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# Relationally-Autonomous Reasons as a Predictor of Collegiate Athletic Performance

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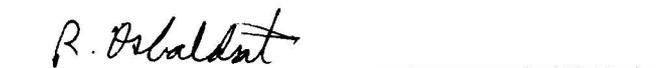
Relationally-Autonomous Reasons as a Predictor of Collegiate Athletic Performance

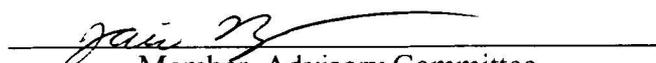
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Date

11/17/15

Relationally-Autonomous Reasons as a Predictor of Collegiate Athletic Performance

By

Josef Katzman

Submitted to the Faculty of the Graduate School of  
Eastern Kentucky University  
in partial fulfillment of the requirements  
for the degree of  
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## DEDICATION

This thesis is dedicated to my family for all their support and encouragements.

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## ABSTRACT

The current proposed study examines a concept that has been looked at before but now using a new specific population. Previous research examined shows that reasons for motivation affect goal attainment and success. The current study is looking at how relational autonomous reasons for motivation play a role in goal attainment in athletes. Eastern Kentucky University athletes were administered a short questionnaire and their previous athletic performance was used as well. The two sets of data were then used to examine the relationship between the two variables. The results of the study showed a positive correlation between Relationally-Autonomous Reasons (RAR) and performance. Those in team sports were seen to be motivated more by RARs when compared to athletes in individual sports.

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## CHAPTER I

### Introduction

Motivation influences many different aspects of our lives. One of the most important factors is how it allows us to achieve our goals. Different sources of motivation allow us to obtain goals faster and more reliably. Research has shown that motivation has a major impact on the completion of goals. The results show that both external and internal sources are factors that help improve motivation, which increases goal attainment. By understanding these relationships, psychologists can use them to help predict athletic performance. The purpose of this study is to examine the motivation of student athletes and its relationship to their athletic performance.

Individual athletic performance is extremely important to the athlete and to their team. Athletic performance is how well individuals execute their skills during their game. For individual athletes, their individual performance has a huge impact on their future career security, income, and opportunities. In addition, the performance of the athlete can also affect their team members, university or professional team. The better the athlete's do impacts the amount of revenue their team or university will receive from different rights. These rights could include branding, media rights, and championship sponsors. With the importance of athletic performance, a new metric is needed to measure performance equally across multiple different sports. The current study also proposes a metric that could be used to compare athletic performance across multiple sports.

## CHAPTER II

### Literature Review

#### **SDT as a Framework for Motivation**

The following section examines how Self-Determination Theory (*SDT*) can be used as a framework for understanding motivation, along with how SDT can be used to analyze different models of motivation and goal attainment. SDT consists of three basic needs that allow for optimal growth and function, which are competence, relatedness, and autonomy (Deci & Ryan, 2000). Competence involves obtaining a mastery of a skill or experience, relatedness is the desire to connect with others, and autonomy means independence, the ability to be separate and self-governed. Autonomy support plays a crucial role in the studies discussed in this section. Autonomy support is defined as support for someone's self-regulation, while it also includes respect of perspectives, values, and feelings (Ryan & Solky, 1996). SDT examines the psychological needs to function at the highest level. Deci and Ryan (2000) discussed how it relates to previous need theories. The model explains that humans are inclined to progress towards personal growth. An individual's growth requires social interaction in order to be successful. By effectively utilizing the SDT, the effect which social motivation can have on a person's potential growth can be seen.

Fulfillment of the three basic needs can lead to behavior changes in individuals. Hagger and Chatzisarantis (2009) conducted a meta-analysis of studies that used the Theory of Planned Behavior and SDT. The purpose of this was to discover empirical

support for a motivational sequence, where self-determined motivation leads to the intentions and actions proposed by the Theory of Planned Behavior. The results of their meta-analysis showed a statistically significant correlation in perceived autonomy support and the self-determined motivation concepts of intrinsic motivation. In addition, extrinsic motivation as well as the behavioral control, intentions and attitude concepts of the Theory of Planned Behavior were also correlated. This means that the evidence supported the suggested sequence of motivation.

A person's level of autonomy was discussed as a major factor, concerning the type of motivation, which can lead to behavioral changes in the health. A meta-analysis conducted by Ntoumanis, Thøgersen-Ntoumani, Deci, Ryan, Duda, and Williams (2012) was done to examine the idea that behavioral change is more effective when it is autonomously motivated. One-hundred-eighty-four data sets, which used the SDT in the health care context, were studied. The meta-analysis examined the relationship between practitioner support and patients' experiences of psychological need fulfillment. The analysis looked at the relationships between the concepts of psychological health and physical health, in addition to how they are affected by motivation. The data revealed that promoting autonomy in patients could promote better mental and physical health. The results suggest that SDT can be a starting point for intervention in health motivation.

Fortier, Sweet, O'Sullivan, and Williams (2007) examined how providing the proper support can increase motivation and goal attainment for participants. They looked specifically at how using a type of care intervention based on the SDT could lead to greater autonomous effort and support. The study looked at whether a patient who was

given brief autonomy supportive physical activity counseling from a health-care provider and intensive autonomy supportive counseling would have higher levels of motivation, support, and competence, when compared to those who did not receive the intense counseling. One hundred twenty participants participated in the study. Measures of autonomous motivation, physical activity, and competence for physical activity were measured in the beginning. Both autonomous motivation and competence for physical activity were measured six weeks into the study again, while physical activity was measured for a second time thirteen weeks into the study. The results of the study showed higher levels of autonomy support and autonomous motivation at the six week mark and higher levels of physical activity at the thirteen week point for the experimental group participants. This research gave the SDT a solid field test in a physical activity area. The results of the study provided evidence, supporting the idea that SDT can lead to higher levels of motivation and higher chances of goal attainment.

Hagger and Chatzisarantis (2008) explain the SDT and its application in exercise motivation, behavior, and outcomes. The SDT is a broad meta-theory that defines external and internal sources of motivation. In addition, it supplies a description of the roles of the external and internal sources in cognitive and social development. This study provides ample evidence, which proves that the use of the SDT, in the field of health-related exercise, is rapidly expanding. Research is being conducted to expand the usefulness of the SDT. The review shows that there are many new ways to use the theory. Along with this further research, ideas were presented to expand on the use of the theory and measuring models.

SDT has been used to explain a variety of health outcomes. Edmunds, Ntoumanis, and Duda (2006) examined SDT in the exercise domain. This was done by exploring how satisfaction of three psychological needs did this related to different types of motivational regulations that influence exercise behavior. Moreover, psychological need satisfaction and motivation regulations were examined to see how they predict exercise behavior. The study had 369 participants, each of whom completed a questionnaire to assess psychological need satisfaction via exercise behaviors, motivational regulations and exercise. Those who answered that they take part in exercise class regularly were asked to complete additional sections to help measure perceived autonomy support. The results of the research showed the significance of motivation-related variables, in understanding the different variables in self-reported exercise behaviors. With this, the research results help show that the SDT can help predict exercise behaviors.

Coaches have a very close relationship to their athletes and have a lot of influence over them. The type of coaching can affect the achievement of the athletes. The study by Reinboth, Duda, and Ntoumanis (2004) looked at the relationship between the dimensions of coaching behavior to basic need satisfaction and physical and mental well being for male adolescent athletes. The hypothesis of the study was that a coach's autonomy support would lead to autonomously motivated behavior in the athlete, mastery focus would lead to proficiency, and apparent social support from the coach would lead to perceived relatedness. Another aspect of the model states that if the psychosocial needs are met, it would lead to the individual's state of well-being. The study had two hundred and sixty five British soccer and cricket players as participants. A multi-sectioned questionnaire was administered either before or after a practice. The participants were

asked to evaluate the type of environment that their team has. This was done to assess the type of environment the coach created. The athletes were given adapted parts of the Health-Care Climate Questionnaire to help ascertain the perceptions of the coach's autonomy support. The results showed that the need of competence was the most important influence of mental and physical well-being. Another aspect found was that the social environment could be a factor in fulfilling particular mental health needs.

As presented in the previous section, the research shows that SDT allows motivation to be applied into multiple different goal domains with similar results. The various applications of SDT show the correlation of internal motivation versus external motivation on goal attainment. Behavior and planning make a great impact on both motivational factors.

### **Autonomy Regulation and Motivation**

Within the following section, the concept of autonomy regulation and motivation are examined. Autonomy support is defined as support for someone's self-regulation, while it also includes respect of perspectives, values, and feelings (Ryan & Solky, 1996). First, we are going to look at the social impact of autonomy and how it affects the motivation of a group. Second, we are going to observe how these concepts can be used to create different scales that can be used to measure motivation in the area of sports and exercise. Finally, we are going to explore the correlations in the theory of how autonomy regulation from coaches can affect the motivation of athletes.

The research conducted by Ryan and Solky (1996) examined how autonomy support is effective, and how it is important to motivation. The researchers hypothesized that, in order for social contact to promote mental well-being, social contact must be classified as autonomously supportive. Relationships that lack this tend to fail to promote and, at times, undermine well-being. The review of the literature present has shown that an autonomy-supportive relationship will promote personal well-being. Autonomy support can show confidence in the individual receiving the support, which can lead to richness in the relationship.

It is generally perceived that personal goals are created and driven from within an internal source. A more current study, by Sheldon and Elliot (1998), looked at how personal goals might be perceived to be caused by external sources, along with goals generated from external forces could lose their importance. The study showed that goals that were self-generated received consistent effort over time and had a higher success rate. The research was separated into three different studies. The first study examined the degree to which the goal felt controlled by external sources and goal autonomy compared to current success rates. The study included one hundred and twenty eight undergraduates at the University of Rochester. The participants were asked to create a list of ten goals and explain why they attempted to accomplish these goals. The participants were brought back and asked to rate how successful they had been. The second study was used to see if autonomy leads to higher success rates on goals. The study had one hundred and forty one undergraduates participating throughout an entire semester of school. During the first session, the participants chose goals and rated why they pursued those goals and how much effort they will put in to achieve them. At the end of the semester, the participants

rated how well they succeeded on accomplishing the goals. The third and final study expanded on the research done in the second study. Eighty-two undergraduates participated in the study. During the initial meeting, the participants were asked to generate five goals they would work on for a month. Along with creating goals, the participants met with a research assistant to come up with possible outcomes for their goals, along with completing the questionnaire. A follow up meeting occurred two weeks later, which consisted of the questionnaire. The final meeting took place four weeks after the initial meeting in which participants completed a questionnaire and had an interview to determine their progress on their goals. The results of these three studies showed that autonomy-motivated goals, unlike controlled motivated goals, predict higher levels of attainment.

There is also another type of model that shows the relationship between behavior and motivation. Sheldon and Elliot (1999) proposed the Self-Concordance Model. The attributes of the Self-Concordance Model are broken into two different parts. The first part is that goals that are classified as autonomous receive greater effort into them, which means that they are more likely to achieve them. The second aspect is that goals that are achieved by autonomous reasons benefit the person the most. Three studies were conducted to examine whether this current model would fit with the different data sets. All of the three studies concluded that this model adequately fits within the different data sets. Based off these results, the study concludes that not all personal goals are truly personal goals. It also shows that motivation for different goals truly dictates whether the goal will be attained.

In addition to the model already presented, Adie, Duda, and Ntoumanis (2008) tested a theoretical model of coach autonomy, motivational process and well/ill-being, along with support. The aim of this study was to examine if psychological needs mediate the relationship between autonomy support and well/ill-being. The study also looked at gender invariance within the presented model. Five hundred and thirty nine adults from the United Kingdom participated in this study. The study used a modified version of the Health Care Climate Questionnaire (HCCQ), along with several surveys using a Likert scale. The results of the study found that athletes' perceptions of an autonomy supportive coach corresponded to competence, relatedness, and greater satisfaction of their needs for autonomy. The strongest relationships found were relatedness and perceived autonomy. It was revealed that the needs for both autonomy and competence somewhat mediated the pathways from athletes' levels of subjective vitality to coach's autonomy support.

Within sports, understanding the motivation process is very important to further research. A study was completed by Smith, Ntoumanis, and Duda (2007), which looked at the motivational process-underlying goal striving in sports. They looked at the role of how coach autonomy support is perceived in the goal process. The participants consisted of two hundred and ten regularly training British athletes from different team and individual sports. The participants were given a multi-sectioned questionnaire, asking about goal striving, during one of their regular practices. The questionnaire was administered towards the end of that particular sports season. The results of this study were that participants appraised their striving for the goals to be more autonomous reasons compared to controlled reasons.

Autonomy regulation plays a crucial role in how motivation affects goal attainment. Presented in the research, autonomous motivated goals tend to be given further effort and are more often obtained. Autonomy regulation in the field of sports and exercise showed that the coaching environment effected how the athletes were motivated. This in turn affected whether or not the goals were obtained. Based off these theories, different scales were created and tested to examine the impact and strength autonomy had on motivation, and how this played into the attainment of goals. The research demonstrated that autonomy is a major factor in the achievement of goals.

### **Integration of Personal and Relational Interests in Motivation**

The following section examines how personal and relational reasons influences motivation. We are going to explore the connection between RARs for motivation and its strength behind goal attainment. The research presented below explains the importance of personal-relational reasons in a person's life. The research will describe how RARs for goals can be attributed to both sports and health related goal obtainment.

The study conducted by Kumashiro, Rusbult, and Finkel (2008) looked at a proposed model of personal-relational equilibrium. The model tested the hypothesis keeping a stable equilibrium between personal and relational concerns is an important aspect of self-regulation. Four studies were conducted to test the presented model. The first study was conducted by disrupting the participants' equilibrium, by providing false information about fictional future interaction style traits. There were one hundred and seventy eight undergraduate participants in the first study. During the second study, the aim was to explore over-dedication versus equilibrium versus under-dedication in a

relational setting. Seventy-six undergraduates participated in this study. The third study looked at disequilibrium in daily life by having the participants use a diary. There were ninety-two couples participating. The fourth study looked at the data from a study of an ongoing relationship to see the effect of personal-relational equilibrium on different categories of well being for a span of 6 months. One hundred and thirty nine couples participated in the fourth study. The results of these studies showed the fragile relationship between relational and personal concerns for humans. The two concerns intermingle and can fulfill many basic needs, however some of the needs of one of the two can contradict the other. Equilibrium between the two aspects can lead to higher rates of well-being, while failure can lead to impaired mental performance.

As presented above, keeping equilibrium is very important to motivation and goal achievement. Some of the first researchers to examine equilibrium of motives came from cross-cultural psychology. Based off the research conducted by Iyengar and Lepper (1999), we see how American and Asian cultures differ on intrinsic motivation. Two separate studies were conducted to examine how children's motivation was affected by choices made for them or by them. Based off the results of these studies, American children showed less intrinsic motivation when goals were chosen for them compared to when they chose them. In comparison, Asian children had greater levels of intrinsic motivation when the choice was chosen by someone they trusted and respected, compared to when they chose for themselves.

Motivation for goals varies between cultures but also vary on the chances of achieving the goals. Gore and Cross (2006) conducted research looking at how different

reasons predicts goal attainment. The study's goal was to see how relational self-construal and relationally autonomous reasons (RARs) influence goal attainment. The authors thought that RARs would predict success on goal attainment. There were two studies conducted to test this hypothesis. The first study had 166 participants. Participants listed seven goals that they were currently working on or planned to start soon. Along with this, they rated their effort and current level of completion for each goal. After this, the participants were asked to rate whether it was personal or relational reason to accomplish these goals. A second session took place four weeks after the first session. All the participants returned for the second session. The participants rated their progress and planned effort for the goals. The second study had 172 participants and followed the same procedure as the first study with a few differences. Instead of the participants listing seven goals, they had to write down four. In addition, the participants returned an extra time, four weeks after the second session. The results of both studies showed that RARs were a strong influence on motivation, particularly affecting the pursuit and success rate of goals.

This integrative form of motivation also seems to be effective for people across cultures. The research conducted by Gore, Cross, and Kanagawa (2009) looked at a cross-cultural model in order to test people with a high relational self-construal will pursue their goals, and that relational self-construal will positively predict goal success rates. One hundred and seventy American and two hundred and nineteen Japanese participants, from a mid-western university in the USA and a Japanese University, participated in the study. Participants were given a packet of scales first to measure well-being and personality. Once this was completed, the participants created a list of goals

they were working on and then rated these goals into different domains. These domains separated the goals into eight different categories such as school, work, relationship, health, and leisure. The goals were then rated on the expected time it would take to accomplish. The second packet the participants received was used to rate the reasons for these goals, the amount of support from outside influences, the effort they put into the goals, and the progress they have made. The results of this study showed that both cultures were more likely to follow through with their goals and reported higher levels of social support when they had a highly relational self-construal. Another aspect of this study showed that obtaining goals that others support leads to greater action by the person pursuing the goal.

Support from others tends to lead to greater goal achievement, but the type of the surrounding people may affect the chances. Gore (2014), looked at how contact with close others on a daily basis could affect relationally-autonomous reason that could be correlated with levels of goal effort. Along with this, the author also hypothesized that the levels would be strongest when with relational and affable people. Forty-nine participants were asked to complete agreeableness and self-construal evaluations in an initial in person session. Afterwards, they were asked to complete reports of relational motives, goal effort, and contact with close and distant people on a daily basis for the next six days. The results of this study showed that, when the participants encountered friends or family there was an association with the levels of effort among those who were greatly relational people. The results also showed that one group was related to the effort among agreeable people, that group was parents.

The types of support received by others may influence the chance of achieving the goals. The study conducted by Gore (2013), looked at how relationally-autonomous reason for goals lead to attainment and that this relationship is stronger in highly relational and agreeable people. Two studies were conducted to test this hypothesis. The first study had one hundred and thirty four participants. They assessed participants self-construal and agreeableness, while also obtaining their likelihood of pursuing sub goals for different reasons. The participants came back after the initial session a month later to report the number of the goals obtained. The second study consisted of seventy-four participants, which assessed participants self-construal and agreeableness. In this study, the participants generated three goals using a goal attainment scale. The participants were randomly assigned to a program that emphasized different types of motivational reasons. A week after the initial session, the participants returned and evaluated their success rates for their goals. For both studies, results showed that RARs correlated positively with fulfilling goals. Furthermore, the data showed for both groups that those who were highly relationally and agreeable people had higher levels of fulfilling their goals.

Motivational reasons for goal attainment effect whether we are able to accomplish these goals. Goal attainment can influence our health in varying degrees by allowing us to reach target goals for a healthier life. RARs were examined by Gore, Bowman, Grosse and Justice (in press), how they influenced goals for health, and how they are different compared to other goals. The researchers conducted four separate studies. The first study examined how RARs for health goals were different than other goals for other reasons and tested a three factor model. The second study examined how RARs for health predicted body composition. The third study examined how RARs

predicted health behaviors. The fourth study examined how RARs for health are related to health goals when in the setting of a one week health program. The study also attempted to identify the factors that promote RARs for health. The first study confirmed that the items fell into one of the three factors in the model presented. Another result of the study was that if someone close to the participant felt strong about a health related goal, it weighed heavily on the participants mind. The second and third studies showed that RARs were associated with body composition and health behavior. The final study found further evidence in support of RARs for health being predicted by involvement of others in their goals. Women were also found to be more successful with the use of RARs for health when compared to men. Based off the results of the four studies, it was shown that RARs were shown to have a strong connection with health related goals and their obtainment. These results also repeated previous research results that women benefit more from RARs for health then men. This research expands upon the understanding that RARs for goal attainment can be beneficial across different contexts.

Goal attainment can be affected by RARs. One of these reasons could be competitiveness, which Graziano, Hair, and Finch (1997) presented in their research. The research looked at how competitiveness relates to personal and group performances. Performance for both individual and groups are based off the goals for the individuals and the groups. The researchers conducted two different studies examining the relationships. The results of the studies showed that individuals might demonstrate different competitiveness or cooperativeness depending on how others peoples competitiveness. There still is some doubt whether individuals may affect cooperation levels between other people. With this information, the research can be used to look at

future group dynamics and whether individuals can affect the levels of competitiveness and cooperation to obtain their goals.

As stated by the research presented, motivational types seem to be a strong indication of whether goals will be attained or not. Some of the research presented showed that relationally-autonomous motivation for goals could lead to greater effort and goal attainment.

Research has shown us the importance of the different motivational types and how they can effect goal attainment in a very generalized population, but has not yet been shown in specific groups. Motives are significantly related to the obtainment of goals in the sports setting. RARs for motivation may play a critical role in goal attainment and needs to be further researched.

### **Hypotheses**

Based off of the past results and lack of specific research on how motivation affects performance of athletes and goal attainment, the current research examined how athlete's motivational types have an effect on their performance in their individual sports. The hypotheses for this study are that relationally-autonomous motivation will be positively associated with performance. In addition, athletes in team sports will have higher levels of RARs than athletes in individual sports. Finally, I hypothesize that athletes in team sports, who have high levels of relational autonomy, will report the highest level of performance. The above hypotheses will be conducted while controlling for alternative forms of motivation.

## CHAPTER III

### Method

#### **Participants and Procedure**

Participants consisted of 66 members of the Eastern Kentucky University Athletic department. The participants were all a part of Eastern Kentucky University Athletics' teams. The participants were from different athletic teams, with the seven baseball players, twenty-five football players, three golf players, nine soccer players, two softball players, four tennis players, five volleyball players, and eleven women's basketball players. The sample was also broken up into team and individual sport teams, with the team sport teams consisting of baseball, soccer, football, basketball, softball, and volleyball. The individual sport group consisted of those in golf and tennis. The participants were recruited at the Chad Bratzke Student-Athlete Academic Success Center On Eastern Kentucky University's campus. Participants were asked if they would like to participate as they entered the center. If they chose to participate, they were given a consent form to sign.

#### **Instruments**

A survey asking information about goals, reasoning, and health was administered to the participants. Previous game statistics were used to measure athletic performance.

### **Relational Motivation**

To measure RARs for goal attainment, the survey included multiple questions asking about the people surrounding the participant (Gore & Cross, 2006; Gore et al., 2009). Athletic goals were identified within the survey. The reasons for these goals were also identified. The participants were asked if they felt more motivated to accomplish things for themselves or for the team, they are on.

### **Goal Attainment**

Actual game statistics were used as a performance score for each individual athlete. Using university records, collegiate division websites, and sport reporting websites the performance scores were obtained. In order to find a usable score from these sources, a common statistic in each sport was chosen to act as the performance score. These statistics included runs for baseball, games played for football, stroke average for golf, games played for soccer, runs for softball, win loss ratio for tennis, points scored for volleyball, and minuets played for women's basketball. All the different sources were used to ensure that the used score was correct and valid. The scores were all from different sports, and had no standardized numbers within the sport or across different sports.

The next step involved in creating a usable performance score was to rank the athletes within their sport. Those with a higher performance level were ranked higher than those with lower performance scores. Rankings were done for the entire team and not just the participants. Once rankings were completed for each sport, the scores were

standardized within there sport. This gave a usable statistic for that sport. To find a usable score to compare between different sports, the newly standardized score is standardized again but with the entire sample. This newly standardized score then creates a new score, which is equal across all the different types of sports represented. The final standardized score was used in the research as the individual's performance score.

## CHAPTER IV

### Results

#### **Correlation**

To examine the association between relationally-autonomous motivation and performance, a bivariate correlation analyses was conducted between the two variables (see Table 1). Based off this analysis, it showed that relationally-autonomous motivation and performance were positively associated with each other ( $r = .28, p < .05$ ), which supported the proposed hypothesis.

#### **T-Test**

In order to test whether athletes in sport teams will have higher levels of RARs than those in individual sports, an independent t-test was conducted. Sport type was used as the independent variable and RARs scores as the dependent variable. As it was predicted, people had higher RARs scores when they were involved in team sports ( $M = 3.83, SD = 0.91$ ) than when they were in the involved in individual sports ( $M = 3.07, SD = 1.14$ ),  $t(64) = 2.05, p < .05$ . Based off these results, the hypothesis is supported.

#### **Moderation Analysis**

To test the hypothesis, that sports type moderates the association between RARs score and Performance score, with team sports showing a stronger association than individual teams, a hierarchical linear regression analysis was conducted. Sport type and the centered RARs scores and their interaction term where used as the independent

variables, while their Performance scores was used as the dependent variable. The results revealed only a significant effect for RARS ( $\beta = .30, p = .01$ ). Both the main affect for type of sport ( $\beta = .21, ns$ ) and Interaction effect ( $\beta_{Int} = .14, ns$ ) was not significant.

## CHAPTER V

### Discussion

Relationally-autonomous reasons for goals lead to higher goal attainment. Those who are motivated by those around them tend to strive for greater levels of performance and goal attainment. When looking at athletes and how motivational reason effect performance, it has been shown by this study that those in team sports tend to have higher level of RARs than those in individual sports. Along with seeing that those in team sports show higher levels of RARs, it was shown that RARs lead to higher scores on performance. When looking at how sports type may moderate the association of RAR and performance scores, the current study lacked enough statistical power to conduct the test.

### **Implications**

The current study examined motivational reasons among athletes, more specifically the way RARs affect performance, for the first time. The previous research conducted has examined how athletes are motivated and how promoting an environment that fulfills their needs for growth, allows for athletic improvement. With past research exploring the needs for personal growth, which were explained by SDT, the current research provides support for the SDT. The current research shows that when certain needs are met, an individual is able to obtain their goals of high levels of performance. Previous research has also looked at how coaches can provide a specific type of atmosphere to enable growth in their athletes. The current results are able to provide a new viewpoint for coaches to think about. With RARs demonstrating their connections with performance, an athletic coach might attempt to foster an atmosphere where the athletes develop RARs for motivation to succeed in that sport.

When looking at the current results, it can be seen that it supports the research done by Gore, Bowman, Grosse and Justice (in press). In the previous research, it was found that those with a health partner were positively associated with RARs in health behavior (RARH). Along with being associated with RARH and health partner, it was predicted based off this that it also predicted individual's efforts and progress during follow up session. This is supported by the current research in that we see how RARs can be associated with performance. With athletes being more motivated by RARs, it tends to be predicted that they will have higher levels of performance in an athletic setting. This is similar to how those with RARH will lead to predictions of great effort and progress in health related context. Both of these results provide evidence for the hypothesis; RARs can influence motivation and goal attainment, along with being able to predict whether individuals succeed or not.

All the implications of the current research are vast and important. By understanding how RARS affect motivation, coaches and other athletic staff obtain the ability to better help their athletes perform and reach their goals. Along with the athletic setting, the current research also provides support for similar research in the field of health behavior. RARs where shown in both studies to be associated with performance and both predicted higher levels of performance.

### **Limitations and Future Directions**

The current study has a few limitations to its use in the area of motivations. The current study had sixty-six participants, with only seven of them being a part of individual sports. Further research should try to obtain a larger number of athletes from

individual sports to have a more even sample size between the two groups. The issue of having non-significant results for the moderation effect might be fixed with a larger and more even sample size of athletes. Another limitation is finding a usable statistics for all individual athletes in the sample. With the varying degree of types and amount of statistics available, it can be difficult to find a usable performance score. Even with these limitations, the current study did provide a starting point for further research to continue the study of motivation and athletes.

Future research can use the current research to examine whether RARS affect motivation and performance on other athletic populations. Since the current research looked at collegiate athletes, future research could examine those in high school, or even the professional levels. Along with looking at other populations, further research should examine the currently used population with focusing on gathering larger sample size, focusing on finding larger numbers of those in individual sports. These are just some of the few possible areas to be examined in the future when it is related to the athletic setting. Other fields could benefit from the study of RARs and understanding how individual is motivated, such as those in the military.

### **Conclusion**

Based off these results, it can be seen that those in sports teams tend to have higher levels of RARs than those in individual teams. This provides great insight into how we understand motivation and how it is fueled. By knowing how individuals are motivated, professionals are better prepared to support them and encourage them to succeed. In addition, knowing that teams foster an environment where RARs are

common, we are able to see how each member is able to strive for perfection with the support and encouragement of their team. The only main problem with the current research was that the sample size obtained was rather small due to lack of available athletes and the lack of obtainable performance scores. Further research should continue examining whether RARs are more prominent in team sports than individual sports, along with who has a higher level of performance, and whether those with High RAR will have the highest level of performance observed. For further research, more individual sports teams should be surveyed along with obtaining larger amounts of performance scores to standardized scores between all individuals. The current research has shown strong support for RARs as strong influence in motivation with athletes and a strong force behind achieving higher levels of performance.

## List of References

- Adie, J. W., Duda, J. L., & Ntoumanis, N. (2008). Autonomy support, basic needs satisfaction and the optimal functioning of adult male and female sport participants: A test of basic needs theory. *Motivation and Emotion, 32*, 189-199. doi:10.1007/s11031-008-9095-z
- Deci, E. L., & Ryan, R. M. (2000). The 'what' and 'why' of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry, 11*, 227-268.
- Edmunds, J., Ntoumanis, N., & Duda, J. L. (2006). A Test of Self-Determination Theory in the Exercise Domain. *Journal of Applied Social Psychology, 36*, 2240-2265. doi:10.1111/j.0021-9029.2006.00102.x
- Fortier, M. S., Sweet, S. N., O'Sullivan, T. L., & Williams, G. C. (2007). A self-determination process model of physical activity adoption in the context of a randomized controlled trial. *Psychology of Sport and Exercise, 8*, 741-757. doi:10.1016/j.psychsport.2006.10.006
- Gore, J. S. (2013). Individual differences that moderate the effectiveness of relational reasons for self-improvement. *Motivation and Emotion*.
- Gore, J. S. (in press). The influence of close others in daily goal pursuit. *Journal of Social and Personal Relationships*.
- Gore, J. S., & Cross, S. E. (2006). Pursuing goals for us: Relationally autonomous reasons in long-term goal pursuit. *Journal of Personality and Social Psychology, 90*, 848-861. doi:10.1037/0022-3514.90.5.848
- Gore, J. S., Cross, S. E., & Kanagawa, C. (2009). Acting in our interests: Relational self-construal and goal motivation across cultures. *Motivation and Emotion, 33*, 75-87. doi:10.1007/s11031-008-9113-1
- Gore, Bowman, Grosse, & Justice (in press). Let's be healthy together: Relational motivation for physical health is more effective for women. *Motivation and Emotion*.

- Graziano, W. G., Hair, E. C., & Finch, J. F. (1997). Competitiveness mediates the link between personality and group performance. *Journal of Personality and Social Psychology*, *73*, 1394-1408. doi:10.1037/0022-3514.73.6.1394
- Hagger, M. S., & Chatzisarantis, N. D. (2009). Integrating the theory of planned behaviour and self-determination theory in health behaviour: A meta-analysis. *British Journal of Health Psychology*, *14*, 275-302. doi:10.1348/135910708X373959
- Hagger, M., & Chatzisarantis, N. (2008). Self-determination theory and the psychology of exercise. *International Review of Sport and Exercise Psychology*, *1*, 79-103. doi:10.1080/17509840701827437
- Hagger, M. S., Chatzisarantis, N. D., Hein, V., Pihu, M., Soós, I., & Karsai, I. (2007). The perceived autonomy support scale for exercise settings (PASSSES): Development, validity, and cross-cultural invariance in young people. *Psychology of Sport and Exercise*, *8*, 632-653. doi:10.1016/j.psychsport.2006.09.001
- Iyengar, S. S., & Lepper, M. R. (1999). Rethinking the Value of Choice: A Cultural Perspective on Intrinsic Motivation. *Journal of Personality and Social Psychology*. *76*, 349-366.
- Kumashiro, M., Rusbult, C. E., & Finkel, E. J. (2008). Navigating personal and relational concerns: The quest for equilibrium. *Journal of Personality and Social Psychology*, *95*, 94-110. doi:10.1037/0022-3514.95.1.94
- Ng, J. Y., Ntoumanis, N., Thøgersen-Ntoumani, C., Deci, E. L., Ryan, R. M., Duda, J. L., & Williams, G. C. (2012). Self-determination theory applied to health contexts: A meta-analysis. *Perspectives on Psychological Science*, *7*, 325-340. doi:10.1177/1745691612447309
- Reinboth, M., Duda, J. L., & Ntoumanis, N. (2004). Dimensions of coaching behavior, need satisfaction, and the psychological and physical welfare of young athletes. *Motivation and Emotion*, *28*, 297-313. doi:10.1023/B:MOEM.0000040156.81924.b8

- Ryan, R. M., & Solky, J. A. (1996). What is supportive about social support? On the psychological needs for autonomy and relatedness. In G. R. Pierce, B. R. Sarason, I. G. Sarason (Eds.) , *Handbook of social support and the family* (pp. 249-267). New York, NY US: Plenum Press.
- Sheldon, K. M., & Elliot, A.J. (1998). Not all personal goals are personal: Comparing autonomous and controlled reasons for goals as predictors of effort and attainment. *Personality and Social Psychology Bulletin*, *24*, 546-557.
- Sheldon, K. M., & Elliot, A.J. (1999). Goal striving, need satisfaction, and longitudinal well-being: The self-concordance model. *Journal of Personality and Social Psychology*, *76*, 482-497.
- Smith, A., Ntoumanis, N., & Duda, J. (2007). Goal striving, goal attainment, and well-being: Adapting and testing the self-concordance model in sport. *Journal of Sport & Exercise Psychology*, *29*, 763-782.
- Vlachopoulos, S. P., & Michailidou, S. (2006). Development and Initial Validation of a Measure of Autonomy, Competence, and Relatedness in Exercise: The Basic Psychological Needs in Exercise Scale. *Measurement in Physical Education and Exercise Science*, *10*, 179-201. doi:10.1207/s15327841mpee1003\_4

APPENDIX A:

Scale

**Please answer the following questions.**

1. What is your Gender? \_\_\_\_\_
2. If you are an athlete, which sports(s) do you play? \_\_\_\_\_

**Please use the scale below to rate the following statements:**

1	2	3	4	5
Strongly Disagree	Disagree Somewhat	Neutral	Agree Somewhat	Strongly Agree

3. \_\_\_\_\_ I am very committed to my sport.
4. \_\_\_\_\_ I put a lot of effort every week toward my sport.
5. \_\_\_\_\_ I often find myself thinking of my sport.
6. \_\_\_\_\_ The work I put into my sport is often effective.
7. \_\_\_\_\_ I find myself “slacking off” when I am training for my sport.
8. \_\_\_\_\_ I am happy with the progress I’ve made in my sport.
9. \_\_\_\_\_ I often monitor how close I am to becoming a better athlete I my sport.
10. \_\_\_\_\_ The progress I’ve made toward becoming a better athlete is close to where I think it should be.
11. \_\_\_\_\_ A lot of people support my participation in this sport.
12. \_\_\_\_\_ Whenever I receive support form other people for being an athlete, I find it to be rewarding.
13. \_\_\_\_\_ I wish I were receiving more support from others for being an athlete.
14. \_\_\_\_\_ I believe playing this sport reflects who I am as a person.
15. \_\_\_\_\_ The participation in this sport gives me a sense of purpose.
16. \_\_\_\_\_ When I am training, I feel like I am working on something meaningful.

**The time and energy I devote to my sport is because....**

17. \_\_\_\_\_ The situation demands it.
18. \_\_\_\_\_ It is important to someone close to me.
19. \_\_\_\_\_ It provides me with fun and enjoyment.
20. \_\_\_\_\_ I would let someone else down if I did not.
21. \_\_\_\_\_ I really believe it’s an important thing to do.

22. \_\_\_\_\_ I would feel left out if I did not.
23. \_\_\_\_\_ I would feel guilt, ashamed, or anxious if I did not.
24. \_\_\_\_\_ The other people involved make it enjoyable.
25. \_\_\_\_\_ It strengthens a relationship with someone I'm close to.
26. \_\_\_\_\_ Someone I'm close to thinks it is enjoyable.
27. \_\_\_\_\_ Someone I am close to is pursuing the same goal, and we both enjoy it.
28. \_\_\_\_\_ It allows me to express my independence and individuality.
29. \_\_\_\_\_ It gives me a sense of control in my life.

APPENDIX B:  
Consent Form

Researcher's Name: Josef Katzman

Title: Relational Autonomous Reasons for Motivation in Athletes

I am a General Psychology Masters student at Eastern Kentucky University who is conducting a study in which you will complete short *questionnaire*. Along with the survey completed your previous game statics shall be used as well. Your participation should take no longer than 10 minuets.

Participation is voluntary and you have the right to refuse to answer any question or withdraw from the study at any time without giving prior notice and without penalty.

Your name shall be obtained to match game statics with survey. Once the game statics are gathered your name shall be stricken and an ID code shall be used to instead. After you complete the session you will be given an explanation of the study. If you wish to participate in this study and all of your questions have been answered, please sign below and return this form to the researcher.

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

APPENDIX C:  
Debriefing Form

Thank you for participating in my research study. The purpose of this study was to examine the relationship between Motivation and performance. The hypothesis for the research was that those with relational-autonomous reasoning's for motivation would perform better in their sport. Along with those in team sports compared to individual sports would have higher levels of relational-autonomous reasoning's for motivation. If you would like to look at past research that relates to this topic please look at the following references.

- Gore, J. S., & Cross, S. E. (2006). Pursuing goals for us: Relationally autonomous reasons in long-term goal pursuit. *Journal of Personality and Social Psychology*, *90*, 848-861. doi:10.1037/0022-3514.90.5.848
- Gore, J. S., Cross, S. E., & Kanagawa, C. (2009). Acting in our interests: Relational self-construal and goal motivation across cultures. *Motivation and Emotion*, *33*, 75-87. doi:10.1007/s11031-008-9113-1
- Graziano, W. G., Hair, E. C., & Finch, J. F. (1997). Competitiveness mediates the link between personality and group performance. *Journal of Personality and Social Psychology*, *73*, 1394-1408. doi:10.1037/0022-3514.73.6.1394

Once again thank you for your time and participation and if you have any questions about the research or would like further information about the study please contact me.

Researcher name: Josef Katzman

Study name:

Email: [Josef\\_Katzman@eku.edu](mailto:Josef_Katzman@eku.edu)