

ORIGINAL SCIENTIFIC PAPER

The Impact of Service Quality on Self-Confidence of Wheelchair Athletes: An Analysis of Family Support as Moderator

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Abstract

This study aims to analyze further the effect of service quality on the confidence of wheelchair athletes. The family support is referred to as a moderator variable. This quantitative research type used the Moderated Regression Analysis (MRA) method. Sampling was carried out at a special open tournament for wheelchair athletes. The total number of athletes was 122 (basketball =30, tennis =16, badminton =22, archery =20, fencing =16, table tennis =18), with characteristics as follows: aged 25.36 ± 2.4 years, and had 11.37 ± 1.2 years of coaching rate. The instrument was a questionnaire which had been validated through the focus group discussion (FGD) with experts, namely sports training lecturers and wheelchair trainers. The initial results were typically distributed data based on the Kolmogorov-Smirnov test 0.200. The second regression test analysis without moderation was 0.003, and $R^2=0.466$, meaning there was an effect between service quality and self-confidence. The third moderation analysis was 0.000, and $R^2=0.583$. The family support variable moderated positively and significantly between service quality and self-confidence. In conclusion, the wheelchair athletes' self-confidence is determined in one way, namely developing and improving good service quality. With the support of parents, wheelchair athletes feel supported by emotional, nutritional, instrumental, appreciation, and informative aspects. Thus, good service quality and family support can increase wheelchair athletes' self-confidence, and hopefully it impacts their achievement.

Keywords: athlete disabilities, para-athlete, wheelchair

Introduction

Self-confidence is a part of psychological elements related to the belief in an individual's ability to do a task or job. Success in a task or job can be interpreted as achievement (Flores Ferro et al., 2023). Everyone, including an athlete, can achieve achievements. The results of the study have been published that self-confidence can influence athletes to produce high performance in competition (Astuti et al., 2023; Jun et al., 2024; Lochbaum et al., 2022). However, training and increasing self-confidence should be done not only from the level of training or experience in participating in competitions. It must also be seen from the condition of the athlete. One of the conditions of the athlete is the wheelchair athlete (Berardi et

al., 2018; Mortenson et al., 2022).

Individuals with disabilities that require wheelchairs generally experience low self-confidence (Foley et al., 2020; Gutiérrez-García et al., 2023). Based on the evidence in the existing environment, a lack of self-confidence is caused by the feeling that they do not have the expertise. Being an athlete is a speciality for an athlete with a wheelchair disability. By becoming an athlete, it is hoped that individuals with disabilities can raise their self-esteem. Self-confidence of athletes with a disability is generally determined by many factors, both internal and external factors. Internal factors consist of motivation, unstable mood and emotions, anxiety, and concentration (Huenullán et al., 2023; Palencia & Gallón, 2022; Požerriené et



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al., 2018; Youngson et al., 2023). Meanwhile, external factors include family support, organization, trainer competence, and training facilities (Balan & Mujea, 2022; Ballas et al., 2022; Sudarko et al., 2023; Tusiime & Odiango, 2022).

However, few scientific publications have examined the factors that influence the confidence level of wheelchair athletes (Graikinis-Evangelinos et al., 2019). Furthermore, to improve the quality of life of athletes with disabilities, service quality will undoubtedly be indispensable (Kunene, 2023). In theory, based on the results of previous studies, it is explained that good service quality will affect the level of athlete satisfaction (Cuesta-Valiño et al., 2023; Günel & Duyan, 2020; Nugroho et al., 2023). Satisfaction is desirable for every athlete with a disability because satisfaction is part of improving the quality of life for individuals with disabilities. Research studies further explain that to obtain satisfaction in people with disabilities, one way of physical activity is exercising (Biagini et al., 2022; Zheng et al., 2023). Thus, based on the results of those studies, there is an assumption that the quality of service at sports clubs can provide a good quality of life for athletes with disabilities. The few findings encourage the researchers to explore more deeply the relationship among service quality, wheelchair athletes, and self-confidence.

The results of other scientific reports also showed that the confidence level of male wheelchair-fencing athletes was better than that of women in pre-competition (Peron & Elsner, 2020). These results are characterized by a tense body, a sense of worry about appearance, and the body feeling stiff when doing movements. Wheelchair basketball also shows that shooting is the most critical performance in wheelchair basketball athletes. However, from the analysis of this study, it is explained that the confidence level of a wheelchair basketball athlete plays a vital role in a shot (Ali & Al-Oudah, 2022; Ceruso et al., 2022; Hernandez-Beltran et al., 2023). Another study compares the confidence levels of wheelchair tennis athletes and wheelchair badminton athletes. The results showed no difference in the confidence level between the two (Abdullah et al., 2021). However, the advice from the study requires any factors that affect the level of self-confidence of both. In addition, the results of studies that affect the quality of life of wheelchair athletes, namely fencing, basketball, tennis, rugby, handball and athletics, show that self-confidence is part

of the psychological factors that make them able to improve the quality of life through disability sports clubs (Calheiros et al., 2021; Clemente et al., 2019, Côté-Leclerc et al., 2017; Rengifo Cruz et al., 2023).

This study aims to analyze further the effect of service quality on self-confidence of wheelchair athletes, namely, basketball, tennis, badminton, archery, fencing, and table tennis. Then, this study also involves family support as a moderator variable because there is a suspicion from the results of previous studies that family support for athletes with disabilities affects the level of athlete psychology (Alanazi, 2023; Coates & Howe, 2023). Family support is shown by emotional closeness, appreciation of processes and results, meeting the needs for training and matches, and participating in sports (Rumahpasal et al., 2020). Furthermore, family support is also shown by paying attention to nutrition, finding solutions when problems occur, and establishing good relationships with coaches (Mandan et al., 2024). Therefore, the published results of this study can provide an evaluation for organizational administrators, officials, sports club facilities providers, coaches, and athletes' families to be able to pay attention to athletes with wheelchair disabilities. Getting attention through improving the quality of services and family support will undoubtedly directly impact their quality of life.

Research Method

Research Design and Procedure

This quantitative research type used the Moderated Regression Analysis (MRA) method (Figure 1). Quality of service is an independent variable, and self-confidence is a dependent variable. Then, the moderation variable aims to test how family support can strengthen or weaken the service quality and self-confidence variables. Data collection was carried out during the wheelchair-open tournament event. However, the types of wheelchair sports involved in the open tournament were carried out at different times and places, so it takes four months (from November 2023 to February 2024). Then, the data was collected using a questionnaire sheet containing statement items. Only researchers and coaches are authorized to provide instructions and accompany the athlete when the athlete fills out the questionnaire sheet. The data collection time on the questionnaire was carried out two to one day before the athlete competed.

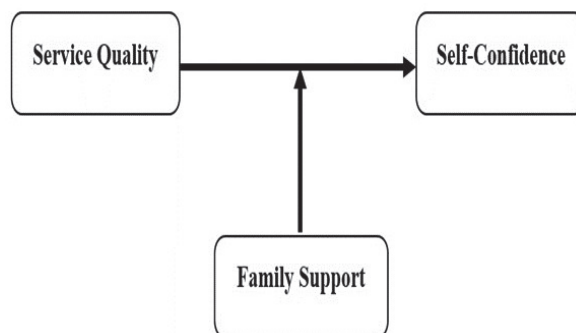


FIGURE 1. Research Design with Moderated Regression Analysis

Study Participants

This study was conducted by total sampling at the special open tournament championships for athletes with wheelchair disabilities. Thus, the research involved a total of 122 wheelchair athletes consisting of 30 basketball athletes, 16 tennis

athletes, 22 badminton athletes, 20 archery athletes, 16 fencing athletes, and 18 table tennis athletes. The characteristics were 29.98 ± 2.4 years of age and 11.37 ± 1.2 years of training. The competition experience is 26 athletes who have participated in competitions at the international and national levels,

44 athletes at the national level, and 52 athletes at the regional and provincial levels. The samples that will be involved in this research are selected voluntarily and if they successfully complete the questionnaire, they will then collect the results of the questionnaire to the researcher. This research has been conducted in accordance with Helsinki Declaration and approved by the author's institution, the coach accompanying the athlete, and the competition organizer.

Research Instrument

Instrument preparation was done by reviewing literature and scientific books with keywords such as athletes with disabilities, athletic achievements, training achievements, parental support, and self-confidence (Yusoff et al., 2021). Then, modifications are made according to the needs and circumstances of the facts in the field. Furthermore, the FGD (focus group discussion) was carried out to test the instrument's validity by involving several experts, namely sports coaching lecturers, teaching lecturers for athletes with disabilities, and disability coaches who have national coach licenses. The scale used was 1 to 4 (1 "very poor", 2 "poor", 3 "good", and 4 "very good").

The results that can be identified are service quality variables (independent variables) which are tangible, empathy, reliability, responsive, assurance (Juita et al., 2024; Prabowo et al., 2024; Prayoga et al., 2024). Confidence variables (dependent variables) are optimistic, independent, sporty, not worried, and adaptable (Abdullah et al., 2021; Berardi et al.,

2018; Djaba et al., 2024; Lochbaum et al., 2022). The moderation variable, namely family support, consists of emotional, nutritional, instrumental, appreciation, and informative factors (Mandan et al., 2024).

Statistical Analysis

The first step of this research analysis was to conduct a normality test as a condition before the regression test. The second step was to test the regression by displaying the coefficient of determination (R Square) and the results of the multicollinearity test (tolerance and VIF values). The third step was the same as the second step, combining the quality of service (independent variable) with the support of family members (moderation variable). Statistical analysis of this study used SPSS 26 (IBM, Armonk, NY, US). The significance level in this regression test is 5% ($p < 0.05$).

Results

Normality Test

Before the regression analysis with moderation, the second stage is the normality test of the normality test based on the Kolmogorov-Smirnov value due to a sample of more than 50 wheelchair athletes.

Based on the results of the normality test in table 1, the Kolmogorov-Smirnov values for service quality, self-confidence and parental support show significant values ($p > 0.05$), meaning the data is normally distributed.

Table 1. Normality (Kolmogorov-Smirnov) Test Results

		Service Quality	Self-Confidence	Family Support
N		122	122	122
Normal Parameters	Mean	95.76	119.58	96.03
	Std. Deviation	26.510	46.093	28.472
	Absolute	0.162	0.255	0.174
Most Extreme Differences	Positive	0.161	0.254	0.183
	Negative	-0.109	-0.212	-0.113
Test Statistic		0.162	0.255	0.176
Asymp. Sig. (2-tailed)		0.082	0.077	0.081

Regression Test without Moderation

The third stage was regression analysis without using moderation variables. Thus, the analysis focused on the quality of service and the self-confidence of wheelchair athletes.

Based on the results of unmoderated regression (Table 2),

it shows a sig value of 0.003 or ($p < 0.05$), which means that there is a relationship between performance in training and the self-confidence of wheelchair athletes in basketball, tennis, badminton, archery, fencing, and table tennis. Then, from these results, there were no symptoms of multicollinearity.

Table 2. Regression Test Results without Moderation

Model	Unstandardized Coefficients		Standardized Coefficients		Collinearity Statistics			
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF	
1	(Constant)	66.682	13.205		5.050	0.000		
	Service Quality	0.354	0.116	0.358	3.042	0.003	0.846	1.053

a. Dependent Variable: Self-Confidence

Table 3. R Square Value Results without Parental Support; Model Summary

Model	R	R Square	Change Statistics						
			Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	0.638	0.466	0.453	4.458	0.466	9.758	1	121	0.001

a. Predictors: (Constant), Service Quality

Then, the R square value in Table 3 shows 0.466, which means that the value of service quality on the confidence of wheelchair athletes in basketball, tennis, badminton, archery, fencing, and table tennis 46.6%. Meanwhile, 87.2% were influenced by other variables that this study cannot explain.

Regression Test Using Moderation Variable (moderated regression analysis)

The fourth stage was regression analysis using moderation variables (moderated regression analysis). Thus, the analysis

focused on testing family support as a moderation variable and whether it can affect service quality and self-confidence variables.

Based on the regression results using moderation (Table 4) shows a sig value of 0.000 or ($p < 0.05$), there is a relationship between the quality of service and the confidence of wheelchair athletes in basketball, tennis, badminton, archery, fencing, table tennis through family support relationship as moderator. Then, from these results, there were no symptoms of multicollinearity.

Table 4. Regression Test Results using Moderation; Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
	B	Std. Error	Beta	t	Sig.	Tolerance	VIF
(Constant)	67.241	10.359		6.491	0.000		
1 Service Quality	0.567	0.097	0.574	5.840	0.000	0.880	1.136
Service Quality*Family Support	0.604	0.101	0.625	6.356	0.000	0.873	1.214

a. Dependent Variable: Self-Confidence

Then, the R square value in Table 5 shows 0.583, which means that the value of the quality of parental service and support as a moderator of the confidence of wheelchair athletes

in basketball, tennis, badminton, archery, fencing, and table tennis 58.3%. Meanwhile, 87.2% were influenced by other variables that this study cannot explain.

Table 5. R Square Value Results; Model Summary

Model	R	R Square	Change Statistics						
			Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	0.764a	0.583	0.572	1.928	0.583	28.719	2	120	0.000

a. Predictors: (Constant), Service Quality*Family Support, Service Quality

Discussion

The results revealed a significant positive effect of service quality on wheelchair athlete's self-confidence, which was 0.003, with a coefficient of determination of 0.466. The quality of service required by wheelchair athletes consists of five factors: tangible, empathy, reliability, responsiveness, and assurance. The results of the five factors on the quality of service have also been carried out in non-disabled sports, such as individual and group sports (Nugroho et al., 2023; Prabowo et al., 2024; Prayoga et al., 2024). In wheelchair sports, the quality of tangible services needed by athletes is in the form of organizational, official, and coach involvement in paying attention to athletes during and outside the training schedule. In addition, it is not only involvement but also handling the needs or problems of athletes quickly. Thus, actual involvement also affects other factors, such as empathy, reliability, and responsiveness. Forms of involvement from the organization include providing adequate training facilities, monthly allowance, and housing. Trainers and officials must have a straightforward training program, help wheelchair athletes meet training equipment, and pay attention to nutrition through assistance with supplements if needed. In the assurance factor, organization, trainer, and official are also responsible for health, ensuring safe training places, protecting from injury, and guaranteeing accidents outside of training time. The results of this study are in line with the results of previous studies that say, in principle, the quality of service is the fulfillment of all the needs of athletes, such as facilities, training equipment, assistance in the form

of material, and moral support (Nugroho et al., 2023). Then, a friendly and polite service, quick in handling problems, and able to provide solutions when athletes experience problems, is the hope of every athlete (Juita et al., 2024).

Proper quality of service will affect athlete's satisfaction. The results of this study on wheelchair sports showed that athletes were satisfied with the service performance of organizations, coaches, and officials. It shows that athletes are always disciplined in training, feel happy and enthusiastic, do not experience complaints, and maintain good relationships by communicating with officials and coaches during or outside the training schedule. The indication highlights the results of previous studies on an athlete's satisfaction, which can indirectly increase self-confidence (Berardi et al., 2021). Other research findings also revealed that life satisfaction can affect the confidence of wheelchair athletes during competition (Abdullah et al., 2021). Based on some wheelchair athletes' disclosures, they assume that the quality of service is a direct support to athletes. Support provided by organizations, coaches, officials, and other support teams can positively affect the psychological condition of athletes, one of which is confidence. This reason has been made clear in previous research studies that athletes who feel valued and cared for tend to perceive their abilities better. It can increase their achievement motivation (Anderson et al., 2023; Hanh et al., 2023; Huenullán et al., 2023).

Then, the regression analysis results using moderation, namely family support, can affect the confidence level of wheelchair athletes in basketball, tennis court, badminton, archery,

fencing, and table tennis 0.000 with a determination coefficient of 0.583. The regression analysis results with moderation are also based on their statement that family involvement, namely support in the form of emotional, nutritional, instrumental, appreciation, and informative, is significant in influencing self-confidence. They also assess the role of the family and are very aware of the needs of a wheelchair athlete. It gives athletes more attention and certainly gets recognition from the family (Richard et al., 2022). Previous qualitative research studies have explained, family support can also help find the meaning of life by becoming an athlete after suffering because it is looked down upon by others (Nopiyanto et al., 2022). Then, the results of qualitative research from deaf athletes explained that parents help athletes win gold medals in national Paralympic championships even though the form of support is often moral support during matches (Mustamin et al., 2021). From the results of previous studies, it is clear that parental support can affect athlete performance, one of which is self-confidence. Increased self-confidence in athletes can suppress anxiety, and athletes become confident in their skills from the results of previous training performances. Hence, the opportunity for lively success in competition is even more fantastic (Hidayat et al., 2023; Lochbaum et al., 2022; Waluyo et al., 2022).

Then, the combination of quality of service and family involvement is indispensable in improving the self-confidence of wheelchair athletes. Further results in this study showed wheelchair athletes revealed that organizations, coaches, and officials always ask about the condition of athlete through the athlete's family. On the other hand, the athlete's family also provides information to organization, coach, and official about daily activities outside of training, including sleep time, nutrition, and the athlete's psychological state. It will be more beneficial for the coach to prepare an effective training program according to the athlete's condition. In addition, it will be easier for coaches to know athlete's personality characteristics so that training programs and materials will be easily conveyed (Mandan et al., 2024). Open communication among athletes, families, organizations, coaches and officials can help identify the needs and expectations of each party (Azhari et al., 2023). By supporting and understanding each other, athletes can feel more accepted, cared for and supported, boosting their confidence. In addition, coaches and athlete families can share information about training goals, athlete development, and achievement targets with the athlete's family. In contrast, the athlete's family can provide insight into the unique needs and

preferences of wheelchair athletes outside of the training environment (Orr et al., 2021). Thus, family support can positively strengthen the impact of service quality on self-confidence in wheelchair athletes.

One of the main factors of a disability athlete's self-confidence is determined by a good quality of service. Then, parental support is able to significantly moderate the relationship between service quality and the self-confidence of wheelchair athletes. The limitation of this study was that the number of samples was considered insufficient because not all wheelchair athletes were willing to fill out this research questionnaire. In addition, wheelchair competence in Indonesia is also minimal. It is due to the interest and motivation of individuals with disabilities to participate as athletes. It is expected that the publication of this study will be a good step for all disability sports and pay attention to the quality of services to improve performance in matches through increasing self-confidence. In addition, the athlete's family continues encouraging individuals with special needs to improve their quality of life. One of them is becoming a paralympic athlete.

Conclusion

Based on the results of this study, it can be concluded that the quality of service can increase the confidence of wheelchair athletes before competing. Then, the variables of parental support could positively and significantly influence the performance in training and the confidence of wheelchair athletes. These results showed the effect of service quality on self-confidence without parental support variables 0.003 and ($R^2=0.466$). In contrast, parental support variables could moderate performance in training on self-confidence 0.000 and ($R^2=0.583$). There needs to be a severe response regarding facilities to support athlete training performance because facilities are vital in service quality. However, it should be noted that if the facilities are exemplary, wheelchair athletes feel cared for. Of course, the most important thing is to train more actively and discipline them. In addition, cooperation between organizations, officials, coaches and family support is essential to pay more attention to athletes. The recommendation from the results of this research study is the involvement of a government agency to foster, develop, and facilitate all individuals with special needs. Further research studies should pay more attention to the number of samples involved and how to collect data, of course, with a simple research design which can produce accurate data.

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Conflict of Interest

The researchers have no conflicts both with the researchers and the results of other studies.

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