

Research on middle-aged and elderly people's risk cognition of physical exercise from the perspective of sports public service

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Abstract

The purpose of this paper is to reduce the risk accidents caused by incorrect subjective risk cognition in the process of physical exercise, and promote the physical exercise of the middle-aged and elderly to be more scientific, sustainable and healthy. Methods qualitative research and questionnaire survey were used to make an empirical study on the risk of physical exercise of middle-aged and elderly people in China. Results the risk cognitive structure of physical exercise in the middle-aged and elderly included risk benefits, risk concerns and measures to deal with risks. Its characteristics included irrationality, degree of control and degree of stability; The cognition degree of physical exercise risk of middle-aged and elderly people includes uncertainty, ability to control and risk. The risk cognition degree of most middle-aged and elderly men is deeper than that of women; Self behavior, risk control, self conditions and risk knowledge are the main factors affecting the risk cognition of physical exercise of the middle-aged and elderly. Conclusion there is no difference in the risk judgment of most physical exercise among the middle-aged and elderly people with different gender and experience; The middle-aged and elderly people of different ages have obvious differences in the judgment of some physical exercise risks.

Keywords

Elderly sports, exercise motivation, quality of life.

1. Introduction

An increasing number of middle-aged and elderly people regard strengthening physique and maintaining health as their first goal and long-term exercise pursuit. However, while physical exercise brings physical and mental health to the middle-aged and elderly, there are also many inevitable risk problems. For example, the risk of accidental injury in physical exercise is one of the more cruel things. Therefore, the awareness of risk in physical exercise is very important. It can not only avoid dangerous accidents, but also carry out physical exercise more scientifically, continuously and healthily [1]. This paper attempts to use the means of qualitative research to study the cognition of physical exercise risk of middle-aged and elderly people, detect the subjects' feeling and judgment of physical exercise risk, and make a quantitative study on the structure and influencing factors of physical exercise risk cognition of middle-aged and elderly people.

2. Overview of the risk of physical exercise for the elderly

Different from physical activity, exercise refers to a kind of leisure physical activity implemented to achieve a special purpose, such as improving appearance, enhancing cardiopulmonary function, eliminating pressure and increasing fun. It is also the use of various sports means, combined with natural factors (sunlight, air, water, etc.) and sanitary measures to improve health and physique The

process of physical activity that regulates the spirit and enriches cultural life. Its purpose lies in people's all-round, free and harmonious development. As a social practice of delaying aging and enhancing physique, physical exercise has been valued and loved by all ages, especially the middle-aged and elderly [2].

The core meaning of the word risk in the modern sense is "uncertainty or loss of future results" [3]. Physical exercise has distinct physical risks. Although the results are also reflected in uncertainty, different from other risks, physical exercise risks are embodied in individual safety or physical injury to some extent. That is, in the process of physical exercise, the uncertainty caused by subjective and objective factors focuses on the injury events caused by subjective and objective factors. It is not only the risk that exercise participants may encounter in each stage or link of physical exercise, but also the possibility of various events that interfere with exercise participants' normal exercise or physical injury in physical exercise.

With the growth of age, the middle-aged and elderly people are affected by the decline of physiological function, senile diseases and lack of diet and nutrition, the motor system degenerates and is threatened by various diseases; On the other hand, they mainly take part in outdoor sports. Park (square) is the first choice, followed by communities and schools. These public places are greatly affected by natural environmental factors, and lack of necessary health measures and guidance personnel. The physical function status and exercise environment of the middle-aged and elderly determine that they will be subject to more risks and threats in physical exercise compared with the young people [4], which is mainly characterized by:

- (1) Objectivity. The risk of physical exercise for the middle-aged and the elderly occurs with the generation of exercise behavior, as long as it is possible. Then it will happen. Various means are needed to reduce the possibility of physical exercise risk of middle-aged and elderly people and reduce the severity of risk results.
- (2) Uncertainty. The core content of risk is uncertainty. There are many factors leading to the occurrence of physical exercise risk events for the middle-aged and elderly. The time and place of risk events and the degree of damage caused by risk events become more uncertain.
- (3) Universality. The middle-aged and elderly people's relatively degraded physical control and response ability lead them to fail to take timely countermeasures when they are aware of the risk. In this way, in the physical exercise of the middle-aged and elderly. Injury accidents are more common.
- (4) Intangibility. The popular form of sports makes it difficult for the middle-aged and elderly to observe the existence of risk on the surface. The middle-aged and elderly people will mistake some of their physical risk factors as their physical aging, which is normal, so they don't pay attention to it. However, under these seemingly normal phenomena, there are often serious disturbing factors.
- (5) Sudden. Due to the lack of "flexibility" in the physical function of the middle-aged and elderly, risk events often occur in the form of "all or nothing". In addition, the intangibility of such risks restricts our risk monitoring. Once an event occurs, it often makes the response measures passive.
- (6) Severity. The weakness of the physiological function of the middle-aged and elderly makes them more vulnerable to injury in physical exercise. Some sudden diseases, such as cardiovascular and cerebrovascular diseases, even caused the serious consequences of sudden death in the middle-aged and elderly [5].

Researchers in sociology, medicine, physical education and many other fields have long studied the injury of physical exercise, and aimed at the current situation of physical exercise for the middle-aged and elderly, the impact of different types of sports on the physique of the middle-aged and elderly, physical exercise and disease, the intensity and load of physical exercise for the middle-aged and elderly A series of problems such as the safety and injury of physical exercise for the middle-aged and elderly are studied to limit the occurrence and harm of injury accidents to the minimum. These studies no longer blindly follow the call of national fitness, study the benefits of physical exercise, but explore the negative effects and solve the practical problems. This provides some help for the

scientific rationalization of national fitness, especially physical exercise for the middle-aged and elderly [6].

In recent years, with the deepening of research, in order to more systematically and comprehensively analyze and solve the injury problem of people's physical exercise, the integration and reference between disciplines provide researchers with a new perspective. The research on the factors causing damage as risk factors has become a hot spot in recent years.

3. Risk perception of physical exercise in the elderly

3.1 Definition of risk cognition of physical exercise for the elderly in the wind of physical exercise for the elderly

Risk cognition is a concept used to describe people's risk attitude and intuitive judgment. Risk is an unknown loss result. In this sense, it is only a future danger or threat, which can not be perceived by individuals. However, individuals can use experience to imagine the unknown, compare and judge. Therefore, risk cognition is different from perception and cognition in psychology. It emphasizes the individual's judgment and attitude towards objective risk. Slovic believes that when people estimate all kinds of dangerous things, they generally rely on intuitive risk judgment, which is called risk cognition. In a broad sense, it also includes people's general assessment and response to risk. Risk assessment is based on risk identification, qualitative and quantitative analysis, and the public generally judges and distinguishes risks through intuition, which is a typical "risk cognition" [7]. Shi Yan and Hou chanli defined the risk cognition of sports activities as "the participants' intuitive judgment and subjective feelings on various potential objective risks existing in different sports activities in sports activities" [8]. Based on the above description of physical exercise risk and risk cognition, this paper defines the middle-aged and elderly people's physical exercise risk cognition as: the middle-aged and elderly people's intuitive judgment and subjective feeling of various objective risks in the process of physical exercise. Risk cognition is an individual's attitude and cognition. It has strong subjectivity. Therefore, in different fields, due to different research purposes and methods, the division of risk cognition dimensions is not consistent. Slovic obtains two basic dimensions of risk cognition through factor analysis: fear of risk, which is related to the degree of disaster and uncontrollability of risk [9]; Unknown risk dimension represents the knowability of risk. The public's risk perception evaluates the risk from three dimensions, namely:

- (1) Familiarity with risks.
- (2) Severity of risk results.
- (3) The number of casualties caused by the risk.

The risk perception of urban residents is composed of five factors, namely: risk controllability, risk visibility, risk horror, risk possibility and risk severity [10]. Weyman and Kelly believe that these views on the dimension of risk cognition have a common construction basis, that is, the calculated probability (possibility of occurrence), frequency of occurrence and the associated consequence severity obtained through evaluation [11].

3.2 The role of risk cognition in physical exercise of middle-aged and elderly people

Although the risk of physical exercise is difficult to control and eliminate, it can not prevent the middle-aged and elderly from engaging in physical exercise. For such risky behaviors, foreign scholars have made a more detailed theoretical explanation (Table 1).

The emergence of risk-taking behavior is affected by personal, social, cultural and other factors. These factors are not independent of each other, but work together. Among them, risk cognition plays an important role.

Table 1 Theoretical Explanation of risk behavior

Theory	Main points
Character characteristics	Individuals are more positive or negative in the prediction of risk scenarios, resulting in different behavioral responses. Individuals with brave and adventurous personality characteristics are more likely to engage in adventurous behavior
Risk preference theory	For the reason of seeking stimulation and resisting risk, people have a - kind of nature inclined to engage in risky behavior, which is determined by people's personality and usually carry out activities according to their own preferences
Value expectation model	Suppose people evaluate the severity of risk, evaluate the pay and benefits of different behaviors, and then choose a behavior to optimize their expected results
Behavioral supply perspective	When people engage in risk behavior, they only judge whether the behavior can be implemented, and do not think too much about the risk results
Safety culture research	Social, organizational and cultural factors are emphatically considered. Intention determination has a more significant impact on individual risk cognition in the of safety behavior, such as motivation, safety attitude, code of conduct, job satisfaction, time pressure, worker investment, manager control and safety objectives

3.3 The difference of risk cognition and objective risk of physical exercise among the elderly

Fischhoff investigated experts and ordinary people, and the results showed that when rating different behavioral and technical risks [12]. Expert judgment is related to the high mortality rate obtained from technical evaluation. On the contrary, people's judgment shows some deviations, such as overestimation of low-risk level and underestimation of high-risk level events. Knowles found that the respondents overestimated some practical risks (such as being injured by animals and machinery) and underestimated some other risks (such as falling from height or being run over by a car) [13]. JONA than's research confirmed that drivers' perceptions of some key risks were inconsistent with the objective risks assessed after the accident. These studies show that [14], individual risk cognition lacks accuracy when compared with objective risk. The main reason for this difference. It is mainly due to the different characteristics between risk cognition and objective risk. It is the subjective cognition of objective risk and has the subjective and dynamic characteristics of human psychological activities.

4. Study on the effect of physical exercise on the quality of life of the elderly

The middle-aged and elderly people's own behavior, risk control, their own conditions, risk knowledge (the degree of understanding exercise methods, the degree of understanding the risk of exercise projects, media publicity, professionals' risk demonstration and risk discussion of relatives and friends) are the main factors affecting their physical exercise risk cognition [15]. The middle-aged and elderly should not choose too intense exercise methods and do not exercise too tired as much as possible, such as long-distance running, mountaineering, rock climbing, squatting, etc. these exercise methods will cause great damage to the body. It is not suitable for middle-aged and elderly people to practice three or nine times in winter and three or five times in summer. The physical exercise of middle-aged and elderly people needs to avoid changeable weather. Because it is too cold or too hot, the pressure of body, mind and cerebrovascular will change suddenly, which is prone to

vascular collapse. The middle-aged and the elderly can generally achieve the purpose of exercise, and should choose an appropriate temperature for physical exercise.

5. Conclusion

The middle-aged and elderly people's own behavior, risk control, their own conditions, risk knowledge (the degree of understanding exercise methods, the degree of understanding the risk of exercise projects, media publicity, professionals' risk demonstration and risk discussion of relatives and friends) are the main factors affecting their physical exercise risk cognition [15]. The middle-aged and elderly should not choose too intense exercise methods and do not exercise too tired as much as possible, such as long-distance running, mountaineering, rock climbing, squatting, etc. these exercise methods will cause great damage to the body. It is not suitable for middle-aged and elderly people to practice three or nine times in winter and three or five times in summer. The physical exercise of middle-aged and elderly people needs to avoid changeable weather. Because it is too cold or too hot, the pressure of body, mind and cerebrovascular will change suddenly, which is prone to vascular collapse. The middle-aged and the elderly can generally achieve the purpose of exercise, and should choose an appropriate temperature for physical exercise.

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