

## The Effect of Service Quality on Achievement Motivation in Kurash Sport in Indonesia: Analysis Based on Category as Moderator

### El efecto de la calidad del servicio en la motivación de logro en Kurash Sport en Indonesia: análisis basado en la categoría como moderador

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**Abstract.** This study aims to analyze the effect of service quality on achievement motivation based on the category of athletes in kurash sport in Indonesia. This research is a correlational quantitative research and it was analyzed using structural equating modeling (SEM) with the help of Smart-PLS 4 for students. The sample number of athletes was 100, and the athlete categories were by the rules of KCAO (Kurash Confederation of Asia-Oceania). The cadet category was 30 athletes; aged  $15.2 \pm 1.7$ , have  $2.8 \pm 5.3$  years of training experience, and have  $4.5 \pm 0.0$  hours of training duration in a week. The junior category was 31 athletes; aged  $17.7 \pm 4.4$ , have  $3.1 \pm 9.6$  years of training experience, and have  $5.7 \pm 4.8$  hours of training duration in a week. The senior category was 39 athletes; aged  $21.8 \pm 7.8$ , have  $5.7 \pm 8.8$  years of training experience, and have  $8.2 \pm 3.1$  hours of training duration in a week. Data collection in the form of questionnaires that have passed the validation stage and interviews with random athletes was also used if necessary. The results showed an outer loading value of  $>0.7$  and cronbach's alpha of  $>0.6$ . The Goodness of Fit (GoF) test on Standardized Root Mean Square Residual (SRMR) was  $0.062 < 0.08$  or  $0.10$ . Path analysis was based on categories, namely P-Values and the magnitude of influence, by referring to the Original Sample (O) value. The cadet category is  $0.000$  with an influence of  $0.614$ ; the junior category is  $0.000$  with an influence of  $0.698$ , and the senior category is  $0.000$  with an influence of  $0.661$ . In conclusion, the quality of service is very important and is a top priority in developing types of sports, so that athletes feel fully cared for and guaranteed as athletes.

**Keywords:** Kurash, Service Quality, Achievement Motivation

**Resumen.** Este estudio tiene como objetivo analizar el efecto de la calidad del servicio en la motivación de logro según la categoría de los atletas en el deporte kurash en Indonesia. Esta investigación es una investigación cuantitativa correlacional y se analizó utilizando modelos de equiparación estructural (SEM) con la ayuda de Smart-PLS 4 para estudiantes. El número de muestra de atletas fue de 100 y las categorías de atletas se ajustaron a las reglas de la KCAO (Confederación Kurash de Asia-Oceania). La categoría cadete fue de 30 deportistas;  $15,2 \pm 1,7$  años,  $2,8 \pm 5,3$  años de experiencia en entrenamiento y  $4,5 \pm 0,0$  horas de duración de entrenamiento en una semana. La categoría junior fue de 31 deportistas;  $17,7 \pm 4,4$  años,  $3,1 \pm 9,6$  años de experiencia en entrenamiento y  $5,7 \pm 4,8$  horas de duración de entrenamiento en una semana. La categoría senior fue de 39 deportistas;  $21,8 \pm 7,8$  años,  $5,7 \pm 8,8$  años de experiencia en entrenamiento y  $8,2 \pm 3,1$  horas de duración de entrenamiento en una semana. Si fue necesario, también se utilizó la recopilación de datos en forma de cuestionarios que pasaron la etapa de validación y entrevistas con atletas aleatorios. Los resultados mostraron un valor de carga exterior de  $>0,7$  y un alfa de cronbach de  $>0,6$ . La prueba de bondad de ajuste (GoF) sobre el residuo cuadrático medio estandarizado (SRMR) fue  $0,062 < 0,08$  o  $0,10$ . El análisis de ruta se basó en categorías, a saber, valores P y la magnitud de la influencia, haciendo referencia al valor de la muestra original (O). La categoría cadete es  $0.000$  con una influencia de  $0.614$ ; la categoría junior es  $0.000$  con una influencia de  $0.698$ , y la categoría senior es  $0.000$  con una influencia de  $0.661$ . En conclusión, la calidad del servicio es muy importante y es una máxima prioridad en el desarrollo de tipos de deportes, para que los deportistas se sientan plenamente atendidos y garantizados como deportistas.

**Palabras clave:** Kurash, calidad del servicio, motivación para el logro

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## Introduction

Achievement motivation is one of the basic elements a combat sports athlete must have because this type of fighting sport involves the physical contact of two contestants at risk of severe injury (Kostorz & Sas-Nowosielski, 2021). In addition, an athlete in combat sports must go through a long and very tiring training period (Cid-Calfucura et al., 2023; Ojeda-Aravena et al., 2023). Achievement motivation is the driving force that enables athletes to achieve the highest achievement (Rismayanthi et al., 2023). Athletes who have high achievement motivation tend always to try to achieve success despite obstacles and difficulties in achieving it (Elia et al., 2020; Albert et al., 2022; Djaba et al., 2024). Someone's achievement motivation tends to decrease and increase at other times. Achievement motivation that is owned by an athlete ideally always progresses or develops so that it

will accelerate the achievement competition (Abod & AlHaddad, 2022; Han et al., 2022). Many fighting sports exist today and have organizations at the world level, one of which is kurash. Kurash is a sport that originated from Uzbekistan, and it will continue to grow throughout the world (Ahmedov & Abdulakhatov, 2023). Kurash sport has been officially entered Indonesia, has an official organization, and is recognized by the world.

Kurash in Indonesia has progressed rapidly over the last decade. The factors that cause the sport to progress are determined by many factors, one of which is the quality of service (Kurniawan et al., 2021; Cho et al., 2022; Nachucho et al., 2023). Service quality is an important part of sports clubs; even clubs or types of sports that are oriented as competitive sports must always pay attention to service quality (Nugroho et al., 2021; Nugroho et al., 2023). The explanation in the research results is that service

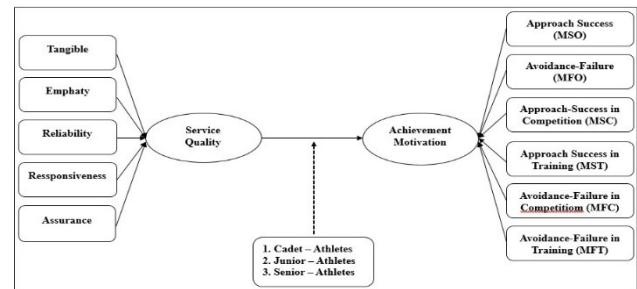
quality is very important to support athlete development by providing quality coaches, providing adequate facilities, collaborating with schools or universities for athletes undergoing education. Then strengthen the attraction of prospective athletes for athlete talent development programs. In addition, it increases the good image of the sports club in society so that it can attract people to practice or interest in sports sponsors. Thus, it can be concluded that the quality of service is the basis for developing the type of sport from the amateur level to becoming a professional athlete. Ideally, service quality comprises five factors: tangible, empathy, reliability, responsiveness, and assurance (Prabowo et al., 2024). The definition of these five factors includes modern, clean, safe facilities and equipment, then involvement and commitment from sports organizations, officials and coaches. Furthermore, fast response to suggestions or requests, as well as guaranteed protection and health of athletes. These five factors also have an important role in assessing the performance of coaches, organizations in sports clubs, and facilities for training programs (Huang & Kim, 2023; Polyakova & Ramchandani, 2023; Sousa et al., 2024). The maximum quality of service provided will provide a sense of satisfaction for athletes who train (Günel & Duyan, 2020, Nurahmanah et al., 2023). The analysis results in previous studies showed that the satisfaction felt by athletes can directly and indirectly impact athlete motivation (Aznar-Ballesta et al., 2022; Aznar-Ballesta & Vernetta Santana, 2022). In the field, the quality of service in developing sports is rarely considered because it focuses on increasing the number of athletes to look like an elite sports club.

Based on the results of previous studies, the influence of the quality of services provided at each sports club greatly affects the achievement of athletes at the student level, with achievement motivation as a mediator (Mandan et al., 2024). The effect of service quality on achievement motivation also differs between individual and group sports. The study's results, which compared individual and group sports using smart PLS, explained that the original sample of team sports was 0.83 larger than individual sports, which was 0.39 (Nugroho et al., 2023). Furthermore, the good quality of services such as paying attention to training facilities, mentoring athletes at all times, health insurance, and closeness to athletes can increase the achievement motivation of basketball athletes (Juita et al., 2024). Then, in an investigation of 307 young athletes aged 12-18, the quality of service provided by each sports club positively impacted motivation, especially intrinsic motivation (Aznar-Ballesta et al., 2022). However, until now, the results of research on the effect of service quality on achievement motivation in fighting sports, especially kurash sport, have not been found. Service quality research on achievement motivation has been conducted but not from the type of martial sport and has not been scientifically published.

This study aims to analyze the effect of service quality on achievement motivation based on the category of athletes in kurash sport in Indonesia. This research method

uses structural equating modeling, and the uniqueness of this study is that it involves moderation variables in the form of athlete categories. The results of this study can explain more systematically and in detail the importance of service quality on achievement motivation in kurash sport. In addition, it can be used as a reference for developing types of sports or fighting sports.

Figure 1. Research Design



## Methods

### Research Design

This correlational quantitative study aims to measure the effect of each variable. The independent variable in this study is service quality, and the dependent variable is achievement motivation. Then, the moderator variable is based on the athlete category. The design of this study is described in Figure 1. In order for the results of this study to measure each variable based on moderator variables, the analysis method used structural equating modeling (SEM) with the help of Smart-PLS. The structural equating modeling method was chosen because it can explain the research results systematically and comprehensively. It also has an advantage in analyzing direct and indirect influences.

### Research Subject

The study population was kurash athletes in Indonesia. However, the sample selection used a purposive sampling technique with sample characteristics, namely active athletes who had been champions at the regional or regional level. The participants in this study were 100 kurash athletes in Indonesia who were divided into three categories: cadet, junior, and senior, according to the rules of KCAO (Kurash Confederation of Asia- Oceania).

The number of athletes in the cadet category was 30 athletes with characteristics (mean $\pm$ SD) as follows: aged 15.2 $\pm$ 1.7, training experience of 2.8 $\pm$ 5.3 years, and training duration in a week of 4.5 $\pm$ 0.0 hours. The number of athletes in the junior category was 31 athletes with characteristics (mean $\pm$ SD) as follows: aged 17.7 $\pm$ 4.4, training experience of 3.1 $\pm$ 9.6 years, and training duration in a week of 5.7 $\pm$ 4.8 hours. The number of athletes in the senior category was 39 athletes with characteristics (mean $\pm$ SD): aged 21.8 $\pm$ 7.8, training experience of 5.7 $\pm$ 8.8 years, and training duration in a week of 8.2 $\pm$ 3.1 hours.

**Research Procedure**

The first stage of this research was done by conducting observational studies on the training facilities and then observing competitions conducted at the provincial and national levels. The results of the first stage were to formulate and identify research problems, to capture initial screening such as the brief identity of athletes. Athletes who matched the characteristics needed in this study were used as samples. In order to make observations faster and more flexible, the researcher provided a platform to use which was zoom meeting with coaches and athletes who are willing to be respondents for this research.

The second stage is preparing the instrument by reviewing the literature with the keywords 'service quality' and 'motivation'. The aim of the literature review is to look for facts in the research methods and results. After finding facts from the results of previous research, the next method is to adopt and modify it so that it becomes a statement item in the instrument. After the instrument material is formed, the next method is to conduct a forum group discussion (FGD) with academics who are experts in the field of sports coaching and kurash coaches who have a national license. The aim of the FGD is that the instrument has proper validation before being used for data collection. The results of the second stage were service quality consisting of five factors, namely Tangible, Empathy, Reliability, Responsiveness, Assurance (Prayoga et al., 2024; Prabowo et al., 2024; Juita et al., 2024; Mandan et al., 2024). Quality of service in tangible factors includes adequate facilities and equipment according to safety standards. Factors in Empathy include the relationship between coaches, officials and organizations towards athletes. Factors in Reliability include training programs and assistance for athletes. Factors in Responsiveness include responses when athletes need help or advice from athletes. Factors in Assurance include insurance for athletes' health during training and when athletes are injured during competition. Achievement motivation consists of six factors, namely Approach Success (MSO), Avoidance-Failure (MFO), Approach-Success in Competition (MSC), Approach Success in Training (MST), Avoidance-Failure in Competition (MFC), and Avoidance-Failure in Training (MFT) (Rismayanthi et al., 2023; Tomoliyus et al., 2024). Factors in MSO include solving problems and solutions that hinder athletes. Factors in MFO include worrying about performance and avoiding competition that requires maximum effort. Factors in MSC include competing with maximum effort and liking competition situations where athletes can exert high levels of ability. Factors in MST include the athlete's confidence in achieving achievements and trying unusual activities during training. Factors in MFC include concerns about readiness before the competition. The factor in MFT is concern about not being able to complete the training program targets given by the coach.

The third stage was data collection using a questionnaire (google form). Items on the questionnaire for service qual-

ity variables and motivation variables are arranged sequentially. The questionnaire on service quality consisted of 20 statement items, and achievement motivation consisted of 18 statement items. Questionnaires were distributed to Kurash athletes who had certain criteria based on purposive sampling. Then, on the moderator variable using code, code 1: junior-male athletes, code 2: junior-female athletes, code 3: senior-male athletes, code 4: senior-male athletes. Then the questionnaire fills in the statement items with a Likert scale of 1 – 5, 1 (very poor), 2 (poor), 3 (fair), 4 (good), and 5 (very good).

**Statistical Analysis**

The analysis of this study used Smart-PLS 4 for students. The first stage of analysis used the PLS algorithm, which aims to test the validity and reliability of each item in the instrument by testing the goodness of fit. The second analysis stage used a bootstrapping menu that examines the effect of exogenous variables on endogenous variables based on the categories that this study has determined. Because of the sample size of 100 athletes, Smart-PLS 4 for students could work to analyze the data, but the data report could not be downloaded properly. Thus, we rewrote the results in Excel and edited some snippets of images from the results in the bootstrapping menu to include them in this article.

**Results**

The following are the results of data analysis using smart PLS 4 for students; the first analysis stage is with the PLS Algorithm menu in Figure 2.

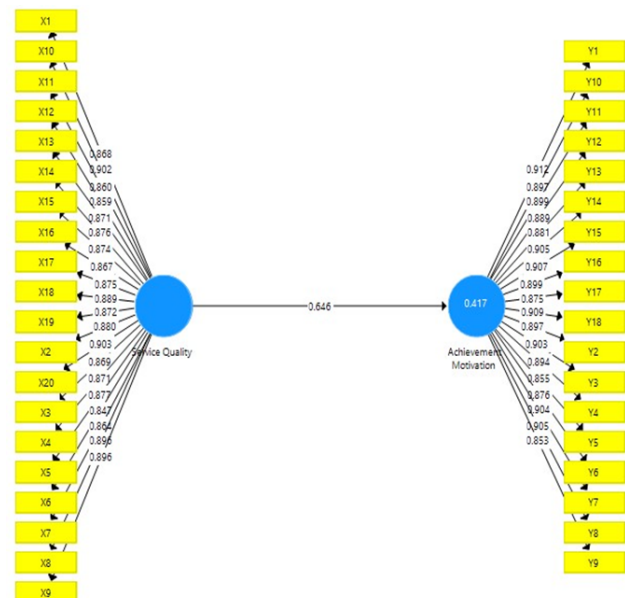


Figure 2. Results of PLS Algorithm

Based on Table 1 for the validity test, the outer loading value on 20 Service Quality variable items is >0.7, and the

average extracted variance (AVE) value is 0.767 or >0.5. Then, the outer loading value on the 18 Achievement Motivation variable items shows a value of >0.7 and the average extracted variance (AVE) value of 0.796 or >0.5.

Table 1. Results of Outer Loading and average variance extracted (AVE)

Service Quality			Achievement Motivation		
Code	Outer Loading	Average Variance Extracted (AVE)	Code	Outer Loading	Average Variance Extracted (AVE)
X1	0.868	0.767	Y1	0.912	0.796
X10	0.902		Y10	0.897	
X11	0.860		Y11	0.899	
X12	0.859		Y12	0.889	
X13	0.871		Y13	0.881	
X14	0.876		Y14	0.905	
X15	0.874		Y15	0.907	
X16	0.867		Y16	0.899	
X17	0.875		Y17	0.875	
X18	0.889		Y18	0.909	
X19	0.872		Y2	0.897	
X2	0.880		Y3	0.903	
X20	0.903		Y4	0.894	
X3	0.869		Y5	0.855	
X4	0.871		Y6	0.876	
X5	0.877		Y7	0.904	
X6	0.847		Y8	0.905	
X7	0.864		Y9	0.853	
X8	0.896				
X9	0.896				

The reliability test on Cronbach’s Alpha value should be greater than 0.6. Based on Table 2, Cronbach’s Alpha value on the service quality variable was 0.984 > 0.6, and the achievement motivation variable was 0.985 > 0.6. From

the results of Table 1 and Table 2, this instrument item is valid and reliable ((Hair et al., 2019), (Sarstedt & Cheah, 2019)).

Table 2. Cronbach’s Alpha Reliability Test Results

	Cronbach’s Alpha	Composite Reliability (rho_a)	Composite Reliability (rho_c)
Service Quality	0.984	0.985	0.985
Achievement Motivation	0.985	0.986	0.986

The research can meet the goodness of fit (GoF) in Table 3 if the Standardized Root Mean Square Residual (SRMR) value is <0.08 or <0.10 and the NFI value is >0.90. Based on the results of Table 3, the SRMR value is 0.062 < 0.08 or < 0.10. However, the NFI value shows 0.741 < 0.90, so this study has a fit model with data (Narimawati et al., 2022).

Table 3. Goodness of Fit (GoF) Results

	Saturated Model	Estimated Model
SRMR	0.062	0.062
d_ ULS	2.811	2.811
d_G	3.612	3.612
Chi-square	1668.596	1668.596
NFI	0.741	0.741

After the analysis used the PLS algorithm menu, then the analysis used the bootstrapping menu on Smart PLS 4 for students. The following are the results of the path coefficient analysis of the effect of service quality on achievement motivation based on the category of kurash athletes.

Path coefficients - Mean, STDEV, T values, p values (complete)					
	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ( O/STDEV )	P values
Service Quality -> Achievement Motivation	0.646	0.646	0.074	8.681	0.000

Figure 2. Overall Path Coefficient Results

The effect of service quality on overall achievement motivation in Figure 3 shows P Values of 0.000 with an effect of 0.646.

Figure 4. Path Coefficient Results Based on Cadet-Athletes Category

Path coefficients - Mean, STDEV, T values, p values (Cadet-Athletes)					
	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ( O/STDEV )	P values
Service Quality -> Achievement Motivation	0.614	0.625	0.113	5.435	0.000

Based on the results in Figure 4, the effect of service quality on achievement motivation in the cadet category, shows P Values 0.000 with an effect of 0.614.

Path coefficients - Mean, STDEV, T values, p values (Junior-Athletes)					
	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ( O /STDEV)	P values
Service Quality → Achievement Motivation	0.698	0.704	0.118	5.893	0.000

Figure 3. Path Coefficient Results Based on Senior-Athletes Category

Based on the results in Figure 5, the effect of service quality on achievement motivation in the junior category, shows P Values 0.000 with an effect of 0.698

Path coefficients - Mean, STDEV, T values, p values (Senior-Athletes)					
	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics ( O /STDEV)	P values
Service Quality → Achievement Motivation	0.661	0.665	0.103	6.431	0.000

Figure 4. Path Coefficient Results Based on Senior-Athletes Category

Based on the results in Figure 6, the effect of service quality on achievement motivation in the senior category, shows P Values 0.000 with an effect of 0.661.

## Discussion

Based on this study's results, service quality affects achievement motivation of kurash athletes in Indonesia. Previous studies reported that the quality of service has an effect on motivation in athletes, as well as types of sports such as individual or group sports (Nugroho et al., 2021; Nachucho et al., 2023; Cuesta-Valiño et al., 2023; Nugroho et al., 2023). However, the difference from previous studies is that there is no mention of the type of kurash exercise. The results of this study show that the developing type of sport must pay attention to the quality of service. The quality of services described in this study includes several factors, such as the quality of coaches, training facilities, club management, performance in the organization and sports coaching, especially for talented athletes. The quality of service in each type of sport is very important to pay attention to and improve gradually so that athletes can feel satisfaction during training and satisfaction while being an athlete (Graikinis-Evangelinos et al., 2019; Günel & Duyan, 2020; Putro et al., 2020; Lumintuarso et al., 2021; Sousa et al., 2024). Because with satisfaction, the athlete feels well cared for and nurtured (Duenãs-Dorado et al., 2021; Sanmiguel-Rodríguez, 2021). Thus, a sense of satisfaction from good service quality will further increase achievement motivation of athletes (Calesco & Both, 2021; Mandan et al., 2024).

The analysis of this study was divided into three categories, namely cadet (aged 15 – 16), junior (aged 16 – 17), and senior (aged 18 – 35). Based on the results, the three categories showed a significant effect between service quality and achievement motivation. However, from these results, the junior category showed a greater effect of 0.698 than the category of cadet, which was 0.614 and the senior category, which was 0.661. Experience in training as an athlete can certainly assess a sports club (Rundio & Buning, 2021; Reyes Robles et al., 2022). There is still little training

experience from the cadet and junior categories compared to the senior category. Thus, the assessment of each category will be different. In senior category kurash athletes, the effect of service quality on achievement motivation showed a slightly smaller effect than in the junior category. The cause of the low in the junior category is that they started training when the sport of kurash was present in Indonesia. So that the quality of service at that time was still minimal, such as the number of trainers was lacking, the equipment was less adequate, the facilities were still simple, and the organizational management was less strong. Unlike the junior category, they participate in the kurash sport when the quality of service at a club has progressed. A good quality of service at a sports club will attract potential athletes, and they assume that a good quality of service can guarantee being a professional athlete (Yıldız et al., 2018; Otto et al., 2019; Filho et al., 2021; Cuesta-Valiño et al., 2023; Allsabab et al., 2024). Because athletes obtained a guarantee quality of service, the achievement motivation of junior athlete category increased.

In cadet category, the results of the analysis of the effect of service quality on achievement motivation were not as large as the junior and senior categories. However, the potential for increasing achievement motivation tends to be greater in the cadet category because athletes at the age of 15 – 16 years old still have enthusiasm in practicing (Prieto et al., 2023; Costa et al., 2023). In addition, athletes have not been bored because the average training experience is still less than three years. Then, the results of previous research also state that it is very important to improve the quality of service for student athletes because it will have an impact on performance through achievement motivation (Juita et al., 2024; Mandan et al., 2024). The benefit of increasing achievement motivation is that athletes become disciplined in training, do not easily give up on difficult tasks or when facing difficult competitions, besides that athletes easily accept new material from coaches

(Albert et al., 2022; Rismayanthi et al., 2023; Imtihansyah et al., 2024). Another advantage of increasing achievement motivation influenced by good service quality is that the athlete's performance will certainly also be maximized, such as being able to complete the training program appropriately, discipline and diligent in practicing, having the mentality to compete at any time (Nugroho et al., 2021; Diana et al., 2022; Mandan et al., 2024).

The limitation of this study is that the analysis method still uses Smart-PLS 4 for students, so the data is only limited to 100 samples. To our knowledge, the athlete category variable is included in the categorical data type, and the service quality variable and the achievement motivation variable are included in the numerical data type. So, the analysis using Smart-PLS 4 will be more suitable for this data type. The researcher expectation on the publication of this study is to provide insight to readers about the sport of kurash. Until now, the publication of research on kurash sports has been minimal in the Scopus-indexed journal database. In addition, as a guideline to improve the quality of service because it is indispensable for the type of sport that is developing in a country.

## Conclusion

Good service quality affects achievement motivation in kurash sport in Indonesia. The analysis results based on the cadet, junior, and senior categories also showed a good influence with a large influence that was similar. The influence on the cadet category is 0.614; junior is 0.698, and senior is 0.661. In developing sports, the quality of service is very important to pay attention to. Because it can attract prospective athletes, increase athlete satisfaction, and maintain the sustainability of kurbash sport such as early-age athlete coaching and organized management. Thus, athletes feel fully cared for and guaranteed as athletes. Thus, achievement motivation will increase along with improving service quality. It is recommended to improve the quality of services by meeting the needs of athletes, adding and caring for training facilities, providing health insurance, adding competent coaches, looking for coaching talent of athletes, and regularly evaluating the management. Future studies are expected to conduct research studies with mixed methods (quantitative and qualitative) to obtain deeper results on the effect of service quality on achievement motivation, especially kurash sport.

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