The Effects of Achievement Goals, Gender, and Leisure on Motivation for Physical Activity

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Honors Project

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Abstract

This study intends to analyze the intrinsic and extrinsic motivations of athletes, intramural athletes, and the non-athletes attending East Texas Baptist University in relation to achievement goals, leisure activities, and gender. Specifically, 347 students completed a survey comprised of five scales. It was hypothesized that athletes and intramural athletes are intrinsically motivated and task oriented while non-athletes are more extrinsically motivated and ego oriented. Furthermore, males should exhibit ego orientation and extrinsic motivation while females exhibit task orientation but are still more extrinsically motivated. Lastly, any group that pursues challenging leisure activities should be more intrinsically motivated.

Introduction

Since motivation refers to the why of behavior (McClelland, 1985), understanding motivation represents a central issue for studies of physical activity (Kilpatrick, Hebert, & Bartholomew, 2005). Researchers develop and improve strategies for physical activity by studying the variables of motivation (Kilpatrick et al., 2005). Many studies describe the individual and combining effects of achievement goals, leisure activities, and gender on the development of motivation (Duda, Chi, Newton, Walling, & Catley, 1995; Frederick & Ryan, 1993; Matteo, 1986; Weissinger & Bandalos, 1995). This study intends to investigate the relationship of achievement goals, leisure activities, and gender on intrinsic and extrinsic motivation in different groups of college students. The purpose of this study is to analyze the physical activity motivations of athletes, intramural athletes, and the non-athletes attending East Texas Baptist University in relation to achievement goals, leisure activities, and gender.

Motivation

Definition and Description

"Motivation concerns energy, direction, persistence and equifinality—all aspects of activation and intention" (Ryan & Deci, 2000, p. 69). According to self-determination theory (Deci & Ryan, 2008; Lens & Sideridis, 2008; Mouratidis, Ryan, & Deci, 2000; Vansteenkiste, Vallerand, & Losier, 1999), autonomy, competence, and relatedness represent the basic needs required for high levels of motivation. A *basic need* describes a physiological or psychological "state that, if satisfied, conduces toward health and well-being but, if not satisfied, contributes to pathology and ill-being" (Ryan & Deci, 2000, p. 74). Autonomy (i.e., volition) describes the desire to regulate actions independently (Mouratidis et al., 2008; Vallerand & Losier, 1999; Wang & Koh, 2006). Competence (i.e., effectiveness) and relatedness (i.e., belongingness) deal

with an individual's interaction with the environment and his or her desire to associate with other people (Mouratidis et al., 2008; Vallerand & Losier, 1999; Wang & Koh, 2006). In relation to satisfying these needs, many studies demonstrate that an activity's positive or negative consequences facilitate personal growth and well-being, actualization, and constructive social development (Deci & Ryan 2000; Vallerand & Losier, 1999; Wang & Koh, 2006). Therefore, self-determined individuals exhibit greater desire for participation in physical activity in the future and during leisure time (Cox & Williams, 2008). They also show higher levels of effort, persistence, and enjoyment (Cox & Williams, 2008).

Research shows that *intrinsic* and *extrinsic motivation*s are two forms of motivation (Cox & Williams, 2008; Deci & Ryan 2008; Escarti & Gutierrez, 2001; Frederick & Ryan, 1993; Murphy, 2005; Ryan & Deci, 2000; Snyder & Spreitzer, 1979; Vallerand & Losier, 1999; Wankel & Kreisel, 1985). Internal regulators exist within a person (e.g. participating in a sport for the inherent pleasure), and external regulators affect behavior through reasons outside the person (e.g. participating in a sport for trophies, recognition, or scholarships) (Simons et al., 2003). These factors interact in order to facilitate motivation, and studies consistently find that athletes lose intrinsic enthusiasm when extrinsic incentives are introduced (Frederick & Ryan, 1993; Murphy, 2005; Wankel & Kreisel, 1985; Vallerand & Losier, 1999). *Locus of causality* describes an individual's perception of how forces influence their efforts, and if the cause is external, self-determination and motivation decreases; however, autonomy and motivation increase if a person claims responsibility for the behavior (Murphy, 2005). A sense of purpose, perceptions of autonomy and competence, and enjoyment represent the "most powerful motivators" (Murphy, 2005, p. 8), but extrinsic motivations are not always negative. If an

individual chooses to pursue an external reward (e.g., college scholarship) for personal value, "motivation remains high despite the incorporation of outside rewards" (Murphy, 2005, p. 7).

Intrinsic Motivation

Ryan and Deci (2000) define intrinsic motivation as "the inherent tendency to seek out novelty and challenges, to extend and exercise one's capacities, to explore, and to learn" (p. 70). *Interest* represents an essential, positive influence on intrinsic motivation through the relationship between a person and the activity (Csikszentmihalyi, 1975). Along with competence, these motives correlate with greater satisfaction for a given activity (Frederick & Ryan, 1993). Interest depends on challenge, self-testing, developing skills, and competency (Csikszentmihalyi, 1975; Deci & Ryan 2008; Ryan & Deci 2000). It requires the balance of these needs, desires, and capacities (Deci, 1992), which corresponds with self-determination theory.

Csikszentmihalyi's (1975) study of the *flow* parallels this work. Flow describes the feeling of total involvement in an activity when challenge and ability are balanced (Wankel & Kreisel, 1985). Therefore, using skills to succeed describes a vital aspect of intrinsic motivation (Wankel & Kreisel, 1985). People who exhibit intrinsic motivation participate in activities for pleasure and fun (Cox & Williams, 2008; Mouratidis et al., 2008; Recours, Souville, & Griffet, 2004; Snyder & Spreitzer, 1979; Vallerand & Losier, 1999), to extend capacity through new challenges (Frederick & Ryan, 1993; Ryan & Deci, 2000), to experience the present moment of an action (Recours et al., 2004), to achieve personal accomplishment and improve skills (Wankel & Kreisel, 1985), and to feel competent and self-determined (Weiss, Bredemeier, & Shewchuk, 1985). They pursue activities without striving for external rewards, and the activity, effort, and persistence provide satisfaction (Escarti & Gutierrez, 2001). Achieving competence, choosing opportunities, and relating to others enhance intrinsic motivation, but any reward, threat,

pressure, or forced goals through competition weaken intrinsic motivation (Ryan & Deci 2000; Vallerand & Losier, 1999). Wankel and Kreisel (1985) consistently show *fun* and *intrinsic rewards* as dominant motives for participation in activities, such as youth sports. Relative to a *win at all cost orientation*, studies show that a *play orientation* causes more positive reactions toward participation (Vallerand & Losier, 1999).

Extrinsic Motivation

Extrinsic motivation differs from intrinsic motivation by performing an activity to achieve discernable rewards or to meet external demands. (Frederick & Ryan, 1993; Ryan & Deci, 2000; Vallerand & Losier, 1999). People aim to beat an opponent and achieve victory (Snyder & Spreitzer, 1979), orient towards more competitive climates (Escarti & Gutierrez, 2001), or participate for any reason other than the inherent pleasurable nature of the activity, such as wealth, fame, trophies, approval, and attractiveness (Frederick & Ryan, 1993; Murphy, 2005; Wankel & Kreisel, 1985). For example, students who complete their homework in order to pursue a career or because their parents force them are both extrinsically motivated because of the external regulators (Ryan & Deci, 2000). Preventing the satisfaction of autonomy, relatedness, and competence results in "external indicators of worth …. [that] fail to foster integration or wellness" (Deci & Ryan, 2008, p. 183). Since the satisfaction of these needs results in self-determined motivation, negative consequences of extrinsic motivations result in a decrease of self-determined motivation (Vallerand & Losier, 1999).

Achievement Goal Orientation

Definition and Description

Achievement goal theory describes the effect of *task* and *ego orientations* on the motivation process and the influence of perceived competency and ability on behavior. (Biddle,

Wang, Kavussanu, & Spray, 2003; Boyd, Weinmann, & Yin, 2002; Brunel, 1999; Duda et al., 1995; Elliot, Cury, Fryer, & Huguet, 2006; Lee, Whitehead, Ntoumanis, & Hatzigeorgiadis, 2008; Lochbaum, Bixby, Lutz, Parsons, & Akerhielm, 2006; Roberts, Treasure, & Balague, 1998; Sage & Kavussanu, 2007; Simons, Dewitte, & Lens, 2003; Smith, Balaguer, & Duda, 2006; Steinberg, Grieve, & Glass, 2001; Stephens, 2004; Thomas & Barron, 2006; Wang & Koh, 2006; Wells, Ellis, Arthur-Banning, & Roark, 2006; Zarantonello, Johnson, & Petzel, 1979). Studies focus on the "energization and direction of competence-relevant behavior" (Elliot et al., 2006, p. 344), and this theory considers a person's idea of success (Biddle et al., 2003). The imbalance of sport ability and perceived competence influences a person's adoption of an achievement goal (Wang & Koh, 2006). Boyd et al., (2002) also addresses competence and the avoidance of incompetence as reasons for achievement behavior. They emphasize that a person's understanding of competence and definition of success influences his or her achievement goal preference.

Task Orientation

Success in task orientation refers to the achievement of mastery in a given activity (Roberts et al., 1998). A person who exhibits a task orientation focuses on the mastery of skills and development of abilities (Brunel, 1999; Elliot et al, 2006; Lee et al., 2008; Smith et al., 2006; Steinberg et al., 2001), believes effort produces success (Biddle et al., Boyd et al., 2002, 2003; Brunel, 1999; Simons et al., 2003), exerts more effort and displays interest in activity (Roberts et al., 1998), experiences intrinsic motivation and enjoyment (Duda et al., 1995; Lochbaum et al., 2006; Simons et al., 2003; Thomas & Barron, 2006; Wells et al., 2006), develops positive social and sportsmanship attitudes (Lee et al., 2008; Wells et al., 2006), and recognizes personal competency and success (Lee et al., 2008; Sage & Kavussanu, 2007). Executing a task for the

experience and focusing on the process are the primary goals of task orientation (Duda et al., 1995). These people work hard to satisfy requirements and prefer intrinsic elements instead of judging competency in a competitive environment (Duda et al., 1995). Research suggests that task orientation correlates positively with enjoyment and interest of activity (Duda et al., 1995).

Ego Orientation

Ego oriented individuals engage in activities for competitiveness and judge success on the demonstration of superior ability and performance compared to others (Duda et al., 1995; Roberts et al., 1998). This achievement goal relates to improving status and recognition (Thomas & Barron, 2006; Wang & Koh, 2006), defining success and competence through ability and outperforming others with less effort (Biddle et al., 2003; Boyd et al., 2002; Brunel 1999; Elliot et al., 2006; Lee et al., 2008; Smith et al., 2006; Steinberg et al., 2001; Wang & Koh, 2006; Wells et al., 2006), viewing activity as a way to accomplish goals (Brunel, 1999; Thomas & Barron, 2006), promoting negative social behaviors (Wells et al., 2006), decreasing intrinsic motivation (Duda et al., 1995), focusing on winning (Sage & Kavussanu, 2007), and improving social status (Smith et al., 2006). During ego orientation, people associate their self-worth with performance (Duda et al., 1995). However, their goals, such as outperforming others, are less self-determined (Duda et al., 1995). They lack high levels of perceived ability, tend to avoid challenges, perform poorly, use less effort, and drop out of activities (Simons et al., 2003). Studies show that these people concentrate on the consequences of an activity instead of the task itself (Simons et al., 2003).

Leisure

Definition and Description

Leisure describes a state of being where people free themselves from daily obligations, anxieties, and pressures (De Grazia, 1962; Hoffman, 2005). According to Barnett (2006), leisure is a "reflection and extension of our uniquely individualistic personality" (p. 445) and a means to resist laziness (Stevenson & Lochbaum, 2008). The U.S. Department of Health and Human Services (1996) documented the rewards of leisure activities to include improved "cardiorespiratory function, blood pressure control and weight management" (Kerner & Kurrant, 2003, p. 228). The Surgeon General established necessary amounts of activity in order to encourage children and adolescents to participate in physical activity in the future as adults (Kerner & Kurrant, 2003). Furthermore, people who participate in leisure activities for intrinsic rewards pursue challenges and feel self-determined, competent, and deeply involved (Barnett, 2006). Intrinsic motivation and exercising for leisure relate to an increase in leisure activities during physical activity (Stevenson & Lochbaum, 2008).

Opportunities for intrinsic rewards exist in many leisure activities (Weissinger & Bandalos, 1995). High intrinsic motivation in leisure pursuits corresponds with increased enjoyment and time spent participating in activity and influences many aspects of human behavior (Iwasaki & Mannell, 1999). Therefore, continued motivation depends on the promotion of mastery and competence (Stevenson & Lochbaum, 2008). Conducive activities for leisure, such as sedentary and large-muscle activities, provide a satisfying experience (Hoffman, 2005). While stress depends on personal interpretation, stress relief depends on self-determination, which results in positive or negative experiences with leisure (Kimball & Freysinger, 2003). Activities that involve concentration, effort, and challenge help adolescents transition from play to work (Shaw, Kleiber, & Caldwell, 1995). Identity development results from these feelings of competence or social identity (Shaw et al., 1995).

Physical Activity

Definition and Description

Using *exercise* and *physical activity* interchangeably occurs throughout research of physical activity (Kerner & Kurrant, 2003). Therefore, various studies differ on the operational definition of physical activity (Hoffman, 2005; Kerner & Kurrant, 2003; Whaley & Kaminsky, 2001; Zwiren, 2001). For the purpose of this study, physical activity is defined as "intentional, voluntary movement directed toward achieving an identifiable goal" (Hoffman, 2005, p. 8). This eliminates the requirement of substantial amounts of energy, pointless movements and reflexes, and the necessity of a sport or exercise setting (Hoffman, 2005). Physical activity breaks down into the two subcategories of exercise and skilled movements. People engage in exercise to "improve or regain performance, health, or bodily appearance" (Hoffman, 2005, p. 12) through training, health-related, and therapeutic exercise. Under the realm of skilled movement, sport is defined as physical activity performed under established rules (Hoffman, 2005). Self-motivation provides the best indication for exercise participation and strategies for understanding ways to increase exercise behavior (Ebben & Brudzynski, 2008).

Gender

Definition and Description

Although used interchangeably, *sex* and *gender* refer to different aspects between men and women. Biological differences based on the appearance and reproduction function of male and female genitalia correspond with an individual's sex. However, gender is a set of socially defined and assigned norms concerning sexuality and procreation (Hoffman, 2005), and it affects participation in sport by developing gender ideologies (Koca, Asci, & Kirazci, 2005). It also applies to a person's degree of masculinity and femininity (Schmalz, Kerstetter, & Anderson,

2008). After birth, girls learn "passive, submissive, and nurturant" (Koivula, 1995, p. 543) behavior while boys exhibit "active, aggressive, and autonomous" (Koivula, 1995, p. 543) behavior (Schmalz et al., 2008). These gender roles appear more distinct in the sport arena (Gill, 1986).

Men traditionally dominate the realm of physical activity and tend to label activities as masculine or feminine; therefore, a person's gender can restrict socially approved options for physical activity (Chalabaev, Sarrazin, Stone, & Cury, 2008; Koivula, 1995). Socialization encourages the relationship between sport and masculinity in order to refine masculine qualities in men (Koca et al., 2005). On the other hand, society discourages women from developing these same masculine attributes (Koca et al., 2005). Gender stigmas (i.e., sexuality and sexual orientation) affect physical education by placing gender roles on certain activities. Even though both sexes tend to participate in the same number of activities, men demonstrate greater interest in sex-appropriate activities (e.g., football and ice hockey) while women tend to favor more masculine activities (Matteo, 1986; Schmalz et al., 2008). Women possess greater freedom in their choice activities because men face more stringent social and performance expectations in sports.

Furthermore, studies suggest that gender and activity type affect intrinsic and extrinsic motivation (Frederick & Ryan, 1993). For example, social pressure or the desire for health can influence body-related motivations for women. Intricate covert and overt motivations complicate the differences between males and females (Lindzey & Goldberg, 1953). "Sex differences are neither fixed nor universal, but may vary with the task, social situation, and previous experiences" (Gill, 1986, p. 235). However, studies suggest that both males and females exhibit competitiveness, but they strive for different results. Males tend to pursue win-loss outcomes

while females aim to achieve personal goals (Gill, 1986). For the purpose of this study, differences will be based on gender rather than sex.

Participant Groups

Depending on achievement orientation, people can pursue either competitive challenges, noncompetitive personal goals, or avoid achieving these ambitions (Gill, Dzewaltowski, & Deeter, 1988).

Athletes

Contrary to logic, athletes appear more oriented to performance rather than outcome orientation (Gill & Dzewaltowski, 1988; Gill et al., 1988; Gill, Kelley, Martin, & Caruso, 1991). This trait does not stifle the high level of competitiveness (Gill & Dzewaltowski, 1988). Therefore, the desire for competitive sports and high levels of "general and sport-specific achievement orientation" (Gill & Dzewaltowski, 1988, p. 220) distinguish athletes and non-athletes. Successful athletes approach competition by enjoying the activity and attempting to succeed (Gill & Dzewaltowski, 1988). This finding follows previous research that shows ego orientation (i.e., win orientation) reduces intrinsic motivation and performance while task orientation (i.e., goal orientation) increases these factors (Duda et al., 1995; Gill & Dzewaltowski, 1988). According to Reis and Jelsma (1978), male athletes aspire for victory, but the opportunity to socialize motivates female athletes. Intrinsic motivation encourages female participation in sports while males cite personal accomplishment as a means to develop self-confidence (Croxton & Klonsky, 1982; Petrie, 1971). Furthermore, athletics affects a person's perception of *self-concept*. Self-concept is "formed through experience with interpretation of one's environment" (Marsh, Perry, Horsely, & Roche, 1995, p. 71) and refers to self-perception. Some research points to athletes possessing higher self-concept concerning athletic ability, body

image, and global self-esteem in relation to non-athletes (Marsh et al., 1995). For example, many athletes consider public image as an important value (MacLean & Hamm, 2008).

Intramural athletes

Within the school setting, intramural activities offer opportunities for the general population to participate in physical activities (e.g., basketball, volleyball, flag football, and softball) (Hinkle, 2008; Lamke & Dunn, 1998; Lewis, Jones, Lamke, & Dunn, 1998). These programs allow students not in athletic programs to engage in appropriate levels of competition regardless of athletic ability (Hinkle, 2008; Lewis et al., 1998). According to Stein (1983), intramural sports assist people who possess a variety of skills but might lack the ability, confidence, or desire to engage in interscholastic sports. Highly competitive environments limit opportunities for students who are not elite athletes, which leads to sedentary spectatorship. However, intramurals potentially attract this alienated population (Kanters, Bocarro, Casper, & Forrester, 2008). Students can socialize and develop companionship (Artinger et al., 2006; Hinkle, 2008; MacLean & Hamm, 2008), refine and learn skills (Hinkle, 2008), enhance leadership qualities (Byl, 2004; Rothwell & Theodore, 2006), clarify values (Rothwell & Theodore, 2006), and have fun (Boyl, 2004; Hinkle, 2008; Kanters et al., 2008). Also, intramural athletes "do not report the intrinsic motivation losses reported by athletes engaged in highly competitive structures such as intercollegiate sports" (Vallerand & Losier, 1999). Recreation exists as a common bond between students (Bryant, Banta, & Bradley, 1995) and an outlet for student interaction (Artinger et al., 2006). These "recreational engagements…develop and enhance [a student's] … physical, mental, or emotional capacity" (Collins, Valerius, King, & Graham, 1998, p. 38).

Non-athletes

Even though non-athletes might have participated in competitive sports in the past, this participant group describes the general population (Knoppers, Schuiteman, & Love 1986). However, Americans engage in too little exercise and tend to exhibit sedentary lifestyles (Pinto & Marcus, 1995). One of the steepest declines in physical activity occurs during the transition between high school and college (Pinto & Marcus, 1995). Major life transitions (i.e., marriage, college, and career) occur after high school and impact a person's health behaviors (Brown, 2005). The majority of college students partake in hazardous behaviors that affect their overall health, such as smoking, drinking, sex, stress, and a lack of nutrition (Von Ah, Ebert, Ngamvitroj, Park, & Kang, 2004; Wiley, 1996). Most college students fail to meet suggested requirements for physical activity and to understand that motivation is necessary for increasing participation (Ebben & Brudzynski, 2008). Furthermore, an estimated 66% of Americans suffer from obesity because physical activity participation declines over a person's lifespan (Ebben & Brudzynski, 2008). These problems and obesity relate to the low levels of physical activity and poor diet that afflicts college students (Brown, 2005; Huang, 2003; Von Ah et al., 2004). Also, men and women in the general population pursue different types of physical activity. Studies consistently show that women prefer aerobics and men choose weight lifting (Pinto & Marcus, 1995). However, non-athletes consider enjoyment as an important value for engaging in physical activity (MacLean & Hamm, 2008).

Hypotheses

This study will examine intrinsic and extrinsic motivation during physical activity for different participant groups based on gender, achievement goals, and leisure activities. It is hypothesized that athletes and intramural athletes are motivated more intrinsically and task oriented while non-athletes are more extrinsically motivated and ego oriented. It is further

hypothesized that males exhibit ego oriented characteristics and are motivated more by extrinsic factors while females exhibit task orientation but are still more extrinsically motivated. Lastly, any group that pursues challenging leisure activities are more intrinsically motivated.

Methods

Participants

By using convenience sampling, three hundred and forty-seven students (139 athletes, 93 intramural athletes, and 108 non-athletes, mean age = 21) at East Texas Baptist University participated in the research. Upper level and general education classes in the Behavioral Sciences and Kinesiology department were asked to participate. For this study, athletes must have been currently participating in varsity athletics at ETBU, intramural athletes must have participated in ETBU's intramural program in the past year, and non-athletes must have not participated with any organized, competitive, or extracurricular sports team in the past two years.

Measures

For this study, participants completed a survey comprised of several scales that measured motivation, degree and enjoyment of physical activity, achievement orientation, and leisure activities.

Leisure Preferences and Physical Activity. To understand leisure preferences for students at East Texas Baptist University, students listed three leisure activities. These open-ended responses were coded into one of the following four groups: Active (e.g., hunting, lifting weights, sports, and running) Passive (e.g., reading, sleeping, writing, and cooking) Entertainment (e.g., watching TV or movies and attending sporting events), or Social (e.g., talking on the phone, text messaging, or spending time with friends or spouse) Leisure. Active leisure was considered *challenging*, while passive, entertainment, and social leisure were labeled

as *non-challenging*. The 24-item Intrinsic Leisure Motivation measured the underlying motives for intrinsic leisure motivation. The original scale used a 7-point scale ranging from 1 (*very strongly disagree*) to 7 (*very strongly agree*) (Weissinger & Bandalos, 1995). However, to keep the survey consistent, the scaling was changed to a 5-point scale from (*strongly disagree*) to 5 (*strongly agree*). Self-determination (e.g., "I feel in control of my life during my leisure time"), competence (e.g., "My friends think that I am skilled at leisure time activities"), commitment (e.g., "My leisure time activities are a central part of my life), and challenge (e.g., "I like a challenge in my leisure time) are the four subscales comprised of six questions each (Iwasaki & Mannell, 1999). The Cronbach alpha reliability ranges from .87 to .91 for the entire scale and .64 to .83 for each subscale.

Four additional questions measured students' *frequency, duration, intensity,* and *adherence* to physical activity (Kilpatrick et al., 2005). By using an 8-point Likert scale ranging from 0 to 7, the following question measured frequency: "Please indicate how many days per week you participate in physical activity." Duration (e.g., "Please indicate the duration of your typical physical activity experience") was defined with a 6-point Likert scale ranging from 1 (*0-15 minutes*) to 6 (*90+ minutes*). Intensity (e.g., "Please indicate your typical physical activity experience in terms of average level of exertion.") was measured with a11-point Likert scale ranging from 0 (*no effort*) to 10 (*maximum effort*). Lastly, the participants described their adherence with a 6-point scale ranging from 1 (*0-3 months*) to 6 (*5+ years*): "Please indicate how long you have been participating in physical activity consistently at least three times each week."

Physical Activity Enjoyment Scale. The Physical Activity Enjoyment Scale, which is a16-item scale, measured the participants' enjoyment of an activity (Carraro, Young, & Robazza, 2008). Kendzierski and De Carlo (1991) verified its reliability and validity. By using a 5-point

Likert scale, nine positive (e.g., "I like it") and nine negative (e.g., "It's no fun at all") statements provided a possible score from 16 to 80.

Perception of Success Questionnaire. The Perception of Success Questionnaire is a 12-item questionnaire measured when people feel successful in sports (Boyd et al., 2002; Brunel, 1999; Sage & Kavussanu, 2007). Each question began with: "I feel most successful in sport when…" (Wang & Koh, 2006). Six questions assessed task orientation, and six questions assessed ego orientation based on a 5-point Likert scale that ranges from strongly disagree to strongly agree. Cronbach's alpha measured .81 and .86 for task and ego orientation. Two items are included (*I do things more easily than others* and *I learn something new to me*) to represent aspects of ego and task orientation not included in the original scale (Lee et al., 2008). This is a "valid and reliable instrument to measure task and ego motivational orientations in sport" (Roberts et al., 1998, p. 344).

Exercise Motivation Inventory-2. Participants also completed the Exercise Motivation Inventory-2. Markland & Ingledew (1997) introduced this scale to "distinguish between intrinsic and extrinsic motives for exercise" (Maltby & Day, 2001, p. 651) and to reveal factors that facilitate both internal and external motivations. This 51-item questionnaire used a 5-point scale ranging from 0 (*not true for me*) to 5 (*very true for me*) (Kilpatrick et al., 2005) and includes 14 subscales: Stress Management, Revitalization, Enjoyment, Challenge, Social Recognition, Affiliation, Competition, Health Pressures, Ill-Health Avoidance, Positive Health, Weight Management, Appearance, Strength & Endurance, and Nimbleness. For the purposes of this study, these subscales were combined into Intrinsic, Extrinsic, and both. Internal reliability of this scale ranges from .69 to .95 (Maltby & Day, 2001).

Design and Procedure

Surveys were administered during a two-week period in twenty different classes in the Behavioral Sciences and Kinesiology departments. Based on the parameters of the experiment, participants were placed in the athlete, intramural, or non-athlete group. The purpose of the research was explained to each class, and the students were asked to sign the informed consent and to complete the survey. Students were told that participation was voluntary, that their responses are anonymous and confidential, and that it would take approximately 10 minutes to complete. They were also told to only complete the survey only once regardless if they were asked to fill it out in another class. Only five classes offered extra credit to the students for their participation.

Results

Intrinsic and Extrinsic Motivation

Three one-way between-subjects analysis of variance tests compared the mean scores of athletes, intramural athletes, and non-athletes at East Texas Baptist University that demonstrated the following types of motivation: intrinsic, extrinsic, or both. For intrinsic motivation, this test was found to be statistically significant, $F(2, 330) = 20.32$, $p < .05$. The strength of the relationship, as indexed by eta^2, was .11. A Tukey HSD test indicated the mean for athletes ($M = 69.34$, $SD = 14.90$) was significantly greater than intramural athletes ($M = 63.97$, $SD = 16.40$) and non-athletes ($M = 55.70$, $SD = 18.67$). Also, the mean for intramural athletes was significantly greater than the mean for non-athletes. Concerning extrinsic motivation, this test was found to be statistically significant, $F(2, 331) = 20.32$, $p < .05$. The strength of the relationship, as indexed by eta^2, was .08. A Tukey HSD test indicated the mean for athletes ($M = 49.17$, $SD = 11.59$) was significantly greater than intramural athletes ($M = 44.38$, $SD = 12.52$) and non-athletes ($M = 40.31$, $SD = 14.18$). Lastly, for factors that could be labeled both intrinsic

and extrinsic motivation, the test was found to be statistically significant, F (2, 332) = 21.97, p < .05. The strength of the relationship, as indexed by eta^2, was .12. A Tukey HSD test indicated the mean for athletes (M = 64.27, SD = 12.26) was significantly greater than intramural athletes (M = 56.92, SD = 13.768) and non-athletes (M = 52.54, SD = 16.11).

Task and Ego Orientation

Two one-way between-subjects analysis of variance tests compared the mean scores of participant groups based on task and ego orientation. For task orientation, this test was found to be statistically significant, F (2, 338) = 3.37, $p < .05$. The strength of the relationship, as indexed by eta^2, was .02. A Tukey HSD test indicated the mean for the athletes (M = 35.97, SD = 4.312) was significantly greater than the means for non-athletes (M = 34.42, SD = 5.90) but not for intramural athletes (M = 34.98, SD = 3.85). Concerning ego orientation, this test was found to be statistically significant, F (2, 338) = 29.123, $p < .05$. The strength of the relationship, as indexed by eta^2, was .15. A Tukey HSD test indicated the mean for the athletes (M = 28.53, SD = 4.47) was significantly greater than the means for the intramural athletes (M = 25.77, SD = 4.65) and the non-athletes (M = 23.76, SD = 5.67). Intramural athletes were also significantly greater than non-athletes on ego orientation.

Male and Female Motivation

Two independent groups t tests were performed comparing the mean scores of extrinsic and intrinsic motivation for males and females. For extrinsic motivation, this test was found to be statistically significant, $t(334)=2.13$, $p < .05$, indicating that males (M=46.63, SD=12.80) are more likely to be motivated by extrinsic factors than females (M=43.58, SD=13.41). The strength of the relationship between gender and extrinsic motivation, as indexed by eta^2, was .01. For intrinsic motivation, this test was statistically significant, $t(332)=2.52$, $p < .05$, indicating that

males (*M*=65.77, *SD*=16.14) are more likely to be motivated by intrinsic factors than females. (*M*=60.96, *SD*=18.67). The strength of the relationship between gender and intrinsic motivation, as indexed by eta^2, was .02.

Another independent groups *t* test was performed comparing the mean scores of males and females for factors that were both extrinsically and intrinsically motivated. This test was found to be statistically significant, $t(335)=.79$, $p < .05$, indicating that males (*M*=61.47, *SD*=14.56) are more likely to be motivated by factors that were motivated by both intrinsic and extrinsic factors than females (*M*=55.54, *SD*=14.67). The strength of the relationship between gender and both intrinsic and extrinsic motivation, as indexed by eta^2, was .04.

Male and Female Achievement Goals

In order to compare the mean scores of task and ego orientation, two independent groups *t* tests were performed. For task orientation, this test was not found to be statistically significant, $t(341)=-.31$, $p > .05$, indicating that females (*M*=35.29, *SD*=4.1) are not more likely to be task oriented than males (*M*=35.13, *SD*=5.36). For ego orientation, this test was statistically significant, $t(341)=.245$, $p < .05$. Males (*M*=27.5, *SD*=5.04) scored higher than females (*M*=24.95, *SD*=5.35), which indicates that males are more likely to be ego oriented than females. The strength of the relationship between gender and achievement goals, as indexed by eta^2, was .06.

Leisure Motivation

An independent groups *t* test was performed to compare how intrinsic motivation affected challenging (*M*=67.22, *SD*=14.26) or non-challenging (*M*=61.69, *SD*=18.09) leisure activities. This test was found to be statistically significant, $t(314)=5.29$, $p < .05$, indicating that participants who pursue challenging leisure activities are more likely to be intrinsically

motivated than those who pursue non-challenging leisure. The strength of the relationship between intrinsic motivation and leisure, as indexed by eta^2, was .02.

Discussion

The purpose of this study was to investigate intrinsic and extrinsic motivation during physical activity for different participant groups based on gender, achievement goals, and leisure activities.

In accordance with previous research, athletes and intramural athletes were motivated more intrinsically than non-athletes (Gill & Dzewaltowski, 1988; Vallerand & Losier, 1999). This demonstrates how these two groups are more likely to engage in physical activity because of an inherent tendency to seek challenges and to push past their boundaries. However, contrary to my hypothesis, non-athletes were not more extrinsically motivated and ego oriented. Mean scores for athletes and non-athletes were significantly higher on both variables. These results follow previous research by suggesting that these factors might be independent of each other, which results in a person being high or low in either or both (Kilpatrick et al., 2005; Roberts et al., 1998). For example, some aspects of motivation can be extrinsically or intrinsically motivated depending on the situation, such as social recognition and avoiding ill health. This orthogonal characteristic applies to goal orientation when a person strives to master skills and also to demonstrate superior ability.

In terms of gender, males scored significantly higher on ego orientation and intrinsic and extrinsic motivation but not on task orientation. Females scored slightly higher on task orientation. However, because the scales had a different number of questions that measured each variable, the results only demonstrate differences between males and females rather than whether males scored higher on task or ego orientation and extrinsic or intrinsic motivation. This applied

to females as well. Therefore, these results imply that external forces motivate males and females, such as wealth, approval, and attractiveness, as well as an internal, inherent tendency to seek a sense of purpose, perceptions of autonomy and competence, and enjoyment. However, males feel these forces more strongly than females. Lastly, while a majority of students engaged in non-challenging leisure activities (e.g., talking, socializing, watching TV, and so on.) those students that reported pursuing challenging leisure activities (e.g., playing sports, working-out, hunting, and so on.) were significantly more likely to be intrinsically motivated. Since leisure is a "reflection and extension of our uniquely individualistic personality" (Barnett, 2006), these students have developed the desire to pursue activities in their free time without striving for external rewards; and the activity, effort, and persistence provide satisfaction (Escarti & Gutierrez, 2001).

Concerning the design of the study, the scales failed to measure whether males were more ego oriented or task oriented and likewise for females. This can also be applied to extrinsic and intrinsic motivation. The Perception of Success scale, which measured ego and task orientation, and the EMI-2, which measured intrinsic and extrinsic motivation, had a different number of questions to measure each variable. Therefore, the means of these items could not be compared.

The anonymity of the subjects was maintained by placing identifying information only on informed consent forms, which were kept separate from the surveys. The informed consent forms were then randomly shuffled. Furthermore, confidentiality was maintained by not allowing anyone except for the researcher to view responses and to enter in data.

In the future, using the EMI-2 to measure motivation in athletes, intramural athletes, and non-athletes based on its 14 subscales might provide a more in depth analysis of intrinsic and extrinsic motivation. This extension can view how different groups value motivators, such as

stress management, competition, affiliation, appearance, health pressures, and so forth. Furthermore, this study can be improved by investigating how to instill certain types of motivation or how to encourage the development of task and ego orientation in athletes. For example, by understanding what motivates athletes, coaches are given more insight as to how to motivate their players to achieve their goals. Or, in the case of intramural athletes and non-athletes, it provides ETBU administrators with the opportunity to understand what motivates their students and how they choose to use their leisure time.

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