

The relationship between adult table tennis players' perception on coaches' leadership behavior and satisfaction

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Abstract: The purpose was to explore coaches' leadership behavior and table tennis players' satisfaction, and the relationship between them. The research approach applied was survey method with a questionnaire. The researcher took the table tennis players who joined the 2010 Jhong-Jheng Cup as samples. Two hundred and thirteen samples were effective among 244 table tennis players and the rate of return was 87.3%. The statistical methods include reliability analysis, t-test, one-way analysis of variance, and Scheffe's method. The findings from the analysis were summarized as follows: "training and direction" earned the highest score in table tennis players' perception of coaches' leadership behavior, and "autocratic behavior" received the lowest score. "coach and his leadership behavior" earned higher score than "performance" in table tennis players' perception of satisfaction. Canonical correlation existed between coaches' leadership behavior and table tennis players' satisfaction, 'training and direction' and 'award behavior' of coaches' leadership behavior had the highest effect on table tennis players' satisfaction. The results revealed that the more leadership behavior perceived by table tennis players, the higher satisfaction they had. Hopefully, this study can offer some suggestions for the direction of future researches and applications in coaches' leadership and team management.

Keywords: coaches' leadership behavior, satisfaction

1. INTRODUCTION

1.1. Background and motivation

Kwak (2002) believed that coach's leadership behavior is a complex and diversified behavior; it guides player to reach the goal through direct or indirect ways. He concluded that an outstanding coach should possess training basics and abilities to enhance player's body and mind, and also make much of using skills, strategy, and process to encourage player to work voluntarily toward his goal. And during scenarios of sports, coach and player's interaction behavior is also a process of interpersonal interaction. This kind of interactive relationship will affect player's motive and satisfaction in participating in the sports (Chelladurai, 1993). The National Jhongjheng Cup Table Tennis Tournament has a very stringent entry pre-requisite, and is one of the most important annual tournaments in Taiwan. Therefore, studying the suitable leadership behavioral model of table tennis coaches for the open group is an important topic, so that leadership efficiency of coaches, and hence players' level of satisfaction may be enhanced. It is hoped that results of the study may provide a reference for table tennis coaches in their team leadership behaviors for implementation of training and management of the team.

1.2. Objectives

The study aims at investigating the relationship between table tennis players' perception of coaches' leadership behaviors and their level of satisfaction, in the hope to provide research results that serve as a

reference for table tennis coaches in training and management. Specific objectives include understanding the current status of players' perception of coaches' leadership behaviors and their level of satisfaction, and understanding the relationship between the two.

2. METHOD

2.1 Subjects

Subjects of this study are players participated in the 34th National Jhongjheng Cup Table Tennis Tournament 2010. Questionnaire survey was conducted from September 14 to 16. 244 questionnaires were distributed on the spot, and 213 responses were received, rate was 87.3%.

2.2 Questionnaire

2.2.1 Description

The questionnaire included 2 parts. Part 1 of the questionnaire: the coaches' leadership behaviors scale was mainly developed from The Leadership Scale for Sport (LSS) by Chelladurai (1993) and translated into Chinese by Zheng (1997). Five factors, namely "training and guiding behaviors", "caring behaviors", "awarding behaviors", "democratic behaviors" and "autocratic behaviors", were used to assess players' perception of coaches' leadership behaviors.

Part 2 is the players' satisfaction scale, developed mainly from Wu's (2002) research tool. Two factors, coach and leadership behaviors, results and performance, were used to assess players' satisfaction.

The coaches' leadership behaviors and players' satisfaction scales are 5-point Likert scale: "Always", "Often", "Sometimes", "Rarely", "Never" are given scores of 5, 4, 3, 2, 1 respectively. The higher the score, the higher is the subjects' perception of coaches' leadership behaviors. Players' levels of satisfaction are "Very satisfied", "Satisfied", "No comment", "Unsatisfied", "Very unsatisfied", with scores 5, 4, 3, 2, 1 respectively. The higher the score, the higher is the subjects' satisfaction.

2.2.2 Reliability

Reliability analysis for part 1 of the questionnaire shows that Cronbach's α coefficient of the factors ranges from .792 to .912. The total Cronbach's α coefficient of the scale is .904, showing a good reliability of the scale.

Reliability analysis for part 2 of the questionnaire indicates that Cronbach's α coefficient for the two factors is .830 and .897. The total Cronbach's α coefficient of the scale is .882, showing a good reliability of the scale.

2.3 Data analysis

Analysis for the data was mainly conducted by statistical methods such as descriptive statistics and canonical correlation. Significance level of the statistical tests was set at $\alpha < .05$.

3. RESULTS AND DISCUSSION

3.1 Current status of coaches' leadership behaviors

Statistic results of the scores of the five factors of coaches' leadership behaviors are shown in Table 3-1. The total mean scores, in descending order, are "training and guiding behaviors" $M=3.935$, "awarding behaviors" $M=3.723$, "democratic behaviors" $M=3.531$, "caring behaviors" $M=3.283$, "autocratic behaviors" $M=2.764$. This result confirms the finding by Lai (2008), showing that in open group sport teams, the perception of coaches' "training and guiding behaviors" is most impressive. That is, coaches' effort in guiding players' skills and tactics during training is positively recognized by players. "Autocratic behaviors" have the lowest score in this study, which is consistent with the study of Lin, Chen and Hsiung (2010). Lin, Huang and Huang, (2011) also have similar findings. This result shows that coaches leading the team by autocratic behaviors are least liked by players, which means coaches should minimize using such approach to avoid negative effect and affect players' performance. Coaches should be more inclined to use training and guiding, awarding, and democratic approaches to lead the team.

Table 3-1 Analysis of current status of coaches' leadership behaviors

Coaches' leadership behavioral factors	Mean	S.D.	Rank
Training and guiding behaviors	3.935	0.605	1
Awarding behaviors	3.723	0.652	2
Democratic behaviors	3.531	0.765	3
Caring behaviors	3.283	0.902	4
Autocratic behaviors	2.764	0.715	5

3.2 Analysis of current status of players' satisfaction

Statistic results of the scores of the two factors of players' satisfaction are shown in Table 3-2. The total mean scores, in descending order, are "coaches' leadership behaviors" $M=3.950$, "results and performance" $M=3.725$. Both of the scores are good satisfaction level. This confirms the results of Kuo (2007). The result shows that satisfaction with the coach scores higher than players' results and performance, meaning that professional training and leadership behavioral of the coaches may gain greater trust by players. Therefore, coaches should make good use of players' trust to boost up players' results and performance.

3.3 Canonical correlation analysis of coaches' leadership behaviors and players' satisfaction

Results of the canonical correlation analysis of coaches' leadership behaviors and players' satisfaction are shown in Table 3-3. Coaches' leadership behavior is the control variable (variable X), and players' satisfaction is the criterion variable (variable Y); the correlation of the linear combination of x and y is found out. As it is found that the canonical correlation coefficient is $\rho=0.642^*$ ($p<0.001$), the five control variables of coaches' leadership behaviors influence the two criterion variables of satisfaction through the canonical factor.

The canonical factor (χ_1) of the control variables (coach and leadership behaviors) can explain 41.2% of the total variance of the canonical factor (η_1) of the criterion variables (players' satisfaction), and this canonical factor (η_1) of the criterion variables can in turn explain 61.992% of the variance of the criterion variables. The overlapping part of the control variables and criterion variables is 25.494%, and so through the canonical factors (χ_1 and η_1), control variables may effectively explain 25.494% of the variance of the criterion variables.

Table 3-2 Analysis of current status of players' satisfaction

Players' satisfaction factors	Mean	S.D.	Sequence
Coach and leadership behaviors	3.950	0.694	1
Results and performance	3.725	0.778	2

Table 3-3 Summary of the canonical correlation analysis of coaches' leadership behaviors and players' satisfaction

Control variable Variable X	Canonical factor (Kai) χ_1	Criterion variable Variable Y	Canonical factor (Eta) η_1
Training and guiding behaviors	.959	Coach and leadership behaviors	.998
Awarding behaviors	.743	Results and performance	.489
Caring behaviors	.691		
Democratic behaviors	.391		
Autocratic behaviors	-.002		
Extract variance Percentage (%)	42.034	Extract variance Percentage (%)	61.992
Overlap (%)	17.306	Overlap (%)	25.494
		ρ^2	.412
		Canonical correlation ρ	.642*

*P<0.05

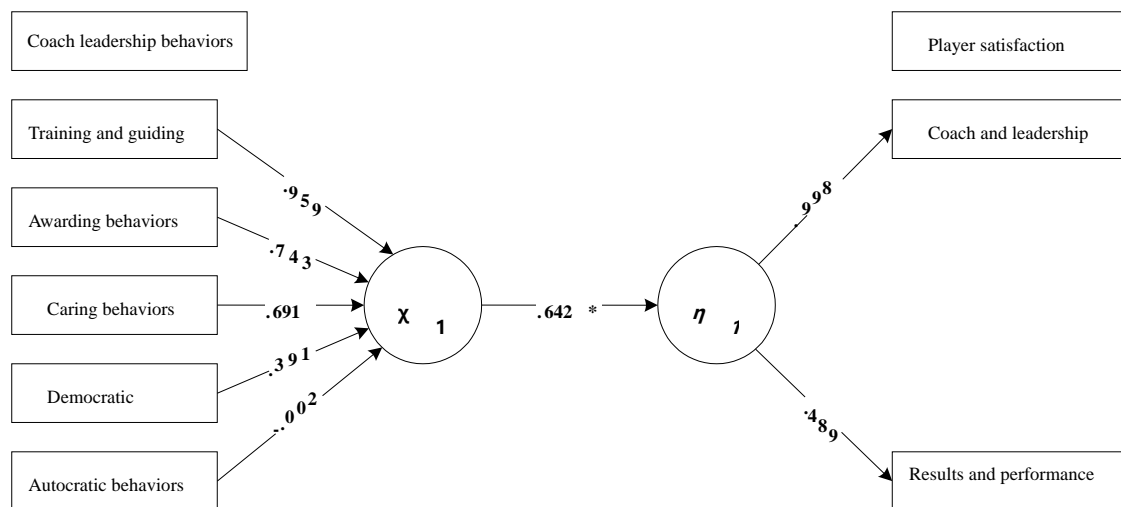


Figure 3-1 Illustration of canonical correlation analysis of “coaches' leadership behaviors” and “players' satisfaction”

Summarizing the above findings, among the player-perceived coaches' leadership behaviors, "training and guiding" and "awarding behaviors" have a construct coefficient above 0.700 with the "coach and leadership behaviors" of the players' satisfaction, showing a positive correlation. Therefore, it is mainly the "training and guiding" and "awarding behaviors" of the coaches' leadership behaviors that affect the "coach and leadership behaviors" of the players' satisfaction. The result shows that the higher the player-perceived training, guiding and awarding behaviors by the coach, the higher is the players' level of satisfaction. This result is consistent with Tseng's (2003) findings that coaches' leadership behaviors have a positive influence on players' satisfaction; Yu's (2007) findings that there is a significant positive correlation between coaches' leadership behaviors and performance, and a significant positive correlation between democratic behaviors and training and guiding. Thus, in order to enhance players' satisfaction, coaches should adopt less "autocratic behaviors" and "training and guiding", "awarding behaviors", "caring behaviors" in higher frequency, so that players' satisfaction may be increased. In particular, "training and guiding" behaviors have greatest influence.

4. CONCLUSION AND RECOMMENDATIONS

4.1 Conclusion

Summarizing the analysis and discussion of this study, the following conclusions are made:

4.1.1 Current status of coaches' leadership behaviors

Scores of player-perceived coaches' leadership behavior factors, in descending order, are: "training and guiding behaviors", "awarding behaviors", "democratic behaviors", "caring behaviors" and "autocratic behaviors". It shows that coaches should adopt mainly "training and guiding" and "awarding" behaviors in their leadership behaviors, while "autocratic behaviors" score the lowest and should be adopted the least.

4.1.2 Current status of players' satisfaction

In terms of players' satisfaction, the "coach and leadership behaviors" of coaches score higher than the "results and performance" of players, but both factors have good a satisfied score. It shows that to enhance players' satisfaction, "training and leadership" of coaches is a major influence.

4.1.3 Canonical correlation analysis of coaches' leadership behaviors and players' satisfaction

Results show that there is a positive canonical correlation between coaches' leadership behaviors and players' satisfaction. Among the coaches' leadership behaviors, it is mainly the "training and guiding" and "awarding behaviors" that influence "coach and leadership behaviors" of players' satisfaction. It shows that the more the player-perceived training, guiding and awarding behaviors, and the less the autocratic behaviors, the higher will be the level of satisfaction. Among others, "training and guiding" behaviors have the greatest influence.

4.2 Recommendations

4.2.1 Application of research findings

4.2.1.1 Adopt "training and guiding behaviors" and "awarding behaviors"

Findings of this study show that among the players' perception of coaches' leadership behaviors, "training and guiding behaviors" and "awarding behaviors" score the highest. Hence, in a competitive environment where players have to rely on the coaches for training in both skills and tactics, the coaches should replace autocratic leadership with awarding, caring and democratic leadership. Therefore, coaches should continue to reinforce such leadership behaviors to enhance the individual and group performance of the players.

4.2.1.2 For enhancing players' satisfaction, leadership style of "autocratic behaviors" is not recommended.

Findings also show a significant positive correlation between coaches' leadership behaviors and players' satisfaction, and among others, "training and guiding" and "awarding behaviors" are major factors that affect players' satisfaction with coaches' leadership behaviors. The lower the score of autocratic behaviors, the higher is the level of satisfaction. Furthermore, satisfaction with coaches' leadership behaviors is higher than satisfaction with players' results and performance, and thus, coaches should make good use of players' trust and appreciation to enhance players' results and performance.

4.2.2 Recommendations for future studies

This study is confined only to table tennis players in the open group of the 2010 National Jhongheng Cup Tournament. If subjects from the university group, senior high school group, junior high school group and elementary group can be included, the research results will be more comprehensive, and hence may be extended as a reference for coaches of all grades.

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