

Football Players' Satisfaction: An Exploratory Factor Analysis

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Abstract

This study aims at identifying the constructs in the Athlete Satisfaction Questionnaire from the perspective of the football players. To date, empirical study on athletes' satisfaction construct especially in the football sport has been limited. 250 professional football players from the Malaysian Super and Premiere League were involved in this study. Athlete Satisfaction Questionnaire developed by Reimer and Chelladurai (1997) was used and the exploratory factor analysis was done to obtain information pertaining to this current study. The study findings showed that from the 14 constructs that existed in the Athlete Satisfaction Questionnaire, only 5 constructs had been formed. The outcome showed that the training and instruction, also personal treatment were included in the same factor. This is not surprising as the items had given the same picture through the support and motivation of the coaches towards the players. The five constructs had given a greater eigenvalue than 1. Through the Rotated Sums of Squared Loadings analysis, the five constructs predicted as much as 77.47% overall change of variance for the variable 'athletes satisfaction' (Factor 1 = 20.65%; Factor 2 = 19.18%; Factor 3 = 13.07%; Factor 4 = 12.99%; Factor 5 = 11.58%)

Keyword: *Player Satisfaction, Exploratory Factor Analysis, Athlete Satisfaction Questionnaire*

Introduction

Satisfaction is part of the sports and enjoyment. Without it, athletes would seek for other sources to obtain fulfilment and enjoyment (Maday 2000). A lot of researchers had measured the level of athletes' satisfaction as a form of satisfaction that related with excellent performance also effective team management (Cranny et al. 1992; Chelladurai & Reimer 1997). Nevertheless, Riemer (1995) admitted that the efforts to measure athletes' satisfaction involved a complex evaluation towards the structure, process and outcome related to the athletes' own experiences. However, professional members believed that athletes need to be contented and satisfied with the work surroundings or their tasks if they want to achieve success and good performance. In relation to this, most research in the sports sector was done on athletes' satisfaction and included in the theoretical framework as the dependent variable (Chelladurai 1980, 1990; Paradis 2010; Reddy et al. 2013), and automatically it also

influenced the performance of athletes and the team, and this could point to the influence of the leaders or behaviour of the coach (Chelladurai 1984; Horne & Carron 1985; Weiss & Friedrichs 1986; Schliesman 1987; Chelladurai et al. 1988; Riemer & Chelladurai 2001; Bebetos & Theodorakis 2003; Theodorakis & Bebetos 2003).

Athletes' satisfaction related closely with the performance of the athletes. The study by Williams & Hacker (1982) showed that athletes' satisfaction including the coaching style, cohesion and motivation was important in performance enhancement. According to Fraser et al. (2008), the level of athletes' satisfaction influenced their involvement in sports, where athletes who were more satisfied with the overall experiences and performance lack the tendency to be eliminated from sports. According to Chelladurai et al. (1988), Petty et al. (1984) dan Whittal dan Orlick (1978), performance was the most important source to athletes' satisfaction where the standard performance would vary according to the level of athletes' satisfaction. Extensive studies on athletes' satisfaction in the sports sector had shown that athletes' satisfaction had a high correlation with the performance of athletes in sports. This was proven by Cranny et al. (1992) who measured that the level of athletes' satisfaction was related to excellent performance also effective organisational management. This was supported by Eichas (1992); Hardy and Crace (1991) Klint and Weiss (1987) and Williams and Hacker (1982) who opined that athletes' satisfaction was found to have a very close relationship with efforts, willingness and performance, and Riemer (1995) asserted that the main beneficiary of the sports organisation was athletes, and athletes' satisfaction was seen as a pre-requirement to display higher performance. Therefore, the level of athletes' satisfaction should be an important indicator that could predict the effectiveness of the team management and also organisational management (Riemer 1995). Athletes who were satisfied with the acknowledgement, progress, responsibility, promotional system, friendliness and the support of coach and team members, and work environment would have higher tendency to work harder and improve their performance. Satisfied athletes would also reduce their tendency to play truant (on their training), experience fatigue and give up.

Various issues of the football sports industry especially in Malaysia were now the subject for debate among the society members, particularly with regard to the welfare of the players that was not given due attention so much so that it led to bribery, disharmony and lack of cooperation among the players in a team, also in terms of coaching that had distracted and become among the factors as to why there was dissatisfaction that led to the fluctuating performance and further leading to their failure to display the best actions. Controversies involving the basic psychological needs and this social relationship had led to the dissatisfaction among the football players that also indirectly influenced their behaviour and contributed to the deteriorating performance of the footballers in the football league tournament in Malaysia. Consequently, the performance of the football team at the national level was also affected when 'Harimau Malaya' was only placed at the 171st rank, behind the Phillipines (120), Thailand (126), Vietnam (134) and Myanmar (159) among the South East Asian countries (MStar 2016). According to Chalofsky (2003), the level of satisfaction would decline when there was an emotional disturbance such as being stressed by not having basic needs fulfilled, or the threat from the management causing one to lose the enjoyment to perform the tasks well. Thus, players should make an effort to carry a positive emotion such as happiness and calmness in enhancing their satisfaction to achieve optimal performance- this is better than carrying around negative emotions that led to dissatisfaction and weak performance (Lane et al. 2010).

Thus, the objective of this study is to identify the constructs that influenced athletes' satisfaction from the perspective of the professional football players in Malaysia. This study will look into important aspects in terms of players' satisfaction in football, that could give an impact on their good effort and performance. This study would use a model developed by Chelladurai and Reimer (1997) named A Classification of Facets of Athlete Satisfaction. The aim of this model is to analyse the needs, benefits and treatment provided for intercollegiate athletes. Based on Chelladurai and Riemer's (1997) classification of facets of athlete satisfaction, Riemer and Chelladurai (1998) developed a multiple-item, multiple-dimension scale

to measure athlete satisfaction, the Athlete Satisfaction Questionnaire (ASQ). The development of the ASQ resulted in a final scale with 15 dimensions and a total of 56 items on the scale.

The constructs in the Athlete Satisfaction Questionnaire covered five very important aspects of athletes' involvement in sports, comprising of:

Performance

Chelladurai et.al (1988), Whittal and Orlick (1978), Petty, McGee and Cavender (1978) had stated that performance was the most important satisfaction source in the organisation, team or individuals evaluated based on the different standardization. Thus, an athlete could had a different satisfaction from the aspect of the individual or team performance.

Leadership

Chelladurai (1984) showed that coaching leadership was a significant target to achieve satisfaction. The focus of athletes towards the coaches rested on i) the ability of the coach to see the athlete's capability ii) choosing and implementing the appropriate strategies iii) training and giving instructions to athletes iv) giving personal treatment

Team

This aspect related to how a team cooperated (team integration), how a team gave individual treatment (task and social contributions) and the behaviour of the athlete in the team (ethics)

Organisation

The organisational support (sports department) was important for the athletes in the form of financial source for the team (budget), medical personnel, academic support. Therefore, the coach, team and sports department were inextricably linked with the individual athletes. Athletes could also increase their satisfaction with external agents like the media, university, local community and sports fans.

Athlete

Individual self-satisfaction with the tasks and contribution given. Athletes might be capable of reducing or enhancing satisfaction with their contributions in terms of efforts, spirit and dedication towards the team.

Based on all five aspects, the multidimensional scale instrument comprising of 15 dimensions had formed the instrument Athlete Satisfaction Questionnaire (ASQ) (Reimer & Chelladurai 1998) to evaluate athlete's satisfaction which is performance aspects comprising of : (1) individual performance - individual athletes were content with their performance from the task carried out (2) team performance - individual athletes were content with their team's level of performance. The Leadership Aspect comprising of: (3) ability utilization- individual athletes were satisfied with the way their coach used and maximised their talent and capability (4) strategy- individual athletes were satisfied with the coach's strategic plans, also technical and tactical strategies (5) personal treatment - individual athletes were satisfied with the coach's behaviour that impacted their performance, and automatically developed the team (6) training and instruction - individual athletes were satisfied with the coach's training and instruction. The athlete aspect comprises of (7) personal dedication - individual athletes were satisfied with the contribution given to their team. The Organisational aspect comprises of: (8) budget- individual athletes were satisfied with the amount of money given to their team by various organisations involved (9) external agent - individual athletes were satisfied with agents outside the organisation that contributed towards the team. (10) academic support - individual athletes were satisfied with the academic support given to them (11) medical personnel - individual athletes were satisfied with the medical team. Team Aspect comprises of: (12) ethics - individual athletes were satisfied with the ethics of the team members (13) team integration - individual athletes were satisfied with the contribution of the team members and the amount of effort they exerted toward the team's tasks (14)

team task contribution - individual athletes were satisfied with the actions or tasks done by team members that demonstrated their leadership in the team (15) team social contribution - individual athletes were satisfied with the contribution given to the team members as human. This ASQ instrument was often used to study athletes' satisfaction towards the coach, the manager, the administrator, team cohesion, incentives from various organisations and sports games (Anuar 2015; Hassani Sangani et al. 2013; Onag & Tepeci 2014; Tshube et al. 2012).

However, this study employed only 14 constructs, with the exclusion of the factor of academic support, seeing that the respondents of this study were professional footballers from the Malaysian Super League and Premiere League. The outcome of this study should be able to identify, reduce also extract the questionnaire items of athletes' satisfaction that were deemed suitable to be used in the football sports under the constructs of the satisfaction of football players. As the empirical study towards the constructs of athletes' satisfaction, especially in football was quite scarce, the study outcome would add to the research knowledge in sports management.

Methodology

The study design was quantitative survey study. The survey approach was adopted to obtain an accurate explanation on individual characteristics in a group who was involved directly or indirectly in sports-related activity. Data were gathered through the questionnaire. According to Babbie (2001) it was more appropriate to use the questionnaire to get the data desired because it was easy to administer at such low cost. In addition, data and information could be obtained from a great number of respondents more quickly.

Sample of Study

This study adopted a non-random sampling technique because this technique did not lay an emphasis on the opportunity so that every subject in the population could be chosen and would concentrate more on simple and purposive selection. The subject chosen was assumed to have been able to represent the population studied. Professional football players from clubs and state associations competing in the Super and Premiere League in 2015 were chosen as the respondents for this study. It was estimated that the total population was 600 professional players from 24 teams, taking into account main and reserve players. Next, the determination of the sample size was based on the diagram of Krejcie and Morgan (1970). Referring to the table of the sample size determination, the population for this study was 600, so the number of respondents needed would be 234. However, this study had a sample size of 250, and according to Sekaran (2003), a large sample size used in the study made it better and easier to obtain a more accurate result and a more appropriate model.

Instrument

The Athlete Satisfaction Questionnaire used the scale developed by Reimer and Chelladurai (1998). In this questionnaire, there were 56 items and they were divided into 15 constructs which were individual performance, team performance, ability utilization, strategy, personal treatment, training and instruction, team task contribution, team social contribution, ethics, team integration, personal dedication, budget, medical personnel, academic support and external agent. In this study, 14 constructs would be used, and only 1 would be exempted, which was academic support. This is because the factor was not related to the respondents of this study. Thus, a total of 53 items would be used and measured based on the Likert scale. Subjects had to answer every question by using the five-point likert scale between 1 (not at all satisfied) and 5 (extremely satisfied). The reliability value of the questionnaire (ASQ) based on the study by Reimer and Chelladurai (1998)

also Reimer and Toon (2001) rested on the Cronbach's Alpha between .78 and .99 for every dimension.

Data Collection

Questionnaires were distributed to 250 professional football players from 24 football clubs and state associations involved in the Malaysian Super and Premiere League 2015. The data collection method was self-administered as it was deemed more appropriate and the locations of every club and state association were already identified. Thus, the researcher had sent the questionnaire to the locations of the sample of respondents, where the aim of the study was highlighted. It would facilitate the respondents, other than giving them ample time to complete the questionnaire and allowing the researcher to collect it. This method would help reduce and control the error of the respondents' feedback that has been absent. Players were given 20 minutes to answer the questionnaire and this was monitored by the researcher. Every state and club team would receive an official letter from Football Association Malaysia (FAM) to authorise the football players to answer the questionnaire distributed and also to explain the aim of study also FAM's support letter on the study carried out. FAM also gave the assurance that the feedback from the players would be kept confidential. The football clubs and state associations selected in this study were teams that were very active due to their participation in the Super and Premiere League held by the Football Association Malaysia (FAM).

Data Analysis

The data obtained were analysed using the Statistical Package for Social Science (SPSS) version 1 to screen the data for the exploratory factor test. The factor analysis sought to identify, reduce also arrange the questionnaire item into certain constructs. This analysis was needed in this study where the variable measurement instrument was tested for the first time in the professional football industry environment.

Factor Analysis

The factor analysis is a procedure that was often adopted by researchers to identify, reduce or extract the majorit of questionnaire items into certain constructs. It served as an analysis that focused on the interdependence relationship between variables (Malhotra 1993; Hair et al. 1998). In general, the factor analysis comprises of the exploratory factor analysis and confirmatory factor analysis (Martin & Bateson 1986). An exploratory factor analysis is a factor analysis that seeks to identify factors, where it comprises of variables that have a correlation with a horizontal combination and it is often carried out at the early stage of the scale formation. It detects similarities of variables with the intention to identify new concepts which are in the form of factor. Meanwhile, the confirmatory factor analysis is a factor analysis that was naturally oriented on hypothesis testing where there was past analytical research for verification, that is if it was really functioning as a true variable measurement tool.

An Exploratory Factor Analysis

In this study, researcher had carried out the exploratory factor analysis on the factors of professional footballers' satisfaction as there was a lack of empirical evidence that supported the factor structure containing 15 constructs. The exploratory factor analysis was done to improve and add to the empirical evidence about the players' satisfaction dimension in football.

Therefore, the exploratory factor analysis was done to identify and extract the items of the questionnaire of footballers' satisfaction in certain constructs under a variable in the study. Other than that, the analysis was also a technique adopted to reduce the data, where this analysis reduced the items that overlapped between one another. In general, the factor analysis procedure involves three stages which are i) identifying the correlation among the factors ii) extracting the factors iii) rotating the factors.

Findings

The first stage in the factor analysis is to identify the correlation between the factor (items) of football players' satisfaction. The Analysis of the Bartlett's Test of Sphericity is used to identify if the correlation between the items is sufficient to perform the factor analysis. Based on Table 1, the result of this test is significant, which is $p < .05$ showing that the correlation between the items is enough to perform the factor analysis. In the meantime, the KMO test displays multi-collinearity. If the value of the correlation is the same, there exist two or more items, where these items would measure the same aspect. This test will assist in identifying the suitability of the items for the factor analysis. The factor analysis is appropriate if the KMO value is greater than 0.60 (Pallant 2010). Table 1 showed that the KMO value is 0.881. This explains that the data did not have a severe multi-collinearity issue, so these items will be suitable for the factor analysis.

Table 1: KMO and Bartlett's Test of Sphericity for Football Player Satisfaction

	Keiser-Meyer-Olkin (KMO)	Bartlett's Test of Sphericity	N
Player Satisfaction	.881	3326.49 (p = .000)	250

$p < .05$

The second stage for the factor analysis is to exclude and extract the factors in certain constructs under the variable of football players' satisfaction. This analysis is clarified through the Total Variance Explained with the eigen value. The eigen value illustrates the proportion of the variance contribution of every factor extracted through the factor analysis. The same, or greater eigen value than 1.0 in the principle component analysis based on Kaiser's rule (Hair et al. 2005) will be extracted as a factor to the variable. Eigen that is less than 1.0 will be eliminated from the factor's list. Based on the exploratory factor analysis labelled as the 'Extraction Sums of Squared Loadings' in Table 2, Total Variance Explained showed that there were 5 components (Factor) that gave eigen values greater than 1. Five factors contributed as much as 77.47% of the overall change of variance (satisfaction of football players). Other 19 components only contributed 22.53% of the variance of the variable of football players' satisfaction. The component removed at the second stage of the analysis factor was caused by the eigen value less than 1, from the individual performance, team social contribution, strategy, budget, external agent, medical personnel, team integration and ethics. The assumption that the individual performance factor and strategy factor would be eliminated, was explained by the overlapping meaning of the individual performance factor and the ability utilization factor, and strategy factor with the training and instruction factor that were seen to be very much linked together, in the assessment of the efficiency and capability of athletes and coaches. Meanwhile the team integration and ethics were also inextricably linked with team task contribution that concerned more with the unity of team members in achieving the best aim and performance. The factor of team social contribution had a low eigenvalue, with the possibility that the players' understanding on the measurement of the social relationship

among team members was ambiguous. Then, the rest of the factors which were budget, external agent and medical personnel was seen to be eliminated because those factors did not give any impact on the players' satisfaction. Nonetheless, this extraction process was still unclear. To explain the structure of the factor, the process of rotating the factors extracted was carried out to obtain more accurate factor information. This is done in the third stage.

Table 2: Total Variance Explained

Factor	Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Eigenvalue	% of Variance	Cumulative %	Eigenvalue	% of Variance	Cumulative %
1	7.77	40.87	40.87	3.92	20.65	20.65
2	2.58	13.60	54.47	3.64	19.18	39.83
3	1.74	9.15	63.62	2.48	13.07	52.90
4	1.41	7.40	71.02	2.47	12.99	65.89
5	1.23	6.45	77.47	2.20	11.58	77.4

Table 3: Factor loadings for Football Players Satisfaction from An Exploratory Analysis

Item	Factor 1	Factor 2	Factor 3	Factor 4	Factor 5
	Ability Utilization	Personal Treatment & Training Instruction	Team Performance	Team Task Contribution	Personal Dedication
Ability Utilization8	.838				
Ability Utilization10	.837				
Ability Utilization11	.818				
Ability Utilization9	.797				
Ability Utilization7	.767				
Training & Instruction23		.765			
Training & Instruction24		.762			
Personal Treatment22		.807			
Training & Instruction25		.754			
Personal Treatment20		.827			
Team Performance4			.810		
Team Performance5			.798		
Team Performance6			.790		
Team Task Contribution27				.846	
Team Task Contribution26				.825	
Team Task Contribution28				.764	
Personal Dedication39					.806
Personal Dedication38					.773
Personal Dedication36					.732
Cronbach Alpha	.92	.93	.84	.86	.89

The third stage of the factor analysis had rotated the factors that had been extracted through the Varimax Rotation Operation. The correlation between items and the respective factors in the satisfaction of football players must fulfill the general requirement of minimum rotation loading of ± 0.33 . The items were explained in Table 3, Rotated Component Matrix. The analysis results demonstrated that the factor loadings value for every item was more than 0.5 and according to Tabachnick and Fidell (2007), the loading factor with the value of 0.5 and above should fulfill the value requirement recommended. The analysis outcome of the exploratory factor found that 34 items (1, 2, 3, 12, 13, 14, 15, 16, 17, 18, 19, 21, 29, 30, 31, 32, 33, 34, 35, 37, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53) overlapped with other factors and they served as items of various concepts that could be categorised into other factors and can be eliminated from the questionnaire. Therefore, the exploratory factor analysis found that only 5 constructs had been formed from the existing 14 constructs in the Athlete Satisfaction Questionnaire. The analysis outcome showed that the training and instruction as well as personal treatment were fed into the same factor. This comes as no surprise as these items reflected the coach's support and motivation towards his players. Therefore, Factor 1 under the construct 'Ability Utilization' contains 5 items (items 8, 10, 11, 9, 7), Factor 2 under the construct 'Personal Treatment and Training and Instruction' contains 5 items (items 23, 24, 22, 25, 20), Factor 3 under the construct 'Team Performance' carries 3 items (items 4, 5, 6), Factor 4 under the construct 'Team Task Contribution' carries 3 items (items 27, 26, 28) and Factor 5 under the construct 'Personal Dedication' contains 3 items (items 39, 38, 36). In reference to Table 2, Rotated Sums of Squared Loadings, all five factors had given a greater eigen value than 1. Through the Rotated Sums of Squared Loadings analysis, the five constructs predicted as much as 77.47% overall change of variance for the variable 'athletes' satisfaction' (Factor 1 = 20.65%; Factor 2 = 19.18%; Factor 3 = 13.07%; Factor 4 = 12.99%; Factor 5 = 11.58%)

Discussion

This study of the exploratory analysis factor aimed to identify, reduce also extract the larger part of the questionnaire items of athletes' satisfaction in certain constructs from the perspectives of the professional football players in Malaysia. This study employed a model that had been constructed by Chelladurai and Reimer (1997) namely A Classification of Facets of Athlete Satisfaction comprising of 15 constructs with a total number of items of 56. However, this study only used 14 constructs with 53 items. The factor that was not included was academic support as it was not regarded as suitable in this study seeing that the respondents comprised of professional football players. The study findings showed that among 14 existent constructs in the Athlete Satisfaction Questionnaire only 5 constructs had been formed. The outcome of the analysis illustrated that the training and instruction also personal treatment were fed into the same factor. Other factors remained in the existing items, and yet it was found that 34 items were removed due to overlap and that they constituted as items of various concepts that could be categorised in other factors. All five constructs had given a greater eigen value than 1. Through the Rotated Sums of Squared Loadings analysis, the five constructs predicted as much as 77.47% overall change of variance for the variable 'athletes satisfaction' (Factor 1 = 20.65%; Factor 2 = 19.18%; Factor 3 = 13.07%; Factor 4 = 12.99%; Factor 5 = 11.58%). The study outcome also illustrated that part of the factors depicted the issue of football players not satisfied in terms of the aspects of coaching, teamwork and as individual player so much so that they left an impact to their performance. Therefore, the study outcome should be able to assist the management to assess and help footballers to fulfil their satisfaction and improve their performance.

Conclusion

To date, an empirical study on athletes' satisfaction dimension especially in football has been scarce. Therefore, the study outcome should be able to help identify, reduce as well as re-arrange the questionnaire items of athletes' satisfaction deemed suitable to be used in the field of football under clearer and more proper constructs. The study outcome will add to the empirical evidence of the exploratory analysis factor towards athletes' satisfaction, especially in the field of football and it will also add to the research knowledge of sports management.

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