

2008 オリンピック科学会議に参加して

2008 Pre-Olympic Congress

森脇 保彦

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東京オリンピックから欠かさずこの学会に参加されて来た共同研究者の飯田颯男先生を中心とするこの研究チームが、チームとして初めて参加したのは、1992年、スペインの第24回バルセロナオリンピックである。競技よりやや早く6月14日～19日まで「1992 Pre-Olympic Congress」としてマラガという街で、世界中からスポーツに関するプロフェッショナル (professional) やスポーツのエクスパーター (exporter) が一同に会して開催された。研究会は、15のセクション (section) に分かれて研究発表や討論会が組み込まれております。(例: Adapted Physical / Exercise Biochemistry / Sport Biomechanics / Sport Facilities and Construction / Sport History and Sport Philosophy / Sport Information and Documentation / Kin anthropometry / Sport and Low / Sport Management and Economics Sport Medicine / Sport Pedagogy and Comparative Physical Education and Sport / Exercise Physiology / Sport Psychology / Sport Sociology / Women and Sport)

この時のテーマは、Kin anthropometry (KIN-30) にて、

「COMPARISON OF FACTORIAL STRUCTURE

OF FITNENN BETWEEN DIFFERENT WEIGHT CLASSES OF COLLEGE JUDOISTS」について発表した。

続いて、1996年アメリカにて行われた第26回アトランタオリンピックでの「1996 Pre-Olympic Congress」はダラスにて、6月10日～14日まで開催された。

テーマは、「A Comparison of the Structure of Basic Physical Fitness in Male and Female University Judoists」について発表した。

次に2000年、第27回シドニーオリンピック大会での「2000 Pre-Olympic Congress」はオーストラリアのプリズベンにて行われ、テーマは、「The Comparison of the Structure of Fundamental Physical Fitness Between Players and Members in Japanese College Judoists (81kg class)」について発表した。私自身、この時からチームに加わり初参加であった。

そして、前回の第28回アテネオリンピック大会での「2004 Pre-Olympic Congress」は、ギリシャはテッサロニキという街で8月6日～11日までアリストテレス大学にて行われた。

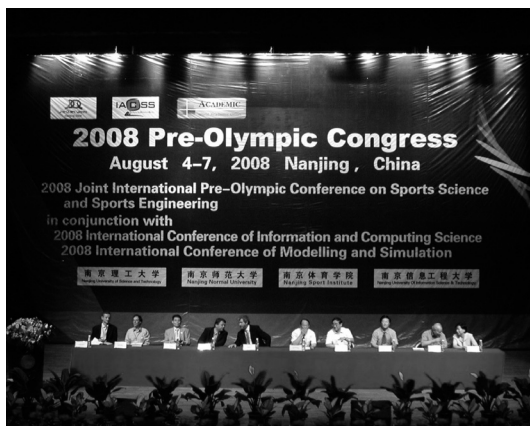
テーマは、「COLLEGE JUDO PLAYERS BASIC PHYSICAL FINESS USING DISCRIMINATE ANALYSIS」について発表した。

今回の第29回北京オリンピック大会での「2008 Pre-Olympic Congress」は、南京理工大学にて、35ヶ国、1,300人の研究者がノミネート (nominate) されて開催された。前回のギリシャに比べて非常に少なく、やはりチベット問題が大きく影響をもたらしたのではないかと推察いたします。しかし、学会の運営については従来通りのきめ細やかな対応であり、中国南京理工大学実行委員会の皆様に感謝申し上げますと同時に、南京市民の皆様の温かいおもてなしを受け感動いたしました。

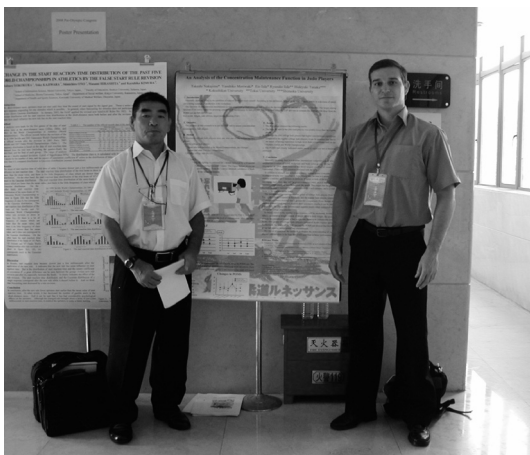
「武道 (柔道) は一般的に良く言われる言葉に「心・技・体」が総合されたものである。」と言われますが、柔道競技は5分間の試合に集中しなければならず、一瞬のスキで負けてしまう事があります。勿論技を掛ける瞬間は、野生の豹が獲物を捕らえるときの集中力、また蛇が獲物を得るときの素早さ等々…。一瞬の内に技を出し切るときの心理状態は獲物を得る野生化した動物に喩えても過言ではないと察します。

そこで今回の発表は、柔道選手の集中力について優勝経験が豊富な強豪と言われる大学の柔道部員群と一般の大学柔道部員群との違いを比較検討し、ポスターにて発表したものであります。以下その発表を紹介させて頂きたいと思えます。

*ポスター発表とは、会場に2時間準備したポスターを掲示し、自由に質問を受ける形で、日本国内においても同様の形式で行われる。



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An Analysis of the Concentration Maintenance Function in Judo Players

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I. Introduction

Generally speaking, refers to the condition of reduced ability to exert oneself. According to this definition, fatigue in the case of sports results in a decrease of speed, and a falling standard of production in the workplace.

The function of concentration maintenance is very important to Judo athletes, and is often the decisive factor in success or failure in matches. The target aiming function (TAF) test is useful for assessing concentration maintenance in Judo players. The purpose of using the TAF test was to compare the findings with those from the POMS test and KRAEPLIN test.

Key words: fatigue, judo athletes, target aiming function (TAF)

II. Objective

The purpose of this research is to use the TAF test to assess concentration maintenance in Judo players.

III. Method

Seventeen college Judo players were put into one of the following two groups:

1. Elite college Judo players :

Those who had competed at the World Championships, the Olympic Games and other first-class competitions.

2. Regular college Judo players.

<TAF Test>

In a routine test, the sighting is continued for 1 minute followed by a 10-second rest, with the process being repeated 3 times. The figure below shows an example of a 1 minute sighting. From the 3 curves obtained, calculation is made in accordance with the following formula:

$$L_i = \frac{\sum x}{n}$$

$$D_i = \sqrt{\left(\frac{\sum x^2}{n} - L_i^2\right) \times \frac{n}{n-1}}$$

$$L = \frac{L_1 + L_2 + L_3}{3}$$

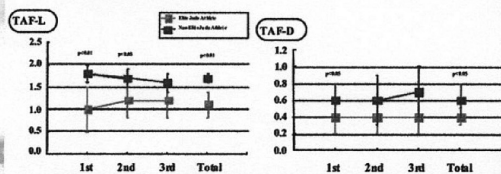
$$D = \frac{D_1 + D_2 + D_3}{3}$$

x : Value obtained for every 2.5 seconds
 n : Number of x values in 1 minute
 L : Average level (Li) of the 1st minute
 D : Standard deviation (Di) of the 1st minute



In a 3 minute test, the average value of 3 Li's is indicated by TAF-L, and the 3 Di's by TAF-D. The former indicates the level of concentration, while the latter shows the degree of fluctuation in maintaining concentration.

Changes in TAF

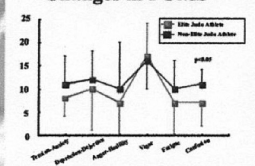


<POMS Test>

The mental state of each participant was calculated by using the POMS test. The POMS test is a self-evaluation questionnaire consisting of 65 adjectives. Each adjective is ranked on a point-scale of 1 to 5, and measures are made of 6 mood states:

1. TENSION
2. DEPRESSION
3. ANGER
4. VIGOUR
5. FATIGUE
6. CONFUSION

Changes in POMS



IV. Results

1. The elite group obtained the following results:

- a. The body-fat ratio in the elite Judo players was notably lower than the regular group.
- b. Although the elite college Judo players had higher concentration capabilities compared to the regular college Judo players, it can be surmised that this is the result of having experience in high-level Judo competitions such as the Olympic Games and World Championships.
- c. The POMS test clearly indicated stable mood (a tendency not to become confused).

V. Conclusion

Generally speaking, Judo is a popular international competitive sport which emphasizes a union of mind, technique and body (*shin-gi-tai*). At the 28th Olympiad in 2004, Judo boasted the third largest number of countries represented. (There are 187 countries affiliated with the UF).

In addition to strength and technical dexterity, mental power (concentration) is considered to be very important in Judo. Match time for men is 6 minutes, and women's matches are 5 minutes in duration. If either or both of the players do not engage each other, they will be given a warning (*chū*), so it is important to maintain a high attacking pace throughout the match. This means that the player needs to be able to maintain their concentration for 5 to 6 minutes, and is a vital factor in the outcome of the match.

The internationally experienced elite group of college Judo players from T University who participated in this study, and the regular Judo players, totaling 17 altogether, were divided into 2 groups for comparison. Even though the number of participants was too small to draw conclusive results, it can be stated that overall, the elite group demonstrated superior results when compared with the regular college Judo players.

In future research the number of participants will be increased. Power is usually measured as weight x speed. If weight refers to body weight, the amount of body fat considered typical to that weight was found to be considerable lower in the elite group of college Judo players compared to the regular group. Furthermore, the results of the TAF test and the POMS test showed that the elite group had superior mental power and concentration.

We intend to continue the research to deepen the understanding of Judo players' concentration in the hope that it will contribute to better performance.

Reference Works

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