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A Case Study: Participation Motives of Strength and Conditioning Training for College Students

大學生肌力及體能訓練的參與動機

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Abstract

The aim of this study was to investigate the participation motives of college students taking part in strength and conditioning training. The subjects were four university students. Observations, interviews and documents were utilized as the primary sources of data collection. The data were analyzed using number checking and triangulation techniques. The findings were organized into the following sections: need recognition, and belonging and affection motives. The participants' needs to work out included losing weight, keeping fit, staying in shape, securing physical appearance, releasing stress, and establishing healthy lifestyles. The most important motive for them to work out was spending time and interacting with friends.

Keywords: Participation motives, strength and conditioning training, college students

摘要

本文旨在探討大學生參與肌力與體能訓練的動機。研究對象為四位大學生。資料收集主要途徑為觀察、訪問及文獻紀錄。所收集的數據以數字核對及三角測量法作分析。研究結果被分類為以下類別：被認同的需求、歸屬感及情感動機。研究對象做肌力與體能訓練的目的包括：減肥、健美、維持線條、保持外表、減壓及建立健康生活，當中做運動最重要的動機是與朋友消磨時間及維繫。

關鍵詞：參與動機、肌力與體能訓練、大學生

Introduction

The Physical Activity guidelines for Americans issued in late 2008 recommended that adults should do at least 150 minutes a week of moderate-intensity aerobic physical activity and muscle-strengthening activities to improve physiological and psychological health (US Department of Health and Human Services, 2008). Despite science-based recommendations on physical activity and health by the

US Department of Health and Human Services, research showed that the level of physical activity of students declined from high school to college (Pribis, Burnack, McKenzie, & Thayer, 2010). The inactivity may lead to weight gain and obesity. Accordingly, "the freshman fifteen" became a common term to describe the weight gained by students during their freshman year of study in college.

To promote active lifestyles, firstly understanding the participation motives of physical activities is essential. Motivation involves the desire and willingness to spend energy in order to attain a given outcome. Motivation is a result from the complex interaction of intrinsic and extrinsic factors. It is a fundamental force that causes an individual to behave in a particular manner. Individuals are motivated to perform different activities in order to meet their needs at different times. Motivation is a force which keeps people moving (Gill, & Williams, 2008)

Numerous quantitative studies (Keating, Guan, Piñero, & Bridges, 2005; Kilpatrick, Hebert, & Bartholomew, 2005) have investigated the motives to participate in physical activity. However, there was limited research utilizing qualitative research methodology on the motives of college students to go work out at the strength and conditioning room. The purpose of this qualitative case study was to have an in-depth understanding on the motives for four college students participating in strength and conditioning training at the University Student Recreational Sports Center (SRSC).

Research Question

The research question of this study was “What were the college student participation motives to go work out at the strength and conditioning room in the SRSC?”

Methodology

Subjects

The participants of this study were four college students at Indiana University in Bloomington, IN, USA. Known as Susan, Betty, Thomas and John (pseudonyms were used throughout this paper), they served as the primary subjects of the present study. Their backgrounds were as follows: Susan was a sophomore majoring in elementary education and her physical appearance looked fit at the time of this study. She had participated in strength and conditioning training regularly when she was a member of her high school sport team. Betty was a sophomore majoring in psychology and looked overweight. She attended strength and conditioning class in her senior year of high school. Thomas was a senior majoring in public financial management and his upper body was toned up. He had been an athlete in high school. The last student was John, who was a senior majoring in finance and his upper body was toned up. He was also

an athlete in high school. These students received training and consultation from Mr. Fit, the fitness consultant of the center, who was the secondary subject. He had been working at the SRSC as a fitness consultant for two years.

Site Description

The SRSC was located one block Northeast of the Indiana University (IU) Main Library. The participants could work out any time from morning to evening, 362 days a year. Memberships were available to individuals aged 18 and above, including students, faculty, staff, alumni, and the general public. All IU Bloomington students had automatic memberships that included access to the facilities at any time whenever they paid the student activity fee. The SRSC Strength and Conditioning Room was located on the second floor. It had a total square footage of 12,000. There were 3 lines of selectorized machines, a strength circuit, over 100 pieces of cardiorespiratory equipments, a free weight area with dumbbells that go up to 100 lbs., and an area called the PATIO (programming, alternative training, instruction, and orientation).

Data Collection

Observations, interviews and documents were utilized as the primary sources of data collection. The researcher gathered field notes on the physical setting of the strength and conditioning room, the activities and environments during the orientation session, and the activities and behaviors of the primary subjects in the strength and conditioning room. The researcher followed the language of the participants in the field notes to keep the data as accurate as possible. Data were also gathered through the interviews with the primary subjects and secondary subject, the examination of equipment usage reports, and the user surveys of the SRSC strength and conditioning room. Audiotapes were used to assist note-taking during interviews and to ensure accuracy of field notes.

Data Analysis

Analysis of data was conducted during the data collection stage. Working hypotheses were generated and checked throughout the data collection period. Then, transcripts were examined by the researcher more than three times. Recurring themes were identified for content analysis. Assertions were then developed and checked for validity by seeking confirming evidence as well as

disconfirming evidence. The data were analyzed using number checking and triangulation techniques.

Results

The findings were organized into following sections: need recognition, and belonging and affection needs.

Need Recognition

Need was employed in this analysis to represent a psychological condition experienced by a person. The term “need” was defined as a form of psychological needs rather than a form of normative needs in this study. Psychological needs tend to involve more motivation than needs of a normative nature. Although no clear pattern of responses has emerged, the following excerpts showed that there were various needs for Betty, Susan, Thomas, and John to work out.

Betty

Betty seemed overweight (observation, October 30) and was frustrated about her physical appearance because she knew that she was overweight. The negative feelings of being overweight induced her to lose weight. At this stage, she was aware that working out had the potential to meet some of her specific needs -- to lose weight and to be slim. As Betty said, “in our generation today, society's emphasis on slim physique.” (Betty, interview, November 16). Betty also stated:

The initial reason for me to exercise in the SRSC is to lose weight. I want to look better, feel better and to tune up my muscles. ...Or when I get on the scale, I realized that I have gained weight....I am not happy (Betty, interview, November 16).

Susan

Susan's appearance was fit and she went to work out because she wanted to keep fit. However, she was disappointed about her physical fitness level when compared with her high school years. She felt that she had not maintained her previous fitness level, as she was a high school athlete. Moreover, workout became her habit since she was in high school. Susan said, “I go to workout because I want to keep fit. I started working out when I was in high school” (Susan, interview, November 27). At this stage, going to workout had the potential to meet her specific needs – to maintain her fitness level and to maintain her habit.

Thomas and John

The initial reasons that Thomas and John went to work out were to be healthy, to stay in shape, to secure their physical appearance, and to release stress. Thomas and John were not overweight and appeared to be fit, although they still had room for improvement on muscle toning. Thomas and John were athletes in high school. Thomas said, “Both of us were heavily involved in athletics back in our younger days” (Thomas, interview, November 2). They were upset about their present fitness level when compared with their high school years. At this stage, they were aware that working out could have the potential to meet some of their specific needs. In particular, they wanted to be healthy, to maintain their physical appearance, and to release stress.

The following capture the essence of the negative feeling of putting on weight that increased their awareness of their need to work out:

The reason to work out is because I want to be healthy. I want it to be part of my lifestyle and be proud of myself. It can be done by goal setting and I become more confident on my physical appearance (Thomas, interview, November, 2).

The reason to work out is that I want to stay in shape and look as good as I can be. I feel good about myself when I work out. I have a lot of stress. Working out is good for stress relief. It gives me something to look forward to. ...It is easy to see us put on weight. ... We did not really plan on it. We just stress out as we are getting out of shape. Moreover, there are a lot of research and information showing that working out to stay healthy is part of routine of a successful CEO. John said, “We try to follow that line and so we can be run our own company someday, you never know.” (John, Interview, November 2).

This study found that the initial desires of the college men and women to go workout related to the awareness that working out would have the potential to meet some of his or her specific needs, such as losing weight, keeping fit, staying in shape, securing physical appearance, releasing stress and establishing healthy lifestyles. This was a stage of problem recognition. Problem recognition was the result of a discrepancy between a desired state and an actual state large enough

and important enough to activate a decision (Shank, 2009). These four college students recognized there was discrepancy between their desired physical fitness and their actual physical fitness.

Belonging and Affection Motives

The desires to stay healthy, keep fit, and look good alone were not sufficient to motivate these four college students to go workout. The essential motives that drove their thoughts into action were the feelings of affiliation and sense of belonging. Spending time with friends and interacting with friends were important motives for them to work out.

Betty and Susan

The following expression from Betty showed that she was not satisfied with the outcome of her workout, as she did not lose enough weight. She understood that no matter how hard she exercised, the workout did not help her look as slim as the models on TV. Betty stated:

However, it does not end up happening because I do not go often enough. ...Today, in our generation, the society emphasizes on the fact that everyone wants to be slim. Most of the models on TV look so slim and it is impossible to look like them (Betty, interview, November 16).

According to the balance theory proposed by Fritz Heider (1958), people try to maintain consistency in their attitudes. If attitude inconsistency occurred, such as when Betty believed that workout would help her lose weight but the outcome was not, she tried to reestablish consistency by changing the perception of why she went workout. She claimed that she liked the feelings to be with friends and she enjoyed doing exercise with friends. Betty stated:

I like doing exercise because I am not just by myself but with friends. That is kind of fun. I feel better after a workout. I usually go with friends. It is a strong motivation when someone asks you "Do you want to go to work out?" I will answer "sure, let's go" (Betty, interview, November 16).

Therefore, an important motive that pushed Betty's desires into action was the feelings of affiliation. The following instance provided several examples of how Betty liked the feelings to be with friends.

Susan and Betty came together to the strength and conditioning room in the SRSC for exercise. Right after they finished stretching in the observation room, they went to the stationary cycling machine and sat beside each other. Susan started to ask Betty "How was the class...?" and Betty replied, "Well, it seemed OK..." After Betty finished talking and Susan showed her understanding by nodding her head, they turned their focus back to their exercise. After 5 minutes of cycling, Susan asked Betty to look after her wallet and went to the rowing machine while Betty continued her stationary cycling. ... After cycling for about 25 minutes, Betty proceeded to look for Susan who was at the strength circuit area. Then they went to the variable resistance area together. Susan and Betty went to work out on the thigh adduction and abduction machines together. After finishing one set of thigh exercise, Susan and Betty switched to exercise on each other machines. Betty finished her exercise a bit earlier than Susan did. Betty stood in front of Susan and drank water. Susan told Betty that her earrings were very nice. Betty agreed with her and told Susan where she got them. ... After finishing the stretching, Betty and Susan left the SRSC together. Susan gave a ride for Betty in her GMC truck (Observation, October 30).

Betty went to the SRSC to work out with her friend Susan. They started their stretching and cycling exercises together and chatted during the exercises. Afterward, Susan switched to rowing and circuit training while Betty continued her cycling. They were exercising separately for a short period of time. Then, they looked for each other after they finished their respective exercises. This scenario showed a form of feelings of affiliation/belonging. They always wanted to have company to go to work out. Susan stated, "I always go with friends to workout but seldom by my own. I go for workout spontaneously but I always grab someone to go with me" (Susan, interview, December 4).

Thomas and John

The feeling of affiliation was also an important motive for Thomas and John to go workout. They liked the social atmosphere, as they could meet many other people. Several incidents from the interviews showed that spending time with friends and interacting with friends were important motives for them to work out. John stated, "We have a set program and workout together. ...I like to

work out because you can meet people. It's like a social setting where we can see friends everywhere and it is just fun"(John, Interview, November 2).

Thomas enjoyed his time with John. He knew that it was important to work out with a friend as he could share his feeling with John. Thomas stated:

So we love to come here to work out for fun. The social atmosphere just like John said earlier is great. ... We seldom come alone. It is really good to have someone, especially someone who is a good friend like John. To come here with him really motivates me. When you are by yourself, you tend to procrastinate. I don't really want to go but if you have someone to look for, maybe you do. You may go to do workout an extra day too. When you are working out, maybe your friend calls "come on, come on, you can do it", it helps. It is really good to come with someone. I don't think I will come without John. ...

I really enjoy the time. I think this was one reason to work out (Thomas, Interview, November 2).

Thomas had given us an example why it was important to workout with a friend. In his case, he would not go to work out without his good friend John, even if he decided to go. This showed that the desires to go to work out because of being healthy, keeping fit and releasing stress were not strong enough to motivate him into action. The most important factor for him to go to work out was spending time and interacting with his friends. Betty had the similar case. She stated that she would only go to work out when she was with someone.

The following vignette also showed the importance of affiliation for Thomas and John.

Thomas and John came to the strength and conditioning room in the SRSC together for exercise. They started their exercise with the inclined bench press in the free weight room. They worked in a pair and took turn to assist each other for unloading and uploading the weight. They chatted with each other about the performance of their exercises. During the third set, Thomas reminded John "don't get hurt, especially during the last set". After working out on the inclined bench press, they switched to the bench press. They started with

45lbs. This time John started first and Thomas was the next one. Before Thomas started, they discussed about the technical skills on how to do the lighting correctly. Thomas seemed a bit tired in his third set and John motivated him "one more, two more". After they finished the bench press, they switched to the cable cross. Cable cross was a user-friendly machine on which individual could workout independently. However, John stood aside of Thomas and waited for his turns. After Thomas completed the second set of cable cross exercises, he discussed with John his feeling during his second set of bench press. Both Thomas and John appeared tired in their third sets of cable cross. They then assisted each other. Thomas pushed the handle and John lifted the weight with his hands at the same time. In addition, John pushed the handle while Thomas lifted the weight with his hands. They left the free weight room and went to do the Nautilus resistance exercise. They took turns and did the Pec deck. While pushing the handle of the Pec Deck, they chatted about their friends, their leisure time, and also about the Halloween party last night. After finishing the Pec Deck, they left the strength and conditioning room and went to play basketball together (Observation, November 2).

Thomas and John went to workout at the SRSC together. They worked out as a group. They motivated each other during exercises and shared about their feelings and their lives.

The following analysis summarized the interpretations on the findings of both college men and college women in this study. They always went to workout with friends. They were always chatting during exercising and even worked as a pair. They did not like working out alone and they enjoyed spending time and interacting with friends. In addition, the physical and social setting of the strength and conditioning room also provided a good atmosphere for them to socialize.

The fitness consultant, Mr. Fit, commented that the atmosphere at the strength and conditioning room was more like a "nightclub atmosphere". A lot of people dressed up and put on make-up or perfume. This was a place to show off or be noticed by other people. (Orientation Session Observation, October 10). The social atmosphere of SRSC could enhance the feelings of affiliation.

Discussion

These findings yield interesting insights into the participation motives of strength and conditioning training for college students. Theory promotes understanding. A theoretical framework furnishes the concepts and definitions that crystallize the important elements in the observable phenomena or behavior that one was interested in studying and describing. Attempting to validate the propositions derived from this study enhanced our confidence to comprehend the phenomenon or behavior of these four college students to work out with friends. Maslow's hierarchy of needs theory was utilized to further explain the importance of affiliation. Abraham Maslow (1970) stated that human beings are motivated by the desire to fulfill certain needs which all individuals share: physiological needs comprise the fundamental requirements for water, food, and sleep; security needs comprise the needs of clothing, shelter, and ways of defending oneself; belonging and affection needs comprise the desire to relate to other people and to give and accept love, care, and cooperation; esteem needs comprise the desire for self-worth, independence, and achievement and recognition and respect from others; self-actualization needs comprise the desire for growth, development, and self-fulfillment and the urge to realize one's potential (Maslow, 1970; Mills 1985).

According to the Maslow's hierarchy of needs theory, the basic human needs emerge in a given sequence for each person and the needs at one level of the hierarchy must be satisfied before a person is motivated to meet the needs at the next higher level. For example, the belonging and affection needs of an individual must be satisfied before the "higher" needs of esteem and self-actualization can manifest in a dominant manner. The theory can suggest that these four college students had self-esteem needs on improving their self-worth by working out. However, they might not go to work out by themselves as the belonging and affection needs had not been satisfied. They would go to work out with friends as the belonging and affection needs must be fulfilled before the "higher" needs of esteem and self-actualization.

Moreover, the integrated theory of intrinsic and extrinsic motivation in sport and exercise was developed by Vallerand and Losier in 1999. In this theory, psychological mediators (perceptions of competence, autonomy and relatedness) were viewed as mediating

relationship between social factors (such as success/failure, competition/cooperation, coaches' behavior) and motivation (intrinsic motivation, extrinsic motivation and amotivation), then the consequences associated with motivation were affect, sportpersonship and persistence (Cox, 2007).

In the present study, both Betty and Susan, Thomas and John worked out together. They also assisted each other during the work out, indicating that the social factor would help develop intrinsic motivation. Thomas felt that he was good at weight training and felt good about himself. This would enhance his perception of competence which could act as psychological mediator for the development of motivation. Based on the interviews, the motives of these four students for exercise were identified as regulation of extrinsic motivation. This finding was supported by previous studies. Kilpatrick, Herbert and Bartholomew (2005) stated that motivation for exercise of college students were more extrinsic and they focused on appearance, weight control and stress management. Yoh (2009) reported that the most important motivations to participate in physical activity for international college students were for organic development, such as keeping good health, getting regular exercise and developing and maintaining sound and proper physical functioning.

The other interesting implication from this study was gender differences. Researchers suggested that females valued the social aspects of participation more than males and that they ranked affiliation-friendship higher than did males (Cheung, 2000; Leslie, Owen, Salmon, Bauman, & Lo, 1999). However, in examining these four college students working out in the strength and conditioning room in the SRSC, the findings supported that the need of affiliation, spending time with friends and interacting with friends were important factors for both males and females.

Given the qualitative nature of this study and the small sample size, these findings may be best suited for hypothesis generation for future research. Although these findings yield insights into the participation motives for strength and conditioning training of college students, additional work is needed.

Through gaining a better understanding of college-age strength and conditioning training behavior, one can better identify large-scale intervention targets for motivating college students to work out. Universities need to take

an active role in creating intervention strategies focusing on providing welcoming physical (e.g. facilities) and social setting atmosphere (e.g., recreation programming) to motivate college students to actively participate in strength and conditioning exercise.

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