

A Qualitative and Quantitative Survey Design of the Benefits of Intrinsic Motivation in  
Softball Players

Capstone Project

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The Master of Education Degree in the  
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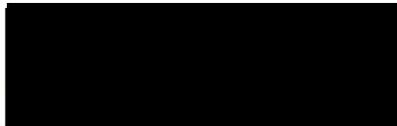
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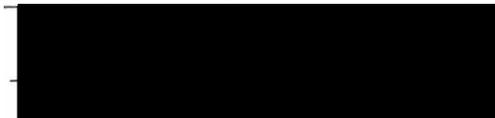
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## **Abstract**

The purpose of this paper was to identify the benefits of intrinsically motivated softball players versus extrinsically, and the impact their coaches' behavior plays on their motivation throughout the Northern Sun Intercollegiate Conference (NSIC). This study was drawn through a Qualtrics survey that was sent out and open to all current members of the NSIC. Subjects were reached via email survey from their current head coach asking/giving them the option to participate in the voluntary survey. The data was drawn and collected from each of the 15 participating schools in the NSIC.

Throughout this paper it will be noticed the results from both the athletes and coaches who have used intrinsic motivation while competing. Intrinsic motivation describes an individual who participates in an activity (sport) for internal reasons or benefits (e.g., personal pleasure, excitement, finding the challenge fun or interesting, or personal health benefits.). This paper also analyzes the effects in which coaching behavior plays towards an intrinsically motivated athlete (softball player). The purpose is to help collegiate coaches stray their athletes away from the constant "what can I get?" idea and to help them build more of an intrinsically based motivation for a lifetime.

## Table of Contents

Acknowledgments	i
Dedication	ii
Abstract	iii
Table of Contents	iv
Chapter One Introduction	1
Purpose of the Study	1
Background and Significance of the Study	2
Setting	3
Assumptions	4
Scope and Limitations of the Study	5
Definitions	5
Summary	6
Chapter Two Literature Review	8
Pros and Cons of Intrinsic Motivation	8
Coach Behavior Impact on Motivation	12
Summary	14
Chapter Three Methodology	16
Research Design	16
Setting and Participants	16
Instrument	18
Data Gathering and Analysis	18

Summary	19
Chapter Four Results and Discussion	20
Results	20
Discussion	27
Chapter Five Summary and Conclusion	28
Significant Findings	28
Educational Implications	28
Recommendations for Future Research	29
Limitations	29
Summary	30
References	31
Appendices	35
Appendix I: IRB Approval Email	36
Appendix II: Survey Questionnaires	37

## **List of Tables**

Table 1: Participant Characteristics	21
Table 2: Intrinsic and Extrinsic Motivation Subscale Item & Internal Consistency, Reliability	22
Table 3: Coach Behavior Scale & Internal Consistency, Reliability	23
Table 4: Impact of Coach Behavior on Intrinsic Motivation: Multiple Regression Analysis	24
Table 5: Impact of Coach Behavior on Extrinsic Motivation: Multiple Regression Analysis	25

## **Chapter One**

### **Introduction**

Competitive. That is one of the few words that you will see across the board when you ask athletes at a collegiate level to describe themselves. Most athletes by nature have a strong desire to compete or to succeed. Yet there is a huge difference in athletes as they try and explain what it is that gets them excited, motivated, or even their reasoning for participating in sport. Throughout this paper you will see the difference in extrinsically motivated athletes (softball players) versus intrinsically motivated athletes (softball players) throughout the Northern Sun Intercollegiate Conference (Division II). You will then see clear-cut differences in why it is first important for coaches to recruit intrinsically motivated athletes versus extrinsically motivated athletes. From there a guide will be shown as to how coaches' behaviors can impact and persuade athletes motivational preferences and how their behavior can truly play a role in their personal program.

### **Purpose of the Study**

The intention of this study was to first identify the differences between intrinsic and extrinsic motivation, then see how it is applied towards Division II intercollegiate softball players. By examining the difference in motivation, it creates the opportunity for coaches and athletes to build and hopefully "fuel" their desire towards their sport, in turn creating more passion for the game itself. Given the purpose of the study, the question that guides this research is what type of impact does coaches' behavior play on their athletes' intrinsic and extrinsic motivation?

## **Background and Significance of the Study**

“Assessing intrinsic and extrinsic motivation in sport settings is important because different types of motivation have been associated with different experiential outcomes” (Martens & Webber, 2002, p. 204). When an athlete develops or acquires a higher level of intrinsic motivation towards the sport, they increase the enjoyment of the activity, display a desire to compete, and are less likely to remove themselves from the sport. They want to be there participating in sport for themselves rather than just for the money or reward. “High extrinsic motivation has been associated with increased state of anxiety in young athletes” (Scanlan & Lewthwaite, 1984, p. 208). These types of athletes are most likely competing in sport for the rewards gained rather than the sport itself, and in turn are more likely to drop out from the sport. As a coach it is important to make sport fun, enjoyable, and also rewarding to each athlete. If an athlete is constantly feeling discouraged or not seeing results or achievements gained, they are more likely to draw away from the sport. “Thus, events or factors in the achievement environment that facilitate or enhance individuals’ perception of competence and self-determination will result in increases in their intrinsic motivation” (Amorose & Horn 2000, p. 64).

At a Division II collegiate sport level, 75% of the time spent in sport goes towards practice; the other 25% is spent on competition. If the athlete is worried or fixed on a reward or award, they will only then show up to perform to their greatest ability during competition. If an athlete is intrinsically motivated however, you will see them come day in and day out to practice to improve their game and take competition itself as a reward. Collegiate or even higher level high school coaches should try to bring the fun back to the game to create more intrinsically motivated athletes. They should find out what motivates each athlete to participate and play to

their fullest ability each day. Each athlete started the game of sport because they wanted to, or their parents encouraged them too. At this point there was no promise of reward, scholarship, or even another season of this sport. These young athletes were in it for that season to try sport and if that athlete enjoyed it, from there, if able, they would continue. We must remember that sport at the collegiate levels is not a job, even if the twenty plus hours a week makes it seem that way. The athlete should never feel as if the coach is a boss but rather a leader, and they are part of a team. This will relieve some of the “burn out” stage of athletes and hopefully in turn their performance will increase. According to Hardy, Jones and Gould (1993), “elite athletes must have high levels of intrinsic motivation in order to sustain effort through dips in form and confidence.”

“Research in the academic domain supports the idea that selected aspects of teachers’ behavior can be important factors affecting the intrinsic motivation of students” (Connell & Wellborn, 1991, p. 49). Though not much research has been done from a coach’s impact on their athletes regarding intrinsic motivation at a collegiate level, results show that athletes’ perception of ability and intrinsic motivation play a huge role in how their coaches have given feedback.

### **Setting**

The participant sample in this study is 15 Northern Sun Intercollegiate Conference teams, and at least three or more members from each of these participating teams. The conference is made up of 16 teams (Augustana College: Sioux Falls, SD; Bemidji State: Bemidji, MN; Concordia State University: St. Paul, MN; University of Mary: Bismarck, ND; University of Minnesota Crookston: Crookston, MN; University of Minnesota Duluth: Duluth, MN; Minnesota State University Mankato: Mankato, MN; Minnesota State Moorhead: Moorhead, MN; Minot State University: Minot, ND; Northern State University: Aberdeen, SD; University of Sioux

Falls: Sioux Falls, SD; Southwest State University: Marshall, MN; St. Cloud State University: St. Cloud, MN; Upper Iowa University: Fayette, IA; Wayne State University: Wayne, NE; and Winona State University: Winona, MN) from 5 different states (Minnesota, Iowa, North Dakota, South Dakota, and Nebraska). The participants ages range from 18-22 years of age. Due to what would be a breach of confidentiality and personal relations to the University of Minnesota Duluth, their softball team members were excluded.

### **Assumptions**

As a Division II coach in the Northern Sun Intercollegiate conference (NSIC), I have had struggles in not only identifying athletes' motivation, but also developing athletes' intrinsic motivation as a coach. Being that I also competed four years as a softball player in the NSIC for Winona State University, I know how important motivation is to each athlete in order to succeed and make it through the practices and competition schedule for four years. I also know how crucial of a role my coach was in either enhancing or deteriorating my motivation. I am fortunate to still be a part of the NSIC, and now roles are reversed. Having played under a male coach and now coaching with a female, I have gained knowledge of a wide divergent of styles throughout those programs.

Biases that I have towards this study are that I believe that intrinsic motivation has to be instilled in each athlete to some degree in order for them to achieve their full potential. This is especially crucial in Division II softball where some athletes/teammates are on scholarship dollars and others are not. My expectations of this study is to help athletes in the league find out what truly drives them in sport, and for coaches to use a more autonomy-orientated pattern of coaching to promote these motivations. This study and research is extremely important to me because it will help me down the road in my career as a collegiate coach. It will not only help me

as a coach to bring these factors out in my athletes but also hopefully help my athletes enjoy and really reach their full potential in their short four years of collegiate competition.

### **Scope and Limitations of the Study**

This study was limited to the current members of the NSIC Division II present athletes during the year of 2014 that were willing to participate. Typically on a team at this level there are 17 members of each team. So 103 out of 255 isn't including every current member of the NSIC softball teams. The results are not a representative of all Division II softball schools, just one conference. There are 295 schools currently making up Division II softball so the results are just a small northern piece.

This study was also limited to only Division II. In Division II, unlike Division III, scholarships are available to some degree and some schools are allotted more dollars to disperse throughout their team members. In this study some participants were members of a fully funded program, and some were not.

The data was collected through the using of the University of Minnesota Duluth online survey tool, Qualtrics. This survey tool brings forth the risk of various interpretations of the questionnaire items, which limits the reliability of the results.

### **Definitions**

- Division II: an intermediate-level division of competition, which offers an alternative to both the highly competitive level of intercollegiate sports offered in Division I and the non-scholarship level offered in Division III. Division II provides an intersection where athletically gifted students can compete at a high level, while maintaining much of a traditional student experience. "Very few of the 100,000 student-athletes competing in

Division II receive a full athletics grant that covers all of their expenses, but most of them will receive some Financial Aid to help them through school.” (Scottsdale, S., 2014)

- Extrinsic Motivation: describes an individual who participates in an activity (sport) for external reasons (e.g., to earn a reward or avoid a punishment).
- Fully Funded: Division II offers some schools fully funded scholarships. This means that they are granted from the high end 7.2 full rides (which means 7.2 complete athletic scholarships that will pay for all of ones tuition costs at that college) to be dispersed between their athletes. This can also mean that 7 athletes are on fully paid for tuition and others might not have a single dollar.
- Intrinsic Motivation: describes an individual who participates in an activity (sport) for internal reasons or benefits (e.g., personal pleasure, excitement, finding the challenge fun or interesting, or personal health benefits).
- Northern Sun Intercollegiate Conference: this is just one of the many conferences that make up Division II softball. This conference contains 16 teams, from five different states. These teams have anywhere from 12-24 current members (athletes) that compete.

## **Summary**

How can one affect motivation, especially intrinsic? “As a player only you can decide as to what level you want to do something, but this can be influenced by others. The best motivation for anyone is success- if you achieve at something it is a positive reinforcement and you are more likely to attempt to repeat the behavior. As a coach you can have an effect on this by reinforcing desirable behaviors with praise and positive feedback” (Barracough, 2013, p. 63).

It is important for the athlete to have a growth mindset in believing that her abilities can improve with effort. It will create an atmosphere of optimism and persistence when dealing with

setbacks and a coach you should always praise effort to promote this type of mindset. The result of this study will provide information about factors associated with intrinsic motivation in collegiate softball players. The results and information could also play a crucial role in the literature on coaching effectiveness by identifying coaching behaviors that are either positively or negatively related to athletes' intrinsic motivation.

## Chapter Two

### Literature Review

The literature reviewed in this chapter provides the foundation in which the idea for this research was built. The review covers the predominant themes regarding athlete motivation, pros and cons of these themes, and the role that the teacher/coach's behavior plays. Finally, the current thinking on intrinsic motivation with athletes and the impact their coaches play on them is addressed.

### Pros and Cons of Intrinsic vs. Extrinsic Motivation

**Pros of Extrinsic Motivation.** In the Division II setting, athletic scholarship dollars are a factor that many athletes tend to use as motivation. Money or prize are again considered extrinsically motivational factors, though they may not always play a role in determining an athlete's whole reason for playing sport. A scholarship itself, as a reward might not be the deciding factor when showing a decrease in intrinsic motivation. In fact it is more so how the coaches use the scholarships to "control" the athletes. "Athletes who were on scholarship and who perceived that a relatively small number of their teammates were also on scholarship had an increasingly higher rate of intrinsically motivation present" (Ryan, 1977,1980, p. 33). The disbursement of scholarship dollars and how the coach decides to use, or reward these athletes play a large factor in the motivational aspect. Ryan's study points to that rewards or awards that are given must be wisely chosen to fit in with success and effort. With that being said, not all extrinsically motivated pieces are negative impacts towards an athlete's overall motivation.

"Cognitive evaluation theory predicts that awards/rewards given to an individual in an achievement context can either enhance or undermine that individual's intrinsic motivation, depending on how the award is perceived by the performer" (Amorose & Horn, 2000, p. 66).

One way to tell if the reward or award given plays a positive or negative impact is to determine if it is a controller over his or her behavior. In Ryan et al., study provides support for the influence of awards on intrinsic motivation. E.Ryan (1977, 1980) conducted two field studies to examine the effects of athletic scholarships on intrinsic motivation levels in collegiate athletes.

“Assessing intrinsic and extrinsic motivation in sport settings is important because different types of motivation have been associated with different experiential outcomes” (Martens & Webber, 2002, p. 206). If you have an athlete where you are aware they are extrinsically motivated you can use the rewards to benefit the athlete. They are normally more likely to take constructive feedback to improve and obtain their medal or award. They are also likely to perform to their potential in a given situation (e.g., playing for a championship) in order to obtain their reward.

**Cons of Extrinsic Motivation Amongst Athletes.** “High extrinsic motivation has been associated with increased state of anxiety in young athletes” (Scanlan & Lewthwaite, 1984, p. 212). These types of athletes are most likely competing in sport for the rewards gained rather than the sport itself, and in turn are more likely to drop out from the sport.

In 1985, Deci and Ryan published a book that explains extrinsic motivation. They introduced the ideas of external regulation, interjected regulation, and integrated regulation. Studies show that higher (college and beyond) level athletes use external regulation in order to receive medals, trophies, money, fame, or simply avoid sitting on the bench during competition.

With interjected regulation, individuals internalize the reasons for their actions. This type of motivation possesses effect on athletes who might be in sport for the wrong reasons. They might have been forced into sport because their parents made them, or were trying to live through them; because they want money eventually from it; or even because they are trying to

impress this or that person. With this type of motivation athletes simply aren't playing sport for themselves, it is a factor coming from the outside. Studies show this normally affects athletes at a younger age: 10-15 years old. "Performing badly in a sport leads one to feel incompetent, and this in turn fuels a loss of intrinsic motivation and identified regulation and concomitant increase in external and introjected regulation and amotivation" (Vallerand, 2001, p. 270). With research like this it separates the athletes from the enjoyment of the actual game, to those with other motivational purposes.

The extrinsic reward could potentially provide negative information and outlook on the athlete's ability if they are not chosen for that one award. Extrinsically motivated athletes might have higher depression or hold onto losses, bad outcomes, longer. They are also less likely to perform to their highest level day in and day out if their isn't a constant reward or obtainable goal. Players like these are normally the "gamers" but often times the headaches when it comes to practice. They aren't willing or see the point in giving it their all if nothing is on the line during that point in time.

**Pros of Intrinsic Motivation in Athletes.** Athletes have been shown to play better, and have more of a drive towards their sport when they are enjoying the actual activity and are surrounded by positives. When athletes develop or acquire a higher level of intrinsic motivation towards the sport, they increase the enjoyment of the activity, display a desire to compete, and they are less likely to dropout from the sport. They actually want to be there participating in sport for him or her rather than just for the money or reward.

According to Hardy, Jones and Gould (1993), "elite athletes must have high levels of intrinsic motivation in order to sustain effort through dips in form and confidence." Intrinsically motivated athletes have fewer changes (ups and downs) in motivation and are more willing and

able to forget the past mistakes, or loss and are more eager to move on to the next opportunity in sport. Athletes who play for the love or enjoyment are athletes who are normally less stressed, and see the sport as sport, rather than a job; which provides them with greater satisfaction throughout each activity related to sport. Because an intrinsically motivated athlete is more focused and wanting to do the activity they have less distractions associated with the sport, whereas extrinsically motivated athletes are concerning themselves when doing sport with the reward or external factor.

From the integrated motivational side, an athlete might not decide to do this or that activity because of one's dedication to the game. Research on an integrated athlete shows most of these decisions are made by athletes with dreams of playing a collegiate sport or in the professionals. "It wasn't just the practices, game schedule, or even road time that my team has put in day in and day out. We have given up a lot of our social life. We chose to stay in on Saturday nights, to not jump into relationships during the regular season, to stay away from associating ourselves with situations that could potentially hurt our performance down the road" (Verducci, 2014, p. 4). This type of intrinsic motivation is clear that they have committed and dedicated essentially their life for the love of the sport itself.

Usually more intrinsically motivated athletes are willing to put in more hours and more task-relevant focus toward sport itself. They want to try harder to improve their abilities and understand more about the sport itself and their performance. These athletes will show up every day regardless of an award at stake simply because they are interested and the sport provides a positive factor in itself.

Intrinsically motivated athletes are more about the "team" in sport rather than the benefits or external factors that might come with it. They are less likely to carry a grudge, blame a

teammate, or have a bad day when arriving or finishing sport. Because they are playing with an internal desire to do well and for the satisfaction sport brings to them, they aren't so drawn into the complete final result.

**Cons of Intrinsic Motivation in Athletes.** There are only a few negatives that come from extremely high intrinsically motivated athletes. When an athlete is so invested in something for their own personal benefits, they might make the activity more like a job rather than what it first meant to them. When athletes become so focused on doing the activity or sport itself it takes over their life and can potentially put them in the burn out stage. Their stress over their sport can also interfere with their intrinsically motivated mindset.

Athletes with intrinsic motivation might also not take sport so seriously or truly evaluate to get to the next level. These athletes could be just fine with “going through the motions” because they don't have that burning desire to obtain anything other than self-satisfaction they get out of sport. This can cause a lot of highly competitive teammates and coaches stress and they often find it hard to build up the athlete's “fire” to win. Often times you might look at these athletes as the “walkers”. They just are doing it because it's fun, not to really obtain anything else out of it.

### **Coaches' Behavior Impact on Motivation**

“Research in the academic domain supports the idea that selected aspects of teachers' behavior can be important factors affecting the intrinsic motivation of students” (Connell & Wellborn, 1991, p. 27). There has been little research in the sport setting to determine coaching behavior as a factor in affecting collegiate athletes' intrinsic motivation, yet there have been numerous studies with younger athletes. “Teachers (coaches) may exhibit either a controlling pattern of behavior in the classroom or a more autonomy-oriented pattern of behavior

encouraging and supporting the transfer of responsibility for student behavior to the students (athletes) themselves” (Deci, Nezlek & Sheinman, 1981, p. 8). This study exhibited the intrinsic motivation amongst students when having either an autonomy-oriented teacher or a controlling teacher. The results provided that those with a leader who have a more autonomy-oriented approach will produce athletes/students with a higher intrinsically motivated score versus those with a more controlling leader. The leader (coach) must be careful on how he or she decides to reward or punish his or her athletes. It starts from the top.

When creating a positive, highly intrinsically motivated team, one needs to be cautious on how deciding to reward athletes without making them rely on a reward to finish a task. If there is an over-emphasis on extrinsic motivation, it may lead athletes to feel like their behavior is controlled by the extrinsic reward. “Coaches’ flows of communication remain one of the key factors that boosts the athletes’ motivation. Coaches must put their self-interest away in treating their athletes. There must be zero favoritism in the field so an athlete is happy and motivated to train. Positive character building may lead athletes to have positive feedback and trigger their motivation” (Samah, A., Hanie, I., & Olutokunbo, S. , 2013, p. 136-141).

By examining the influence of perceived coaching feedback patterns and coaches’ general leadership styles on college athletes’ intrinsic motivation, Amorose and Horn revealed that “coaches who were perceived to exhibit high frequencies of positive, encouraging, and informational feedback, high levels of democratic behavior, as well as low levels of autocratic behavior and low frequencies of ignoring players performance attempts, had athletes who reported higher levels of intrinsic motivation” (Amorose & Horn, 2000, p. 66).

“In 1992, Vallerand and colleagues proposed and showed that there are at least three types of intrinsic motivation: intrinsic motivation toward accomplishments, intrinsic motivation

to know, and intrinsic motivation toward accomplishments” (Vallerand, 2001, p.305). Each of these models proposes something different and can give coaches ideas on how to better their programs with certain athletes.

Recent research at the collegiate level states that most athletes, when being recruited aren't just recruited for their talents. These athletes are looked at on a spectrum. Their enjoyment while playing the sport they love, their reasoning behind playing, and their competitive nature. This helps the process of recruiting already intrinsically motivated athletes for their future program, though it is not always possible to get to know a recruit that well before they commit.

### **Summary**

Motivation levels can be altered, measured, and changed due to a specific point in time. “Motivation at the situational level refers to a motivational state” (Vallerand, 2001, p. 66). Motivation is one of the hardest things to measure, simply due to the fact it is all internal. It is crucial to success in anyone's life, not just an athlete. “People who have more motivation in their work environment are proven to be more successful and love what they do” (Kjerulf, 2007, p. 82). Though motivation does not completely correlate with competitiveness in oneself, these are the forces that drive everyone to get to the next level.

Whether one is an athlete playing for intrinsic motivational factors such as enjoyment and personal betterment, or extrinsic factors like scholarships or avoiding punishment; we all use these motivations in determining how we are going to perform. Many people pick careers out of intrinsic motivations, because they liked this or that subject or it was interesting and intriguing to themselves. One finds oneself saying, “because we want to” with intrinsic motivation. The more athletes experience competence and success due to their own actions and skills the greater their

intrinsic motivation. Even with the presence of extrinsic rewards such as scholarships you can help increase or maintain the intrinsic motivation of college athletes.

“Intrinsic motivation is considered to be the healthiest type of motivation and reflects an athlete’s motivation to perform an activity simply for the reward inherent in their participation. Strictly extrinsic motivational reasoning in an athlete can be detrimental to not only the athlete’s success and future but also their team’s outcome. Athlete’s interpretation on coaches’ behavior and attitudes can lead to positive or negative impacts on their athlete’s own personal motivation” (“Sports psychology, Motivation, 2014”).

The results of this study may provide important information about the factors associated with intrinsic motivation in Division II collegiate athletes (specifically softball). This study might also play a role in enhancing collegiate coaches to better facilitate their time with their athletes in enhancing their intrinsic motivation.

## **Chapter Three**

### **Methodology**

This study was a randomized controlled trial, which was used to test the efficacy and effectiveness of intrinsic motivation in Division II Northern Sun Intercollegiate Conference softball players and the impact their coaches' behavior plays. The population surveyed are current members from each of the 15 (excluding University of Minnesota Duluth) Northern Sun Intercollegiate Conference softball teams during the 2014-2015 season.

First this chapter describes the research design. Then it describes the setting and participants who were studied. Next, it discusses the development of the survey, and concludes with a description of the process used to gather and analyze the data.

#### **Research Design**

This study was a survey design trial using the online University of Minnesota Duluth survey tool, Qualtrics. It is a qualitative and quantitative survey to define the relationships of intrinsic motivation in the NSIC softball conference and their coaches' behavior impact.

#### **Participants**

The subjects for this study are current anonymous members of the Northern Sun Intercollegiate Conference representing 15 of the 16 schools. Participants were identified from the each of the participating NSIC softball roster lists and their head coaches. An email was sent out to their current head coaches to elicit their assistance in the recruitment in which they forwarded on inviting their players to voluntarily participate. Surveys were done voluntarily online between December 2-9<sup>th</sup> of 2014. Data was collected and stored with anonymous results labeling the participant as subject 1, etc., and the school they are currently members at.

Athletes were chosen because of their Northern Sun Intercollegiate softball membership and their current positions held on their team. The teams were chosen because of a close geographic and previous affiliation within the league to the researcher. The first two members of each of the 15 teams that participated were chosen to make the study randomized.

### **Setting**

The list of schools and their geographic locations are:

1. Augustana College: Sioux Falls, SD
2. Concordia University: St. Paul, MN
3. Minnesota State University: Mankato, MN
4. Southwest Minnesota State University: Marshall, MN
5. Upper Iowa University: Fayette, Iowa
6. University of Minnesota Crookston: Crookston, MN
7. Northern State University: Aberdeen, SD
8. University of Sioux Falls: Sioux Falls, SD
9. St. Cloud State University: St. Cloud, MN
10. Bemidji State University: Bemidji, MN
11. University of Mary: Bismarck, ND
12. Winona State University: Winona, MN
13. Wayne State College: Wayne, NE
14. Minnesota State University Moorhead: Moorhead, MN
15. Minot State University: Minot, ND

## **Instrument**

The methods used to collect the data were gathered by a self-administered online survey created specifically for this study using Qualtrics. There were 103 subjects statements/surveys gathered (at least three members from each of the 15 NSIC softball teams). Each one of the survey questions represented a result in their own personal beliefs and attitudes towards their motivation and the role their coaches behavior plays in their motivation. They were first asked three background questions with fill-in information to help identify if they were on athletic scholarship, the team they are currently playing for; the amount of years they have played in the NSIC conference. They were then asked to complete 23 questions, five point Likert scale strictly on motivation. From there they were given another five point Likert scale asking 19 different questions based off of their coaches' behaviors and styles. To finish the voluntary participants were asked 10 different written survey questionnaires asking them to write out their thoughts and what it is like at their school based off of motivation and coaches' behaviors.

## **Data Gathering and Analysis**

For each attributing question on the Likert scale they were asked to check either: Strongly disagree, disagree, neither agree nor disagree, agree, or strongly agree. This data was collected and analyzed through Qualtrics and marked with the subject number as well as their corresponding team. The fill-in questions were also collected and analyzed through Qualtrics which provided the subject number and corresponding team. The written survey questions were labeled with subject and school and were analyzed by the personal investigator as well as Insoon Han (Assistant Professor, University of Minnesota Duluth). Over half of the attributes were single word descriptors and others by a statement/phrase. All of the data was collected and stored using Qualtrics for two months after completion of the survey.

To capture each athlete's success and motivational impact, quantitative items were first analyzed. First the surveys provided a diagnostic ratio for each respondent's answers and were then calculated to find correlation between the question and each individual's responses. This was then turned into a ratio and calculated for each attribute. The statements and phrases provided by the subjects were used to investigate the why and how of athletes' decision making to provide support for the researched hypotheses. Mean scores were calculated on items that addressed participants' characteristics such as years, age, scholarship, and team apart of in the Northern Sun Intercollegiate Conference.

### **Summary**

Following the studies results, a qualitative and quantitative research analysis helps gain an understanding of the effect of both intrinsic motivation and coaches' behavior in Division II, NSIC softball players. Correlations were calculated between intrinsic and extrinsic motivation. The correlations were run through cronbach alpha internal consistency reliability for a ratio. This gave reliability and validity on coaches' behavior scale and internal consistency. The multiple regression analysis used determined the impact of coach behavior on intrinsic motivation, and impact of coach behavior on extrinsic motivation. Regarding the qualitative open-ended questions all 103 responses were looking for themes emerging and tallied the number of yes/no, positive and negative responses. From there one or two of the respondents were used to make purpose of the relevant data.

## Chapter Four

### Results and Discussion

This chapter analyzes the data through tables and open-ended quotes from the survey to provide results of the study. The survey gathered 115 responses but only 103 of them were completed and the other 12 responses were thrown out due to non-completion to ensure the survey's reliability. Throughout this chapter one sees the correlation between the subjects and their answers in terms of intrinsic motivation and the roles their coaches' behavior plays as well as the relations with previous research.

#### Results

**Participant characteristics.** Table 1 provides background of the subjects. This piece of the survey was used at the beginning of the Qualtrics survey to see the different participant characteristics. In this table you are able to see the number of years each subject has played in the Northern Sun Intercollegiate Conference and the percentage of participants this equates to. Then presented an amount of scholarship dollars they are on towards athletics in five different breakdowns (zero scholarship, less than half, half scholarship, more than half scholarship, and no response). The final participant characteristic captures the amount of how many responses from each Northern Sun Intercollegiate Conference team members participated and the average age of each participant.

**Motivation scale item and internal consistency, and reliability.** Table 2 presents the final items of the motivation scale and Chronbach alpha coefficient for the internal consistency reliability. Among 23 items in the original motivation scale, 11 items measured intrinsic

Table 1  
*Participant Characteristics (n=103)*

Variable	n	%
<b>Years in the NSIC</b>		
0-1 year	48	46.6
2 years	29	28.2
3 years	17	16.5
4+ years	9	8.7
<b>Scholarship toward athletics</b>		
Zero scholarship	13	12.6
Less than half scholarship	47	45.6
Half scholarship	23	22.3
More than half scholarship	19	18.4
No response	1	1.0
<b>Race/Ethnicity</b>		
African American/ Black	1	1.0
Asian American/ Pacific Islander	2	1.9
Caucasian/White, non-Hispanic	86	83.5
Hispanic/Latino	8	7.8
Native American/ American Indian	1	1.0
No response	5	4.9
<b>Team in the NSIC</b>		
1. Augustana College (Sioux Falls, SD)	3	2.9
2. Bemidji State University (Bemidji, MN)	9	8.7
3. Concordia State University (St. Paul, MN)	6	5.8
4. Minnesota State University- Mankato (Mankato, MN)	4	3.9
5. Minnesota State University- Moorhead (Moorhead, MN)	10	9.7
6. Minot State University (Minot, ND)	5	4.9
7. Northern State University (Aberdeen, SD)	6	5.8
8. Southwest Minnesota State University (Marshall, MN)	5	4.9
9. St. Cloud State University (St. Cloud, MN)	4	3.9
10. University of Minnesota Crookston (Crookston, MN)	6	5.8
11. University of Sioux Falls (Sioux Falls, SD)	11	10.7
12. Upper Iowa University (Fayette, IA)	8	7.8
13. University of Mary (Bismarck, ND)	10	9.7
14. Wayne State University (Wayne, NE)	3	2.9
15. Winona State University (Winona, MN)	13	12.6
<b>Age Mean 19.86, Standard Deviation 1.09, Range 18-22</b>		

Table 2

*Intrinsic and Extrinsic Motivation Subscale Item and Internal Consistency Reliability*

Item	Item-Total Correlation
<i>Intrinsic Motivation Subscale, Cronbach alpha internal consistency reliability, <math>r = .84</math></i>	
2. I play because I love the game	0.66
3. I play because I like my teammates	0.43
4. I play for personal pleasure	0.66
5. I play for the excitement	0.71
6. I play because I find the sport challenging, fun and interesting	0.68
8. I am passionate about the sport	0.72
15. I don't have any stress about competition or rewards	0.23
16. When playing softball I have no other worries	0.48
17. I have set personal goals for achievement throughout the season	0.51
21. I enjoy learning more about softball	0.65
<i>Extrinsic Motivation Subscale, Cronbach alpha internal consistency reliability, <math>r = .52</math></i>	
1. I play softball because I get money towards my tuition for it	0.29
11. I compete for other reasons other than my own personal	0.26
18. Rewards help me perform better	0.44
19. I put a lot of pressure on myself to get an end reward	0.46
22. If there isn't something to get rewarded with, I probably won't give it my all	0.14
23. If I wasn't playing softball in college I would be disappointing someone other than myself	0.15

motivation, seven items measured extrinsic motivation, and five items were filler. One item of the intrinsic motivation (7. I play to stay in shape), and one item of the extrinsic motivation (12. If I didn't have a scholarship I would still play softball) was removed from the analysis due to poor item quality, including low item-total correlation. Chronbach alpha coefficient was  $r=.84$  for the intrinsic motivation scale with 10 items, and  $r = .52$  for the extrinsic motivation with 6 items.

**Coach behavior scale and internal consistency, and reliability.** Table 3 displays the final items of the coach behavior scale and Chronbach alpha coefficient for the internal consistency reliability. All 19 items in the original coach behavior scale were included in data

Table 3

*Coach Behavior Scale and Internal Consistency Reliability*

Item	Item-Total Correlation
<i>Cronbach alpha internal consistency reliability, r = .95</i>	
1. My coach tries to build character in us athletes	0.64
2. My coach provides nonverbal and verbal positive reinforcement based off of positive behavior	0.77
3. I believe that my coach believes in me.	0.81
4. My coach is always very positive towards myself	0.82
5*. My coaches are often yelling and providing no hope or encouragement	0.67
6. My coach is very passionate about the sport	0.65
7. My coach uses different techniques to make the game more fun	0.60
8. My coach cares about myself and teammates beyond the game	0.71
9*. My coach is only happy if we win	0.60
10. My coach gives me confidence	0.82
11. My coach believes in me all of the time	0.80
12. My coach is same tempered throughout practice and games	0.46
13. My coach puts for his/her best effort to make me successful	0.82
14. My coach provides fairness throughout the team (no favorites)	0.75
15*. My coach only gives negative feedback	0.73
16. My coach recognizes athletes specific contributions to practices and the team	0.57
17. My coach works with us to create reasonable goals throughout the season	0.60
18. My coach provides positive feedback often	0.77
19*. My coach puts a lot of pressure and anxiety on me to perform well	0.62

*Note .* \* These four items were scored reverse.

analysis and four items with negative statements were scored reverse to calculate the total score.

Chronbach alpha coefficient was  $r=.95$  for the coach behavior scale.

**Impact of coach behavior on motivation.** The impact of the coach behavior on motivation was analyzed, and shown in Tables 4 and 5. Multiple regression analyses were conducted to examine the relationship between coach behavior and predictors, which are coach behavior, years in the NSIC, and scholarship amount. As can be seen in Table 4, only the coach behavior is positively and significantly correlated with the criterion, intrinsic motivation,

Table 4

*Impact of Coach Behavior on Intrinsic Motivation: Multiple Regression Analysis*

Variable	Intrinsic Motivation				
	B	Std. Error	Beta	t	p-value
(Constant)	25.14	2.79		9.02	0.00
Coach behavior	0.18	0.03	0.50	5.64	0.00**
Years in the NSIC	0.38	0.44	0.08	0.88	0.38
Scholarship Amount	0.84	0.45	0.16	1.87	0.06
R <sup>2</sup>	0.27				
F	12.11**				

Note. \*\*  $p < .01$

Table 5

*Impact of Coach Behavior on Extrinsic Motivation: Multiple Regression Analysis*

Variable	Extrinsic Motivation				
	B	Std. Error	Beta	t	p-value
(Constant)	22.37	2.33		9.61	0.00
Coach behavior	-0.06	0.03	-0.23	-2.28	0.03*
Years in the NSIC	-0.13	0.36	-0.04	-0.37	0.72
Scholarship Amount	0.57	0.38	0.15	1.52	0.13
R <sup>2</sup>	0.07				
F	2.42				

Note. \*  $p < .05$

indicating that those who rated higher scores on coach behavior tend to have higher intrinsic motivation. The multiple regression model with the three predictors produced  $R^2 = .27$ ,  $F(3, 98) = 12.11$ ,  $p < .01$ , which means that three predictors explained 27% of variance in intrinsic motivation. A subsequent stepwise regression analysis revealed that 24% of the variance of intrinsic variance was explained solely by the coach behavior ( $F(1, 100) = 30.87$ ,  $p < .01$ ), and other two variables were automatically excluded with no significance.

In contrast, Table 5 demonstrated that the coach behavior is negatively and significantly correlated with the criterion, extrinsic motivation, indicating that those who rated higher scores

on coach behavior tend to have lower extrinsic motivation. The multiple regression model with the three predictors produced  $R^2 = .07$ ,  $F(3, 98) = 2.72$ ,  $p = .07$ , which is not significant. A subsequent stepwise regression analysis revealed that 5% of the variance of intrinsic variance was explained solely by the coach behavior ( $F(1, 100) = 4.89$ ,  $p < .05$ ), and other two variables were automatically excluded with no significance.

**Qualitative results from open-ended questions.** For the qualitative portion of this data open-ended questions were asked. Questions one through three were background questions regarding the participants reasoning for choosing their current school in the Northern Sun Intercollegiate Conference. Questions four through six were asked in regards to the participants reasoning for continuation of the sport itself. These questions illustrate a background on the participant and reasoning for their choices of continuation and weren't analyzed thoroughly because of their small significance to the surveys purpose. Question number eight of this studies open-ended portion was "Would you say your coach has or plays a big part in your success or continuation to love/hate the game?" When selecting the first two participants/responses (first two participants from each team to respond) from each of the 15 schools for a total of 30 subjects, 25 of them agreed and responded "yes" with an explanation. As a couple participants responded, "HUGE part in why I love the game so much," "Coaches play a huge part in the love or hate for the game. Whether the players admit it or not they have some sort of impact for how we view the game itself." The other five were responses stating that their coach plays no part in their continuation or love/hate for the game. With 83% of these student-athletes responding yes to their coach playing a big part in their success or continuation one can see how these athletes are impacted and influenced by their coaches behavior either positively or negatively towards the game itself.

Question number nine of the open-ended question was “How would you describe your motivation tendencies in softball?” Participants overwhelmingly responded with “good, or high and self-motivated.” One particular participant responded “I would say I am intrinsically motivated. I am on scholarship but it’s not major. I play because I love the game and I want to do my best. I love my team and I want all of us to have the ability to be successful. It’s not all about wins and losses, it’s about playing to the best of your ability and the wins will come on their own if you’re doing your best.” The last open-ended question was for the participants to ask question or leave additional comments.

## **Discussion**

This study was conducted to gather more information on the Division II collegiate softball athlete’s intrinsic motivation and how it would vary as a function of several factors including athletes’ scholarship status, and their coaches’ behavior. The hypothesized relationships examined were through the use of a series of data analyses. The results provided some interesting information concerning intrinsic motivation in athletes and are discussed in the following paragraphs.

No evidence was found in this study to support the idea that athletes on scholarship are lower in intrinsic motivation than are non-scholarship athletes. This could be found that even by giving scholarship it may enhance athletes’ intrinsic motivation because of their drive to love the game more because of the reward. This sheds light of attribution, intrinsic motivation, and athletics: A replication of extension findings (Ryan, E.D., 1977) whose results suggested that athletic scholarships might serve to enhance athletes’ intrinsic motivation.

The second purpose of this study was to examine the relationship between intrinsic motivation and the perceptions of their coaches' behaviors. In general the results found that coaches behavior and intrinsic motivation were tied hand in hand. Based on previous research it had been hypothesized that "coaches who provide high frequencies of positive, encouraging and informational-based feedback facilitate the development of intrinsic motivation in their athletes" (Black & Weiss, 1992; Pelletier & Vallerand, 1985). As seen in Table 4, those who had higher intrinsic motivation tended to have higher scores related to coaches behaviors.

### **Summary**

This study examined the relationship between the Division II Northern Sun Intercollegiate Conference softball student-athletes and their intrinsic motivation as well as coaches' behavior related with previous research that was found. In line with cognitive evaluation theory (Deci and Ryan, 1985,2000) this research shows the importance of coaching behavior to enhance the intrinsic state of each individual athlete. Similarities in this research also aligned with a meta-analytic review of experiments examining the effects of extrinsic rewards on intrinsic motivation (Deci, E. L., Koestner, R., & Ryan, R. M., 1999) in the notion that scholarship dollars did not play a factor in determining the athletes intrinsic or extrinsic motivation enhancement.

## **Chapter Five**

### **Summary and Conclusions**

#### **Significant Findings**

The research reviewed here shows that coaches' behavior has an impact on athletes' intrinsic and self-determined extrinsic motivation, which are important factors of determination and implementation towards athletics. Though one might think of an athletic scholarship as an extrinsic piece of motivation towards sport, this research shows that the scholarship dollar distribution in the Division II Northern Sun in Conference softball players neither plays a positive or negative towards intrinsic motivation in these athletes.

#### **Educational Implications**

The motivational piece involving the coach-athlete relationship entails the findings that coaches' behaviors influences athletes' intrinsic motivation through their impact on athletes' perceptions of autonomy. A coach when trying to influence and enhance an athlete's intrinsic motivation should constantly be giving nonverbal and verbal positive reinforcement based on specific behaviors of athletes, recognize athletes' specific contribution to practice or the team, work together with athletes to set individual and team goals that are challenging and realistic, and fostering an "autonomy-supportive" style of coaching for the benefits of their athletes. Similarly those in educational/teaching positions should take the same route. If they were to be autonomy supportive this would ensure that the individual in a position of authority takes the others perspective, acknowledges the other's feelings, and provides the other with pertinent information and opportunities for choice, while minimizing the use of pressures and demands. "Autonomy support thus implies that athletes are regarded as individuals deserving self-determination, and not mere pawns that should be controlled to obtain a certain outcomes"

(Mageau, 2013, p. 886). When using these types of practices educators or those in authority would be able to see great gains in not only their classroom, team, work environment, etc., but also will be fostering behaviors to enhance intrinsic motivation within others affected. "...the potentials for enhanced motivation and improved performance if coaches would, instead, adapt their own behaviors to fulfill their athletes' needs of autonomy, competence and relatedness" (Mageau, 2013, p. 884).

### **Recommendations for Future Research**

Through this study there are further research questions and invited research studies. Like any research, once the start begins one finds numerous things that could be tied in to either help or limit your study. With this study because it was limited to only the female gender and the Northern Sun Intercollegiate Conferences, further research is welcome to male sports and other divisions as well as conferences. With this research other projects could stem to make the comparison between different sports as well as different conference throughout the country. Also further research could be done in pinpointing each individual athlete's scholarship and how each of these athlete's scholarship plays a factor in continuation or just how much motivation is put forth to keep or "gain" athletic scholarship dollars. Different more specific descriptions of coaching behavior could also be an invited research study to further the coach behavior implications.

### **Limitations**

Although the results of this study have provided some interesting information concerning the intrinsic motivation of Division II Northern Sun Intercollegiate Conference Softball players, certain limitations should be noted. First, the sample of athletes in this study was limited to the NSIC Division II softball players who were predominantly from the northern Division II schools

and from a selected sample of those only willing to participate from the current members of the 2014-2015 rosters. Thus, this sample does not really represent an adequate cross-section of the population of Division II collegiate softball players. In addition, although the participants included athletes at all academic levels (first year to senior), we did not include academic year (or year of athletic eligibility) as a factor in my examination of intrinsic motivation. There is evidence that suggests that collegiate athletes' intrinsic motivation may vary as a function of year in college (E.Ryan, 1977,1980). Therefore, more research on this could be obtained. Another limitation concerns the instrumentation that was used in this study to measure athletes' intrinsic motivation and their perceptions of their coaches' behavior. It is difficult to obtain reliable and valid measures of coaching behavior (or athletes' perceptions of their coaches' behavior).

### **Summary**

The research reviewed here suggests that coaches' behavior does have an impact on athletes' intrinsic motivation in the Division II Northern Sun Intercollegiate Conference softball players. When athletes are able to not only bring to the table their own high degree of intrinsic motivation but also feed off of their coach's behavior to strengthen this, one would assume that it will make for a better atmosphere as well as heighten each athletes ability and passion for the game itself. It is hoped that the present review, and previous literature will help coaches achieve this objective of strengthening their individual team members' motivation.

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## Appendices

## Appendix I

### IRB Approval Email

The IRB: Human Subjects Committee determined that the referenced study is exempt from review under federal guidelines 45 CFR Part 46.101(b) category #2 SURVEYS/INTERVIEWS; STANDARDIZED EDUCATIONAL TESTS; OBSERVATION OF PUBLIC BEHAVIOR.

**Study Number:** 1409E54061

**Principal Investigator:** Katherine Crudo

**Title(s):**

A Mixed Methods Assessment of the Benefits of Intrinsic Motivation in Softball Players

This e-mail confirmation is your official University of Minnesota HRPP notification of exemption from full committee review. You will not receive a hard copy or letter.

This secure electronic notification between password protected authentications has been deemed by the University of Minnesota to constitute a legal signature.

The study number above is assigned to your research. That number and the title of your study must be used in all communication with the IRB office.

Research that involves observation can be approved under this category without obtaining consent.

SURVEY OR INTERVIEW RESEARCH APPROVED AS EXEMPT UNDER THIS CATEGORY IS LIMITED TO ADULT SUBJECTS.

This exemption is valid for five years from the date of this correspondence and will be filed inactive at that time. You will receive a notification prior to inactivation. If this research will extend beyond five years, you must submit a new application to the IRB before the study's expiration date.

Upon receipt of this email, you may begin your research. If you have questions, please call the IRB office at [\(612\) 626-5654](tel:6126265654).

The IRB wishes you success with this research.

## Appendix II

### Initial Email

Note: The following is a text of the original email sent out to all Northern Sun Intercollegiate Conference softball coaches for their assistance in eliciting their current 2014-2015 student athletes:

Hello fellow NSIC Coaches,

Hope this email finds you well and getting fired up for the season. I know I have personally met most of you but I am doing my thesis at this time and could really use your help in getting your athletes to take my survey for my data portion. My paper is a mixed methods assessment of the benefits of intrinsic motivation in Division II NSIC softball players and the roles and impacts their coaches play (hence the reason I am reaching out to you all☺). This survey will be about 20 questions in regards to their own personal motivation, internal, and external factors towards the game itself. I will also have a portion (about 10 questions) in regards to ways their coaches impact this. I will be using the first two (2) athletes from each school who respond (for randomization purposes). None of your athletes will be compensated for the survey and again it is completely voluntary. Also, none of your athletes will be identified throughout the research to ensure their confidentiality cannot be breached.

**If you could, and are comfortable with this, please pass this link on to your athletes and have them fill it out if they are willing to participate. I am keeping this open for just a short period of time now-December 9<sup>th</sup> to start the data collection process as soon as possible.**

[https://umn.qualtrics.com/SE/?SID=SV\\_d5v0PGiE9O7OGEd](https://umn.qualtrics.com/SE/?SID=SV_d5v0PGiE9O7OGEd)

If you have any questions about the survey, or research paper itself, please feel free to contact myself or advisor at anytime.

Thanks for your help, see you this spring!

Kathy Crudo  
651-233-7096  
[Crudo002@d.umn.edu](mailto:Crudo002@d.umn.edu)

Advisor:  
Frank Gulbrandsen  
218-726-8172  
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## Appendix II

### Survey Questionnaires

Note the following questions were provided in a 5 Point Likert Scale (1- Strongly Agree, 2- Agree, 3- Neither Agree nor Disagree, 4- Disagree, 5- Strongly Disagree)

The first set of questions were in regards to the athletes motivation:

1. I play softball because I get money towards my tuition for it
2. I play because I love the game
3. I play because I like my teammates
4. I play for personal pleasure
5. I play for the excitement
6. I play because I find the sport challenging, fun and interesting
7. I play to stay in shape
8. I am passionate about the sport
9. I put forth my best effort EVERYDAY at practice
10. I have a “starting” spot on my team
11. I compete for other reasons other than my own personal
12. If I didn’t have a scholarship I would still play softball
13. The game stresses me out
14. I have considered quitting
15. I don’t have any stress about competition or rewards
16. When playing softball I have no other worries
17. I have set personal goals for achievement throughout the season
18. Rewards help me perform better
19. I put a lot of pressure on myself to get an end reward
20. I try to accomplish something very practice or game
21. I enjoy learning more about softball
22. If there isn’t something to get rewarded with, I probably wont give it my all
23. If I wasn’t playing softball in college I would be disappointing someone other than myself

The next set of questions were in regards to their coach behavior

1. My coach tries to build character in us athletes
2. My coach provides nonverbal and verbal positive reinforcement based off of positive behavior
3. I believe that my coach believes in me
4. My coach is always very positive towards myself
5. My coaches are often yelling and providing no hope or encouragement
6. My coach is very passionate about the sport

7. My coach uses different techniques to make the game more fun
8. My coach cares about myself and teammates beyond the game
9. My coach is only happy if we win
10. My coach gives me confidence
11. My coach believes in me all of the time
12. My coach is same tempered throughout practices and games
13. My coach puts forth his/her best effort to make me successful
14. My coach provides fairness throughout the team (no favorites)
15. My coach only gives negative feedback
16. My coach recognizes athletes specific contributions to practices and the team
17. My coach works with us to create reasonable goals throughout the season
18. My coach provides positive feedback often
19. My coach puts a lot of pressure and anxiety on me to perform well

The last set of 10 questions were fill in the box:

1. Why did you choose Division II to continue your education and athletic involvement in softball?
2. Why did you choose your current school in regards to continuing your softball experience?
3. When in the softball setting, how do you feel? (Is it an added stress? Do you take it more as a job than sport?)
4. What was the original reason you decided to continue to play softball in college?
5. What type of commitment do you feel you have or will continue to have in softball? (Do you commit to it as much, more, or less than you do school or other areas in your life?)
6. Do you feel as if you have continued to play softball for the love and passions of the game, or do you think you do it because you feel forced or obligated to?
7. How does your coach influence you (good or bad) when it comes to your motivation to play?
8. Would you say your coach has or plays a big part in your success or continuation to love/hate the game?
9. How would you describe your motivation tendencies in softball?
10. Do you have any further comments or questions regarding your own motivation, or motivation in general?