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PARTICIPATION AND WITHDRAWAL MOTIVES FOR
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ANGELA KAY LOUND

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Martha E. Ewing
Major Professor's Signature

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PARTICIPATION AND WITHDRAWAL MOTIVES FOR FEMALE NOVICE COLLEGIATE ROWERS

By

Angela Kay Lound

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ABSTRACT

PARTICIPATION AND WITHDRAWAL MOTIVES FOR FEMALE NOVICE COLLEGIATE ROWERS

By

Angela Kay Lound

Rowing is one of the fastest growing college sports for women in the United States. Opportunities to be on a team are often greater than the number of qualified high school rowers available. Many colleges are using *walk-ons* as the bulk of their Novice class. However, after a few months, many of these "potential rowers" have quit the team. The purpose of this study was to look at characteristics and differences between novice rowers who continued participation and those who withdrew with respect to commitment, goal orientation, and perceived benefits. Thirty female rowers who participated in this study were required to be full-time students at a Midwest university and meet eligibility requirements for participation. Goal orientations, commitment levels, and perceived benefits were found in two stages between athletes who decided to stay and athletes who decided to dropout. Coaches should focus on helping athletes maximize their perceived benefits to participation.

To Bilal,

for his patience and love

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CHAPTER 1

INTRODUCTION

Overview of the Problem

Rowing is one of the fastest growing college sports for women in the United States, adding 158 Division I, II, and III teams in the years from 1988 to 2002 (Bray, 2003). Opportunities to be a member of a team are often greater than the number of qualified high school rowers available to fill them. Therefore, many colleges are using *walk-ons* as the bulk of their Novice recruiting class. Out of a few hundred athletes who try out, many with no rowing experience at all, coaches select who they believe to be the best potential rowers of the group. However, after a few months, many of these "potential rowers" have quit the team. Why are these athletes withdrawing so early into their participation on the team?

Participation and dropout factors, models, and theories have been identified or developed and studied with a number of groups in a range of sports throughout recent years. However, these studies are often done using sports that are well-known, played, and understood by the athletes since childhood. Rowing is a unique sport that is not widely known or understood by the general public, and due to the skills and equipment needed, the few athletes who do participate before college do not start until high school. There is a strong focus on the learning of tasks and being a "team player." Additionally, rowing requires a strong commitment to physical training as most of a rower's time is spent in conditioning for the few competitions during the academic year, which may be perceived by many as an extreme cost to participation. Benefits of participation in rowing are not always immediately realized. First time rowers were asked to take the

word of their new coaches and older teammates on the "good experiences" they will have by staying and participating the whole year.

As novices, or beginning rowers at the college level, the athletes will often find themselves in a new, and sometimes stressful, weekly routine. They would be required to attend one rowing practice each day, Monday through Friday, either early in the morning, around 5 am, or later in the afternoon, around 3pm. These practices typically last between 2-3 hours. They would also be required to attend a Saturday morning practice, again for 2-3 hours. Additionally, they would begin a strength training and weight lifting routine twice a week for an hour each session. Coaches expect athletes to be on time and at every practice unless the athlete has a class, is severely ill, or has a family emergency. Coaches ask that the athletes push themselves to work their hardest and best every day, as with any Division I college sport. The athletes, who are told to prepare accordingly, often practice outside in many challenging weather conditions, including wind, rain, light snow/cold, and hot temperatures. When weather conditions become unsafe, as advised by weather experts and coaches' experience, practice is moved indoors or, in rare cases, cancelled. Some athletes adjust well to these new expectation levels for practices and performance, while others struggle to see the significance or importance of these changes from high school or club sports.

This study is intended to be the first step in looking into the motivation of college female rowing participants in the United States. The uniqueness of rowing poses several questions about motivation of novice rowers and why they dropout. Little is known about the commitment levels, perceived benefits, and sport orientations of freshmen college women with a chance to jump into a brand new sport opportunity. Is there a

difference in participation and dropout motives between "traditional sports" and the unusual sport of rowing? In other words, why do female athletes with a history of "traditional sports" try out for the rowing team in the first place, and why do some decide to quit after a few weeks? How do those who stay differ from those who withdraw in commitment levels, goal orientations, and perceived benefits? Finally, could the results of this study suggest different strategies that coaches could use to keep more athletes interested and involved longer in the sport of rowing, as well as attract more women from diverse ethnic and cultural backgrounds?

Commitment

Collegiate rowing requires a high level of commitment to the betterment and achievement of both the team and the athlete. Scanlan, Carpenter, Schmidt, Simons, and Keeler (1993) define sport commitment as "a psychological state representing the desire or resolve to continue sport participation (p.1)." Carpenter and Coleman (1998) used this definition and the sport commitment model developed by Scanlan and her colleagues (Carpenter, 1995; Carpenter, Scanlan, Simons, & Lobel, 1993; Scanlan, Carpenter, Lobel, & Simons, 1993; Scanlan, Simons, Carpenter, Schmidt, & Keeler, 1993) in their studies involving male elite cricket players. They found that attractiveness of alternatives to continued involvement, personal investment, investment opportunities, sport enjoyment, and social constraints were components that influenced the commitment levels of the athletes. If these components fluctuated within an athlete, they could be used as predictors of an increase or decrease in commitment level and eventual dropout or continued participation in sport. The researchers also observed that commitment level was an important factor in sport participation.

Commitment is an extremely important component in a number of studies looking at success in sport participation. Gould, Guinan, Greenleaf, Medbury, and Peterson (2000) found that at the Olympic level, teams who were very successful and exceeded the researchers' performance level (a pre-determined set of successful performance characteristics) were very committed up to and throughout the Olympics. However, teams who did not meet the researchers' performance level and did not perform well at the Olympics had problems with commitment. Another study that focused on the importance of commitment level was done by Rusbult (1983) and also focused on alternatives and investments, as well as rewards, costs, and satisfaction for each partner (Schmidt & Stein, 1991). Changes in these components would predict an increase or decrease in the commitment to the relationship. In terms of sports, a strong commitment was characterized by low alternatives and high investments, high rewards, low costs, and high satisfaction. Withdrawal from sport could be predicted for those athletes with increasing alternatives and decreasing investments, decreasing rewards, increasing costs, and decreasing satisfaction (Schmidt & Stein, 1991).

This study looked at the alternatives, investments, and enjoyment as a part of commitment to rowing. A commitment scale was used to determine what a beginning rower perceives to be her alternatives, investments, and enjoyment as she tries out this new sport. Based on these studies, it was hypothesized that commitment would predict dropouts from rowing.

Goal Orientations

Rowing, like many other sports, requires a pattern of behaviors conducive to skill mastery, individual and team achievement, and hard work. Achievement Goal Theory

(Nicholls, 1984, 1989) posits that there are multiple goals or orientations that could influence these behaviors, i.e., ego and task. These orientations may influence a person's decision to approach or avoid certain activities as well as persist in an activity. With an ego orientation, an athlete may engage in sport to demonstrate high levels of her/his skill in order to boost her/his feelings of self-worth. If the athlete is unable to demonstrate these high levels of skill, she/he may choose to withdraw from the sport rather than risk continuing to demonstrate low ability compared to the other participants. With a task orientation, the athlete is concerned with skill and performance improvement. Athletes who are unable to see improvement in personal performance and skill may withdraw from the sport. Duda (1988), in a study involving female and male athletes in team or intramural leagues in college, found that an orientation towards mastery or task lead to longer periods of involvement over winning or ego orientation. It is also significant to note that the women in the study were more inclined than men to be of mastery or task orientation. Also, Ntoumanis (2001) found a link between orientation and self-determination. British college athletes who were high in task orientation were also high in self-determination, or had feelings of independence and control of their own skill mastery, while athletes high in ego orientation were low in self-determination.

Since Nicholls' conceptualization of task and ego orientations, additional orientations have been identified. Maehr and Midgely (1991, 1996) argue that additional goals, i.e., ego-defensive orientation, work avoidance orientation, and social approval orientation, reflect behaviors seen in many classrooms. When a school and classroom environment are set up to focus on ability, children who are already skilled in topic areas will receive the credit and rewards for their high ability. This situation leaves children

with low ability "marked" as bad or underachieving students. These students may then develop a work avoidance orientation, where they do as little work as possible to get by, because they know they cannot compete with the more skilled students. Children with ego-defensive orientations are constantly looking for extrinsic rewards to justify their feelings of self-worth and to distinguish themselves from the group, while children with social approval orientation are looking to social groups and significant others as a source of positive reinforcement of their effort that impacts their feelings of self-worth, belonging, and motivation.

These five orientations, ego-enhancing, task, ego-defensive, work avoidance, and social approval have been found to be correlated (Maehr & Midgley, 1996) and can be used in sport environments such as rowing. Determining the level of each orientation in an athlete using an instrument such as the Multiple Goal Orientation Scale, MGOS (Duda, 1989a; Duda & Nicholls, 1992; Ewing, 1981) may help predict continued participation or withdrawal from rowing.

Perceived Benefits

In collegiate rowing, much time is spent in practice and the weight room for a few opportunities to travel and compete. However, many experienced rowers will tell you there is more to gain in rowing than just practice, hard work, and time spent. Unfortunately, the loss of many participants in novice women's rowing occurs in the first few weeks to months of participation, before they have had many of the same experiences as their older teammates. As a novice rower, an athlete will go through tryouts, and sometimes cuts, and weeks of on-land instruction mixed with on-water instruction. She will have to attend every practice on time, listen and believe what her

new coaches are telling her, and be very patient with her own progress. She is putting in a lot of time, effort, and thought, but not very sure of what is to come or how it will make her life better.

Social Exchange Theory (Thibaut & Kelley, 1959) weighs the perceived costs and benefits to participation as an indicator of continued participation or withdrawal from sport. Brodkin and Weiss (1991) found that factors such as competition, health, fitness, social status, affiliation, energy release, and fun are some benefits or reasons to participate for an athlete. Johns, Lindner, and Wolko (1990) found that time demands, injury, loss of interest, pressure, other options, and expense were reasons or costs leading an athlete to withdraw from a sport. If the weight of the costs is greater than the benefits, Social Exchange Theory predicts withdrawal from the sport. If benefits are greater than the costs, participation will continue until a change in the balance occurs, or external factors (e.g., injury, eligibility, graduation, or other interests) present themselves. Guillet, Sarrazin, Carpenter, Trouilloud, and Cury (2002) found this to be the case in their study of female handballers. Athletes tended to participate as long as they could see the benefits to participation, but began to dropout as social constraints and alternate activities presented themselves.

Gould (1987) provides an example of Social Exchange Theory in a model for examining sport participation and withdrawal. The four components of the model are Motivation for Sport Withdrawal, Cost-Benefit Analysis, Child or Externally Controlled Withdrawal, and Sport Withdrawal. These four components are shown in Figure 1, An

Figure 1

An Integrated Model of Youth Sport Withdrawal

Figure removed

Integrated Model of Youth Sport Withdrawal. Sport Withdrawal is discontinued participation in a sport with the understanding that the sport or other sports may be taken up at a later time. Motivation for Sport Withdrawal has two subcomponents consisting of explanations and ratings of a sport's costs, and of the theories involved, such as achievement orientation, cognitive-affective model, and competence motivation. Costs-Benefits Analysis is where a child weighs the perceived costs and benefits of participation, and attractiveness and availability of other sport or non-sport activities to the current activity. If the overall costs are greater than the benefits, it is predicted that the child will withdraw from the current sport. Child or Externally Controlled Withdrawal looks at whether the decision to withdraw was made by the child, or by an external force, such as an injury, lack of money or necessary support, or opportunity set.

Benefits and costs to participation in rowing can be measured with quantitative survey instruments. The Sport Participation Questionnaire is a survey instrument used by Seefeldt, Ewing, and Walk (1991) in a study of youth sport programs in the United States. It contains questions regarding participation motives as well as dropout motives that can be adapted and applied to the sport of rowing. For example, in the current study, the item *Someone I admire played this sport*, was adapted to *Someone I admire rows.*

Need for the Study

It is important to understand the participation and drop-out motivations for female rowers. This study is needed as a building block, first, for understanding the motivations and expectations of female athletes entering into a sport where they realistically have little experience, skill, and understanding of the physical, mental, and emotional demands that will be made on them. The results will help coaches understand which athletes are

best suited for their program as well as understand how their program can change to appeal to wider or different groups and how they can encourage athletes to participate longer. This study will begin to show if the sport of rowing presents unique motives, benefits, and factors for its participating athletes. Additionally, commitment and goal orientation will be examined for their importance in continued participation or withdrawal. Once the major appeal, commitment levels, goal orientations, and motives for rowing participation are understood for the majority of female college novice rowers, attempts to understand minority groups' motivation in rowing (e.g., minority ethnic groups, disabled, elderly, etc.) can be given specific consideration to increase scholars', coaches', and the public's awareness and enjoyment of rowing.

Purpose of the Study

The purpose of this study is to understand participation and dropout motives of female athletes in college rowing and provide recommendations to coaches and administrators on how to adapt their programs to the needs of the athletes. Another purpose is to find a difference or differences in motives between those who withdraw and those who stay in the sport. A final purpose is more applied, that is, to look for changes that can be made to rowing programs to promote greater retention of athletes. Participation motives will be determined by administering questionnaires adapted from the Commitment Model, Multiple Goal Orientation Scale, and Sport Participation Questionnaire to all participants.

Hypotheses

A. There will be no difference on pre-season commitment subscales at the beginning of the season between the continuing participants and eventual dropouts of rowing.

B. There will be a difference on post-season commitment subscales at the end of the study between the continuing participants and the dropouts of rowing. Specifically, continuing participants will have a higher level of commitment than those who withdraw from rowing, based on the commitment subscales.

C. There will be an increase on the post-season commitment subscales for continuing participants, up from the pre-season commitment subscales, while there will be no change or a decrease on the commitment subscales for the dropouts, down from the pre-season commitment subscales, by the end of the study.

D. Orientations from the pre-season surveys for the participants who continue for the whole semester and for participants who drop out from rowing will not be different, but both will be different from the participants who are cut from the team. Specifically, those who are cut from the team will score higher on ego-defeating orientation, work avoidance orientation, and social approval orientation, and lower in task orientation, and ego-enhancing than those who remain on the team or eventually drop from the team.

E. Orientations from the post-season surveys for the participants who continue for the whole semester and for participants who drop out from rowing will be different. Those who remain on the team will be higher in ego-enhancing orientation, and task orientation, and lower in ego-defeating orientation, work avoidance orientation, and social approval orientation, than those who withdraw from rowing.

Research Questions

A. Is there a difference in reasons for participating in rowing for novice rowers who continue participation and those who withdraw from novice rowing?

B. Is there a difference in reasons for dropping-out of rowing for novice rowers who continue participation, but have thought about quitting, and those who withdraw from novice rowing?

Operational Definitions

Perceived Benefits: Individually decided or externally determined motives or outcomes of participation that prompt participation or continued participation in sport.

Costs: Individually decided or externally determined motives or outcomes of participation that prompt withdrawal from participation or inhibit participation.

Cost/benefit analysis: The process of comparing and weighing the motives for withdrawal against the motive for participation as a step in the decision to participate or withdraw.

Crew: Another term for rowing, sometimes referring to the team or group of athletes rowing a boat or fleet of boats.

Cut: Removal from team membership by coach due to non-compliance with team rules and regulations or inability to meet performance expectations.

Drop out: A rower who has been confirmed by the head novice coach to no longer be a part of the team due to voluntary withdrawal.

Erg Room: Room designated for a rowing team containing a number of rowing ergometers.

Field House: A building on a college campus that has been designated for the use of sport training.

Novice: An athlete in her first year of college rowing.

Preseason: First few weeks before and during a novice rower's first semester on the team.

Postseason: Last few weeks of and after a novice rower's first semester on the team.

Rowing Egrometer: A piece of equipment that simulates the rowing motion. A rower sits on a seat that has small wheels underneath that allow the seat to move along a rail. Wooden foot placements are on each side of the rail near a wooden handle that is attached to a chain. The chain is linked to a fly-wheel

that provides resistance to moving the seat along the rail when the rower pushes her/his feet against the foot placements.

Traditional sports: Sports that most Americans are exposed to and recognize from an early age including (but not limited to) soccer, swimming, football, baseball, tennis, track, basketball, volleyball, hockey, and cycling.

Walk-on: Athlete brought onto an institution's athletic program who was not formally recruited.

CHAPTER 2

REVIEW OF LITERATURE

This chapter will review the literature that helped to frame and build the research questions and structure of this study. First, an overall look at sport participation and withdrawal will be discussed. Then, the components of participation and withdrawal used as measures in this study, namely commitment, goal orientation, and perceived benefits will each be examined by reviewing the past literature done on "traditional" sports. Since little research has been done using the sport of rowing, what is known about these measures must come from studies using other sports, and can serve as a good beginning for comparing and contrasting these sports with rowing.

Sport Participation and Withdrawal

The research, work, and findings in the area of sport participation and withdrawal were critical areas to understand when structuring the current study on attrition in college rowing. Little research has been done on the sport of rowing, especially females in rowing. Therefore, it was important to understand and recognize participation and withdrawal patterns in "traditional" sports in order to find any major differences or similarities in rowing. The following studies helped explain sport participation and withdrawal behaviors and shape the current study.

Gould's (1987) work on youth sport participation and attrition proposed four different areas of focus, and are reviewed in greater detail in the section below. Gould first reviewed previous studies on youth withdrawal to determine current levels of knowledge in the area. Next, Gould looked at new and upcoming studies that attempted to examine and model attrition. A model developed by Gould to help explain and depict

youth sport attrition is introduced and finally, future research directions and implications are suggested.

The review of past studies on youth sport attrition revealed varied and numerous reasons for deciding to drop out of sport. Orlick and Botterill (1975) asked 60 children, ages 7 to 19, to give reasons for withdrawing from sport. Seventy-five percent stated that they did not enjoy the orientation of the program, with emphasis on competition and winning. Twenty-one percent had commitment conflicts, saying they left because of other interests. All of the elementary children stated they left because they felt unsuccessful or were never given a chance to play, thereby not gaining any perceived benefits from staying. In 1978, Sapp and Haubenstricker asked 1183 athletes in the 11-18 year age range and 418 parents of athletes 6-10 years old to complete a survey on reasons to participate and reasons to withdraw. Of the athletes who did not plan on participating the next season, 64% stated that commitment to other activities was more important than the current sport involvement, and 34% said they were no longer interested in the sport. Similarly, in 1982, Petlichkoff found that 78% of 46 former athletes, ages 12-18, rated commitment in other activities as reasons for withdrawing from sport. Petlichkoff also found that 52% did not believe they were improving their skills, 52% felt they were not as good as they needed or wanted to be, and 52% did not enjoy the participation. Robinson and Carron (1982) looked at withdrawal from sport from both an environmental and personal perspective in a study of 98 former high school football players. They found that social reasons to withdraw were often complex, a mixture of a variety of reasons including lack of feelings of inclusion, lack of participation enjoyment, lack of social support, and lack of ability. These reasons were

measured using variables such as achievement motivation, trait anxiety, self-esteem, group cohesion, communication, and sportsmanship.

After a number of studies had been done on youth sport attrition, a few researchers began to develop models for participation and withdrawal in an attempt to explain this pattern of behavior. Achievement Orientation Theory and Social Exchange Theory were two that were developed. Ewing (1981) stated that the desire to achieve in sport depended on an individual's orientation. This orientation could focus on ability (those who have better skills and win more often are more successful), task (those who work to show skill and task improvement are successful), social (those who make friends, get support from family, and become popular are successful), or a combination of two or more. If the sport environment has goals and demands similar to the individuals' orientation, then the athlete is likely to feel successful. On the other hand, if the environment is very dissimilar to the individual's orientation, he or she may feel frustrated and unfulfilled with participation, and decide to withdraw.

Smith (1986) developed a Social Exchange Theory for sport participation and withdrawal that was based on Thibaut and Kelly's (1959) work on costs (perceived negative aspects to an activity) versus benefits (perceived positive aspects to an activity). In relation to sport, Smith stated that individuals will weigh the costs and benefits as they see them to sport participation. If the benefits outweigh the costs, they will often continue with participation. If the costs outweigh the benefits, they will often withdraw from participation. However, individuals also often look to other options available that may be appealing to them before staying or leaving. If they are dissatisfied with a sport, but nothing else is available, they may opt to continue for "something to do." Also, if

they are happy with the sport, but something else is more appealing, they may withdraw to "devote more time" to the preferred activity.

Gould (1987) provides a model for examining sport participation and withdrawal. The four components of the model are Motivation for Sport Withdrawal, Cost-Benefit Analysis, Child/Athlete or Externally Controlled Withdrawal, and Sport Withdrawal. These four components are shown in Figure 1, An Integrated Model of Youth Sport Withdrawal (see p. 8 in Chapter 1). Motivation for Sport Withdrawal has two subcomponents consisting of explanations and ratings of a sport's costs, and of the theories involved, such as achievement orientation, cognitive-affective model, and competence motivation. Costs-Benefits Analysis is where a child weighs the perceived costs and benefits of participation, and attractiveness and availability of other sport or non-sport activities to the current activity. If the overall costs are greater than the benefits, it is predicted that the child will withdraw from the current sport. Child/Athlete or Externally Controlled Withdrawal looks at whether the decision to withdraw was made by the child/athlete, or by an external force, such as an injury, lack of money or necessary support, or opportunity set. Sport Withdrawal is discontinued participation in a sport with the understanding that the sport or other sports may be taken up at a later time.

Finally, Gould (1987) discusses future directions of study using his integrated model. Gould stresses a need to continually utilize the latest forms of research and theories so that new insights may arise. Study construction, such as achieving a minimum participant number, using valid and reliable instruments, and using a variety of assessments to help in understanding the varying reasons and complexity of participation and withdrawal was also suggested as a way to improve research.

The move from high school to college brings many changes. Students often find themselves in new and often confusing surroundings, and looking for ways to "fit in" and "find their place." This may lead students to search for and try out new or somewhat familiar activities. Harter (1978, 1981) believed that part of the desire to participate in an activity is connected to an individual's need to feel competent and have mastery over some area of the environment in which he/she lives. These feelings of competence and mastery lead to feelings of joy in performing the activity with continued attempts at mastery. Harter developed a model of competence motivation based on White's (1959) effectance motivation. White theorized that individuals want to interact with their environment in an effective way, and therefore engage in an activity in order to feel they are in control and are able to manipulate their surroundings. Once an individual is able to control an aspect of his/her environment, feelings of competence and mastery lead to feelings of being efficient. When individuals feel efficient and competent, they become confident in their abilities and curiosity may lead them to try new activities or continue on with the current activity to gain greater mastery.

Harter (1978) modified White's model in a number of ways, including adding a socialization factor. Harter believed that friends, family, peers, and authority figures play an important role in an individual's competence motivation. As children grow, they learn through observation how to attempt control and mastery of the surrounding environment. Some children learn to value mastery attempts for the intrinsic values, such as challenge and enjoyment. Other children learn to value mastery attempts for the extrinsic values, such as social approval or recognition. When positive feedback was given after early mastery attempts despite the outcome, children were more likely to continue in the

mastery attempt as well as develop a greater sense of intrinsic, rather than extrinsic, motivation.

While the participants in this study are no longer children developing perceptions of competence, it is interesting to note that they are learning new movements and new rules that will need to be mastered in order to row. Harter's (1978) insights into the socialization of children at young ages will help to explain the differences in participants' attempt at rowing. Those who are intrinsically motivated may feel satisfaction and success as they learn the movements and overcome physical challenges, while those who are extrinsically motivated may feel satisfaction and success when they hear praise from their coaches or are better than their teammates.

Gould's research and Harter's research in sport participation and withdrawal provide the foundation for the current study. Reasons to participate, reasons to withdraw, a model of participation and withdrawal, and recommendations for future studies all give structure to the three components, goal orientation, perceived benefits, and commitment, used in this study.

Perceived Benefits

Novice rowers may see many perceived benefits when trying out for a varsity college rowing team. Social status, awards, new friends, free gear, exercise, and fun may all appeal to a beginning athlete in a collegiate sport. What may not be so obvious at the start are the costs to participation, such as the amount of work, time, patience, and diligence it takes to be successful. Just what exactly is important in terms of costs and benefits to novice rowers has never been examined before, yet it is an important component to sport participation and withdrawal. The section below will look closer at

perceived costs and benefits in more "traditional" sports and the importance on continued participation.

Perceived costs and benefits in sport can be linked back to the Social Exchange Framework developed by Thibaut and Kelley in 1959. Looking at interactions and relationships between groups of people, Thibaut and Kelley found that all decisions to engage or withdraw from certain interactions could be based on a system of perceived rewards, or benefits, and costs to the individual involved in the interaction. Rewards were defined as *pleasures, satisfactions, and gratifications the person enjoys. The provision of a means whereby a drive is reduced or a need fulfilled constitutes a reward.* Costs were defined as *any factors that operate to inhibit or deter the performance of a sequence of behavior. The greater the deterrence to performing a given act – the greater the inhibition the individual has to overcome – the greater the cost of the act* (Kelley, 1983). Thibaut and Kelley go on to say that individuals will inherently want to maximize rewards and minimize costs to him or herself based on what he or she feels is personally "deserved," and will continually evaluate and adjust interactions to maintain the optimal balance. In terms of sport participation, an individual, the athlete, will continue to play as long as the participation provides more rewards than costs than any other available option. As soon as the costs rise higher than the rewards, or other options provide a more optimal balance, withdrawal from the sport will occur. This system of rewards, or benefits and costs, is now often referred to in sport as Social Exchange Theory (Smith, 1986).

A number of studies have been done to determine perceived benefits and costs from sport participation. In 1991, Brodkin and Weiss studied motivation for participating

in competitive swimming for athletes in six different age groups. Using a version of the Participation Motivation Questionnaire by Gill, Gross, and Huddleston (1983), Brodkin and Weiss (1991) found that factors such as competition, health, fitness, social status, affiliation, energy release, and fun are some benefits or reasons to participate for an athlete, although order and strength of importance was different for each age group. For high school and college age swimmers specifically (n =10, ages 15-22 years), the top ten questionnaire items rated as benefits to participation were *I like to be physically active, I want to stay in shape, I want to get in shape or get stronger, I like to exercise, I want to improve my health, I like to have fun, I like the challenge, I like how my body looks/feels when I swim, I want to improve my skills,* and *I like to do something I'm good at.* Johns et al. (1990) used parts of Social Exchange Theory to examine reasons for withdrawal in female gymnasts. A total of 76 former gymnasts, average age of 14 with 6.29 years of experience, were asked to complete a Likert scale questionnaire on reasons for leaving gymnastics. The researchers found that time demands, injury, loss of interest, pressure, other options, and expense were some of the major reasons or costs leading an athlete to withdraw from a sport. When asked about their overall sport experience, most former gymnasts reported that they had enjoyed learning new skills, making new friends, and meeting new challenges that gymnastics presented. Most respondents said they liked their coaches and felt that their coaches thought of them as competent athletes. However, when asked about time demands, most respondents said that since they stopped participating in gymnastics, they now had time to spend with their other friends outside of gymnastics, engage in hobbies, and participate in youth culture activities that were restricted by the time demands of participation. Social Exchange Theory predicts

withdrawal from the sport when the costs to participation outweigh the benefits or a change in the balance, such as other interests presenting themselves, occurs. So, even though most former gymnasts agreed that their experience was a positive one, they perceived that the time spent in practice and restriction from other activities to be too great a cost to overcome the positive aspects to participation.

Guillet et al. (2002) looked at perceived benefits to sport participation in a study done with French female handball players. A cost versus benefit analysis for 488 athletes, ages 15-19, (M = 17.06), found that perceived benefits gained from participation can come from a number of sources such as learned competence, sport progress, coach's support, relatedness, autonomy, and time of play. The researchers correlated high levels of perceived benefits with high levels of sport enjoyment. In a second study done in connection with the first, 253 French female handball players, ages 14-16, M = 15 years, completed a questionnaire on commitment to their sport. Results showed that athlete commitment (and consequently continued participation) was high as long as: (a) the benefits to participation outweighed the costs, (b) attractiveness to other options remained lower than the attractiveness of handball, (c) investment level was perceived to be high, and (d) perceived social constraints were low. Perceived benefits carried the most weight out of the four components, therefore having a strong influence on the commitment of the athlete to continued participation. The 8-month study found that when commitment levels fell as a result of a significant shift in balance of the four commitment components, withdrawal from the sport occurred. This model proposed by the researchers was able to account for 44% of the variance of the athletes' actions. The researchers also acknowledged that factors outside the athlete's control, such as injury, sickness, or forced

removal from the team also accounted for discontinued participation in sport, even when perceived benefits and commitment remained high.

Perceived costs and benefits play an important role in the commitment level and overall satisfaction of an athlete in sport participation. Understanding what novice rowers believe participation in rowing will gain and cost them is critical in developing successful and long lasting team membership.

Achievement Goal Orientation Theory

Achievement Goal Theory (Nicholls, 1984, 1989) posits that there are multiple goals or orientations that could influence sport participation and withdrawal behaviors, i.e., ego-enhancing or ability and task. These orientations may influence a person's decision to approach or avoid certain activities as well as persist in an activity. This theory is very important in terms of novice rowers, who are trying a brand new sport at a brand new place (i.e., college). What orientations are best for trying the unknown and committing when the athlete is unsure of the outcome? Can more than one orientation be important for committed and successful novice rowers? The following is a description of the goal orientations and studies done on these orientations.

In ego-enhancing orientation, athletes may engage in sport to demonstrate high levels of their skill in order to boost their feelings of self-worth. If athletes are unable to demonstrate these high levels of skill, they may choose to withdraw from the sport rather than risk continuing to demonstrate low ability compared to the other participants. In task orientation, the athlete is concerned with skill and performance improvement. Athletes who are unable to see improvement in personal performance and skill may withdraw from the sport. A study by Duda in 1988 looked at the difference in continued

persistence at a sport between athletes who were mastery oriented versus athletes who were ego or social comparison based oriented. The study involved 67 female and 67 male athletes in team or intramural basketball and volleyball leagues at a large university. The participants had to have been involved for at least a year of play at the competitive or recreational level. The average age of the participants was 21 years old. The participants were asked to fill out questionnaires regarding their preference toward "personal ego involvement (i.e., scoring the most points/kills, doing better than other people in the game), personal mastery (i.e., improving one's skill, playing one's best in the game), group ego involvement (i.e., the team beating other teams, the team winning), or group mastery (i.e., the team trying its best, the team playing as well as it can)." Duda found from the study that an orientation towards mastery or task leads to longer periods of involvement over ability or ego-enhancing orientation. Athletes who were more task-oriented tended to focus on mastery and control, which is linked to intrinsic motivation and the desire to continue when the athlete felt that progress was being made. Athletes who were more ego-oriented tended to continue with participation as long as extrinsic factors, such as social recognition were received. Once ego-oriented athletes stop receiving this extrinsic motivation, they may lose interest in participation. Individuals can be high in both task and ego orientation, as well as other orientations, such as work avoidance orientation and social approval orientation. In other terms, if the goals of one orientation are not being met, participation may still continue if sufficient goals from other orientations are met. It is also significant to note that the women in the study were more inclined to be of mastery or task orientation than men. Also, Ntoumanis (2001) found a link between orientation and self-determination. The study involved a total of

268 British college students (247 after outliers were removed), 154 male, 108 female, 6 who did not specify, between the ages of 18 and 36 years of age with the mean age being 20.4 years. The participants were asked to complete a series of three surveys measuring their goal orientations (specifically task and ego- orientation), motivational type (intrinsic motivation to know, to accomplish, and to experience simulation; extrinsic motivation such as identified regulation, introjected regulation, and external regulation; and finally, amotivation), and perceived competence. Results from the study found athletes high in task orientation to be high in self-determination, or feelings of independence and control of their own skill mastery, and high in perceived competence, while athletes high in ego-enhancing orientation were low in self-determination. It was noted in the study that athletes with both high-task orientation and high-ego orientation exist. These athletes value extrinsic rewards as well as intrinsic rewards, but self-determination is driven by the high task-orientation with no influence from high-ego orientation. In other words, these athletes compete to satisfy their desire to meet internal challenges and to feel competent independently of the rewards they feel from external motivations.

Additional orientations have also been identified. Maehr and Midgely (1991, 1996) argue that additional goals, ego-defensive orientation, work avoidance orientation, and social approval orientation, reflect behaviors seen in many classrooms. In ego-defensive orientation, a student feels successful if she does not receive any negative feedback about her ability and/or performance level from others. If she does, she becomes discouraged and defensive. Children with ego-defensive orientations are constantly looking for extrinsic rewards to justify their feelings of self-worth. In work-avoidance orientation, a student feels successful when she can get through a class session

with doing as little work as possible to pass. When a school and classroom environment is set up to focus on ability, children who are already skilled in topic areas will receive the credit and rewards for their high ability. This leaves children with low ability "marked" as bad or underachieving students. These students may then develop a work avoidance orientation, where they do as little work as possible to get by, because they know they can not compete with the more skilled students. In social approval orientation, a student feels successful when she gains recognition from authority figures, friends, and other important people in her life. Children with social approval orientation are looking to social groups and significant others as a source of positive reinforcement toward their feelings of self-worth and motivation.

These five orientations, ego-enhancing, task, ego-defensive, work avoidance, and social approval have been found to be correlated (Maehr & Midgley, 1996). A student is not restricted to having one goal-orientation, but may have multiple orientations to varying degrees. This was found to be the case in a number of studies on orientation (Spray & Wang, 2001; Issac, Sansone, & Smith, 2002; Standage & Treasure, 2001) In a study on discipline in physical education using 511 students, Spray and Wang (2001) found that a combination of high ego and high task orientation was presents in students with the highest levels of discipline. Standage and Treasure (2001) looked at the goal orientations of 182 male and 136 female students in physical education. The results also suggested that students could have a combination of orientations and that students high in task orientation and ego orientation were most likely to be self-determined in their motivation in physical education. Isaac et al. (2002) found that a combination of high task orientation and high interpersonal or social orientation lead to greater commitments to

and enjoyment of an activity or similar activities in students when participating in groups. Regarding novice, or beginning rowers, a questionnaire to establish the proportion of each orientation could be developed to help coaches determine which athletes would naturally enjoy and understand the sport of rowing and which athletes may need extra guidance and support. This exercise would help coaches build strong team membership with athletes who are strongly committed to staying with the team throughout the season.

Commitment

Being a novice rower takes a great deal of commitment without always knowing or understanding exactly what will happen in the days, weeks, or months to come. Because many of the novice rowers have never rowed before, they must trust in their coaches and older teammates that things will happen a certain way. To be successful on the team, the novice rowers must make a commitment to be and do their best every day, without necessarily understanding what their best is supposed to be or look like. Being able to measure commitment would help coaches understand which athletes are likely to succeed on their own and which athletes may need some additional help along the way.

Scanlan, Carpenter, Schmidt, Simons, & Keeler, B. (1993) define commitment as related to sport as "a psychological construct representing the desire and resolve to continue sport participation." Carpenter and Coleman (1998) used this definition and the sport commitment model developed by Scanlan and her colleagues (Carpenter, 1995; Carpenter, et al. 1993; Scanlan, Carpenter, Schmidt, Simons, & Keeler, 1993; Scanlan, Simons, Carpenter, Schmidt, & Keeler, 1993) in their study involving male elite cricket players. The study involved 78 elite English male cricket players, age 9-17 years old, M = 13.65 years old. The participants were asked to complete the Athletes' Opinion Survey

(Carpenter 1995; Scanlan, Carpenter, Schmidt, Simons, & Keeler, 1993), which had been adapted for cricket playing, at the beginning and end of the playing season. The survey used a 7-point Likert scale to measure perceived competence, commitment, enjoyment, negative affect, personal investment, involvement alternatives, involvement opportunities, social opportunities, recognition items, social support, and social constraint. Multiple regression analysis, using changes in scores over the season, was used. The researchers found that attractiveness of alternatives to continued involvement, personal investment, investment opportunities, sport enjoyment, and social constraints were components that influenced the commitment levels of the athletes. If these components fluctuated within an athlete, they could be used as predictors of an increase or decrease in commitment level and eventual dropout or continued participation in sport. The researchers also observed that commitment level was an important factor in sport participation. Not only did the athletes who were more committed to their sport participate longer, they also tended to be more successful.

Commitment is an extremely important component in a number of studies looking at success in sport participation. Gould et al. (2000) interviewed various participating sports teams at the 2000 Olympic games in Sydney, Australia. The researchers decided on a set of performance guidelines and selected teams based on the level of performance as perceived by the researchers. The researchers found that at the Olympic level, teams who were very successful and exceeded the researchers' perceived performance level were very committed up to and throughout the Olympics. Those teams talked about having a common vision, goal, and determination to put the team first in all situations they encountered. However, teams who did not meet the perceived performance level

and did not perform well at the Olympics had had problems with commitment. The members of these teams did not always share common goals, sometimes did not have clear goals set, and in general, did not work well together as a "team." Another study that focused on the importance of commitment level in close relationships by Rusbult (cited in Schmidt & Stein, 1991) focused on alternatives and investments, as well as rewards, costs, and satisfaction for each partner. A total of 17 men and 17 women attending college were asked to complete questionnaires regarding their dating relationships. The participants continued answering the questionnaires every 17 days until the end of the relationship or the end of the academic year. Based partly on the work and theory of Thibaut and Kelley (1959), Rusbult hypothesized that changes in three components, the balance of rewards and costs of the current activity, the quality of alternatives, and the size of the current investment would predict an increase or decrease in the commitment to the relationship. Rusbult found that for the participants who stayed in their relationship, "rewards increased over time, costs increased less, satisfactions increased more, alternative quality declined more, investment size increased more, and commitment increased more" whereas for the participants who withdrew from their relationship showed "very little increase over time in rewards, great increases in costs, a slight reduction in satisfaction, an increase in alternative quality, a decrease over time in investments, and a decline in level of commitment." Schmidt and Stein (1991) adapted the results of Rusbult's study to participation in sports, where a strong commitment was characterized by low alternatives and high investments, high rewards, low costs, and high satisfaction. Withdrawal, or dropout from sport was characterized with increasing alternatives and decreasing investments, decreasing rewards, increasing costs, and

decreasing satisfaction, and importantly distinguished from the term "burnout," where there is a sharp increase in costs with no increase in rewards and no perceived alternatives over a prolonged period of time.

Goal orientations, perceived benefits, and commitment are all major components to sport participation and withdrawal as seen in many studies done on "traditional" sports. It has also been shown that these components are interrelated and influence one another. However, there are no data for these components on novice rowers to understand why a large number of athletes try out for the team and only a small number of athletes remain throughout the year.

CHAPTER 3

METHODS

Participants

A total of 30 female rowers participated in this study. Participants were required to be enrolled as full-time students at a Midwest university, be at least 18 years of age, and meet the eligibility requirements for participation set by the National Colligate Athletic Association (NCAA) and the participating university. Age, past sporting experiences, and ethnic background data (see Table 1) were also collected for each participant as part of the demographic data. These participants had little to no previous rowing experience. Thirty athletes participated, but only 13 of those athletes completed both the pre and post-season surveys. The other 17 athletes completed either the pre-season or the post-season survey. Table 1 is a summary of pre-season and post-season participation. Age in years, ethnicity, a sport played before college, and participation in the pre and post-season surveys are listed by participant ID code. Average age for pre-season participants was 18.38, SD = 0.77, while post-season average age was 18.61, SD = 0.98. In the pre-season survey, 13 participants (56.5%) said they were European American, 2 were African American (8.7%), 2 were Middle East American (8.7%), and 6 said Other or Did not answer (26.1%). In the post-season survey, 13 participants said they were European American (65%), 3 were African American (15%), and 4 said Other or Did not answer (20%). In the pre-season survey, track was most often cited as a sport played with 4 athletes having participated (17.4%), followed by soccer with 3 athletes having participated (13 %), and hockey with 2 athletes having participated (8.7%). In the

post-season survey, cross-country, soccer, and track were the sports most often cited as a sport played, each with 3 athletes (15%) of the group having participated.

Table 1

Participant Demographic Data

Age	Ethnicity	Sport played	Pre-season Survey	Post-season Survey
18	Other	Hockey	X	
18	Other	Hockey	X	
19	European American	Gymnastics	X	
18	European American	Track	X	
18	Other	Basketball	X	
18	European American	Softball	X	
18	European American	Cycling	X	
18	African American	None	X	
19	Did not answer	Did not answer	X	
18	European American	Soccer	X	
19	Middle East American	Basketball	X	X
19	Other	Cross-country	X	X
19	European American	Cheer	X	X
19	European American	Lacrosse	X	X
18	Middle East American	Rowing	X	X
17*	African American	Track	X	X
18	Other	Golf	X	X
18	European American	Rowing	X	X
18	Did not answer	Soccer	X	X
18	European American	Swimming	X	X
19	European American	Soccer	X	X
21	European American	Track	X	X
18	European American	Track	X	X
20	European American	Cross-country		X
19	European American	Dance		X
18	Other	Soccer		X
18	European American	Did not answer		X
18	Did not answer	Did not answer		X
18	European American	Cross-country		X
18	European American	Rowing		X

* Emancipated minor

Instrumentation

Commitment Scale. The subscales of sport commitment, social constraints, personal investments, involvement alternatives, investment opportunities, and sport enjoyment were measured with a sport commitment scale adapted from Scalan, et al. (1993). For example, the Sport Enjoyment question *Do you enjoy playing in (program) this season?* was adapted to *Do you enjoy rowing this season?* The reliability coefficients for the six subscales range from 0.77 to 0.91, and has construct validity (see Scanlan, et al., 1993). A copy of the adapted sport commitment model can be seen in Appendix A. Reliability coefficients were also calculated for this study using Cronbach's alpha and ranged from 0.45 to 0.91.

Multiple Goal Orientation Scale (MGOS). The subscales of ego-enhancing, ego-defensive, task, work-avoidance, and social approval were measured using the Multiple Goal Orientation in Sport Questionnaire, MGOS, (Stefanek, Gano-Overway, Cummings, & Ewing, 2001). The MGOS is a 28 item scale with 5 response options ranging from strongly disagree to strongly agree about how the respondent personally feels on differing aspects of sport participation, such as *I feel successful in sport when I am the only one who can do a skill.* The reliability coefficients for the subscales range between 0.81 and 0.87. A copy of the MGOS can be found in Appendix B. Reliability coefficients were also calculated for this study using Cronbach's alpha and range from 0.78 to 0.90.

Sport Participation Motive Survey. Importance of perceived benefits was measured using a Likert type scale on an adapted version of the Sport Participation Questionnaire - Part A (Seefeldt et al., 1991). This survey has face validity and asked the participants to rate the importance of an array of reasons for participating in sports. The

survey has been adapted to be specific to the sport of rowing. For example, the item *Someone I admire plays this sport* was changed to *Someone I admire rows*. A copy of the adapted Sport Participation Questionnaire – Part A can be found in Appendix C.

Demographic Questionnaire. Age, ethnic background, sports played, academic major, swimming ability, fitness level, rowing experience, health habits, and perceived ability to learn were collected on a survey information sheet. A copy of the Demographic Questionnaire survey sheet can be found in Appendix D.

Data Collection Procedures

Data collection, which began following approval from the University's human subject committee (see Appendix E), was originally scheduled to take place on the first and second day during the initial week of tryouts for novice participation on the women's rowing team at a Midwest university. Due to an unusually low turn out, data collection was rescheduled for the following week after practice. The women were told about the study and informed of their role as voluntary participants. Because not all the women were at the initial briefing, a number of meetings took place in the following days. These multiple attempts were used to ensure that all the novices were given an instruction packet with the four surveys, plus a demographic questionnaire and consent form (see Appendix F) to read and return if willing to participate. The surveys were collated in different orders to offset any order effect associated with completing the four surveys.

Because the investigator was a volunteer coach with the team, a graduate student who is not a coach of the participants gave the initial introduction to the study and informed the participants about their rights as stated on the consent form. Participants who signed the consent form were given brief instructions on how to construct their

unique identification code number, (ID Code), specifically, the number of sisters a rower has followed by the number of brothers a rower has followed by the middle initial of the rower followed by the last four digits of the home phone number of the rower. When each participant was finished with the packet of surveys, she handed it back to the graduate student who reviewed and compared the packet to a completion checklist, gave a copy of the consent and rights information back to the participant, and placed the packet into a manila envelope for safe keeping. If the graduate student was not available, the participant was asked to separate the consent form from the packet before returning the surveys to the researcher to help ensure confidentiality. The manila envelope was kept in a safe location at the graduate student's office and returned to the researcher after the post survey collection process was completed. Rowers were thanked for participating.

After the initial participants completed the surveys, the graduate student compiled a master code list with the participants' names and ID Codes. This list was kept safe out of sight of the primary investigator and all other coaches until the day after the end of the semester surveys were completed on November 15th, 2003.

The participants who remained on the team as well as the participants who chose to drop out of the program over the course of the semester were asked to complete three of the original surveys, approximately two and a half months after the first surveys were administered. On November 15th, an email went out to all athletes who had tried out for the team, asking them to again complete the commitment questionnaire, the multiple goal orientation in sport questionnaire, and the participant motivation questionnaire part A (participant motives). The fourth survey, reasons for dropping-out (participant motivation questionnaire part B), was removed from the study due to the low turn-out of participants.

Due to this low turn-out no athletes were initially cut from the team, resulting in no data available for hypotheses and research questions pertaining to cut athletes. The surveys were located on a website where all dropout participants had access to them. Participants were identified only by their ID Code. The website tracked only the participants ID Codes and whether they were a dropout or a continuing participant, with no other way of identifying the rower.

Once an athlete filled out the questionnaires on the website, the Webmaster forwarded the researcher the results of the surveys with the ID Code that was used for identification. After all participants had completed the surveys, the researcher compiled a list of the identification code numbers to see who completed the second set of surveys. This list was compared with the original master code list to determine dropout participant data and continued participant data. It should be noted that a number of participants who did not complete the first set of surveys decided to complete the second set of surveys. This unusual circumstance left the researcher with 23 people who completed the first survey, 20 people who completed the second survey, but only 13 people who completed BOTH the first and second surveys. T-tests were run to check for consistency in answers between the groups. No significant differences between groups were found.

Analysis of the Data

For the first hypothesis, *There will be no difference on commitment subscales at the beginning of the season between the continuing participants and eventual dropouts of rowing*, the dependent variables were the six subscales of the Sport Commitment Model. The independent variable has two categories, the continued participants and the dropouts.

Each of the six pre-season subscales was analyzed separately using one-way ANOVAs. Significance for the analysis was set at p=0.05.

For the second hypothesis, *There will be an increase on the post-season commitment subscales for continuing participants while there will be no change or a decrease on the commitment subscales for the dropouts by the end of the study,* the dependent variable was a subscale of the Sport Commitment Model. There were two independent variables. The first independent variable was participant group, i.e., continuing participants and the dropouts. The second independent variable was time of survey comparison, i.e., pre-season and post-season. Each of the six post-season subscales was analyzed separately using a 2 x 2 ANOVA (group x time). For each subscale, the main effects for both independent variables were found. For the first independent variable, the average of the continuing participants' pre and post-survey scores ($X_{part\text{-}avg}$), and the average of the dropout participants' pre and post-season survey scores ($X_{drop\text{-}avg}$) was found. For the second independent variable, the average of the pre-season continuing participant and scores ($X_{pre\text{-}avg}$), and the average of the post-season continuing participant and dropout scores ($X_{post\text{-}avg}$) was found. Interaction effect (group x time) was done to find the average of the continuing participants at the pre-season survey (X_{1avg}), the average of the dropouts at the pre-season survey (X_{2avg}), the average of the continuing participants at the post-season survey (X_{3avg}), and the average of the dropouts at the post-season (X_{4avg}).

For the third hypothesis, *Orientations from the pre-season surveys for the participants who continue for the whole semester and for participants who dropout from rowing will not be different, but both will be different from the participants who are cut*

from the team, the dependent variables were the five correlated subscales of the Multiple Goal Orientation in Sport Questionnaire. The independent variable has three groups, the continuing participants, the participants who dropout, and the participants who are cut from the team. A oneway MANOVA was not used to analyze the data as originally planned due to the low number of participants. Significance for the analysis was to help eliminate type 1 and type 2 errors. A post hoc test, Discriminate Function Analysis, used to interpret results, was also cancelled.

For the fourth hypothesis, *Orientations from the post-season surveys for the participants who continue for the whole semester and for participants who dropout from rowing will be different,* the dependent variables are the five correlated subscales of the Multiple Goal Orientation in Sport Questionnaire. The independent variable has two groups, the continuing participants and the participants who dropout. A oneway MANOVA was used to analyze the data. Significance for the analysis was set at $p=0.01$ to help eliminate type 1 and type 2 errors. A post hoc test, Discriminate Function Analysis, was done to interpret results.

For the first research question, *Is there a difference in reasons for participating in rowing for novice rowers who continue participation and those who withdraw from novice rowing*, a top ten list of reasons for participating for both the continuing participants and the dropout participants was developed from mean rankings. A t-test was used on reasons that are placed in different order between the two groups.

For the second research question, *Is there a difference in reasons for dropping-out of rowing for novice rowers who continue participation, but have thought about quitting, and those who withdraw from novice rowing*, a top ten list of reasons for dropping-out of

rowing for both the continuing participants and the dropout participants was developed from mean ranking. A t-test was used on reasons that are placed in a different order between the two groups.

CHAPTER 4

RESULTS

Results of the data analysis are presented here in sections. Demographic data about the participants is presented first. Perceived benefits to participating in novice collegiate rowing will be discussed, followed by commitment levels, and then achievement goal orientations of the athletes.

Table 2 is a summary of participant age, ethnicity, and sporting experience broken down by season and participation status. T-tests were run on the age differences between the continuing participants and dropout participants. No significance in age difference between the two groups was found. Age, ethnicity, and past sporting experience are presented for both pre-season and post-season. Pre-season age for the total group was M = 18.38, SD = 0.77. Ethnicity for the pre-season participants was 56.5% European American (13 athletes), 8.7% African American (athletes), 8.7% Middle East American (2 athletes), and 26.1% Other/did not answer (6 athletes). The pre-season group as a whole participated in 13 different sports previous to college rowing with track being the most often played at 17.4% (4 athletes). Post-season age for the total group was M = 18.61, SD = 0.98. Ethnicity for the post-season participants was 65% European American (13 athletes), 15% African American (3 athletes), and 20% Other/did not answer (4 athletes). The post-season group as a whole participated in 11 different sports previous to college rowing with track, cross-county, soccer, and high school rowing being the most often played at 15% (3 athletes) each.

Table 2

Continuing and Dropout Participant Age, Ethnicity, and Sport Played by Season

Pre-season – Age					
Cont. Participants (N = 14)		Dropout Participants (N = 9)		Total Pre-season (N = 23)	
M = 18.29, SD = 0.88		M = 18.56, SD = 0.53		M = 18.38, SD = 0.77	
Pre-season – Ethnicity					
Cont. Participants (N = 14)		Dropout Participants (N = 9)		Total Pre-season (N = 23)	
Euro. American, 9	64%	European American, 4	45%	Euro. American, 13	56%
African American, 1	7.2%	African American, 1	11%	African American, 2	9%
Other, 4	28%	Mid-East American, 2	22%	Mid-East American, 2	9%
		Other/DNA, 2	22%	Other/DNA, 6	26%
Pre-season – Sport played					
Cont.Participants (N = 14)		Dropout Participants (N = 9)		Total Pre-season (N = 23)	
Basketball, 1	7.1%	Basketball, 1	11.1%	Basketball, 2	8.7%
Golf, 1	7.1%	Cheer, 1	11.1%	Cheer, 1	4.3%
Gymnastics, 1	7.1%	Cross-country, 1	11.1%	Cross-country, 1	4.3%
Hockey, 2	14%	Cycling, 1	11.1%	Cycling, 1	4.3%
Rowing, 1	7.1%	Lacrosse, 1	11.1%	Golf, 1	4.3%
Soccer, 3	21%	Rowing, 1	11.1%	Gymnastics, 1	4.3%
Swimming, 1	7.1%	Softball, 1	11.1%	Hockey, 2	8.7%
Track, 4	29%	None, 1	11.1%	Lacrosse, 1	4.3%
		Did not answer, 1	11.2%	Rowing, 2	8.7%
				Soccer, 3	13.0%
				Softball, 1	4.3%
				Swimming, 1	4.3%
				Track, 4	17.4%
				None/DNA, 2	8.6%
Post-season – Age					
Cont. Participants (N = 12)		Dropout Participants (N = 8)		Total Pre-season (N = 20)	
M = 18.30, SD = 1.06		M = 18.86, SD = 0.69		M = 18.61, SD = 0.98	
Post-season – Ethnicity					
Cont. Participants (N = 12)		Dropout Participants (N = 8)		Total Post-season (N = 20)	
Euro. American, 9	75%	Euro. American, 4	50%	Euro. American, 13	65%
African American, 1	8.3%	African American, 2	25%	African American, 3	15%
Other, 1	8.3%	Other, 2	25%	Other/DNA, 4	20%
Did not answer, 1	8.4%				
Post-season – Sport played					
Cont. Participants (N = 12)		Dropout Participants (N = 8)		Total Post-season (N = 20)	
Cross-county, 1	8.3%	Basketball, 1	12.5	Basketball, 1	5.0%
Golf, 1	8.3%	Cheer, 1	12.5	Cheer, 1	5.0%
Rowing, 2	17%	Cross-country, 2	25.0	Cross-country, 3	15%
Soccer, 2	17%	Dance, 1	12.5	Dance, 1	5.0%
Swimming, 1	8.3%	Lacrosse, 1	12.5	Golf, 1	5.0%
Track, 3	25%	Rowing, 1	12.5	Lacrosse, 1	5.0%
Did not answer, 2	16%	Soccer, 1	12.5	Rowing, 3	15.0%
				Soccer, 3	15.0%
				Swimming, 1	5.0%
				Track, 3	15.0%
				Did not answer, 2	10.0%

Results of this study are presented in sections according to study hypotheses. Each section will look at the research question or hypothesis presented in Chapter One, and then discuss results from the appropriate analyses.

Perceived Benefits

All participants were asked to complete the adapted version of the Sport Participation Questionnaire to determine reasons for participating in rowing. The list of benefits, number of participants, rank order of importance (symbol #), means, standard deviations, and level of significance are presented in Table 3. The survey was based on a 5-point Likert scale with 5 being the most important and 1 being the least important. The participants as a whole listed *To play as part of a team, For excitement of competition, To stay in shape, To have fun,* and *To get exercise* as the top five reasons to try-out and participate in rowing during the pre-season. The post-season survey found that the top-five reasons for participating stayed the same, but were now in a different order of importance *To stay in shape, To get exercise, To play as part of a team, To have fun,* and *For the excitement of competition.* The only item to approach significance, $p < 0.1$, from the pre-season to post-season was *To play as part of a team.* The mean for the group dropped in importance from 4.83 in the pre-season to 4.53 in the post-season, but it still remained the most important reason. It should also be noted that the item *For the team spirit* was ranked in the top ten important benefits to the athletes while the item *To win* did not rank in the top ten benefits.

Table 3

Total Group Benefits Survey Results Comparison From Pre-Season to Post-Season

Benefit	Pre-Season Survey				Post-Season Survey				Sig
	N	#	M	SD	N	#	M	SD	
To play as part of a team	24	1	4.83	0.38	19	3	4.53	0.61	*
For excitement of competition	24	2	4.75	0.53	19	5	4.47	0.70	ns
To stay in shape	24	3	4.71	0.55	19	1	4.68	0.58	ns
To have fun	24	3	4.71	0.55	19	3	4.53	0.61	ns
To get exercise	24	3	4.71	0.55	19	2	4.63	0.68	ns
To improve my skills	24	6	4.54	1.06	19	8	4.26	1.05	ns
For the challenge of competition	24	6	4.54	1.06	19	6	4.32	0.75	ns
To go to a higher level of competition	24	8	4.50	1.02	19	11	4.00	1.16	ns
To meet new friends	24	9	4.46	0.66	19	6	4.32	0.82	ns
For the team spirit	24	9	4.46	0.83	19	10	4.11	0.99	ns
To win	24	11	4.29	0.96	19	12	3.95	1.03	ns
To learn new skills	24	11	4.29	1.08	19	9	4.21	0.79	ns
To release energy/stress	24	13	3.92	0.93	19	13	3.68	1.20	ns
To do something I'm good at	24	14	3.87	0.99	19	14	3.58	1.31	ns
I like the coaches	24	15	3.79	1.06	19	15	3.42	1.54	ns
To have something to do	24	16	3.71	1.27	19	19	3.16	1.39	ns
To feel important	24	17	3.42	1.38	19	16	3.32	1.11	ns
For the rewards	24	18	3.37	1.31	19	18	3.21	1.32	ns
To use the equipment	24	19	3.25	1.26	19	20	2.74	1.10	ns
To be with friends	24	20	3.21	1.22	19	17	3.26	1.37	ns
For the travel	24	21	2.67	1.13	19	21	2.26	0.99	ns
Someone I admire rows	24	22	1.92	1.28	19	22	2.21	1.65	ns
To attract social attention	24	23	1.75	0.94	19	24	1.53	0.70	ns
Parents/friends want me to participate	24	23	1.75	1.03	19	23	2.16	1.26	ns
To be popular by being a good athlete	24	25	1.62	1.01	19	24	1.53	0.91	ns

* = $p < .0.1$

ns = not significant

= rank order

Athletes were asked to complete the adapted version of the Sport Participation Questionnaire during the pre-season phase of the study to determine reasons for trying-out and participating in rowing. The completed surveys were split into two groups at the end of the study, the continuing participant group and the dropout or withdrawal group. The list of benefits, number of participants, rank order of importance (symbolized by #), means, standard deviations, and level of significance are presented and compared in Table 4 for the continuing participants and the dropout participants of rowing. The participants who decided to stay listed *To play as part of a team, For the excitement of competition, To have fun, For the team spirit, To get exercise,* and *To stay in shape* as the six most important benefits. The participants who decided to dropout of rowing listed *To play as part of a team, To stay in shape, To get exercise, To have fun,* and *To improve my skills* as the top five reasons to participate. T-tests were performed on all of the reasons to determine if participants and dropouts differed in benefits associated with rowing. There were no significant differences on any of the items between the two groups during the pre-season phase of the study. The lack of significant differences answers one of the primary research questions of the study in that there does not appear to be any difference between the continuing participants and dropouts of rowing in their initial perceptions of what they will gain or benefit from by participating in college rowing.

Table 4

Pre-Season Survey Results Comparison Between Continuing Participants and Dropouts

Benefit	Participants				Drop-outs				Sig
	N	#	M	SD	N	#	M	SD	
To play as part of a team	15	1	4.87	0.35	9	1	4.78	0.44	ns
For excitement of competition	15	1	4.87	0.35	9	6	4.56	0.73	ns
To stay in shape	15	4	4.67	0.62	9	1	4.78	0.44	ns
To have fun	15	3	4.73	0.59	9	4	4.67	0.50	ns
To get exercise	15	4	4.67	0.62	9	1	4.78	0.44	ns
To improve my skills	15	10	4.47	1.25	9	4	4.67	0.71	ns
For the challenge of competition	15	4	4.67	1.05	9	8	4.33	1.12	ns
To go to a higher level of competition	15	8	4.53	1.06	9	7	4.44	1.01	ns
To meet new friends	15	8	4.53	0.74	9	8	4.33	0.50	ns
For the team spirit	15	4	4.67	0.62	9	10	4.11	1.05	ns
To win	15	10	4.47	0.83	9	12	4.00	1.12	ns
To learn new skills	15	12	4.40	1.12	9	10	4.11	1.05	ns
To release energy/stress	15	15	3.87	0.92	9	12	4.00	1.00	ns
To do something I'm good at	15	14	3.93	0.96	9	14	3.78	1.09	ns
I like the coaches	15	13	4.00	1.00	9	16	3.44	1.13	ns
To have something to do	15	16	3.73	1.34	9	15	3.67	1.23	ns
To feel important	15	17	3.47	1.51	9	18	3.33	1.23	ns
For the rewards	15	18	3.40	1.06	9	18	3.33	1.73	ns
To use the equipment	15	19	3.13	1.36	9	16	3.44	1.13	ns
To be with friends	15	19	3.13	1.36	9	18	3.33	1.00	ns
For the travel	15	21	2.53	1.19	9	21	2.89	1.05	ns
Someone I admire rows	15	22	2.13	1.41	9	24	1.56	1.01	ns
To attract social attention	15	24	1.60	0.74	9	22	2.00	1.23	ns
Parents/friends want me to participate	15	23	2.00	1.13	9	25	1.33	0.71	ns
To be popular by being a good athlete	15	25	1.40	0.51	9	22	2.00	1.50	ns

ns = not significant

= ranked order

Athletes were asked to complete the adapted version of the Sport Participation Questionnaire during the post-season phase of the study to determine if differences in benefits occurred following withdrawal from rowing. The completed surveys were split into two groups at the end of the study, the continuing participant group and the dropout or withdrawal group. The list of benefits, number of participants, rank order of importance (symbolized by #), means, standard deviations, and level of significance are presented and compared in Table 5 for the continued participants and the dropouts of rowing. The participants who decided to stay listed *To stay in shape, To get exercise, For the excitement of competition, To play as part of a team,* and *For the challenge of competition* as the top five reasons to participate. The participants who decided to dropout of rowing listed *To have fun, To play as part of a team, To stay in shape, To meet new friends,* and *To get exercise* as the top five reasons to participate. Although there were no significant differences in the pre-season phase, the post-season survey results show four items, *For excitement of competition, To get exercise, To stay in shape,* and *To release energy/stress,* approached a significant, $p < 0.10$, difference between those who chose to continue participating and those who chose to dropout. Also, one item, *Someone I admire rows*, had a significant, $p < 0.05$, difference between those who chose to continue participating and those who chose to dropout. Results suggest that the answer to the question as to whether continuing athletes and dropouts differ in their reasons to participate varies with time. Pre-season results showed no difference in reasons to participate between groups, but as time went by, those who stayed began to value different benefits than those who dropped out of rowing. It should be noted that research for the exact answer the research question could not be obtained due to low number of

participants, so data were collected on participation reasons at the end of the semester instead of dropout reasons so that t-tests and comparisons could be run.

Table 5

Post-Season Survey Results Comparison Between Continuing Participants and Dropouts

Benefit	Participants				Drop-outs				Sig
	N	#	M	SD	N	#	M	SD	
To play as part of a team	11	4	4.64	0.67	8	2	4.37	0.52	ns
For excitement of competition	11	3	4.73	0.65	8	6	4.12	0.64	*
To stay in shape	11	1	4.91	0.03	8	2	4.37	0.74	*
To have fun	11	7	4.45	0.69	8	1	4.62	0.52	ns
To get exercise	11	1	4.91	0.30	8	5	4.25	0.89	*
To improve my skills	11	5	4.55	0.93	8	8	3.87	1.13	ns
For the challenge of competition	11	5	4.55	0.69	8	7	4.00	0.76	ns
To go to a higher level of competition	11	10	4.27	1.27	8	12	3.62	0.92	ns
To meet new friends	11	10	4.27	0.91	8	2	4.37	0.74	ns
For the team spirit	11	9	4.36	0.81	8	10	3.75	1.17	ns
To win	11	13	4.09	1.04	8	10	3.75	1.03	ns
To learn new skills	11	7	4.45	0.69	8	8	3.87	0.84	ns
To release energy/stress	11	12	4.18	0.75	8	15	3.00	1.41	*
To do something I'm good at	11	14	3.91	1.30	8	14	3.12	1.25	ns
I like the coaches	11	15	3.73	1.35	8	16	3.00	1.77	ns
To have something to do	11	16	3.55	1.29	8	19	2.63	1.41	ns
To feel important	11	19	3.18	1.25	8	13	3.50	0.93	ns
For the rewards	11	18	3.36	1.50	8	16	3.00	1.70	ns
To use the equipment	11	20	3.00	1.18	8	20	2.37	0.92	ns
To be with friends	11	17	3.45	1.29	8	16	3.00	1.51	ns
For the travel	11	22	2.55	1.04	8	22	1.87	0.84	ns
Someone I admire rows	11	21	2.82	1.89	8	25	1.38	0.74	**
To attract social attention	11	24	1.55	0.69	8	24	1.50	0.76	ns
Parents/friends want me to participate	11	23	2.18	1.08	8	21	2.12	1.55	ns
To be popular by being a good athlete	11	25	1.36	0.67	8	23	1.75	1.17	ns

* = $p <= 0.1$

** = $p < 0.05$

ns = not significant

= ranked order

Commitment

Athletes were asked to complete the adapted version of the Commitment Scale Questionnaire to determine pre-season and post-season commitment to rowing. The survey was based on a 5-point Likert scale with 1 being the least important and 5 being the most important. The completed surveys were split into two groups at the end of the study, the continuing participant group and the dropout or withdrawal group. It was hypothesized there would be no difference in the commitment levels of the continuing participants and the eventual dropouts of rowing during the pre-season, but by the post-season, a significant difference in commitment between the groups resulted. It was also hypothesized that commitment levels for the continuing participants would increase from the pre-Season to the post-season, while the commitment levels for the dropouts would remain the same or decrease from pre-season to post-season.

Independent sample t-tests were run on the commitment items and commitment subscales to determine significant differences or changes in groups. The list of commitment items, number of participants, means, standard deviations, and level of significance between the groups are presented in Table 6 (see page 54). Table 6 looks at the commitment levels on the pre-season survey between the eventual continuing participants and the dropouts from the team, item by item. The only significant, $p \leq 0.05$, difference was on the item *How much effort have you put into rowing so far this season* with the continuing participants' mean at 4.80 and the eventual dropouts at 3.89. These results support the hypothesis that there would be no difference in pre-season commitment levels between groups.

Table 7 (see page 55) looks at the commitment subscale scores on the pre-season survey between the continuing participants and the dropouts from the team. No significant difference for the four commitment subscales was found: Specifically, for the sport commitment subscale, $t(22) = 0.561, p < 0.60$; for the sport enjoyment subscale, $t(22) = 0.560, p < 0.60$; for the social constraints subscale, $t(22) = -0.722, p < 0.50$; and for the involvement opportunities subscale, $t(22) = 1.444, p < 0.20$. This result supports the hypothesis that there would be no difference between the continuing participants and dropout participants at the start of the study.

Table 8 (see page 55) looks at the commitment subscale levels on the post-season survey between the continuing participants and the dropouts from the team. The subscale of sport commitment was significantly, $t(16) = 2.768, p < 0.05$, higher for the continuing participants than the dropout participants. The commitment subscales of sport enjoyment and involvement opportunities approached a significant, $t(15) = 2.207, p < 0.10$, and $t(16) = 0.384, p < 0.07$ respectively, difference between the two groups, and the commitment subscale of social constraints had no significant difference between the groups, $t(16) = 0.337, p < 0.75$. These results partially support the hypothesis that the post-season commitment levels would be different between groups.

Table 9 (see page 55) looks at the significance of commitment subscale level changes for continuing participants from pre-season to post-season. The commitment subscale of social constraints was the only subscale to approach significance, $t(14) = -1.815, p < 0.10$, while the other three subscales of sport commitment, sport enjoyment, and involvement opportunities were not significantly different, $t(24) = 0.960, p < 0.35$, $t(23) = 0.736, p < 0.50$, and $t(24) = -1.371, p < 0.20$ respectively. The change in the

social constraint was toward weaker commitment levels at the post-season survey and does not support the hypothesis.

Table 10 (see page 56) looks at the significance of commitment subscale level changes for dropouts from pre-season to post-season. The commitment subscale of sport commitment had a significant, $t(6.407) = 3.038, p < 0.05$, change from pre-season to post-season, with average commitment subscale levels falling from 4.67 to 3.12. The sport enjoyment subscale also approached a significant change, $t(8) = 2.268, p < 0.10$, and the other two commitment subscales, social constraints and involvement opportunities, had no significant changes from pre-season to post-season, $t(14) = -.0972$, $p < 0.35$ and $t(14) = 0.399, p < 0.70$ respectively. These changes in commitment levels from pre-season to post-season support the hypothesis that there would be a decrease in commitment levels for dropout participants.

Table 6

Significance of Commitment Level Differences between Participants and Dropouts on Pre-Season Survey

Item	Participants			Drop-Outs			sig
	N	M	SD	N	M	SD	
How proud are you to tell people that you're a r ower	15	4.73	0.59	9	5.00	0.00	ns
Do you want to keep participating in college rowing	15	4.87	0.52	9	4.78	0.44	ns
How dedicated are you to college rowing	15	4.93	0.26	9	4.78	0.44	ns
What would you be willing to do to keep on rowing	15	4.80	0.56	9	4.56	0.53	ns
How hard would it be for you to quit rowing	15	4.47	0.64	9	4.11	0.78	ns
How determined are you to stay in college rowing	15	4.73	0.59	9	4.78	0.44	ns
Do you enjoy rowing so far this season	15	4.73	0.59	9	4.67	0.50	ns
Are you happy rowing so far this season	15	4.73	0.59	9	4.56	0.73	ns
Do you have fun rowing so far this season	15	4.67	0.72	9	4.67	0.71	ns
Do you like rowing so far this season	15	4.93	0.26	9	4.67	0.71	ns
How interesting are other activities besides rowing	15	3.47	0.92	9	4.00	0.71	ns
How much fun are other activities besides rowing	15	3.40	0.83	9	3.67	0.07	ns
How much would you like other activities	15	3.40	0.91	9	3.11	1.27	ns
How difficult was it to choose rowing over other act.	15	2.33	1.29	9	2.22	1.48	ns
How much of your time have you put into rowing	15	4.20	0.78	9	4.00	0.71	ns
How much effort have you put into rowing	15	4.80	0.56	9	3.89	1.17	**
How much money have you put into rowing	15	2.07	1.28	9	1.33	0.71	ns
I feel I have to row to be with my friends	15	1.40	0.74	9	1.56	0.73	ns
I feel I have to row to please my friends	15	1.27	0.59	9	1.33	0.71	ns
I feel I have to stay in rowing because of my	15	1.27	0.59	9	1.22	0.44	ns
I feel I have to row to please my mom	15	1.20	0.56	9	1.44	1.01	ns
I feel I have to row to please my dad	15	1.20	0.56	9	1.56	1.01	ns
I feel I have to row to please my coach	15	1.60	0.99	9	1.56	0.88	ns
I stay in rowing so people won't think I'm a quitter	15	1.73	0.80	9	2.11	1.45	ns
Would you miss being a rower if you left the team	15	4.60	0.74	9	4.56	0.73	ns
Would you miss your coach if you left the team	15	3.87	1.13	9	3.56	1.01	ns
Would you miss the good times if you left the team	15	4.47	0.83	9	3.89	1.05	ns
Would you miss your friends if you left the team	15	4.47	0.74	9	3.56	1.67	ns

** = $p < 0.05$

ns = not significant

Table 7

Significance of Commitment Subscale Level Differences between Participants and Dropouts on Pre-Season Survey

Subscale	Participants			Drop-Outs			Sig.
	N	M	SD	N	M	SD	
Sport commitment	15	4.76	0.42	9	4.67	0.28	ns
Sport enjoyment	15	4.77	0.49	9	4.64	0.63	ns
Social constraints	15	1.38	0.54	9	1.54	0.49	ns
Involvement opportunities	15	4.35	0.61	9	3.89	0.96	ns

ns = not significant

Table 8

Significance of Commitment Subscale Level Differences between Participants and Dropouts on Post-Season Survey

Item	Participants			Drop-Outs			Sig.
	N	M	SD	N	M	SD	
Sport commitment	11	4.56	0.53	7	3.12	1.32	**
Sport enjoyment	11	4.60	0.65	7	3.32	1.43	*
Social constraints	11	2.01	1.06	7	1.84	0.74	ns
Involvement opportunities	11	4.64	0.38	7	3.68	1.15	*

* = $p < .1$

** = $p < 0.05$

ns = not significant

Table 9

Significance of Participant Commitment Subscale Level Changes between Pre and Post-Season Surveys

Item	Pre-Season			Post-Season			sg
	N	M	SD	N	M	SD	
Sport commitment	15	4.76	0.42	11	4.58	0.53	ns
Sport enjoyment	15	4.77	0.49	11	4.60	0.65	ns
Social constraints	15	1.38	0.54	11	2.01	1.06	*
Involvement opportunities	15	4.35	0.61	11	4.64	0.38	ns

* = $p < .1$

ns = not significant

Table 10

Significance of Dropout Commitment Subscale Level Changes between Pre and Post-Season Surveys

Item	Pre-Season			Post-Season			Sig.
	N	M	SD	N	M	SD	
Sport commitment	9	4.67	0.28	7	3.12	1.33	**
Sport enjoyment	9	4.64	0.67	7	3.32	1.43	*
Social constraints	9	1.54	0.49	7	1.84	0.74	ns
Involvement opportunities	9	3.89	0.96	7	3.68	1.15	ns

* = $p < 0.1$
** = $p < 0.05$
ns = not significant

Table 11 presents Cronbach's reliability coefficients for each of the commitment subscales. It should be noted that the reliability of the Personal Investments subscale is below 0.70. The items of the subscale were retested in pairs in an attempt to raise the reliability by eliminating a weak item, however, none of the pairs resulted in a reliability higher than 0.48. These findings are consistent with Scanlan et al. (1993) in their study on the sport commitment model. Therefore the Personal Investment subscale was dropped from further analysis. Although, the involvement alternative items were found reliable in this study, with a reliability coefficient of 0.82, the involvement alternative items were found to be unreliable by Scanlan et al, (1993) in their study on the sport commitment model. The involvement alternative items have therefore also been dropped from further analysis in this study.

Table 11

Cronbach's Reliability Coefficients for Commitment Factor Analysis

Subscale Construct	Reliability	Number of Items	Number of Cases
Sport Commitment	0.7968	6	23
Sport Enjoyment	0.9133	4	23
Involvement Alternatives (dropped)	0.8238	4	23
Personal Investments (dropped)	0.4533	3	23
Social Constraints	0.7769	7	23
Involvement Opportunities	0.7694	4	23

Goal Orientations

Athletes were asked to complete the adapted version of the Multiple Goal Orientation Scale Questionnaire to determine pre-season and post-season orientations toward rowing. The survey was based on a 5-point Likert scale with 1 being the least important and 5 being the most important. The completed surveys were split into two groups at the end of the study, the continuing participant group and the dropout or withdrawal group. It was hypothesized there would be no difference in the orientations of the continued participants and the eventual dropouts of rowing during the pre-season, but both would be different in orientations from those who were cut from the team. Because of the low turnout of participants, no one was cut from the team. Therefore, data could not be collected for athletes who were cut from the team, and the analysis of orientation differences between athletes dismissed from the team and the rest of the team was not completed. It was also hypothesized that by the post-season, a significant difference in orientations between the continued participants and the dropouts would occur. Table 12 (see page 61) gives a summary of the means and standard deviations of each orientation for the continued participants and the dropouts at both the pre-season and the post-season.

Separate 2 x 2 (participation status by time) ANOVAs were performed on the five orientation constructs. Overall, it was found that there were no significant changes in any of the orientations over time or between participants and dropouts. The one exception was a trend in the ego-defeating orientation where athletes who dropped-out of rowing showed a higher level of ego-defeating orientation than athletes who continued with

rowing. There were no significant interactions found for any one of the ANOVAs (See Table 13 for a summary of the ANOVAs).

Table 12

Pre-season and Post-season Goal Orientation Comparison Between Participants and Dropouts

	Pre-Season						Post-Season					
	Participants			Drop-outs			Participants			Drop-outs		
	N	M	SD	N	M	SD	N	M	SD	N	M	SD
Task	15	4.51	0.52	9	4.76	0.29	11	4.45	0.59	8	4.32	0.39
Ego-enhancing	15	3.50	0.76	9	3.94	0.74	11	3.68	0.67	8	3.60	0.54
Ego-defeating	15	2.90	0.80	9	3.28	0.95	11	2.82	0.91	8	3.42	0.56
Social Approval	15	3.80	0.58	9	4.27	0.69	11	4.13	0.64	8	4.00	0.52
Work Avoidance	15	1.43	0.45	9	1.50	0.53	11	1.43	0.37	8	1.69	0.56

Table 13

ANOVA Summary Table for Achievement Goal Orientations by Participation Status and Time

Orientation	Effect	df	F	P	Comment
Task	Participation	1	0.144	0.707	Not Significant
	Time	1	2.743	0.106	Not Significant
	Participation x Time	1	1.589	0.215	Not Significant
Ego-enhancing	Participation	1	0.705	0.406	Not Significant
	Time	1	0.132	0.719	Not Significant
	Participation x Time	1	1.428	0.239	Not Significant
Ego-defeating	Participation	1	3.568	0.066	Trend
	Time	1	0.012	0.913	Not Significant
	Participation x Time	1	0.182	0.672	Not Significant
Social Approval	Participation	1	0.787	0.380	Not Significant
	Time	1	0.025	0.875	Not Significant
	Participation x Time	1	2.410	0.129	Not Significant
Work Avoidance	Participation	1	1.188	0.282	Not Significant
	Time	1	0.396	0.533	Not Significant
	Participation x Time	1	0.409	0.526	Not Significant

Results do not support the hypothesis that goal orientations between the continuing participants and drop outs would be different at the end of the season. Although there were differences in the average means between the continuing participants and dropouts during both the pre-season and the post-season, these differences were not significant.

Summary

Analysis of the data showed support for three of the five hypotheses. Hypothesis A was supported with no significant changes between continuing participants and dropout participants on commitment subscales at the beginning of the study. Hypothesis B was supported with a significant difference between continuing participants and dropout participants on the sport commitment subscale at the end of the study.

Hypothesis C was not supported since commitment subscale levels did not increase for the continuing participants at the end of the semester, and even approached, $p < 0.10$, a significant drop on the social constraints subscale. Hypothesis D was supported with no significant differences in achievement goal orientations between the continuing participants and the dropout participants at the beginning of the study. Hypothesis E was not supported since no significant changes in orientation occurred between the continuing participants and the dropout participants at the end of the study although the ego-defeating orientation approached a significant, $p < 0.10$, difference.

Analysis of the data indicated there was no difference in perceived benefits to participating in rowing when first trying out for the team (Research Question A); however, as time passes, a difference in reasons to participate begins to appear between the continuing participants and dropouts (Research Question B). Due to a low number of participants, Research Question B was modified to look at participation reasons at the end of the semester instead of dropout reasons in order to have adequate data for comparison analysis.

CHAPTER 5

DISCUSSION AND CONCLUSIONS

The purpose of this study was to look at characteristics and differences between novice female rowing athletes who continued participation and those who decided to withdraw from sport with respect to commitment, sport orientation, and perceived benefits. This chapter will look at the hypotheses and research questions to see how and if the results of the study support or move away from theory based on "traditional" sports. Additionally, implications for improvement in the sport of rowing will be discussed. Finally, review of the study, conclusions, and future recommendations will be presented.

Hypotheses

The first hypothesis tested the difference on both pre-season and post-season commitment subscales between the continuing participants and eventual dropouts of rowing. Pre-season commitment surveys found only one item, dealing with the amount of effort put into the rowing season so far, to be significantly different between the groups. The participants who ended up staying on the team felt they invested more effort into being on the team than did the participants who eventually dropped-out of the program. This may be due to a difference in understanding among athletes in the relationship between work and success in rowing. Athletes who had to work hard to be successful in high school are more likely to understand the same is true in college, while athletes who were "naturally talented" in high school and for whom the hours of work may have been forgotten, may struggle to understand why they are not automatically "the best" in their new sport. However, when overall commitment subscales were compared

for the pre-season surveys between continuing participants and dropout participants, no significant differences were found. The one item of significance did not carry enough weight to make a significant change in the subscale. Post-season surveys found a significant difference in the sport commitment subscale levels. Athletes who stayed were significantly more proud to admit that they were a rower, dedicated to rowing, willing to keep on rowing, determined to stay in rowing, enjoyed rowing, and willing to put effort into rowing. These athletes seem to have a better grasp of the work and time needed to be successful in rowing, have decided to accept and commit to that work and time, and are beginning to see the rewards and benefits of their efforts. With the athletes who dropped out of rowing, they either did not understand the work and time needed to be successful, or it was not important enough to them, and consequently, their commitment levels began to drop until they decided to withdraw from the team. A similar situation was found in a study by Kitsantas and Zimmerman (2002) who looked at the self-regulatory process of novice and expert volleyball players. Expert volleyball players, with an average of 7.75 years of experience showed much higher levels of perceived instrumentality, or "an individual's understanding of the instrumental or utility value of a behavior to their future goals," than the novice players who had no experience. The expert players were much better at setting and attaining goals and understood how their work would benefit them. The athletes who had spent a number of years working on skills understood what needed to be done in order to improve their abilities, while the beginning athletes had no structure or set goals to guide them, and consequently, struggled with self-efficacy and intrinsic motivation. The rowers who decided to withdraw may have similar work experiences to the novice volleyball players, while the

rowers who decided to stay may have similar work experiences to the expert volleyball players.

The second and third hypothesis stated that there would be an increase on the post-season commitment subscales for continuing participants while there would be no change or a decrease on the commitment subscales for the dropouts by the end of the study. Results showed no support for the second hypothesis and good support for third hypothesis. The participants who stayed had no significant increase in the commitment subscales from pre-season to post-season, and actually approached a significant decrease in the social constraints subscale. The participants who dropped-out of the program had a significant decrease in the sport commitment subscale and approached a significant decrease on the sport enjoyment subscale. Based on observation of the participants over the course of the semester, the high levels of commitment at the start of the season may be due to preconceived ideals of team membership based on high school experiences and the desire to be "a part of a team" again. However, the levels of work, expectation, time commitment, stress, and responsibility have increased dramatically from the high school to college level. Athletes who were once the best on the team find themselves starting over, making constant mistakes, and feeling unable to execute skills effectively. Athletes begin to realize the magnitude of work needed to be successful at the college level, but are still unsure if this new sport is right for them. Therefore, athletes cautiously drop their level of commitment to the team as they continue to "test the waters" to see if the future rewards will be worth the effort they give.

The fourth hypothesis, *Orientations from the pre-season surveys for the participants who continue for the whole semester and for participants who dropout from*

rowing will not be different was supported with no significant changes in the orientations subscales, but part of the hypothesis, that *both will be different from the participants who are cut from the team*, was not tested due to a lack of participant numbers and a lack of data concerning athletes who were cut from the team.

The fifth hypothesis, *Orientations from the post-season surveys for the participants who continue for the whole semester and for participants who dropout from rowing will be different*, was not supported. No significant differences on the orientations subscales between the groups were found even though the difference between the groups' means became larger on all orientations. It should be noted that a trend was discovered with the ego-defeating orientation, where the participants who stayed became less ego-defeating oriented over time, while the participants who dropped-out became more ego-defeating over time. Because many research studies have shown orientation to be a factor in participation and withdrawal, this result may change with a larger sample size. Increasing the number of participants may lead to significant trends and changes in orientations observed in this study.

Research Questions

The first research question was, *Is there a difference in reasons for participating in rowing for novice rowers who continue participation and those who withdraw from novice rowing?* Results of the survey found no significant differences in reasons for participating between the groups. This may be due to a lack of knowledge about the sport of rowing and what benefits may be gained from participation. Many athletes may be joining because they enjoyed their sport experiences in high school and are now hoping to gain the same experiences and benefits from a college sport. Since many of the

participants played many of the same sports in high school, it would be natural to assume that their perceived benefits would be similar.

The second research question was, *Is there a difference in reasons for dropping-out of rowing for novice rowers who continue participation, but have thought about quitting, and those who withdraw from novice rowing?* and was looked at from a slightly different angle due to the low number of participants. Instead of looking at specific dropout reasons, the participants responded to the same benefits to participation on the post-season survey that they did on the pre-season survey. The researchers felt this would give more overall data because a comparison between groups and a comparison over time could be made. It was found that on the post-season survey, four benefits approached significance between the groups. It should be noted that one item *Someone I admire rows*, was found to be significant. The athletes who decided to stay were connected with someone in the rowing community much more strongly than the athletes who decided to dropout. This connection may have brought added stability, friendship, understanding, and devotion that other athletes did not have, and consequently, they may have felt unwanted or alienated from the team. Over time, only one item, *To play as part of a team,* changed significantly from pre-season to post-season for the group as a whole. It may have become less important of a benefit as other benefits surged in importance.

Implications for Rowing

A number of implications for the sport of rowing present themselves as a result of this survey. One aim of this study was to understand the motivations for trying out and participating in collegiate rowing and which motivations are changing sufficiently that participants decided to dropout of rowing. When looking at pre-season commitment of

the athletes, there appears to be little commitment difference between continued participants and dropouts except in the amount of perceived effort put into being on the team. Because commitment is often linked to the amount of perceived benefit one is getting from an activity, as seen in previous literature, the athletes most likely to stay are the ones who understand it takes an initial investment of effort and hard work before all the desired benefits are felt or realized. Coaches can use this early measure of commitment to talk with athletes, stressing that the benefits of rowing often do not show themselves right away, that it is a process that builds over time. Coaches can discuss with athletes what exactly they want out of being on the team, and what the athletes can specifically do or contribute to in order to maximize those benefits as they develop.

When looking at the changes in perceived benefits over time between the athletes who continue participation and the athletes who decide to dropout of rowing, one item from the Sport Participation Questionnaire, *Someone I admire rows,* really stands out. It is the only perceived benefit item that is significantly different between the groups on the post-season survey. What starts to become clear is that even though this item is not viewed consciously as a major reason to participate, having someone to "look-up" to and admire on the team is having an effect on the decision to continue participating or not. In a casual discussion with some of the continuing athletes, they noted that the older rowers did not spend a lot of time getting to know the younger women in the very beginning. These new rowers felt a bit intimidated and that they were not wanted on the team. However, as the number of new rowers began to drop, and the older women began to see and recognize the same faces daily at practice, they began to talk and befriend the younger women. The new rowers stated that they now realized how much the older

women cared about them and wanted them there. Upon asking a few older athletes about this, the older athletes felt a bit overwhelmed with the huge number of new athletes on the team and knowing the history of such a large loss in numbers within the first few months, they felt it a waste of time and energy trying to get to know everyone. There are also a few exceptions where new rowers come onto the team already friends with the older rowers, usually from high school or even related (such as sisters or cousins). These new rowers have instant friends and a support group. The new athletes who have this advantage tend to stay with the team much longer than the new athletes who know no-one from the team previously. Here is where coaches can encourage a change to promote continued participation. Coaches could pair the new athletes with the old athletes from the very first week, encouraging the older women to show up at try-outs and talk with the new athletes, share experiences and what the first few months will be like, exchange email addresses and/or phone numbers, and attempt to form an early bond between the newer and older athletes. Each older athlete would spend time getting to know just a few new rowers, and the new rowers would know that the older athletes care and want them to participate.

When looking at orientations of the participants and comparing orientations between continuing participants and dropouts, there were no significant differences. However, it should be noted that, overall, the athletes who continued in the rowing program were slightly higher in task, higher in ego-enhancing, lower in ego-defeating, lower in social approval, and lower in work avoidance than participants who decided to dropout at the time of the pre-season survey. Coaches can use these orientations as a guide when choosing athletes for the team. It should be noted that social approval

orientation became much stronger for the athletes who continued as the season progressed. Again, it seems that the athletes who decide to stay are finding and developing social expectations to team participation that are a benefit to them that are not being met for the athletes who decide to dropout.

Review and Discussion of the Study

This section looks at the study and some of the questions that arose during the course of data collection. First of all, one goal of the study was to compare results with results of studies using "traditional" sports. When looking at the perceived benefits to sport participation by Seefeldt et al. (1991), there are some small differences between rowing and other sports. The study by Seefeldt et al. listed the top ten reasons to participate in sports for girls as *To have fun, To improve my skills, For the excitement of competition, To do something I'm good at, To stay in shape, For the challenge of competition, To play as part of a team, To win, My parents or close friends want me to play,* and *To go to a higher level of competition.* The novice rowers as a group during the pre-season survey listed *To play as part of a team, For the excitement of competition, To stay in shape, To have fun, To get exercise, To improve my skills, For the challenge of competition, To go to a higher level of competition, To meet new friends,* and *For the team spirit.* The difference is that the rowers did not list *To win, To do something I'm good at, or My parents or close friends want me to play* as reasons to participate and instead, listed *To get exercise, For the team spirit,* and *To meet new friends* in their top ten reasons to participate. Its seems that the novice rowing athletes want to again be a part of a team or group where they can participate and join a social group, but do not believe they will win or be good at rowing right away.

When looking at commitment in novice rowing as compared to other sports, it was interesting to note that; overall, the new participants' commitment was very positive at the beginning when they had no idea what they were getting into. Almost all of the participants dropped in commitment level responses by the end of the semester, even though these drops were not significant. This has been found in other sports as well. One study of gymnasts (Johns et al., 1990) found that those who withdrew from competitive gymnastics and tried another sport were not nearly as committed to the new sport. They did not practice as much or as hard, and did not believe they would go as far in their new sport. This may be a similar phenomenon as when successful high school athletes try rowing in college for the first time. They may have a feeling of having to start all over again, whereas in high school, they were at the top of their game. It may be an overwhelming and frustrating feeling. Yet, even though an overall decrease in commitment occurred with the continuing participants, some athletes stay with the rowing program and excel. Is this due to better athletic ability, better conditioning at the start, or a different mental mindset from those who quit? Does it go back to achievement orientations and how the athlete is defining success for herself?

Orientations in rowing also show similar patterns to orientations of other sports and activities (Issac, et. al, 2002; Maehr & Midgley, 1996; Spray & Wang, 2001; Standage & Treasure, 2001;). The novice rowers of this study showed combinations of multiple goal orientations, and the athletes that stayed were often high in ego-enhancing, task, and social orientation, and low in work-avoidance and ego-defeating orientation.

Next, it should be noted that many of the study participants were people who ended up staying with the program anyway. Many of the people who dropped-out never

even bothered to complete the first survey, even though it was stressed to all the new athletes that data from people who dropout was an important part of the study. Why did the dropouts never even bother to fill out an initial questionnaire, when many of the continuing participants did? Future research will have to provide insight into these questions.

Conclusions

The purpose of this study was to look at beginning rowers' reasons for trying-out and participating in college rowing, and why many decide to dropout of rowing. A second purpose of the study was to provide suggestions to coaches to help retain a larger number of athletes throughout the season. It was found that only slight differences appear in the early stages between the athletes who decide to stay and the athletes who decide to dropout. Coaches can focus on an individual athlete's desired benefits from team participation and how that athlete can maximize the realization of the benefits for herself. Also, coaches can encourage bonding and support between the new athletes and the older athletes at a very early stage in order to create an environment of acceptance, encouragement, and teamwork. Finally, when choosing new athletes, coaches can look for athletes already high in task and ego-enhancing orientations, and low in ego-defeating, social approval, and work avoidance orientations.

Future Recommendations

This study provides an initial insight into the reasons collegiate women decide to try-out and participate for college rowing and then decide to dropout of the program after only a few weeks or months. Unfortunately, the unexpected low number of study participants may have had a huge effect on significant findings. Future studies should

incorporate a larger number of participants, in both the continuing participant and dropout groups. Ideally, the same participants are kept throughout the whole study. The use of new participants at the time of the post-study was felt necessary for the sake of data analysis, but did limit what could be done with the data. Analysis with respect to time interaction was performed to ensure that the data from the extra post-season participants was consistent with data from participants who did both the pre and the post-season surveys or just the pre-season survey. No significant differences were found. Even so, it is recommended to keep the same participants for both sets of surveys to ensure internal integrity of data.

Data should be collected from a number of sites around the country to strengthen generalization of study findings, and a study done over a period of a few years, following the athletes as they become more experienced would give great insight into reasons for continuing participation in the sport of rowing.

APPENDIX A

•Commitment Questionnaire•

COMMITMENT QUESTIONNAIRE

ID Code: _____.

Directions

Please read the following questions and statements and circle the response that is most appropriate for you right now.

	not at all/ nothing	not very/ not much	neutral/ average	above average	a lot/ very much
1.How proud are you to tell other people that you will be or a rower?	1	2	3	4	5
2.Do you want to keep participating in college rowing?	1	2	3	4	5
3.How dedicated are you to college rowing?	1	2	3	4	5
4.What would you be willing to do to keep on rowing?	1	2	3	4	5
5.How hard would it be for you to quit rowing?	1	2	3	4	5
6.How determined are you to stay in college rowing?	1	2	3	4	5
7.Do you enjoy rowing so far this season?	1	2	3	4	5
8.Are you happy rowing so far this season?	1	2	3	4	5
9.Do you have fun rowing so far this season?	1	2	3	4	5
10.Do you like rowing so far this season?	1	2	3	4	5
11.How interesting do you think other activities besides rowing are/would be?	1	2	3	4	5
12.How much fun do you think other activities besides rowing are/would be?	1	2	3	4	5
13.How much would you like to do other activities besides rowing?	1	2	3	4	5

14.How difficult was it to choose rowing over other activities?	1	2	3	4	5
15.How much of your time have you put into rowing this season?	1	2	3	4	5
16.How much effort have you put into rowing this season?	1	2	3	4	5
17.How much money have you put into rowing this season?	1	2	3	4	5
18.I feel I have to row to be with my friends.	1	2	3	4	5
19.I feel I have to row to please my friends.	1	2	3	4	5
20.I feel I have to stay in rowing because my parents have done so much.	1	2	3	4	5
21. I feel I have to row to please my mom.	1	2	3	4	5
22. I feel I have to row to please my dad.	1	2	3	4	5
23.I feel I have to row to please my coach.	1	2	3	4	5
24.I feel I have to stay in rowing so people won't think I'm a quitter.	1	2	3	4	5
25.Would you miss being a rower if you left the team?	1	2	3	4	5
26.Would you miss your coach if you left the team?	1	2	3	4	5
27.Would you miss the good times you had if you left the team?	1	2	3	4	5
28.Would you miss your friends if you left the team?	1	2	3	4	5
29.Would you miss competing if you left the team?	1	2	3	4	5
30.Would you miss traveling if you left the team?	1	2	3	4	5

APPENDIX B

•Multiple Goal Orientation Scale (MGOS)•

Multiple Goal Orientation in Sport Questionnaire

ID Code:_____.

Directions: Please read each of the statements listed below and show us how much you agree with each statement by circling the appropriate response. In general, when do you feel successful in sports? In other words, when do you feel a sporting activity has gone really well for you? Remember there are no right or wrong answers.

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I feel successful in sport when I do my very best.	SD	D	N	A	SA
2. I feel successful in sport when I play better than my teammates.	SD	D	N	A	SA
3. I feel successful when I don't make a fool of myself in my sport skills.	SD	D	N	A	SA
4. I feel successful when I please people important to me.	SD	D	N	A	SA
5. I feel successful when the coach doesn't work us too hard.	SD	D	N	A	SA
6. I feel successful in sport when I learn a new skill and it makes me want to practice more.	SD	D	N	A	SA
7. I feel successful at sport when I do better than other players.	SD	D	N	A	SA
8. I feel successful when my practicing helps me avoid being embarrassed.	SD	D	N	A	SA
9. I feel successful when I am able to do as little as possible at practice.	SD	D	N	A	SA
10. I feel successful in sport when I work really hard.	SD	D	N	A	SA

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
11. I feel successful in sport when I score the most points, goals, or have the fastest time.	SD	D	N	A	SA
12. I feel successful when others don't think poorly of me when I play badly.	SD	D	N	A	SA
13. I feel successful when I demonstrate my worth to others.	SD	D	N	A	SA
14. I feel successful when there is no hard work.	SD	D	N	A	SA
15. I feel successful in sport when I learn something new that is fun to do.	SD	D	N	A	SA
16. I feel successful in sport when I am able to perform skills that others cannot.	SD	D	N	A	SA
17. I feel successful when my practicing makes others not think I am one of the least skilled players.	SD	D	N	A	SA
18. I feel successful when others thought I played a sport well.	SD	D	N	A	SA
19. I feel successful when I avoid difficult tasks or skills.	SD	D	N	A	SA
20. I feel successful in sport when something I learn makes me want to go and practice more.	SD	D	N	A	SA
21. I feel successful in sport when I show that I can do sport skills better than my teammates.	SD	D	N	A	SA
22. I feel successful when others don't notice when I make a mistake in sport.	SD	D	N	A	SA

	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
23. I feel successful when other people tell me I performed well.	SD		D	N	A	SA
24. I feel successful in sport when a new skill I learn really feels right.	SD		D	N	A	SA
25. I feel successful in sport when I am the only one who can do a skill.	SD		D	N	A	SA
26. I feel successful when I avoid looking stupid while playing sports.	SD		D	N	A	SA
27. I feel successful when I make other people happy.	SD		D	N	A	SA
28. I feel successful in sport when I learn a new skill by trying hard.	SD		D	N	A	SA

Subscales from the Multiple Goal Orientation in Sport Questionnaire

Task Orientation (Task subscale from Duda, 1989; Duda & Nicholls, 1992).

- I feel most successful in sport when I do my very best.
- I feel most successful in sport when I learn a new skill and it makes me want to practice more.
- I feel most successful in sport when I work really hard.
- I feel most successful in sport when I learn something new that is fun to do.
- I feel most successful in sport when something I learn makes me want to go and practice more.
- I feel most successful in sport when a new skill I learn really feels right.
- I feel most successful in sport when I learn a new skill by trying hard.

Self-Enhancing Ego **(Ego subscale adapted from Duda, 1989; Duda & Nicholls, 1992).**

- I feel most successful in sport when I play better than my teammates.
- I feel most successful in sport when I do better than other players.
- I feel most successful in sport when I score the most points, goals, or have the fastest time.
- I feel most successful in sport when I am able to perform skills that others cannot.
- I feel most successful in sport when I show that I can do sport skills better than my teammates.
- I feel most successful in sport when I am the only one who can do a skill.

Self-Defeating Ego

- I feel most successful in sport when I don't make a fool of myself in my sport skills.
- I feel most successful in sport when my practicing helps me avoid being embarrassed.
- I feel most successful in sport when others don't think poorly of me when I play badly.
- I feel most successful in sport when my practicing makes others not think I am one of the least skilled players.
- I feel most successful in sport when others don't notice when I make a mistake in sport.
- I feel most successful in sport when I avoid looking stupid while playing sports.

Social Approval **(adapted from Ewing, 1981)**

- I feel most successful in sport when I please people important to me.
- I feel most successful in sport when others thought I played a sport well.
- I feel most successful in sport when I make other people happy.
- I feel most successful in sport when I demonstrate my worth to others.
- I feel most successful in sport when other people tell me I performed well.

Work Avoidance **(adapted from Duda & Nicholls, 1992)**

- I feel most successful in sport when the coach doesn't work us too hard.
- I feel most successful in sport when I am able to do as little as possible at practice.
- I feel most successful in sport when there is no hard work.
- I feel most successful in sport when I avoid difficult tasks or skills.

APPENDIX C

• Sport Participation Questionnaire (adapted)•

SPORT PARTICIPATION QUESTIONNAIRE

Directions: Part A – Reasons to Participate ID Code: _____.

The following is a list of potential reasons for trying out for the rowing team. Please circle the number that corresponds to the importance of each reason to you. There are no RIGHT or WRONG answers.

	very important	important	somewhat important	slightly important	not at all important
1.To improve my skills	1	2	3	4	5
2.To be with friends	1	2	3	4	5
3.To win	1	2	3	4	5
4.Someone I admire rows	1	2	3	4	5
5.For the travel that goes with being on a team	1	2	3	4	5
6.To stay in shape	1	2	3	4	5
7.To play as part of a team	1	2	3	4	5
8.For the excitement of competition	1	2	3	4	5
9.My parents or friends want me to participate	1	2	3	4	5
10.To learn new skills	1	2	3	4	5
11.To meet new friends	1	2	3	4	5
12.To do something I'm good at	1	2	3	4	5
13.To release energy/stress	1	2	3	4	5
14.For the rewards, such as medals and championships	1	2	3	4	5
15.To get exercise	1	2	3	4	5
16.To have something to do	1	2	3	4	5
17.For the team spirit	1	2	3	4	5
18.To feel important	1	2	3	4	5
19.To go to a higher level of competition	1	2	3	4	5
20.To be popular by being a good athlete	1	2	3	4	5
21.For the challenge of competition	1	2	3	4	5
22.I like the coaches	1	2	3	4	5
23.To have fun	1	2	3	4	5
24.To use the equipment and facilities	1	2	3	4	5
25.To attract social attention	1	2	3	4	5
26.Other reasons	1	2	3	4	5
27.Other reasons	1	2	3	4	5

APPENDIX D

•Demographic Questionnaire•

DEMOGRAPHIC QUESTIONNAIRE

ID Code: _____.

Directions: Please fill out the following information about youself.
All questions are optional.

Age: Birth date: Height:

Ethnic Background (please circle one):

African American
Asian American
European American
American Indian
Middle Eastern American
Latin American
Asian Pacific American
Other

Academic Major:

Sports Played in High School

1. 4.
2. 5.
3. 6.

Have you ever rowed before? Yes No

What is your swimming ability?

I can not swim or tread water (1)
I can tread water but can not swim (2)
I can tread water and swim when necessary (3)
I swim for fun and exercise (4)
I swim for have swum competitively (5)

What is your overall fitness level?

I never work out (1)
I work out once a week 30 minutes or more (2)
I work out 2-4 times a week, 30 minutes or more (3)
I work out 5-6 times a week, 30 minutes or more (4)
I work out 7+ times a week, 30 minutes or more (5)

Rate your ability to learn new skills:

I have trouble learning new athletic skills (1)
I can learn new athletic skills (2)
I am good at learning new athletic skills (3)
I learn new athletic skills without any trouble (4)
I enjoy learning new athletic skills (5)

Please rate yourself on the following:

	Never	1 time a week	2-4 times a week	5-6 times a week	7+ times a week
Drink alcohol to get a "buzz"	1	2	3	4	5
Smoke a pack a day	1	2	3	4	5
Use recreational drugs	1	2	3	4	5
Have asthma attacks	1	2	3	4	5

Have you ever been pregnant? Yes No

Have you had any past sport injuries? Yes No

If yes, what were they and when?

_____.

Do you have a friend who is currently a member of MSU varsity rowing?

Yes No

APPENDIX E

•UCHRIS Approval Letter•

MICHIGAN STATE
UNIVERSITY

August 25, 2003

TO: Martha E. EWING
138 IM Sports Circle
MSU

RE: **IRB# 03-620** CATEGORY: EXEMPT 1-2

APPROVAL DATE: August 22, 2003
EXPIRATION DATE:July 22, 2004

TITLE: PARTICIPATION AND WITHDRAWAL MOTIVES FOR FEMALE NOVICE COLLEGIATE ROWERS

The University Committee on Research Involving Human Subjects' (UCRIHS) review of this project is complete and I am pleased to advise that the rights and welfare of the human subjects appear to be adequately protected and methods to obtain informed consent are appropriate. Therefore, the **UCRIHS approved this project.**

RENEWALS: UCRIHS approval is valid until the expiration date listed above. Projects continuing beyond this date must be renewed with the renewal form. A maximum of four such expedited renewals are possible. Investigators wishing to continue a project beyond that time need to submit a 5-year application for a complete review.
REVISIONS: UCRIHS must review any changes in procedures involving human subjects, prior to initiation of the change. If this is done at the time of renewal, please include a revision form with the renewal. To revise an approved protocol at any other time during the year, send your written request with an attached revision cover sheet to the UCRIHS Chair, requesting revised approval and referencing the project's IRB# and title. Include in your request a description of the change and any revised instruments, consent forms or advertisements that are applicable.
PROBLEMS/CHANGES: Should either of the following arise during the course of the work, notify UCRIHS promptly: 1) problems (unexpected side effects, complaints, etc.) involving human subjects or 2) changes in the research environment or new information indicating greater risk to the human subjects than existed when the protocol was previously reviewed and approved.

If we can be of further assistance, please contact us at (517) 355-2180 or via email: UCRIHS@msu.edu. Please note that all UCRIHS forms are located on the web: http://www.msu.edu/user/ucrihs

Sincerely,

Peter Vasilenko III, Ph.D.
UCRIHS Chair

PV: kmb

cc: Angela Lound
5675 Valencia
Lansing, MI 48911

APPENDIX F

•Consent Form•

PARTICPATION AND WITHDRAWAL MOTIVES FOR FEMALE NOVICE COLLEGIATE ROWERS

Consent Form – Researcher's & Participant's Copy

This is an invitation to participate in a study being conducted by Angela Lound, a graduate student in sport psychology at Michigan State University. The goal of the study is to understand reasons athletes participate in and withdraw from college rowing, and ultimately to provide recommendations for coaches to adapt their programs to the needs of the athletes.

There are two phases to this study. The first phase is the completion of the packet of surveys and questionnaires given to you during your tryout week of women's rowing. The surveys and questionnaires will ask you about your commitment level to rowing, your sport motivation, your perceived benefits and costs to participation in rowing, and demographic information (such as your age, ethnic background, and health habits). The surveys and questionnaires should take about 20-30 minutes to complete. All the information you provide will be kept in a secure location where only researchers associated with this study will have access to the data. Also, all information from this study will be reported as group data and not on individuals.

The second phase of the study will occur at the end of the first semester where you will fill out the surveys and questionnaires again. If you decide to voluntarily withdraw from the rowing team, before the end of the semester, you will be asked to complete the surveys and questionnaires again, as your responses are very important to the study.

Participation in this study is voluntary. You may choose not to participate at all, may refuse to answer certain questions, or may discontinue participation at any time. Participation in this study and your responses do NOT determine membership on the rowing team in any way. You will be given a ID Code (the number of sisters you have followed by the number of brothers you have followed by your middle initial followed by the last four digits of your home phone number e.g., 20K0927) to use instead of your name on the survey packet so that neither the coaches nor the researchers will know who you are, thereby protecting your privacy. You are guaranteed confidentiality and privacy to the maximum extent allowable by law.

If you have any questions about this study, please contact the project director, Dr. Martha Ewing of the Institute for the Study of Youth Sports at (517) 353-4652 or email mewing@msu.edu. If you have questions or concerns regarding your rights as a study participant, or are dissatisfied at any time with any aspect of this study, you may anonymously or otherwise contact Ashir Kumar, M.D., Chair of the University Committee on Research Involving Human Subjects (UCRIHS) by phone: (517) 355-2180, fax: (517) 432-4503, email: ucrihs@msu.edu, or regular mail: 202 Olds Hall, East Lansing, MI 48824.

PARTICPATION AND WITHDRAWAL MOTIVES FOR FEMALE NOVICE COLLEGIATE ROWERS

Consent Form – Researcher's & Participant's Copy

Participant:

I, *(print name)*_____, would like to volunteer to participate in the study called "Participation and Withdrawal Motives for Female Novice Collegiate Rowers."

Signature:_____. Date:_____.

Parent/Guardian:

I, *(print name)*_____, give permission for my daughter,

_____, to volunteer to participate in the study called

"Participation and Withdrawal Motives for Female Novice Collegiate Rowers."

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