

/Intrinsic Motivation in Sport and Physical Activity/

by

Derek A. Walters

B.S., Kansas State University, 1984

A MASTER'S REPORT

submitted in partial fulfillment of the

requirements for the degree

MASTER OF SCIENCE

Department of Physical Education, Dance, and Leisure Studies

KANSAS STATE UNIVERSITY
Manhattan, Kansas

1986

Approved by:


Major Professor

LD
2668
.R4
1986
W34
c. 2

A11206 692424

ACKNOWLEDGEMENTS

I would like to express my sincere appreciation to Professor Edward McAuley for his guidance and patience as major professor on this project. I would also like to acknowledge my committee members Don R. Kirkendall, Mary McElroy, and David Wiggins for their support of this report.

Appreciation is extended to Terry Duncan for being a soundingboard and for his friendship throughout graduate school. Also, I sincerely thank my parents Derrick (Gabe) and Mary Walters for their tremendous support, not only through college but everything. Thank you, I love you.

Most of all, for always being there, I would like to acknowledge Loretta Walters, my wife and companion, for her help, patience, understanding, and love in everything.

TABLE OF CONTENTS

	Page
Introduction.....	1
Theory and Research.....	2
Cognitive Theories.....	2
Research Methodologies.....	4
Cognitive Evaluation Theory.....	7
Controlling Function.....	9
Informational Function.....	11
Factors Affecting Intrinsic Motivation in Sport.....	14
Verbal Feedback and Ego-involvement.....	15
Competition.....	17
Limitations In The Intrinsic Motivation Literature.....	18
Future Directions of Intrinsic Motivation in Sport.....	19
Summary.....	21
References.....	24
Abstract Title Page	
Abstract	

INTRODUCTION

Motivation is concerned with the reasons why people select different activities, persist in them, and carry them out with intensity (Carron, 1984). Although motivation encompasses many factors, intrinsic motivation is considered to be the most powerful source of motivation (Carron, 1984). An individual is intrinsically motivated when he/she engages in an activity for its own sake and obtains satisfaction from that activity. Such activities are rewards in themselves. Conversely, extrinsic motivation assumes that an individual participates in an activity for tangible rewards, especially those related to the activity. In recent years increased external motivators such as the pressure to win, trophies, money, and social approval have been associated with sport. If, intrinsic motivation is indeed the most important source of motivation, it is necessary to examine its theoretical underpinnings if we are to understand the factors that impact upon it. In some circumstances rewards have been found to decrease intrinsic motivation while in other circumstances rewards increase intrinsic motivation. Because of the differential effects rewards have on the intrinsic motivation of the participant, the purpose of this report is to review the current literature that examines the effects of external rewards on intrinsic motivation in sport. This paper will examine the basic theoretical approaches toward intrinsic motivation, factors affecting intrinsic motivation in sport, and future directions of intrinsic motivation in sport.

THEORY AND RESEARCH

In examining the theoretical underpinnings of intrinsic motivation it is necessary to first examine the overjustification effect of rewards (Lepper, Greene, & Nisbett, 1973) upon intrinsic motivation, cognitive evaluation theory (Festinger, 1957), and self perception theory (Bem, 1967). Additionally, the typical research methodologies employed by researchers in intrinsic motivation will also be considered.

Cognitive Theories

The phenomenon whereby external reasons for engaging in a certain activity result in an individual losing interest in that activity, has been termed the overjustification effect (Lepper, Greene, & Nisbett, 1973). This effect takes place when an individual no longer believes the activity is justified in itself. The overjustification effect has emerged from two earlier cognitive theories; Festinger's (1957) cognitive dissonance theory and Bem's (1967) self-perception theory.

Cognitive dissonance theory (Festinger, 1957), predicts that dissonant, incompatible cognitions produce an uncomfortable psychological state and motivate the restoration of consonance (satisfied psychological state). The incompatible cognitions referred to by Festinger (1957), are typically between one cognition regarding a person's actual behavior and one cognition about the attitudes toward their behavior. Consequently, engaging in a

behavior that one dislikes may cause dissonance. Edward Deci (1975) cites the example of an individual who found himself eating lamb while knowing he had not liked it since he was a child. This created dissonance and the individual felt the need to resolve his incompatible feelings about the lamb. He could change his attitude about the meat and continue eating or he could decide he still disliked lamb and stop eating the meat. Typically the research suggests that the individual will change his/her attitude. In the previous example, the person felt there was insufficient justification for his having eaten the lamb. A person who freely chooses to do something, with little or no external incentive for doing it, will restore consonance by becoming more positive about the activity.

A plausible and intriguing alternative to dissonance theory, is self-perception theory, advanced by Daryl Bem (1967). This theory suggests that individuals analyze their behaviors from an external perspective and that these behaviors are sometimes influenced by our attitudes (Bem, 1967). According to Bem (1967), dissonance is irrelevant. People do not change their attitudes to lessen an unpleasant state of dissonance but infer their attitudes from watching their own behavior. From their behavior, people reason how they must feel. Attitude change and formation may come about by observing our own behavior when we feel we have chosen our behavior freely. When an individual experiences this free choice behavior, there seems to be little external justification for engaging in the behavior. On the other hand, if a person engages in an activity (behavior) for external rewards or has no choice (external cues) in the activity, their involvement is perceived as being caused by the external cue and not their own attitude. This notion is related to intrinsic motivation in that a person decides

whether to perform a behavior for its own sake. With regard to the presence and strength of internal versus external forces, dissonance may still exist. However, dissonance is not an essential condition for intrinsic motivation (Deci, 1975).

The relationship between intrinsic motivation and the theories of cognitive dissonance and self-perception are apparent because the two theories make similar predictions about intrinsic motivation, i.e., dissonance theory would predict that a reward could cause dissonant arousal depending on ones' perceptions of an activity and self-perception theory suggests that attitude change would take place if a reward was given for an activity.

Research Methodologies

Edward Deci has conducted a number of recent studies empirically testing the relationship between extrinsic rewards and intrinsic motivation (1971, 1972a, 1972b). The typical methodology employed in examining this relationship consists of four steps. First, a measure of an individual's level of motivation for engaging in a particular task is assessed and used as a baseline measure of intrinsic motivation for the activity. The primary method of assessing intrinsic motivation is measuring the initial time an individual spends on the target task. The second stage consists of some experimental intervention in which some extrinsic reward conditions are manipulated, (e.g., expected reward, unexpected reward, and a control group receiving no reward). The third stage assesses how intrinsically motivated the individual is following intervention. In this latter stage, extrinsic

rewards are withheld and intrinsic motivation is measured either by a questionnaire or behavioral observation of the original target task. Finally, if change has taken place in the level of interest in the activity from the baseline measure to the second assessment, it can be inferred that the reward had an effect on intrinsic motivation. Deci (1971) employed this methodology to determine the effects of monetary rewards on intrinsic motivation of individuals participating in a puzzle game. He hypothesized that monetary rewards given to individuals who were intrinsically motivated toward a certain activity would undermine intrinsic interest if the reward was contingent on their performance. After the initial measure of intrinsic motivation, the subjects were divided into two groups. One group received one dollar for each of four puzzles they were able to solve in the allotted 13 minute time limit. The control group, which consisted of the other half of the subjects, received no reward for working the same puzzles within the same time limit.

During each session, the experimenter left the room between the second and third puzzle and observed the subjects through a one-way mirror for eight minutes. The experimenter recorded the subject's behavior in this free-choice period as a measure of the subject's intrinsic motivation toward the activity. The results supported Deci's hypothesis, with subjects who received money (reward group) spending less free time actively engaged in the puzzle task than the subjects receiving no pay (control group). Thus it might be concluded that receiving money for engaging in an activity that is inherently interesting, in this case solving puzzles, decreases intrinsic motivation for the task.

Prior to Deci's studies, many different hypotheses about the consequences of external rewards on intrinsic interest had been advanced. However, Deci (1971; 1972a; 1972b) has presented considerable evidence demonstrating that extrinsic motivation and intrinsic motivation are not additive functions. Under many conditions extrinsic rewards decreased intrinsic motivation.

Greene and Lepper (1974), Lepper and Greene (1975), and Lepper, Greene and Nisbett (1973) conducted a series of studies in field settings to examine the effects of extrinsic rewards on intrinsic motivation. Nursery school children who were intrinsically motivated toward a picture drawing task were selected as subjects for this series of studies. The children were placed into one of three groups; an expected reward group, an unexpected reward group, and a no-reward group. In the expected reward condition, the children were told they would receive a certificate (called a "good player" award) if they drew with felt tip markers. The unexpected reward group received the same award given to the reward group, however, the award was given to the children unexpectedly upon completion of the task. In the no-reward condition, reward was neither expected nor received by the children. Two weeks later the same children were observed in a free-choice period. Intrinsic motivation, the amount of free time spent working on the drawing materials, was assessed through experimenter observation. The results showed that the expected reward group's intrinsic interest decreased in drawing pictures, whereas, the unexpected and no-reward groups maintained statistically significant interest. These findings substantiated the importance of looking closely at how rewards are administered when attempting to determine their effects on intrinsic motivation. Furthermore,

the results also demonstrated the inherent long-term effects of extrinsic rewards upon intrinsic motivation.

The preceding evidence indicates that intrinsic motivation for an activity is undermined when extrinsic rewards are given for engaging in the activity. Evidence also suggests that intrinsic interest will decrease when rewards are contingent on performance. Furthermore, it might be concluded that the expectation of a reward prior to engaging in an activity will result in decreased intrinsic motivation to participate.

COGNITIVE EVALUATION THEORY

While some research has demonstrated an increase in intrinsic motivation due to rewards (Deci, Casio & Krusell, 1975; Vallerand, Reid & Marisi, 1980), others have shown that extrinsic rewards can impair intrinsic motivation (Deci, 1971; Lepper, Greene & Nisbett, 1973; Greene & Lepper, 1974; Lepper & Greene, 1975). In an attempt to explain these apparently discrepant findings concerning the differential effects of rewards upon intrinsic motivation, Deci has proposed a theoretical framework, cognitive evaluation theory.

Deci's (1975) cognitive evaluation theory provides a conceptual framework for determining the relationship between extrinsic rewards and intrinsic motivation. Deci asserts that the reward itself is not important but how the individual interprets the reward is the critical factor. Cognitive evaluation theory predicts that information gained from engaging

in a task which enhances an individual's feelings of competence also influences their perceptions of intrinsic motivation. Conversely, one's perceptions of intrinsic motivation should be undermined if the task decreases the individual's sense of self-determination and competence. Deci (1975) asserted that changes in the perceived locus of control (a person's sense of control over his or her life) are attributed to internal or external causes initiated in individuals who are rewarded for participating in an activity that is intrinsically interesting. As perceived locus of control becomes internalized, self-determination and competence increase. Deci also suggested that individuals engage in activities that permit them to achieve a sense of self-determination and competence.

Cognitive evaluation theory maintains that extrinsic rewards impact upon the individual's self-perception and intrinsic motivation in two ways, either as a controlling function or a informational function (Deci, 1975). The controlling function suggests that rewarding a task that is inherently interesting can decrease intrinsic motivation when the individual perceives the reward to be the reason for participation. The informational function is concerned with a person's level of competence. If a reward enhances one's feelings of self-worth and competence, intrinsic motivation will be increased. On the other hand, if a reward makes one feel less competent and less self-determined, intrinsic motivation will decrease.

Controlling Function

When one participates in an activity solely for a reward, intrinsic motivation toward that activity diminishes. The individual's interest in the activity has shifted from the perceptions of personal responsibility and self-determination (their personal control), to factors outside of their control. If the controlling function is high, extrinsic rewards may lower intrinsic motivation when those receiving the reward realize that the reason they participate has shifted from their own control to factors external to them and beyond their control. Intrinsic motivation will often decrease when an external reward is the main reason for participation because intrinsic interest is no longer enough to motivate the activity. For example, someone who begins swimming for fitness and recreation may find themselves controlled to swim for reasons other than their initial reasons if they start entering swim meets and winning trophies and awards.

Therefore, intrinsic motivation for participation in sport and physical activity decreases when the controlling functions of rewards are salient and strong. Orlick and Mosher (1978) tested this hypothesis by conducting a study examining the effect of extrinsic rewards on the intrinsic motivation of children engaged in a stabilometer task. Subjects were placed in either one of two reward groups. Half the children received a trophy for participating in the task (reward group), while the other subjects received no reward. The authors reported a decrease in intrinsic motivation from the baseline condition to the post-session condition in the reward group, while the children in the no-reward group exhibited an increase in intrinsic motivation. Additional studies using children in the physical activity

domain have also shown, that children's motivation for engaging in an activity that is naturally motivating, can be weakened by the presentation of a tangible reward (Halliwell, 1978; Thomas & Tennent, 1978; Smith, 1975).

When people become ego-involved in an activity they tend to pressure themselves toward achieving a certain result (Ryan, 1982). This pressure to attain the particular outcome becomes controlling. Ego-involvement and pressure from within the individual can also impact upon an individual's intrinsic motivation (Ryan, 1982; Deci & Ryan, 1985). This aspect of the controlling function can be exemplified by those people who pressure themselves into going to exercise and fitness classes on a regular daily basis no matter what the circumstances. Pressure to participate controls the individual and in turn decreases their enjoyment toward the activity. In an attempt to explain this phenomenon, Brawley and Vallerand (1984) suggested that the elevated attrition rate in fitness programs was due to the lack of regard for intrinsic qualities of the task itself. They found that people who enroll in fitness programs primarily join to improve their appearance, lose weight and for social reasons. When the reasons for enrolling are external and if the goals of the fitness program are not met, people tend to drop out of the program. By placing a great amount of emphasis on the type of external factors mentioned above, people will perceive that their participation is externally controlled and consequently their level of enjoyment will decrease. It would appear that it is important for people to change their reasons for participating in fitness programs in order to benefit from exercise. This could be accomplished by understanding the benefits of fitness and exercise.

Rewards, ego-involvement, and pressure all seem to have an externally

controlling effect on intrinsic motivation. When an activity, which is intrinsically interesting initially, becomes controlled by some external force, interest for that activity decreases.

Informational Function

The other process affecting intrinsic motivation through the introduction of extrinsic rewards is the informational function. Since reward or feedback can affect an individual's sense of competence and self-determination either positively or negatively, it can influence intrinsic motivation in the same way. Thus, if a reward enhances an individual's feelings of competence and self-determination, their intrinsic interest will also increase. On the other hand, a decrease in competence and self-determination will decrease intrinsic motivation. For example, receiving the most valuable player award in an indoor soccer tournament serves to inform the recipient of his/her competence and thereby increases their intrinsic motivation. Conversely, the player who is constantly ridiculed by a coach about his/her ability at a certain task perceives him/herself as incompetent and intrinsic motivation toward the task is decreased. When the informational function of a reward is salient, an individual is less likely to perceive a reward as the source of motivation for their involvement in an activity. That is, participation is not associated with a reward.

Early applications of cognitive evaluation theory to sport settings were conducted by E. D. Ryan (1977, 1980). Investigating the differential effects of rewards on intrinsic motivation on males and females, Ryan

(1977,1980) employed a cognitive evaluation framework to examine the impact of athletic scholarship on intrinsic motivation. Ryan (1977) hypothesized that most male scholarship athletes would perceive themselves as performing for the scholarship, thereby reducing their enjoyment of the sport, while nonscholarship athletes would show differing attitudes toward the sport. To test this hypothesis, questionnaires were sent out to several institutions which awarded scholarships to some athletes but did not award them to other athletes. Ryan compared male scholarship and nonscholarship athletes predicting those receiving the grant to be less intrinsically motivated toward their sport than their nonscholarship counterpart. The data indicated that scholarship athletes enjoyed daily practice less, and enjoyed intercollegiate athletics less than high school athletics. Furthermore, seniors were the least intrinsically motivated towards their sport while nonscholarship athletes found intercollegiate athletics more enjoyable and were more intrinsically motivated to participate in their sport.

Ryan's (1977) study had a number of methodological limitations. Several institutions were polled but due to a poor response rate, the athletes of only two institutions' responded. The differences in intrinsic motivation between scholarship and nonscholarship athletes may have been influenced by the fact that the data were collected from only two schools, with the football team as the only sport used. The differences may have been due to only one unique group being studied. Therefore, external factors other than scholarship could have easily impacted on the differences in the perceived motivations of the athletes.

While methodologically weak, Ryan's initial study provided some limited support for cognitive evaluation theory operating as Deci (1975) predicted.

That is, athletes on scholarship felt controlled by the scholarship, thus inferring less enjoyment toward their sport, while nonscholarship athletes made responses associated with enjoyment toward their sport.

In an attempt to try and eliminate some of the methodological problems of the 1977 study, Ryan (1980) administered the same questionnaire to 424 males and 188 females athletes from 12 different institutions. The male athletes competed in either football or wrestling, while the females, because of the small number of participants in a few sports, were selected from seven different sports (basketball, field hockey, swimming, tennis, track, volleyball, and cross country). Among the male competitors, 210 were on scholarship and 214 were nonscholarship athletes. Forty-five female athletes were on scholarship, while 57 competed without the grant.

Ryan hypothesized that male athletes on scholarship would be less intrinsically motivated toward their sport than would nonscholarship athletes. Since very few scholarships were available for females at that time, he predicted there would be an interaction between athletic scholarship and sex of the athlete. Ryan reasoned that the females on scholarship would perceive themselves as being "good" at their sport, thus were being rewarded for their competence. Therefore, the scholarship was hypothesized as exercising a controlling function for male scholarship athletes and a competence informational function for the female athlete on scholarship.

Data from the replication study indicated that contingent upon sport, either football or wrestling, males differed in their perceptions toward their scholarships but that females responded as hypothesized. Football players receiving scholarships perceived themselves as "playing for pay,"

implying reduced intrinsic motivation for the sport as a result of the scholarship. Conversely, wrestlers and female athletes reported that they spent more free time playing their major sport, and enjoyed practice more in college as compared to high school. Because a lower number of wrestlers and females received scholarships, these two groups were suggested to perceive the scholarship as a reward for competence. These results suggest some support for Deci's (1975) cognitive evaluation framework in a real world setting.

Thus, cognitive evaluation theory offers a theoretical framework to explain the effects of external rewards on intrinsic motivation. Essentially, information gained from any activity that increases an individual's feelings of competence can enhance their perceptions of intrinsic motivation. Conversely, intrinsic motivation should be undermined if an individual perceives decreases in self-determination and competence. New challenges should be sought if an individual perceives high amounts of self-determination and competence within that activity. By seeking new challenges and setting new goals, the individual will not become bored with the activity.

FACTORS AFFECTING INTRINSIC MOTIVATION IN SPORT

It is important to understand that the main motivations for enjoying sport and physical activity have definite consequences for programs whose goals are to involve more people and make them persistent towards their

task. Participant enjoyment is the factor that most influences persistence in fitness programs (Wankel, 1980). The research dealing with intrinsic motivation in sport has been concerned with three principle factors, verbal feedback, ego-involvement (Vallerand & Reid, 1985 and Weinberg & Jackson, 1979), and competition (Ryan, 1982 and Deci, Bentley, Kahle, Abrams, & Porac, 1981).

Verbal Feedback and Ego-Involvement

A number of studies have reported that positive verbal feedback increases intrinsic motivation while negative verbal feedback decreases intrinsic motivation (Vallerand & Reid, 1985; Vallerand, 1983; Weinberg & Jackson, 1979). Verbal feedback has been an important source of performance information when testing the positive and negative aspects of intrinsic motivation in sport and physical activity.

In an attempt to examine the impact of positive and negative feedback on intrinsic motivation and perceived competence, Vallerand and Reid (1984) gave subjects either positive or negative feedback in performing a stabilometer task after every fourth trial. The findings suggested that positive feedback enhanced intrinsic motivation toward the task whereas negative feedback undermined intrinsic motivation.

Weinberg and Jackson (1979) conducted a similar study exploring the effects of success and failure feedback on intrinsic motivation. In this study, success or failure feedback was given to the subjects in regard to their normative performance on a stabilometer task. In this study subjects were informed that they had performed better than 82% of the subjects or

worse than 18% of the subjects. The researchers found that when the subjects received feedback related to success their intrinsic motivation was enhanced. Whereas, decreases in intrinsic motivation toward the task were found for those subjects who received failure feedback.

The amount of positive feedback necessary to influence intrinsic motivation has been investigated by Vallerand (1983). Teenage hockey players received 0, 6, 12, 18, or 24 verbal statements positively related to their performance. Results indicated that the amount of feedback appeared unimportant, but all subjects who received verbal feedback were higher in intrinsic motivation than those who received no feedback. Such findings suggest that the amount of feedback is not the critical factor in determining the effects of intrinsic motivation. The important determinant appears to be the quality of the positive feedback (information). Thus, an individual who receives positive feedback related to performance exhibits higher feelings of competence and demonstrates increased intrinsic motivation toward his or her activity.

In sum, positive/success feedback tends to convey competence, whereas negative/failure feedback, implies incompetence. Consequently, positive/success feedback enhances intrinsic motivation while negative feedback or frequent failures diminish intrinsic motivation. Within the realm of positive and negative feedback, ego-involvement can be found to be very motivating. Positive feedback can also enhance ego-involvement but constant failure can undermine ego-involvement and underscore intrinsic motivation.

Competition

Competitive situations are those "in which the comparison of an individual's performance is made with some standard in the presence of at least one other person, who is aware of the criterion for comparison and can evaluate the comparison process" (Martens, 1975). Ryan (1982) suggested that competition and ego-involvement are related in that competition can be controlling because people become ego-involved in it. In examining the effects of competition on intrinsic motivation, Weinberg & Ragan (1979) assessed intrinsic motivation by willingness to volunteer for the same type of competitive experiment in the future. Also, success and failure were assessed as a factor of intrinsic motivation. The results indicated that competition increased intrinsic motivation for males (as measured by willingness to compete in the future) as opposed to females in a no competition group. With regard to success and failure, success increased willingness for future participation.

Winning a competitive task will make an individual more likely to engage in the activity again (Ryan, 1982). But, if there is no competition the individual is less likely to engage in the activity. On the other hand, if a person loses in a competitive activity, they are less likely to participate again unless they are able to improve their skills in the absence of competition where they can regain self-esteem (Deci & Ryan, 1985). Trying hard to win against a competitor in an activity that is intrinsically interesting could also decrease intrinsic motivation. In an attempt to study the effects of competition against an opponent, Deci, Betley, Kahle, Abrams, and Porac (1981) employed a puzzle game in which one

group of subjects were instructed to try to beat a confederate accomplice who would permit the subject to win the competition. The other group of subjects participated in the same activity with an accomplice but were not instructed to beat the accomplice. Subjects who were instructed to beat the accomplice were found to be less intrinsically motivated toward the activity following competition than those who did not try to beat the confederate. The controlling and informational functions of external forces have been found to affect competition by Deci et.al., 1981. Emphasizing the importance of winning leads to the activity becoming more controlling (Deci & Ryan 1985) while competition can be informational by allowing participants to gain information about their competence.

The competitive situation can take on both the controlling and informational functions. When an individual becomes absorbed in winning a competitive activity, the controlling function becomes prevalent due to the competitive situation being extrinsically motivating. However, when competence information is gained in competition, the informational function is more salient. If the focus of the competitive situation is changed by deemphasizing winning and emphasizing the enjoyment of the activity, intrinsic motivation toward the competitive situation can be increased.

LIMITATIONS IN THE INTRINSIC MOTIVATION LITERATURE

Because the area of intrinsic motivation research is still in its developmental stages, most of the intrinsic motivation literature has been

limited by experimental/laboratory based methodology. Therefore the sport area presents a suitable setting for testing the external validity of intrinsic motivation. There are also a number of methodological problems in some of the research. One such problem is that some studies have lacked a *control group and consequently treatment may be due to some other factor* which lends a restrictive nature to the research. Additionally, findings have suggested causal relationships among variables when the findings could be attributed to other forces (Deci & Ryan, 1985). The final limitation within the intrinsic motivation literature is the lack of attention placed on gender differences (Deci & Ryan, 1985). Many studies allude to differences between the sexes but much more research is needed to confirm such hypotheses (Ryan, 1980; Deci et.al.; and Weinberg & Jackson, 1979). Sport may provide the best setting for examining and expanding on these limitations because many people consider sport as play. However, within the sport setting, rewards, feedback, and competition provide extrinsic factors to the element of play in sport, which in turn could decrease intrinsic motivation.

FUTURE DIRECTIONS OF INTRINSIC MOTIVATION IN SPORT

If we are to understand the effects of intrinsic motivation in sport and physical activity, research must be conducted in several different areas. Sport settings may be the best area to investigate intrinsic motivation because intrinsic motivation can be studied at many different

levels.

The differential effects of rewards on intrinsic motivation have been substantiated time and again in the laboratory, but the question remains whether these effects exist in the field. There is a need to approach the factors that affect intrinsic motivation, e.g., competition, ego-involvement, etc., and a need to devise methodological techniques to measure these effects in the field.

Another area of research that warrants further investigation is the effect of gender on perceptions of intrinsic motivation. Several early studies have found sex differences (Deci, Cascio, & Krusell, 1975; Carone, 1975; Ryan, 1980). However, Blanck et al. (1984) found no difference between sex toward positive feedback on intrinsic motivation. With the increased female involvement in sport and training regimens being similar to those of male athletic programs, intrinsic motivation between males and females may be comparable.

A number of studies within the framework of intrinsic motivation and sport has focused on youth sport (Curtis, Smith & Smoll, 1979; Vallerand & Reid, 1984; and Weinberg & Jackson, 1979). Research within youth sport has been very beneficial in understanding the effects of intrinsic motivation on children. However, there needs to be a line of research conducted in the field setting to substantiate those findings from the laboratory.

Finally, to further understand intrinsic motivation beyond the youth experience, future research should look at the various levels of sport, from youth, through the college athlete, to the professional. It would also be beneficial to compare and contrast the different experiences that are associated with each level. By investigating the different levels, coaches

and practitioners could better understand and predict an athlete's motivation toward their activity.

SUMMARY

Sport and physical activity has been suggested to be the most favorable domain to investigate intrinsic motivation. People can experience feelings of competence and self-determination from sport. Still, the sport experience can lead to pressure and involvement for external reasons. External rewards can have either a controlling or an informational function. If a reward is controlling, it usually undermines intrinsic motivation. On the other hand, the informational function, if conveying competence information, will increase intrinsic motivation. If the informational function communicates incompetence, intrinsic motivation will decrease.

Research in the area of intrinsic motivation and sport has shown rewards, e.g., jackets and trophies, can lead to decreases in intrinsic motivation. Verbal feedback has been found to increase intrinsic motivation when positive or success oriented and decrease when negative or failure oriented. Competition like other external forces decreases intrinsic motivation. However, success through competition can increase intrinsic motivation.

While the research to date has been promising, it has been predominately laboratory-based and lacks external validity. The area of intrinsic motivation and sport is open to further future investigation. In

order to understand and predict the factors of intrinsic motivation, future research should look at the various levels of sport, gender differences, and the elite athlete. Understanding the factors of intrinsic motivation at all levels of sport will enable physical educators and coaches to make the sport experience more enjoyable for the participant.

ACKNOWLEDGEMENTS

I would like to express my sincere appreciation to Professor Edward McAuley for his guidance and patience as major professor on this project. I would also like to acknowledge my committee members Don R. Kirkendall, Mary McElroy, and David Wiggins for their support of this report.

Appreciation is extended to Terry Duncan for being a soundingboard and for his friendship throughout graduate school. Also, I sincerely thank my parents Derrick (Gabe) and Mary Walters for their tremendous support, not only through college but everything. Thank you, I love you.

Most of all, for always being there, I would like to acknowledge Loretta Walters, my wife and companion, for her help, patience, understanding, and love in everything.

REFERENCES

- Bem, D. J. (1967). Self-perception: An alternative interpretation of cognitive dissonance phenomenon. Psychological Review, 74, 183-200.
- Carone, D. P. (1975). The effects of positive verbal feedback on females' intrinsic motivation. Unpublished master's thesis, University of Bridgeport.
- Carron, A. V. (1984). Motivation: Implications for coaching and teaching. London Ontario: Sports Dynamics.
- Deci, E. L. (1971). Effects of externally mediated rewards on intrinsic motivation. Journal of Personality and Social Psychology, 18, 105-115.
- Deci, E. L. (1972a). The effects of contingent and noncontingent rewards and controls on intrinsic motivation. Organizational Behavior and Human Performance, 8, 217-229.
- Deci, E. L. (1972b). Intrinsic motivation, extrinsic reinforcement, and inequality. Journal of Personality and Social Psychology, 22, 113-120.
- Deci, E. L. (1975). Intrinsic motivation. New York: Plenum.
- Deci, E. L., Betley, G., Kahle, J., Abrams, L., & Porac, J. (1981). When trying to win: Competition and intrinsic motivation. Personality and Social Psychology Bulletin, 7, 79-83.
- Deci, E. L., Casio, W. F. & Krusell, J. (1975). Cognitive evaluation theory and some comments on the Calder-Staw critique. Journal of Personality and Social Psychology, 31, 81-85.
- Deci, E. L., & Ryan, R. M. (1985). Intrinsic motivation and self-determination in human behavior. New York: Plenum.
- Festinger, L. (1957). A theory of cognitive dissonance. Evanston, IL: Row, Peterson.
- Greene, D. & Lepper, M. R. (1974). Effects of extrinsic rewards on childrens subsequent intrinsic interest. Child Development, 45, 1141-1145.
- Halliwell, W. (1978). Intrinsic motivation in sport. In W. F. Staub (Ed.), Sport psychology: An analysis of athlete behavior. Ithaca, NY: Movement.
- Lepper, M. R. & Greene, D. (1975). Turning play into work: Effects of adult surveillance and extrinsic rewards on childrens intrinsic motivation. Journal of Personality and Social Psychology, 31, 479-486.

- Lepper, M. R., Greene, D. & Nisbett, R. E. (1973). Undermining childrens intrinsic motivation with extrinsic rewards: A test of the overjustification hypotheses. Journal of Personality and Social Psychology, 28, 129-137.
- Martens, R. (1975). Social psychology and physical activity. New York: Harper & Row.
- Orlick, T. D. & Mosher, R. (1978). Extrinsic awards and participant motivation in a sport related task. International Journal of Sport Psychology, 9, 27-39.
- Ryan, E. D. (1977). Attribution, intrinsic motivation, and athletics. In L. I. Gedvilas & M. E. Kneer (Eds.), Proceedings of the National College Physical Education Association for Men/National Association for Physical Education of College Women, National Conference. Chicago: Office of Publications Services, University of Illinois at Chicago Circle.
- Ryan, E. D. (1980). Attribution, intrinsic motivation, and athletics: In C. H. Nadeau, W. R. Haliwell, K. M. Newell & G. C. Roberts (Eds.), Psychology of motor behavior and sport - 1979. Champaign, IL: Human Kinetics.
- Ryan, R. M. (1982). Control and information in the interpersonal sphere: An extension of cognitive evaluation theory. Journal of Personality and Social Psychology, 43, 450-461.
- Ryan, R. M., Connell, J. P., & Deci, E. L. (1985). A motivational analysis of self-determination and self-regulation in education. In C. Ames & R.E. Ames (Eds.), Research on motivation in education: The classroom milieu. New York: Academic Press.
- Ryan, R.M., Vallerand, R.J. & Deci, E.L. (1984). Intrinsic motivation in sport: A cognitive evaluation theory interpretation. In W.F. Staub & J.W. Williams (Ed.), Cognitive sport psychology. Lansing, NY: Sport Science Associates.
- Ryan, R. M., Mims, V. & Koestner, R. (1983). The relationship of reward contingency and interpersonal context to intrinsic motivation: A review and test using cognitive evaluation theory. Journal of Personality and Social Psychology, 45, 736-750.
- Smith, M.C. (1975). Childrens use of the multiple sufficient cause scheme in social perception. Journal of Personality and Social Psychology, 32, 737-744.
- Thomas, J. R. & Tennent, L. K. (1978). Effects of rewards on children's motivation for an athletic task. In F. L. Smoll & R. E. Smith (Eds.), Psychological perspectives in youth sports. Washington, D. C.: Hemisphere.

- Vallerand, R. J. (1983). Effects of differential amounts of positive verbal feedback on the intrinsic motivation of male hockey players. Journal of Sport Psychology, 5, 100-107.
- Vallerand, R. J. (1983). Effects of differential amounts of positive verbal feedback on the intrinsic motivation of male hockey players. Journal of Sport Psychology, 5, 100-107.
- Vallerand, R. J. & Reid, G. (1985). On the causal effects of perceived competence on intrinsic motivation: A test of cognitive evaluation theory. Journal of Sport Psychology.
- Vallerand, R. J., Reid, G. & Marisi, D. R. (1980). Effets de renforcements verbaux et matériels sur la motivation intrinsèque face à une tâche motrice. In C. H. Nadeau, W. R. Halliwell, K. Newell & G. C. Roberts (Eds.), Psychology of motor behavior and sport - 1979. Champaign, IL: Human Kinetics.
- Wankel, L. M. (1980). Involvement in vigorous physical activity: Considerations for enhancing self-motivation. In R.R. Danielson & K.F. Danielson (Eds.), Fitness motivation. Toronto: Orol.
- Weinberg, R. S. & Jackson, A. (1979). Competition of extrinsic rewards: Effects of intrinsic motivation and attribution. Research Quarterly, 50, 494-502.

Intrinsic Motivation in Sport and Physical Activity

by

Derek A. Walters

B.S., Kansas State University, 1984

AN ABSTRACT OF A MASTER'S REPORT

submitted in partial fulfillment of the

requirements for the degree

MASTER OF SCIENCE

Department of Physical Education, Dance, and Leisure Studies

KANSAS STATE UNIVERSITY

Manhattan, Kansas

1986

ABSTRACT

Sport and physical activity has become a major institution in our society. Although there are many reasons given for the accelerated involvement in sport, intrinsic motivation could be the most powerful source associated with sport participation (Carron, 1984). Participating in an activity for the enjoyment of participation can be called intrinsically motivated behavior. People engage in this type of behavior to feel competent and self-determined (Deci, 1975). Rewards have been found to affect an individual's intrinsic motivation. Some rewards undermine an individual's interest toward an activity while other times rewards increase intrinsic motivation. Deci (1975) constructed a theoretical framework in an attempt to explain the contrasting effects of rewards on intrinsic motivation called cognitive evaluation theory. The theory suggests two processes by which rewards affect intrinsic motivation. The first process is the controlling aspect which serves to decrease intrinsic motivation. Depending on the perceptions of competence or incompetence, the informational aspect can either increase or decrease intrinsic motivation. This report examines the theoretical underpinnings of intrinsic motivation from the historical social psychological aspects to contemporary sport psychological perspectives. Also, this literature reviews strategies for enhancing intrinsic motivation in the sport setting, as well as discussing future implications of intrinsic motivation toward physical activity.