

СЕКЦИЯ «СПОРТИВНАЯ ИНЖЕНЕРИЯ. МЕДИЦИНСКАЯ ЭЛЕКТРОНИКА. ВОССТАНОВЛЕНИЕ И РЕАБИЛИТАЦИЯ»

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RESEARCH ON THE RELATIONSHIP OF FLOW EXPERIENCE WITH PHYSICAL EXERCISE BEHAVIOR AND EXERCISE ADDICTION

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Abstract. Flow experience can promote person to produce an important aspect of happiness. A lot of study on flow experience can give a person with great pleasure and improve the quality of individual life. Physical exercise on negative psychological improvement has received a lot of empirical support, the rise of positive psychology, puts forward a new thinking for physical exercise, physical exercise How to promote individual psychological actively, improve the quality of life has become an important research direction of physical exercise.

Keywords: flow experience; exercise; psychology.

1. Introduction

Csikszentmihalyi (1975) proposed that flow can emerge from virtually any activity that is structured and provides individuals with action opportunities. One main precondition to get into flow is the perception that personal skills match situational challenges (Csikszentmihalyi, 1975; Jackson, 1995). Nine dimensions have been proposed to reflect flow experiences in sport, including challenge-skills balance, action-awareness merging, clear goals, unambiguous feed-back, concentration on the task at hand, sense of control, loss of self-consciousness, time transformation and autotelic experience (Jackson, 1995; Jackson&Eklund, 2002; Kawabata & Mallett, 2011) [2].

When we doing exercises, listening to music, producing works of art and participating in leisure activities, we all have chance to experience a wholehearted situation. In this situation, the works at hand are joyful and full of happiness and tasks are handled well. Such a kind of experience is flow.

Flow experience is a widespread phenomenon. While, it's easier to experience flow in physical exercise than other leisure activities. If college student had experienced flow in doing exercise, they'd feel the happiness of sports, which would lead them insist on exercising. But if they addicted into experience flow in sports, and seek for happiness in addition to achieve his expect only based on doing exercise, they'd be exercise addicted [3].

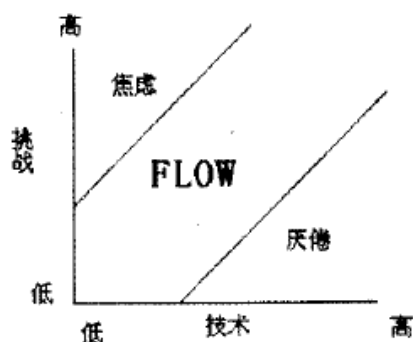


图1 FLOW早期模型

Figure 1 - Early model of flow experience

2. The Relationship Between Flow Experience and Exercise Addiction

The writer used stratified cluster sampling method, chose 459 freshmen and sophomores whose majors aren't about sports from Northeastern University and used self-made general circumstance scale, exercise addiction scale and DFS-2 (Rewrote by Liu Weina in 2009 in Chinese) to do researches. Taking flow experience as a start, writer primarily research three parts: the tendency of dispositional flow in gender, grade and major, the relationship between flow experience and physical exercise behavior in frequency, duration and sports event, the relationship between flow experience and exercise addiction. And finally draw some conclusions as below:

(1) The flow tendency in exercise of college students was different in gender and male were easier than female to experience flow. There was no significant difference in grade and major in the flow tendency.

(2) There was significant association between flow experience and physical exercise behavior of frequency, duration and sports events. Students who exercise more than three times a week were easier to experience flow. Students who exercise more than one hour once were easier to experience flow. Students who participate in basketball were easier to experience flow, and students who participate in race walking and rope jumping were harder to experience flow.

(3) Flow experience is significantly associated with exercise addition and it can effectively predict exercise addiction. There are four factors (Autotelic experience, Challenge-skills balance, Transformation of time, Total concentration on the task at hand) that can effectively predict exercise addiction.

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АЛГОРИТМ АНАЛИЗА ТЕХНИКИ ВЫПОЛНЕНИЯ СОРЕВНОВАТЕЛЬНОГО УПРАЖНЕНИЯ У СТРЕЛКОВ ИЗ ЛУКА РАЗЛИЧНОЙ КВАЛИФИКАЦИИ

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***Abstract.** The study represents the data of biomechanical analysis of movements' efficiency of competitive exercise of athletes-archers in qualification aspect based on application of hardware and software means. The algorithm of actions' sequence within remote registration and assessment of shot's temporal characteristics' process, body position, plantar pressure of the foot's distribution and skeletal muscles' bioelectrical activity were described. Individual distinctive characteristics of temporal parameters and duration of single phases of shots during performing competitive exercise by different qualification sportswomen were defined. It was revealed that the most extended phases are the hold-on phase and ready position phase. Individual and comparative analyses of patterns of total electromyography of key muscles were carried out, that point out at certain multilevel in the amplitude-frequency spectrum, and also the involvement in the functioning of certain set of muscles, strength potential and sportswomen's operating economy taking into account their skill level.*