure gave me many opportunities to make my own decisions about what I was doing.
2. When my parental figure asked me to do something, they explained why they wanted me to do it.
3. When I refused to do something, my parental figure threatened to take away certain privileges in order to make me do it.
4. My point of view was very important to my parental figure when they made important decisions concerning me.
5. My parental figure refused to accept that I could want simply to have fun without trying to be the best.
6. When my parental figure wanted me to do something differently, they made me feel guilty.
7. My parental figure encouraged me to be myself.
8. Within certain limits, my parental figure allowed me the freedom to choose my own activities
9. When I was not allowed to do something, I usually knew why.
10. I always had to do what my parental figure wanted me to do, if not, they would threaten to take away privileges.
11. My parental figure believed that, in order to succeed, I always had to be the best at what I did.
12. My parental figure made me feel guilty for anything and everything.
13. My parental figure were able to put themselves in my shoes and understand my feelings.
14. My parental figure hoped that I would make choices that corresponded to my interests and preferences regardless of what theirs were.
15. When my parental figure wanted me to do something, I had to obey or else I was punished.
16. My parental figure were open to my thoughts and feelings even when they were different from theirs.
17. In order for my parental figure to be proud of me, I had to be the best.
18. When my parental figure wanted me to act differently, they made me feel ashamed in order to make me change.
19. My parental figure made sure that I understood why they forbid certain things.
20. As soon as I didn't do exactly what my parental figure wanted, they threatened to punish me.
21. My parental figure used guilt to control me.
22. My parental figure insisted that I always be better than others.
23. When I asked why I had to do, or not do, something, my parental figure gave me good reasons.
24. My parental figure listened to my opinion and point of view when I disagreed with them.

Autonomy-Support: 1, 2, 4, 8, 9, 13, 14, 16, 19, 14, 23, 24

Psychological Control: 3, 5, 6, 10, 11, 12, 15, 17, 18, 20, 21, 22

Appendix B:

Basic Psychological Needs Scales

Please read each of the following items carefully, thinking about how it relates to participation in your sport, and then indicate how true it is for you. If you are a multi-sport athlete response based on the sport that you consider your primary sport. Use the following scale to respond:

Do not agree at all	Hardly agree	Slightly agree	Somewhat agree	Agree 5	Strongly agree	Very strongly agree
1	2	3	4		6	7

1. I feel like I am free to decide for myself how to participate in my sport.
2. I really like the people I interact with.
3. Often, I do not feel very competent.
4. I feel pressured in my participation in my sport.
5. People I know tell me I am good at what I do.
6. I get along with people I come into contact with.
7. I pretty much keep to myself and don't have a lot of social contacts.
8. I generally feel free to express my ideas and opinions.
9. I consider the people I regularly interact with to be my friends.
10. I have been able to learn interesting new skills recently.
11. In my daily life, I frequently have to do what I am told.
12. People on my team care about me.
13. Most days I feel a sense of accomplishment from what I do.
14. People I interact with on a daily basis tend to take my feelings into consideration.
15. In my sport I do not get much of a chance to show how capable I am.
16. There are not many people that I am close to.
17. I feel like I can pretty much be myself in my daily situations.
18. The people I interact with regularly do not seem to like me much.
19. I often do not feel very capable.
20. There is not much opportunity for me to decide for myself how to do things in my sport.
21. People are generally pretty friendly towards me.

Autonomy: 1, 4(R), 8, 11(R), 14, 17, 20(R)

Competence: 3(R), 5, 10, 13, 15(R), 19(R)

Relatedness: 2, 6, 7(R), 9, 12, 16(R), 18(R), 21

APPENDIX C:

Semi-structured interview

1. How were your parents supportive when you were growing up playing your sport?
2. Did your parents put pressure on you to play your sport? Were how involved were they? Were they over involved?
3. Why did you decide to play your sport in college? Why do you continue playing?
4. What leadership responsibilities have you taken on your team? How do you think this will benefit you in your post college life?

APPENDIX D:
Pre-questionnaire

What year are you in school?

- a) Freshman
- b) Sophomore
- c) Junior
- d) Senior

How long have you been a varsity athlete (including the current season)?

- a) 1 year
- b) 2 years
- c) 3 years
- d) 4 years
- e) 5 years

Do you have a formal leadership role on your athletic team (Captain, Co-Captain)?

- a) Yes
- b) No

To what extent do you engage in an informal leadership role on your athletic team (e.g., encouraging, coaching, mentoring teammates, or mediating disputes on the team)?

1	2	3	4	5	6	7
Not			Somewhat			Very Much
At all						

In general, to what extent do you enjoy being a leader?

1	2	3	4	5	6	7
Not			Somewhat			Very Much
At all						