



The Influence of Access to Facilities and Motivation on Aerobic Dance Participation in the Makassar City Community

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ABSTRACT

This study aims to analyze the influence of facility access and motivation on aerobic dance participation in the Makassar community. The study used a quantitative approach with a correlational design. The research sample consisted of 80 respondents selected using a purposive sampling technique, with the criteria of individuals actively participating in aerobic dance activities. The research instrument was a questionnaire that measured the variables of facility access, motivation, and participation using a Likert scale of 1-5. Data were analyzed using multiple linear regression after meeting the classical assumption test. The results showed that facility access and motivation simultaneously had a significant effect on aerobic dance participation ($F = 30.83$; $p < 0.05$) with a contribution of 58.9%. Partially, facility access ($\beta = 0.39$; $p < 0.05$) and motivation ($\beta = 0.44$; $p < 0.05$) each had a positive and significant effect on participation. Motivation had a more dominant influence than facility access. The partial correlation results also showed that both variables had an independent contribution to participation. These findings confirm that increasing aerobic dance participation requires adequate access to facilities and strong individual motivation. Therefore, synergy between facility provision and motivation-boosting programs is needed to encourage sustained community involvement in physical activity.

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A. Conception and design of the study;
B. Acquisition of data;
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INTRODUCTION

Physical activity is a crucial factor in maintaining and improving public health, particularly in urban areas where sedentary lifestyles tend to be prevalent. Lack of physical activity can increase the risk of various non-communicable diseases, such as cardiovascular disease, obesity, and metabolic disorders. Efforts are needed to encourage people to be more physically active through various forms of exercise that are easily accessible and enjoyable. One form of physical activity that is quite popular among the public is aerobic dance (Helena & Groot, 2021; Alrashidi et al., 2025; Arfanda et al., 2024).



Aerobic dance has the advantage of being easy to do, requiring no special skills, and accessible to people of all ages and fitness levels. Furthermore, it's recreational, typically accompanied by engaging music, boosting motivation and enjoyment. In Makassar, aerobic dance has seen rapid growth, as evidenced by the numerous sports communities that regularly hold outdoor activities in fields, city parks, and other sports facilities (Quan, Yhun, et al., 2025; Quan, Lo, et al., 2025; Delleli et al., 2023).

However, the level of community participation in aerobic dance is not yet optimal. Some people are still less active and participate in these activities regularly. This indicates that various factors influence community participation in aerobic dance. Two of the most prominent are access to sports facilities and individual motivation. Sports participation refers to regular and sustained engagement in structured physical activity that contributes to physical and mental health. Participation is generally reflected in the frequency, duration, and consistency of engagement. Recent studies further emphasize that both individual factors, such as motivation, and environmental factors, such as facility accessibility, play a significant role in maintaining long-term participation in physical activity (Sun et al., 2021; Atakan et al., 2021; Wong et al., 2023).

Accessibility to facilities encompasses various aspects, such as the availability of training venues, distance to the location, the condition and comfort of the facilities, and ease of use and scheduling of training times. Easily accessible and convenient facilities will provide greater opportunities for people to participate regularly. Conversely, limited facilities can be a barrier that reduces people's interest and involvement in physical activity (Eather et al., 2023; Wang et al., 2024; Mölenberg et al., 2020).

On the other hand, motivation is an internal factor that plays a significant role in determining a person's behavior when exercising. Motivation can stem from intrinsic drives, such as the desire for a healthy lifestyle, or extrinsic ones, such as social and environmental support. Individuals with high motivation tend to be more active, consistent, and committed to participating in aerobic dance. They are also better able to overcome laziness, boredom, and other obstacles to exercise (Carrard et al., 2022; Cao et al., 2024; Pedersen & Saltin, 2015).

Previous studies have shown that access to good facilities can increase community participation in sports activities. Furthermore, high motivation has also been shown to contribute to the consistency and sustainability of individual engagement in physical activity. Therefore, these two factors need to be studied together to understand their influence on aerobic dance participation, particularly in an urban context like Makassar (Arfanda, Anwar, et al., 2024; Arfanda et al., 2025; Arfanda et al., 2023).

Based on this description, this study aims to analyze the influence of facility access and motivation on aerobic dance participation among the Makassar community. The results are expected to contribute to the development of more effective community sports programs and serve as a basis for policymakers to improve the quality and accessibility of sports facilities to encourage sustainable community participation.

METHODS

This study uses a quantitative approach with a correlational design to analyze the relationship and influence between facility access and motivation on aerobic dance participation in the Makassar community. This approach was chosen because it is able to explain the relationship between variables objectively through statistical analysis. The population in this study was all Makassar residents who actively participated in aerobic dance activities in various sports communities. The research sample consisted of 80 respondents determined using a purposive sampling technique, with the inclusion criteria being individuals who have participated in aerobic dance activities regularly for at least one month.

The research instrument used a structured questionnaire consisting of three main variables: facility access, motivation, and participation. The facility access variable was measured using a questionnaire developed based on the concept of sports facility accessibility (availability, accessibility, quality, and usability). This instrument consists of several questions structured with reference to the concept of sports facility accessibility. The motivation variable was measured using an adaptation of the Sport Motivation Scale (SMS) that encompasses intrinsic and extrinsic motivation. Meanwhile, the participation variable was measured based on the frequency of attendance, duration of involvement, and consistency of participation in aerobic dance activities. All statement items used a 5-point Likert scale, ranging from 1 (strongly disagree) to 5 (strongly agree).

Instrument validity was tested using Pearson Product-Moment correlation, while reliability was tested using Cronbach's Alpha coefficient with a minimum limit of 0.70. Data analysis techniques included descriptive analysis to describe data characteristics and inferential analysis using multiple linear regression to examine the effect of independent variables on the dependent variable. Before the regression analysis, prerequisite tests were conducted, including normality, multicollinearity, and heteroscedasticity tests. Hypothesis testing was conducted at a significance level of 0.05 using statistical software.

RESULTS AND DISCUSSION

Result

To provide an initial overview of the characteristics of the research data, a descriptive statistical analysis was conducted on all variables studied, namely access to facilities, exercise motivation, and aerobic dance participation. This analysis aimed to determine the average value, data distribution, and score range obtained by respondents.

Table 1.
 Descriptive Statistics of Research Variables

Variables	N	Mean	SD	Min	Max
Facility Access	80	3.68	0.49	2.66	4.56
Sports Motivation	80	3.91	0.46	2.95	4.66
Aerobic Dance Participation	80	3.75	0.48	2.76	4.61

Based on Table 1, it is known that the facility access variable has an average value (mean) of 3.68 with a standard deviation of 0.49. The minimum value is 2.66, and the maximum is 4.56, with an average of 3.91 and a standard deviation of 0.46. Meanwhile, for aerobic dance participation, the minimum value ranges from 2.95 to a maximum of 4.66, with an average of 3.75 and a standard deviation of 0.48.

Before conducting inferential analysis, particularly multiple linear regression, basic assumptions are required, one of which is the data normality test. The normality test aims to determine whether the research data is normally distributed, thus meeting the requirements for parametric statistical analysis. In this study, the normality test was conducted using the Kolmogorov-Smirnov method with a significance level of 0.05.

Table 2.
Data Normality Test

Variables	Sig. (p-value)	Information
Facility Access	0.19	Normal
Sports Motivation	0.19	Normal
Participation	0.18	Normal

Based on the results of the normality test presented in Table 2, the facility access variable showed a significance value of 0.19, the sports motivation variable 0.19, and the participation variable 0.18. These values indicate that the data from the three variables are normally distributed, as they meet the normality test criteria, namely a significance value greater than 0.05.

Once all classical assumptions are met, the next step is to conduct a multiple linear regression analysis to determine the effect of facility access and motivation on aerobic dance participation. This analysis aims to examine the partial contribution of each independent variable to the dependent variable and determine the direction of the relationship.

Table 3.
Results of Regression Analysis

Variables	B	Std. Error	Beta	t	Sig.
(Constant)	1,183	0.505	—	2.22	0.02
Facility Access	0.39	0.095	0.39	3.91	0
Motivation	0.41	0.093	0.44	4.35	0

Based on the results of the multiple linear regression analysis in Table 3, the constant term was 1.183, with a significance level of 0.02 ($p < 0.05$). The facility access variable has a regression coefficient value (B) of 0.39 with a t value of 3.91 and a significance of 0.00 ($p < 0.05$). This indicates that facility access has a positive and significant effect on aerobic dance participation. Furthermore, the motivation variable has a regression coefficient value (B) of 0.41 with a t value of 4.35 and a significance of 0.00 ($p < 0.05$). This indicates that motivation also has a positive and significant effect on aerobic dance participation.

To determine the simultaneous influence of independent variables on the dependent variable, an F-test was conducted using ANOVA analysis in multiple linear regression. This test aims to examine whether the variables of facility access and

motivation together have a significant influence on aerobic dance participation in the Makassar City community.

Table 4.
 ANOVA (F Test)

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	12,203	1.9	6.101	30.83	0
Residual	7,272	73.15	0.094		
Total	19,475	75.05			

Based on the results of the ANOVA analysis in Table 4, the F value was 30.83 with a significance level of 0.00 ($p < 0.05$). The Sum of Squares Regression value of 12.203 indicates the large variation in participation that can be explained by the two independent variables in the model. Meanwhile, the Sum of Squares Residual value of 7.272 indicates variations that cannot be explained by the model and are influenced by other factors outside the study. The Mean Square Regression value of 6.101, which is greater than the Mean Square Residual of 0.094, further supports the model's good predictive ability. It can be concluded that the variables of facility access and motivation simultaneously have a significant influence on aerobic dance participation.

To determine the extent to which the independent variables contribute to explaining the dependent variable, a coefficient of determination (R-squared) analysis was conducted. This analysis aims to measure the regression model's ability to explain variations in aerobic dance participation based on the variables of facility access and motivation.

Table 5.
 Coefficient of Determination

R	R Square	Adjusted R-Square	Std. Error
0.748	0.589	0.580	0.299

Based on the analysis results in Table 5, the correlation coefficient (R) value was obtained as 0.748. The coefficient of determination (R Square) value of 0.589 indicates that 58.9% of the variation in aerobic dance participation can be explained by the variables of facility access and motivation together. Meanwhile, the remaining 41.1% is influenced by other factors not examined in this study, such as social factors, the environment, or other individual characteristics. The Adjusted R-Square value of 0.580 indicates that after adjusting for the number of variables in the model, the model's predictive ability remains in the strong category. In addition, the Std. The error of the estimated value of 0.299 indicates a relatively small level of model prediction error, so it can be said that the model has a good level of accuracy in predicting aerobic dance participation.

To determine the strength of the relationship between each independent variable and the dependent variable, while controlling for other variables, a partial correlation analysis was conducted. This analysis aimed to examine the independent contribution of facility access and motivation to aerobic dance participation, without the influence of other variables in the model.

Table 6.
 Partial Correlation

Variables	r Partial	Sig.
Facility Access	0.361	0.001
Motivation	0.399	0

Based on the results of the partial correlation analysis in Table 6, it is known that the facility access variable has a partial correlation coefficient value of 0.361 with a significance level of 0.001 ($p < 0.05$). The motivation variable shows a partial correlation coefficient value of 0.399 with a significance level of 0.00 ($p < 0.05$). When compared, the partial correlation value of motivation ($r = 0.399$) is slightly higher than that of facility access ($r = 0.361$), which indicates that motivation has a more dominant influence on participation.

Discussion

The results of this study indicate that access to facilities and exercise motivation significantly influence aerobic dance participation among the Makassar community, both partially and simultaneously. These findings indicate that community involvement in aerobic dance activities is influenced not only by internal factors but also by external factors related to the physical and social environment. Descriptively, the access to facilities variable falls into the "fair" category, while motivation and participation fall into the "fair" category. This indicates that the people of Makassar City generally have good potential for participating in physical activity, particularly aerobic dance. However, these results also indicate room for improvement, particularly in optimizing access to more equitable and high-quality facilities.

The regression analysis results indicate that access to facilities has a positive and significant influence on aerobic dance participation. This finding aligns with previous research, which suggests that access to sports facilities is a key determinant of increased community participation in physical activity. The availability of accessible, safe, and comfortable facilities enables individuals to participate more regularly and consistently. In an urban context like Makassar, distance and ease of access are crucial, given the high mobility of the population and the limited time available.

This finding is also supported by the environmental concept of motor learning, which emphasizes that external factors, such as facilities and training equipment, act as "constraints" that can facilitate or hinder the process of engaging in physical activity. In other words, even if an individual is highly motivated, limited facilities can still act as a structural barrier that reduces participation. (Chen et al., 2022; Wu et al., 2022; Zhai et al., 2022).

On the other hand, exercise motivation has been shown to have a more dominant influence than access to facilities in influencing aerobic dance participation. This is evident from the higher beta coefficient and partial correlation values. These findings indicate that internal individual factors play a very strong role in determining participation behavior. Individuals with high motivation tend to be more active, consistent, and committed to participating in aerobic dance activities, despite facing various limitations. (Zhang et al., 2022; Zhao et al., 2024; Abou El-Soud et al., 2020).

These results align with motivational theories in exercise, which state that intrinsic motivation, such as the desire to live healthily, improve fitness, and achieve enjoyment, is a key factor driving long-term engagement in physical activity. Furthermore, extrinsic motivation, such as social support, a community environment, and a pleasant training environment, also contributes to maintaining participation.(Prieto-gonzález et al., 2025; W. Wang et al., 2025; Loprinzi & Davis, 2016).

The results of the partial correlation analysis reinforce these findings by showing that both facility access and motivation remain significantly related to participation, even when one variable is controlled. This indicates that both variables contribute independently to aerobic dance participation. Therefore, increasing participation cannot be focused on a single aspect but requires a comprehensive approach.(Pan et al., 2026; Elmoose-Østerlund et al., 2023).

In practical terms, the results of this study provide important implications for the development of community sports programs in Makassar City. The government and stakeholders need to improve the availability and quality of accessible sports facilities. Furthermore, programs that can increase community motivation are needed, such as community-based exercise activities, sporting events, and culturally-based approaches that are more engaging and relevant to the characteristics of the local community.

Furthermore, aerobic dance trainers and instructors play a crucial role in increasing participant motivation through a communicative, engaging, and adaptive approach tailored to their needs. A positive and supportive training environment will help increase engagement and maintain long-term participation. However, this study has limitations, including a relatively limited sample size and a focus on only one region. Therefore, generalizations of the results should be approached with caution. Furthermore, other variables that could potentially influence participation, such as socioeconomic factors, family support, and cultural factors, were not thoroughly examined in this study.

Overall, this study confirms that access to facilities and motivation are two important, complementary factors in increasing aerobic dance participation. Therefore, efforts to increase community participation in physical activity need to be carried out in an integrated manner, simultaneously considering environmental and psychological aspects.

CONCLUSION

This study concludes that access to facilities and motivation have a positive and significant influence on aerobic dance participation in Makassar City, both partially and simultaneously. Motivation is the more dominant factor, but access to facilities still plays a significant role as a supporting environmental factor. Both variables have also been shown to have an independent influence on participation. Therefore, increasing community participation in aerobic dance needs to be done through the provision of easily accessible facilities and continuous strengthening of individual motivation.

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