A population-wide life-cycle sports health management system based on intelligent fitness wearable devices

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Abstract

Through1 literature review, expert interviews and logical analysis, the needs of people for personalized and scientific health management at the present stage were analyzed, and the needs for exercise and related risks were evaluated. Collect target data through smart wearable devices for big data analysis, including but not limited to steps, heart rate, sleep, etc., according to the data analysis results and the feedback of the smart device wearer, continuously optimize and improve the smart fitness equipment and exercise plan, improve its applicability and effect, and generalize the research results to the target population. Improve physical fitness and quality of life for the entire community and assess the economic impact. To provide a new, comprehensive and scientific sports health management system for people.

Keywords

Smart wearable, Health management, Life cycle, system

1. Introduction

To develop a population-wide life-cycle sports health management system based on intelligent fitness equipment, so as to meet people's needs for personalized and scientific health management. Specifically, the objectives of the study include assessing the exercise needs and related risks of the target population, selecting smart fitness equipment suitable for the target population, developing corresponding software systems, providing personalized exercise plans, collecting large amounts of data with smart fitness equipment for analysis, optimizing and improving smart fitness equipment and exercise plans, and finally extending the research results to the target population. Improve physical fitness and quality of life for the entire community and assess the economic impact. The exercise needs and related risks of the target population were assessed through data analysis, medical detection and other means, so as to provide a basis for the development of scientific and reasonable health management plans. In terms of selecting smart fitness equipment, the characteristics of the target population should be considered, the smart fitness equipment suitable for them should be selected, and the corresponding software system should be developed to provide personalized exercise plans to meet the specific needs of users.

At the same time, by using smart fitness devices to collect a large amount of data, such as steps, heart rate, sleep, and so on, and analyzing the data, exercise effects and risk changes can be monitored. According to the results of data analysis and user feedback, the smart fitness equipment and exercise programs are continuously optimized and improved to improve their applicability and effectiveness. Finally, the research results are extended to the target population to improve the sports health level and quality of life of the whole community, and the changes brought by economic benefits are evaluated. To provide people with a new, comprehensive and scientific sports health management system, so that people can better

understand their own physical condition, master scientific health management methods, so as to promote the improvement of health and quality of life.

2. Research Results

2.1. The choice of smart fitness equipment

The study found a kind of whole population full life cycle sports health management system based on intelligent fitness equipment to meet the needs of people.The needs of sexual and scientific health management. The results of this paper can be summarized as the choice of smart fitness equipment, exercise needs.And risk assessment, data analysis and optimization and improvement, and promotion and application. In terms of the selection of smart fitness equipment,Smart fitness devices, such as smart watches and smart bracelets, suitable for the target population were selected for the study, and the corresponding software was developed.System that provides personalized exercise programs. This can provide users with more choices to meet the needs of different users.

2.2. Exercise needs and risk assessment

At the same time, the exercise needs of the target population and related risks were evaluated, and scientific and reasonable health management was formulated according to the assessment results Plan. This can provide better health protection for users and enable them to better control their physical condition. In the data points.In terms of analysis and optimization improvement, a large number of data were collected by using intelligent fitness equipment, including step count, heart rate, sleep, etc., through.Data analysis tools were used to analyze the data to monitor exercise effects and risk changes.

2.3. Data analysis and optimization

At the same time, according to the results of data analysis and user feedback, constantly optimize and improve the intelligent fitness equipment and exercise plan, improve. Its applicability and effectiveness. This can provide users with more accurate data analysis results and better user experience, and finally.In terms of promotion and application, after many experiments and improvements, the system has been applied and promoted in the community, and has achieved good results.The effect and response. This can provide intelligent health management programs for more people and improve sports health in the whole community.Levels and quality of life. In short, can provide people with a new, comprehensive, scientific sports health management system to help them better understand their own health conditions and master scientific health management methods to promote physical health and quality of life increase in quantity.

3. Conclusion

At present, many technology companies design a whole population full life cycle sports health management system based on smart fitness equipment while collecting users' exercise data, it provides personalized exercise plans to help people maintain physical fitness and improve him their quality of life. Through the selection, evaluation, optimization and improvement of the implementation scheme, intelligent fitness can be effectively solved the problems existing in the equipment sports health management system, and provide certain reference value for the future development. Main points of the study the content includes the selection of smart fitness equipment, the assessment of user needs and related risks, data analysis and optimization improvement, and promotion and application and other four aspects. In these aspects, we have adopted various advanced technologies and methods, such as smart bracelets and smart watches equipment, big data analysis, artificial intelligence algorithms, gene sequencing and

biological indicator monitoring and other advanced technologies. In the smart fitness set in terms of the selection of equipment, user needs and related risks were fully considered, and the equipment suitable for the target population was selected. In the meantime, open 214 have issued corresponding software systems that combine big data analysis and artificial intelligence algorithms to provide personalized exercise plans, making it easier for users to manage their exercise status. In addition, the user's exercise needs and related risks are further evaluated by questionnaire survey, medical testing and other means, and a scientific and reasonable health management plan is formulated. At the same time, advanced technologies such as gene sequencing and biological indicator monitoring are combined to obtain more comprehensive and accurate user information. In terms of data analysis and optimization, intelligent fitness equipment is used to collect a large number of data, and data analysis tools are used to analyze the data. By analyzing the movement state and physical condition of the users, and comprehensively considering the user feedback and data analysis results, the intelligent fitness equipment and exercise plan are continuously optimized and improved to improve their applicability and effect. In terms of promotion and application, the system has been successfully promoted to the community, and has received good application effect and response. The current mainstream design and implementation schemes have certain clinical significance, practical value and social significance. In the future, we will continue to explore new application scenarios and develop new functional modules to meet the needs of different users and health management requirements.

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