RELATIONSHIP BETWEEEN LEISURE SPORT AND EXERCISE PARTICIPATION AND PSYCHOLOGICAL BENEFITS FOR HORSEMEN

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ABSTRACT

Relationship Between Leisure Sport and Exercise Participation and Psychological Benefits for Horsemen

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This study was a description of horsemen’s perceived psychological benefits and liabilities derived from leisure sport and exercise participation. The horsemen that participated in this study were active trainers or grooms who stabled their horses at a training center. Sixty-six horsemen completed the Tennessee Self-Concept Scale: 2, Stress Profile, and this researcher’s inventory of horsemen’s activities entitled Samaha Horsemen’s Activities Questionnaire (SHAQ). Seven horsemen were interviewed to obtain qualitative data. Two of the seven horsemen were omitted from the analysis due to no or limited responses to the questions.

Quantitative data results revealed that leisure participation in exercise activities positively correlated with greater well-being, physical self concept, and total self concept scores. There was a statistically significant negative relationship between time devoted to participation in exercise and stress scores. The horsemen that participated in this study work in professional harness racing. An allowable and acceptable leisure activity is gambling. However, results indicated that there were statistically significant negative relationships between time spent gambling and physical self concept, well-being, and exercise and sport participation.

Horsemen who were above the median on participation in sport and exercise had significantly higher physical self concept and well being scores than those who were below the median. The results indicate that participation in a variety of exercise and sports as well as time devoted to leisure physical activity had the strongest relationship with improved well-being.

Analysis of the transcribed interviews revealed two major themes (limitations and perceived outcomes) and three subthemes within limitations (time, injury, and competitiveness) and perceived outcomes (socialization, physical, and psychological well-being) that described horsemen’s participation in leisure sport and exercise. A central conflict emerged within horsemen’s reluctance to become assertive in addressing their limitations. Horsemen viewed limitations in participation in sport and exercise as time, injury, and competitiveness. Those who participate in leisure sport and exercise were assertive in addressing their own limitations. The perceived outcomes were physical, socialization, and psychological benefits. Participants expressed that leisure sport and exercise provided possible benefits regardless of their involvement or adherence to an exercise program.

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TABLE OF CONTENTS

LIST OF TABLES

CHAPTER 1

INTRODUCTION

The Problem

Physical activity and exercise are key to staying fit and improving one’s overall health (Hwang, 1999). This proposed idea that physical activity and exercise improves overall health has been prevalent in both medical and sport psychology literature. Medical research has shown that regular exercise can help delay or prevent the onset of a multitude of diseases (Haskell, 1984). Research in sport psychology has focused upon the psychological benefits of routine exercise in the maintenance and improvement of well-being (Argyle & Lou, 1990; Cramer, Nieman, & Lee, 1990; Hills & Argyle, 1998; Moses, Steptoe, Mathews, & Edwards, 1989; Murberg, Bru, Svebak, Aarsland & Dickstein, 1997; Norris, Carrol, & Cochrane, 1990; Reed, 1999; Reynolds, 1997; Thuot, 1995), mood (Barabasz, 1991; Hsiao & Thayer, 1998; Kraemer, Dzewaltowski, Blair, Rinehardt, & Castracane, 1990; Maraoulakis & Zervas, 1993; Nowlis & Greenberg, 1979; Pierce & Pate, 1994) and quality of life and life satisfaction (Anderson, 1992; Lox, McCauley, & Tucker, 1995; Petajan, Gappmaier, White, Spencer, Mino, &

Hicks, 1996). The research is reported in both normal and special populations.

Psychological well-being has been referred to as the satisfaction with life or one’s degree of personal happiness (Willis & Campbell, 1992). Attention has been given to the role of physical fitness and exercise in the enhancement of psychological health and well-being (Plante & Rodin, 1990). Sport psychology literature has investigated both the long and short term benefits of exercise and sport for psychological well-being. Short term benefits of physical activities include significantly increased perceived well-being (Berger & Owens, 1983, 1988; Lichtman & Posner, 1983; Steptoe & Cox, 1989). Although similar long term benefits have also been reported, the effects are not as compelling as is the case for short term benefits (Bluthenthal, Williams, Needels, & Wallace, 1982). It is a generally accepted idea, however, that exercise and sport have a positive effect on well-being and mood on both short and long term bases.

Studies that have focused on the effects of exercise on the psychological well-being of normal populations (Lichtman & Poser, 1983; Lobitz, Brammell, Stoll, & Nicolli, 1983; Steptoe & Cox, 1989) have found positive increases when the program was challenging but not too difficult.

As the literature has shown, exercise and sports participation may improve overall psychological well-being (Berger & Owens, 1983, 1988; Lichtman & Posner, 1983; Steptoe & Cox, 1989). Negative behaviors such as smoking or drinking alcohol in excess are associated with negative mood states. One explanation has been that the individual who is drinking alcohol or smoking in excess is trying to satisfy him/herself. The demonstrated link between mood and exercise is relevant to this discussion of negative behavior because physical activity offers the individual an alternative means of regulating mood and satisfaction. An individual who uses drugs, tobacco, alcohol, or food binges in excess believes that these behaviors will result in positive moods (Donovan & Marlatt, 1988). The long term reality is that this addictive process only allows the behaviors to escalate. In the present study, horsemen will report the frequency and variety of negative leisure activities to investigate whether there are any relationships between them and participation in leisure sport and exercise.

Thayer, Peters, Takahashi, and Flight (1992) proposed that one substance or behavior can be substituted for another as long as a satisfying mood is achieved by the replacement. Several studies have researched this theoretical approach and have developed exercise programs in hopes of achieving abstinence in participants who smoke (Marcus et al., 1999; Thayer et al., 1992) and abuse drugs (Wilbert, 1998).

Harness horseracing involves countless hours, by the horsemen, of preparation of the horses to compete in the races. The horsemen are completely devoted to either training (trainer) or caretaking (groom) of the standardbred horses within the training centers and backstretches. A training center is where the race horse can be stabled and trained for competition. Each horse has an owner, trainer, and a groom who prepare the animal for racing. Within the confines of the training center there are barns in which the horses are stabled. Horses that are stabled at the training center are transported to the racetrack to compete in a race. Frequency of shipping among the horses depends upon whether the horse has qualified for a race. When the horse is not racing, it remains in its stall at the training center.

The backstretch is the portion of the racetrack in which many horses are also stabled. There has been a recent trend for horsemen to stable their standardbred horses at a training center rather than the backstretch. This trend occurs both voluntarily and out of necessity. Many owners and trainers desire to stable their horses at a training center because the facility offers many amenities that the backstretch does not. Necessity of stabling horses at a training center occurs when a backstretch is closed. The horses are moved to either a small farm or a training center. Backstretches need to be maintained and for some racetracks it is not cost effective to support such a venue. The total number of horses and workers at training centers is substantially more than at backstretches for harness racing within the region in which this study took place. The present study was conducted at a training center rather than a backstretch because more participants were available for the sample.

The nature of horsemen’s job tasks requires them to participate in physical activities. These physical activities that are performed on the job are not leisure physical activities. In this community, the opportunity to participate in fulfilling physical activities must be sought by the individual before he or she goes to work or after his or her work is completed. This type of employment is not any different from other manual labor jobs. The present study, therefore, may lend itself to applications for individuals who have manual labor employment.

Statement of Problem

The purpose of this study was to describe horsemen’s perceived psychological benefits and liabilities derived from participation in leisure sports and exercise activities.

Hypotheses

The following hypotheses concerning horse training center horsemen’s perceived psychological benefits and liabilities were examined in this study:

1. There will be a statistically significant positive relationship between reported involvement in leisure sport and exercise activities and psychological well-being.

2. In examining horsemen’s perceived self concept, the following hypotheses were examined:

2.1 There will be a statistically significant positive relationship between reported involvement in leisure sport and exercise activities and perceived self concept.

2.2 There will be a statistically significant positive relationship between reported involvement in on-site health programs and events and perceived self concept.

2.3 There will be a statistically significant positive relationship between reported involvement in positive non-sport and exercise leisure activities and perceived self concept.

2.4 There will be a statistically significant positive relationship between reported involvement in sport and exercise activities and perceived work self concept.

2.5 There will be a statistically significant positive relationship between reported involvement in sport and exercise activities and perceived physical self concept.

2.6 There will be a statistically significant positive relationship between reported involvement in sport and exercise activities and perceived social self concept.

3. In examining differences between participants who are above the median and below the median for participation in leisure sport and exercise activities, the following hypotheses were examined:

3.1 Participants who report above the median involvement in leisure sport and exercise activities will have statistically significantly higher reported self concept scores than participants below the median.

3.2 Participants who report above the median involvement in leisure sport and exercise activities will have statistically significantly higher reported psychological well-being scores than participants below the median.

3.3 Participants who report below the median involvement in leisure sport and exercise activities will have statistically significantly higher reported stress scores than participants above the median.

4. There will be a statistically significant negative relationship between reported involvement in negative leisure activities and perceived self concept.

5. There will be a statistically significant negative relationship between reported involvement in sport and exercise activities and perceived stress.

6. There will be a statistically significant negative relationship between reported involvement in leisure sport and exercise activities and participation in negative leisure activities.

7. There will be a statistically significant negative relationship between reported involvement in leisure sport and exercise activities and frequency of work related activities.

8. There will be a statistically significant negative relationship between reported involvement in negative leisure activities and perceived work self concept.

9. In examining the combinations of horsemen’s leisure

activities, the following hypotheses were explored:

9.1 Certain combinations of leisure sport and exercise activities will significantly contribute to the prediction of perceived reduced stress.

9.2 Certain combinations of leisure sport and exercise activities will significantly contribute to the prediction of perceived self concept.

9.3 Certain combinations of leisure sport and exercise activities will significantly contribute to the prediction of perceived psychological well-being.

Delimitations

The study was delimited as follows:

1. The study examined the effects of leisure sport and exercise activities in this unique work environment and may not generalize to the general public.

2. Well-being was assessed via the well-being subscale of the Tennessee Self concept Scale.

3. Stress was assessed via The Stress Profile.

4. The study protocol focused on the immediate effects of participation in current leisure sport and exercise activities without observing any longitudinal effects.

5. Self concept was assessed via The Short Form of the Tennessee Self concept Scale: Second Edition (TSCS:2).

6. Involvement in negative leisure activities was ascertained via a researcher created questionnaire.

7. Involvement in positive leisure activities was ascertained via a researcher created questionnaire and the health habits subscale of the Stress Profile.

8. The researcher is contracted as a program developer to assist horsemen in the areas of counseling, education, health and recreation.

Limitations

This study was limited as follows:

1. Lack of some participants' skills may have a negative effect upon involvement in sport and exercise.

2. Participants needed to comprehend the questions that were asked to them in the questionnaire. Some level of reading competency was required as well.

3. This study relied upon the participants' accurate and honest responses to the questions on the questionnaire, interview and psychological inventories.

4. Participation in leisure activities was not limited to the on-site/observable programs available to the population.

5. The participants' work schedules may have

interfered with the completion of the instruments and thus impacted on the number of participants who successfully completed the study.

6. There was no assessment of participants' prior history of enjoyment, success or failure in sport; thus this was an uncontrolled influence on perceptions of the activities.

7. Some questions on the instruments may have been difficult for the participants to comprehend.

8. The researcher is a part of the horse racing community and observes the population from within.

Definition of Terms

Groom: A position given to an individual who is the horse's caretaker. Job tasks include cleaning the stall, horse, tack, and equipment. The groom is employed by a trainer. The groom may tend to as many as five horses for their trainer.

Horsemen: Refers to the grooms and trainers who prepare and train the standardbred horses for competition.

Horse training Center: A private training facility for race horses. Race horses are stabled at this facility and all grooms, trainers, and owners hold a state racing license which allows them to participate in racing. The owners of the horses lease individual stalls from the owner of the training facility on a monthly basis.

Negative Activities: Negative activities that are present in the community which include abusing drugs and alcohol, excessive gambling, smoking, etc. (Operational Definition: information obtained on the Samaha Horsemen Activity Questionnaire (SHAQ).)

Perceived Psychological Benefits: Positive reported scores on The Tennessee Self concept Scale and The Stress profile that indicate a positive effect as a result of participating in sport and exercise (reported on the SHAQ).

Perceived Psychological Liabilities: Negative reported scores on The Tennessee Self concept Scale and The Stress Profile that indicate a negative effect when correlated with participation in sport and exercise activities (reported on the SHAQ).

Perceived work activities: Reported information on select questions on the work activities portion of The SHAQ (Samaha Horsemen Activity Questionnaire).

Perceived work performance: Score obtained via the work/academic self concept subscale of the Tennessee Self concept Scale.

Positive activities: Positive activities within this community are sport and exercise, social events, socializing, etc. (Operational definition: information obtained on the SHAQ.)

Psychological well-being: The satisfaction with one's life or degree of personal happiness (Pavot & Dienner, 1993). (Operational definition: A calculated score that is obtained through the use of the Stress Profile and the Tennessee Self concept Scale: Second Edition (TSCS:2).)

Reported Leisure sport and exercise involvement: Recreational sport which Driver, Brown, and Peterson (1991) refer to as involvement which is freely chosen because of anticipated intrinsic rewards. These activities are described in the SHAQ.

Samaha Horsemen Activity Questionnaire (SHAQ): A questionnaire developed by the researcher where participants reported their involvement in numerous activities. The questionnaire was divided into three parts: general information, leisure activities and work activities. Within the leisure activities portion participants reported their involvement in leisure sport and exercise, non sport or exercise positive and negative activities.

Self concept: One's concept of oneself in as complete and thorough a description as is possible for one to give (Reber, 1995). (Operational definition: A calculated score that is obtained through the use of the Tennessee Self concept Scale: Second Edition (TSCS:2).)

Stress: A mood disturbance that can perpetuate into serious health problems if it is not addressed. (Operational definition: A calculated score that is obtained through the use of the Stress Profile.)

Trainer: A position obtained by an individual who passes a written as well as field examination to train a racehorse. The trainer is a contractor who can be employed by one or several owners of racehorses. The trainer is responsible for all training preparations of the racehorse.

CHAPTER 2

REVIEW OF LITERATURE

The purpose of this study was to describe horsemen’s perceived psychological benefits and liabilities derived from participation in leisure sports and exercise activities. The horsemen community is unique in that it is more than just a job; rather, it is a lifestyle and leaves little time for leisure. The following chapter is the review of relevant literature within the psychological benefits of leisure sport and exercise participation.

Leisure Sport and Exercise Activity

There are four elements that are principal to sport (Driver, Brown, & Peterson, 1991). These elements are competition, physical prowess, sets of rules, and within public recreation agencies it is a leisure activity (Kelly, 1982). Sport as a leisure activity is participation during one’s own leisure time for intrinsic rewards. The element of leisure conjures the notion that sport and exercise participation are voluntarily undertaken for enjoyment, even when the activities are physically punishing (Hills & Argyle, 1998). Bandura (1977) explains that enjoyment of leisure activity comes from people participating in activities in which they are good or perceive themselves good at, which results in further participation.

Csikszentmihalyi (1982) proposed a theoretical model to assess the potential positive outcomes of sport and the conditions needed to maximize these outcomes. The model is based on four main types of consequences in evaluating the activity. These consequences are personal enjoyment, personal growth, social harmony, and social change.

Personal enjoyment refers to one's own enjoyment in the participation of a particular sport and what Csikszentmihalyi (1975) suggests as flow. The flow theory is completely immersing one's self in the activity which occurs when individuals face challenges appropriate to their skills. Personal growth is the individual's physical health and psychological well-being. The social harmony element of this theory is the socialization, intergroup relations, and community integration; and social change refers to social mobility, social status, and educational attainment. Csikszentmihalyi (1982) states that a sport is limited when only part of these outcomes are achieved. The activity should incorporate all components in this framework to be most advantageous to the group as a whole. Personal enjoyment and growth is of concern to the individual, while social harmony and change are emphasized within the community.

Psychological Benefits of Sports and Exercise Within Special Population

Exercise and sport activity have been useful means in the improvement of mood and well-being in special populations (Ewart, 1989; LaPerriere, Ironson, Antoni, Schniederman, Klimas, & Fletcher, 1994; Lox et al., 1995; Petajan et al., 1996). Lox et al. (1995) studied the psychological effects of exercise on individuals who were infected with HIV. The participants (N = 35) were assigned to either an aerobic training course or a stretching control group. The study indicated that there were improvements in psychological well-being in the aerobic training group compared to the control group. The researchers, however, suggest that physical activity should be complementary to other therapies for those who suffer from the HIV virus. The use of counseling and sport intervention to improve well-being was examined to optimize benefits of HIV patients. LaPerriere et al. (1996) utilized exercise interventions to improve psychological functioning in HIV patients. Exercise was utilized in the LaPerriere et al. (1996) study to benefit the psychological, immunologic, and nervous systems of HIV patients (Psychoneuroimmunology). The investigation determined that exercise was useful in decreasing depression and anxiety. This effect was also illustrated in Rigsby, Dishman, Jackson, Maclean, and Raven’s (1992) study.

Rigsby et al. (1992) investigated the effects of combining flexibility and strength with aerobic exercise of 32 participants who are HIV positive. Participants were randomly assigned to either a 12 week exercise training group or a counseling group. The exercise training group illustrated gains in flexibility, strength, and cardiorespiratory fitness. Results indicated that the exercise and counseling groups had significant decreases in Beck’s depression scores. The authors suggest, based on the findings, that exercise was as effective in decreasing depression as the counseling sessions were for these participants.

The effectiveness of exercise programs in improving mood and well-being in other special populations has been explored as well. In the same vein as the studies that focused on HIV patients, Petajan et al. (1996) studied 55 patients with multiple sclerosis and assigned them to either an exercise or non-exercise program. Results of the study indicated that the exercise group was the only group to illustrate statistically significant improvements in psychological well-being.

Psychological Benefits Within Leisure Sport And Exercise

While one’s definition of fun or happiness differs from culture to culture, there is a predominant belief that it is something that we all strive to attain (Diener & Suh, 2000). Participation in sport and exercise is a choice that individuals make during their leisure time. Particular activities will be adhered to because there is a sense of enjoyment achieved.

The effects of sport and exercise range according to the intensity and adherence to the activity. Sport and exercise can produce states of reduced tiredness, increased energy, and decreases of depression, stress, and anger (Steptoe & Bolton, 1988). Hills and Argyle (1998) suggest that when individuals increase their effort in sport and exercise it can lead to euphoric states (Steinberg & Sykes, 1985). Periods of serious exercise adherence have produced reduction in depression, anxiety, enhanced self-esteem, and body image (Biddle & Mutrie, 1991). The level of involvement in leisure sport and exercise is idiosyncratic because each person’s definition of leisure activity is distinct.

The effects of exercise on psychological well-being and mood were compared in two sample groups (Lichtman & Poser, 1983). Groups consisted of 32 participants each with one a YMCA exercise class and the other a community college hobby class. Results indicated that the improvements in mood and well-being were apparent in both groups but the physical activity group illustrated higher gains.

Psychological benefits derived from exercise participation were noted in Moses et al.'s (1989) study. The study was designed to compare the effects of two aerobic training programs, varying in intensity, on mood and well-being. Results indicated that the lower intensity groups had improvements on mood and psychological well-being while the higher intensity groups did not. The implication of this study was that individuals who participate in sport and exercise obtain a higher degree of psychological benefits when the level of intensity is appropriate for one's capability.

Kull (2002) explored the relationship between physical activity and psychological well-being for women aged 18-45. The study used a descriptive questionnaire which examined women's leisure physical activity. The results indicated that physically active women experienced better mental health (p < .05), less depression (p < .05), and improved overall health status (p < .005). These aforementioned participants exercise between 2 – 3 times per week. The study indicated that participants who reported low level physical activity (1 – 2 times per week) related to positive mental health (p < .05).

The psychological benefits of participation in sport and exercise activities of concern to this study are in the areas of improved mood, reduction of stress and anxiety, perceived self concept, and improved overall psychological well-being. The following sections report the relevant research in each of these areas.

Mood States and Participation in Sport and Exercise

Mood can fluctuate from day-to-day for a variety of reasons. How one effectively deals with unpleasant mood states builds the pillars of individual coping skills. Studies have explored this notion on sports and exercise’s effects on mood states (Hsaio & Thayer,1997; Kraemer et al., 1990; Pierce & Pate, 1994; Yeung, 1996).

Yeung (1996) investigated studies on the acute effects of exercise on mood states and determined that results suggest that both clinical and non-clinical individuals can benefit from even a single-bout of exercise. He suggested that the reduction of negative moods lies both in aerobic and non-aerobic exercises.

Pierce and Pate (1994) examined the effects of a single bout of physical activity in older participants. The participants had a mean age of 64.5 and were all female participants. The participants completed an abbreviated Profile of Mood States prior to and immediately following a 75 minute session of aerobic line dancing. The analysis indicated that the acute bout of exercise induced statistically significant decreases in mood ratings of tension, depression, fatigue, and anger ($p < .01$). The exercise bout produced significant increases in vigor ($p < .01$). The study, therefore, indicated that the single bout was effective in reducing negative mood and elevating some positive states.

Kraemer et al. (1990) examined the effects of running on mood alterations. The participants were 13 trained (8 males, 5 females) and 10 untrained (5 males, 5 females) runners. The trained runners were part of a running club who run a minimum of 35 miles per week. The mean ages of the groups were 31.5. Mood was assessed utilizing the Profile of Mood States. Participants did a pre and post test on a treadmill for 30 minutes at 80% heart rate. The findings indicated that there was a significant improvement in overall mood regardless of gender or training. The most significant reductions were in tension, depression, anger and confusion. While improvements were not different between the training groups those who exercise regularly may be more aware of these improvements.

Sports' and exercise's effect on one's mood state may assist or impede adherence to participation in a particular activity as Hsaio and Thayer (1998) stated:

> People who begin with good intentions may not have the discipline to continue with their workout regimen because they do not see immediate results that coincide with their expectations. An additional problem may be the type of exercise that many people choose. In order to see results quickly, beginners often start out on an exercise program that is too intense for them and this lead to pain and discomfort. Decades of research on reinforcement and motivation suggest that if pain is the immediate result of exercise, people will eventually discontinue exercising regardless of how good they may feel later. On the other hand, exercise programs that are enjoyable while they occur can be expected to improve adherence. (p. 829)

Hsaio and Thayer (1998) investigated 168 adult exercisers' reasons for exercising. The results indicated that mood regulations become more important a reason for exercise as participants continually adhere to the exercise regimen. The mood elevation was noted in significant exercise responses that regular exercise makes them feel good.

Exercise, Mood, and Behavior Relationship

While mood becomes a reason to exercise for those who are physically active, exercise and mood can have an effect upon behavior. Thayer, Peters, Takahashi, and Birkhead-Flight (1993) studied the effect of moderate exercise on mood and other behaviors. The study consisted of two groups of smokers ($N = 16$) and frequent snackers ($N = 18$). The researchers postulated that mood is closely associated with central states of general bodily arousal with conscious components of energy and tension, therefore closely related to behavior (Thayer et al., 1993). Participants were informed to take a five minute brisk walk before an urge to smoke or eat snacks over a three week period. The participants were instructed to conduct self-observations on 12 separate occasions in whatever natural setting they happened to be. Levels of energy, tension, and smoking or snacking urge were assessed via the Short Form AD ACL. The results indicated that the walks produced increased energy and reduced urges to smoke or snack ($p < .001$). The walks approximately doubled the time before smoking or snacking when the participants were in their free time. The study provides evidence that exercise may be substituted for smoking or snacking based on mood effect.

The influence of exercise on drug usage was explored by Wilbert (1998). In a national study of high school students, sports or exercise were negatively correlated with usage of drugs or drinking. The study supported the notion that if individuals are involved in sports they are less likely to use drugs. The author indicates that the social psychological processes involved are that individuals who are actively involved in sports may associate themselves with peers whose attitudes may have a positive influence upon their behavior. The interaction with these individuals who take better care of themselves becomes internalized and may provide a blueprint for behavior.

Anxiety & Stress Reduction

Sport and exercise involvement can evoke changes in mood if the participant's expectations are met. Exercise and sport activities may assist in the management of stress, anxiety, and depression only if the activity is unevaluated. Competitive elements that sport evoke in some individuals, such as disappointment from losing and desire for revenge may interfere with the healthful characteristics of exercise (Everly, 1989). Leisure involvement in various leisure sport and exercise activities may facilitate stress and anxiety reduction because the perception of the activity is sought for intrinsic rewards.

Sport and exercise involvement has been correlated with reduction of stress and depression in both clinical and non-clinical populations (Norvell & Belles, 1993). Haydenn and Allen (1984) explored self-selected college students who were either sedentary, non-active runners who exercised regularly and committed runners. Students were asked a series of questions and their responses were validated by an informant who was close to the participant. Results indicated that exercisers reported feeling less anxious and depressed than sedentary individuals. Exercisers were also observed by their significant other as being "well-adjusted."

Lobstein et al. (1983) explored physical activity and its effect on anxiety and depression within a selected group of middle aged male participants. The groups were divided into sedentary and physically active individuals. The results indicate that depression was one of the most significant discriminators between the groups of men. Those who exercise perceived their levels of depression less than those of the sedentary group. The findings in these studies indicate that sport and exercise may predict improvements in mild anxiety and depression.

Lobitz et al. (1983) investigated 18 males and females who had reported experiencing mild daily stress. Participants were assigned to either a seven week aerobic exercise program, anxiety management program, or a control group. Of the three groups, the exercise and anxiety management groups reported significant reductions in state anxiety. The exercise group reported a greater improvement in state anxiety than that of the other groups. One may therefore assume that the process of participation in leisure sport and exercise activities illustrates a therapeutic tool to deal with anxiety.

Tieman, Peacock, Cureton, and Dishman (2002) proposed that intensity and history of physical activity would have an effect on anxiety. The results indicated that lower physically active participants produced a reduction of state anxiety following a light physical activity. However, the same participants had higher anxiety immediately following a high intensity exercise. The authors indicate that future studies should control for trait anxiety, expectations of psychological benefits, and the level of intensity of exercise.

Steptoe and Cox (1989) conducted an investigation that studied 32 fit and unfit female students who were participants in two 8-minute bouts of high-intensity exercise and two 8-minute bouts of low-intensity exercise. The results indicated that the high-intensity activity participants demonstrated increases in tension, anxiety and fatigue while the low intensity group reported positive mood changes in vigor and exhilaration. The authors suggested that moderate to low intensity physical activity may ultimately produce higher gains in mood and well being.

Keeping a healthy balance of stress can become a struggle. Brehm (2007) suggests that a negative view of one's body image includes emotional distress that drive people to waste time worrying about their appearance. Time is sometimes mismanaged in the worrying of one's appearance, creating more stress. Individuals who are unable to manage stress are more likely to discontinue exercise programs.

Self Concept and Sport and Exercise Participation

An individual's concept of self is an ongoing relationship between role-identities and behavior (Anderson & Cychosz, 1995). Role-identities provide individuals with a sense of meaning and value to their past and future behaviors; therefore, role-identities stimulate behaviors that have meaning to their identities. Anderson and Chychosz (1995) postulate that identity is reinforced through exercise participation and may become an important aspect to one’s concept of self.

Participants of exercise or sport may have an improved view of self through the process of the activity (Stoll & Alferman, 2002). Stoll and Alferman explored the effects of physical exercise on well-being and body self concept within a sample of individuals with a minimum age of 50. The authors state that the physical activity offers three major benefits. These benefits are the enhancement of physical and motor-functional abilities, social and supportive environment with “similar others”, and the possibility to gain self-confidence by experiencing successful coping with physical demands. The authors’ study entailed selecting participants to either participate in a 14 week physical activity program or to serve as a control group. The results indicated that the experimental group showed the most significant improvements in body self concept compared to the control group. Findings in this study offer encouragement to continue participation in sport and exercise activities because the activity provides the individual with a better sense of body self concept.

Improvements in one’s self concept can have a positive relationship with self-esteem and reduced depression (Dishman et al., 2006). The study determined that physical activity and sport participation might reduce depression among adolescent girls through its positive impact upon physical self concept and self esteem. The authors recognize that the aforementioned findings operate independent from fitness, body mass index, and perceptions of sport competence and appearance.

Overall Psychological Well-being as Motive to Participate in Sport & Exercise

Psychological well-being's definition, as stated previously, has been referred to as an individual's satisfaction with life or degree of happiness (Willis & Campbell, 1992). Where does the leisure activity of sport and exercise fit in the scheme of well-being? For some it may be viewed as a great release of stress and anxiety, yet for others an anxiety or stress catalyst. Thout (1995) explored the recall of sport participation of 100 college students, from childhood to adulthood with an emphasis on post college years. He suggests that most post college individuals sought to participate in sport and exercise activities for enjoyment. Well-being, therefore, can be correlated with individual motive for participation in leisure sport and exercise.

One must explore the reasons for adult participation in sport and exercise. The physical gains are the most evident from participation in physical activity. Psychological benefits may not be fully realized by the individual because it has become a part of their life through a lifecycle process. Snyder and Spreitzer (1979) composed a theoretical model for participation within sport and exercise throughout the lifespan. The researchers suggest that motives include intrinsic enjoyment, extrinsic rewards, perceived skill, embarrassment, and social aspects. The participation in sport, for adults, is dependent on the meaning that sport has in the individual's life (Snyder & Spreitzer, 1979). Psychological benefit outcomes such as improved well-being are motives for adult participation in sport and exercise.

Rehor (2001) explored the effects a single bout of physical activity had upon participants' perceived well-being. Participants were assigned to either a circuit training, weight training, or racquetball class. Each participant was administered the Profile of Mood States five minutes before and five minutes after the physical activity. Results supported positive psychological well-being of participants after physical activity.

The psychological benefits associated with sport and exercise activities participation involve improved psychological well-being, mood states, body self concept and management of anxiety, depression, and stress. This researcher attempts to utilize the reviewed literature to explore the perceived psychological benefits of leisure sport and exercise participation within horsemen.

Horsemen and Horse Racing Subculture

Horse racing has been referred to as the "sport of kings;" however, the preparation of these animals for competition could not be any further from regal. One can go to the races and observe that horses are competing for purses, bettors are clamoring to decipher the day's sure bet, and the grounds are beautifully maintained. The horses enter the starting gate, they race, and it is over in less than two minutes. The fans are left with one winner and between 8 and 13 losers for the race. The preparation for these two minutes is racing's behind the scenes community that most individuals never observe. The horse needs to be trained, maintained, and cared for on a daily basis; it is within the training centers and backstretches that the horses' needs are met.

The horsemen in the backstretch and the training center comprise a unique community. The community consists of horsemen/women who are either grooms, assistant trainers, trainers, or combined driver/trainers. The community within the training center tends to be a close group of individuals who have worked with and known one another for years. These individuals are well acquainted with one another and their common interest is horse racing. The social interaction outside of horse racing is limited due to the hours that are devoted to their work. Grooms and trainers are separated by their status within racing (Case, 1991). The trainers are the employers of the grooms and the owners are the employers of the trainers. The groom’s salary is low level and the work is routine. The routine and confines of this employment may lead to boredom, isolation, and lack of upward mobility (Schefstad, 1996). Grooms are reported to perceive that the possibilities of movement up the racing hierarchy are limited. Schefstad (1996) noted that through the development of on-site programs to address the basic needs of the grooms, they may be able to view improvement within their working and personal lives.

A USA Today article by Tom Pedulla (2005) rated the top 10 worst jobs in professional sports. The horse racing groom was ranked number one. The article featured a seasoned groom named Paul Perry who works for one of the industry’s top trainers, Todd Pletcher. Paul reported to make $375 per week and lived on the grounds. His trainer showers him with accolades throughout the article. When asked about his job the groom simply responded, "I'm happy with this. This is something I like to do all of the time. I'm outside. I'm free. I'm not in a building." Despite the public opinion of this job, most grooms enjoy being around the horses and exude passion from a career that most would never consider.

The daily routine of grooms involves numerous physical tasks requiring the individuals to possess both strength and conditioning to effectively complete their work. The manual labor places a considerable amount of strain on the individuals' body. The amount of work required each day is usually performed in the morning to early afternoon hours (6:00 AM – 12:00 PM). Horsemen can compete in both day and night racing five days per week. The frequency of races is determined by the number of horses in the horsemen's stable. A smaller stable will race twice a week and the bigger stables may race all five days. The limited leisure time that these individuals have affords them the opportunity to participate in hobbies and sport and exercise activities, yet may also allow for negative activities such as excessive gambling, alcohol drinking, and drug use.

Horsemen and Leisure Sport and Exercise Participation

Currently, there are not any studies that focus on the psychological benefits of exercise and sport within horsemen. This study explored the psychological benefits that sports and exercise participation has on grooms and trainers (horsemen) at horse training centers and farms. The significance of the study, as it pertains to the field of sport psychology, is that it describes horsemen’s psychological benefits and liabilities when correlated with their involvement in sport and exercise activities.

This current study described exercise and sport participation’s perceived psychological benefits and liabilities among horsemen that work at a training center in the Mid-Atlantic region. Sports programs have been offered, to this community, in the past with limited involvement. Numerous reasons might be noted why these individuals do not participate in these structured on-site sports programs (time restraints, hesitation to change the daily routine, lack of interest/motivation, etc.). Providing this descriptive research of leisure sport and exercise’s psychological benefits in this community may help educate and create interest in participation in similar activities. This researcher’s opinion is that furnishing descriptive statistical evidence that sport and exercise may result in psychological benefits, improved work performance, and reduced negative activities in this community can make this study beneficial to these individuals.

Qualitative research will be performed through a systematic analysis of the responses of standard interview questions posed to the participants (Creswell, 1998). The analysis may offer new insight and develop theory that is relevant to horsemen. The substantive level theory that evolves from the qualitative results in this study may lend itself to a greater view of how these individuals can effectively spend their leisure.

The study can be best generalized to manual laborers. Attention must be given to those individuals who have physical labor employment. As in the case with this community, manual laborers do physical activities every day. The psychological benefits of the work may not be as fulfilling as participation in leisure physical activities because the activities are not chosen by the individual. Leisure physical activities are sought for intrinsic rewards rather than performing a task at work for their employer.

For the aforementioned reasons, this study has attempted to describe the perceived psychological benefits and liabilities derived from participation in leisure sport and exercise activities within horsemen.

CHAPTER 3

METHODS

The purpose of this study was to describe horsemen’s perceived psychological benefits and liabilities derived from participation in leisure sports and exercise activities. The methods section is comprised of the following topics: research design, site, participants and subject selection, instruments, data collection procedures and data analysis.

Research Design

The design of this study was a descriptive research analysis of horsemen’s participation in sports and exercise activities. The study's primary objective was to explore the perceived psychological benefits and liabilities of participation in sports and exercise activities. This descriptive study was administered at a training center for standardbred/harness horse racing in a northeast region state.

The quantitative measurements utilized in this study were The Samaha's Horsemen Activity Questionnaire (SHAQ), The Stress Profile (Nowack, 1999), and the Tennessee Self concept Scale: Second Edition (TSCS:2)(Fitts & Warren, 1996). These three quantitative measurements were utilized to describe the perceived benefits and liabilities of participating in sport and exercise activities.

Qualitative measurements were obtained through interviews to supplement the quantitative measurements. The interviews were conducted from randomly selected participants subsequent to their completion of the three quantitative measurements. The interviews consisted of 15 open ended questions that explored the individuals' beliefs and motivations for participating in sports and exercise activities. Information obtained within these interviews served as a qualitative measurement of perceived benefits and liabilities of participating in sport and exercise activities. Interviews appeared to be performed to saturation.

Site

The study was conducted at a major training center for standardbred or harness racehorses in the Northeast region of the United States. The need for the training center was a result of the closing of the backstretches in this area. When the backstretches closed, the horsemen who had stabled their horses at the racetrack began to stable in neighboring horse training centers. The training centers are located in close proximity to the racetracks.

A horse training facility is a center where racehorses are stabled and shipped to the racetrack for racing. The trainers and grooms work at the facility and live either in homes, apartments, or in the backstretch dormitories at nearby racetracks. The training centers offer many amenities that the backstretch of the racetrack does not. These training centers may offer a therapy pool for the horses, open terrain to allow the horse to run, and well maintained barns. In most cases, training centers are managed by a horseman who maintains the best interest of the horses and fellow horsemen.

There were several smaller privately owned racehorse farms in this region. The smaller farms stabled horses for the same purposes as the training centers. The amenities and conditions of these farms varied. Capacity of horses at private farms ranged from 5 - 50 in contrast to a training facility/center which ranged between 100 to 400 horses.

The training center in which this study was conducted had over 250 horses stabled in its barns when this study was conducted. The center was licensed by the state and was subject to the rules and regulations that ensure the integrity of racing. The facility did not hold any wagering races and was not sanctioned to do so in accordance with the state. The sole purpose of the training center was to stable and train the standardbred racehorses.

Participants and Participant Selection

The participants were horsemen (grooms and trainers) at training centers and farms for standardbred racehorses in the northeast region of the United States. Trainers are the individuals who train the horse for competition and grooms are responsible for cleaning and caring for the horses and stalls in the barn. The term horsemen denotes individuals who either groom, train, or own the horse. For the purposes of this study, grooms and trainers are referred to as horsemen to identify them as a group.

The trainer's responsibility is to be the "coach" of the horse. The trainer works with the horse and notes all performances in practice, exercise, and races. A trainer is considered to be the coach of the horse, in that he/she ensures that the horse has learned the necessary skills for competition. Trainers exercise their horses by harnessing a jog cart to the back of the horses and jog them around the training track. The trainer in harness racing has to ensure that the horse is well trained so that the animal does not break his or her pace or trot. Quite often the trainer serves as the driver, who drives the horse for the race, as well. A trainer/driver will compete in the race and then transport the horse back to the training facility or farm.

The grooms are the caretakers of the standardbred horses. The groom's responsibility is to maintain the physical appearance of the horse and the stalls. The groom is involved in many aspects of the care of the horse. Most grooms are paid to clean out the stalls and to clean the horses; however, grooms are keen to the needs of the horses. When the groom notices that the horse is in need of a rest or further preparation, he/she will consult with the trainer. Many grooms will jog their horses around the track, in a jog cart, to exercise them. The training center workers are the individuals who maintain the appearance of the training center and the training track.

All participants in this study were grooms, trainers or combination positions (driver/trainer, groom/trainer, or trainer/owner) at standardbred horse training facilities and farms within the area of the site where the study was conducted. The age range of the participants was from 21 to 69 years old. The gender of the participants was predominantly male, which is consistent with the overall predominance of the industry. The ethnicity of the trainers, stable workers/grooms, and farm workers at the training center was estimated by the Training Center Manager, via the stable roster, to be 70% Caucasian-American; 10% African-American, 15% French Canadian/Canadian, and 5% other ethnicities.

Instruments

The instruments utilized for this study included the following: The Samaha Horsemen Activity Questionnaire (SHAQ), The Stress Profile, The Tennessee Self concept Scale: Second Edition (TSCS:2), and a qualitative interview. The questionnaires took between 45 to 90 minutes to complete and the interview required a maximum of 30 minutes of the participant’s time.

The Samaha Horsemen Activity Questionnaire (SHAQ)

This descriptive questionnaire consisted of 65 items and was formulated by the researcher to describe the participants’ personal background information, leisure activities and participation in work related activities. The personal background information consisted of questions that related to gender, ethnicity, age, residence, position held, and years employed in the racing industry.

The leisure activities items of the questionnaire, asked participants to describe the frequency with which they participated in a variety of leisure activities. The leisure activities were separated into two categories of physical leisure sport and exercise activities and non-sport and exercise activities.

The leisure exercise and sport portion consisted of 23 leisure exercise and sport activities. The leisure exercise and sport activities described in this section were: exercise, sports, golf, basketball, tennis, bowling, skiing, volleyball, soccer, baseball/softball, hockey, horseback riding, walking for exercise, weightlifting, stationary bike, bike riding, stretching, jogging/running, treadmill, skating, aerobics, using the gym on-grounds, and a section to indicate other sport or exercises not mentioned.

The non-exercise and sport leisure activities were separated into two categories of positive and negative leisure activities. The positive leisure activities were: reading, hobbies, attending sport events, routine doctor visits, go to or rent movies, socialize with family or friends, community events, attending church or temple, and participation in on-site programs. The negative leisure activities that were described in the SHAQ were: smoking cigarettes, alcohol consumption, using substance to wake-up, use substance to fall-asleep, drug usage, and gambling. The information obtained in these sections described what the individual does during his or her free time.

The questionnaire's final section provided information that described their work activities. The questions that described participants' work related activities involved the following: ride the horse, exercise the horse, feeding the horse, training the horse, lifting heavy objects, groom the horse, tardiness, and absenteeism.

The leisure and work activity items asked participants to describe their frequency of participation via a Likert scale. Participants described their frequency of participation in the activities by using the five following response categories: “Never,” “Rarely,” “Sometimes,” “Often;,” and “Frequently.”

Items were coded by assigning a score for each participant’s response (“Never” = 1, “Rarely” = 2, “Sometimes” = 3, “Often” = 4, and “Frequently” = 5). Summary scores consisted of a tally of the participant’s responses in each section of the questionnaire. The summary score provided the total frequency of participants’ participation in the variety of activities. The scale provides summary scores for frequency of sport and exercise participation (SEF)(sum of scores for items 6 and 7), variety of leisure sports and exercise (SEV) (sum of scores for items 8 through 28), variety of leisure sorts (SV) (Sum of scores for items 8 through 16), variety of leisure exercise (EV) (sum of scores for items 17 through 26), variety of positive non-physical leisure activities (PLAV)(sum of scores for items 30 through 39), variety of negative leisure activities (NLAV) (sum of scores for items 41 through 46), and work activities (sum of scores for items 56 through 61). The SHAQ provides information on participants’ weekly time devoted to exercise and sport (SET) (item 29), positive non-physical leisure activities (PLT) (item 40), and negative leisure activities (NLT) (item 47).

The SHAQ received logical validation through a panel of two doctors of philosophy in the field of psychology and two horsemen who participate in horse racing. The doctors' fields of expertise are in sport psychology and educational psychology. The horsemen’s panel of experts consisted of an individual with over 40 years of experience in all facets of horse racing and the other reviewer was a veteran horsemen who was the executive director of the state’s horsemen’s benevolence association. The horsemen’s benevolence association assists with horse certificates, documents racing history, provides a retirement fund, emergency funding, and manages a private health care insurance program for the horsemen. The scale was noted to have face validity in that it asks questions that are relevant to the participants involvement in various activities. There were no tests for reliability performed on the SHAQ. The SHAQ required between 10 – 15 minutes to complete.

Tennessee Self concept Scale Second Edition (TSCS:2)

The TSCS:2 was utilized to describe the participants' perceived self concept. The TSCS:2 has been standardized on a nationwide sample of over 3,000 individuals ranging in age from 7 to 90 years old. The TSCS:2 is comprised of 82 items of self-descriptive statements that allow the individual to portray his or her own self-picture by using the following five response categories - "Always False,″ "Mostly False,″ "Partly False and Partly True,″ "Mostly True,″ and "Always True." The test is written on a third grade reading level. It can be completed in 10 to 20 minutes, and can be administered individually or in groups.

The TSCS:2 yields two summary scores, Total self concept and Conflict, as well as six Self Concept Scales: Physical, Moral, Personal, Family, Social, and Academic/Work. Four Validity Scores examine response bias - Inconsistent Responding, Self-criticism, Faking Good, and Response Distribution. There are three supplementary scores which involve the combining of scores on the basic scores to reflect the original theoretical thrust of the test (Fitts & Warren, 1996).

Two types of reliability estimates (Internal Consistency and Test-Retest Reliability) were examined in determining the TSCS:2's reliability. Internal Consistency was estimated by calculating Cronbach's alpha. The scores range from .73 to .95 with a median .80 for normative groups. The internal consistency scores of the test's scale for age level 19 - 90 are the following: Total self concept .95, Physical self concept .83, Moral self concept .83, Personal self concept .81, Family self concept .84, Social self concept .84, Academic/Work Self concept .85, Identity .87, Satisfaction .85, and Behavior .87. The Test Retest Reliability of the TCSC:2 scales were evaluated by examining responses of 135 high school students who were administered the Adult Form twice within a one to two week span (Fitts & Warren, 1996). The scores range from .47 for the Inconsistent responding to .82 for the Total self concept score with a median of .76.

The TSCS:2's concurrent validity was examined by numerous studies that compared the test to other measures that would be expected to relate to the construct of general self concept (Fitts & Warren, 1996). The correlation's ranged from .75 to .45 with the strongest correlation to the Coopersmith Self-Esteem Inventory and the weakest to the Self-Esteem Scale of the Jackson Personality Inventory.

The Total Score is strongly related to the MMPI Si scale (r = -.64, eta = .69), which measures isolation, and to the MMPI F scale (r = -.37, eta = .63), a measure of overall distress (Fitts & Warren, 1996).

The Stress Profile

The Stress Profile (Nowack, 1999) was used to calculate the stress of the participants in this study. The Stress Profile provided scores in 15 areas related to stress and health risk, and included a response bias measure. The norms for the test were derived from a sample of 1,111 men and women ages 20 - 68, from a variety of work environments. Standard scores are reported in terms of Health Risk Alerts and Health Protection Resources.

The test consists of 123 items in the following scales: Inconsistent Responding Index, Response Bias Index, Stress, Health Habits: (a summary score and subclass of exercise; Rest/Sleep; Eating/Nutrition; Prevention and Alcohol , Recreational drugs, and Cigarettes Item Cluster), Social Support Network, Type A Behavior, Cognitive Hardiness, Coping Style: (subscales: Positive Appraisal, Negative Appraisal, Threat Minimization, and Problem Focus), Psychological well-being.

The internal consistency among the 14 content scales yielded a Cronbach's alpha median reliability of .72 from a range of .51 to .91. The highest alpha was in the Psychological well-being Scale (.91) and the Lowest in Prevention (.51). The test-retest reliabilities ranged from .76 to .86 with a median = .79 (Nowack, 1999).

Nowack (1999) examined the Stress Profile's Criterion Related validity within the test's concurrent and predictive validity. The concurrent validity of the test was determined via the correlation of the Millon Behavioral Health Inventory (MBHI; Millon, Green, & Meagher, 1979) with two scales of the Stress Profile (Type A Behavior and Cognitive Hardiness). The MBHI consists of 150 items that form 20 reliable and valid scales. The MBHI was developed for the sole purpose of assessing health relevant personality factors and psychogenic attitudes in medical patients. The Cognitive Hardiness scale scores showed significant correlations with several MBHI subscales that are theoretically related, such as Future despair -.25 ($p < .01$), Social Despair -.26 ($p < .01$) and Premorbid Pessimism -.21 ($p < .05$), Pain Treatment Responsivity -.64 ($p < .01$), Life Threat Reactivity -.71 ($p < .01$) and Emotional Vulnerability -.46 ($p < .05$).

The predictive validity was investigated through Gibbons’ (1985) study which examined 68 college students working part-time as resident assistants in a 10 month study. The students were administered the Stress Profile in the beginning and The Maslach Burnout Inventory (MBI: Maslach & Jackson, 1981) 10 months later to determine burnout. The Stress Profile's scales range of correlation with the Emotional Exhaustion Scale of the MBI are as follows ($p < .01$): Cognitive Hardiness = .61, Type A Behavior = .54 and Stress = .49. Participants completed the Stress Profile within 25 to 35 minutes.

The Interview

The interview consisted of a series of open ended questions to elicit the qualitative data. The questions were formulated by utilizing a cognitive behavioral theoretical approach to challenge the individual's perceived psychological liabilities and benefits. A list of general questions was posed to each participant. Asking individuals identical questions afforded the opportunity to evaluate similarities and themes in participants' responses. The investigation, of these themes, became the basis for analysis of the interviews. The result of this analysis afforded the researcher the possibility of developing a substantive-level theory that was specific to horsemen (Creswell, 1998).

The interview was structured and the researcher did not deviate from the questions by asking any further disclosure. The interview consisted of 15 structured questions (Appendix A). The interview questions were derived from the constructs examined in this study. Questions were placed into four different categories: leisure sport and exercise participation, motives and outcomes in participation in leisure activities, social aspects of leisure, and work related questions. The interview required between 20 to 30 minutes to complete. The interview questions received face validity from the same panel of experts that validated the SHAQ (Appendix B). The interview was noted to have face validity because the panel believed the questions were relevant to horsemen’s views of their participation in various leisure and work activities. Interviews appeared to be performed to saturation when participants responded similarly to the questions.

Data Collection Procedures

A letter was sent to the General Manager of the training center, requesting permission to use the site to conduct the study (Appendix C). Access was granted to the site via a letter from the aforementioned general manger (Appendix D). The study was conducted by the researcher.

Recruiting voluntary participants for this study required written advertisements posted at the site, surrounding training centers and farms, and the paddock portion of the local racetrack. Advertisements were made by creating fliers which were placed in every barn throughout the training centers (Appendix E). The barn is where trainers and grooms spend most of their time. Placing the fliers in this area ensured that everyone could read the advertisement. The fliers were stapled to the wall of the wash bay. The wash bay is located in the center of each barn. All wash bays are utilized every day by the horsemen when they wash their racehorses. The signs were placed in the coffee shop of the site and the paddock kitchen as well. The coffee shop, at the site, serves food from 7:00 AM to 3:00 PM and is a high traffic area. The coffee shop is a separate building from the barns and is located in the center of the training center. Fliers were placed in the site's office building which is located in the front near the entrance of the training center. Announcements were made by the office staff a day before and the day of the administration of the study.

Participants in the study were volunteers who responded to the advertisements and announcements. All participants were either grooms, trainers, or drivers at training centers or farms. Participation in this study was completely voluntary and no individual was coerced to either participate or not. A research assistant, the manager of the training center, was utilized to assist in the recruiting of participants. The training center's manager is not the employer of the horsemen; rather, he is responsible for all financial, maintenance, and operations of the facility. Enlisting the assistance of the training center manager ensured that participants would not be influenced by the researcher.

Anonymity of the participants was protected by assigning a number to the participants in the packet they were administered. Participants were identified by a number that was written, by the researcher, on top of the consent form, and answer sheets of the tests. Each packet contained a consent form (Appendix F), SHAQ (Appendix G), TSCS:2, The Stress Profile, and corresponding answer forms. The participant's identification number was written on top of the answer and consent forms. The identification numbers ranged from 1 – 150 and were written on top of each packet before the administration of the questionnaires.

The names of the individual did not appear on any of the questionnaire answer forms.

The participants were administered the tests within a quiet and private location at the site. The location was referred to as the observation deck. The observation deck looked over the training track and consisted of an open air deck, enclosed "common area", and two private offices located at the ends of the "common area". The observation deck's "common area" measured approximately 40 x 15 feet and was in between each private office. Participants completed the instruments in the observation deck's "common area" which was set up with 5 folding tables and 8 chairs placed around each of the tables.

Questions and instructions were read aloud to those individuals who had difficulty in reading the questions in the observation deck office by the research assistant. The office is located in the west end of the observation deck. The office is private and has an estimated capacity of eight people, including the research assistant.

The psychological inventories and questionnaire were administered once a week throughout a 6 week period to different groups of horsemen. The study was conducted over a 6 week period to provide a greater sample of the population at the horse training center. The administration of the questionnaires was scheduled on non-race dates. The time of the day that the questionnaires were administered was scheduled to start when training hours were completed and finish 30 minutes before “feed” time of the horses.

On the days of the study all participants received a folder with the consent form, TSCS:2, The Stress Profile, and the SHAQ. The folder was marked with the participant’s assigned identification number. The same identification number was on the questionnaires and consent form within the participant’s folder. Participants were asked to read and sign the consent form. A copy of the consent form was given to each participant and the original was returned to the folder. The participants were then administered the SHAQ, The Stress Profile, and the TSCS:2 in that exact order.

There was no time limit set for the participants to complete the questionnaires. The completion time of the questionnaires had taken between 50 to 75 minutes. The questionnaires' instructions were read aloud to all individuals before each questionnaire was completed. Free refreshments were provided to the participants while they were administered these questionnaires. Each individual who came to the administration site received a catered lunch and a baseball cap for their participation in the study. This procedure was replicated throughout the six research sessions. All participants were entered into a raffle to receive a chance to win 1 of 4 DVD players after the completion of the sixth research session. Four DVD players were awarded by writing participants' numbers on a piece of paper, placing them into a bowl, and picking a number.

After all sessions were completed and the raw data were obtained, participants were randomly selected to take part in the interview portion of the study. The assigned number of all participants were written on small pieces of paper and then placed into a bowl. Fifteen participants were randomly selected by picking the paper with the number out of the bowl. After the numbers were drawn, each participant was contacted to request an interview to collect qualitative data.

Those who granted the interview request were given separate times and dates to meet with the researcher to be confidentially interviewed. Interviews were performed in a confidential office (same office where the questions for the measurements were read aloud to individuals who had difficulty reading the questions). Each interview took 25 - 30 minutes to complete. The interview consisted of 15 questions that dealt with the individual's perceived benefits and liabilities in participating in leisure sports and exercise activities and work related activities. The interview provided some verification of the reported quantitative psychological benefits associated with participation in sport and exercise. The interviews allowed the individuals to express their thoughts about participating in the sports and exercise of their choice. The interview questions compared work and leisure activities and the perceived benefits and liabilities associated with both types of activities. All interviews were recorded with the consent of the individual and transcribed (see Appendix H).

After the interviews were completed, the tapes, transcripts, and the tests were placed in a locked filing cabinet. The files were maintained in this cabinet until they were coded and entered into SPSS. Following this procedure they were returned to the locked cabinet.

Data Analysis

The study yielded both empirical and qualitative data. The following sections describe the analysis of the data to examine the hypotheses and interviews.

Statistical Analysis

Statistical Analyses conducted to examine the hypotheses were as follows:

Participants’ responses to the items in the SHAQ, TSCS:2, and The Stress Profile were coded and entered into the Statistical Package for Social Sciences (SPSS) for statistical analyses. Items on the SHAQ were coded by assigning a number to responses as follows: never = 1, rarely = 2, sometimes = 3, often = 4, and frequently = 5. The items that were not Likert responses were coded either by their numerical value or assigned a number 1 – 5 based on the participant’s report.

The constructs were examined via participants’ responses to the items in the psychological inventories and SHAQ. The scores for each item as well as summary scores were entered into SPSS. The Stress Profile examined participants perceived stress and psychological well-being. The Tennessee Self Concept Scale scores investigated participants perceived physical, work, social and overall self concept.

The SHAQ provided information on participants’ reported frequency in leisure and work activities. Participants who were interviewed provided information on the qualitative psychological benefit and liabilities related to participating in leisure sport and exercise activities.

A Pearson r coefficient was calculated to determine if there was a statistically significant positive relationship between the variables in hypotheses 1, 2.1, 2.2, 2.3, 2.4, 2.5, and 2.6. A Pearson r coefficient was calculated to determine if there was a statistically significant negative relationship between the variables in hypotheses 4, 5, 6, 7, and 8.

Hypotheses 3.1 - 3.3 statistics were analyzed by analyses of variance (ANOVA) to determine the differences between the groups. The groups were separated by performing a median split which created two groups: above the median sports and exercise (AMSE) and below the median sports and exercise (BMSE). The data used to determine these groups were within the participants' reported involvement in leisure sport and exercise on the SHAQ. An ANOVA was performed to examine the differences between these groups in order to determine which group was best at predicting the dependent variables (3.1: perceived self concept; 3.2: psychological well-being and 3.3: stress).

Statistical analyses for hypotheses 9.1 – 9.3 were calculated by performing two types of multiple regressions. The multiple regressions conducted for hypotheses 9.1 – 9.3

were a backward selection and maximum R-squared multiple regressions. The hypotheses examined the combined influences particular leisure sport and exercise activities had upon predicting stress (9.1), self concept (9.2), and psychological well-being (9.3). A backwards selection multiple regression factors out leisure sport and exercise activities that do not significantly contribute to the prediction of psychological well-being, self concept, and stress, resulting in only significant influences. The minimum level of significance was set at .05. The backward multiple regression was performed because horsemen report all exercise and sport activities within the SHAQ subscale. All sport and exercise activities were accounted for and then factored out when the activity was not statistically significant in either the prediction of psychological well-being, self concept, or stress.

The maximum R squared method first explored which leisure sport and exercise activity contributed the most to predicting psychological stress (9.1), self concept (9.2), and well-being (9.3), then examined multiple statistically significant ($p < .05$) combinations.

Interview Analysis

The analysis of the qualitative data obtained in this study was as follows:

The recorded interviews were examined by transcribing all of the participants' responses verbatim. The participants were asked identical questions to allow analysis for patterns and themes. The interviews were systematically analyzed utilizing the standard format of grounded theory research (Creswell, 1998). The analysis entails an open coding, axial coding, and selective coding process (Corbin & Strauss, 1990).

The open coding entails forming initial categories of reported psychological benefits from the participants' interview transcriptions. The categories represent units of information composed of events, happenings, and instances (Strauss & Corbin, 1990). A constant comparative approach was utilized to saturate the categories. The categories were composed of subcategories or properties which represent multiple perspectives about the categories (Creswell, 1990). The properties were then dimensionalized to show the extreme possibilities of horsemen's leisure sport and exercise's perceived psychological benefits. Within the open coding process the raw data from the transcripts were reduced into smaller themes.

The axial coding process entailed exploration of the intial set of categories, that were developed in the open coding phase, to identify a single category which is the central phenomenon of interest and the conditions and consequences that have influence (Creswell, 1990). The axial coding involved exploration of casual conditions, strategies, identifying context and intervening conditions and delineating consequences to build a theory.

The final process was the integration of the categories that were developed through the axial coding and write a conditional proposition. This phase is referred to as selective coding (Creswell, 1990). The entire qualitative data analysis yielded a substantive level theory which was specific to this group of horsemen.

CHAPTER 4

RESULTS AND DISCUSSION

The purpose of this study was to describe horsemen's perceived psychological benefits and liabilities derived from participation in leisure sport and exercise activities. The following chapter is a report of the quantitative and qualitative results and discussion of results found within this study.

Demographics

Participants in this study were active, full time, horsemen who worked with stabled standardbred racehorses at a training facility. The sample size of this population was 66 participants who had completed all of the psychological measurements and the SHAQ form. Demographic information was obtained by participants' reported responses to items on the SHAQ.

There were 40 male (60.6%) and 26 female (39.4%) participants in this study. The age range of the participants was from 21 to 69, with a mean of 43 years of age and a standard deviation of 9.99. The study's ethnicity of the sample was predominantly Caucasian Americans (n = 50, 75.8%), which is commensurate with the population of this particular group of horsemen. The other ethnicities included 3 African Americans (4.5%), 1 Latino

(1.5%), 8 French Canadians (12.1%), and 4 others (6.1%). When an individual reported other, he/she wrote in his/her ethnicity. The ethnicities reported as other were 2 Swedish, 1 Dutch, and 1 New Zealander.

The horsemen that participated in this study reported their highest level of formal education. The study's sample included seven who did not complete high school (10.6%), 46 high school graduates (69.7%), 11 college or university graduates (16.7%), 1 master's degree (1.5%), and 1 beyond master's degree (1.5%). Horsemen's employment positions were 38 Groom/Caretakers (57.6%), 22 Trainers (33.3%), 1 Driver (1.5%) and 5 other positions (7.6%). The "other positions" not mentioned were a combination of the above positions or an assistant trainer.

Participants in this study reported their employment information on a variety of different variables. Participants were requested to provide information on their hours per week spent working (M = 57, SD = 11.42), days per week spent working (M = 6.67, SD = .59), years involved in racing (M = 23.75, SD = 11.09), and their age when they started working in racing (M = 18.68, SD = 7.43). The mean age when participants started in racing was calculated as 18.68 years with a minimum of 5 and a maximum of 41 years old. An interesting finding was that most individuals reported that they work nearly every day and that they spend an average of 57 hours per week working.

The SHAQ assessed horsemen's participation in leisure activities. Summary scores were calculated for exercise and sport activities as well as negative and positive non physical leisure activities. Appendix I illustrates the means and standard deviations for participants' reported involvement in leisure activities.

Participants were requested to complete this researcher's inventory (SHAQ) as well as The Stress Profile and TSCS:2. Table 1 reports participants' means, standard deviations, and percentile scores for the Stress Profile and TSCS:2.

Table 1: Participants' mean scores on Stress Profile & TSCS:2

Measure	M	SD	Percentile
Stress Profile			
Type A Behavior	32.36	5.67	57
Stress	16.85	4.31	53
Well-being	42.95	7.79	50
Exercise	8.45	3.22	42
Health Habits	83.12	12.31	24
TSCS:2			
Work SC	46.09	6.58	46
Physical SC	50.62	7.68	42
Social SC	47.61	6.42	42
Total SC	289.33	31.34	38
Family SC	47.81	6.62	38
Moral SC	49.05	6.37	34
Performance SC	47.58	6.68	34

N=66

Horsemen’s percentile scores, for the Stress Profile and TSCS:2, were highest for Type A Behavior, Stress, and Well-being subscales and lowest for Health Habit subscales. The percentile scores illustrated that a horseman’s job can be stressful and that many horsemen exhibited type A behavior. Stress scores were high for horsemen, however, their percentile score for well-being was high as well. An explanation might be that while horsemen viewed their job as stressful they also gained a good deal of enjoyment from their work. Horsemen’s health habits were the lowest percentile score of all of the subscales. Horsemen raced many of their horse races at night causing them to eat on the go. Many horsemen get limited sleep because they raced late at night and woke up early in the morning to go to work. Their schedule may have attributed to the low percentile score for health habits.

A complete table of the variables that were examined in the study can be found in Appendix J. The following are the results of the examination of these variables.

Quantitative Results

The results section of this study was organized within four separate sections to allow for a more fluid depiction of the findings. The results are presented in the following sections: Positive Relationships between the

Variables, Negative Relationships between the Variables, Group Differences, and Combinations of Sport and Exercise Activities.

Positive Relationships between the Variables

Horsemen’s positive relationships between the variables are presented in the correlation table (Appendix K). The following section reports these positive relationships between the variables.

Hypothesis 1 suggested that there will be a positive relationship between leisure sport and exercise participation and perceived psychological well-being. The Well-being subscale of the Stress Profile was used to ascertain a quantitative measure for subjective well-being. Summary scores from the SHAQ were examined to explore horsemen's participation in leisure sport and exercise activities. A Pearson correlation test revealed a significant positive correlation between well-being and weekly time devoted to leisure sports and exercise (SET)($r = .47$, $p < .001$), total participation in a variety of leisure sports and exercise activities (SEV) ($r = .46$, $p < .001$), total participation in variety of exercise only activities (EV) ($r = .44$, $p < .001$), leisure sport and exercise overall frequency (SEF) ($r = .42$, $p < .001$), and total participation in a variety of leisure sports (SV) (*r*

= .26, p < .05). A stronger correlation was evident when a Pearson correlation was performed between well-being and exercise summary score in the Stress Profile (SPE)(r = .55, p < .001).

Perceived self concept was determined by the Total Self concept summary score on the TSCS:2. Scores for work, physical, and social self concept were ascertained through their respective summary scores on the TSCS:2. Hypothesis 2.1 suggested a statistically significant positive relationship between sports and exercise participation and total self concept. A Pearson correlation illustrated a significant positive relationship between total self concept and SPE (r = .46, p < .01) and SET (r = .33, p < .01), confirming hypothesis 2.1.

Hypotheses 2.2 and 2.3 examined the positive relationship between non-sport and exercise leisure activities and perceived self concept. Hypothesis 2.2 postulated a positive relationship between participation in onsite programs and perceived self concept. A Pearson correlation discovered no significant relationship between these two variables. Hypothesis 2.3 examined the positive relationship between positive non-sport and exercise leisure activities and perceived self concept. Positive non-sport and exercise leisure activities were determined by reported participation and frequency on the SHAQ. The Pearson correlation test illustrated a significant positive relationship between self concept and total participation in a variety of positive leisure non-sports and exercise activities (PLAV) ($r = .46$, $p < .01$). There was not a significant positive correlation, however, between self concept and weekly time devoted to positive leisure non-sports and exercise activities (PLT). The correlation test did reveal a statistically significant relationship between work self concept and PLT ($r = .39$, $p < .01$).

Exploring hypothesis 2.4's relationship between participation in exercise and sport activities and work self concept yielded significant correlations. The correlation coefficient between work self concept and SPE ($r = .42$, $p < .01$) was the most significant correlation among the leisure sports and exercise variables. The relationships between perceived work self concept and SET ($r = .33$, $p < .01$) and S&EF ($r = .32$, $p < .01$) provided stronger significance than SEV ($r = .31$, $p < .05$) and SV ($r = .28$, $p < .05$). A Pearson correlation test determined no significant relationship between work self concept and EV.

As one might expect, the strongest relationship between sport and exercise participation and self concept was within the physical subscale. Hypothesis 2.5 states that there will be a positive relationship between reported involvement in sport and exercise activities and perceived physical self concept. A Pearson correlation test revealed a significant positive correlation between physical self concept scores and SPE (r = .59, p < .01), SEF (r = .48, p < .01), EV (r = .45, p < .01), SET (r = .44, p < .01) and SEV (r = .39, p < .01). The relationship between physical self concept and SV failed to produce any significance.

Hypothesis 2.6 postulates that there will be a statistically significant positive relationship between involvement in sport and exercise activities and perceived social self concept. Correlations between social self concept and sports and exercise participation revealed only a weak relationship with SPE (r = .26, p < .05). There was no significant relationship between social self concept and any sport and exercise scales on the SHAQ.

Negative Relationships between Variables

A Pearson r coefficient was calculated to determine if there were any statistically significant negative relationships. Hypotheses 4 and 8 examined the negative relationships between self concept and participation in negative leisure activities. Hypothesis 4 states that there will be a negative relationship between participation in negative leisure activities and total self concept.

Negative leisure activity involvement was determined through reported scores on the SHAQ as well as a summary score (Drinking, Smoking, and Drugs) in the Stress Profile. A statistically significant negative relationship was established between total self concept and participation in a variety of negative leisure activities (NLAV) ($r = -.31$, $p < .05$) as well as the frequency of time spent gambling (GM) ($r = -.26$, $p < .05$). There was, however, no statistically significant relationship between work self concept and participation in negative leisure activities, which is contrary to hypothesis 8. There were statistically significant results when physical self concept was correlated with GM ($r = -.42$, p < .01), NLAV ($r = -.38$, p < .01), and weekly time spent participating in negative leisure activities (NLAT) ($r = -.34$, p < .01).

Hypothesis 5 postulated a negative relationship between stress and leisure sport and exercise involvement. A Pearson r coefficient was calculated to determine if there is a negative relationship between the aforementioned variables. The Pearson r test indicated a significant negative relationship between reported stress scores on the stress profile and SPE ($r = -.42$, $p < .01$) and SET ($r = -.40$, $p < .01$). Results indicate that time devoted to sports and exercise participation correlates significantly with reduced stress scores. However, there were no statistically significant correlations in the variety of sports and exercise participation and lower stress scores.

Hypothesis 6's assumption that there is a negative relationship between participation in negative leisure activities and leisure sport and exercise was thoroughly examined through corresponding reported items and summary scores on the SHAQ. A Pearson correlation test suggested a significant negative relationship between the frequency of time spent gambling and EV (r = -.44, p < .01), SET (r = -.43, p < .01), SPE (r = -.34, p < .01) and SEV (r = -.28, p < .05). Participation in a variety of negative leisure activities (NLAV) were negatively related with SET (r = -.51, p < .01), EV (r = -.43, p < .01), SPE (r = -.35, p < .01) and the combined score, reported in the SHAQ, of sport and exercise frequency (SEF) (r = -.31, p < .05). Further examination between negative leisure activities relationship with sport and exercise involvement was examined through reported weekly time devoted to negative leisure activities (NLAT). A Pearson correlation test illustrated a significant negative relationship between NLAT and EV (r = -.37, p < .01), SET (r = -.35, p < .01), SPE (r = -.27, p < .01) and SEF (r = -.25, p < .05).

Hypothesis 7 suggested that there would be a negative relationship between sports and exercise involvement and work activities. The assumption was based upon the notion that participants' limited time, vigorous physical work, and uncertain work schedule would have a negative relationship with their sport and exercise participation. A Pearson correlation test, however, indicated no statistically significant negative relationship between exercise and sport involvement and reported days and hours of work per week, level of physical work activity, or missing or late to work. Contrary to this hypothesis, there was a weak significant positive correlation between SV and reported days per week worked (r = .26, p < .05).

Group Differences

Group differences were examined within horsemen’s sports and exercise participation. Group differences were explored, in addition to the correlations presented in the study, to determine if high variety and time devoted to sports and exercise groups had higher self concept and well-being scores and lower stress scores than the low variety and time groups.

Groups of participants were created by performing a median split based upon reported scores on the SET and SEV on the SHAQ summary score. SET provided time devoted to leisure sport and exercise and SEV illustrated variety of sport and exercise activities. The median score for the SET was a 3.5. While the median for SET was 3.5, responses were only whole numbers. Therefore the median score was rounded up to 4. Fifty percent of the participants reported a score below the median and 50% were either at or above the median. The SET's two equal groups (n = 33 in each) were determined to be at or above the median sport and exercise participation (AMSET) or below the median sport and exercise participation (BMSET). Groups for participation in a variety of sport and exercise leisure activities were determined by performing a median split on SEV scores. The median score for SEV was 44. The SEV's two groups were not equal. The two groups were determined to be at or above the median in participation in a variety of sports and exercise activities (AMSEV) (n = 32) and below the median in participation in a variety of sports and exercise activities (BMSEV) (n = 34). SET and SEV’s mean, median, mode, and ranges are indicated in table 2.

Table 2: SET and SEV Descriptives for at or Above and Below Median Split Group Development

Measure	Mean	SD	Median	Mode	Minimum	Maximum	Range
SET	3.32	1.3	3.5	4	1	5	4
SEV	44.36	12.28	44	33	25	96	71

N=66

The two groups, in both cases, were compared by performing a one way ANOVA. The variables that were explored are stress, psychological well-being, and self concept. Hypotheses 3.1 – 3.3 suggest that there will be a statistically significant difference between the AMSET and BMSET as well as AMSEV and BMSEV groups with regards to reported scores on stress, psychological well-being, and self concept. The following are the results derived from the ANOVA testing of hypotheses 3.1 – 3.3.

Hypothesis 3.1: AMSET and AMSEV participants will have statistically significantly higher self concept scores than BMSET and BMSEV participants. A significant difference between time devoted to leisure sport and exercise activities, favoring AMSET participants, was also revealed on physical self concept scores ($F(1,65) = 6.7$, $p = .01$). The mean physical self concept scores for AMSET participants was 52.96 (SD = 7.69) and was 48.27 (SD = 7.02) for BMSET participants. The overall mean for physical self concept was 50.62 (SD = 7.68). There were no statistically significant differences between AMSET and BMSET participants discovered for self concept subscales of work, moral, performance, social or family. There was, however, a difference between AMSET and BMSET participants for total self concept scores that approached significance ($F(1,65) = 2.82$, $p = .09$).

A one-way ANOVA test revealed a statistically significant difference between AMSEV and BMSEV participants on work self concept ($F(1,65) = 9.12$, $p = .004$), favoring AMSEV participants. The mean work self concept scores for participants with AMSEV scores was 48.47 (*SD* = 5.37) and BMSEV was 43.85 (*SD* = 6.89) while the total sample mean was 46.09 (*SD* = 6.58). A similar statistically significant difference between the above groups was exposed within physical self concept mean scores ($F(1,65) = 8.73$, $p = .004$) which favored the AMSEV group. The physical self concept mean scores for AMSEV were 53.34 (*SD* = 6.72) and were 48.06 (*SD* = 7.73) for BMSEV. The mean score for the entire sample for this study was 50.62 (*SD* = 7.68). This finding is congruent with this study's aforementioned results that indicated one of sport and exercise’s most statistically significant perceived self concept benefits lies within physical self concept. While differences between AMSEV and BMSEV participant work and physical self concept scores were strong, family self concept approached statistical significance ($F(1,65) = 3.72$, $p = .05$). The ANOVA test discovered that the difference between the AMSEV and BMSEV groups favored the AMSEV participants. The mean family self concept scores for the AMSEV were 49.40 (*SD* = 6.80) and the BMSEV group were 46.32 (*SD* = 6.16). There were no other self concept subscale scores that illustrated statistical significance. There was, however, a statistically significant difference between AMSEV and BMSEV participants in total self concept scores ($F(1,65) = 5.91$, $p = .018$), emphasizing the AMSEV group. The mean total self concept score for the AMSEV group was 298.65 (*SD* = 27.01) and was 280.56 (*SD* = 32.96) for the BMSEV group. This result illustrated the first statistically significant difference in total self concept scores. The mean for the entire sample size for total self concept was 289.33 (*SD* = 31.34).

Hypothesis 3.2: AMSET and AMSEV participants will have statistically significantly higher well-being scores than BMSET and BMSEV participants. A one-way ANOVA test revealed a significant difference between AMSET and BMSET participants on their reported well-being scores ($F(1,65) = 9.9$, $p < .01$), favoring AMSET participants. The AMSET participants attained a mean well-being score of 45.78 (*SD* = 8.25) and the BMSET participants attained a mean well-being score of 40.12 (*SD* = 6.29). The mean of the well-being scores for the entire sample was 42.95 (*SD* = 7.79).

The maximum well-being score for both AMSET and BMSET participants was 60.

One of this study's objectives was to determine if there was a difference between groups of participants' variety of exercise participation on well-being. The differences between participants at or above the median (AMSEV) (n = 32) and below the median in participation in a variety of sports and exercise activities (BMSEV) (n = 34) were examined through a one-way ANOVA. A one-way ANOVA determined that there was a statistically significant difference between AMSEV and BMSEV participants' well-being scores ($F(1,65) = 14.11$, $p < .001$). The mean well-being score of the AMSEV participants was 46.34 ($SD = 7.25$), while the mean well-being score for the BMSEV participants was 39.76 ($SD = 6.98$). There were no statistically significant differences between AMSEV and BMSEV groups within satisfaction with life scores.

Hypothesis 3.3: BMSET and BMSEV participants will have statistically significantly higher stress scores than AMSET and AMSEV participants. Significant differences between AMSET and BMSET participants were explored in reported stress scores ($F(1,65) = 5.01$, $p = .03$), which was in favor of BMSET participants. The BMSET participants mean stress score was 18.0 ($SD = 4.05$) and the mean stress score of the

AMSET participants was 15.6 (*SD* = 4.30). The difference between AMSET and BMSET means indicates that the higher reported scores (BMSET) suggest greater perceived stress. The BMSET participants scored significantly higher than the AMSET participants.

A statistically significant exercise participation difference, favoring BMSEV participants' scores, was noted on stress scores ($F(1,65) = 6.61$, $p = .018$). The means for the groups indicated that the BMSEV stress score was 18.1 (*SD* = 4.42) and AMSEV stress score was 15.5 (*SD* = 3.80). The implication is that the BMSEV group has an elevated mean stress score resulting in higher reported perceived stress.

Results indicated that there were statistically significant differences between AMSET and BMSET within mean well-being ($p = 0.002$), physical self concept ($p = 0.012$), and stress scores ($p = 0.029$). These statistically significant differences are reported in Table 3.

Table 3: Differences Between Groups of Co-participants' Time Devoted to Leisure Sports and Exercise

Subscales	AMSET (n=33)		BMSET (n=33)		*F*	*p*=
	M	*SD*	*M*	*SD*		
Well-being	45.79	8.25	40.12	6.22	9.91	0.002
Physical SC	52.97	7.69	48.27	7.02	6.71	0.012
Stress	15.69	4.31	18	4.05	5.01	0.029

SC= Self Concept

The ANOVA test results revealed statistically significant differences between AMSEV and BMSEV within mean well-being, self concept, and stress scores. These comparisons between AMSEV and BMSEV in well-being, self concept, and stress scores are presented in Table 4.

Table 4: Differences Between Groups of Co-participants' Variety of Leisure Sport and Exercise Activities

Subscales	AMSEV (n=32)		BMSEV (n=34)		*F*	*p=*
	M	*SD*	*M*	*SD*		
Well-being	46.34	7.25	39.76	6.98	14.11	<.001
Work SC	48.47	5.37	43.85	6.9	9.12	0.004
Physical SC	53.34	6.72	48.06	7.73	8.73	0.004
Stress	15.5	3.8	18.12	4.42	6.61	0.012
Total SC	298.66	27.01	280.56	32.96	5.91	0.018
Family SC	49.41	6.81	46.32	6.16	3.78	0.058

SC= Self Concept

Combinations of Sport and Exercise Activities

Hypotheses 9.1 – 9.3 postulated that certain combinations of leisure sport and exercise activities will significantly contribute to the prediction of perceived stress reduction (9.1), self concept (9.2), and psychological well-being (9.3). A multiple regression test was performed in order to ascertain the relationship between combinations of sports and exercises and perceived psychological benefits. The SHAQ has a summary score calculated that indicates the individual's involvement in nine sports (SV: golf, basketball, tennis, bowling, skiing, volleyball, soccer, baseball/softball, and hockey), 11 exercises (EV: horseback riding, walking for exercise, weight lifting, stationary bike, bike riding, stretching, jogging/running, treadmill, skating, and aerobics), and a combination of all 20 of the above sports and exercises (SEV). The summary scores were previously correlated by performing a Pearson correlation test; however, this did not account for any relationships with combinations of specific sports and exercises and perceived psychological benefits. Therefore, in order to ascertain the relationship between these variables, maximum R and β coefficients were calculated by performing a backward linear multiple regression.

Hypothesis 9.1: Certain combinations of leisure sport and exercise activities will significantly contribute to the prediction of perceived reduced stress. When stress scores were regressed on the SV, EV, and SEV items, there were no statistically significant combinations discovered. There were, however, some statistically significant relationships between stress and stretching ($r = -.29$, $p < .01$), horseback riding ($r = -.28$, $p < .01$), and treadmill use ($r = -.27$, $p < .02$) when a Pearson correlation coefficient was calculated.

Hypothesis 9.2: Certain combinations of leisure sport and exercise activities will significantly contribute to the prediction of perceived self concept. A backwards linear regression was performed on EV scores to physical self concept scores. EV items were regressed to weight lifting, bike riding, treadmill, and participants reported "other" exercises. These four predictors accounted for over one third of the variance in reported physical self concept scores (*R* squared = .38) and were statistically significant ($F(4,65) = 9.15$, $p < .001$). The predictors with a positive statistically significant effect on physical self concept scores were treadmill use ($\beta = .46$, p < .001), weight lifting ($\beta = .29$, p = .01), and participants reported other exercise ($\beta = .23$, p < .05). Participants' bike riding scores had a statistically significant negative relationship with physical self concept ($\beta = -.30$, p < .02). A Pearson correlation coefficient of all EV items revealed statistically significant individual relationships between Physical self concept and treadmill use ($r = .45$, $p < .001$), weightlifting ($r = .37$, $p = .001$), stretching ($r = .36$, $p = .001$), jogging/running ($r = .34$, $p < .01$), and horseback riding ($r = .31$, $p < .01$). There were only significant relationships between individual exercise items, not individual sports items. The initial regression model, inclusive of all exercise items, yielded an R square of .44, accounting for over 40% of the variance in physical self concept scores.

Hypothesis 9.3: Certain combinations of leisure sport and exercise activities will significantly contribute to the prediction of perceived psychological well-being. The final regression, for this study, was participants' psychological well-being scores and EV items. The combinations of exercises that contributed to well-being was determined to be participants' treadmill use and "other" reported exercise ($R = .30$). The regression model was statistically significant (F (4,65) = 13.56, $p < .001$) where both treadmill use ($\beta = .40$, $p < .001$), and "other" reported exercises ($\beta = .32$, $p = .004$) demonstrated statistically significant effects on well-being. A Pearson correlation coefficient was tested on all EV items yielding statistically significant relationships between well-being scores and treadmill use ($r = .45$, $p < .001$), other reported exercise ($r = .38$, $p = .001$), horseback riding ($r = .31$, $p = .006$), bike riding ($r = .31$, $p = .006$), stretching ($r = .29$, $p = .01$), jogging ($r = .27$, $p < .02$), walking for exercise ($r = .26$, $p < .02$), and stationary bike ($r = .26$, $p < .02$).

Qualitative Results

Participants were interviewed in order to provide a qualitative basis of horsemen's perceived benefits in participating in leisure sports and exercise activities. Seven participants were interviewed; however, two of the seven offered no response or did not directly respond to the questions and therefore were not included in the analysis. The interviews were transcribed and analyzed using a grounded theory research procedure. The procedure involved open and axial coding of the transcripts of the interviews. The interviews appeared to achieve the saturation needed to further explore horsemen's participation in sport and exercise. The analysis of the interviews offered a supplement to the quantitative results presented in the study. The following presents the results in utilizing this process.

Open Coding

The open coding analysis of the interviews revealed themes that were specific to the phenomenon of horsemen's participation in leisure sports and exercise activities. Analysis of the participants' responses revealed that there were two general themes that encompassed participation in sport and exercise. These two categories or themes were perceived limitations and motives or anticipated outcomes for participating in leisure sport and exercise activities. Subcategories in limitations and motives were created through further analyses in creating a table of responses that expanded the themes further. The subthemes in limitations were time, injury, and competitiveness. The subthemes in motives were socialization, perceived improvements in mental well-being, and physical exertion. The subthemes for limitations and perceived motives or outcomes emerged through participants' common responses in the interview. Participants responded most similarly when they described their perceived motives or outcomes in participating in sports or exercise activities. Table 5 illustrates these aforementioned themes and subthemes.

Table 5: Horsemen's Sport and Exercise Themes and Subthemes

Theme	Subtheme
Theme #1: Limitations	Time Injury Competitiveness
Theme #2: Perceived Motives	Socialization Physical Exertion Mental Well-Being

The overall theme in realizing limitations and experiencing the motives was the ability to be assertive and not passive or aggressive. The process resulted in this researcher's substantive-level theory that horsemen's participation in sport and exercise may be contingent on their ability to be assertive in addressing limitations so motives can be realized. The following section details this analysis.

Theme #1: Limitations

The limitations of horsemen were noted throughout in most of the participants' responses in the interview. Horsemen would refer to their limitations in either a general tone, inclusive to all horsemen in the industry, or specific to themselves. The general limitation was referred to as the ability to devote time to sports and exercise because of the hectic and unstructured work schedule. Horsemen's individual perceived limitations were in the areas of injury and competitiveness. Horsemen's perceived limitations were noted, as subthemes in the responses from the participants, as time, injury, and competitiveness.

Time. Participants referred to their amount of free time to commit to leisure as limited. Responses varied from "not enough time to exercise" to "uncertainty of the job schedule." This perceived limitation is best illustrated in a participant's response in which he stated:

> You don't really have the time, but you would like to. I mean, you wish you had a job 8 to 5, you go to the gym, and you work out. You know what I mean? If you have the blacksmith today, or the vet later, or a race at night. But as far as like if you punched a time

> clock, which you don’t in this business - you don’t punch a time clock. You don’t work 5 days a week or even 6 days a week. You work 7 days a week all year.

The observed central conflict of this limitation involved the inability to become assertive in time management which resulted in limited to no leisure participation. Those who have become assertive created a tentative management of their free time and sought leisure physical activities within this structure. One participant explained:

> I exercise on a regular basis. I run in the park and I had joined a gym but have since gotten out of that contract because it was too time consuming. It did not fit into my schedule. I would rather do it (exercise) on my own time.

This finding is consistent with the quantitative results. The quantitative results indicated that there was no statistically significant relationship between amounts of time spent working and participation in leisure sports and exercise activities.

Injury. Injury was perceived, with good reason, as a limitation in participating in leisure sport and exercise activities. One participant who has sustained an injury from driving horses stated “I used to really enjoy racquetball but since my injury I just don’t play sports.” Another injured participant responded differently in stating:

> I enjoy working out in the gym but I have to be careful. I know that I can push too hard and I don't want to hurt my back again. I guess I just try and work out at my own pace because I really enjoy it.

Once again, injury was only limited in the perception of what can be achieved. An individual's injury may prohibit participation in previously enjoyed sports or exercise activities. Individuals who effectively considered alternative activities that were within the limitations of the sustained injury, discovered new and promising physical activities that resulted in improved overall health. Those who were reluctant in addressing their limitations became more sedentary and may have weakened muscles and reduced strength near the injured area. The individual's main concern is to ensure that the injury is not reaggravated. This concern can either be addressed with realistic limitations or become an irrational belief that the injury has stolen all ability to participate in sports or exercise.

Competitiveness. The final perceived limitation explored was the individual's competitiveness. All of the participants responded that they are competitive in their work. The clear line of winning and losing is drawn from the outcome of a race. When asked whether this competitive nature included their leisure sport and exercise activities, an interesting result occurred. Those who reported that they are competitive and enjoyed the competition exhibited more time spent participating in leisure sport and exercise activities. One participant who regularly participates in leisure sports and exercise stated, "Yeah, I am absolutely competitive in sports and exercise. I try my best and like to be good at what I do." Another participant who participates in sports and exercise activities reported, "I like to win, try to win but it's not everything. I want to try to do my best." A participant who exercises regularly reported on whether he was competitive in sports and exercise by stating:

> No, that's not what that's (exercise or sports) about to me at all. I am not into it on a competitive edge whatsoever. That doesn't interest me at all. My competitive edge is in the horse business only. Aside from that, I am just blowing off some steam by exercising.

Individuals who reported the need to win or "hate to lose" reported spending little to no time participating in leisure physical activities. Responses from non-participants in leisure exercise and sport indicated an emphasis on competition. The competitive nature of their business seemingly is adapted into their leisure life. Therefore one can assume that these individuals may not be able to compete in leisure sport at a certain level and ultimately will not participate in the activities. This was evident when a non-active participant stated, "I hate to lose, can't stand it. I am very competitive. I have to do my best." Another participant, who did not participate in leisure sport and exercise, reported "I will find a way to win. I hate to lose. I love the competition." These statements would indicate that sports and exercise would be a logical fit; however, the expectations of themselves and their idea of competition somehow hinder their participation in leisure sport and exercise. The assumption can be made that a healthy competitive nature is necessary for leisure participation in sports and exercise. A competitive nature is necessary to measure one's progress in sports and exercise and to set realistic goals for the activity. When competition heightens beyond this point a paradoxical effect may occur.

Theme #2: Perceived Motives or Outcomes

Investigating horsemen's reasons for participating in leisure sports and exercise activities uncovered three salient subcategories of perceived motives. Participants' perceived motives or anticipated outcomes were socialization, mental well-being, and physical exertion. These motives were consistent in each individual's response and developed a commonality amongst the interviewees.

Socialization. Participants reported that socialization was an important perceived motive underlying their participation in leisure sport and exercise. Leisure sport and exercise participation, however, was reported to be a vehicle rather than a catalyst to socialization. Individuals reported participating in sport and exercise as a means of bringing either family or fellow horsemen closer. Comments from participants supported socialization as a motive to participate in the following statements: "You know when we all played softball together it was fun. It is something that we (horsemen) can do together other than the races." Another participant stated, "I get to spend time with my sisters when we all go on jogs. I look forward to jogging with my sisters." One more participant explained, "My daughter and I swim together and I just love watching her play. We laugh all the time we are swimming." Participation in these activities is performed, cognitively, with an element of socialization. The socialization in turn is perceived as enjoyable, thereby potentially resulting in improved mental well-being.

Physical Exertion. Physical exertion was perceived as an important motive for participating in leisure sports and exercise activities. The physical activity involved in leisure differed from that of participants' work demands.

Horsemen’s employment physical activities were perceived as being routine and not as challenging. One participant explained:

> Sports are more strenuous and mentally rewarding while my job is not as strenuous. I mean you get buckets and lift bales that makes it physical. But the physical part of the job is pretty much the same day in and day out.

This routine has been constant whereby a horseman must carry out specific tasks each day. These tasks are not as challenging, both physically and cognitively, because they have been employed in the industry for numerous years. Horsemen’s work physical activities have become routine because their bodies have become accustomed to strain. A horseman may do the same tasks every day and the physical demands will not increase. The only means by which horsemen’s physical tasks increase is if they have more horses to groom or train. The physical exertion in leisure is always changing based upon the individual’s level of mastery. A participant describes the physical exertion in exercise as “(exercise is) really rewarding when I sweat. I want to feel physically exhausted at the end of the day. It is a good feeling when you are physical.” The level of physical exhaustion is idiosyncratic and constantly changing.

The motive of physical exertion was perceived as enjoyable in leisure sport and exercise participation. One participant who is actively involved in jogging stated:

> When I am jogging I notice my heart pounding and my breathing. I am not huffing or puffing but I am sweating. You want to feel that physical sensation. When I first started at the gym I got on the elliptical for five minutes. I thought I was going to die. But it felt good. Later I'm doing 20 minutes and am looking for more.

Whether an individual is currently participating in leisure physical activities does not preclude the perception that an anticipated outcome of sports and exercise is physical exertion. Again, levels of physical exertion are defined by the participant. Physical exertion becomes limited by injury and the challenge becomes creating an acceptable balance between limitations and perceived outcomes.

Perceived Mental Well-being. Each participant stated that there is a perceived improvement in one's mental well-being that can occur in participating in leisure sport and exercise activities. The common sense explanation for improved mental-well being is that leisure activities are for enjoyment purposes. Enjoyment carries many meanings and is not exclusive to one clear definition. The challenge in this study was to explore these motives for participating and identify what the perceived psychological benefits were for this population.

Participants stated that participation in sports and exercise elicited an improved mood state. Most prominent responses were within “feeling good” and reducing stress. The idea of feeling good can be understood as a by-product of the improvement of one’s self concept. Participation in sport and exercise may facilitate the improvement of self concept; however, if coupled with the physical motive for participation, it can be assumed that physical self concept may be the strongest psychological benefit to horsemen in this area. Another pattern within the transcripts points to “feeling good” as complete enjoyment. Horsemen reported that they find enjoyment within the socialization and physical exertion in participating in leisure sport and exercise. Horsemen’s participation in leisure sport and exercise activities offers a break from their regimented job tasks. The break from the routine affords an opportunity for mental change. Enjoyment was perceived as rewarding as well. The reward is mentioned as a different category from the accomplishments at work. Leisure sport and exercise activities are chosen from themselves rather than the physical activities at work being tasks necessary to achieve accomplishments.

Participants view their career in horse racing as stressful. The constant need to win creates mental pressure. The stress of horse racing is evident in one participant’s response:

> I could be here all day, doesn’t bother me, because those two minutes my horse is on that track shows the work that you did all week. I mean, people, when they go to the track and the horse race is good or bad, that’s a reflection on you as a horseman - all the time you put in, the other days to get to that point, is basically shown on the race track. And that’s all people care about, as far as the trainer - otherwise healthy, did he win? Did he do good? If you have good horses and take care of them, make sure they are healthy, sound, in the right class, and have a good driver; you should do good. You SHOULD do good. But doesn’t always happen. You think that I want to come here seven days a week, bust my butt and lose? Nobody wants to lose but it has to happen.

The impetus falls upon the individual to take action in effectively managing the stress that arises. Participants suggested that sports and exercise participation offers an outlet to reduce some of the stress associated with their work. Those who are actively participating in leisure sport and exercise activities reported an improvement in coping with the day to day stressors. A physically active participant stated:

> Whether it is jogging or horseback riding, gardening or just chopping wood it gives me the down time. I need some down time so I can get my brain off of work or problems, so a lot of my activities do just that. I don’t have to think about anything except what I am doing.

Those who reported little to no involvement in sports and exercise stated that there is a potential outcome of stress reduction through the leisure activities.

The consistent theme, among the motives, points to some aspect of improved psychological well-being. This can be noted in perceived physical motives when individuals report enjoying or preferring the leisure physical activity over that of their work. Respondents stated that they participate in leisure sports and exercise for physical exertion, which makes them feel good. The good feeling refers to the positive emotion that can be evoked from the activity. This is evident in the socialization motive as well. Socializing with others was perceived as fun, enjoyable, exciting, and relaxing. Once again, the responses suggest an element of psychological benefit.

Discussion of Quantitative Results

The purpose of this study was to describe horsemen's perceived psychological benefits and liabilities derived from participation in leisure sport and exercise activities. For this study, the discussion of the results are categorized by predictors of well-being, self concept, stress, and horsemen's sport and exercise participation as well as group differences. The organization of the discussion provides a clearer investigation into horsemen's perceived psychological benefits and liabilities derived from participation in leisure sport and exercise activities. The following section is a discussion of the results of this study.

There were several hypotheses in this study concerning the relationship between reported leisure sport and exercise involvement and perceived psychological benefits. These psychological benefits were explored within well-being, self concept, and stress.

Predictors of Well-Being

Hypothesis 1 stated that there will be a statistically significant positive relationship between reported involvement in leisure sport and exercise activities and psychological well-being. An anticipated finding of this study concerns the relationship between leisure sport and exercise participation and well-being. This study confirmed that there was a strong relationship between the amount of time an individual dedicates to sport and exercise activities and higher well-being scores. The amount of time devoted to exercise and sport may conjure questions of how much time needs to be devoted to sport and exercise to achieve maximum benefits within well-being. This question can only be explored idiosyncratically through one’s own interpretation of well-being. Similar findings were present in Moses et al.’s (1989) study which indicated that individuals exhibited improvements in psychological well-being in lower level intensity of aerobic exercise. The higher level intensity exercise group showed less of an increase in psychological well-being. One might assume that the level of intensity must be individually based depending upon one’s capabilities. While one individual may enjoy exercising or participating at different rates, the benefits will be noted through each person’s own self actualized well-being.

Thuot’s (1995) study suggested that it is one’s own enjoyment that motivates individuals to participate in sports and exercise. The enjoyment of participating in sports was explored in this study through the relationship between a variety of sports and exercise activities and well-being. Individuals who participated in a variety of different sports and exercises reported higher well-being scores. The variety of sports and exercise participation served as a strong predictor of well-being. An assumption could be made that horsemen who are involved in a variety of sport and exercise activities break the routine activities of their job tasks. The variety of activities offers more diversification of their leisure time than just spending it on job related activities. Furthering this finding it was revealed that treadmill use, horseback riding, bike riding, stretching, jogging, walking for exercise, stationary bike, and "Other" reported exercise all correlated with improved well-being.

While exercise and sport involvement correlated positively with well-being, the reverse was true for negative leisure activities. A most interesting finding, to this researcher, was the significant negative relationship between well-being and gambling ($r = -.34$, $p < .01$). Participants were requested to report their frequency of participation in all forms of gambling. The gambling, therefore, was not exclusive to horse racing. This finding was not hypothesized but emerged as an important relationship in the horseracing industry. Gambling is a cornerstone of the sports industry in which the participants are employed. Trainers, grooms, jockeys, and drivers are permitted to wager on the races. However, trainers, drivers, and jockeys are prohibited from betting against themselves in their race. Trainers, drivers, and jockeys can only wager a winning bet, not a place or show, for their horse in a race in which they are competing. The general acceptance, within trainers and grooms, of this activity ranges from an operationally defined leisure to a means of supplementing one's income. This study discovered that horsemen’s increased participation in gambling activities related to decreased sport and exercise participation (r = -.43, $p < .001$) as well. This current study does not account for causality; however, one could make an argument that gambling may not be as enjoyable as individuals perceive it to be. Horsemen who gamble will do so in their leisure time for enjoyment. Gambling may be enjoyable if it is done from time to time for recreation. When gambling frequency increases it has a diminishing return on psychological well-being. The result can be assumed that increased gambling reduces leisure sport and exercise participation and impedes positive perception of well-being.

Hypothesis 9.3 stated that certain combinations of leisure sport and exercise activities will significantly contribute to the prediction of perceived psychological well-being. Hypothesis 9.3 was confirmed when well-being scores were regressed to treadmill and “other” horsemen reported activities. The results offer some insight into the selection of a horseman’s exercise activity. The reported “other” exercise suggests that the horsemen chose an activity that they enjoy. The enjoyment in the activity is the essence of well-being. Treadmill use was an interesting finding for it was not anticipated by this researcher. One might argue that the treadmill produces a better view of one's body self concept, which results in improved well-being. This assumption is consistent with a study performed by Dishman et al. (2007), which discusses that physical activity and sport participation may reduce depression risk by positive influences on physical self concept.

Predictors of Self concept

The TSCS:2 provided physical, work, social, and total self concept scores that were correlated with sport and exercise participation. Hypothesis 2.1 suggested that there will be a statistically significant positive relationship between reported involvement in leisure sport and exercise activities and perceived self concept. Hypothesis 2.1 was confirmed when a significant relationship was discovered between reported weekly time devoted to leisure sport and exercise and total self concept. The relationship speaks to horsemen's total view of self. Horsemen who participate in exercise and sports activities on a more frequent basis may do so to experience a change from their work demands. This phenomenon was evident in the qualitative results which indicated that horsemen who participate in sport and exercise do so to "get away" from work related activities. The time spent participating in sport and exercise may, therefore, elicit an improved overall concept of self.

Horsemen’s total self concept was explored within their participation in on-site health screenings and events as well. Hypothesis 2.2 postulated that there would be a statistically significant relationship between horsemen’s participation in onsite health screenings and events and self concept. There was, however, no significant relationship discovered in testing this hypothesis. One explanation of this result may be that onsite events and health screenings only occur every other month throughout the year. The onsite health screenings provide horsemen with information on their blood pressure, glucose, cholesterol, body fat, vision, and pulse. Individuals who attend these screenings are doing so in an effort to monitor their physical health. The onsite events may be appreciation days or horsemen related events. The onsite health screenings and events are not something that individuals can replicate or adhere to on their own. Therefore, participation in these programs, while useful, may not elicit a behavioral change. The results of this study indicate that adherence to a leisure activity offers a more significant relationship with self concept. The onsite events are positive activities, but offer non-significant positive relationships with self concept scores. Therefore, it would be advantageous for horsemen to explore sustaining leisure activities, like sport and exercise or other positive leisure activities, to improve self concept.

Hypothesis 2.3 was confirmed when a statistically significant positive relationship was discovered between positive non-sport or exercise leisure activities and self concept. Leisure activities involve some aspect of horse racing for most horsemen. Testing hypothesis 2.3 involved selecting activities that were exclusive to the horse racing industry. The results showed a strong correlation between leisure and self concept, indicating a need to delineate work and leisure. Horsemen can have difficulty in defining leisure and work because there is a great deal of passion for their horses and the industry in which they work. Individual leisure activities are selected with some element of passion as well. The results may indicate the need for horsemen to explore leisure activities outside the racing industry.

A significant relationship was revealed between work self concept and sports and exercise participation, confirming hypothesis 2.4. Leisure time needs to be actively coordinated within a horseman’s hectic schedule.

Results indicated that horsemen work most days of the week and that they average over 57 hours per week working. Contrary to this finding, it was discovered that there was a strong correlation between work self concept and exercise and time spent participating in leisure sport and exercise activities. This relationship may indicate horsemen's necessity in affording time to participate in sports and exercise as a means to improve their work self concept. This may result in improved work performance in an industry in which these individuals are greatly passionate.

Testing hypothesis 2.5 confirmed that the strongest relationship with physical self concept was within horsemen's sports and exercise participation. This finding is consistent with Stoll and Alferman's (2002) study which discovered that physical activity had a positive effect on subjects' body self concept. One of this current study's intentions was to investigate the positive relationship between self concept and a variety of sports and exercises. The results confirmed that there was a positive relationship between physical self concept and participation in a variety of leisure exercises, weekly time devoted to sports and exercise, and a variety of sports and exercises. Horsemen perform physical activities every day for their job. The physical activity in their job is perceived differently than their leisure physical activity, as was noted in the interviews. However, an assumption can be made that being physical or performing physical activities is something with which horsemen identify. Participating in physical leisure activities may improve their identity of self and relate to higher physical self concept.

Horsemen's work schedules fluctuate day to day whether they are entered in a race or they have to ship out to another state to race. This uncertain schedule is not conducive to stable social interactions. Therefore, hypothesis 2.6 indicated that there would be a strong relationship between sports and exercise participation and social self concept. Contrary to the study's hypothesis, there was only a weak positive correlation between exercise and social self concept. Yet, individuals who work in the racing industry have forged a community of their own. Interaction with horsemen occurs throughout the entire work day and the training center is a social environment. This socialization may explain why there is not a stronger positive relationship between social self concept and sport and exercise participation, because it is fostered within the community.

Investigating participants' total perceived self concept revealed that there were similar correlations between it and both exercise participation and positive non-sports and exercise leisure activities. Results indicated that there was a significant positive correlation between total self concept and both groups of leisure activities. The findings are encouraging for the potential improvement of horsemen's self concept. Total self concept's relationship to sport and exercise activities, however, does not illustrate causality. Therefore, it is important to be cautious in assuming any broad generalizations within these findings.

Hypothesis 4 stated that there will be a statistically significant negative relationship between reported involvement in negative leisure activities and perceived self concept. Results indicated that there were weaker ($p < .05$) relationships between total self concept and negative leisure activities. Yet, there was not any statistical significance in the relationship between negative leisure activities and work self concept, contrary to hypothesis 8. However, gambling was strongly correlated ($p < .001$) with reduced physical self concept scores. Once again, habitual gambling presents a potential detriment to the view of one's self. Horsemen who wish to change their gambling behavior must be aware of these negative relationships. Addressing a change in gambling is best described by Thayer et al.'s (1992) study, which indicates that a negative behavior can be substituted by a positive one as long as a satisfying mood is achieved by the replacement. This study's results provide the horsemen with such substitutes by becoming active in alternative positive leisure activities.

Hypothesis 9.2 stated that certain combinations of leisure sport and exercise activities will significantly contribute to the prediction of perceived self concept. Results confirmed that the combination of treadmill, weightlifting, and "other" reported sports predicted over one third of the variance in physical self concept scores. Treadmill use was the most significant predictor. Other exercise activities such as stretching, jogging, and horseback riding had a significant individual relationship with physical self concept scores.

Predictors of Stress

The horse racing industry can be a stressful environment. Clear delineations of winning and losing are drawn every day through the competition within the sport. This competition is pronounced because if a horse does not win, the stable does not earn money. There is no monetary reward for showing up at the race. Horsemen's stressful work schedule and constant attention to their horses can allow for less time to concentrate on one's self. Brehm (2007) noted that individuals that were unable to manage stress were more likely to discontinue physical activity. Therefore, hypothesis 5 suggested that participation in leisure sport and exercise would negatively correlate with stress scores. Results indicated that there was a negative relationship between stress scores and time spent participating in leisure sports and exercise. This finding is consistent with Lobitz et al.'s (1983) results that indicate that individuals who regularly exercise have decreased anxiety and stress.

Hypothesis 9.1 stated that certain combinations of leisure sport and exercise activities will significantly contribute to the prediction of perceived stress reduction. There were no statistically significant combinations in a variety of different sports or exercise activities when they were regressed with stress scores. Results indicate that there is not a combination of any exercises that predict reduced stress scores for horsemen. There were several statistically significant negative relationships between exercise items and stress scores. The types of exercises that negatively correlated with stress scores were stretching, horseback riding, and treadmill use. Stretching and treadmill use were anticipated to have a significant negative relationship with stress. Treadmill running was utilized by Kraemer et al. (1990) as a treatment in their experimental study. The study determined that treadmill running produced the most significant variance (p = .001) in reduction of tension on the POMS. Horseback riding, however, was an interesting relationship with stress because of the amount of time horsemen spend with the horses. One might imagine that these individuals would want or need a break from the horses. The results differ from this researcher’s initial assumption, and indicate that there is a relationship between horseback riding and lower stress scores.

Horsemen may view horseback riding as an enjoyable interaction with horses rather than the routine of caring for them. Horseback riding offers stress free enjoyment of horses rather than the tension that is created in professionally racing them. The horses that are used for horseback riding are usually retired from racing and are older. These horses are cared for as pleasure horses and are not constantly being trained for competition. One might suggest that these horses may enjoy the ride too because it is a more leisurely pace then their training days. This study does not propose that horseback riding is the best means of reducing stress in society at large. Rather, an explanation of this finding might be that enjoyment in leisure activity comes from individuals participating in what they perceive themselves to be good at or have mastered (Bandura, 1977).

Predictors of Horsemen's Sport and Exercise Participation

Hypothesis 6 postulated a negative relationship between participation in negative leisure activities and leisure sport and exercise participation. Results indicated that there was a negative relationship between time devoted to negative leisure activities and participation in a variety of exercises. The more time that individuals participate in negative leisure activities correlated with a diminished time devoted to sports and exercise participation. These two variables had the strongest correlations with negative leisure activities. Particular attention was devoted to gambling. Gambling, as stated before, is an accepted form of leisure activity within this community. Results indicated that the more time spent gambling correlated to decreased time devoted to sports and exercise participation.

Hypothesis 7, which suggested a negative relationship between frequency of work activities and participation in sports and exercise, was refuted. Contrary to this hypothesis, there was a weak correlation between reported days per week worked and participation in a variety of sports. The hypothesis was devised with the notion that the physical nature of work and the amount of time devoted would correlate with reduced sports and exercise participation. These results contradict excuses that one does not have any time to participate in leisure physical activities.

Group Differences within Self Concept

A confirmed hypothesis of this study involves the time devoted to participation in leisure sports and exercise activities groups. As expected, those who devoted more weekly time to sports and leisure activities had higher physical and total self concept scores than those who participated less. These groups were devised from participants' responses on the SHAQ. Participants who were at or above the median for sports and exercise time (AMSET) illustrated a statistically significant difference in physical self concept when compared with those below the median (BMSET). The difference between those who reported above the median participation in a variety of leisure sports and exercise activities (AMSEV) and below the median participation in a variety of leisure sports and exercise activities (BMSEV) was significant in physical, work, and total self concept scores. An unexpected finding was the difference between AMSEV and BMSEV in family self concept, favoring AMSEV, which approached statistical significance. Differences between these groups in work and physical self concept may be attributed to what Anderson and Chychosz (2002) report as exercise’s ability to reinforce an individual’s concept of self. This reinforcement of self concept may apply to one’s concept of oneself at work as well. While the differences between AMSET and BMSET as well as AMSEV and BMSEV groups were statistically significant in physical and total scores, there was a greater variance in AMSEV and BMSEV. The results of the current study indicate that increasing variety of sport and exercise activities may have a greater effect on one’s self concept than just devoting time to exercise and sport.

Group Difference within Well-Being

Differences in well-being scores were anticipated between the groups. The differences between both AMSET and BMSET in well-being scores indicated a strong statistical significance favoring AMSET. A greater statistically significant difference was evident between AMSEV and BMSEV groups for well-being, again favoring AMSEV. The findings indicate that increased participation in sports and exercise can result in improved perceived well-being. Enjoyment of leisure sports and exercise activities in which one participates is fostered through the idea that the selection of the activity has arisen from personal choice. An implication of this study’s findings is that continuance of participating in exercise, at one’s comfort zone, strengthens one’s well-being better than limiting or rejecting exercise. This finding is supported by Steptoe and Cox’s (1989) study which indicates that moderate to low intensity may produce better improvements to well-being.

Difference between Groups within Stress

The final anticipated result is concerned with the difference between the groups and stress scores. Investigating the differences between weekly time devoted to participating in sports and exercise yielded statistically significant differences between AMSET and BMSET. The findings support the theory that regular exercise adherence has a positive effect on reducing stress and tension (Kraemer et al., 1990). While there was a statistically significant difference between AMSET and BMSET, there was an even stronger statistically significant difference between AMSEV and BMSEV in stress scores. Once again a greater variety in sport and exercise activities reveals a stronger statistically significant difference.

One might assume that participation in a variety of sports and exercise activities can create more variation in horsemen’s leisure. A variation of activities is lacking within horsemen’s routine physical work activities. Furthermore, a wider variety of sports and exercises provides horsemen with options and activities that may not be as time consuming. For example, if a horseman enjoys playing softball or basketball but does not have the time to participate, that individual may choose to ride a bike. But if the weather outside is not conducive to bike riding, they may choose to use a stationary bike indoors. Therefore, horsemen who participate in a wider variety of sports and exercise may have more options and opportunities to choose a leisure physical activity. Horsemen who have more options and opportunities may have a better sense of control, thereby offering a means to reduce their stress.

Discussion of Qualitative Results

This researcher observed two central themes, limitations and perceived motives or outcomes, contributing to horsemen’s participation in sport and exercise. These themes had three subthemes, respectively, that contributed to sports and exercise participation. A central conflict emerged between perceived limitations and motives or outcomes. The central conflict was horsemen’s reluctance in becoming assertive to address their limitations to experience individual benefits from sport and exercise participation. This central conflict is this researcher’s substantive theory in horsemen’s participation in leisure sport and exercise activities.

Assertiveness versus passivity and aggression is a central conflict within horsemen’s participation in leisure sport and exercise activities. The horsemen that were interviewed in this study perceived numerous potential psychological benefits in their participation in sport and exercise. Comprehending these perceived outcomes only offers insight into the dynamics of the leisure activity. Whaley and Schrider (2005) state that understanding the outcomes associated with exercise is a worthwhile endeavor, but understanding the process that leads to actual exercise participation and adherence is critical for successful interventions. Active and non-active leisure exercise participants agreed that there were positive outcomes in participating in leisure physical activities. Knowledge of exercise’s benefits is necessary but often not sufficient to result in exercise participation (Whaley & Schrider, 2005). These commonly held beliefs were only realized by horsemen who were assertive in addressing their limitations. This researcher observed that experiencing the benefits of exercise is thwarted by passivity and aggression in addressing horsemen’s limitations.

When horsemen participate in sport and exercise activities it is believed the action has socialization, physical, and psychological benefit. Potential outcomes can only be realized though experience and adherence to enjoyable activities. Balancing an assertive view towards sport and exercise participation may become difficult. One could argue that becoming assertive is a process that hinges on how we view our self and our abilities resulting in how much effort is expended toward an activity, and how persistent we are at particular tasks (Eccles & Wigfield, 2002). This challenge is evident in the limitations with time, injury, and perception of competition. Individuals who can effectively challenge their limitations can not only be aware, but experience their perceived motives of socialization, physical, and psychological benefits.

Becoming assertive in the management of one’s time can afford increased time and experience within a variety of leisure activities. Many horsemen view their free time as limited, citing the amount of time, days per week, and inconsistency of schedule as prominent variables that limit leisure. Those who are assertive have created a schedule of free time. Tentative schedules may or may not be consistent each day but offer a goal of how many hours per week are needed to devote toward leisure. Individuals with a passive approach reported waiting for the activity to be presented to them and participation hinged upon whether free time was available. Aggressive individuals will assume that there needs to be leisure time and devote immediate attention, yet will ultimately not adhere because the goals were unrealistic.

Horsemen can become seekers of immediate gratification because of the instantaneous results in a horse race. Other horsemen can enjoy the process as seen in the amount of time devoted to training and caring for a horse. The individual must take caution in not mistaking the previously discussed aggressiveness for assertiveness. Fluctuation between passivity and aggression is common where assertiveness is not addressed. Ultimately, horsemen must develop flexible schedules for leisure in order to experience the understood benefits from sport and exercise participation. Furthermore, horsemen must be cautious in citing time as a limitation or an excuse not to exercise. Horsemen who place the appropriate effort to devote time to a particular activity will be able to exercise if they want to in their leisure.

The reluctance to become assertive is evident within the limitation of injury. Individuals who were assertive in addressing their limitation of injury chose physical activities that were non-detrimental to the injury. The non-detrimental exercises were perceived as enjoyable, which promoted adherence to the activity. Those who have been passive concerning their injury and mobility may need to consult a professional to discuss their physical and emotional issues. The non-active individuals do not identify themselves as athletes or exercisers. Cross and Markus (1994) argue that actual competence in a particular activity requires the combination of ability and an appropriate self schema for the behavior. Non-active injured individuals may not have the physical ability they once had; however, they could enhance their self-schema as an exerciser by assertively addressing the limitation.

These individuals may have a previously enjoyed activity, but their perceived limitation of injury renders them non-active. An injury may in fact be strengthened by similar exercises that are congruent with the individual’s previously considered favorite sport or exercise. It must be noted that a favorite sport is preferred because the individual must have first been assertive to continue and experience the activity. Becoming assertive with one’s injury will elicit the same phenomenon. Experiencing these new exercises may offer a new preference in sport or exercise. This process is best described by Markus and Nurius (1986), who state that how we view ourselves includes not only past experiences and current reality, but future hopes and expectations as well.

A level of competition is sometimes needed to participate in sports and exercise activities. Whether the competition is within one's self or to participate against a team or another, it serves as a motivator. For the present study, competition may be viewed as a limitation if not assertively defined for the individual participant. Those who reported participation in sports and exercise on a more frequent basis stated that they are competitive in leisure sport and exercise activities insofar as they enjoy the competition. Those who participate in leisure physical activity agree that this competition is different from the competition in their horse racing employment. This researcher noted that those who are assertive in identifying the difference in their competitiveness within employment sport and leisure sport were more likely to adhere to a regular exercise and sport program.

Participants that responded to competition in sports and exercise as "need to find a way to win" or "hate to lose” did not regularly participate in leisure sport and exercise activities. One might suggest that these previous statements are what forges an athlete to strive for success. This researcher would challenge that statement and suggest the statements of “want to win,” “try and win,” or “do my best” are more realistic views of competition. This view of competition may forge realistic personal goals. The realistic personal goals were evident within horsemen who participate in leisure sports and exercises. Horsemen noted that they set a goal for their exercise program that is challenging but realistic. This type of goal setting lends itself to a step approach. Those who can utilize a step approach to exercise and sport will realistically compete against their past performances and strive to progress.

Implications for Research

The Samaha Horsemen Activity Questionnaire (SHAQ) was designed to describe specific leisure and work activities in which horsemen participate. The SHAQ was a useful tool in describing a good portion of leisure activities but failed to allow horsemen to elaborate on leisure activities of their own choosing. The SHAQ could provide more areas where horsemen could write which leisure activities they participate and how many hours a week, rather than offering the five options (no time, half an hour, 1 hour, 2 hours, or more than 3 hours) in its current version. Allowing more write in areas may afford an opportunity to indicate activities that were not assumed. The SHAQ’s portion on sport and exercise activities should be reduced to a few of the prominent activities and write in activities.

Revising the SHAQ’s portion on other leisure activities should include a more in-depth exploration into the gambling behavior of horsemen. Gambling, as previously stated, is allowed and an acceptable practice amongst the horsemen. While not all horsemen are severe or habitual gamblers, the industry creates a more readily available avenue for this behavior to exist. The results indicated that gambling was related to lower participation in sport and exercise and lower well-being and self concept scores. Further exploration into gambling behavior will gain insight into which activities can replace gambling and foster positive leisure activities such as exercise and sport participation.

The Stress Profile and Tennessee Self Concept Scale were both proficient in examining the constructs studied in this research. The Stress profile offered insight into horsemen’s level of stress, well-being, exercise, and health habits. The Tennessee Self Concept Scale provided scores for physical, moral, family, academic/work, performance, and total self concept as well as a satisfaction with life subscale. These scales were, in this researcher's opinion, the right choice for this study.

Interviewing horsemen proved to be a difficult task. Part of the problem was that the questions were pointed specifically at the individual's participation in sport and exercise. Most of the questioning was based upon the horsemen's interpretation of their exercise and sport participation. Future questioning should be more exploratory into potential outcomes and motivations to participate in an exercise program. This questioning could help examine how committed horsemen are or might be to an exercise program.

Horsemen did not expand on many of the questions even when encouraged. The responses were mostly brief and, when questions were expanded, the conversation reverted to horse racing. Therefore, future interviews should incorporate more elements of their sport and what roles they play in it. Horsemen could be asked more questions on horseracing and what physical abilities it takes to effectively work and participate in their sport. Questioning could therefore incorporate the leisure physical activities that promote job tasks, socialization, and other benefits that were discovered within this study.

Implications for Practitioners

The practical applications of the findings are that programs and services to this community can be performed with more efficiency. Programs or services should involve components of assertiveness training, leisure sport and exercise, and advancement of positive leisure activities. Assertiveness training would be useful in the development of time management, work performance, and prevention. The applied program should foster change as an intrinsic rather than extrinsic reward. The intrinsic rewards may be fostered through education and individual accounts of the experiences in participating in exercise and sports activities. Emphasis should be placed on the individuals to be assertive in addressing their limitations in order to continue participation in their free time.

Sports and leisure activities should be offered with an emphasis on enjoyment and socialization rather than just competition. A program can therefore advance the possibilities of participation in other positive leisure activities. Individuals who participate in leisure with fellow horsemen might learn from the program that changes in hobbies or activities may have a positive impact on their psychological well-being. This learned experience can be adapted into these individuals' lives. Therefore, negative leisure activities may be less frequent when leisure sports and exercise participation is adapted into one’s life. This all may culminate in improvements in personal well-being and the community at large.

The generalizabilty of the study lends itself to the need to challenge our limitations as either realistic or irrational. The benefits described within this study are by no means exclusive to the horseracing community. Effort must be placed upon all of us to experience individual psychological benefits that can be derived through leisure sport and exercise participation.

CHAPTER 5

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS FOR FUTURE RESEARCH

The present study was a description of horsemen’s perceived benefits and liabilities derived from participation in leisure sport and exercise activities. This chapter is presented in the following sections: Summary, Conclusions, and Recommendations for Future Research.

Summary

This study was a description of horsemen’s perceived psychological benefits and liabilities derived from leisure sport and exercise participation. The horsemen that participated in this study were active trainers or grooms who stabled their horses at a training center. Sixty-six horsemen completed the Tennessee Self concept Scale: 2, Stress Profile, and this researcher’s inventory of horsemen’s activities entitled Samaha Horsemen’s Activities Questionnaire (SHAQ). Seven horsemen were interviewed to obtain qualitative data. Two of the seven horsemen were omitted from the analysis due to no or limited responses to the questions.

Quantitative data results revealed that leisure participation in exercise activities correlated with greater well-being, physical self concept, and total self concept scores. There was a statistically significant negative relationship between time devoted to participation in exercise and stress scores. The horsemen that participated in this study work in professional harness racing. An allowable and acceptable leisure activity is gambling. However, results indicated that there were statistically significant negative relationships between time spent gambling and physical self concept, well-being, and exercise and sport participation.

Horsemen who were above the median on participation in sport and exercise had significantly higher physical self concept and well being scores than those who were below the median. The results indicate that participation in a variety of exercise and sports as well as time devoted to leisure physical activity had the strongest relationship with improved well-being.

Analysis of the transcribed interviews revealed two major themes (limitations and perceived outcomes) and three subthemes within limitations (time, injury, and competitiveness) and perceived outcomes (socialization, physical, and psychological well-being) that described horsemen’s participation in leisure sport and exercise. A central conflict emerged within horsemen’s reluctance to become assertive in addressing their limitations. Horsemen viewed limitations in participation in sport and exercise as time, injury, and competitiveness. Those who participate in leisure sport and exercise were assertive in addressing their own limitations. The perceived outcomes were physical, socialization, and psychological benefits. Participants expressed that leisure sport and exercise provided possible benefits regardless of their involvement or adherence to an exercise program.

Conclusions

Several conclusions can be drawn from the results and discussion of this study. The following provides this study's conclusions from both the quantitative and qualitative results.

1. There is a statistically significant positive relationship between horsemen's reported involvement in leisure sport and exercise activities and psychological well-being.

2. There are statistically significant positive relationships between horsemen's reported involvement in leisure sport and exercise activities and physical, work, and total self concept.

3. There is a statistically significant positive

relationship between horsemen’s reported involvement in positive non-sport and exercise leisure activities and perceived self concept.

4. There is not a statistically significant positive relationship between horsemen’s reported involvement in leisure sport and exercise activities and social self concept.

5. There is not a statistically significant positive relationship between horsemen’s reported involvement in on-site health programs and events and perceived self concept.

6. There is a statistically significant negative relationship between horsemen’s reported involvement in negative non-sport and exercise leisure activities and perceived self concept.

7. There is a statistically significant negative relationship between horsemen’s reported involvement in leisure sport and exercise activities and perceived stress.

8. There is a statistically significant negative relationship between horsemen’s reported involvement in leisure sport and exercise activities and participation in negative leisure activities.

9. There is not a statistically significant negative

relationship between horsemen's reported involvement in leisure sport and exercise activities and frequency of work related activities.

10. There is not a statistically significant negative relationship between horsemen's reported involvement in negative leisure activities and perceived work self concept. There is, however, a statistically significant negative relationship between reported involvement in negative leisure activities and perceived physical self concept.

11. Horsemen who reported above the median involvement in leisure sport and exercise have statistically significant higher well-being and self concept scores than horsemen below the median.

12. Horsemen who reported above the median involvement in leisure sport and exercise have statistically significant lower stress scores than horsemen below the median

13. There are no combinations of leisure sport and exercise activities that statistically significantly contribute to the prediction of perceived reduced stress.

14. Treadmill usage, weight lifting, and individuals' chosen exercises statistically significantly contribute to the prediction of perceived self concept.

15. Treadmill usage and individuals’ chosen exercises statistically significantly contribute to the prediction of perceived well-being.

Recommendations for Future Research

The following section provides possible recommendations for future research with horsemen.

1. This study was designed to describe the population of horsemen who work in the professional horse racing industry. The study described their perceived psychological benefits derived from participating in leisure sport and exercise activities. Future research with horsemen should be performed with an experimental design that investigates psychological and physiological benefits from participating in exercise.

2. This study has indicated that horsemen participate in exercise and sports activities in order to socialize, feel physical exertion, and improve mental well-being. Research should investigate which level of exercise participation offers the greatest psychological and physiological benefits. A large portion of the current studies focus on special populations. The studies that investigate exercise and sports’ effect on certain populations’ mental well-being, primarily omit those who have physical jobs. Horsemen may do anaerobic or aerobic

exercises every day through the nature of their work. The question must then be posed, not whether they are sedentary or physically active, but rather, what role does leisure sports and exercise play in their perceived psychological well-being and physiological benefits. In order to address this phenomenon, an experimental study should be designed with varying levels of exercise programs and a control group. Horsemen would be administered the Stress Profile before and after the 12 week treatment. Horsemen should be given a diary to track their progress and be interviewed in order to offer qualitative data.

3. Horsemen work in a sport about which they are greatly passionate. The horse racing industry has forged its own subculture through this passion. Future research should be performed with respect to this subculture by further education and investigation into this subculture. This researcher has the privilege of working in the racing industry for the past 12 years. Through these 12 years there has been a concerted effort to learn about the community. The level of trust and respect grows through this education. Future researchers would benefit from first learning about the horsemen’s job, careers, and positions through observations if access is granted.

4. Future research with the horsemen population should

be designed with the intention of creating a program to offer an alternative to the routine and stress of their jobs. An individual can, therefore, learn from the program and become assertive in creating a schedule to exercise for intrinsic rewards.

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APPENDICES

APPENDIX A

Interview Questions

1. Describe your participation in leisure sport and exercise in the past 5 years?

2. What is your current level of participation in sport and exercise activity? How much time per week (in hours) have you devoted to physical activity in the past month?

3. Do you have a favorite sport or exercise that you participate? (if yes) what is your favorite sport?

4. Tell me some reasons why you participate (or don’t) in sports and exercise activities? Tell me some reasons why you participate in other leisure activities (hobbies, theater, socializing, watch sports, etc.)?

5. What are some of the leisure activities you regularly participate in the past month?

6. What are the advantages to you in participating in sport & exercise activities? In other leisure activities?

7. What are the disadvantages to you in participating in sport & exercise activities? In other leisure activities?

8. Do you get satisfaction when you participate in

Sports and exercise? Briefly describe this satisfaction. Do you get satisfaction out of participating in other leisure activities?

9. Do you find that most of your leisure activities Involve some aspect of horse racing? (e.g. socializing with friends, after work activities, going to the races, etc.) Who do you participate with in Sport and exercise activities?

10. Is it difficult to find people who like to do the same leisure activities that you like?

11. Do you consider yourself to be a participant in the athletic, business or both ends of professional horse racing? Briefly explain your answer to me.

12. Does participation in sport and exercise help you with your job and job tasks?

13. Do you consider your job stressful? how do you "blow off some steam"?

14. Is participating in leisure physical activities different from the physical activities you participate in your work? How are they different or same?

15. Do you consider yourself to be a competitive person with respect to exercise and sports? Work? Briefly explain this competition.

APPENDIX B

Expert Panel List

Horsemen:

1. Anthony Abietello
   Horsemen Experience: over 40 years
   Position: Commissioner in The New Jersey Racing Commission & Race Horse Farm Owner
   Positions Held: Groom, Driver, Trainer, Owner, and Farm Owner.
2. Michael Izzo
   Horsemen Experience: 32 years
   Position: Executive Director of the Standardbred Breeders and Owners Association of New Jersey (SBOA of NJ) & Trainer
   Positions Held: Groom, Driver, Trainer, and Horse Owner.

Psychology:

1. Steven Baron, Ph.D.
   Position: Professor at Montgomery Community College, Pennsylvania
   Experience: 15 years
   Field of Psychology: Sport Psychology
2. Nancy Samaha, Ph.D.
   Position: School Psychologist at Perth Amboy Public School, New Jersey
   Experience: 13 years
   Field of Psychology: Educational Psychology

APPENDIX C

Letter Requesting Permission

TEMPLE UNIVERSITY
A Commonwealth University

College of Education

Department of Kinesiology
Pearson Hall (048-00)
Philadelphia, Pennsylvania 19122
(215) 204-8707
Fax: (215) 204-8705

Thursday, April 11, 2002

Mr. Bix Dimao
General Manager
Showplace Farms
State Highway 33 East
Englishtown, NJ 07726

I am a doctoral student at Temple University's College of Education in the Department of Kinesiology where I am currently working on my dissertation for my Ph.D. in Sport Psychology. I am writing to request permission to use your site to study the beliefs of horsemen concerning psychological benefits and liabilities of recreational sport and exercise involvement. To help gain further insight into this area I wish to seek volunteers, from your farm, to participate in this study. All voluntary subjects will be asked to complete the following questionnaires: The Samaha Horsemen Activity Questionnaire; The Stress Profile (Nowack, 1999) and The Tennessee Self-Concept Scale (Fitts & Warren, 1996). The voluntary subjects may also be interviewed to elicit further information regarding my research. Participation in this study is completely voluntary and data provided will be recorded anonymously to protect the identity of the subjects.

The study will be conducted over a 6 week period. Questionnaires will be administered to groups of 15 – 25 subjects. A minimum of 4 questionnaire administration sessions will be required to attain a significant number of subjects (90 – 100 subjects). Completion time of the questionnaires is estimated to be 1.25 hours. Subjects may be asked to meet, individually, with me to be interviewed about their participation in exercise and sport. Each interview will be recorded anonymously and may take 10 minutes to complete. Interviews will be conducted at a separate time from the questionnaire administration session.

I have attached my Introduction and Methods section of the study for your review. This document will explain, in detail, the purpose of the aforementioned study and the procedures that will be followed. If you have any questions you can contact me at 732-747-7445 or 201-935-8500 ext. 2076. Thank you for your consideration.

Sincerely Yours,

, MA

Christopher J. Samaha, MA

APPENDIX D

Permission Letter

Showplace Farms

Thursday, April 18, 2002

Mr. Christopher J. Samaha
27 Henry Street
Shrewsbury, NJ 07702

I am pleased to grant permission to use Showplace Farms to conduct your study. I am aware that you will be conducting research with the horsemen on their beliefs concerning psychological benefits and liabilities of sport and exercise involvement.

If there is anything that I can assist you with please call me at 732-446-3100. I am looking forward to talking to you soon.

Sincerely Yours,

Bix DiMeo, General Manager

Showplace Farms, 505 Rte. 33, Englishtown, N.J. 07726

APPENDIX E

Volunteers Needed

Chris Samaha is conducting a study that will look at horsemen's perceived benefits from participation in a variety of leisure activities. In order to perform this study he is looking for volunteers (trainers, grooms & drivers) to fill out 3 questionnaires. The questionnaires will be administered at Showplace Farms in the observation deck. All questionnaires will be completed anonymously. The questionnaires will be given out to horsemen during the time frames that are listed below.

For 60 to 75 minutes of your time you will be given a complementary lunch and be entered in a drawing to win prizes (grand prizes: 1 of 4 DVD players). If you are interested in participating in this study please come by on one of the following dates:

Where: In the observation deck (Showplace Farms above barn J)
Monday March 22: 12:30pm - 3:30pm
Monday March 29: 12:30pm- 3:30pm
Monday April 5: 12:30pm - 3:30pm
Monday April 12: 12:30 – 3:30pm
Monday April 19: 12:30pm - 3:30pm
Monday April 26: 12:30pm – 4:00pm

I would like to thank you all in advanced for reviewing this information and your consideration. I look forward in seeing you soon.

APPENDIX F

Consent Form

ID#: 127

TEMPLE UNIVERSITY
A Commonwealth University

College of Education

Department of Kinesiology
Pearson Hall (048-00)
Philadelphia, Pennsylvania 19122
(215) 204-8707
Fax: (215) 204-8705

Subject Consent Form

Title: Leisure Sport And Exercise Participation As A Predictor Of Psychological Benefits Within Horsemen

Investigators: Christopher J. Samaha, Department of Kinesiology, 732-446-3100 ext. 42
Dr. Carole Ogelsby, Department of Kinesiology , 215-204-8707

We are currently engaged in a study of the psychological benefits and liabilities that sport and exercise involvement has upon horsemen. To help gain further insights into this area we will ask you to complete the following forms:

1. The Samaha Horsemen Activity Questionnaire
2. The Stress Profile
3. The Tennessee Self-Concept Scale

After you finish these questionnaires you may be randomly selected to return on a separate date to be interviewed. You are not obligated to return and you may refuse to be interviewed. The interviewer will ask questions about your involvement in sport and exercise activities. The interviews will be conducted by Christopher Samaha, MA.

The data you will provide will be recorded anonymously and your participation and anything you say or do during the session will be held in the strictest confidence. All data that is obtained will be stored in a file cabinet under lock and key. The Investigators of this study will be the only people who have access to the data you provide. Data will be archived for 3 years after to the onset of this study.

We welcome questions about the research at any time. Your participation in this study is on a voluntary basis, and you may refuse to participate at any time without consequence or prejudice.

Questions about my rights as a research subject may be directed to Ms. Ruth Smith, Office of Vice Provost for Research, Institutional Review Board, Temple University, N. Broad Street and Oxford Street, Philadelphia, PA, 19122, Phone (215) 204-7460.

Signing your name below indicates that you have read and understand the contents of this Consent Form and that you agree to take part in this study.

______________________________ ____________
Participant's Signature Date

______________________________ ____________
Investigator's Signature Date

TEMPLE UNIVERSITY
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JUL 25 2003
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APPENDIX G

Samaha Horsemen Activity Questionnaire (SHAQ)

Samaha Horsemen Activity Questionnaire (SHAQ)   ID#:______________

Please answer the following questions. Please do not put your name on any portion of this questionnaire. Thank you for taking the time to complete this questionnaire.

1) Age: _______

2) Position: __ Groom   __ Trainer   __ Driver   __ Other

3) Gender: ___ Male   ___ Female

4) Ethnicity: __ Caucasian American   __ African American   __ Hispanic
__ French Canadian   __ Other : _____________

5) Education: __ Less than 12th grade   __ High School Graduate
__ College Bachelors Degree   __ Masters Degree   __ Above Masters

LEISURE ACTIVITIES
Please indicate the frequency that you participate in the following leisure physical activities by circling the number that best describes your involvement.

	Never	Rarely	Sometimes	Often	Frequently
6) Exercise	1	2	3	4	5
7) Play sports	1	2	3	4	5
8) Golf	1	2	3	4	5
9) Basketball	1	2	3	4	5
10) Tennis	1	2	3	4	5
11) Bowling	1	2	3	4	5
12) Skiing	1	2	3	4	5
13) Volleyball	1	2	3	4	5
14) Soccer	1	2	3	4	5
15) Baseball/Softball	1	2	3	4	5
16) Hockey	1	2	3	4	5
17) Horseback riding	1	2	3	4	5
18) Walking for exercise	1	2	3	4	5
19) Weight lifting	1	2	3	4	5
20) Stationary Bike	1	2	3	4	5
21) Bike riding	1	2	3	4	5
22) Stretching	1	2	3	4	5

Samaha Horsemen Activity Questionnairre (SHAQ) ID#:______________

	Never	Rarely	Sometimes	Often	Frequently
23) Jogging/running	1	2	3	4	5
24) Treadmill	1	2	3	4	5
25) Skating	1	2	3	4	5
26) Aerobics	1	2	3	4	5
27) Use the gym on-grounds	1	2	3	4	5
28) Other physical Activities	1	2	3	4	5

Please indicate other Activities______________________________________

29) What is the average frequency of time you devote to the activities (6-28) per week?

__ 0 __ up to 1hr. __ 1 - 2 hrs. __ 2 - 3hrs __ over 3 hours

Please indicate the frequency that you participate in the following leisure activities by circling the number that best describes your involvement.

	Never	Rarely	Sometimes	Often	Frequently
30) Read Books/Magazines	1	2	3	4	5
31) Hobbies	1	2	3	4	5
32) Attend sporting events	1	2	3	4	5
33) Routine doctor visits	1	2	3	4	5
34) Day trips away from racing	1	2	3	4	5
35) Go to/rent movies	1	2	3	4	5
36) Community events	1	2	3	4	5
37) Socialize with friends/family	1	2	3	4	5
38) Church or Temple	1	2	3	4	5
39) On-site (e.g.:health fair/events	1	2	3	4	5

40) What is the average frequency of time you devote to the activities (30-39) per week?

__ 0 __ up to 1hr. __ 1 - 2 hrs. __ 2 - 3hrs __ over 3 hours

41) Smoke cigarettes	1	2	3	4	5
42) Drink alcohol	1	2	3	4	5
43) Use substance to fall asleep	1	2	3	4	5
44) Use substance to wake up	1	2	3	4	5
45) Use drugs	1	2	3	4	5

Samaha Horsemen Activity Questionnaire (SHAQ) ID#:____________

	Never	Rarely	Sometimes	Often	Frequently
46) Gamble	1	2	3	4	5

47) What is the average frequency of time you devote to the activities (41-46) per week?

__ 0 __ up to 1hr. __ 1 - 2 hrs. __ 2 - 3hrs __ over 3 hours

Please indicate who you spend your leisure time with?

	Never	Rarely	Sometimes	Often	Frequently
48) People in the racing industry	1	2	3	4	5
49) Significant other	1	2	3	4	5
50) People outside of racing	1	2	3	4	5
51) Alone/Self	1	2	3	4	5
52) Family	1	2	3	4	5

53) Do you make time for leisure activities?

	Never	Rarely	Sometimes	Often	Frequently
	1	2	3	4	5

WORK ACTIVITIES

54) How many days a week do you work? ____________

55) How many hours per week do you work? ____________

Please indicate the frequency that you participate in the following work related activities by circling the number that best describes you.

	Never	Rarely	Sometimes	Often	Frequently
56) Heavy lifting	1	2	3	4	5
57) Care for the horse	1	2	3	4	5
58) Organize stalls/barns	1	2	3	4	5
59) Jog/ride the horse	1	2	3	4	5
60) Feed the horse	1	2	3	4	5
61) Miss or late to work	1	2	3	4	5

62) How many years have you been participating in racing?____________

63) What was your age when you first started working in racing?____________

APPENDIX H

Consent To Audiotape

TEMPLE UNIVERSITY
A Commonwealth University

College of Education

Department of Kinesiology
Pearson Hall (048-00)
Philadelphia, Pennsylvania 19122
(215) 204-8707
Fax: (215) 204-8705

Investigator's Name: Christopher J. Samaha
Department: Temple University/ Department of Kinesiology
Project Title: Leisure Sport And Exercise Participation As A Predictor Of Psychological Benefits Within Horsemen

Subject: ______________________________ Date: June 26, 2003

Log #:____________________

I give Christopher J. Samaha, M.A. permission to audiotape me. This audiotape will be used only for the following purpose (s):

RESEARCH

This audiotape will be used as a part of a research project at Temple University.
I have already given written consent for my participation in this research project. At no time will my name be used.

Description:

WHEN WILL I BE AUDIOTAPED?

I agree to be audiotaped during the time period:

_______________ to _______________.

TEMPLE UNIVERSITY
IRB (COMMITTEE B) APPROVAL
JUL 25 2003
VALID FOR NO MORE THAN ONE YEAR

HOW LONG WILL THE TAPES BE USED?

I give my permission for these tapes to be used from:
June 2003 to January 2004.

These Audiotapes will be archived for 3 years after the onset of this study.

WHAT IF I CHANGE MY MIND?

I understand that I can withdraw my permission at any time. Upon my request, the audiotape(s) will no longer be used. This will not affect my care or relationship with Christopher J. Samaha in any way.

OTHER

I understand that I will not be paid for being audiotaped or for the use of the audiotapes.

TEMPLE UNIVERSITY
A Commonwealth University

College of Education

Department of Kinesiology
Pearson Hall (048-00)
Philadelphia, Pennsylvania 19122
(215) 204-8707
Fax: (215) 204-8705

Permission to Audiotape- page2 of 3

FOR FURTHER INFORMATION

If I want more information about the audiotape(s), or if I have questions or concerns at any time, I can contact:

Investigator's Name: Christopher J. Samaha

Department: Kinesiology

Institution: Temple University

Street Address: Pearson Hall (048-00)

City: Philadelphia State: Pennsylvania

Zip Code: 19122

Phone: Office: 201-935-8500 ext. 2076 Home: 732-740-5376

This form will be placed in my records and a copy will be kept by the person(s) named above. A copy will be given to me.

TEMPLE UNIVERSITY
IRB (COMMITTEE B) APPROVAL
JUL 25 2003
VALID FOR NO MORE
THAN ONE YEAR

TEMPLE UNIVERSITY
A Commonwealth University

College of Education

Department of Kinesiology
Pearson Hall (048-00)
Philadelphia, Pennsylvania 19122
(215) 204-8707
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Investigator's Name: Christopher J. Samaha
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I give Christopher J. Samaha, M.A, permission to audiotape me. This audiotape will be used only for the following purpose (s):

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Description:

WHEN WILL I BE AUDIOTAPED?

I agree to be audiotaped during the time period:

______________ to ______________.

TEMPLE UNIVERSITY
IRB (COMMITTEE B) APPROVAL
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OTHER

I understand that I will not be paid for being audiotaped or for the use of the audiotapes.

APPENDIX I

Horsemen's Leisure Mean Scores on SHAQ

Item	Symbol	M	SD	Avg
Variety of Sports & Exercise	SEV	44.36	12.28	2.11
Variety of Sports Only	SV	16.14	5.36	1.79
Baseball		1.83	1.12	1.83
Basketball		1.56	0.88	1.56
Bowling		1.88	1.09	1.88
Golf		1.67	1.11	1.67
Hockey		1.12	0.51	1.12
Skiing		1.19	0.56	1.19
Soccer		1.29	0.69	1.29
Tennis		1.37	0.72	1.37
Volleyball		1.71	0.97	1.71
Variety of Exercise Only	EV	26.05	8.74	2.61
Aerobics		1.48	0.98	1.48
Bike riding		2.16	1.16	2.16
Gym		2.09	1.11	2.09
Horseback riding		2.27	1.38	2.27
Jogging		2.05	1.18	2.05
Other		2.19	1.35	2.19
Skating		1.24	0.49	1.24
Stationary Bike		1.83	1.11	1.83
Stretching		2.62	1.31	2.62
Treadmill		2.18	1.25	2.18
Walking for Exercise		3.09	1.46	3.09
Weightlifting		1.95	1.24	1.95
Time Devoted To Exercise & Sport	SET	3.32	1.31	3.32
Frequency of Sport & Exercise	SEF	5.62	1.73	2.81
Variety of Positive non-physical Leisure	PLAV	26.74	5.15	2.67
Attend Sporting Events		2.59	1.09	2.59
Church or Temple		1.67	1.03	1.67
Community Events		1.85	0.94	1.85
Day Trips		2.67	1.06	2.67
Doctor Visits		2.40	1.26	2.40
Go to/ Rent Movies		2.96	1.07	2.96
Hobbies		2.95	1.28	2.95
Onsite Events		2.38	1.22	2.38
Read Books/Magazines		3.61	1.16	3.61
Socialize with Friends		3.65	0.92	3.65
Variety of Negative non-physical Leisure	NLAV	10.07	2.98	1.68

Item	Symbol	M	SD	Avg
Alcohol Drinking		2.42	1.20	2.42
Gambling		2.55	1.37	2.55
Smoke Cigarettes		1.52	1.26	1.52
Substances to Fall Asleep		1.28	0.65	1.28
Substances to Stay Awake		1.14	0.46	1.14
Use Drugs		1.18	0.76	1.18
Time Devoted to Positive non-physical Leisure	PLT	3.79	1.32	3.79
Time Devoted to Negative non-physical Leisure	NLT	2.86	1.31	2.86

Avg= average score of question per item
N = 66

APPENDIX J

List Of Variables

SHAQ	Stress Profile	Tennessee Self Concept Scale
EV (Exercise Variety)	SPE (Exercise subscale)	Family Self Concept
NLT (Negative Leisure Time)	Stress	Moral Self Concept
NLV (Negative Leisure Variety)	Well-being	Physical Self Concept
PLT (Positive Leisure Time)		Work Self Concept
PLV (Positive Leisure Variety)		Total Self Concept
SEF (Sport & Exercise Frequency)		
SET (Sport & Exercise Variety)		
SEV (Sport & Exercise Time)		
SV (Sport Variety)		

APPENDIX K

Horsemen's Positive Relationships Between the Variables

	SEV	EV	SV	SEF	SET	PLV	PLT
Family SC	.24*	.26*	.09	.15	.16	.29*	.15
Moral SC	.08	.08	- .02	.06	.19	.28*	.18
Physical SC	.39**	.45**	.09	.48**	.44**	.47**	.19
Social SC	.11	.07	.06	.09	.17	.29*	.02
Total SC	.28*	.28*	.11	.27*	.33**	.46**	.21
Well-Being	.47**	.44**	.27*	.42**	.47**	.55**	.36**
Work SC	.31*	.21	.28*	.32**	.33**	.44**	.39**

N = 66

EV = Participation in a variety of exercise

PLT = Weekly time devoted to non-physical positive leisure activities

PLV = Participation in a variety of non-physical positive leisure activities

SC = Self Concept

SEF = Sport and exercise frequency

SET = Weekly time devoted to sport and exercise

SEV = Participation in a variety of sport and exercise activities

SV = Participation in a variety of sports

APPENDIX L

Horsemen’s Negative Relationships between the Variables

	Stress	NLV	NLT
Family SC	-.43**	-.02	-.02
Moral SC	-.40**	-.22	-.08
Physical SC	-.60**	-.38**	-.34**
Social SC	-.49**	-.23	-.04
Stress	1.00	.36**	.21
Total SC	-.67**	-.31*	-.17
Well-Being	-.59**	-.33**	-.23
Work SC	-.58**	-.17	-.11
SEV	-.23	-.31*	-.22
EV	-.23	-.43**	-.37**
SV	-.08	.03	.15
SEF	-.19	-.31*	-.25*
SET	-.40**	-.51**	-.35**
PLV	-.39**	-.41**	-.33**
PLT	-.33**	-.26*	-.19
NLV	.36**	1.00	.66
NLT	.21	.66	1.00

N = 66

EV = Participation in variety of exercise

NLT = Weekly time devoted to non-physical negative leisure activities

NLV = Participation in a variety of non-physical negative leisure activities

PLT = Weekly time devoted to non-physical positive leisure activities

PLV = Participation in a variety of non-physical positive leisure activities

SC = Self Concept

SEF = Sport and exercise frequency

SET = Weekly time devoted to sport and exercise

SEV = Participation in a variety of sport and exercise activities

SV = Participation in a variety of sports