

A study of factor analysis related to the consideration of judo: In the case of Taiwanese youth judo players

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PURPOSE

Judo originated by Master Jigoro Kano in 1882 and has spread and developed internationally, including both martial arts and sports aspects. It is said that when cultural phenomena are spread internationally that they will develop a unique consciousness of their own. Mr Murata stated that "We need to clarify the facts of internationalization, the realities of the society that it brings in, the way people think about things, and the value judgment that the resulting change is what we are seeking there is enough" (Nakamura, 2008). A factor analysis study for Judo has therefore been conducted both in Japan and in Western countries however consciousness research for Asian countries has not been conducted. As we deepen our understanding of the internal conditions of judo internationalization, it is essential to look to Asia to which Japan belongs and to advance the consciousness research of Asian judo players. Therefore, in this research, we have selected Taiwan to be the subject for consciousness research in Asia and aimed to clarify how judo is developed in the consciousness of young Taiwanese judo players.

METHODS

1. About the questionnaire: The questionnaire is based on 45 questions from the "Research Questionnaire relating to Awareness of Judo" authored by Funakoshi after removing 5 Japan related questions (Funakoshi et al., 1989).
2. Research Target Group: This research is targeted 174 people at the high school Judo players that attended the joint training session with Central Police University, National College of Physical Education, Taipei Physical Education College, in Taiwan.
3. Period of research: 24th ~ 29th February 2016
4. Analysis methods: 1) Factor analysis: Factors were first extracted from the principal factor method using factor analysis by Varimax rotation. 2) Comparison of consciousness level: Age differences (Under 17 ages and over 18 ages), the difference of years of experience in Judo (Under 5 years, over 5 years to under 10 years and over 10 years)

RESULT

1. Result of the factor analysis: As a result of the factor analysis, it was found that under the eigenvalue of 17.68 and the cumulative contribution rate of 39.29%, the first Discipline factor, the second Peace factor, the third Affirmation factor, the fourth Spirit and Technique factor, the fifth Victory factor, and the sixth Earnest factor. (Table 1)

Table1. Result of the factor analysis

Factor	Eigenvalue	Contribution rate (%)
1 Discipline	4.85	10.78
2 Peace	3.71	8.23
3 Affirmation	3.17	7.04
4 Spirit and Technique	2.29	5.09
5 Victory	2.21	4.90
6 Earnest	1.46	3.24
Total	17.68	39.29

2. Comparison of consciousness level (Age differences): The results of analysis of variance indicated significant age differences in four of the six factors; Peace, Affirmation, Victory and Earnest factors. In addition, the older people show more respect to a partner and how to participate in Judo from the aspect of martial art than that in the younger people. (Table 2)

Table2. Result of t test (Age differences)

Factor	Under 17 ages (n=77)		Over 18 ages (n=97)		t score	Significant probability	
	M	SD	M	SD			
1 Discipline	0.10	0.91	-0.08	0.90	1.297	0.196	n.s.
2 Peace	-0.15	0.97	-0.15	0.80	2.045	0.042	*
3 Affirmation	-0.13	0.81	0.10	0.89	1.789	0.075	†
4 Spirit and Technique	0.08	0.92	-0.06	0.78	1.047	0.297	n.s.
5 Victory	-0.17	0.85	0.14	0.85	2.384	0.018	*
6 Earnest	-0.22	0.85	0.18	0.74	3.315	0.001	**

n.s. : non significant ** : p < 0.01 * : p < 0.05 † : p < 0.10

3. Comparison of consciousness level (the difference of years of experience in Judo): The significant difference by years of experience in Judo occurred in Affirmation, Victory and Earnest factors. The combination of the factors indicated that longer experience in Judo allows a player to have better understand in Judo from both aspects of competition sports and martial art. The players who are older than 18 years old with longer years of experience in Judo have more affirmative feeling to Judo, seek winning in completion more seriously, and have a stronger desire for peace than the other combinations.

Table3. Result of analysis of variance (The difference of years of experience in Judo)

Factor	Under 5 years (n=55)		5 years or more and less than 10 years (n=86)		Over 10 years (n=33)		F score	Significant probability	
	M	SD	M	SD	M	SD			
1 Discipline	0.04	0.88	0.02	0.91	-0.14	0.96	0.476	0.622	n.s.
2 Peace	0.06	0.95	-0.09	0.92	0.13	0.69	0.913	0.403	n.s.
3 Affirmation	-0.23	0.87	0.08	0.82	0.18	0.89	3.024	0.051	†
4 Spirit and Technique	-0.01	0.69	0.05	0.91	-0.11	0.92	0.467	0.628	n.s.
5 Victory	-0.17	0.85	-0.01	0.86	0.29	0.86	2.955	0.055	†
6 Earnest	-0.14	0.87	-0.02	0.80	0.29	0.66	3.018	0.051	†

n.s. : non significant † : p < 0.10

CONCLUSION

1. A total of six factors, Forging, Peace, Affirmation, Spirit and Technique, Victory, and earnest, explained the trends in conscious structure of Taiwanese youth Judo player.
2. Age difference influences on Peace, Affirmation, Victory, and Earnest factor. In particular, older players with competitive consciousness show stronger attitude to respect other people and how to face with judo from the martial arts aspect. Difference in experience of Judo showed strong influence on Affirmation, Victory, Earnest factors,. The players with longer experience often capture judo from both the competition and martial arts point of view. Players who are over 18 years old with longer years of experience in judo tend to have a positive feeling toward judo, serious seeking in victory, and strong motivation to seek peace.

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