

International Journal of Physical Activity and Health

Volume 1
Issue 2 Supplemental Issue: Abstracts of 2021
International Chinese Society for Physical
Activities and Health

Article 2

8-1-2022

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Recommended Citation

Pang, Xuelin and Zhang, ZhengZe (2022) "A Comparative Study on the Construction of Special Psychological Ability Indexes of Curling Male Athletes," *International Journal of Physical Activity and Health*: Vol. 1: Iss. 2, Article 2.

DOI: <https://doi.org/10.18122/ijpah.1.2.2.boisestate>

Available at: <https://scholarworks.boisestate.edu/ijpah/vol1/iss2/2>

A Comparative Study on the Construction of Special Psychological Ability Indexes of Curling Male Athletes

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Abstract

Curling is a sport combining skill and intelligence. Athletes should not only have proficient physical fitness, technical and tactical level, but they also need strong psychological ability. This study attempts to build a special psychological ability system for curling athletes, to provide guidance for the athlete selection and training. In this study, 13 male athletes of Heilongjiang curling team were recruited. HengChan Yin 's attention scale, Dr. Ping Ye's competitive motivation scale, XiaoChuan Yin 's excellent athlete's will quality evaluation scale, Vealey's athlete's trait self-confidence scale, Martens's sports competition state anxiety scale, LiWei Zhang's pre competition emotion scale-t scale, electronic stopwatch and other equipment were used for the test. In order to determine the constituent factors of curling athletes' specialized psychological ability, 11 psychological indexes, such as time and space judgment, speed perception, attention distribution, attention transfer, competitive motivation, will quality, sports competition anxiety, cognitive trait anxiety, self-confidence, attention stability, emotional stability, were analyzed by factor analysis method. The characteristic value, contribution rate and fatigue of the factors were calculated. The results suggested that the first four factors whose characteristic value are greater than 1 and cumulative contribution rate is greater than 80% are selected as the main factors. According to the characteristic value of the first four main factors, the initial factor load matrix is obtained, and the orthogonal factor matrix after rotation is obtained by using variance maximization. The system of special mental ability of curling male athletes consists of four aspects: mental preparation ability, mental state ability, attention ability and space-time judgment ability. There are significant differences in mental preparation ability and mental state ability between the main players and the substitutes. The main players are better than the substitutes.