WEST VISAYAS STATE UNIVERSITY
COLLEGE OF EDUCATION
GRADUATE SCHOOL
Iloilo City

EXERCISE MOTIVATION AND EXERCISE ATTRIBUTION OF RECREATIONAL ATHLETES

A Thesis Presented to the

Faculty of the Graduate School

College of Education

West Visayas State University

La Paz, Iloilo City

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts in Education

(Physical Education)

by

Jerson Jalandoni Jaurigue

March 2011

WEST VISAYAS STATE UNIVERSITY
COLLEGE OF EDUCATION
GRADUATE SCHOOL
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APPROVAL SHEET

A Thesis for the Degree

Master of Arts in Education

(Physical Education)

by

JERSON J. JAURIGUE

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Acknowledgement

The researcher wishes to express his deepest gratitude and sincere appreciation to the following persons who contributed and shared their precious time, support, encouragement, and inspiration for the realization of this research study:

Prof. Eva Rose G. Malones, thesis adviser, for her enduring patience and enlightenment, untiring effort, and concern in providing lots of courage and confidence, all throughout the process of writing this thesis;

Dr. Richard J. Gabayoyo, panel member, for his untiring help and encouragement, valuable suggestions, and constructive criticisms for the refinement of the research study;

Dr. Evangeline B. Ybañez, program adviser and panel member, for her valuable and meticulous comments and suggestions;

Dr. Elnora V. Loriega, OIC-Dean of the College of Education, for the approval of the study;

+Dr. Ramon C. Cabag, former Dean of the College of Education, for accepting the research study, and for his comments and suggestions;

Dr. Shirley R. Jusayan, panel member, for sitting in behalf of Dr. Cabag during the final defense;

Prof. Camila Jill R. Belandres, panel member, for her insights, comments and suggestions;

Prof. Liberty R. Porras, former program adviser, and Prof. Ma. Elena Bernadette P. Hojilla, pre-oral panel member, for their comments and suggestions;

Dr. Helen A. Hofileña, research statistician, for her valuable time in helping interpret the research data;

Prof. Cynthia L. Morga for editing this paper;

Dr. Catherine O. Roces, Dr. R Jonathan J. Quimpo, Prof. Ninette T. Bajador, jurors, for validating the instrument;

Recreational athletes and physical education teachers, research and pilot test respondents, respectively, for their patience and valuable time in answering the instruments;

Dr. David Markland and Prof. David K. Ingledew, authors of the Exercise Motivation Inventory (EMI-2) instrument, for allowing the researcher to use the instrument;

Colegio de San Jose, Higher Education Department family, Dr. Ma. Luz Percy Abolucion, Ms. Norma Nodado, Mrs. Susan Barbara Donato, Mrs. Rufina Caas, Mr. Sanny Fernandez, Ms. Mercedes Fango, Ms. Eufemia Brasileño, Mr. Globert Flores, Mrs. Rochelle Flores, Mr. Armando Forbes, Ms. Irma Britaña, Ms. Ma. Luz Pagtolon-an, Mr. Nonito Baldeviso, Mrs. Dolores Baldeviso, Mr. Leo Prieto, Mrs. Serena Alabado, Mrs. May Anne Jaro and other colleagues, for their friendly support, encouragement, camaraderie and prayers;

Mr. Arlan Maro, Mr. Alrey Duero and other friends, for their moral support and encouragement;

Ms. Catherine M. Vergara, for her moral support, encouragement, and unselfish love that inspired the researcher to finish this research study;

The researchers family, for the support and understanding;

Nanay Teresita, Tatay Abelardo, Lola Auring, Sister Jane, and nieces John Lhester and Aljon, for their understanding, unconditional love, moral support and prayers; and

Above all, the Almighty God, for the gift of life, the guidance, unconditional love, courage, direction, and countless blessings that made this research study possible.

Jerson Jalandoni Jaurigue

March 2011

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Jaurigue, Jerson J. *Exercise Motivation and Exercise Attribution of Recreational Athletes*. Unpublished Master of Arts in Education (Physical Education) Thesis, West Visayas State University, Iloilo City, March 2011.

Abstract

This descriptive study determined the exercise motivation and exercise attribution of recreational athletes in one of the major cities in Panay Island. A total of 75 purposively selected respondents who are regular members in a particular club for at least a year and have finished at least a college degree participated in the study. To gather data a researcher-made instrument for exercise attribution and the Exercise Motivations Inventory (EMI-2) by Markland and Ingledew 1997 (Anshel, 2003) were used.

Mean, rank and standard deviation were the descriptive statistics while the Mann-Whitney U Test, Kruskal-Wallis Test, and Spearman Rank Correlation Coefficient Analysis, all set at.05 level of significance, were the inferential statistics. The results revealed that whether taken as an entire group or classified according to age, gender and employment type the exercise motivation of recreational athletes was *personal enhancement*. Their exercise attribution as an entire group and when classified as to gender was *work*

related, including those who were self-employed, were working in government agencies and were 30 years old and below. However, the exercise attribution of those who were 31 yrs. old and above and working in private agencies was *health-related*. No significant difference existed in the exercise motivation of recreational athletes when they were classified according to age and gender but a significant difference existed when they were grouped as to employment type. Similarly, a significant difference existed in their exercise attribution when they were classified according to age but no significant difference existed when they were grouped as to gender and employment type. A significant relationship existed between the recreational athletes' exercise motivation and exercise attribution.

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EXERCISE MOTIVATION AND EXERCISE ATTRIBUTION OF RECREATIONAL ATHLETES

Jerson J. Jaurigue

Chapter 1

Introduction to the Study

Chapter 1 is made up of five parts: (1) Background and Theoretical Framework of the Study, (2) Statement of the Problem and the Hypotheses, (3) Significance of the Study, (4) Definition of Terms, and (5) Delimitation of the Study.

Part One, Background and Theoretical Framework of the Study, presents the underlying reasons for conducting the research and provides the framework that served as basis and support for the study.

Part Two, Statement of the Problem and the Hypotheses, states the general and specific problems as well as the hypotheses tested.

Part Three, Significance of the Study, describes the stakeholders of the research and the manner by which they may able to benefit from the results.

Part Four, Definition of Terms, defines conceptually and operationally the important terms and the key variables used in the study.

Part Five, Delimitation of the Study, sets the limits of the research in terms of the respondents, research design, variables, research instrument, and statistical tools.

Background and Theoretical Framework of the Study

The importance of exercise is nothing new. Thomas Jefferson once wrote that to be successful in academic studies, a person should give about two hours every day, to exercise; for health must not be sacrificed to learning. A strong body makes the mind strong (http://kidshealth.org/teen/school_jobs/college/exercise.html).

Most experts today do not just demand two hours of daily exercise. The U.S. Department of Health and Human Services recommends that people get at least 60 minutes of moderate to vigorous physical activity most days of the week. For example, brisk walking, jogging, and swimming are easy ways to boost heart rate and promote cardiovascular health. Research has shown that exercise can also help lower blood pressure and counter stress.

Inactive adults have twice the mortality of adults who are at least somewhat active (Blair and Connelly, 1996). Schools that promote physical activity may have a significant impact on reducing childhood obesity, chronic disease, and, ultimately, adult mortality. Therefore, physical education teachers hold a tremendous responsibility on the promotion of exercise among youth. Insofar as physical activity has been associated with increased academic performance, self-concept, mood, and mental health, the promotion of physical activity and exercise may also improve quality of life.

Regular physical activity substantially reduces the risk of dying of coronary heart disease, the nation's leading cause of death, and decreases the risk of developing colon cancer, Type 2 diabetes and high blood pressure. It also helps to control weight; contributes to healthy bones, muscles, and joints; reduces falls among the elderly; helps to relieve the pain of arthritis; reduces symptoms of anxiety and depression; and is associated with fewer hospitalizations, physician visits, and medications. Moreover, physical activity need not be strenuous to be beneficial; people of all ages benefit from moderate physical activity, such as 30 minutes of brisk walking on five or more days a week.

On top of these physiological, psychological and social benefits of exercise, people demonstrate varying reasons to exercise and not to exercise. Based on literature, people exercise for these top reasons: weight control, feeling good after, increased energy, muscle tone, cardiovascular benefits, keep flexibility, reduce stress, time for self, enjoy exercise and improve self-esteem (www.rebound-aerobics.com).

Males and females also demonstrate varying reasons for exercise. According to a survey (www.rebound-aerobics.com), the most cited reason for exercise among males was muscle tone while for females was weight control.

The present study was anchored on three motivation theories in order to determine the exercise motivation and exercise attribution of recreational athletes. These are attribution theory, achievement goal theory and self-determination theory.

Attribution theory (theory of motivation, 2010) says that attributions influence motivation. It further states that making attributions for failure to ability, or for success to luck, decreases motivation and that making attributions for failure to effort, or for success to effort or ability, increases motivation. In addition, learned helplessness, is associated with making attributions for failure to ability.

Achievement goal theory (theory of motivation, 2010) cites that achievement goals influence behavior. Achievement goal theory has three aspects: goal involvement, goal orientation, and motivational climate. Goal involvement focuses on whether an individual tries to compete or master in a particular achievement situation. Goal orientation focuses on whether an individual generally tries to compete or to master in a particular achievement situations. Staying fit is both an achievement and a goal. Motivational climate focuses on whether the environment is set up to reward competing or mastering. Research has shown that the highest level of motivation results when an individual is high in task orientation, high in outcome orientation, and in a mastery-focused climate. In contrast, the lowest level of motivation results when an individual is low in task orientation, low in outcome orientation, and in a competitively-focused climate.

Self-determination theory (theory of motivation, 2010) is an interactional theory of motivation. Aspects of the environment, the social factors, interact with aspects of the individual. The core psychological needs for this theory include the need

for autonomy, the need for competence, and the need for relatedness or connection. Self-determination theory, then, says that to the extent that an individual's needs for competence, autonomy, and relatedness are met, he will be more intrinsically motivated. That is, if the environment, a teacher, a coach, or a boss helps him meet his needs, then, he will move up the continuum towards intrinsic motivation. If his needs are not met, he will move down the continuum towards external regulation or a motivation. Therefore, if a teacher, a coach, or a boss wants to maximize intrinsic motivation, he should allow people under him to make choices, help them become competent, and connect with them.

This study looks into the exercise motivation and exercise attribution of recreational athletes.

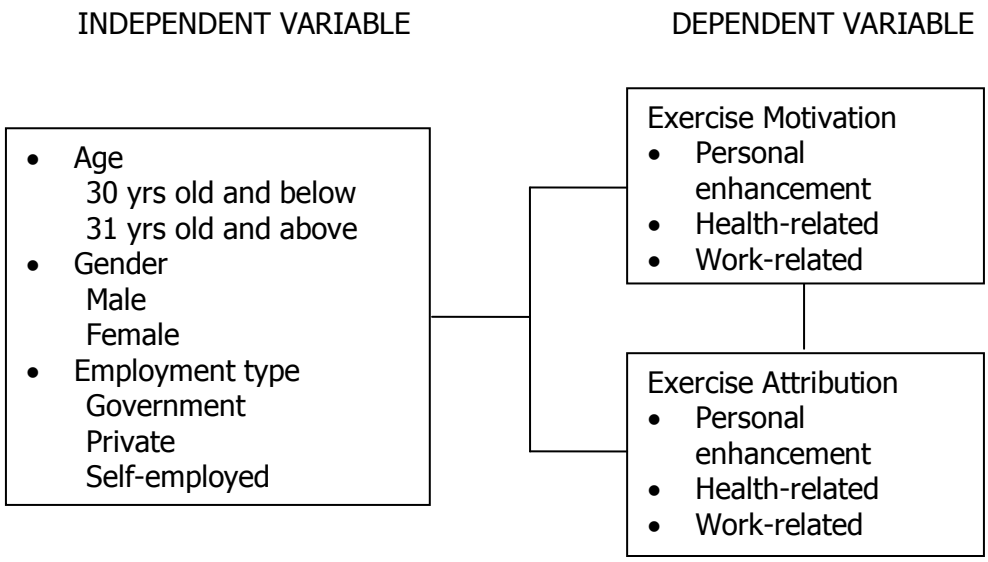

Figure 1. The paradigm of the study.

Statement of the Problem and the Hypotheses

This study aimed to determine the exercise motivation and exercise attribution of recreational athletes in one of major cities in Panay Island.

Specifically, this study would like to answer the following questions:

1. What is the exercise motivation of the recreational athletes in terms of personal enhancement, health-related and work-related aspects when they are taken as an entire group and classified as to age, gender, and employment type?

2. What is the exercise attribution of the recreational athletes in terms of personal enhancement, health-related and work-related aspects when they are taken as an entire group and classified as to age, gender, and employment type?

3. Is there a significant difference in the exercise motivation of the recreational athletes in terms of personal enhancement, health-related and work-related aspects when they are grouped according to age, gender, and employment type?

4. Is there a significant difference in the exercise attribution of the recreational athletes in terms of personal enhancement, health-related and work-related aspects when they are grouped according to age, gender, and employment type?

5. Is there a significant relationship between exercise motivation and exercise attribution of the recreational athletes in terms of personal enhancement, health-related and work-related aspects?

In view of the preceding problems, the following hypotheses were tested:

1. There is no significant difference in the exercise motivation of the recreational athletes in terms of personal enhancement, health-related and work-related aspects when they are grouped according to age, gender, and employment type.

2. There is no significant difference in the exercise attribution of the recreational athletes in terms of personal enhancement, health-related and work-related aspects when they are grouped according to age, gender, and employment type.

3. There is no significant relationship between exercise motivation and exercise attribution of the recreational athletes in terms of personal enhancement, health-related and work-related aspects.

Significance of the Study

The findings of this study may give insights to school administrators, physical educators, recreational athletes, club instructors as well as individuals who want to exercise.

School administrators may be encouraged to support dance and sports activities in schools, and promote healthy lifestyles that would enhance the fitness of the individual.

Physical educators may formulate objectives, select subject matters and design PE curricula that would inspire students to love their physical education subjects and make them conscious of their fitness and wellness.

Moreover, results of this study may encourage recreational athletes to set time and motivate themselves to exercise despite their busy schedule, limited budget and previous failed exercise attempts.

Fitness instructors may select effective ways to encourage people to exercise and keep them in the exercise program.

Furthermore, the results of the present study may help individuals find ways to get themselves involved in an exercise regimen to promote healthy lifestyles.

Definition of Terms

For a clearer understanding of this study, the following terms were defined:

Age --is an individual's development measured in terms of the years requisite for like development of an average individual (Webster's New Explorer Encyclopedic Dictionary, 2006).

In this study, *age* was classified into two categories: 30 yrs. old and below and 31 yrs. old and above.

Athlete --is one who has a natural aptitude for or is reasonably skilled in physical exercises, sports or games (Webster, 1986).

The same definition was adopted in this study.

Attribution --is the process by which people arrive at the explanations of the causes of events in the social world, particularly for actions they and other people perform (Banizal, 1999).

In this study, *attribution* referred to the reasons of the respondents to engage in exercise.

Employment --is the degree or extent to which the persons needing employment or available for employment are provided with it or lack of it because of the prevailing economic conditions (Webster, 1986).

In this study, *employment* referred to the work classification of the respondents whether government, private or self-employed.

Enhancement-- means to increase or improve in value, quality, desirability, or attractiveness (Webster's New Explorer Encyclopedic Dictionary, 2006).

The same definition was adopted in this study.

Exercise--is an artificially devised bodily action or set of actions prescribed for regular or repeated practice as a means of gaining strength, dexterity, suppleness, or all-around competence in some field of performance (Webster, 1986).

Similar definition was used in this study.

Gender-- is the behavioral, cultural, or psychological traits typically associated with one sex (Webster's New Explorer Encyclopedic Dictionary, 2006).

In this study, *gender* referred to the male and female respondents of the study.

Health-- is the condition of being sound in body, mind, or spirit especially freedom from physical disease or pain (Webster's New Explorer Encyclopedic Dictionary, 2006).

The same definition was utilized in this study.

Health-related--refers to exercise motivation and exercise attribution that are connected with the respondent's health and physical fitness.

Motivation--the tendency for the direction and selectivity of behavior to be controlled by its connections to consequences and the tendency of this behavior to persist until a goal is achieved (Anshel, 2003).

Similar definition was used in this study.

Exercise motivation--refers to the result revealed by respondents through the exercise motivation inventory (EMI-2) by Markland and Ingledew,1997 (Anshel, 2003).

Personal--it means relating to an individual or an individual's character, conduct, motives, or private affairs often in an offensive manner (Webster's New Explorer Encyclopedic Dictionary, 2006).

The same definition was adopted in this study.

Personal enhancement-- refers to an individual's desire to improve oneself.

Recreation --is a means of getting diversion or entertainment (Webster, 1986).

The same definition was utilized in this study.

Recreational athlete --defined as an individual who plays on a sport team at a recreational level, works-out 1-4 times a week, does not train and/or compete nationally or internationally (ask.reference.com 2011).

In this study, *recreational athlete* refers to athlete who pursues exercise for the purpose of recreation and who may participate in friendly or club tournaments only.

Related—connected by reason of an established or discoverable relation (Webster's New Explorer Encyclopedic Dictionary, 2006).

The same definition was adopted in this study.

Work-- is a sustained physical or mental effort to overcome obstacles and achieve an objective or result (Webster's New Explorer Encyclopedic Dictionary, 2006).

The same definition was adopted in this study.

Work-related—refers to exercise motivation and exercise attribution that are connected to the respondent's work or job.

Delimitation of the Study

The present study was conducted among recreational athletes in sports and dance centers in one of the major cities in Panay Island last August to September 2010. The 75 athletes were either in private or government agencies or self-employed, were regular members in a particular club for at least a year, and had finished at least a college degree. Purposive sampling design was employed for the selection of the respondents that included 15 members of tennis clubs, 15 members of dance clubs, 15 members of badminton clubs, 15 members of basketball clubs, and 15 members of swimming clubs and track oval in a sports complex.

The descriptive research was used in the study. The independent variables were age, gender and employment type while the dependent variables were exercise motivation and exercise attribution.

To gather the data for the exercise motivation of recreational athletes, the researcher used the Exercise Motivations Inventory (EMI-2) by Markland and Ingledew (1997, in Anshel, 2003). The inventory categorized three sources of exercise motivation: personal enhancement, health-related and work-related.

To gather data for the exercise attribution of recreational athletes, a researcher-made instrument was used. The checklist also categorized three sources of exercise attribution: personal enhancement, health-related and work-related.

Mean, rank and standard deviation were employed for descriptive analysis; while Mann-Whitney U Test, Kruskal-Wallis Test, and Spearman Rank Correlation Coefficient analysis all set at .05 level of significance, were used for inferential analysis. Statistical computations were availed through the Statistical Package for the Social Sciences (SPSS) software.

Chapter 2

Review of Related Literature

Chapter 2 contains three topics, namely: (1) Motivation (2) Attribution, and (3) Summary.

Part One, Motivation, discusses the definitions of motivation, theories of motivation and exercise motivation, and studies on exercise motivation.

Part Two, Attribution, includes general information about attribution, the definition of attribution and exercise attribution, and literatures explaining the reasons why people exercise.

Part Three, Summary, recapitulates the literature and researches related to the study.

Motivation

Motivation is a Greek term "movere" which means "to move" (Lupdag, 2005). Spear et al. (1988) defined motivation as an internal process or state that presumably accounts for why people and other animals do or do not pursue particular goals on particular occasions. Bower et al. (1987) refer to motive as the property that organizes behavior. Motivation refers to the internal state or condition that influences behavior and gives its direction in relation to physiological conditions, interests, attitudes and

aspirations. It is a concept that stands for the underlying force impelling behavior toward a particular goal (Zulueta and Paraso, 2004).

To Beltran (1996), motivation refers to the process that directs behavior toward a goal. On the other hand, Evan (Bernstrein et al., 1991) sees motivation as the influences that govern initiation, direction, intensity, and persistence of behavior, while Creder et al. (1996) defined motivation to the desires, needs, and interests that arouse and activate an organism and direct it toward a specific goal. Numerous theories on motivation have been proposed over the years. According to Zulueta and Paraso (2004), there are 11 theories of motivation. These are: Instinct theory, psycho-analytic/drive theory (Freud), arousal theory, Solomon's opponent process theory, Whiting and Child behavior theory, association theory (Thorndike), humanistic or need gratification theory, cognitive theory (Hunt), self-efficacy theory (Bandura), and self-determination theory.

Instinct theory. An individual acts the way he does because of his instinct. An instinct is a descriptive term for a complex, unlearned adaptive response, an unlearned pattern of reflexes appearing in all members of a species. It is a genetically pre-determined disposition to adjust in a particular situation when confronted with certain stimuli.

Psycho-analytic/drive theory (Freud). This theory postulates that an organism is motivated to eliminate or reduce bodily tensions. Drive refers to physiological

conditions which impels the organism to become active. Drives motivate organisms to reduce or eliminate bodily tensions. Individuals behave as they do because their early experiences drive them instinctively to do.

Incentive theory. The fundamental assumption of this theory is that if a certain desirable goal can be anticipated following the completion of a particular action, in effect, the organism is likely to be motivated to perform that action. The anticipation of undesirable goal something aversive or unpleasant will naturally motivates the organism not to perform the action.

Arousal theory. This theory assumed that this is an alternative to drive theory which stipulates that a moderate level of stimulation is reinforcing. Arousal is an increase in the degree of excitement or tension of the organism. This theory presupposes that the moderate level of stimulation is the most pleasant and that both higher and lower levels of stimulation are relatively unpleasant.

Solomon's opponent process theory. This theory explains that a state of positive feeling is followed by a contrasting negative feeling, and vice versa. The basic assumption is that any feeling, whether positive or negative that is experienced in succession by the organism has the tendency to lose some degree of intensity. At the outset, an individual who is actively involved in activities like karate fighting or parachute jumping may experience a negative and apprehensive feeling attempt which is soon followed by a contrasting positive and ecstatic euphoria. The sudden shift from

fear to euphoria evidently reinforces the attitude and motivation to engage in such activities.

Whiting and Child behavior theory. This theory states that a few basic motives acquired in early infancy tend to grow excessively and rapidly into behavior systems in later life and consequently, various kinds of observable responses are influenced by this common motive. The mechanism as regards learning and habit-formation is that, hunger, dependency and aggression proliferate into all sorts of food-related behavior. It also involves attachment with other people and situations where there is a motive to inflict harm on another or turn it against him.

Association theory (Thorndike). Deprivation of need will cause the individual to act to satisfy the need.

Humanistic or need gratification theory. Maslow postulates that individual does something to satisfy deficiency needs.

Cognitive theory (Hunt). Man is rational and consciously decides what he will and will not do. Motives, curiosity, intention, motive to achieve success and goals activate and direct the individual to action.

Self-efficacy theory (Bandura). The key to individual achievement lies with the individual's own belief in his ability to organize and execute actions required for successful performance.

Self-determination theory. An attitude of determination is the foundation for motivated behavior.

However, Lupdag (2005) emphasized three theories of motivation: Maslow's hierarchical needs theory, Herzberg's two-factor theory and Alderfer's ERG theory-three-tiered satisfied man theory.

Maslow's hierarchical needs theory. Abraham Maslow's theory which is based on logical and clinical insights says that there are five human needs that are hierarchical, namely; physiological, safety, belongingness, esteem and self-actualization needs. In this theory, the individuals' behavior is focused first on the basic needs, the physiological needs before focusing on the higher psychological needs. It is further described as humanistic as it focuses on man's capacity for growth from sheer biological existence needs to self-actualization.

Herzberg's two-factor theory. Frederick Herzberg came-up with his two-factor theory and growth in the job. The hygiene or extrinsic factors relate to environmental conditions around the job. These include company policy and administration, supervision, work conditions, salary, relationships with others and job security. The motivation factors which are also called satisfiers lead to satisfaction if these are present. But their absence does not necessary lead to dissatisfaction. On the other hand, the hygiene factors, the dissatisfiers or job content factors do not necessarily lead to satisfaction and their absence do not always result in dissatisfaction.

Alderfer's ERG theory-three-tiered satisfied man theory. It proposes that man's needs progress through three levels, from existence (E) to relatedness (R) and growth (G). In the first level (E), man's needs are basically material and are satisfied by environmental factors like food, water, fringe benefits, and working conditions. Relatedness (R) needs involve relationship with significant others like co-workers, supervisors, subordinates, family and friends. Growth (G) need, the highest need in Alderfer's theory is the desire for unique personal development. This is met when the individual develops his abilities and potentials.

On the other hand Beltran (1996) classifies theories of motivation into five: drive-reduction theory, incentive theory, homeostatic theory, instinctive theory and expectancy-value theory.

Drive-reduction theory. It states that if any arousal is unpleasant, they seek to reduce it and this reduction is reinforcing. Motivation in these terms would consist entirely of seeking to reduce arousal when it exists and of avoiding or escaping situations that produce arousal.

Incentive theory. This emphasizes the role of specific arousals (incentives) and the particular context. Motives are produced by an interaction of the internal state and the external situation.

Homeostatic theory. It states that motivation serves to maintain a particular level of arousal. Deviations from that level produce motivation that causes the athletes

to seek a way to return to the original level. If the arousal state rises above this ideal level, they are motivated to reduce stimulation. If it drops below it, they are motivated to increase stimulation.

Instinctive theory. It regards instincts as the biological basis of motivated behavior. Sigmund Freud suggested that the source of motivation is a pool of instinctual psychic energy that has biological origin. This energy or libido builds up and drives them to find outlets to relieve pressure or tensions.

Expectancy-value theory. Actions result from a conscious or an unconscious estimation of the probability of a certain outcome multiplied by the strength of positive or negative value placed on the outcome. This theory focuses mainly on future goals or incentives in the environment.

On exercise, 12 motivation theories were proposed. These are need achievement theory, competence motivation theory, attribution theory, achievement goal theory, stimulus response or behavioral theory, self-determination theory, social cognitive or self-efficacy theory, theory of reasoned action, theory of planned behavior, behavioral economics theory, social ecological model and goal setting model (theories of motivation, 2010).

Need achievement theory . It says that behavior is determined by an interaction between certain personal and situational factors. The personal factors are called motivation for success and motivation to avoid failure. Both are personality

traits and people have different levels of both. Traits are general predispositions to behave in particular ways. Motivation for success reflects one's tendency to strive for achievement. Motivation to avoid failure reflects one's tendency to strive to avoid failure. Both are also fairly stable aspects of personality. That is, they remain pretty consistent across one's lifetime. The situational factors are probability of success, probability of failure, incentive value of success, and incentive value of failure. Probability of success and probability of failure reflect the difficulty of a task. They are inversely related. For example, a difficult task might have a Ps of .10 and a Pf of .90. Incentive value for success and incentive value for failure reflect how important success or failure on a task is.

Competence motivation theory. It pulls a number of different ideas together. The main idea though, is that all have the need to demonstrate competence. To the extent that there is a feeling of demonstrating competence (or are becoming increasingly competent). People feel good and they become more motivated. To the extent that they feel like they are not demonstrating competence. They feel badly and they decrease in motivation. As the model illustrates, people base sense of whether or not they are demonstrating competence (i.e., our perceived competence) on the feedback and reinforcement that they receive as a consequence of our efforts to perform a skill. If a coach, teacher, or their own experiences, tell them they have demonstrated competence, they enjoy what they are doing and they become more

motivated. If a coach or teacher tells them that they can learn and improve on a task, they feel more in control of their learning and progress and they become more motivated. Moreover, their perceived competence is also influenced by other motivational characteristics, including whether they are intrinsically or extrinsically motivated and whether or not they are more task or outcome oriented. For example, someone who is highly outcome oriented, will only increase in perceived competence if they wins. For that person, success is defined as winning.

Attribution theory . It says that attributions influence motivation. Attributions are the explanations people make for the things that happen to them. For example, if one just won a road race and asked why he won, the attribution would be how the person answered my question. He may say, I won because I had been training hard," would be an attribution. So would "I won because my opponent happened to trip over a rock and fall down". Attributions generally are to one of the four things abilities, effort, task difficulty, or luck and attributions can be classified as internal or external; stable or unstable. Attribution theory says making attributions for failure to ability, or for success to luck, decreases motivation and that making attributions for failure to effort, or for success to effort or ability, increases motivation. In addition, learned helplessness, is associated with making attributions for failure to ability. If one continually says that he failed because of his low ability, he will have little motivation to attempt to improve. Attribution retraining can be used to change an individual's

tendency to make inappropriate attributions. It involves modeling and reinforcing appropriate attributions. The most important thing about attribution theory is that it says that attributions must change before motivation can change. A frequent misunderstanding about attribution theory is to think that it is saying is that ability, task difficulty, effort and/or luck must be changed. It is not. It is saying that the attributions need to change! Athletes must stop saying to themselves "I failed because I can't run fast enough" which is an attribution for failure to ability. Instead, they must say to themselves, and others, I "failed because I didn't train hard enough".

Achievement goal theory. It says that achievement goals influence behavior. However, the theory is a bit more sophisticated than the simplest version. Achievement goal theory has three aspects: goal involvement, goal orientation, and motivational climate. Goal involvement focuses on whether an individual tries to compete or master in a particular achievement situation. Goal orientation focuses on whether an individual generally tries to compete or to master in achievement situations. Motivational climate focuses on whether the environment is set up to reward competing or mastering. Goal involvement can be either task involvement and/ or outcome involvement. Goal involvement fits within Marten's model of personality as a role related behavior. It can change depending on the situation. Goal orientation, is a trait and it is a fairly stable part of personality. Motivational climates can be either task or mastery focused or outcome focused. Motivational climate fits within the social

environment level of Martens model of personality. It is the one part of all this that is under the teacher's or coach's control. Interestingly, athletes can be high or low on both traits, task orientation and outcome orientation. Research has shown that the highest level of motivation results when an individual is high in task orientation, high in outcome orientation, and in a mastery focused climate. In contrast, the lowest level of motivation results when an individual is low in task orientation, low in outcome orientation, and in a competitively-focused climate. Although, sport is about inter-team competition, the climate does not necessarily have to focus on intra-team competition.

Stimulus response or behavioral theory. It offers four main techniques which are positive reinforcement, negative reinforcement, punishment, and response cost. Positive reinforcement increases the likelihood of a behavior by providing a pleasant stimulus. Negative reinforcement increases the likelihood of a behavior by removing an unpleasant stimulus. Punishment decreases the likelihood of a behavior by providing an unpleasant stimulus. Response cost decreases the likelihood of a behavior by removing a pleasant stimulus. There are two types of reinforcers. These are primary or innate, reinforcers and secondary, or learned, reinforcers. Secondary reinforcers become reinforcers because they are paired with primary reinforcers. There are four types of reinforcement schedules: continuous, intermittent, fixed ratio, and variable ratio. Continuous reinforcement means giving the reinforcement every time the behavior is emitted. Intermittent reinforcement means giving the behavior only

after the behavior has been emitted several times. Fixed ratio reinforcement means giving the reinforcer after the behavior has been emitted a set number of times. Variable ratio reinforcement means giving the reinforcer after the behavior has been emitted a variable number of times. For the aforementioned behavioral techniques to work, the target behavior, the behavior to be reinforced, must be emitted and then followed by the appropriate consequence. When the target behavior is not one that is emitted, shaping is often used. Shaping is reinforcing behaviors that approximate the target behavior. Forward chaining and backward chaining are variations on the theme of shaping. They can be used to shape a behavior that can then be reinforced when emitted. Forward chaining involves reinforcing for the first step involved in doing the task and then for doing the first and second steps, etc. Backward chaining involves reinforcing for doing the last step involved in doing the task and then for doing the last two steps.

Self-determination theory. It says that there are several different types of motivation and people tend to act out one of the types along the self-determination continuum. Some types are completely intrinsic. For example, the desires to know, to accomplish, or to experience something are intrinsic. Other types are more or less extrinsic. On the self-determination continuum, these are external, introjected, identified, and integrated regulation. A motivation is endpoint. It is the state of not being motivated. There is a threshold of autonomy, a change from an "I should" to an

"I want", on the self-determination continuum between identified regulation and integrated regulation. Self-determination theory, like most, is an interactional theory of motivation. Aspects of the environment, the social factors, interact with aspects of the individual, the core psychological needs to determine motivation/ behavior. The core psychological needs include the need for autonomy, the need for competence, and the need for relatedness or connection. Humans all have these needs at the core of our personalities and they have them all of their lives. Generally, the best, most durable motivation is intrinsic, or as close to that as one can get. The reason is that extrinsic factors come and go and if they are not there, motivation is not there either. For example, how many trophies does one really want… one or two are really cool… twenty or thirty become less meaningful. People also enjoy what they are doing more if they are intrinsically motivated and they do a better job with the task if they are intrinsically motivated. Self-determination theory, then, says that to the extent that people's needs for competence, autonomy, and relatedness are met, they will be more intrinsically motivated. That is, if the environment, the teacher, coach, or boss helps meet our needs, we will move up the continuum towards intrinsic motivation. To the extent that the needs are not met, he/she will move down the continuum towards external regulation or a motivation. Therefore, if one wants to maximize intrinsic motivation, people shall be allowed to have choices, they must be helped to become competent, and connection should be made with them.

Self-determination theory (SDT, Deci, 1975, Deci and Ryan, 1985, 2002) is a sub-theory of cognitive evaluation theory (CET; Deci and Ryan, 1985) and predicts that events that enhance self-determination and competence will facilitate intrinsic motivation. SDT forecasts that exercisers seek certain goals through their exercise involvement, and these goals are fuelled by three needs: competence (to interact efficiently with the environment), autonomy (desire to be self-initiating), and relatedness (to feel connected to significant others). The theory holds that opportunities that satisfy exercisers' needs, and consequent goals, will facilitate intrinsic motivation (Markland, 1999).

A study performed at the University of Bath in England explored the exercise motivation of 281 male and female undergraduates. The researchers asked half of the group to imagine a physically unattractive version of themselves. They then asked this group to either imagine a situation in which they failed to continue an exercise routine, or one in which they adhered successfully to the program. The researchers discovered that those who had been asked to think about a failed exercise routine were motivated to keep working out because they were fearful of looking unattractive. The participants who were asked to imagine that they were succeeding in getting in shape were less motivated to continue, because they did not have this fear of looking unattractive. This study indicates that fear of gaining weight or losing muscle tone

may be one of the major reasons that people embark on an exercise program (http://exercise.lovetoknow.com/What_Motivates_People_to_Exercise).

To encourage people to exercise, and to keep themselves in the exercise program, psychologists suggest effective tips on exercise motivation such as practice initiating change, letting go of the past, doing any physical activity that one feels good about, start writing, setting up a goal chart and time line**, c**ommitting to an exercise schedule, finding a workout partner or group, changing your workouts daily, keeping going and celebrating successes (Wood, 2010).

Related studies on exercise motivation have also been conducted by several researchers. Floyd, Dunn and Rogers (2006) investigated a meta-analysis of research on protection motivation theory, a model of disease prevention and health promotion that has generated research for over two decades. The literature review include 65 relevant studies. In general, there were increases in threat severity, threat vulnerability, response efficacy, and self-efficacy facilitated adaptive intentions or behaviors. Conversely, decreases in maladaptive response rewards and adaptive response costs increased adaptive intentions or behaviors. This held true whether the measures were based on intentions or behaviors, and it was suggested that protection motivation theory (PMT) components may be useful for individual and community interventions.

Dzewaltowski (1989) worked toward a model of exercise motivation. In his study, he compared the ability of Bandura's social cognitive theory and Fishbein and Ajzen's theory of reasoned action to predict exercise behavior. The theories' constructs were assessed and then the exercise behaviors of 328 individuals were recorded for the following seven weeks. A path analysis indicated that the theory of reasoned action model fit the data, but explained only 5% of the exercise behavior variance. Two social cognitive theory variables, self-efficacy and self-evaluated dissatisfaction, significantly predicted exercise behavior. Also, a multiplicative function of self-evaluated dissatisfaction and outcome expectations increased the amount of predicted exercise behavior variance to 16%. Thus, individuals who were confident they could adhere to an exercise program and were satisfied with their standing on probable outcomes from participation (e.g., present body weight) exercised more days per week. A commonality analysis indicated that the theory of reasoned action did not account for any unique variance in exercise behavior over the social cognitive theory constructs. In sum, social cognitive theory was more effective than the theory of reasoned action in predicting exercise behavior.

Kasimatis, Miller and Marcussen (1996) on the other hand, studied the effects of implicit theories on exercise motivation by investigating whether type of implicit theory about athletic coordination would influence motivation to persist at a novel exercise task in the face of difficulty. Fifty college students were told that a new type

of exercise is being tested and they were one of two theories about the nature of athletic coordination. Some participants were told that athletic coordination was mostly learned (incremental condition), while others were told that athletic coordination was genetically determined (entity condition). Participants initially experienced success and then difficulty while following videos containing the new exercise. Consistent with predictions, results showed that participants who were given an incremental theory of athletic coordination reported greater motivation and self-efficacy and less negative effect in the face of difficulty than those given an entity theory.

Gillison, Standage and Skevington (2006) on another study attempted to determine relationships among adolescents' weight perceptions, exercise goals, exercise motivation, quality of life and leisure-time exercise behavior: a self-determination theory approach, exercise has an important role to play in the prevention of child and adolescent obesity. Recent school-based interventions have struggled to achieve meaningful and lasting changes to exercise levels. Theorists have suggested that this may, in part, be due to the failure to incorporate psychosocial mediators as they relate to behavior change. Using a sample of 580 British school children, a model grounded in self-determination theory was explored to examine the effects of exercise goals on exercise motivation, leisure-time exercise behavior and quality of life. Results of structural equation modeling revealed that adolescents

perceiving themselves to be overweight and pressurized to lose weight, endorsed extrinsic weight-related goals for exercise. Extrinsic goals negatively predicted, whereas intrinsic goals positively predicted, self-determined motivation, which in turn positively predicted quality of life and exercise behavior. Furthermore, self-determined motivation partially mediated the effects of exercise goals on reported exercise behavior and quality of life. Multi-sample in variance testing revealed the proposed model to be largely invariant across gender. Results suggest that holding extrinsic exercise goals could compromise exercise participation levels and quality of life. A role of teachers and parents is proposed with the aim of orienting young people towards intrinsic goals in an attempt to enhance future exercise behavior and quality of life.

Duncan, Hall, C.R and O, J. (2010) exercise motivation on another study, conducted a cross-sectional analysis examining its relationships with frequency, intensity, and duration of exercise. The study employed self-determination theory as a framework from which to examine how motivation contributes to various characteristics of exercise behavior. Regular exercisers (N = 1079; n = 468 males; n = 612 females) completed inventories which assessed the frequency, intensity, and duration with which they exercise, as well as the Behavioral Regulation in Exercise Questionnaire including four additional items assessing integrated regulation. Bivariate correlations revealed that all three behavioral indices (frequency, intensity, and

duration of exercise) were more highly correlated with more autonomous than controlling regulations. Regression analyses revealed that integrated and identified regulations predicted exercise frequency for males and females. Integrated regulation was found to be the only predictor of exercise duration across both genders. Finally, introjected regulation predicted exercise intensity for females only.

Hagger, Chatzisarantis, Barkoukis, Wang and Baranowski (2005) on another study tested the replicability and cross-cultural invariance of a trans-contextual model of motivation across four samples from diverse cultures. The model proposes a motivational sequence in which perceived autonomy support (PAS) in physical education (PE) predicts autonomous motivation, intentions, and behavior in a leisure-time (LT) physical activity context. High-school pupils from Britain, Greece, Poland, and Singapore completed measures of PAS and autonomous motives in a PE context. Good-fitting path-analytic models supported the main hypotheses of the trans-contextual model in the British, Greek, and Singaporean samples. PAS in PE had significant total effects on autonomous motives in LT, except in the Polish sample. The effect of autonomous motives in LT on physical activity intentions and behavior was mediated by theory of planned behavior constructs in all samples. Results supported the main hypotheses of the trans-contextual model across cultures, although the effect of PAS was not pervasive in the Polish sample.

Ingledew and Markland (2008) have attempted to establish the role of motives in exercise participation. The aim was to better understand the role of motives in exercise participation. It was hypothesized that motives influence exercise participation by influencing behavioral regulation, and that motives are themselves influenced by personality traits. Data were from a cross-sectional questionnaire survey of 252 office workers, with mean age 40 years. Analysis was by structural equation modelling. According to the final model, appearance/weight motive increased external regulation, thereby reducing participation, and also increased introjected regulation. Health/fitness motive increased identified regulation, thereby increasing participation. Social engagement motive increased intrinsic regulation. Neuroticism increased appearance/weight motive, openness increased health/fitness motive, and conscientiousness, without affecting motives, reduced external and introjected regulation. It is inferred that exercise promotion programmes, without denigrating appearance/weight motive, should encourage other motives more conducive to autonomous motivation.

Li, Wright, Rukavina and Pickering's (2008) study measured students' perceptions of personal and social responsibility and the relationship to intrinsic motivation in urban physical education. The purpose of the study was to test the validity and reliability of a two-factor model of the Personal and Social Responsibility Questionnaire (PSRQ) and examine the relationships between perceptions of personal

and social responsibility and intrinsic motivation in physical education. Participants were 253 middle school students who completed the questionnaires. The results from a confirmatory factor analysis and internal consistency suggested that the two-factor PSRQ is valid and reliable for assessing students' perceptions of personal and social responsibility in physical education. The correlational analysis suggests that participants with higher levels of personal and social responsibility were likely to enjoy physical education more. An important implication for teaching practice is that, to encourage all individuals to be intrinsically motivated to participate in physical education, physical education teachers need to empower students with choices and voices, focus them on effort and self-direction in physical education, and create a respectful and caring learning environment.

Moreno-Murcia, Coll and Cervello-Gimeno (2008) analyzed the influence of goal orientations and self-determined motivation in the acquisition of motives for physical-sport practice related with health and studied the differences in these variables depending on the consumption of alcohol and tobacco. A sample of 513 practitioners of individual and collective physical-sport activities, ranging in age from 16 to 58, was used. They were given Spanish versions of the Goal Orientation in Exercise Scale (GOES), the Behavioural Regulation in Exercise Questionnaire-2 (BREQ-2) and the fitness/health factor of the Motives for Physical Activity Measure-Revised (MPAM-R). The results revealed that task orientation and self-determined motivation positively

and significantly predicted health motives, while ego orientation predicted it in a negative way. Also, people who consumed alcohol were more ego-oriented than those who did not, while these ones reflected higher self-determined motivation. The practitioners who did not smoke were more ego and task-oriented than those who smoked.

Murphy, Raisanen, Moore, Tudor-Edwards, Linck, Williams, Din, Hale, Roberts, McNaish and Moore (2010) studied the benefits to health of a physically active lifestyle are well established and there is evidence that a sedentary lifestyle plays a significant role in the onset and progression of chronic disease. Despite a recognized need for effective public health interventions encouraging sedentary people with a medical condition to become more active, there are few rigorous evaluations of their effectiveness. Following NICE guidance, the Welsh national exercise referral scheme was implemented within the context of a pragmatic randomized controlled trial. The randomized controlled trial, with nested economic and process evaluations, recruited 2,104 inactive men and women aged 16+ with coronary heart disease (CHD) risk factors and/or mild to moderate depression, anxiety or stress. Participants were recruited from 12 local health boards in Wales and referred directly by health professionals working in a range of health care settings. Consenting participants were randomized to either a 16 week tailored exercise program run by qualified exercise professionals at community sports centers (intervention), or received an information

booklet on physical activity (control). A range of validated measures assessing physical activity, mental health, psycho-social processes and health economics were administered at 6 and 12 months, with the primary 12 month outcome measure being 7 day Physical Activity Recall. The process evaluation explored factors determining the effectiveness or otherwise of the scheme, while the economic evaluation determined the relative cost-effectiveness of the scheme in terms of public spending. Evaluation of such a large scale national public health intervention presented methodological challenges in terms of trial design and implementation. This study was facilitated by early collaboration with social research and policy colleagues to develop a rigorous design which included an innovative approach to patient referral and trial recruitment, a comprehensive process evaluation examining intervention delivery and an integrated economic evaluation. This allowed a unique insight into the feasibility, effectiveness and cost effectiveness of a national exercise referral scheme for participants with CHD risk factors or mild to moderate anxiety, depression, or stress and provided a potential model for future policy evaluations.

Rose, Parfitt and Williams (2005) explored the relationship between exercise causality orientations and stages of change and in doing so highlight any motivational changes that accompany movement through the stages, and investigated the relative importance of exercise causality orientations and behavioral regulations in discriminating stage of change. One hundred and one female (M age = 28.85 +11.21

and 83 male M age = 33.99 +13.86) volunteers completed the Stage of Change for Exercise Ladder, the Exercise Causality Orientations Scale (ECOS) and the Behavioural Regulation in Exercise Questionnaire (BREQ). For both males and females, levels of the autonomy orientation increased across the stages of change while levels of the control orientation remained stable. Taking the ECOS and BREQ in combination, only identified and introjected regulation distinguished stage of change. Less self-determined regulations decreased as exercise participation increased but intrinsic regulation was not increased by longer participation in exercise.

Sorensen (2006) examined motivation variables, self-determination and self-schema, in relation to physical activity, among psychiatric patients with experience of physical activity as part of their treatment. Participants were patients (N=109) from 15 psychiatric hospitals or day-care institutions. Data were collected by questionnaires. A positive relationship between physical activity level, positive experiences of the activity and higher degree of self-determination and exercise self-schema was expected. Intrinsically regulated motives (motivated by the experience of the activity in itself) were positively and significantly related to physical activity level and the experience of decrease in symptoms during physical activity, and extrinsically regulated motives were negatively correlated with physical activity level. Intrinsically regulated motives gave an odds ratio of 20.0 for being physically active rather than inactive. Holding an exercise self-schema gave an odds ratio of 6.1 for being physically active. The majority

of the patients (57.4%) reported that physical activity decreased their illness symptoms, but a few (11.9%) reported negative effects. The findings demonstrated that psychiatric patients do not differ from the normal population in relation to motivational mechanisms, even if they may experience more barriers to physical activities because of their illness. Therefore, in trying to motivate psychiatric patients, it is important to make physical activity as intrinsically motivating as possible by focusing on the positive experiences of the activity itself, as well as helping to develop an exercise self-schema.

Sweet, Fortier, Guerin, Tulloch, Sigal, Kenny and Reid (2009) research was set to test if autonomous motivation mediated the relationship between self-efficacy and 12-month physical activity in adults with type 2 diabetes involved in a randomized exercise trial. Participants (n = 234) completed questionnaires measuring barrier self-efficacy at three months, autonomous motivation at six months, and PA at 12 months. A mediational analysis of longitudinal data revealed that autonomous motivation mediated the relationship between barrier-self-efficacy and PA. High barrier self-efficacy can therefore help predict 12-month PA in adults with Type 2 diabetes, although this effect is attenuated by autonomous motivation. Hence, participating in PA for autonomous reasons such as by choice and/or for fun further explains PA at 12 months in this population. Results of this study extended the understanding of the motivational constructs involved in PA in the maintenance phase. This study had

important theoretical implication in helping organize and consolidate well-known correlates of PA by proposing a temporal relationship between them that could be tailored in interventions.

Thogersen-Ntoumani, Ntoumanis and Nikitaras (2008) examined typologies of non-exercisers based on reasons for physical activity and conditions reported to be necessary to change exercise behavior. Typologies of Greek inactive older adults based on reasons their abstaining from exercise and on conditions for change. These typologies were then compared on psychological variables of interest and exercise history. Questionnaires were distributed to Greek older adults aged 60 and above who were recruited from social clubs and city cafes. Only individuals engaging in no regular exercise were recruited (n = 188). The results of hierarchical and k-means cluster analyses revealed two clusters for males (approachable and unconvinced) and three for females (unconcerned, approachable, and unconvinced). The clusters differed significantly on psychological variables not used in the cluster solution. Exercise history distinguished between clusters only among males. The results reveal that physically inactive older adults are not a homogeneous group of individuals. Implementers of physical activity interventions should probably use a range of strategies that take into consideration that some sedentary older adults are more amenable to consider taking up exercise than others.

Vlachopoulos and Karageorghis (2005) investigated the way in which the exercise-related motives of external regulation, introjected regulation, and identified regulation interacted with intrinsic motivation to relate to exercise enjoyment. The study was conducted to test the "additive relationship hypothesis" emanating from Vallerand and Fortier's (1998) theoretical position regarding the interplay between extrinsic and intrinsic motivation in exercise. Exercise participants (N = 516) responded to a self-report questionnaire assessing their reasons for exercise participation before the commencement of a single exercise class. One week later, and immediately prior to the corresponding class, participants reported on their levels of exercise enjoyment. Interactional analyses using linear regression showed a significant interaction between identified regulation and intrinsic motivation. Specifically, the coexistence of high levels of identified regulation with high levels of intrinsic motivation corresponded with higher scores on exercise enjoyment. External regulation and introjected regulation did not interact with intrinsic motivation, thus supporting the research hypotheses. Collectively, the findings supported the validity of Vallerand and Fortier's theoretical propositions in the exercise domain and specifically the additive relationship hypothesis between identified regulation and intrinsic motivation with respect to exercise enjoyment.

Attribution

Attribution is something, such as a quality or characteristic, that is related to a particular possessor; an attribute (www.thefreedictionary.com/attribution). Attribution is also the act of attributing something to a particular cause or person, especially the act of saying that something was written, said, painted by a particular person (www.macmillandictionary.com/dictionary/british/attribution). According to Webster (1986), attribution is the process of ascribing to someone or something. Banizal (1999), defined attribution as the process by which people arrive at the explanations of the causes of events in the social world, particularly for actions they and other people perform.

Attribution theory (Weiner, 1980, 1992) is probably the most influential contemporary theory with implications for academic motivation. It incorporates behavior modification in the sense that it emphasizes the idea that learners are strongly motivated by the pleasant outcome of being able to feel good about themselves. It incorporates cognitive theory and self-efficacy theory in the sense that it emphasizes that learners' current self-perceptions will strongly influence the ways in which they will interpret the success or failure of their current efforts and hence their future tendency to perform these same behaviors. Attribution theory speaks to how people answer questions that begin with "why?" It refers to the motivation that people have to explain and understand causality, particularly in situations that cannot be

predicted. They make causal explanations about a variety of events, and those explanations motivate their behavior. Causal attributions are beliefs about what caused something to happen. They may attribute the cause of an event to factors which they believe are outside of their own control (i.e., luck or fate) rather than to their own influence over a situation (pagestowson.edu/mcozart/attribution_theory.htm). There are four factors related to attribution theory that influence motivation in education: ability, task difficulty, effort, and luck (wikipedia.org/wiki/Attribution theory).

Ability is a relatively internal and stable factor over which the learner does not exercise much direct control.

Task difficulty is an external and stable factor that is largely beyond the learner's control.

Effort is an internal and unstable factor over which the learner can exercise a great deal of control.

Luck is an external and unstable factor over which the learner exercises very little control.

Brickell and Chatzisarantis (2007) investigated the motivational correlates and predictive utility of spontaneous exercise implementation intentions. This study adopted a self-determination theory approach to explore the correlates of a measure of spontaneous implementation intentions; designed to allow for volition in planning

when, where, and how to exercise. The study further explored the relationship between spontaneous implementation intentions and measures of behavioral regulation, in explaining exercise behavior. The initial sample of 253 (99 males, 153 females) Canadian University College students was reduced to 162 participants (63 males, 99 females) after three phases of data collection. Measures of spontaneous implementation intentions and the Behavioral Regulation in Exercise Questionnaire were completed during the first phase of data collection. Actual exercise behavior was assessed two, then three weeks later. A standard regression analysis revealed that identified regulation significantly predicted spontaneous implementation intentions, accounting for 36% of the variance. A hierarchical regression analysis revealed that after-the first step, identified regulation made a significant contribution accounting for 35% of the variance in exercise behavior. The addition of spontaneous implementation intentions significantly increased the prediction of exercise by 8%. An investigation of the beta coefficients revealed that spontaneous implementation intentions reduced the effects of identification from .50 to .26 after taking into consideration the effects of spontaneous implementation intentions in the second step of the analysis. The indirect effect of identification on exercise via spontaneous implementation intentions was statistically significant ($z = 3.88$, $p < .05$).

Brunet and Sabiston (2009) proved the relationship between social physique anxiety and physical activity-related psychological needs, motivation, and reported

behavior by using self-determination theory [Deci, and Ryan, 1985), intrinsic motivation and self-determination in human behavior. Deci, & Ryan, in their Handbook of Self-determination Research utilized 381 males and (*Mage* = 18.69, *SD* = 1.15) completed a self-administered questionnaire package. Results revealed a good measurement model for the total sample *(?2* = 592.52; *df* = 238; *RMSEA.* = 063; *CFI* = .*94; SRMR* = .05) and multi-group invariance indicated that the male and female measurement models were comparable. The structural model was adequate for the total sample *(?2* = 638.69; *df* = 243; *RMSEA* = .065; *CFI* = .94; *SRMR* = .06) and accounted for 36% of the variance in reported physical activity behavior. In addition, the structural model was partially gender invariant.

Chatzisarantis, Hagger, Smith and Sage (2006) looked into the utility of two forms of measurement of intrinsic motivation in increasing the predictive validity of the theory of planned behavior. Self-report questionnaires were administered to school pupils (n = 174), university students (n = 129) and adults (n = 157). The data were analyzed using confirmatory factor analysis and regression analysis. Confirmatory analysis supported discriminant validity between Forms A and B measures of intrinsic motivation. In addition, hierarchical regression analysis demonstrated that Form B measure of intrinsic motivation increased effectiveness of the theory of planned behavior in predicting intentions and social behavior. Further, the regression analysis showed that age and past behavior did not reduce the effects observed for intrinsic

motivation. It is recommended that intrinsic motivation could increase the predictive utility of the theory of planned behavior.

Daley and Duda (2006) explored the relationship between exercise regulations varying in self-determination with stage of readiness to change for exercise and physical activity patterns in university students. Self-determination, stage of readiness to change for exercise, and frequency of physical activity in young people. Grounded in self-determination theory (Deci and Ryan, 1985) and the transtheoretical model (Prochaska and DiClemente, 1983) a cross-sectional survey design was used. The sample consisted of 409 (158 men, 251 women) university undergraduates aged 18-30 years. Participants completed the Behavioral Regulations in Exercise Questionnaire-2, the visual analogue stage of change for exercise ladder, and a physical activity questionnaire. Linear discriminant function analyses revealed that men and women at the early stages were less self-determined in the regulation of their exercise behavior than those at the later stages of change. Additionally, men and women who were more self-determined reported being more physically active over the previous 3 months. These results suggest that self-determination may have an important role to play in the adoption and maintenance of health-promoting behaviors in young adults.

D'Angelo, Reid and Pelletier (2007) looked into processes related to short and long-term regulation of exercise to gain a clearer understanding of why people might

fail to maintain intended behavioral changes. A model for exercise behavior change regulation in patients with heart disease. They modeled intention formation and plan formulation to investigate the distinct roles of self-efficacy and motivation (self-determination) in different phases of behavior change. Their results showed self-efficacy to be more relevant to exercise intentions and motivation to exercise planning. This research provided evidence supporting the proposition that the psychological processes related to short- and long-term regulation of behavior change differ and suggested that people might fail to continue regulating intended behavior owing to a lack of self-determined motivation.

Edmunds, Ntoumanis and Duda (2006) in accordance with self-determination theory (SDT) (Deci & Ryan, 1985), examined the relationship among autonomy support, psychological need satisfaction, motivational regulations, and exercise behavior. Participants (N = 369) were recruited from fitness, community, and retail settings. Fulfillment of the three basic psychological needs (i.e., competence, autonomy, and relatedness) were related to more self-determined motivational regulations. Identified and introjected regulations emerged as positive predictors of strenuous and total exercise behaviors. Competence need satisfaction also predicted, directly and indirectly via identified regulation, strenuous exercise. For participants engaged in organized fitness classes, perceptions of autonomy support provided by exercise class leaders predicted psychological need satisfaction. Furthermore,

competence need satisfaction partially mediated the relationship between autonomy support and intrinsic motivation. These findings support SDT in the exercise domain.

Edmunds, Ntoumanis and Duda (2006) investigated whether individuals classified as 'nondependent-symptomatic' and 'nondependent-asymptomatic' for exercise dependence differed in terms of reported levels of exercise-related psychological need satisfaction, self-determined versus controlling motivation and exercise behavior. In addition, they examined the type of motivational regulations predicting exercise behavior among these different groups, and their role as mediators between psychological need satisfaction and behavioral outcomes. Pulling from self-determination theory (SDT-, Deci & Ryan, 1985). Participants (N = 339) completed measures of exercise-specific psychological need satisfaction, motivational regulations, exercise behavior and exercise dependence. Nondependent-symptomatic individuals reported higher levels of competence need satisfaction and all forms of motivational regulation, compared to nondependent-asymptomatic individuals. Introjected regulation approached significance as a positive predictor of strenuous exercise behavior for symptomatic individuals. Identified regulation was a positive predictor of strenuous exercise, and completely mediated the relationship between competence need satisfaction and strenuous exercise behavior, for asymptomatic individuals.

Edmunds, Ntoumanis and Duda (2007) studied differences in perceived autonomy support, psychological need satisfaction, self-determined motivation,

exercise behavior, exercise-related cognitions and general well-being, between overweight/obese individuals who demonstrated greater adherence to an exercise on prescription program and those who adhered less. In addition, this study explored the motivational sequence embedded in SDT by testing autonomy support as a predictor of psychological need satisfaction, autonomy support and psychological need satisfaction as predictors of the motivational regulations, and autonomy support, psychological need satisfaction and the motivational regulations as predictors of behavioral, cognitive and well-being outcomes. Adherence and well-being in overweight and obese patients referred to an exercise on prescription scheme: A self-determination theory perspective. Before commencing, at 1-month, and upon terminating a 3-month exercise on prescription program, overweight/obese individuals (N = 49; M Body Mass Index = 38.75) completed a multi section questionnaire tapping all aforementioned variables. Participants adherence to the scheme was assessed using attendance records. Multi-level regression analyses revealed that, at the end of the exercise prescription, those individuals who adhered more reported more self-efficacy to overcome barriers to exercise versus those who adhered less. In addition, those individuals who showed greater adherence demonstrated an increase in relatedness need satisfaction over time. For the whole sample, need satisfaction predicted self-determined regulation, and collectively, these constructs corresponded to adaptive exercise related outcomes and general well-being throughout the program.

Edmunds, Ntoumanis and Duda (2008) determined the effect of an autonomy supportive, well structured and interpersonally involving teaching style on exercise class participants' psychological need satisfaction, motivational regulations, exercise behavior, behavioral intention and effect. They tested a self-determination theory-based on teaching style intervention in the exercise domain. Female exercise class participants enrolled in a 10-week exercise program were exposed to an SDT-based (i.e. *SDTc*; n?=?25) or typical (i.e. control group*; n?*=?31) teaching style. The control condition reported a significant decrease in autonomy support, a motivation and behavioral intention over time. In addition, they reported a significant increase in competence and introjected regulation. Compared to the control condition, the SDT reported a significantly greater linear increase in structure and interpersonal involvement, relatedness and competence need satisfaction and positive affect. Attendance rates were significantly higher in the SDTc. SDT-based social-contextual characteristics and psychological needs predicted autonomous regulations; all these variables collectively predicted adaptive outcomes.

Gillison, Osborn, Standage and Skevington (2009) explored the experience of introjected regulation (i.e. a controlling motivational regulation in which people act due to internal pressures that are regulated by contingent self-esteem.; Adolescents reporting strong introjected regulation of sport and/or exercise relative to their peers were identified using quantitative questionnaires, and were invited for interview. Semi-

structured interviews were recorded with 10 boys and 8 girls (mean age 14 years), transcribed verbatim, and analyzed using an interpretive phenomenological approach. Introjected regulation accompanied high levels of self-determined motivation, and was associated with high levels of physical activity in the present sample. Two major themes emerged: (a) gender differences in the basis for introjected regulation; and (b) differences in the reasons and goals underpinning self-determined versus introjected regulations for exercise. In boys, introjected regulation was largely related to social factors, such as avoiding social disapproval and attaining ego enhancement. Girls rarely exercised with their friends, and introjected regulation more commonly reflected the partial internalization of a health and fitness rationale. In many cases, self-determined and introjected regulations were underpinned by different goals or reasons, supporting the importance of assessing an individual's multiple motives towards activities.

Hall, Rodgers, Wilson and Norman (2010) looked into the patterns of imagery use and motivational self-determination, and the relationships between them in regular exercisers (RE), non-exercisers who intend to exercise (NE-I), and non-exercisers who do not intend to exercise (NE-N). A survey was conducted through the random sampling of a large population. The NE-N group used the same amount of imagery as the other two groups. NE-N participants were the least and RE participants the most self-determined, with NE-I participants in between. The patterns of

association among imagery and self-determination were different for the NE-N participants than the other two groups. It was concluded that imagery interventions that might be successful with RE and NE-I participants are unlikely to be effective with NE-N participants.

Hamer, Karageorghis and Vlachopoulos (2002) investigated whether motives for exercise participation predicted exercise dependence (ED) among endurance athletes. The rationale for the study centered upon a test of the affect regulation model utilizing constructs that form part of the self-determination theory as predictors of ED. It was hypothesized that non self-determined motivation, specifically external regulation, would be predictive of ED, design: correlational design, with a time gap between predictor and dependent variables. The settings was a competitive sports environment, the participants were 188 competitive endurance athletes who were recruited from amateur sports clubs. There was no intervention. Measures were the use of Behavioral Regulation in Exercise Questionnaire which was administered before a training session to measure the predictor variables (motives for exercise participation), and the Running Addiction Scale which was administered before similar training session, one week later, to measure the dependent variable (ED). Multiple regression analysis revealed that the strongest predictor variable of ED was introjected regulation (beta=0.29, $p<0.001$), followed by identified regulation (beta=0.19, $p<0.05$). External regulation and intrinsic motivation were weak and non-significant

predictors. The total variance in ED explained by the exercise participation motives was 15% (Rsq= 0.15).

Hein and Hagger (2007) established a theoretical model of global self-esteem that incorporated constructs from achievement goal and self-determination theories. Global self-esteem, goal achievement orientations, and self-determined behavioral regulations in a physical education setting. The model hypothesized that self-determined or autonomous motives would mediate the influence of achievement goal orientation on global self-esteem. The adapted version of the Behavioral Regulation in Exercise Questionnaire (Mullan et al., 1997), the Perception of Success Questionnaire (Roberts & Balague, 1991), and Rosenberg's (1965) self-esteem scales were administered to 634 high school students aged 11-15 years. A structural equation model supported the hypotheses and demonstrated that autonomous motives mediated the effect of goal orientations on global self-esteem. The results suggested that generalized motivational orientations influence self-esteem by affecting autonomous motivation and is consistent with theory that suggests that experiences relating to intrinsic motivation are the mechanism by which global motivational orientations are translated into adaptive outcomes like self-esteem. The findings suggested that physical activity interventions that target autonomous motives in physical activity contexts are likely to enhance young people's general self-esteem.

Ingledew, Markland and Ferguson (2009) proved a three-level of motivation, derived from self-determination theory. According to the model, dispositional motives (represented by life goals) influence participatory motives (exercise participation motives), which influence regulatory motives (exercise behavioral regulations), and influence behavior (exercise participation). The participants were 251 young adults. They completed the Aspirations Index, Exercise Motivations Inventory Version 2, Behavioral Regulation in Exercise Questionnaire Version 2, and a quantity-frequency measure of exercise participation. The model was tested using partial least squares latent variable modeling. Exercise participation was positively predicted by identified and intrinsic but not predicted by external or introjected behavioral regulations. Behavioral regulations were all positively predicted by participation motives: Intrinsic regulation by affiliation and challenge motives; identified regulation by health/fitness and stress management motives; introjected regulation by appearance/weight motive; external regulation by social recognition and appearance/weight motives. Participation motives were themselves predicted by corresponding life goals. The findings supported the three-level model of motivation. Health promotion programs need to take account of individuals' participatory motives and underlying dispositional motives.

The physiological (Blair, Cheng, and Holder, 2001) and psychological (Biddle, Fox, and Boutcher, 2000) benefits of regular physical activity are widely recognized (Nieman, 1998). However, recent research has shown that over 50% of individuals

who take part in a fitness program dropped out after the first six months (Berger, Pargman, and Weinberg, 2002; Matsumoto and Tekenaka, 2004). Phillips, Schnider, and Mercer (2004) suggested that primary reasons given by exercisers for dropping out of an exercise program were (a) failure, (b) lack of improvement, and (c) changes in motivation. Goal setting is a common tool within organizational/industrial/sport settings to enhance motivation (Locke and Latham, 1985). The aim of the current study was to utilize a goal-setting intervention to examine the impact upon motivation for, and adherence to, a six-week exercise program. This research was underpinned by self-determination theory (Deci, 1975, Deci and Ryan, 1985, 2002).

There are several reasons why people exercise. These are reduction in chronic disease risk--hypertension, Type 2 diabetes, high blood lipids, cardiovascular disease, and obesity. Even among children and adolescents, physical activity can prevent or delay the development of hypertension and can reduce blood pressure in those young people who already have hypertension. The benefits particularly of those children who are experiencing the same epidemic of overweight as adults have lowered risk of colon cancer, increased bone density, reduced anxiety, improvement in body image and mood, and the development of physical fitness and promotion of weight control through caloric expenditure (Physical Activity ,1996).

Weinberg and Gould (2004) found that, among Americans, 64% were seen as overweight or obese. It should be no surprise then that many Americans exercise to

lose weight or maintain weight. Other reasons that people exercise are for health benefits such as reducing the risk of cardiovascular disease. There are also psychological reasons why individuals chose to exercise and these include reducing stress, enhance self-esteem, and the pure feeling of enjoyment. Some of the most popular reasons for not exercising are as follows: perceived lack of time, lack of energy, and lack of motivation.

There are several reasons why people love to exercise. First, cardio vascular benefits: A muscle that gets a lot of use adapts to the demand placed on it, growing gradually stronger over time so as to better handle the workload. This does not just apply to biceps; the heart works the same way. Give a couple of thorough workouts per week on a regular basis, it will have little trouble handling the occasional sprint to catch the bus or moving the new couch up the stairs. Second is preventing diabetes. Type 2 diabetes and pre-diabetes are on the rise. Part of the blame lies with sugar-rich foods and beverages, but exercise is another very important component of dodging this bullet. In a nutshell, the body takes damage from too high levels of blood sugar. To combat this, it releases insulin, a powerful hormone that "force feeds" the muscles and liver with excess sugar. Third, keeping a healthy skeleton: bones tend to grow brittle with age -- osteoporosis -- especially for women. Calcium supplementation goes a long way towards keeping the skeleton in shipshape, but regular exercise can further tilt the odds in your favor. Fourth, avoiding aches: office workers don't get

much exercise at their desks, and while the field of ergonomics has made great strides over the past couple decades, there are plenty of aching necks and poor postures out there. In many cases, the cause is lack of muscle tone in the neck and upper back area. This in turn triggers muscle pains, headaches, pinched nerves and gradual deterioration of the whole structure. Likewise, blue collar workers benefit greatly from core training (abs, lower back, hips) since this is the best insurance policy there is against back pain and injuries caused by insufficient muscular support when lifting things. Finally, looking good and feeling good: Exercise is an excellent way of fighting winter depression. It is very difficult to put in a tough Tae Bo workout and feel all blue and listless as one hits the shower. The effect isn't just psychological either; the workout triggers a burst of endorphins, similar in nature to morphine, raising all-around well-being (Why Should People Exercise, 2010).

Another source also pointed out that there are 21 powerful scientifically proven reasons to exercise (21 powerful scientifically proven reasons to exercise, 2010).

1. Longevity. People who are physically active live longer. Regular exercise reduces the risk of dying prematurely.

2. New brain cells development. Exercise stimulates the formation of new brain cells (neurons). Also, exercise strengthens connections between those cells. The areas of the brain that are stimulated through exercise are associated with memory and learning.

3. Cognitive and mental function enhancement. Physical activity improves cognitive performance, information processing and may delay cognitive impairment and dementia. For instance, older adults who engage in regular physical activity have better performances in tests implying decision-making process, memory and problems solving.

4. Prevention of cardiovascular disease. There is a direct relation between physical inactivity and cardiovascular death. Regular physical activity makes the heart, like any other muscle, stronger. A stronger heart can pump more blood with less effort. Regular exercise also prevents heart disease by lowering blood pressure, increasing good HDL cholesterol that transports fat away from the arteries and back to the liver for processing, reducing levels of bad LDL cholesterol that can form fatty deposits in the arteries and by preventing blood clots.

5. Cholesterol lowering effect. Physical exercise favorably influences blood cholesterol levels by decreasing LDL cholesterol, triglycerides and total cholesterol and increasing HDL cholesterol. Exercise itself does not burn off cholesterol like it does with fat. Physical exercise can positively alter cholesterol metabolism by increasing the production and action of several enzymes in the muscles and liver that function to convert some of the cholesterol to a more favorable form, such as HDL-cholesterol.

6. Prevention and control of type 2 diabetes. There is strong evidence from randomized controlled studies (e.g. Finnish Diabetes Prevention Study and the

Diabetes Prevention Program in the USA) that moderate physical activity combined with weight loss and balanced diet can confer a 50-60% reduction in risk of developing diabetes among those already at high risk. Regular physical activity may improve insulin resistance and glucose tolerance and is highly effective in preventing or delaying the onset of type 2 diabetes in persons with impaired glucose regulation.

7. Blood pressure lowering. Regular exercise decreases blood pressure in approximately 75% of hypertensive persons with an average decrease of 11 and 8 Hg mm for systolic and diastolic blood pressure respectively. Regular exercise may decrease blood pressure in overweight and obese persons even without changes in body weight. Aerobic exercise appears to have a slightly greater effect on blood pressure in hypertensive individuals than in individuals without hypertension. Low physical activity increases the risk of hypertension.

8. Prevention of neoplastic (cancer) diseases. Evidence exists that physical activity may be associated with a lower risk of several common forms of cancer, most notably colon and breast cancer.

9. Reduced risk of stroke. Research data indicates that moderate and high levels of physical activity may reduce the risk of total, ischemic, and hemorrhagic strokes. People who have good physical function after the age of 40 may lower their risk of stroke by as much as 50 percent compared to people who are not able to climb stairs, kneel, bend, or lift as well.

10. Weight control. Regular physical activity helps an individual to reach and maintain a healthy weight. If a person takes in more calories than needed in a day, exercise offsets a caloric overload and controls body weight. It speeds the rate of energy use, resulting in increased metabolism. When metabolism increases through exercise, you will maintain the faster rate for longer periods of a day.

11. Muscle strength. Health studies repeatedly show that strength training increases muscle strength and mass and decreases fat tissue.

12. Attractive body. With perfect body a person looks better in clothes and you look better naked. Exercise helps reduce body fat by building muscle mass. Both resistance and aerobic exercise improve body composition even without dieting.

13. Bone strength. An active lifestyle benefits bone density. Regular weight-bearing exercise promotes bone formation, delays bone loss and may protect against osteoporosis .

14. Strong immune system. Regular moderate exercise may have a beneficial effect on the immune function. The findings from some studies support the possibility that exercise may delay immune senescence (age dependent decline in immune function).

15. Better night sleep. If an individual suffer from poor sleep, daily exercise can make the difference. The natural dip in body temperature five to six hours after exercise may help to fall asleep. Researches from the Stanford University School of

Medicine found that regular exercise provides improvement in general quality of sleep, quicker sleep-onset, longer sleep duration and feeling rested in the morning.

16. Better sex life. Regular exercise maintains or improves sex life. Physical improvements in muscle strength and tone, endurance, body composition and cardiovascular function can all enhance sexual functioning in both men and women. Men who exercise regularly are less likely to have erectile dysfunction and impotence than are men who do not exercise.

17. Back pain remedy. By increasing muscle strength and endurance and improving flexibility and posture, regular exercise helps prevent back pain. High quality studies prove that exercise is an effective treatment for recurrent low back pain.

18. Stress management. Exercise can cause release of chemicals called endorphins into one's blood stream. These chemicals give a person a feeling of happiness and positively affect one's overall sense of well-being.

19. Alternative to antidepressants. Study after study has shown that exercise promotes mental health and reduces symptoms of depression. The antidepressant effect of regular physical exercise is comparable to the potent antidepressants like Sertraline. Research suggests that it may take at least 30 minutes of exercise a day for at least three to five days a week to significantly improve symptoms of depression. However, smaller amounts of activity (as little as 10 to 15 minutes at a time) have been shown to improve mood in the short term. Severe, exhaustive exercise, inhibits

gastric emptying, interferes with gastrointestinal absorption, and may cause heartburn and gastrointestinal bleeding.

20. Gastrointestinal tract benefits. Exercise is beneficial for persons suffering from cholelithiasis and constipation. Physical activity may reduce the risk of diverticulosis, gastrointestinal hemorrhage, and inflammatory bowel disease.

21. Alternative to hormone replacement therapy for postmenopausal women . High-intensity exercise significantly reduces negative changes related to the menopausal transition.

There were top ten reasons for males and females to exercise. For males, the most cited reason for exercise is muscle tone (84.7%); second, increased energy (83.0%); third, cardiovascular benefits 81.9%); fourth, weight control (81.8%); fifth, feeling good after (81.7%); sixth, reduce stress (77.1%); seventh, build strength (76.5%); eight enjoy exercise (76.1%); ninth, keep flexibility (75.6%); and tenth, time for self (75.3%). For females, the most cited reason for exercise is weight control (87.5%); second, feeling good after (86.6%); third, increased energy (86.0%); fourth, muscle tone (84.3%); fifth, a tie cardiovascular benefits and keep flexibility (81.3%); seventh, reduce stress (80.5%); eight, time for self (79.3%); ninth, enjoy exercise (77.9%); and improve self-esteem (76.2) (rebound-aerobics.com, 2011).

According to Stefano (2000) there were 20 top reasons to exercise: helps lose weight and reduce body fat, improves physical appearance, increases level of

muscular strength and endurance, maintains resting metabolic rate to prevent weight gain, increases stamina and ability to continuous work, improves fitness levels, or body's ability to use oxygen, provides protection against injury, improves balance and coordination, increases bone mineral density to prevent osteoporosis, lower resting heart rate and blood pressure, lowers body mass index (BMI), fat to height ratio, reduces triglycerides and bad cholesterol, enhances sexual desire and performance, reduces heart disease risk and stroke, reduces the risk of developing certain types of cancer, increases insulin sensitivity, prevents Type 2 diabetes, reduces level of anxiety and helps manage stress, improves function of the immune system, improves self-esteem and restores confidence, and helps one sleep better, relax, and improve mood.

Summary

To support the present study, various and relevant ideas, concepts, and related studies were presented in this chapter in view to exercise motivation and exercise attribution of recreational athletes.

Motivation is a Greek term "movere" which means "to move" (Lupdag, 2005). Spear et al. (1988) defined motivation as an internal process or state that presumably accounts for why people and other animals do or do not pursue particular goals on particular occasions. Bower et al. (1987) refers to motive as the property that

organizes behaviour. This definition is supported by various authors as Zulueta and Paraso, 2004; Beltran, 1996; Evan (Bernstrein et al., 1991); and Creder et al., 1996.

Numerous theories on motivation have been proposed over the years. According to Zulueta and Paraso (2004), there are eleven theories of motivation. These are: instinct theory, psycho-analytic/drive theory (Freud), arousal theory, Solomon's opponent process theory, Whiting and Child behavior theory, association theory (Thorndike), humanistic or need gratification theory, cognitive theory (Hunt), self-efficacy theory (Bandura), and self-determination theory. Another author, Lupdag (2005), emphasized three theories of motivation: Maslow's hierarchical of needs theory, Herzberg's two-factory theory and Alderfer's ERG theory, and three-tiered satisfied man theory. On the other hand Beltran (1996) classifies theories of motivation into five: drive-reduction theory, incentive theory, homeostatic theory, instinctive theory and expectancy-value theory. On exercise, twelve motivation theories were proposed. These were need achievement theory, competence motivation theory, attribution theory, achievement goal theory, stimulus response or behavioral theory, self-determination theory, social cognitive or self-efficacy theory, theory of reasoned action, theory of planned behavior, behavioral economics theory, social ecological model and goal setting model (theories of motivation, 2010). Self-determination theory (Deci, 1975, Deci and Ryan, 1985, 2002) is a sub-theory of

cognitive evaluation theory and predicts that events that enhance self-determination and competence will facilitate intrinsic motivation (Markland, 1999).

To encourage people to exercise and to keep themselves in the exercise program, psychologists suggest effective tips on exercise motivation such as practice initiating change, let go of the past, do any physical activity that you feel good about, start writing, set up a goal chart and time line**, c**ommit to an exercise schedule, find a workout partner or group, change your workouts daily, keep going and celebrate successes (Wood, 2010).

Related studies on exercise motivation have also been conducted by several researchers. Floyd, Dunn and Rogers (2006, cited in Rogers, 1975, 1983; Rogers and Prentice-Dunn, 1997) investigated a meta-analysis of research on protection motivation theory, a model of disease prevention and health promotion that has generated research for over two decades. Dzewaltowski (1989) worked toward a model of exercise motivation. In his study, he compared the ability of Bandura's social cognitive theory and Fishbein and Ajzen's theory of reasoned action to predict exercise behavior. Kasimatis, Miller and Marcussen (1996) on the other hand, studied the effects of implicit theories on exercise motivation by investigating whether type of implicit theory about athletic coordination would influence motivation to persist at a novel exercise task in the face of difficulty. Gillison, Standage and Skevington (2006) on another study attempted to determine relationships among adolescents' weight

perceptions, exercise goals, exercise motivation, quality of life and leisure-time exercise behavior: self-determination theory approach, exercise has an important role to play in the prevention of child and adolescent obesity. Duncan, Hall, C.R and O, J. (2010) conducted a cross-sectional analysis examining its relationships with frequency, intensity, and duration of exercise. Hagger, Chatzisarantis, Barkoukis, Wang and Baranowski (2005) on another study, tested the replicability and cross-cultural invariance of a trans-contextual model of motivation across four samples from diverse cultures. Ingledew and Markland (2008) have attempted to establish the role of motives in exercise participation. Li, Wright, Rukavina and Pickering's (2008) measured students' perceptions of personal and social responsibility and the relationship to intrinsic motivation in urban physical education. Moreno-Murcia, Coll and Cervello-Gimeno (2008) analyzed the influence of goal orientations and self-determined motivation in the acquisition of motives for physical-sport practice related with health and studied the differences in these variables depending on the consumption of alcohol and tobacco. Murphy, Raisanen, Moore, Tudor-Edwards, Linck, Williams, Din, Hale, Roberts, McNaish and Moore (2010) studied the benefits to health of a physically active lifestyle and there is evidence that a sedentary lifestyle plays a significant role in the onset and progression of chronic disease. Rose, Parfitt and Williams' (2005) explored the relationship between exercise causality orientations and stages of change and in doing so highlighted any motivational changes that

accompany movement through the stages. They, too, investigated the relative importance of exercise causality orientations and behavioral regulations in discriminating stage of change. Sorensen (2006) examined motivation variables, self-determination and self-schema, in relation to physical activity, among psychiatric patients with experience of physical activity as part of their treatment. Sweet, Fortier, Guérin, Tulloch, Sigal, Kenny and Reid (2009) research was set out to test if autonomous motivation mediated the relationship between self-efficacy and 12-month physical activity in adults with Type 2 diabetes involved in a randomized exercise trial. Thogersen-Ntoumani, Ntoumanis and Nikitaras (2008) examined typologies of non-exercisers based on reasons for physical inactivity and conditions reported to be necessary to change exercise behavior. Vlachopoulos and Karageorghis (2005) investigated the way in which the exercise-related motives of external regulation, introjected regulation, and identified regulation interacted with intrinsic motivation to relate to exercise enjoyment.

On exercise attribution, several definitions and theories exist. Attribution is defined as something, such as a quality or characteristic, that is related to a particular possessor; an attribute (www.thefreedictionary.com/attribution). Attribution is also the act of attributing something to a particular cause or person, especially the act of saying that something was written, said, painted by a particular person (www.macmillandictionary.com/dictionary/british/attribution). Similar definition had

been proposed by Webster ,1986 and Banizal, 1999. The attribution theory by Weiner (1980, 1992) is probably the most influential contemporary theory with implications for academic motivation. There are four factors related to attribution theory that influence motivation in education: ability, task difficulty, effort, and luck (wikipedia.org/wiki/Attribution theory).

Several studies on self-determination theory have been conducted lately. Brickell and Chatzisarantis(2007) investigated the motivational correlates and predictive utility of spontaneous exercise implementation intentions. This study adopted a self-determination theory approach to explore the correlates of a measure of spontaneous implementation intentions; designed to allow for volition in planning when, where, and how to exercise. The study further explored the relationship between spontaneous implementation intentions and measures of behavioral regulation, in explaining exercise behavior. Brunet and Sabiston (2009) proved the relationships between social physique anxiety and physical activity-related psychological needs, motivation, and reported behavior. Chatzisarantis, Hagger, Smith and Sage (2006) looked into the utility of two forms of measurement of intrinsic motivation in increasing the predictive validity of the theory of planned behavior. Daley and Duda (2006) explored the relationship between exercise regulations varying in self-determination with stage of readiness to change for exercise and physical activity patterns in university students. D'Angelo, Reid and Pelletier (2007) looked into

processes related to short and long-term regulation of exercise to gain a clearer understanding of why people might fail to maintain intended behavioral changes. Edmunds, Ntoumanis and Duda (2006) examined the relationship between autonomy support, psychological need satisfaction, motivational regulations, and exercise behavior. They also investigated whether individuals classified as nondependent-symptomatic and, self-determined versus controlling motivation and exercise behavior. They further examined the type of motivational regulations predicting exercise behavior among these different groups, and their role as mediators between psychological need satisfaction and behavioral outcomes. Moreover, they studied differences in perceived autonomy support, psychological need satisfaction, self-determined motivation, exercise behavior, exercise-related cognitions and general well-being, between overweight/obese individuals who demonstrated greater adherence to an exercise on prescription program and those who adhered less. They explored the motivational sequence embedded in SDT by testing autonomy support and psychological need satisfaction as predictors of the motivational regulations, and autonomy support, psychological need satisfaction and the motivational regulations as predictors of behavioral, cognitive and well-being outcomes. Edmunds et al. likewise determined the effect of an autonomy supportive, well-structured and interpersonally involving teaching style on exercise class participants' psychological need satisfaction, motivational regulations, exercise behavior, behavioral intention and affect. Gillison,

Osborn, Standage and Skevington (2009) explored the experience of introjected regulation (i.e. a controlling motivational regulation in which people act due to internal pressures that are regulated by contingent self-esteem). Hall, Rodgers, Wilson and Norman (2010) looked into the patterns of imagery use and motivational self-determination, and the relationships between them in regular exercisers, non-exercisers who intend to exercise, and non-exercisers who do not intend to exercise. Hamer, Karageorghis and Vlachopoulos (2002) investigated whether motives for exercise participation predicted exercise dependence among endurance athletes. Hein and Hagger (2007) established a theoretical model of global self-esteem that incorporated constructs from achievement goal and self-determination theories. Ingledew, Markland and Ferguson (2009) proved a three-level model of motivation, derived from self-determination theory. The physiological (Blair, Cheng, & Holder, 2001) and psychological (Biddle, Fox, & Boutcher, 2000) benefits of regular physical activity are widely recognized (Nieman, 1998). However, recent research has shown that over 50% of individuals who took part in a fitness program dropped out after the first six months (Berger, Pargman, & Weinberg, 2002; Matsumoto & Tekenaka, 2004). Phillips, Schnider, and Mercer (2004) suggested that primary reasons given by exercisers for dropping out of an exercise program were (a) failure, (b) lack of improvement, and (c) changes in motivation. Goal setting is a common tool within organizational/industrial/sport settings to enhance motivation (Locke & Latham, 1985).

There are several reasons why people exercise. Physical Activity (1996) suggests that people exercise in order to: reduce chronic disease risk--hypertension, Type 2 diabetes, high blood lipids, cardiovascular disease, and obesity. Another source also pointed out that there are 21 powerful scientifically proven reasons to exercise (21 powerful scientifically proven reasons to exercise, 2010). These are longevity, new brain cells development, cognitive and mental function enhancement, prevention of cardiovascular disease, cholesterol lowering effect, prevention and control of Type 2 diabetes, blood pressure lowering, prevention of neoplastic diseases, reduce risk of stroke, weight control, muscle strength, attractive body, bone strength, strong immune system, better night sleep, better sex life, back pain remedy, stress management, alternative to antidepressants, gastrointestinal tract benefits and alternative to hormone replacement therapy for postmenopausal women. Males and females do vary in their reasons to pursue exercise. Males tend to pursue exercise for muscle tone; increased energy; cardiovascular benefits; weight control; feeling good after; reduce stress; build strength; enjoy exercise; keep flexibility; and time for self. While for females tend to pursue exercise for weight control; feeling good after; increased energy; muscle tone; a tie cardiovascular benefits and keep flexibility; reduce stress; time for self; enjoy exercise; and improve self-esteem (rebound-aerobics, 2010).

According to Stefano (2000) there were 20 top reasons to exercise. These are losing weight and reducing body fat, improving physical appearance, increasing level of muscular strength and endurance, maintaining resting metabolic rate to prevent weight gain, increasing stamina and ability to continuous work, improving fitness levels, or the body's ability to use oxygen, provide protection against injury, improving balance and coordination, increasing bone mineral density to prevent osteoporosis, lowering resting heart rate and blood pressure, lower Body Mass Index and fat to height ratio, reducing triglycerides and bad cholesterol, enhancing sexual desire and performance, reducing heart disease risk and stroke, reducing the risk of developing certain types of cancer, increasing insulin sensitivity, preventing type 2 diabetes, reducing level of anxiety and helping an individual manage stress, improving function of the immune system, improving self-esteem and restoring confidence, and having sleep better, relaxing, and improving one's mood.

Another survey revealed that there are several reasons to exercise: longer life, self-confidence, decreased stress, increased immune health, increased flexibility, better cardiovascular health, keep up with the kids, lower healthcare costs, improved sleep quality and appearance (Top Ten Reasons to Exercise, 2010). Similarly, exercise contributes to fat loss, preventing disease, enhancement of one's state of mind, and wellness, persistence and social capabilities (7 Great Reasons to Exercise, 2010).

Chapter 3

Research Design and Methodology

This chapter is made up of three parts: (1) Purpose of the Study and Research Design, (2) Methods, and (3) Statistical Data Analysis Procedure.

Part One, Purpose of the Study and Research Design, restates the main purpose of the study and describes the research design.

Part Two, Method, introduces the respondents, the research instruments, and the procedures involved in the conduct of the study.

Part Three, Statistical Data Analysis Procedure, enumerates and provides brief description on the use of different statistical tools in the analysis of the data.

Purpose of the Study and Research Design

The purpose of the study was to determine the exercise motivation and exercise attribution of recreational athletes in one of the major cities in Panay Island.

The descriptive research was used. According to Gay (1987), descriptive research involves collecting data in order to test hypotheses or answer questions concerning the current status of the respondents. A descriptive research determines and reports the way things are. This study determined the exercise motivation and exercise attribution of recreational athletes. The independent variables were age,

gender and employment type. The dependent variables were the exercise motivation and exercise attribution of the respondents.

Method

Respondents

The present study was conducted to find out the exercise motivation and attribution of recreational athletes in dance and sports centers a major city in Panay Island last August to September 2010. A total of 75 purposively selected respondents participated in the study. The respondents included 15 members of tennis clubs, 15 members of dance clubs, 15 members of badminton clubs, 15 members of basketball cubs and 15 members of swimming clubs and track oval runners in a sports complex. They were classified according to age, gender and employment type.

Table 1 reflects the distribution of the respondents by category.

Table 1

Distribution of the Respondents

Category	*N*	%
Entire Group	75	100
Age		
30 yrs. old and below	27	36
31 yrs. old and above	48	64
Gender		
Male	40	53
Female	35	47
Employment type		
Government	18	24
Private	30	40
Self-employed	27	36

Instrumentation

This study utilized three instruments to gather the needed data:

Personal background information survey form. This part of the instrument solicited information on the respondents' age, gender, and employment type.

Exercise motivations inventory by Markland and Ingledew (1997, in Anshel, 2003). The instrument gathered data on the exercise motivation of the respondents. This inventory categorized three sources of exercise motivation: personal enhancement, health-related and work related. The instrument was composed of 14 statements that measured the exercise motivation of the respondents. For personal enhancement, the items were 4, 8 and 14, for health-related, the items were 1, 3, 5, 6, 7, 9, 10, 11, and 12, for work related, the items were 2 and 13.

Exercise attribution checklist. This instrument was a researcher-made instrument gathered data on the respondents exercise attribution. This checklist categorized three sources of exercise attribution: personal enhancement, health-related and work related. It was composed of 17 statements that measured the exercise attribution of the respondents. For personal enhancement, the items were 3, 4, 9, 14, and 17, for health-related, the items were 1, 8, 12, 13 and 15, for work-related, the items were 2, 5, 6, 7, 10, 11 and 16.

Numerical scores were assigned to their corresponding responses: (1) "Not at all True" , (2) "Partly True", (3) "Uncertain" , (4) "True" and (5) "Very True".

Procedure

Permission to use the instrument, Exercise Motivation Inventory – 2 (EMI-2), was sought from the authors Markland and Ingledew.

The Exercise Attribution Checklist was submitted for face and content validation to the three experts in physical education, psychology and guidance, and medicine. Their suggestions and recommendations were incorporated in the final draft of the instrument. Both instruments were pilot tested among 30 respondents. The reliability coefficient, α = .92, of the instrument was determined by employing Cronbach alpha. Thus, the instrument was highly reliable to gather the data needed for this research study.

Prior to the study, the researcher surveyed recreational athletes in dance and sports centers in one of the major cities in Panay Island. After the pre-survey, the researcher determined the proportionate number of respondents as suggested by the panel. The purpose of the study and the instructions how to answer were personally explained by the researcher. Interviews were also conducted to substantiate the data. Collected data were then subjected to statistical analysis and interpretation of data.

Statistical Data Analysis Procedure

The data gathered for the study were subjected to computer-processed descriptive and inferential statistics, using the Statistical Package for the Social Sciences (SPSS).

Mean --was used to obtain mean scores to describe the respondents' exercise motivation and exercise attribution.

Rank --was used to determine the ranking of the categories in the exercise motivation and exercise attribution of the respondents when taken as an entire group and when grouped according to age, gender and employment type. The rank of means was used to determine the exercise motivation and exercise attribution of the respondents which are classified into personal enhancement, health-related and work-related categories.

Standard deviation --was used to determine the homogeneity and heterogeneity of respondents exercise motivation and exercise attribution.

Mann-Whitney U test --was used to determine significant differences in the exercise motivation and exercise attribution of the respondents when grouped according to age and gender.

Kruskal-Wallis test --was employed to test the significant difference in the exercise motivation and exercise attribution of the respondents when grouped according to employment type.

Spearman rank correlation coefficient test --was used to determine significant relationship between the exercise motivation and exercise attribution of the respondents.

The level of significance was set at .05 alpha for all inferential statistics.

Chapter 4

Results and Discussions

Chapter 4 is divided into two parts: (1) Descriptive Data Analysis, and (2) Inferential Data Analysis.

Part One, Descriptive Data Analysis, presents the descriptive data and their respective analyses and interpretations.

Part Two, Inferential Data Analysis, discusses the inferential data and their respective analyses and interpretations.7b:

This study aimed to determine the exercise motivation and exercise attribution of recreational athletes. The findings of the present investigation were derived from the data gathered through the use of Exercise Motivation Inventory by Markland and Ingledew (1997, in Anshel, 2003) for exercise motivation and Exercise Attribution Checklist, a researcher-made instrument.

Descriptive Data Analysis

Exercise Motivation of Recreational Athletes

The results in Table 2 showed the exercise motivation of the respondents in the different aspects of motivation when they were taken as an entire group and classified according to age, gender and employment type.

The exercise motivation of recreational athletes when taken as an entire group, was *personal enhancement* (*M* = 4.37, *SD* =.53).

When classified according to age, both 30 yrs. old and below (*M* = 4.46, *SD* = .50) and the 31 yrs. old and above (*M* = 4.33, *SD* =.55) age groups were also motivated to exercise for *personal enhancement*.

Likewise, when grouped as to gender, both males (*M* = 4.35, *SD* = .52) and females (*M* = 4.40, *SD* = .56) exercised for *personal enhancement.*

Furthermore, the recreational athletes were also taken as to employment type. The findings showed that those who were working in government agencies (*M* = 4.43, *SD* = .58), private agencies (*M* = 4.24, *SD* =.57) as well as those who were self-employed (*M*=4.48, *SD*=.44) were motivated to exercise for *personal enhancement*.

These findings support the psycho-analytic drive theory (Freud). As cited by Zulueta and Paraso (2004), this theory postulates that an organism is motivated to eliminate or reduce bodily tensions. Drive refers to psychological conditions which impels the organism to be active. Drives motivate organisms to reduce or eliminate bodily tensions. Individuals behave as they do because their early experiences drive them instinctively to do. In this study, to enhance personally in physique and attitude were the drives that motivated recreational athletes to exercise.

Furthermore, these results also support the incentive theory (Hull). As cited by Zulueta and Paraso (2004), this theory states that if a certain desirable goal can be

anticipated following the completion of a particular action, the organism is likely to be motivated to perform that action. In this study, to gain recognition for the accomplishments was the top motivator of the recreational athletes to engage in exercise. This is the major incentive that motivates them to exercise and keep themselves in the exercise program.

Table 2

Exercise Motivation of Recreational Athletes Taken as an Entire Group and Classified as to Age, Gender and Employment Type

Variables	*Personal enhancement*		*Health-related*		*Work-related*	
	M	*S D*	*M*	*S D*	*M*	*S D*
Entire Group	4.35	.53	3.64	.47	2.91	.41
Age						
30 yrs. old and below	4.46	.50	3.56	.53	2.94	.38
31 yrs. old and above	4.33	.55	3.68	.43	2.88	.43
Gender						
Male	4.35	.52	3.64	.43	2.75	.30
Female	4.40	.56	3.64	.51	3.09	.44
Employment type						
Government	4.43	.58	3.38	.42	2.78	.52
Private	4.24	.57	3.65	.44	2.90	.38
Self-employed	4.48	.44	3.79	.46	3.00	.34

Exercise Attribution of Recreational Athletes

Table 3 shows the means of exercise attribution in different categories among recreational athletes taken as an entire group and classified according to age, gender and employment type.

When taken as an entire group, the exercise attribution of recreational athletes was *work-related* (*M* = 3.92, *SD* = .67).

The results showed that when grouped as to age, the exercise attribution of recreational athletes who were 30 yrs. old and below was *work-related* (*M* = 4.04, *SD* = .77), but those who were 31 yrs. old and above had *health-related* (*M* = 3.87, *SD* = .64) exercise attribution.

Furthermore, the exercise attribution of recreational athletes classified according to gender was *work-related*, male (*M* = 3.87, *SD* = .65) and female (*M* = 3.97, *SD* = .69).

When taken as to employment type, the exercise attribution of recreational athletes who were working in the government (*M* = 3.96, *SD* = .83) and those who were self-employed (*M* = 3.91, *SD* = .67) was also *work-related*, but those athletes who were working in private agencies had *health-related* (*M* = 3.94, *SD* = .60) exercise attribution.

These results support Thorndike's connectionism theory which states that deprivation of need will cause the individual to act to satisfy them. In this study,

recreational athletes were deprived of fitness but they recognized it to be important for their jobs and career plans. Therefore, they engage in exercise to satisfy these need.

It further supports Maslow's humanistic or need gratification theory. As cited by Zulueta and Paraso (2004), this theory postulates that an individual does something to satisfy deficiency. In this study, the recreational athletes recognized their deficiency in fitness, that's why they felt it important to discover new movements and skills that keep them active and fit in order to meet the physical demands in their jobs.

Table 3

Exercise Attribution of Recreational Athletes Taken as an Entire Group and Classified as to Age, Gender and Employment Type

Variables	*Personal enhancement*		*Health-related*		*Work-related*	
	M	*S D*	*M*	*S D*	*M*	*S D*
Entire Group	3.58	.89	3.87	.64	3.92	.67
Age						
30 yrs. old and below	3.80	.80	3.85	.67	4.04	.77
31 yrs. old and above	3.45	.93	3.87	.64	3.85	.60
Gender						
Male	3.45	.95	3.81	.64	3.87	.65
Female	3.72	.81	3.93	.64	3.97	.69
Employment type						
Government	3.51	.90	3.80	.66	3.96	.83
Private	3.71	.75	3.94	.60	3.90	.57
Self-employed	3.47	1.03	3.84	.69	3.91	.67

Inferential Data Analysis

The Mann-Whitney U test, Kruskal-Wallis test and Spearman rho were used to determine the significant differences and relationships among variables. Significance was set at .05 alpha.

Differences in Exercise Motivation of Recreational Athletes

As shown in Table 4, no significant differences existed in the exercise motivation of recreational athletes when classified according to age ($z = -.25$, $p<.05$) and gender ($z = -1.17$, $p<.05$).

These findings affirm the cognitive theory by Hunt. As cited by Zulueta and Paraso (2004), this theory states that man is rational and consciously decides what he will and will not do. Motives, curiosity, or intention, to achieve success and goals activates and direct the individual to action. In this study, recreational athletes decide to pursue exercise in order to enhance themselves.

Table 4

Mann Whitney U Test Results for Differences in the Exercise Motivation of Recreational Athletes Classified According to Age and Gender

Variables	Mean Rank	Mann Whitney U-Value	Z	Significance (2-tailed)
Age		625.50	-.25	.80
30 yrs. old and below	37.17			
31 yrs. old and above	38.47			
Gender		590.00	-1.17	.24
Male	35.25			
Female	41.14			

The results in Table 5 revealed the Kruskal-Wallis test result that significant difference existed in the exercise motivation of recreational athletes when classified according to employment type (X^2 = 7.07, <.05).

Generally, the exercise motivation of recreational athletes when classified according to employment type is personal enhancement. However, recreational athletes employed in private agencies demonstrated a significantly lower responses to personal enhancement items of the questionnaire than their counterparts in the government agencies and those who were self-employed.

Table 5

Kruskal-Wallis Test Results for Differences in the Exercise Motivation of Recreational Athletes Classified According to Employment Type

Variables	*Mean Rank*	*df*	*Chi-square(X^2)*	*Significance*
Employment type		2	7.07 *	.03
Government	28.17			
Private	37.03			
Self-employed	45.63			

*p<.05, .Significant

The Mann-Whitney U test was used to determine which two categories differed significantly. The results reveals that a significant difference existed between the exercise motivation of the government employed and self-employed recreational athletes (z=-2.67, <.05).

Differences in Exercise Attribution of Recreational Athletes

The results in Table 6 reflected the Mann-Whitney U test result that significant differences existed in the exercise attribution of recreational athletes when classified

according to age (z = -1.98, <.05) but no significant difference existed in their exercise attribution when grouped as to gender (z = -1.34, <.05).

As to age, older recreational athletes tend to attribute their exercise to health-related factors, but younger athletes attribute theirs to work-related factors. This difference may be influenced by the aging process. Advances in science show that muscle mass decreases as the individual ages (Tortora and Derrickson, 2009). This is probably the reason why older recreational athletes tend to work out for health reasons rather than work-related or personal enhancement reasons.

Table 6

Mann-Whitney U Test Results for Differences in the Exercise Attribution of Recreational Athletes Classified According to Age and Gender

Variables	Mean rank	Whitney U-value	*Z*	Significance (2-tailed)
Age		468.50	-1.98 *	.05
30 yrs. old and below	44.65			
31 yrs. old and above	34.26			
Gender		570.50	-1.34	.17
Male	34.76			
Female	41.70			

*p<.05, Significant

The results in Table 7 reflected the Kruskal-Wallis test results that no significant difference existed in the exercise attribution of recreational athletes when they were classified according to employment type (X^2 = .26, <.05). Although, the study found that the recreational athletes working in the government agencies had highest mean rank compared with private agency and self-employed workers, this difference, however, is not comparable. It is just interesting to note that those in the government agencies and those who are self-employed are working towards career advancement and promotion while those in private agencies are working towards health-related reasons. As mentioned earlier, this factor could probably be influenced by the leave benefits that the three groups avail.

Table 7

Kruskal-Wallis Test Results for Differences in the Exercise Attribution of Recreational Athletes Classified According to Employment Type

Variables	Mean Rank	*df*	Chi-square*(X^2)*	Significance
Employment Type		2	.26	.88
Government	39.81			
Private	38.27			
Self-Employed	36.50			

Significant Relationship Between Exercise Motivation and Exercise Attribution

The Spearman Rank Correlation Coefficient was used to find out the significant relationship between exercise motivation and exercise attribution of recreational athletes.

As shown in Table 8, a significant linear relationship existed (r^2=.58, >.05) between them. The result suggested a linear relationship.

These findings support the attribution theory (theory of motivation, 2010) which states that attribution influences motivation. The recreational athletes in this study were motivated to exercise for personal enhancement. This motive is influenced by predominantly work-related factors.

The results support the two other theories on which this study was anchored on. These are the achievement goal theory (theory of motivation, 2010) and self-determination theory (theory of motivation, 2010). Achievement goal theory states that achievement goals influence behavior. The recreational athletes' personal enhancement goal must have influenced their behavior towards exercise. On the other hand, the self-determination theory is an interactional theory of motivation which includes aspects of the environment, social factors and interaction with aspects of the individual. The core psychological needs for this theory include the need for autonomy, the need for competence and the need for relatedness or connection. It further states that for an individual to be intrinsically motivated, these needs must be met. The recreational

athletes in this study seem to be intrinsically motivated to exercise, perhaps to able to meet their core psychological needs for competence, autonomy and relatedness. One of the many benefits for exercise is competence in physique and personality. Exercise also offers autonomy which is expressed in one's free will to engage in exercise, the freedom to choose his/her activity, the level appropriate for him/her and the goals that he/she sets for himself/herself. The benefits that one can derive from exercise tend to be also related to what one individual does. Physical fitness and personal values are needed to support the individual to achieve and fulfill success in goals and career plans.

Table 8

Relationship Between Exercise Motivation and Exercise Attribution of Recreational Athletes

Variables	Attribution	
	r^2	Significance
Motivation	.58*	.00

**p<.01, Significant

Chapter 5

Summary, Conclusions, Implications, and Recommendations

Chapter 5 contains four parts: (1) Summary of the Problem, Method, and Findings, (2) Conclusions, (3) Implications, and (4) Recommendations.

Part One, Summary of the Problem, Method, and Findings, reflects the vital points of the study and the results.

Part Two, Conclusions, gives the inferences drawn from the results of the study.

Part Three, Implications, clarifies the relationships between the findings of the present investigation and the theories presented in relation to the present study.

Part Four, Recommendations, offers suggestions in terms of the findings, implications, and conclusions.

Summary of the Problem, Method, and Findings

This study aimed to determine the exercise motivation and exercise attribution of recreational athletes.

Specifically, this study would like to answer the following questions:

1. What is the exercise motivation of the recreational athletes in terms of

personal enhancement, health-related and work-related aspects when they are taken as an entire group and classified as to age, gender, and employment type?

2. What is the exercise attribution of the recreational athletes in terms of personal enhancement, health-related and work-related aspects when they are taken as an entire group and classified as to age, gender, and employment type?

3. Is there a significant difference in the exercise motivation of the recreational athletes in terms of personal enhancement, health-related and work-related aspects when they are grouped according to age, gender, and employment type?

4. Is there a significant difference in the exercise attribution of the recreational athletes in terms of personal enhancement, health-related and work-related aspects when they are grouped according to age, gender, and employment type?

5. Is there a significant relationship between exercise motivation and exercise attribution of the recreational athletes in terms of personal enhancement, health-related and work-related aspects?

Data for the study were obtained using two sets of instruments, the Exercise Motivation Inventory by Markland and Ingledew (1997, in Anshel, 2003) and a researcher-made instrument for the exercise attribution.

The respondents of the study were taken from sports and dance centers in one of the major cities in Panay Island on August-September 2010.

The descriptive statistics employed were mean, rank and standard deviation while the inferential statistics used were Mann-Whitney U test, Kruskal-Wallis test, and Spearman's rho, all set at .05 alpha. The Statistical Package for the Social Sciences (SPSS) software was employed in the analysis of data gathered.

The findings of the present study revealed that:

1. The exercise motivation of recreational athletes as an entire group and classified according to age, gender and employment type was *personal enhancement*.

2. The exercise attribution of recreational athletes as an entire group and classified as to gender was *work-related* like those who were 30 years old and below, government employees, and self-employed athletes. On the other hand, recreational athletes who were 31 years old and above, and working in private agencies had *health-related* exercise attribution.

3. No significant difference existed in the exercise motivation of recreational athletes when classified according to age and gender, but a significant difference existed in their exercise motivation when they were classified according to employment type.

4. A significant difference existed in their exercise attribution when they were classified according to age, while no significant difference was noted when they were grouped as to gender and employment type.

5. A significant linear relationship existed between exercise motivation and exercise attribution of the recreational athletes.

Conclusions

Based on the findings of the study, the following conclusions were drawn:

Exercise motivation is influenced by exercise attribution. The recreational athletes in this study are motivated to exercise for reasons that are predominantly work-related. This, however, does not apply to older recreational athletes who are engaging in exercise for health-related reasons and recreational athletes who are employed in private agencies. The reasons for this could be attributed to the diminishing health of older recreational athletes and to the leave benefits that are availed by those employed in private agencies.

Implications

The findings of the present study have led to certain implications for theory and practice in relation to the exercise motivation and exercise attribution of recreational athletes.

For theory. The findings revealed in this study support the attribution theory (theory of motivation, 2010) which states that attribution influences motivation. The

recreational athletes in this study were motivated to exercise for personal enhancement. This motive is influenced by predominantly work-related factors.

The results support the achievement goal theory (theory of motivation, 2010) which states that achievement goals influence behavior. The recreational athletes' goal was personal enhancement which influence their behavior towards exercise.

Moreover, the findings reinforced the self-determination theory (theory of motivation, 2010) which is an interactional theory of motivation that includes aspects of the environment, social factors and interaction with aspects of the individual. The core psychological needs for this theory include the need for autonomy, the need for competence and the need for relatedness or connection. It further states that for an individual to be intrinsically motivated, these needs must be met. The recreational athletes in this study seem to be intrinsically motivated to exercise perhaps because they are able to meet the core psychological needs for competence, autonomy and relatedness. One of the many benefits for exercise is competence in physique and personality. Exercise also offers autonomy which is expressed in one's free will to engage in exercise, the freedom to choose the activity and the level appropriate for him and the goals that he sets for himself. The benefits that one can derive from exercise tend to be also related to what the individual does. Physical fitness and personal values are needed to support the individual to achieve and successfully fulfill his goals and career plans.

For practice. The findings revealed in the study support campaigns of the Physical Education Program, to strengthen the physical fitness and wellness program in schools (BPESS, 2011) in order to prepare students for the future adult-life as a professional. Enhanced physical attributes such as strength and endurance are necessary to help one achieve career plans and other personal motives. These attributes of exercise should be given a paramount concern in PE classes and should be provided to individuals outside the school. Continued pursuance of exercise through fitness centers and gyms should also be encouraged even after graduation.

Li, Wright, Rukavina and Pickering (2008) asserted that participants with higher levels of personal and social responsibility were likely to enjoy physical education more. In order that individuals be intrinsically motivated to participate in physical education, physical education teachers need to empower students with choices and voices, focus them on effort and self-direction, and create a respectful and caring learning environment.

Recommendations

Based on the findings and conclusions of this study, the following recommendations are advanced: School administrators should plan and implement effective exercise program and monitor personnel and students in valuing exercise to help them become competitive and productive adults.

Training schools for physical education teachers should include in their program training theories of motivation and other psychological principles that would encourage people to exercise and equip their prospective PE experts with adequate skills to carry out effective exercise programs.

Physical education teachers should motivate students to exercise and emphasize the value of being fit both as students and as future professionals.

Recreational athletes should motivate themselves more to work on better exercise programs despite their hectic schedules, and allot enough time for exercise in order that they will be health-conscious, more active individuals, and be effective in their chosen careers.

Owner of fitness/sports/dance centers and instructors should find ways to promote health consciousness and attract more recreational athletes to be part of their clubs.

Department of Education (DepEd), Department of Health (DOH), and other government agencies, private agencies and health and wellness advertisers, should

strengthen fitness programs and build fitness and wellness facilities to encourage individuals to pursue exercise to prevent diseases brought about by sedentary lifestyles.

The lawmakers in the Philippine should pass laws to strengthen the Physical Education Program in schools and allot appropriate budget to implement effective PE programs. Further, the government should support and encourage entrepreneurs to engage in the fitness and wellness business.

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Iloilo City

APPENDIXES

APPENDIX A

Letter to the Author of the Instrument and Letter of the Author to the Researcher

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Iloilo City

Letter to the Author of the Instrument

July 15, 2010

David Markland, Ph.D., C. Psychol
Director of Postgraduate Research
School of Sport, Health & Exercise Sciences
Bangor University
Adeilad George Building
Holyhead Road
Bangor, Gwynedd, LL57 2 PZ

Dear Dr. David Markland:

Greetings!

I'm Jerson Jaurigue, a student of West Visayas State University located in La Paz, Iloilo City, Philippines taking up Master of Arts in Education Major in Physical Education. I'm presently conducting a study entitled "Exercise Motivation and Exercise Attribution of Recreational Athletes". In this regard, I would like to ask permission from you to use your instrument "Exercise Motivation Inventory (EMI-2) 1997 as one of the instruments for my study. I am very much willing to share with you the results of my study.

I am hoping for your positive response on this matter. Thank you.

Truly yours,

(SGD.) JERSON J. JAURIGUE
MA Ed Physical Education Student

Noted:

(SGD.) PROF. EVA ROSE G. MALONES
Research Adviser

WEST VISAYAS STATE UNIVERSITY
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Iloilo City

Letter of the Author to the Researcher

July 16, 2010

Dear Jerson:

You are welcome to use the EMI-2. Good luck with your research.

David Markland

Appendix B

Letter to the Jurors

WEST VISAYAS STATE UNIVERSITY
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Iloilo City

July 26, 2010

_____
_____
_____

Dear Sir/Madam:

Greetings!

I am presently conducting a research study entitled, "Exercise Motivation and Exercise Attribution of Recreational Athletes" for which I made a checklist in order to determine the exercise attributions of the respondents.

Kindly peruse each item of the different test categories to determine its validity, reliability, and acceptability.

Your competence along this field will truly enrich this humble endeavor. So, I would appreciate it very much if you could indicate your suggestions/recommendations in order to improve each item.

Thank you for your assistance.

Truly yours,

(SGD.) JERSON J. JAURIGUE
Candidate, M.A. Ed. Physical Education

Noted:

(SGD.) PROF. EVA ROSE G. MALONES
Research Adviser

Appendix C

The Jurors

The Jurors

Prof. Ninette T. Bajador

Faculty, College of PESCAR

West Visayas State University

Dr. R Jonathan J. Quimpo

Faculty, College of Medicine

West Visayas State University

Dr. Catherine Roces

Faculty, College of Education

West Visayas State University

Appendix D

Letter to the Respondents

WEST VISAYAS STATE UNIVERSITY
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GRADUATE SCHOOL
Iloilo City

Letter to the Respondents

July 26, 2010

Sir/Madam:

Greetings!

I am presently working on my Masters' thesis entitled, "Exercise Motivation and Exercise Attribution of Recreational Athletes" as a requirement for the degree, Master of Arts in Education (Physical Education) at West Visayas State University.

In this connection, may I request you to be a respondent of my study? Attached herewith are two sets of checklist that I am asking you to accomplish for me.

Rest assured that the information you share therein shall be dealt with utmost confidentiality.

Your cooperation and magnanimous help is vital to the completion and success of this research study.

Thank you very much.

Truly yours,

(SGD.) JERSON J. JAURIGUE
Candidate, M.A. Ed. Physical Education

Noted:

(SGD.) PROF. EVA ROSE G. MALONES
Research Adviser

Appendix E

Research Instruments

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Iloilo City

Name: (Optional)_____ Age: _____

Gender: [ ] Male

[ ] Female

Employment Type: [ ] Government Employee

[ ] Private Employee

[ ] Self-employed

Occupation: _____

Type of Activity Pursued:_____

The Exercise Motivations Inventory-2 (EMI-2) by Markland and Ingledew 1997

(Anshel, 2003)

Direction: This questionnaire will measure your exercise motivation. Please read each statement carefully and check the appropriate column that is most applicable to you. Please answer all items. Be assured that your responses will be kept confidential and will be used for research purposes only. Below are the meanings of the choices:

Very True (VT) -- if the statement describes fully your motive to participate in the activity (100%)
True (T)-- if the statement somehow describes your motive to participate in the activity (80%)
Uncertain (U) – if you are not sure if the statement describes your motive to participate in the activity or not (50%)
Partly True (PT)-- if the statement describes partly your motive to participate in the activity (40%)
Not at all True (NT) – if the statement does not in any way describe your motive to participate in the activity

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Iloilo City

Personally, I exercise (or might exercise)……	N T (1)	P T (2)	U (3)	T (4)	V T (5)
1. because I want to maintain good health					
2. to have fun being active with other people					
3. because it helps to reduce tension					
4. to gain recognition for my accomplishments					
5. to have a good body					
6. to have a healthy body					
7. to avoid heart disease					
8. to recharge my batteries					
9. to give me goals to work toward					
10. to prevent health problems					
11. because I feel at my best when exercising					
12. because exercise helps me to burn calories					
13. to spend time with friends					
14. to measure myself against personal standards					

Thank you for completing this questionnaire.

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Iloilo City

The Exercise Attributions Checklist

Direction: This questionnaire will measure your most honest reason for engaging in different types of exercise/activities. Please read each statement carefully and check the appropriate column that is most applicable to you. Please answer all items. Be assured that your responses will be kept confidential and will be used for research purposes only. Below are the meanings of the choices:

Very True -- if the statement describes fully your reason to participate in the activity (100%)
True -- if the statement somehow describes your reason to participate in the activity (80%)
Uncertain – if you are not sure if the statement describes your reason to participate in the activity or not (50%)
Partly True -- if the statement describes partly your reason to participate in the activity (40%)
Not at all True – if the statement does not in any way describe your reason to participate in the activity

I am engaged in this type of exercise/activity…..	N T (1)	P T (2)	U (3)	T (4)	V T (5)
1. because of my medical/health condition					
2. because it is important for me to discover new movements and skills to keep me active and fit to meet the physical demands in my job					
3. because of the self-discipline that I was able to impose upon myself					
4. to reduce anxiety in order to be effective in my job					
5. because the people I know will approve of me					
6. because of my ability to handle tasks in this activity smoothly/easily					

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Iloilo City

I am engaged in this type of exercise/activity…..	N T (1)	P T (2)	U (3)	T (4)	V T (5)
7. because I feel great personal satisfaction when I master certain difficult training techniques					
8. to reduce/maintain my blood pressure					
9. for muscle toning					
10. because of my enjoyment in doing this activity especially those benefits that help me become competitive in my job					
11. because I was challenged to give it another try after a previous failure					
12. to maintain an ideal weight due to a health threat					
13. to prevent hypokinetic diseases that could be detriment to my career advancement					
14. because I easily progress in this activity					
15. because I have excellent reflexes					
16. because I like to feel involved in the activity as well as other people to expand my connections and influence					
17. to enhance self-determination					

Thank you for completing this questionnaire.

JERSON J. JAURIGUE
(Candidate, M.A. Ed. Physical Education)

Exercise Motivation Inventory Parameters

Personal Enhancement – 4, 8, 14
Health-Related – 1, 3, 5, 6, 7, 9, 10, 11, 12
Work-Related – 2, 13

Exercise Attribution Checklist Parameters

Personal Enhancement – 3, 4, 9, 14, 17
Health-Related – 1, 8, 12, 13, 15
Work-Related – 2, 5, 6, 7, 10, 11, 16

Appendix F

Reliability Coefficient of the Instruments

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.929	.936	50

Item Statistics

	Mean	Std. Deviation	N
var00001	3.8333	1.05318	30
var00002	4.5000	.68229	30
var00003	4.3333	.80230	30
var00004	3.9333	.90719	30
var00005	4.6333	.49013	30
var00006	4.2333	.67891	30
var00007	4.1667	.87428	30
var00008	3.5000	1.10641	30
var00009	4.1000	.60743	30
var00010	4.4000	.72397	30
var00011	4.3667	.88992	30
var00012	4.1333	.81931	30
var00013	4.6000	.62146	30
var00014	4.0000	1.14470	30
var00015	4.1667	.91287	30
var00016	3.9000	1.09387	30
var00017	3.4333	1.33089	30
var00018	4.0333	.80872	30
var00019	4.2000	.80516	30
var00020	4.1333	1.00801	30
var00021	4.3333	.71116	30
var00022	4.5333	.77608	30
var00023	4.6000	.56324	30
var00024	3.9667	1.03335	30
var00025	4.0333	.71840	30
var00026	4.3333	.54667	30
var00027	4.4667	.62881	30
var00028	3.9667	.71840	30
var00029	3.8000	.76112	30
var00030	3.3667	1.15917	30

var00031	4.1667	.91287	30
var00032	3.7667	1.13512	30
var00033	3.6333	1.24522	30
var00034	3.8000	1.06350	30
var00035	4.1333	.89955	30
var00036	4.3000	.70221	30
var00037	3.4333	1.16511	30
var00038	4.2667	.58329	30
var00039	4.3333	.66089	30
var00040	4.4000	.67466	30
var00041	3.9333	.78492	30
var00042	3.4667	1.00801	30
var00043	4.2000	.61026	30
var00044	3.6000	.89443	30
var00045	3.7333	.78492	30
var00046	4.2667	.58329	30
var00047	3.8333	.69893	30
var00048	4.3000	.59596	30
var00049	3.3333	.99424	30
var00050	4.2667	.86834	30

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
var00001	199.3333	401.609	.285	.	.929
var00002	198.6667	410.299	.145	.	.930
var00003	198.8333	406.489	.236	.	.929
var00004	199.2333	395.909	.499	.	.927
var00005	198.5333	412.533	.100	.	.930
var00006	198.9333	399.926	.529	.	.927
var00007	199.0000	402.414	.330	.	.929
var00008	199.6667	393.057	.467	.	.928
var00009	199.0667	402.685	.480	.	.928
var00010	198.7667	402.944	.389	.	.928
var00011	198.8000	395.614	.519	.	.927
var00012	199.0333	395.275	.578	.	.927
var00013	198.5667	399.013	.619	.	.927

var00014	199.1667	391.661	.481	.	.928
var00015	199.0000	388.414	.709	.	.926
var00016	199.2667	399.168	.329	.	.929
var00017	199.7333	384.409	.548	.	.927
var00018	199.1333	402.464	.359	.	.928
var00019	198.9667	394.930	.600	.	.927
var00020	199.0333	392.861	.523	.	.927
var00021	198.8333	401.109	.462	.	.928
var00022	198.6333	399.620	.469	.	.928
var00023	198.5667	401.426	.577	.	.927
var00024	199.2000	391.200	.550	.	.927
var00025	199.1333	392.257	.773	.	.926
var00026	198.8333	399.523	.684	.	.927
var00027	198.7000	403.528	.429	.	.928
var00028	199.2000	402.441	.410	.	.928
var00029	199.3667	409.964	.137	.	.930
var00030	199.8000	403.683	.209	.	.930
var00031	199.0000	394.690	.530	.	.927
var00032	199.4000	392.800	.460	.	.928
var00033	199.5333	395.154	.365	.	.929
var00034	199.3667	386.033	.660	.	.926
var00035	199.0333	392.240	.609	.	.926
var00036	198.8667	399.637	.521	.	.927
var00037	199.7333	407.168	.133	.	.931
var00038	198.9000	405.472	.381	.	.928
var00039	198.8333	398.626	.595	.	.927
var00040	198.7667	397.289	.633	.	.927
var00041	199.2333	393.702	.656	.	.926
var00042	199.7000	387.528	.661	.	.926
var00043	198.9667	401.551	.525	.	.927
var00044	199.5667	399.082	.416	.	.928
var00045	199.4333	405.702	.267	.	.929
var00046	198.9000	402.300	.518	.	.928
var00047	199.3333	400.782	.482	.	.928
var00048	198.8667	405.016	.392	.	.928
var00049	199.8333	407.109	.166	.	.930
var00050	198.9000	397.472	.478	.	.928

Appendix G

SPSS Outputs

Statistics

	N		
	Valid	Missing	Mean
em1	75	0	1.6400
em2	75	0	1.4667
em3	75	0	2.1200
em4	75	0	4.6000
em5	75	0	4.3600
em6	75	0	4.3467
em7	75	0	3.3600
em8	75	0	4.1600
em9	75	0	4.5733
em10	75	0	4.3067
em11	75	0	4.0667
em12	75	0	3.9600
em13	75	0	4.3467
em14	75	0	4.3600
ea1	75	0	4.4133
ea2	75	0	4.1867
ea3	75	0	3.7467
ea4	75	0	3.3600
ea5	75	0	3.5467
ea6	75	0	3.9733
ea7	75	0	3.8667
ea8	75	0	3.0000
ea9	75	0	3.4800
ea10	75	0	3.6800

ea11	75	0	4.0800
ea12	75	0	3.8800
ea13	75	0	4.5067
ea14	75	0	3.2133
ea15	75	0	3.5467
ea16	75	0	4.1067
ea17	75	0	4.0800

Means

Case Processing Summary

	Cases					
	Included		Excluded		Total	
	N	Percent	N	Percent	N	Percent
motivation * age	40	53.3%	35	46.7%	75	100.0%
attribution * age	40	53.3%	35	46.7%	75	100.0%
motivation * gender	40	53.3%	35	46.7%	75	100.0%
attribution * gender	40	53.3%	35	46.7%	75	100.0%
motivation * employment type	40	53.3%	35	46.7%	75	100.0%
attribution * employment type	40	53.3%	35	46.7%	75	100.0%

motivation attribution * age

age		motivation	attribution
30 years and below	Mean	3.6888	3.8613
	N	14	14
	Std. Deviation	.54153	.74678
31 years and above	Mean	3.6538	3.7557
	N	26	26
	Std. Deviation	.46410	.68694
Total	Mean	3.6661	3.7926
	N	40	40
	Std. Deviation	.48590	.70071

motivation attribution * gender

gender		motivation	attribution
male	Mean	3.5556	3.6830
	N	18	18
	Std. Deviation	.46456	.74820
female	Mean	3.7565	3.8824
	N	22	22
	Std. Deviation	.49470	.66328
Total	Mean	3.6661	3.7926
	N	40	40
	Std. Deviation	.48590	.70071

motivation attribution * employment type

employment type		motivation	attribution
government	Mean	3.2768	3.2500
	N	8	8
	Std. Deviation	.53375	.87800
private	Mean	3.6050	3.9412
	N	17	17
	Std. Deviation	.50767	.54828
self-employed	Mean	3.9429	3.9137
	N	15	15
	Std. Deviation	.21800	.65423
Total	Mean	3.6661	3.7926
	N	40	40
	Std. Deviation	.48590	.70071

NPar Tests
Mann-Whitney Test

Ranks

	age	N	Mean Rank	Sum of Ranks
motivation	30 years and below	14	21.50	301.00
	31 years and above	26	19.96	519.00
	Total	40		
attribution	30 years and below	14	22.11	309.50
	31 years and above	26	19.63	510.50
	Total	40		

Test Statistics[b]

	motivation	attribution
Mann-Whitney U	168.000	159.500
Wilcoxon W	519.000	510.500
Z	-.398	-.638
Asymp. Sig. (2-tailed)	.690	.523
Exact Sig. [2*(1-tailed Sig.)]	.705[a]	.528[a]

a. Not corrected for ties.

b. Grouping Variable: age

NPar Tests
Mann-Whitney Test

Ranks

	gender	N	Mean Rank	Sum of Ranks
motivation	male	18	17.19	309.50
	female	22	23.20	510.50
	Total	40		
attribution	male	18	18.39	331.00
	female	22	22.23	489.00
	Total	40		

Test Statistics[b]

	motivation	attribution
Mann-Whitney U	138.500	160.000
Wilcoxon W	309.500	331.000
Z	-1.623	-1.034
Asymp. Sig. (2-tailed)	.105	.301
Exact Sig. [2*(1-tailed Sig.)]	.106[a]	.312[a]

a. Not corrected for ties.

b. Grouping Variable: gender

NPar Tests
Kruskal-Wallis Test

Ranks

	employment type	N	Mean Rank
motivation	government	8	11.06
	private	17	19.35
	self-employed	15	26.83
	Total	40	
attribution	government	8	11.69
	private	17	22.62
	self-employed	15	22.80
	Total	40	

Test Statistics[a,b]

	motivation	attribution
Chi-Square	9.850	5.693
df	2	2
Asymp. Sig.	.007	.058

a. Kruskal Wallis Test

b. Grouping Variable: employment type

NPar Tests
Mann-Whitney Test

Ranks

	employment type	N	Mean Rank	Sum of Ranks
motivation	government	8	9.69	77.50
	private	17	14.56	247.50
	Total	25		

Test Statistics[b]

	motivation
Mann-Whitney U	41.500
Wilcoxon W	77.500
Z	-1.548
Asymp. Sig. (2-tailed)	.122
Exact Sig. [2*(1-tailed Sig.)]	.124[a]

a. Not corrected for ties.

b. Grouping Variable: employment type

NPar Tests
Mann-Whitney Test

Ranks

	employment type	N	Mean Rank	Sum of Ranks
motivation	government	8	5.88	47.00
	self-employed	15	15.27	229.00
	Total	23		

Test Statistics[b]

	motivation
Mann-Whitney U	11.000
Wilcoxon W	47.000
Z	-3.179
Asymp. Sig. (2-tailed)	.001
Exact Sig. [2*(1-tailed Sig.)]	.001[a]

a. Not corrected for ties.

b. Grouping Variable: employment type

NPar Tests
Mann-Whitney Test

Ranks

	employment type	N	Mean Rank	Sum of Ranks
motivation	private	17	13.79	234.50
	self-employed	15	19.57	293.50
	Total	32		

Test Statistics[b]

	motivation
Mann-Whitney U	81.500
Wilcoxon W	234.500
Z	-1.747
Asymp. Sig. (2-tailed)	.081
Exact Sig. [2*(1-tailed Sig.)]	.082[a]

a. Not corrected for ties.

b. Grouping Variable: employment type

Nonparametric Correlations

Correlations

			motivation	attribution
Spearman's rho	motivation	Correlation Coefficient	1.000	.578**
		Sig. (2-tailed)	.	.000
		N	75	75
	attribution	Correlation Coefficient	.578**	1.000
		Sig. (2-tailed)	.000	.
		N	75	75

**. Correlation is significant at the 0.01 level (2-tailed).