HAPPY GO GO somatosensory game on the exercise performance and software intensity setting of healthy elderly people

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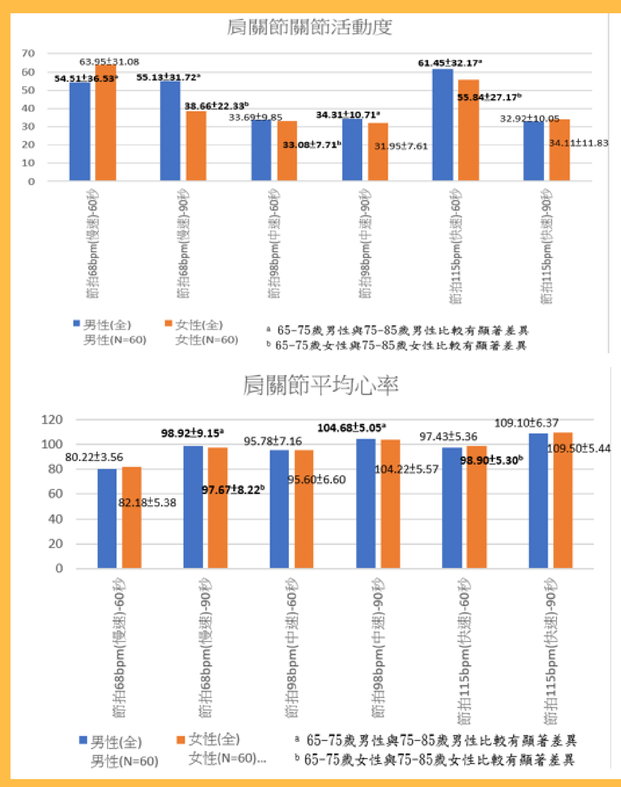
Background & Purpose:

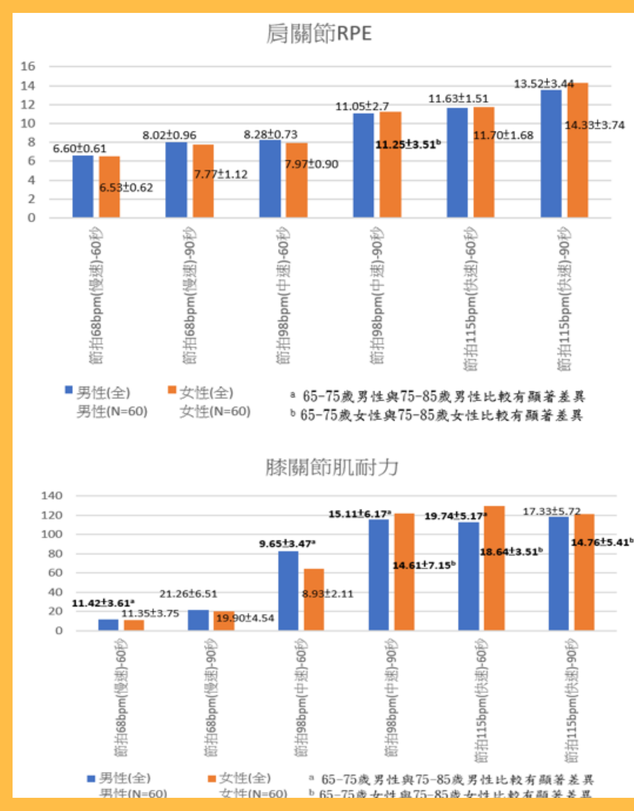
In recent years, the rate of aging has been increasing, in order to detect problems as early as possible, prevent and delay the rate of aging. There are many health technology products on the market. At present, physical fitness testing is gradually replacing manual methods with automated modules. This not only saves time and effort on cloud-based information, but also provides immediate access to medical advice and increases the overall testing efficiency and provides appropriate exercise intensity for different age groups.

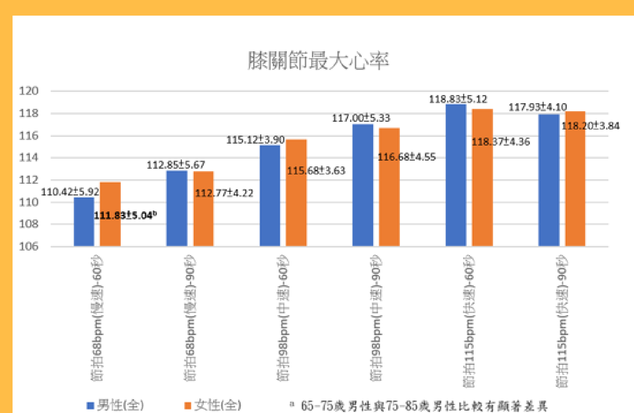
Divide the 65 to 85-year-old men and women into one age group for every ten years old, and construct HAPPY GO GO exergame and healthy elderly sports performance of heart rate, movement joint range , average muscle endurance, and standard deviation , Quartile. Explore the HAPPY GO GO somatosensory game of different strengths for healthy elderly people in use and heart rate changes, muscle endurance, range of joint range of motion, and give suggestions on the strength of the software. Explore the correlation between HAPPY GO GO exergame performance and cognitive function.

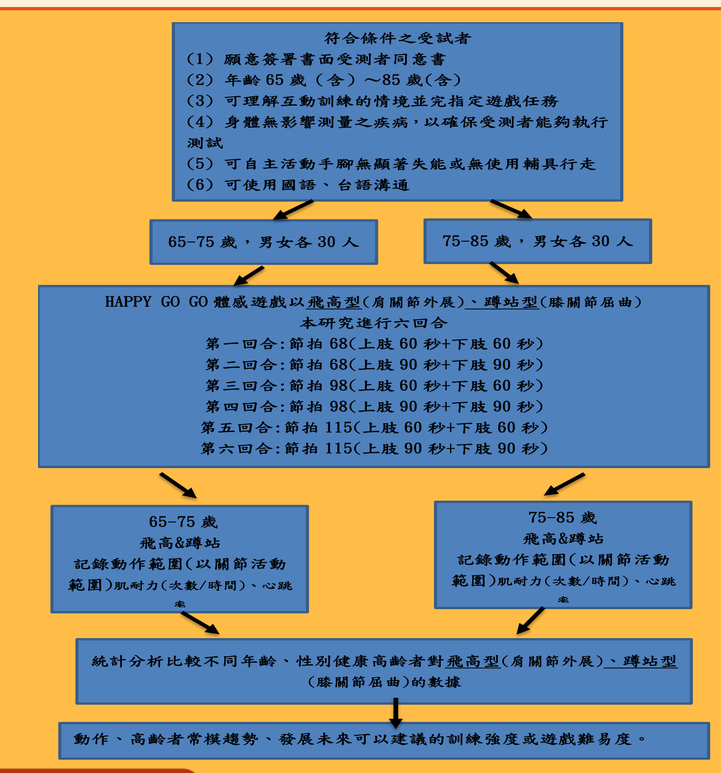


Method

This study recruited healthy seniors aged 65 (inclusive) to 85 (inclusive) in the northern neighborhoods and community silver clubs, including 60 men and 60 women, with a total of 120 subjects. The test was performed with exercise heart rate watches and physical fitness. The interactive game evaluation tool and the matching metronome are divided into 68, 98, 115bpm in sequence, and the time is divided into 60 and 90 seconds. There are 6 combinations of beat speed and time length as the test project of this research; Before the test, use the basic information and exercise habits scale to ask about the basic characteristics of the subjects and use the Montreal Short Cognitive Assessment Scale for cognitive assessment.







Results

In this study, the muscle endurance, range of motion, and heart rate changes of HAPPY GO GO somatosensory game performance of male and female elders were divided into two age groups, and a quartile table of action performance of different beats and durations was created to provide the intensity of the game. Suggest. At the same time, based on the exercise performance of healthy seniors aged 65 to 85, the Happy Go Go software sets the appropriate exercise intensity for the shoulder and knee joints. It is recommended to set the beat 68bpm="light", the beat 98bpm="medium", it is recommended Beat 115bpm="heavy". In addition, there is no obvious correlation between cognitive ability and sports performance.

Conclusion

The results of this study show that when the elderly are playing HAPPY GO GO exergames , the speed of the action is the main determinant of the exercise intensity. The faster the rhythm, the stronger the exercise intensity will be. It is suggested that in the future, HAPPY GO GO can use the matching music rhythm speed to control the exercise intensity of the elderly running this software.

Clinical significance

Under different intensities and times, the joint range of motion and heart rate variability in this study provide accurate game setting basis for healthy elderly people and improve clinical exercise efficiency in the future.