

## The training satisfaction of the university table tennis players of general Group

Ching-Tsai Wen

Ta-Hwa Institute of Technology, Taiwan, ROC

(Tel : +886-3-5907086; E-mail: leisure.wen@msa.hinet.net)

**Abstract:** The study is aimed to study the satisfactory level and difference of university general Group plays. The subjects are 257 table tennis players attending the table tennis competition held in Tamkang University. The statistical analysis included description, factory analysis, t-test and one-way ANOVA. It found 7 factors related to satisfaction including the professional competence of coaches, skill performance, team welfare, venue facility, training supervision, and team morale and teammate relationship. The descending rank of players' satisfactory factors is teammate relationship, professional competence of coaches, team morale, training supervision, venue and facility, players' welfare, and team performance. The satisfaction of Male players is significantly higher than female ones in the factors of the professional competence of coaches, venue facility, and training supervision. The performance of players with longer playing span is significantly better than those with shorter experience. The players have no achievement in competition is significantly higher in satisfaction with the professional competence of coaches than those ranked higher. Compared to the players with shorter training sessions, those who trained longer are more satisfied with the three factors of the professional competence of coaches, training supervision, and teammate relationship. Under the guidance of the coach with professional background, the player has significant satisfaction with the professional competence of coaches and teammate relationship.

**Keyword :** Table tennis, Table tennis players, training satisfaction

### 1. INTRODUCTION

#### 1.1 Background

Table tennis is one the widely practiced programs of university physical education. It is also a common leisure activity for students. Table tennis has beneficial effects on overall health with the advantages in easy access of venue and facility, simple game rules, safety for intensity self adjusted, and full of diversity (Wen et al., 2005). Besides, table tennis is an indoor exercise without the effect of weather and with high feasibility (Xu, 1986). Table tennis is very popular in the university students. According the statistic report from the official website of university sports competition (2007) documented table tennis had the most attendants in all the competing events. However, table tennis training often confronted much inadequacy in raising funding, recruiting or maintaining players (Lai, 2004). The motivation of students to join in the team can be intense interest, peer affect. The team players bear pressure from family and/or university since they have to balance the time spending in study and training. Locke (1976) defined satisfaction as the happiness or positive sensation resulted from personal judgment of certain experience. Chelladurai and Riemer (1997) suggested that athlete satisfaction is the positive sensation or perception after self-judgment when experiencing exercise-related organization, implement, and outcomes. Coaches who had had absolute authority in the past have being experiences the role changing to training player-centered. The satisfaction of players greatly influences individuals' enthusiasm, motivation, morale, and achievement as well as team performance. The study of players' satisfaction with the team can reflect the effectiveness of team management so as to form insight to the need of players and status quo of ball team. The current study addressed

the player's satisfaction to their team.

#### 1.2 Research purpose

The study aims at the following investigation:

- 1.2.1 the satisfactory condition of general Group players.
- 1.2.2 the satisfaction difference in players' gender.
- 1.2.3 the satisfaction difference in players' playing span.
- 1.2.4 the satisfaction difference in players' performance.
- 1.2.5 the satisfaction difference in players' training session.
- 1.2.6 the satisfaction difference in the professional background of coaches. .
- 1.2.7 the suggestion for coaches, athletes and future study.

### 2. RESEARCH METHOD

#### 2.1 Subjects

The total number of subject is 257 (male = 166, female = 91), and randomized chosen from 499 table tennis players from 30 universities attending the competition held in Tamkang University on October, 20-21. The response rate is 86%. Table 1 showed the biographic information of subjects.

Table 1 Biographic information

Variable		Number
gender	male	166
	female	91
Playing span	1-5 year	158
	6-10 year	80
	11 year above	19
best result	1~2	20
Nationwide rank	3~4	14

	5~8	41
	9~16	29
	No rank	153
training session	<=3 hour	50
	3~6 hour	125
	6~9 hour	60
	>=9 hour	22

**2.2 Measurements**

The research applied a 5-point Likert scale (Chien, 2006, Wang, Tang, Chen, 2006, Lee, 2003, Huang, 2000), ranged from very satisfied to extremely dissatisfied.

**2.3 Reliability and validity**

Factor analysis found DP ranged from .83 to 1.66, CR value form 5.52 to 14.92, P<.05. According to Ebel (1979) and Wolman (1989), the questionnaire had satisfying discriminate power when DP > .04 and CR > 3. The score of R2 indicated that all the items were significantly correlated with each others. And the reliability is satisfactory with R1> 0.4. As table 3 showed, the final factor structure differentiated among 7 subscales and subsequently labeled as: ‘the professional competence of coaches’ accounted for 31.40%, consisted of item 12, 10, 9, 6, 11, 4, 7, 5, 8, 3, 28, and 27; ‘performance’ with the variance percentage of 10.47%, was consisted of item 16, 18, 1, 17, and 2; ‘ball team welfare’ with the variance percentage of 6.80%, was consisted of item 34, 33, 36, and 35; ‘venue facility’ consisted of item 30,31,32, and 29, accounting for 5.39% of variance; ‘training supervision’ is consisted of item 26, 23, 24, and 25, accounting for 4.45 % of variance; ‘ball team morale’ is consisted of item 19, 22, 20, and 21, accounting for 3.54% variance; and ‘teammate’ is consisted of item 13, 14, and 15, accounting for 3.35%. The reliability coefficients of the above factors were 0.93, 0.82, 0.86, 0.80, 0.86, 0.80, and 0.79 respectively.

Table 2 The content of scale items

Questions	DP	CR	R1	R2
1 My feeling to my performance in the games of last year	0.88	5.71	0.42	0.38
2. My feeling of my improvement in skill in the games of last year	0.97	6.45	0.42	0.37
3. My feeling to coach attitude to players	1.42	10.3	0.59	0.55
4. My feeling to the way that coach deal with team affaire	1.42	12.28	0.62	0.58
5 My feeling to the way that coach trains me	1.39	11.71	0.64	0.61
6.My feeling to the coach’ s caring to me	1.66	14.92	0.71	0.68
7. My feeling to my relationship with the coach	1.39	12.15	0.62	0.58
8. My feeling to the professional background of the coach	1.28	10.76	0.58	0.55
9.My feeling to the coach’ s arrangement of player sequence	1.41	12.54	0.66	0.63
10. My feeling to the coach’ s strategy for games.	1.38	10.88	0.62	0.58
11.My feeling to the coach’ s conclusion for games	1.33	11.16	0.62	0.58
12. My feeling to the coach’ s guidance to me	1.41	13.00	0.67	0.65
13 My feeling to my relationship with other team members	0.97	7.16	0.48	0.45

14. My feeling to the guidance from my team members	0.86	8.01	0.50	0.47
15.My feeling to the relationship between the older players and the younger	0.92	6.91	0.46	0.42
16. My feeling to my attacking performance in the games of recent one year	1.06	6.86	0.47	0.42
17.My feeling to my defending performance in the games of recent one year	0.88	5.98	0.42	0.38
18. My feeling to my strategies applied in the games of recent one year	1.00	6.87	0.48	0.43
19.My feeling to the team morale	1.22	9.59	0.52	0.49
20.My feeling to the training attendance of team members	1.00	7.30	0.50	0.46
21.My feeling to the team member’ s contribution to the team	1.02	7.45	0.54	0.50
22.My feeling to the training atmosphere	1.23	9.75	0.58	0.55
23.My feeling to the training hours per time	1.13	9.77	0.60	0.57
24.My feeling to the training sessions per week	1.33	12.26	0.65	0.62
25.My feeling to the arrangement of training and break	1.20	11.41	0.66	0.63
26. My feeling to the training time controlling	1.25	10.61	0.60	0.56
27.My feeling to the coach’ s psychological guidance	1.25	10.61	0.63	0.60
28.My feeling to the coach’ s skill guidance	1.48	13.10	0.69	0.66
29.My feeling to the quality of training venue	1.33	7.91	0.49	0.44
30.My feeling to the quality and quantity of campus facility of weight training	1.28	10.05	0.53	0.49
31.My feeling to the quality and quantity of training facility of the ball team	1.25	8.38	0.54	0.50
32.My feeling to the provision of facility and medicine for treating exercise-induced jury	1.11	7.31	0.50	0.46
33.My feeling to the team’ s funding	0.89	5.52	0.40	0.35
34.My feeling to the quality and quantity of player’ s equipment	0.89	6.07	0.45	0.41
35.My feeling to the allocation of team’ s funding	0.83	6.75	0.46	0.42
36. My feeling to the team welfare (tourism, bonus, awards, etc.)	1.03	6.97	0.48	0.43

Table 3 The outcomes of factor analysis

Topic number	coach	technique	team	place	train	team	teammate
	professional	performance	welfare	equipment	control	atmosphere	relation
12	0.79	0.10	0.05	0.10	0.18	0.04	0.07
10	0.78	0.02	0.16	-0.04	0.10	0.12	0.02
9	0.78	0.06	0.12	0.01	0.09	0.18	0.07
6	0.77	0.07	0.00	0.20	0.16	0.12	0.13
11	0.77	0.14	0.13	0.04	0.00	0.01	0.11
4	0.76	-0.03	0.00	0.18	0.14	0.13	-0.03
7	0.75	0.05	-0.05	0.15	0.06	0.10	0.13
5	0.75	0.04	0.11	0.05	0.11	0.26	-0.06
8	0.72	0.01	-0.01	0.12	0.13	-0.08	0.29
3	0.70	-0.01	-0.04	0.12	0.07	0.22	0.12
28	0.67	0.10	0.09	0.18	0.22	0.10	0.18
29	0.62	0.23	0.15	0.11	0.20	-0.07	0.12

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16	0.06	0.79	0.08	0.16	0.05	0.10	0.10
18	0.14	0.74	0.14	0.04	0.00	0.18	0.05
1	0.04	0.72	0.22	0.04	0.07	0.15	-0.01
17	0.04	0.71	0.11	0.07	0.13	0.17	-0.04
2	0.10	0.67	0.03	0.09	0.18	0.03	0.03
34	0.02	0.16	0.81	0.21	0.15	0.01	0.05
33	0.06	0.12	0.80	0.15	0.07	0.05	-0.10
36	0.14	0.16	0.80	0.11	0.04	0.03	0.11
35	0.12	0.12	0.80	0.08	0.10	0.10	0.02
30	0.16	0.12	0.06	0.82	0.12	0.08	0.14
31	0.16	0.13	0.16	0.78	0.10	0.17	0.02
32	0.13	0.07	0.30	0.69	0.13	0.09	0.01
29	0.23	0.09	0.10	0.67	0.05	0.01	0.10
26	0.29	0.11	0.04	0.15	0.74	0.07	0.17
23	0.20	0.18	0.11	0.08	0.73	0.23	0.13
24	0.24	0.19	0.19	0.17	0.73	0.18	0.12
25	0.32	0.09	0.17	0.10	0.68	0.28	0.13
19	0.18	0.17	0.06	0.10	0.08	0.74	0.15
22	0.21	0.15	0.01	0.20	0.14	0.71	0.25
20.	0.09	0.29	0.04	-0.01	0.27	0.71	0.05
21	0.21	0.15	0.11	0.10	0.18	0.58	0.15
13	0.22	0.09	0.01	0.06	0.13	0.15	0.83
14	0.27	-0.01	0.03	0.11	0.21	0.12	0.76
15	0.14	0.03	0.03	0.09	0.11	0.36	0.67
Eigenvalue	11.30	3.77	2.45	1.94	1.60	1.28	1.21
Explained variability	31.40	10.47	6.80	5.39	4.45	3.54	3.35
General Explained variability	31.40	41.87	48.67	54.07	58.52	62.06	65.41
General scale	.93	.82	.86	.80	.86	.80	.79
Crobach $\alpha=.93$							

### 2.3 Data analytical

This research adopts SPSS 13.0 for data analysis including description, mean, SD and t-test.

## 3. Result

### 3.1 Result

#### 3.1.1 The description of satisfaction

Table 4 show the description of university players' satisfaction with the 7 factors

Table 4 The descriptions of players' satisfaction

Factor	Number people	Average	Standard Deviation	Rank
teammate relationship	257	4.03	0.66	1
coach professional competence	257	3.87	0.65	2
ball team	257	3.62	0.67	3

morale				
Training Supervision	257	3.61	0.65	4
Venue facility	257	3.48	0.77	5
ball team welfare	257	3.23	0.75	6
performance	257	3.14	0.68	7

#### 3.1.2 The satisfaction difference in gender

In comparison with female players, male ones have the higher satisfaction in the factors of the professional competence of coaches, venue facility, training supervision ( $p<.05$ ).

Table 5 The satisfaction difference in gender

Factor	sex	Number people	Average	Standard Deviation	T Value	P Value
coach professional competence	male	166	3.97	0.65	3.58*	0.001
	female	91	3.67	0.61		
performance	male	166	3.19	0.65	1.70	0.090
	female	91	3.04	0.72		
ball team welfare	male	166	3.29	0.72	1.79	0.075
	female	91	3.11	0.80		
Venue facility	male	166	3.55	0.72	2.20*	0.029
	female	91	3.34	0.84		
Training supervision	male	166	3.67	0.65	2.19*	0.029
	female	91	3.49	0.64		
ball team morale	male	166	3.68	0.69	1.73	0.085
	female	91	3.52	0.64		
teammate relationship	male	166	4.03	0.66	0.01	0.996
	female	91	4.03	0.65		

\* $p<.05$

#### 3.1.3 The satisfaction difference in playing span

Table 6 showed that the players with playing span of 5 years shows the obvious dissatisfaction with the performance compared the ones with 6-10 years and more than 11 years. ( $p<.05$ ).

Table 6 The satisfaction difference in playing span

Factor	year	Number people	Average	Standard Deviation	F Value	P Value	Significant difference
coach professional competence	1-5	158	3.83	0.68	8.32*	0.001	1<2,3
	6-10	80	3.95	0.59			
	11 above	19	3.86	0.63			
performance	1-5	158	3.01	0.66	0.46	0.632	
	6-10	80	3.29	0.67			
	11 above	19	3.53	0.63			
ball team welfare	1-5	158	3.20	0.70	0.46	0.632	
	6-10	80	3.24	0.79			
	11 above	19	3.37	0.98			

Venue facility	1-5	158	3.49	0.77	0.54	0.585	
	6-10	80	3.42	0.75			
	11 above	19	3.62	0.88			
Training Supervision	1-5	158	3.58	0.66	0.35	0.702	
	6-10	80	3.65	0.63			
	11 above	19	3.63	0.69			
ball team morale	1-5	158	3.57	0.64	1.72	0.181	
	6-10	80	3.74	0.74			
	11 above	19	3.54	0.65			
teammate relationship	1-5	158	3.99	0.68	0.93	0.398	
	6-10	80	4.11	0.61			
	11 above	19	3.96	0.64			

\* p<.05

**3.1.4 The satisfaction difference in performance**

As table 7 showed, the players who ever had ranked No. one to two in the national competitions had lower satisfaction with the professional competency of coaches compared to those who ranked No. three to four (p <.05).

Table 7 The satisfaction difference in performance

Factor	Country results	Number people	Average	Standard Deviation	F Value	P Value	Significant difference
coach professional competence	1~2	20	3.36	0.64	6.49*	0.001	1<3,5
	3~4	14	3.40	0.64			
	5~8	41	3.93	0.54			
	9~16	29	3.79	0.64			
	No rank	153	3.97	0.64			
performance	1~2	20	3.35	0.78	2.49	0.044	
	3~4	14	3.39	0.66			
	5~8	41	3.22	0.60			
	9~16	29	3.30	0.63			
	No rank	153	3.03	0.69			
ball team welfare	1~2	20	3.33	0.78	2.97	0.020	
	3~4	14	3.66	0.56			
	5~8	41	3.03	0.88			
	9~16	29	3.47	0.68			
	No rank	153	3.18	0.72			
Venue facility	1~2	20	3.65	0.65	2.58	0.038	
	3~4	14	3.11	1.12			
	5~8	41	3.23	0.72			
	9~16	29	3.49	0.87			
	No rank	153	3.55	0.72			
Training supervision	1~2	20	3.79	0.57	0.97	0.423	
	3~4	14	3.38	0.78			
	5~8	41	3.54	0.55			

ball team morale	9~16	29	3.65	0.52				
	No rank	153	3.61	0.70				
	1~2	20	3.94	0.66			1.87	0.117
teammate relationship	3~4	14	3.38	0.69				
	5~8	41	3.53	0.65				
	9~16	29	3.56	0.58				
ball team morale	No rank	153	3.64	0.69				
	1~2	20	4.07	0.75			0.84	0.498
	3~4	14	3.88	0.84				
teammate relationship	5~8	41	3.95	0.60				
	9~16	29	3.90	0.61				
	No rank	153	4.08	0.65				

\* p<.05

**3.1.5 Satisfaction difference in training sessions**

Table 8 presented that in terms of the satisfaction with the professional competence of coaches, training controlling, and teammate relationship, the players who had the training time more than 9 hours gave higher scores than those who trained less than 3 hours, 3-6 hours, and 6-9 hours. It indicates that more training sessions can lead to higher satisfaction in the professional competence of coaches, training controlling, and teammate relationship (P<.05).

Table 8 The satisfaction difference in training sessions

Factor	hour	Number people	Average	Standard Deviation	F Value	P Value	Significant difference
coach professional competence	<3 hour	50	3.66	0.70	5.84*	0.001	
	3~6 hour	125	3.94	0.56			
	6~9 hour	60	3.75	0.72			
	9 hour above	22	4.26	0.62			
	<3 hours	50	3.14	0.67			
technique performance	3~6 hour	125	3.15	0.67			
	6~9 hour	60	3.09	0.73			
	9 hour above	22	3.22	0.67			
	<3 hour	50	3.29	0.86			
	3~6 hour	125	3.21	0.78	0.14	0.935	
ball team welfare	6~9 hour	60	3.22	0.68			
	9 hour above	22	3.18	0.51			
	3 hour following	50	3.49	0.88			
	3~6 hour	125	3.47	0.71			
	6~9 hour	60	3.36	0.79	5.88*	0.001	4>1,2,3
train supervision	9 hour above	22	3.80	0.73			
	<3 hour	50	3.43	0.67			
	3~6 hour	125	3.58	0.59			

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	6~9 hour	60	3.63	0.67			
	9 hour above	22	4.10	0.70			
	<3 hour	50	3.54	0.77	2.73	0.045	
ball team morale	3~6 hour	125	3.61	0.65			
	6~9 hour	60	3.58	0.60			
	9 hour above	22	4.00	0.69			
	<3 hour	50	3.93	0.72	6.62*	0.001	4>1,2,3
teammate relationship	3~6 hour	125	4.01	0.59			
	6~9 hour	60	3.93	0.68			
	9 hour above	22	4.59	0.54			

\*p<.05

**3.1.6 Coach's professional background**

Table 9 showed the difference of satisfaction resulted in the professional background of coaches (p<.05). It is indicated that the coaches with professional background would receive more satisfaction from players who were also more satisfied with teammate relationship than the players without awareness of coach's background or under the guidance of unprofessional coaches. The players have the highest scores in the factors of teammate relationship and the professional competence of coaches.

Table 9 The satisfaction difference in coach background

Factor	coach background	Number people	Average	Standard Deviation	F Value	P Value	Significant difference
coach professional competence	PE	201	3.94	0.63	6.35*	0.002	1>2,3
	non-PE	17	3.52	0.71			
	never	39	3.64	0.66			
technique performance	PE	201	3.17	0.68	1.26	0.285	
	non-PE	17	2.95	0.49			
	never	39	3.04	0.73			
ball team welfare	PE	201	3.23	0.78	0.05	0.954	
	non-PE	17	3.18	0.68			
	never	39	3.24	0.64			
venue facility	PE	201	3.49	0.78	0.17	0.840	
	non-PE	17	3.47	0.74			
	never	39	3.41	0.72			
Training supervision	PE	201	3.66	0.65	3.97	0.020	
	non-PE	17	3.31	0.65			
	never	39	3.44	0.62			
ball team morale	PE	201	3.65	0.66	1.09	0.338	
	non-PE	17	3.43	0.95			
	never	39	3.56	0.58			
teammate	PE	201	4.10	0.61	6.43*	0.002	1>2,3

relationship	non-PE	17	3.69	0.85
	never	39	3.79	0.74

\*p<.05

**4. Discuss**

**4.1 The training satisfaction**

The study shows the score of training satisfaction is 133.13, 73.69% of the total score indicating the medium level. The results is little higher than that of the adult group A of baseball (63.79%) in the research conducted by sick Huang in 2000 and university elite tennis players 68.62% suggested by Li (2003). The subscales of teammate relationship and professional competence of coaches have the highest satisfactory score, whereas the lowest score in team welfare and performance. The finding supports with the highest score in teammate relationship in the study of Huang (2000) and the most satisfactory aspects of personal relationship and coach behavior in the study of king, Tang, Chen (2006). The players' highest satisfaction with teammate relationship suggests that the general Group players are voluntary to attend the training without being forced by university departments. The good relationship is developed in the process of training requiring players' efforts and adherence. The second higher score in the factor of the professional competence of coaches indicates that the general acceptance of coaches' performance. As for the dissatisfaction with team welfare, it suggests that the gap between the expectancy of players and the provision of university. The lowest score in team performance demonstrates that fierce competition among various teams resulting in unsatisfactory achievement out of the expectation.

**4.2 The analysis of satisfaction difference**

**4.2.1 Gender**

In comparison with female players, male ones have the higher satisfaction in the factors of the professional competence of coaches, venue facility, training supervision, which is inconsistent with the findings of the studies of Lee, and Liao(2004), Chen(1995) indicating that the perception in satisfaction is not affected by gender. And it is also contradicting with the findings of Hong (2007) and Wang (2007) showing that female athletes have higher satisfaction in personal relationship than male athletes. The possible explanation is the achievement obtained by male groups largely depended on professional competence of coaches, provision of training venue and arrangement of training time so as to guarantee the competency.

**4.2.2 Playing span**

The players with playing span of 5 years shows the obvious dissatisfaction with the performance compared the ones with 6-10 years and more than 11 years. The finding is different from the study of Wang (2006) that there is no correlation between the training satisfaction degrees and playing span. In addition, Lee and Shi (2003) showed that the players with the playing span of 1-5 years had higher score than those with 6-10 year playing

in training satisfaction. And Huang (2000) suggested that the players with playing span of 1-3 years were the most satisfied with the training and those with playing span of more than 10 years showed the lowest satisfaction. The two studies also contradict with the finding in the current study. The potential reason is that in group A the players with shorter playing span have higher expectancy and learning efficacy so that they have higher satisfaction in training. However, the players of general Group are not professional athlete but amateur, so their motivation is originated from their interest. Their training time is limited, even for the basic skills, which results in their lower satisfaction with the performance. But some of these amateur players had the training at younger age or relatively longer training span, so they do well in grasping the skills and strategies.

#### **4.2.3 Performance**

The players who ever had ranked No. one to two in the national competitions had lower satisfaction with the professional competency of coaches compared to those who ranked No. three to four. In other words, there is the higher achievement the players have, the lower satisfaction expressed to coaches' competency. The finding is consistent with the observation of Zheng (2001), Wang (2006) and Liao (2004). It is likely due to less experience of the players who have less chance to compare various coaches. Besides, the players inadequate in skills rely largely on the coaches for improvement. More feedback from coaches could lead to higher players' satisfaction. The study of Hong (2007) pointed out that the players with very high rank have mature skill so they did not show profound response to the factors.

#### **4.2.4 Training sessions**

As for the satisfaction with the professional competence of coaches, training controlling, and teammate relationship, the players who had the training time more than 9 hours gave higher scores than those who trained less than 3 hours, 3-6 hours, and 6-9 hours. It indicates that more training sessions can lead to higher satisfaction in the professional competence of coaches, training controlling, and teammate relationship. The finding is not consistent with that of Wu's research (2002). The players who participate in more training sessions due to their strong interest in table tennis have higher expectancy to coach guidance so that they are more satisfied with the professional competence of coaches. In addition, the lack of scientific training arrangement can have negative effect to training and ultimately lead to the feeling of boredom and fruitlessness. Fortunately, most of present university coaches are competent in training controlling and reach the expectancy of the players. What's more, more training sessions lead to more interaction between coaches and players, which cultivate the value and cohesion of the group.

#### **4.2.5 Coach**

It is indicated that the coaches with professional background would receive more satisfaction from

players who were also more satisfied with teammate relationship than the players without awareness of coach's background or under the guidance of unprofessional coaches. Jiang (1997) suggests that there are multiple factors effecting training achievement, but the front-line coaches are determinant. Zheng (1991) also points out that the role of coach is crucial, who is the leader of the group as well as develop and maintain the harmonious relationship among players. Besides, the study of Zheng (1997) finds that a coach acts as not only skill guide but also manager, consultant, and role model. the study and performance of player are closely related to coach's training method (Kao & Chen,2006). Wu (2002) and Wu (2000) demonstrate that compared with the athlete of group A, general Group is more cohesive. On the other hand, general Group is generally from the spontaneity of player so that the corporative spirit is very high. Therefore, the quality of coach is very important. The incumbent university coaches has the background of elite athletes and the degree of master or higher degree, who are experienced to build good teammate relationship.

### **5. Conclusion and recommendation**

#### **5.1 Conclusions**

The study is concluded as below:

- 5.1.1 The descending rank of players' satisfactory factors is teammate relationship, professional competence of coaches, team morale, training supervision, venue and facility, players' welfare, and team performance.
- 5.1.2 The satisfaction of Male players is significantly higher than female ones in the factors of the professional competence of coaches, venue facility, and training supervision
- 5.1.3 The performance of players with longer playing span is significantly better than those with shorter experience.
- 5.1.4 The players have no achievement in competition is significantly higher in satisfaction with the professional competence of coaches than those ranked higher.
- 5.1.5 Compared to the players with shorter training sessions, those who trained longer are more satisfied with the three factors of the professional competence of coaches, training supervision, and teammate relationship.
- 5.1.6 Under the guidance of the coach with professional background, the players has significant satisfaction with the professional competence of coaches and teammate relationship.

#### **5.2 Recommendation**

- 5.2.1 General Group players are less satisfied with the factors of venue facility and team welfare. It is suggested that the aspects have not reached the expectation of players such as the training budget, environment, and related facilities. It is helpful to make students aware of university's status quo in the resource. On the other hand, universities can

appeal to sponsorship from alumnus by holding regular competition to raise the fund for team uniform, facility, competition outlay, coach, and hardware of venues.

5.2.2 Besides the promotion of the skills and strategies, it is vital for players to cultivate good teammate relationship and stress the importance of personal interaction to future success in occupation .

5.2.3 The players have the highest scores in the factors of teammate relationship and the professional competence of coaches. It indicates the importance of teammate interaction. The cultivation of team members' interaction and cooperation can lead to the construction of team spirit and ultimately be beneficial to future development in society. The confirmation to coaches' professional performance suggests the selection addresses the professional background and encourages in-service training of coaches.

5.2.4 Further study can address the construction of teammate relationship, such as team quality, leadership, management and motivation.

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