

An Examination of Psychological Competitive Ability in Soccer Players

– A Comparison between the Universiade Soccer Players of Japan and Korea –

Masato Otake^{*}, Lee Woo Young^{}, Yoshimasa Suda^{***},
Hajime Koga^{****} and Nozomu Hasegawa^{*****}**

^{*}Nihon University College of HUMANTIES and SCIENCES
3-25-40 Sakurajosui, Setagaya-Ku, Tokyo 156-8550 Japan
m-otake@chs.nihon-u.ac.jp

^{**}Nippon Sport Science University, Doctoral Program of Training Science
7-1-1 Fukasawa, Setagaya-ku, Tokyo, 158-8508 Japan
^{***}Keio University

4-1-1 Hiyoshi, Kohoku-ku, Yokohama-shi, Kanagawa, 223-8521 Japan
^{****}Tokyo Denki University

2-1200 Muzai Gakuendai, Inzai-shi, Chiba, 270-1382 Japan
^{*****}Chukyo University, Doctoral Program of Sport Science

Tokodate, Kaizu-cho, Toyota-shi, Aichi, 470-0393 Japan

[Received April 6, 2005 ; Accepted February 3, 2006]

Psychological competitive ability is one of the most important factors in perform peak performance in soccer games. The purpose of this research was to clarify psychological competitive ability of the Universiade soccer players from Japan and Korea. The effects of psychological competitive ability were investigated using DIPCA. The results were as follows: 1. Japanese soccer players were relatively high in aggressiveness, but low in confidence, decisiveness, predictive ability, and judgment. 2. Korean soccer players were relatively high in aggressiveness and volition for self-realization, but low in self-control, ability to relax, and concentration. 3. Japanese soccer players were superior in concentration to Korean soccer players, while Korean soccer players were superior in volition for self-realization, confidence, decisiveness, predictive ability, and judgment to Japanese soccer players.

Keywords: Soccer, DIPCA, Japan, Korea

[Football Science Vol.3, 9-14, 2006]

1. Introduction

FIFA World Cup™, the greatest event in soccer, was co-hosted by Japan and Korea in 2002. In this 2002 FIFA World Cup Korea/Japan™, both Japan and Korea achieved glorious results: the Japan National Squad progressed to the best 16, and the Korea National Squad to the best 4. Games in such great events require players to have not only technique, strategy, and physical strength but also mental strength. The Japan Football Association

says that one of the most important qualities for high-level performance is aggressiveness, which should be acquired by all the soccer players on the pitch, and that it is necessary for goalkeepers to stay calm in order to perform appropriately under pressure (2002). Apparently, the higher the competition level becomes, the more the performances are affected by players' mental abilities. In order to improve competitive ability, it is important to develop goal setting ability, ambition, concentration, and the ability to communicate with teammates and coaches through

daily training. In recent years, mental training has been included in training so that players can use their capabilities to play games to the fullest. In order to conduct mental training, it is important to understand players' psychological ability accurately.

The Japan Professional Football League was established in 1993, and the Korea Professional Football League was established in 1983. Since then, both countries have made great progress in soccer, becoming top teams in the Asian soccer world. To become top in the world, both leagues are making continuous efforts to develop and improve players at various ages.

In this study, the Japanese soccer players who participated in the 22nd Universiade in 2003 (hereafter Japanese players) and the Korean soccer players who participated in the 22nd Universiade (hereafter Korean players) were examined for their respective psychological competitive abilities. The purpose of this study is to clarify psychological characteristics of the Japanese and Korean players for future coaching and for the enhancement of psychological competitive ability.

2. Methods

2.1. Study subjects

In this study, subjects were 16 Japanese players aged 20.6 ± 0.9 with 12.3 ± 1.6 years of soccer experience and 17 Korean players aged 20.1 ± 1.0 with 10.4 ± 1.3 years of soccer experience. Those whose answers were significantly low in reliability and those who failed to answer all the questions were excluded.

2.2. Protocol

For the investigation of the subjects, the Diagnostic Inventory of Psychological Competitive Ability for Athletes (hereafter called DIPCA 2), which was developed by Tokunaga, et al., in 1988 and 1994, was used. The DIPCA 2 is composed of 52 questions about psychological ability, which is supposed to be necessary for athletes. A five point evaluation scale is used for answers. The questions are classified into 12 scales, patience, aggressiveness, volition for self-realization, volition for winning, self-control, ability to relax, concentration, confidence, decisiveness, predictive ability, judgment, and cooperation. And these scales and also sorted into

five factors, volition for competition, mental stability and concentration, confidence, strategic ability, and cooperation. Each participant is required to provide his/her name, age, years of soccer experience, position, university name, and mental training experience on the face sheet.

2.3. Time and method of investigation

Investigation for the Japanese players was conducted in a meeting room in June, 2003. Later, Later, we used the data of the selected athletes for the 22nd Universiade. Investigation for the Korean players was conducted in a meeting room in August, 2003, using survey forms that were translated into Korean.

2.4. Analysis

Answers for each question were quantified. The mean value and standard deviation of the obtained score for each factor and scale were calculated. Regarding each factor, scale, and question item, the difference between the mean values for the teams was evaluated by unpaired t-test.

3. Results and Discussion

3.1. Analysis of the psychological competitive ability of the Japanese player

Japanese players score and evaluation by factor were as follows: Volition for competition: 70.8 ± 5.09 evaluation 4; mental stability and concentration: 48.5 ± 7.07 , evaluation 4; confidence: 30.3 ± 4.33 , evaluation 3; strategic ability: 28.3 ± 4.30 , evaluation 3; cooperation: 18.0 ± 2.22 , evaluation 3.

Japanese players profile by scale are shown in **Figure 1**. Within Japanese player psychological competitive ability, aggressiveness (19.0 ± 1.32) was the highest of the 12 scales, followed by cooperation (18.0 ± 2.22). It is said that the less uneven the profile, the more balanced the psychological competitive ability is. And that the more the profile projects outward, the more desirable (Tokunaga, et al., 1995). Evidently, Japanese player psychological competitive ability was excellent in aggressiveness and cooperation. On the other hand Predictive ability (14.1 ± 2.83), was the lowest, followed by judgment (14.2 ± 2.04). This proved that Japanese

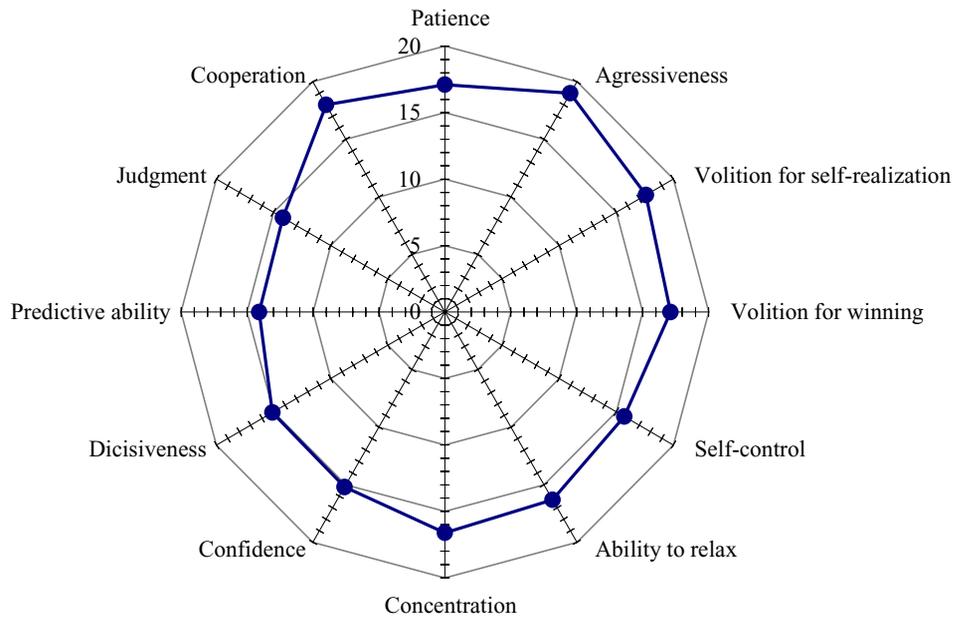


Figure 1 Psychological competitive ability of Japanese players

player psychological competitive ability was inferior in confidence, decisiveness, predictive ability, and judgment. According to Tokunaga (1996), aggressiveness refers to the perception that "the bigger the competition is, the more aggressive the athlete becomes, and the stronger the opponent is, the more the fighting spirit increases"; cooperation refers to "teamwork and cooperative spirit"; confidence refers to "confidence in achieving one's goal and confidence in proving oneself in a game"; decisiveness refers to "promptness of decision-making in a game and decision-making without fear of failure"; predictive ability refers to the "ability to make a workable strategy and to plan a strategy to win"; and judgment refers to "ability to judge the flow of a game quickly, to judge appropriately at crucial points". Apparently, the Japanese players were inferior in strategic ability which may have been required in various situations in a game, However they had mental strength which enabled them to participate without hesitation in grand games like international competition or in games with strong opponent teams. And also to play vigorously with teammates without losing hope until the end of the game.

3.2. Analysis of the psychological competitive ability of the Korean player

Korean players score and evaluation by factor were as follows: Volition for competition: 72.4 ± 4.23 ,

evaluation 4; mental stability and concentration: 42.6 ± 7.95 , evaluation 3, confidence: 33.9 ± 3.94 , evaluation 4; strategic ability: 32.5 ± 3.91 , evaluation 4; cooperation: 17.4 ± 2.06 , evaluation 3.

Korean players profile by scale is shown in **Figure 2**. Within the Korean players psychological competitive ability, aggressiveness (19.2 ± 0.95) was the highest, followed by volition for self-realization (18.9 ± 1.34). This proves that the Korean player was excellent in aggressiveness and volition for self-realization. The lowest were self-control (14.1 ± 2.84) and concentration (14.1 ± 3.29), followed by ability to relax (14.5 ± 3.39). This proves that the Korean player was inferior in self-control, concentration, and ability to relax. According to Tokunaga (1996), aggressiveness refers to the perception that "the bigger the competition is, the more aggressive the athlete becomes. And the stronger the opponent is, the more the fighting spirit increases"; volition for self-realization refers to "playing a game as if challenging one's own potential and playing while attempting to achieve one's goal"; the lack of self-control refers to "being too nervous to play and being slow to switch one's mood"; the lack of the ability to relax refers to "being emotionally unsettled, becoming nervous before a game and feeling the pressure"; and the lack of concentration refers to "being unable to play calmly and losing one's composure". Obviously, the Korean players became nervous physically and mentally in response to certain plays and moves. And were inferior in

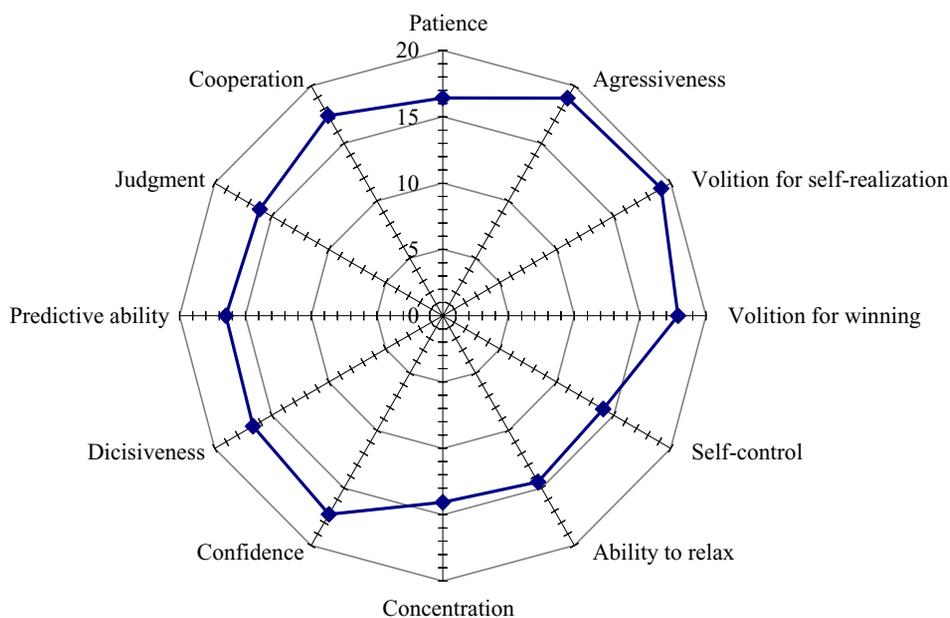


Figure 2 Psychological competitive ability of Korean players

Table 1 Comparision between the belong to psychological competitive ability

factor and scale	Japanese playeres		Korean players		t-valu
	M	SD	M	SD	
Total score	195.9	16.46	198.9	18.97	0.485
Volition for competition	70.8	5.09	72.4	4.23	1.022
Mental stability and Concentration	48.5	7.07	42.6	7.95	2.252*
Confidence	30.3	4.33	33.9	3.94	2.518*
Strategic ability	28.3	4.30	32.5	3.91	2.951**
Cooperation	18.0	2.22	17.4	2.06	0.788
Patience	17.1	1.39	16.4	2.09	1.045
Agressiveness	19.0	1.32	18.9	1.34	0.126
Volition for self-realization	17.6	2.33	19.2	0.95	2.472*
Volition for winning	17.1	1.91	17.9	1.54	1.361
Self-control	15.7	2.55	14.1	2.84	1.730
Ability to relax	16.3	3.30	14.5	3.39	1.526
Concentration	16.6	2.42	14.1	3.29	2.477*
Confidence	15.2	2.48	17.3	1.96	2.713*
Dicisiveness	15.1	2.03	16.6	2.21	2.058*
Predictive ability	14.1	2.83	16.5	2.10	2.720*
Judgment	14.2	2.04	16.1	2.16	2.552*
Cooperation	18.0	2.22	17.4	2.06	0.788

**p<.01, *p<.05

self-control ability, which was needed to remain unaffected by success, failure, or the opponent’s superior play. However they had mental strength with which they play aggressively, progressing toward their goal and potential.

3.3. Comparison between the Japanese player and the Korean player

The mean values, standard deviation, and test results of the scores by scale and by factor of the Japanese player and the Korean player are shown in **Table 1**.

Regarding the total scores, there was no significant

difference. Regarding the first factor, volition for competition, there was no significant difference between the Japanese players and the Korean players. As for the subscale, the Korean players scored significantly higher than the Japanese players in volition for self-realization ($p < 0.05$). In patience, aggressiveness, and volition for winning, there were no significant differences between the Japanese players and the Korean players. In concentration, a subscale, the Japanese players scored significantly higher ($p < 0.05$). There was no significant difference between the Japanese players and the Korean players in self-control and the ability to relax. In the third factor, confidence, the Korean players scored significantly higher ($p < 0.05$). In concentration and decisiveness in subscales, the Korean players scored significantly higher ($p < 0.05$). In the fourth factor, strategic ability, the Korean players scored significantly higher ($p < 0.05$). In predictive ability and judgment in subscales, the Korean players scored significantly higher score than the Japanese players ($p < 0.05$). As for the fifth factor, cooperation, there was no significant difference

It was in aggressiveness that both the Japanese players and the Korean players scored the highest. According to the Japan Football Association (2002), the outcomes of games are often affected by player aggressiveness, which should be possessed by all soccer players on the pitch. Clearly, the soccer players in Japan and Korea had aggressiveness which enabled them to attack the goal and to make saves boldly.

Kotani, et al., (1993) and Nishimura (2002) have reported that the more experience the player has, the higher the psychological competitive ability becomes, and that mental stability and concentration are not significantly affected by the quantity of experience. In this study, however, despite the fact that the subjects were university students who were well experienced, and representing their respective countries, there was a significant statistical difference. There are in self-control, confidence, decisiveness, predictive ability, and judgment. 9 of the 16 Japanese players had experienced mental training, and this may have yielded the difference in self-control.

According to the Japan Football Association (1996) and Oshima (1996), sports have developed in the school education system in both Japan and Korea. And while the two nations are similar to

each other environmentally, geographically, racially, and physically, there are many differences in their soccer styles. Therefore, differences in training, coaching, and strategic views generated differences in confidence, decisiveness, and predictive ability. Korea. Moreover, the Japan Football Association (2003) states that it is important for players to be able to make adequate judgments in any situation and to play according to circumstances in order to stay top players in the world. Considering this, the Korean players clearly had judgment and predictive ability, which were closer to those of the top players of the world ability were.

Compared with the Korean players, the Japanese players were seen as being calmer and more stable in a game, being able to respond appropriately to the changes of circumstances, situations, and environment, and being good at self-control. On the other hand, the Korean players were confident about the accuracy of their play and achieving their goals, adequately judging every new situation developing in the course of a game and making proper decisions to play as he had planned.

In the 22nd Universiade Daegu, the Japanese soccer team won the championship while the Korean team was beaten in a preliminary game. In International championships, mental pressure control, concentration on play, and mental stability are considered as key factors for achieving satisfactory results. Moreover, it is important for Japanese players to intensify judgment and predictive ability, in which Japanese players have been inferior to Korean players, in order to play successfully in the J League and FIFA World Cup™ with the best teams in the world.

References

- Furutani, M., and Yaguchi, K. (1993). Study of psychological competitive ability of student soft tennis players. *Kyushu Journal of Physical Education*. 7(1): pp.29-38. (in Japanese)
- JFA News Special number. (1996) Strengthening instruction guideline 1998. (in Japanese)
- JFA Technical Study Group. (2002). 2002 FIFA world Cup Korea/Japan™ Technical Report. pp.46-55. (in Japanese)
- JFA Technical Study Group. (2003). FIFA Confederations Cup FRANCE 2003 JFA Technical Report, pp.26-27. (in Japanese)
- Nishimura, C., and Shimomura, H. (2002). Psychological-Competitive Ability of University Male Soccer Players. *Nagasaki Prefectural University Journal*. 36(1): pp.73-85. (in Japanese)
- Oshima, H. (1996). Japan-South Korea kickoff legend. pp.190-191. Tokyo: Jitsugyo no Nihon Sha, Ltd. (in Japanese)
- Tokunaga, M., and Hashimoto, K. (1994). A study on training of psychological competitive ability for athletes (4): On making

- the diagnostic inventory. *Journal of Health Science*. 10: pp.73-84. (in Japanese)
- Tokunaga, M. (1996). *Mental training for best performance -Diagnosis and improvement of psychological competitive ability*. Tokyo:Taishukan Publishing. (in Japanese)
- Tokunaga, M., and Hashimoto, K. (1994). *Diagnostic inventory of psychological competitive ability (DIPCA.2, junior high school students to adults)*. Fukuoka:Toyo Physical Co., Ltd.,. (in Japanese)
- Tokunaga, M. (1995). *Diagnostic inventory of psychological competitive ability (junior high school students to adults)-handbook*. Fukuoka:Toyo Physical Co., Ltd.,. (in Japanese)
- Tokunaga, M., Yoshida, E., Shigeeda, T., Azuma, K., Inadomi, T., and Saito, T. (2000). *Difference between the Sexes, Competitive Levels and Events in the Athletes' Psychological Competitive Ability*. *Journal of Health Science*, 22: pp.109-120. (in Japanese)
- Uemukai, K. (2001). *A Study of psychological competitive ability for Keio University Athletic members*. Keio University Institute of Physical Education Project Research Report 2000. pp.71-76. (in Japanese)



Name:
Masato Otake

Affiliation:
Nihon University College of Humanities and Sciences

Address:
3-25-40 Sakurajosui, Setagaya-Ku, Tokyo 156-8550 Japan

Brief Biographical History:
1994-1997 Osaka Football Club Co., Ltd.
1998-2000 Master's program in Health and Sports Science, Juntendo University
2001-2004 Instructor, Institute of Physical Education, Keio University
2005-Assistant professor, Nihon University College of Humanities and Sciences

Main Works:
• *Oyako de Manabo! Soccer Academy*. Tokyo: GAKKEN CO., LTD. Apr. (2005)

Membership in Learned Societies:
• Japan Society of Physical Education, Health and Sports Sciences
• Japanese Society of Science and Football
