Research on the Security System of Swimming Teaching in Colleges

——Take Colleges in Wuhan for Examples

**Abstract**：This paper is based on the theory of sports safety and the swimming teaching courses and to analyze the present situation of swimming teaching in colleges or universities of Wuhan. Besides the author tries to propose the construction of safety guarantee system of swimming teaching and to ensure the healthy and orderly development of swimming teaching by using research methods such as **document research**, investigation, logical analysis and so on.

1. Problem Introduction

Wuhan, capital of Hubei Province, local rivers and the lakes intertwined in the city, is known as the "city of a hundred lakes" in the world. It is in the subtropical monsoon humid climate zone in terms of geographical position. Wuhan's climate is characterized with plenty of rain, sunshine, four distinct seasons, summer heat, precipitation concentration, slightly cool in winter, etc. At the same time, Wuhan is an important scientific and educational base of China, the number of its colleges or universities and the scientific research institutes is after Beijing, Shanghai; and it ranks third in the country with1.3 million college students in school. Through the investigation of the questionnaire, most of the colleges or universities in Wuhan have built their own swimming pools (natatorium), and among which 8 colleges or universities directly under the Ministry of Education has its own swimming pools. The majority of Wuhan colleges or universities offer swimming courses, however, some swimming pools (natatorium) are really in poor facilities, lack of management, lack of professional swimming teachers, lack of development and training, lack of advanced teaching methods and course content and lack of innovation, furthermore, their safety and security system is not perfect, and those pools lack of supervision and other parts of various factors, thus they greatly affect the quality and safety of swimming teaching.

1. Research Object and Its Method
   1. 2.1 Research Object: Wuhan University, Huazhong University of Science and Technology, Huazhong Agricultural University, Wuhan University, and China University of Geosciences (Wuhan), etc. 8 universities attached to Ministry of Education, besides Hubei University, Wuhan University of Science and Technology, Wuhan Institute of Technology and other seven provincial universities etc.

2.2 Research Method:

2.2.1 Literature Data Method

Through the CNKI to consult the treatise from 2010 to 2015 and we purposefully focus on 50 papers. By Detailed reading these papers, we surely can understand the current situation and management of swimming teaching in colleges or universities and the risk management of college swimming pool (natatorium). Thus doing so, we can have an analysis and reference to the research value of this topic.

2.2.2 Expert Interview

In order to acquire the various indicators and influencing factors in the security system of swimming teaching courses in universities, we pay a visit 20 experts in the field of swimming teaching in universities. We try to analyze in depth the various indicators such as human factors, the impact of factors, safety management and supervision system, emergency safety and risk protection system and to determine the proportion of each index, too.

Basic introduction expert interviews (Table 1)

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Position Title | Professor | Associate Professor | Lecturer | Coach | Total | Remarks |
| Number | 4 | 8 | 4 | 4 | 10 |  |

2.2.3 Questionnaire Survey

(1) The Design of the Questionnaire

Through literature review and expert interview, according to the contents of this paper, we firstly design the questionnaire （1）*On the Safety Factors of Swimming Teaching in Universities* and the questionnaire （2） *On the Influence Factors of Safety Management of Swimming Pool in Colleges or Universities*. To ensure the questionnaire true and effective, we specially invited 20 experts to give advice for the indicators design, content and structure of the questionnaire. Upon examination, professionally these questionnaire meet the requirements of this research.

(2) The Distribution and Recovery of the Questionnaire

The 750 copies of questionnaires (1) were issued to students who from 15 schools, and the 90 copies of questionnaires (2) were issued to swimming pool (natatorium) management personnel. And nearly all the questionnaires were collected, including 720 questionnaires（1), the recovery rate was 96%; The questionnaire(2) was 90, the recovery rate was 100%. The reliability of the questionnaire by using a "retest method", The questionnaire survey to 20 students in the same questionnaire, the results were: R>0.90, P<0.01, the results showed that the questionnaire does have a relatively high credibility.

(3) Mathematical Statistics

In this paper, we use Spass10 and Excel to analyze the content of the questionnaire (1)、 (2), and provide data support and theoretical support for this study.

1. Results and Analysis

In this paper, we discuss with the experts in the field of swimming, humbly listen to experts' advice, and fully absorb experts' recommendation. The experts suggested that the initial system structure has been modified for many times and eventually formed a college swimming pool (natatorium) security system structure diagram. As shown below in the table:

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Human Factors

Objective Factors

Security Management System

Security assurance System

student

Site

Equipment

Market propaganda team

Training department

Water treatment department

the guard medical teams

the rescue group

Teacher training

Students training

Various types of insurance

Teacher

3.1 Analysis of the Human Factors in the Security System of Swimming Teaching in Universities

The human factors in the safety and security system of the swimming pool in universities include the two parts of teachers and students. Teachers as the dominant in the swimming teaching must enhance the safety awareness of teaching. Before the class, teachers must do homework such as preparing lessons, mastering the teaching skills and teaching methods and grasping the knowledge and skills of swimming first aid. So they can have swimming safety education for students and explain the importance of swimming safety and instill basic safety knowledge to students. In the course, teachers use the reasonable teaching methods and organization methods for swimming safety education and must be able to ensure that the entire swimming teaching is under the control of teachers. Through a comprehensive observation, teachers must focus on monitoring those students who cannot swim or with poor foundation. After class, teachers must timely record the number of students and summarize the overall situation of the classroom. Students in the course of the swimming exercise must be aware that they first and foremost have a sense of self-protection and protection. Because their every move is only in good teaching environment and reasonable exercise method, they decrease the chance of the swim injury or make swimming safety risk to a minimum.

* 1. Analysis of the Objective Factors in the Security System of Swimming Teaching in Universities

Good site environment is an objective condition to ensure the safety of physical education in universities and is also the material basis and important guarantee for swimming teaching. First in terms of the swimming pool，the managers must inspect of the swimming pool water quality, inspect the water cycle system and the use of disinfection chemicals records, publish chlorine content, room temperature, and water temperature in a prominent position every day. The managers must hang the pool warning signs, ensure that the pool hall lighting, luminance meet the national standards, and ensure the normal operation of ventilation and exhaust system. Adequate teaching equipment is the successful completion of the task of teaching swimming and reduce injuries prerequisite, which can effectively improve the quality of swimming teaching.

* 1. Analysis of the Influence Factors of Security Management in the Security System of Swimming Teaching in Universities

Through the questionnaire survey, swimming pools (Halls) in universities of Wuhan city are substantially belong to the universities themselves (except for the new swimming pool at Wuhan University of Technology). Therefore, the establishment, management and organization of a sound scientific, rational pool meet the requirements of society. Swimming pool safety management organization should include market planning propaganda team, training department, the rescue group, water treatment department, ticketing financial group, and the guard medical teams, etc. Each team works independently with clear rights and responsibilities. At the same time, the normal operation of the swimming pool needs supervision and management besides the workers in pools need to formulate rules and regulations, such as the management system of swimming pool (Library), the management system of the rescue personnel, and the management staff system, etc. Supervision must tie the responsibilities to the specific person, and all violations to the swimming pool must be taken seriously and cannot be with the slightest negligence.

* 1. Analysis of the Factors of Emergency Security in the Security System of Swimming Teaching in Universities

The old saying goes: “Forewarned is forearmed, not pre-waste.” Safety risk assessment must be carried out in the normal operation of the swimming pool in colleges and universities. For the existence of weaknesses or safety hazards, managers must completely know to the full in order to protect the swimming pool healthy and orderly operation. First of all, we must arrange the training of teachers to specialize in technical skills and teaching the right way, teachers must hold "double certificates" (lifeguard certificate and swimming instructor certificate) posts, in order to ensure safety to reduce accidents in swimming teaching. Second, mangers must master the rescue techniques, learning, training, and regular assessment, improve the safety awareness of the rescue personnel, and acquire the necessary safety knowledge and improve the rescue ability. Third, inside and outside of the swimming pool must be carried on the regular and irregular maintenance, and get rid of all security hidden danger. Last but not least, mangers encourage students to participate in accident insurance (the guarantee of students' personal safety in the swimming teaching). At the same time, colleges should purchase specifically for the swimming pool accident insurance in case bad luck hits. Through the students and management departments to buy accident insurance, to a certain extent, can spread the risk, and to provide a certain degree of economic compensation in the event of swimming accidents, so the purchase of sports insurance is a guarantee to prevent accidental risks in a large degree.

1. Conclusion and Suggestion

4.1 The safety management of the swimming pools in colleges or universities in Wuhan should be made efforts on safety management, professional swimming teachers' training, training of the rescue personnel, swimming stadium construction, emergency and safety plans, and improving rules and supervision and management system, etc. in order to avoid any security risks.

4.2 In the construction of the teaching security system of the university swimming pools we should follow the people-oriented core spirit and adhere to the comprehensive, systematic, dynamic and controllable principle etc.

**References**

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