The relationship between gender, personality type, and participation motives in physical activity

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Abstract

The purpose of this study was to determine if a relationship exists between personality type and exercise participation motives in college-aged students. The Myers-Briggs Type Indicator and the Exercise Motivations Inventory-2 were administered to college students (N=157) enrolled in university walking and weight training classes. It was found that all sixteen of the MBTI personality types were represented, with the majority of participants being intrinsically motivated for both the walking and weight training classes. While no clear relationship was found between personality type and exercise participation motives, results showed an interesting relationship between the least common and the most common personality types. Results are discussed in relation to current understanding of personality type and exercise participation.

Introduction

Obesity and overweight are conditions that are risk factors for many chronic diseases including hypertension, type II diabetes mellitus, cardiovascular disease, and some forms of cancer (National Institutes of Health, 1998). They are also associated with high blood cholesterol, pregnancy complications, menstrual irregularities, hirsutism, stress incontinence, psychological disorders, and increased surgical risk (National Institutes of Health, 1998). An estimated 31% of U.S. adults are obese, with an additional 33% of U.S. adults overweight (Flegal, Carroll, Ogden, & Johnson, 2002).

One method for combating overweight and obesity is physical activity. According to the U. S. Department of Health and Human Services (USDHHS, 1996), physical activity is helpful for the prevention of overweight and obesity. It has also been shown to prevent or reduce the risk of chronic conditions including hypertension, type II diabetes mellitus, cardiovascular disease, osteoporosis, obesity, depression, and some forms of cancer.

Although the benefits of physical activity are well known, most adults and many children do not participate in regular exercise (USDHHS, 2002), with 40% of adults engaging in no physical activity (USDHHS, 2000a). More specifically, sedentary lifestyles are most likely to begin during the college years. Healthy People 2010 (USDHHS, 2000a) was designed to identify the most preventable threats to the health of the United States population and to establish goals to reduce these threats. These goals are to increase the quality and years of healthy life and to eliminate disparities in health. This is to be accomplished in part by reducing the proportion of children, adolescents, and adults who are overweight or obese as well as increasing the proportion of

adolescents and adults who engage in regular physical activity. However, it is questionable as to whether or not these objectives will be reached, for the objectives for Healthy People 2000, comparable to those of Healthy People 2010, were not met. Even more disturbing are the clinical findings that indicate the majority of people who do engage in physical activity will discontinue participation within three to six months (Dishman, 1994).

Exercise participation motives and exercise adherence have been areas of research interest for many years. Intrinsic motives for participation can be viewed as behaviors performed for the satisfaction of engaging in the activity, while extrinsic motives for participation can be viewed as behaviors performed for rewards separate from the activity (Deci & Ryan, 1985). Intrinsic and extrinsic motivation behaviors are based on the self-determination theory. This particular theory provides a foundation for the study of exercise motivation.

Research indicates that individuals are different in their exercise preferences relative to motivation, style, activity, and environment (Brue, 2002). The Myers-Briggs Type Indicator (MBTI) is based on Carl Jung's theory of personality and psychological type (Myers & McCaulley, 1998). It has been used as an instrument to discover differences in individuals and their exercise preferences (Brue, 2002, 2003a, 2003b, 2003c, 2003d).

There are four dichotomies according to the MBTI (Figure 1): Extraversion-Introversion (E-I), Sensing-Intuition (S-N), Thinking-Feeling (T-F), and Judging-Perceiving (J-P). The main objective of the MBTI is to identify which of two opposite categories is preferred in each of the four dichotomies. Everyone is assumed to use both sides of each, just as everyone uses both the right and left hands; however, there is always one that is preferred over the other. The four dichotomies result in sixteen personality types.

Researchers are exploring the possibility that participation motives pertaining to exercise could be related to personality type (Brue, 2002, 2003; Buckworth, Granello, & Belmore, 2002; Wittig, Schurr, Ruble, & Ellen, 1994). The exploration of the relationship between exercise motivation and personality type may prove to be a determinant in an individual's success in adhering to an exercise program. An assessment of innate personality type combined with the proper exercise modality for that personality type may lead to increased exercise adherence and the health benefits associated with that adherence. Therefore, the purpose of this study was to examine the relationship between personality type and exercise participation motives. It was hypothesized that there would be a relationship between type and motives.

Method

Participants and Design

The present study was a non-experimental, observational design that investigated the relationships between personality type, exercise participation motives, type of activity, and gender. Participants consisted of college students (55 male, 102 female) with a mean age of 19.8 years (±1.56) currently enrolled in either walking or weight training classes. Participation in the study was on a voluntary and anonymous basis.

Procedure

Participants were administered the Myers-Briggs Type Indicator (MBTI) followed by the Exercise Motivation Inventory-2 (EMI-2). The MBTI was explained and administered by a certified MBTI administrator, and followed by an explanation and completion of the EMI-2.

Treatment of the Data

Scores on the MBTI were used to distinguish one of sixteen personality types for the participants, while scores on the EMI-2 were used to determine tendencies for intrinsic or extrinsic motives. A frequency table was created for each of the exercise modalities (walking and weight training) using SPSS 11.0 (SPSS, Inc., Chicago, IL). The frequency tables showed the number and percentage of personality type as well as motivation type for each modality. Comparisons were made between walking and weight training classes for personality type as well as motivation type. Comparisons were also made between gender and motivation type in the walking and weight training classes. The data were then collapsed into Keirsey's (1998) four temperaments with comparisons made between participants of this study and those from that of Keirsey (2006).

Results

All sixteen of the personality types were represented in both the walking and weight training classes (Figure 2). Walkers (N=76) consisted of 53% extraverts and 47% introverts, 26% intuitive and 74% sensing, 53% feeling and 47% thinking, and 61% judging and 39% perceiving. ESFJ (15.79%) and ISTJ (14.47%) were the most prevalent personality types in the walking classes. The least common personality types found in the walking class were ENTJ (1.32%) and INTJ (1.32%).

Weight trainers (N=81) consisted of 49% extraverts and 51% introverts, 28% intuitive and 72% sensing, 44% feeling and 56% thinking, and 52% judging and 48% perceiving. ISTJ (14.81%) and ESTJ (13.58%) were the most prevalent personality types in the weight training classes. The least common personality type found in the weight training class was also INTJ (1.23%). Walkers showed approximately 27.6% extrinsic and 72.4% intrinsic motivation tendencies, while weight trainers showed approximately 14.8% extrinsic and 85.2% intrinsic motivation tendencies.

Both walkers and weight trainers were more intrinsically motivated (72.4%, 85.2%) than extrinsically motivated (27.6%, 14.8%). This trend was consistent across both gender groups (Figure 3).

Discussion

The purpose of this study was to investigate the relationship between personality type and exercise participation motives. It was found that all sixteen personality types of the MBTI were represented among the walking class participants, with ESFJ (15.79%) and ISTJ (14.47%) being the most prevalent personality types. The least common personality types found in the walking class were ENTJ (1.32%) and INTJ (1.32%). All sixteen personality types of MBTI were also found in the weight training class. The most prevalent personality types were ISTJ (14.81%) and ESTJ (13.58%). Similar to the walking class, the least common personality type found in the weight training class was INTJ (1.23%). This could suggest that there is no particular personality type associated with these two exercise modalities. However, the prevalence of the ESFJ, ISTJ, and

ESTJ could be associated with the findings of Brue (2002) in that these types are attracted to exercise that is structured and planned, regular and routine, safe and orderly, and connects them to other people in a friendly, harmonious environment.

A comparison of these results against those found by Keirsey (2006) indicate that some results are dissimilar to those among the general population (Table 1). First, the majority of participants were classed as Guardian, which corresponds to the findings of Keirsey. However, approximately twice as many participants in Keirsey's study were Idealist compared with the present study's findings. In addition, the opposite was found for the Artisan, as approximately twice as many participants in the present study were classed as Artisan compared to the findings of Keirsey. The MBTI results showed significantly more sensing types (S) than intuiting types (N). Artisans include the sensing types (S) and perceiving types (P) characterized as adventurous and fun-loving, while Idealists include the intuiting types (N) characterized as independent and unconventional. Artisans are termed sensation-seeking and Idealists termed knowledge-seeking. The findings of this study may be dissimilar to the findings of Keirsey due to the mean age of the respective groups, as the mean age of Keirsey's group was not stated. Although not statistically demonstrated by these results, it is suggested that perhaps intuition (N) is developed over time, as it correlates with vocations such as teaching and counseling. Given the relatively young age of the population in the present study, it may be that intuition was not yet fully developed.

The EMI-2 results showed the majority of participants regardless of gender were intrinsically motivated. This could be attributed to both classes being fitness-oriented classes. The majority of the participants were found to be intrinsically motivated to participate. Motivation tendencies did not differ greatly between the type of activity or gender. This could be due to both physical activity classes being based on individual performance and for reasons associated with the process. Results may differ in other physical activities that are based on team performance and performing the activity for rewards associated with the outcome.

While these results may illuminate areas for further investigation, some limitations exist. First, the small participant numbers in each group may not sufficiently allow for further generalizations beyond the scope of this specific group. Second, participants in each group were from activity classes selected on a voluntary basis. No information was ascertained with regard to the motivation behind activity class selection. For example, some participants may have chosen one class over another because of a schedule clash or through peer pressure.

However, while no relationship was found between personality type and exercise participation motives, the study does provide some interesting results which investigators may wish to pursue. Future research should consider temperament types and their usefulness in exercise programming, prescription, and/or protocol. If more specific instruction is necessary, determining personality type may be more beneficial in working with individual traits of a specific personality type. Because a large proportion of the group was intrinsic, future investigation may want to determine whether those participating in exercise are more intrinsically motivated and the associated benefits of intrinsic motivation in exercise programming. Research investigating the area of personality type and exercise participation motives may be vital if the goals and objectives of Healthy People 2010 are to be achieved.

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Where a person focuses his or her attention	**Extraversion (E)**	**(I) Introversion**
	People who prefer Extraversion tend to focus on the outer world of people and things	People who prefer Introversion tend to focus on the inner world of ideas and impressions
The way a person gathers information	**Sensing (S)**	**(N) Intuition**
	People who prefer Sensing tend to focus on the present and on concrete information gained from their senses	People who prefer Intuition tend to focus on the future, with a view toward patterns and possibilities
The way a person makes decisions	**Thinking (T)**	**(F) Feeling**
	People who prefer Thinking tend to base their decisions primarily on logic and on objective analysis of cause and effect	People who prefer Feeling tend to base their decisions primarily on values and on subjective evaluation of person-centered concerns
How a person deals with the outer world	**Judging (J)**	**(P) Perceiving**
	People who prefer Judging tend to like a planned and organized approach to life and prefer to have things settled	People who prefer Perceiving tend to like a flexible and spontaneous approach to life and prefer to keep their options open

Figure 1. The Myers-Briggs categories, adapted from King (2003).

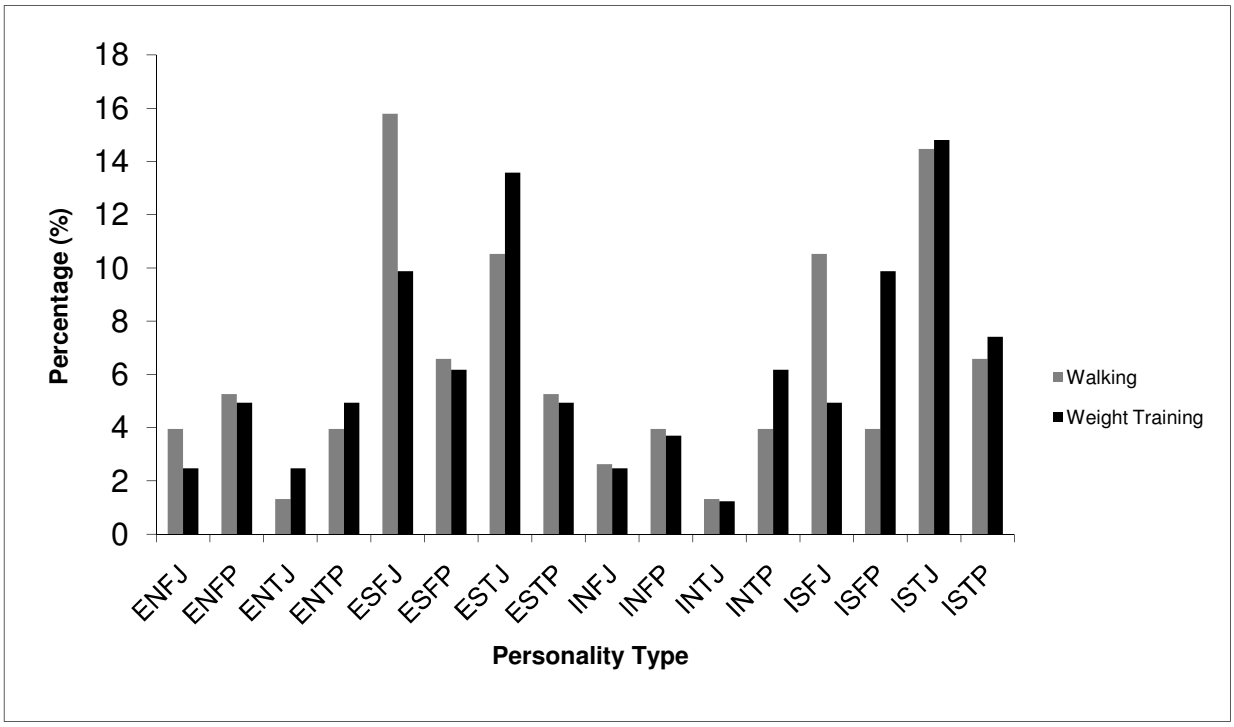

Figure 2. A comparison of personality type against activity.

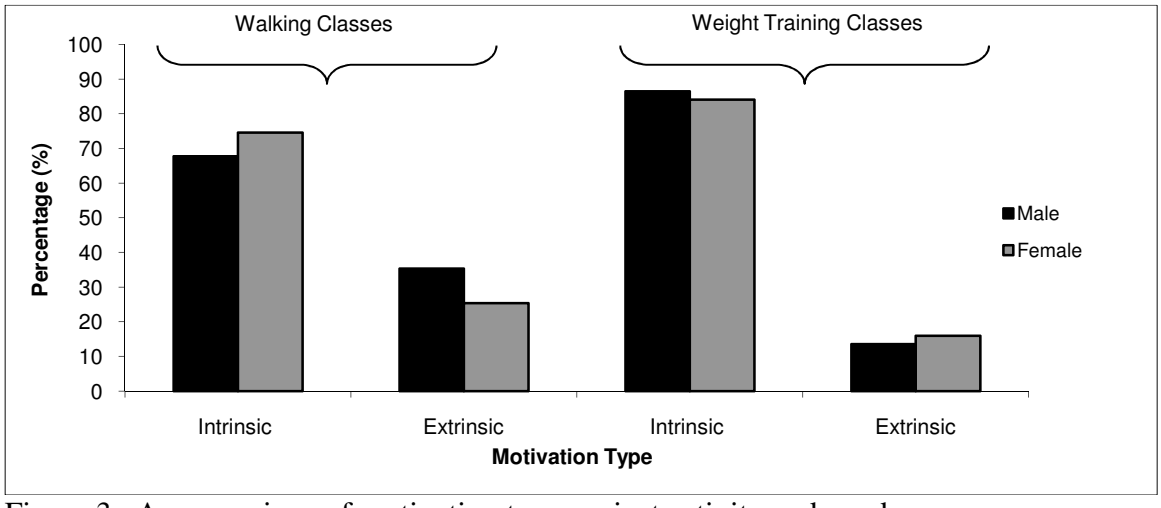

Figure 3. A comparison of motivation type against activity and gender.

Table 1
A Comparison of Keirsey (2006) Percentages Against Activity Class Percentages.

Temperament	Keirsey %	Walking %	Weight Training %
Guardian	43.71	51.32	43.21
Idealist	29.96	15.79	13.58
Rational	13.96	10.54	14.81
Artisan	12.38	22.37	28.4
Supervisor (ESTJ)	11.48	10.53	13.58
Inspector (ISTJ)	10.56	14.47	14.81
Provider (ESFJ)	12.18	15.79	9.88
Protector (ISFJ)	9.49	10.53	4.94
Teacher (ENFJ)	7.5	3.95	2.47
Champion (ENFP)	8.62	5.26	4.94
Counselor (INFJ)	7.17	2.63	2.47
Healer (INFP)	6.67	3.95	3.70
Field marshal (ENTJ)	3.43	1.32	2.47
Inventor (ENTP)	2.3	3.95	4.94
Mastermind (INTJ)	5.21	1.32	1.23
Architect (INTP)	3.02	3.95	6.17
Promoter (ESTP)	2.69	5.26	4.94
Operator (ISTP)	2.1	6.58	7.41
Performer (ESFP)	4.7	6.58	6.17
Composer (ISFP)	2.88	3.95	9.88

Biographical Sketch

Dr. Timothy Baghurst is an Assistant Professor of Health, Physical Education, Recreation, and Athletic Training at Henderson State University. Dr. Baghurst teaches a variety of courses and brings a multidisciplinary background in Kinesiology and K-12 public teaching experience.