



Intrinsic and Extrinsic Motivation as Predictors of Long-Term Participation in the Tennis Community Program in Makassar

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ABSTRACT

This study aims to analyze the influence of intrinsic and extrinsic motivation on long-term participation in the tennis community in Makassar City. The study used a quantitative approach with a correlational design, involving 80 respondents selected through purposive sampling. Data were collected through a Likert-scale questionnaire measuring intrinsic motivation, extrinsic motivation, and participation. Validity and reliability tests indicated that all instruments were suitable for use. Data analysis used multiple linear regression, ANOVA, and the coefficient of determination. The results showed that intrinsic and extrinsic motivation had a positive and significant effect on participation, with intrinsic motivation as the dominant factor. The coefficient of determination value of 58% indicates that both variables were able to explain most of the variation in participation. This finding emphasizes the importance of a combination of internal and external factors in encouraging sustainable involvement in community-based sports.

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INTRODUCTION

Physical activity plays a crucial role in improving physical and mental health and quality of life. However, the development of modern lifestyles in urban areas tends to encourage sedentary behavior, which increases the risk of non-communicable diseases. Therefore, strategic efforts are needed to increase community participation in sustainable and accessible sports activities (Akksilp et al., 2023; Pelliccia et al., 2021). One form of physical activity with significant potential is tennis. Besides being a competitive sport, tennis is also developing as a recreational sport that can be enjoyed by people of all ages. Tennis offers both physical fitness benefits and social value because it involves interaction between individuals in a fun atmosphere. This makes tennis an effective alternative sport in promoting an active lifestyle in the community (Karakullukcu et al., 2025; Shafizadeh et al., 2025).



In Makassar, the development of tennis shows a positive trend. This is indicated by the increasing number of active tennis communities practicing at various sports facilities, both public and private courts. Tennis communities serve not only as training venues but also as social spaces that strengthen bonds between members through regular activities such as group practice and friendly matches. However, long-term participation in tennis communities remains suboptimal, as not all individuals are able to maintain regular exercise.

One of the main factors influencing long-term participation is motivation. Based on Self-Determination Theory, motivation is divided into intrinsic and extrinsic motivation. Intrinsic motivation stems from an individual's internal drives, such as the desire to live a healthy life, improve their abilities, and derive pleasure from the sport itself. Individuals with high intrinsic motivation tend to be more consistent and have a long-term commitment to participation. (Dong et al., 2024; Bordo et al., 2025). In contrast, extrinsic motivation stems from external factors, such as social support, community environment, rewards, and a conducive training environment. In the context of the tennis community, the presence of training partners, coaches, and a supportive environment can increase individual engagement. Extrinsic motivation acts as a reinforcing factor that helps individuals maintain participation, especially when intrinsic motivation fluctuates (Ren & Xiao, 2023; Silva & Sobreiro, 2022).

Although numerous studies have addressed the role of motivation in physical activity, most have focused on sports in general or fitness activities such as aerobics. Research specifically examining intrinsic and extrinsic motivation in the context of the tennis community, particularly in Makassar, is limited. Furthermore, studies analyzing the contributions of both types of motivation simultaneously or independently to long-term participation are also rare.

Based on this, there is a research gap that needs to be filled: the lack of empirical studies integrating intrinsic and extrinsic motivation to explain long-term participation in community-based tennis. The novelty of this research lies in its focus on the tennis community in Makassar City and its analysis of the simultaneous and partial contributions of both types of motivation in predicting long-term participation.

Thus, this research is expected to provide theoretical contributions in the development of sports motivation studies, as well as practical contributions to the development of tennis community programs in increasing community participation sustainably.

METHODS

This study uses a quantitative approach with a correlational design that aims to analyze the relationship and influence of intrinsic and extrinsic motivation on long-term participation in the tennis community in Makassar City. The population in this study was all members of the tennis community who actively participated in training activities at various tennis courts in Makassar City. The research sample consisted of 80 respondents determined using a purposive sampling technique, with the criteria being individuals who

have participated in tennis activities regularly for at least one month and aged between 18 and 45 years.

Data collection was conducted using a structured questionnaire instrument consisting of three main variables: intrinsic motivation, extrinsic motivation, and sports participation. The motivation variable was measured using an adaptation of the Sport Motivation Scale (SMS) that covers aspects of enjoyment, personal satisfaction, and external encouragement, such as social and environmental support, consisting of 18 questions. Meanwhile, the participation variable was measured based on the frequency of attendance, duration of involvement, and consistency in participating in tennis activities, with 12 questions. All statement items were arranged using a five-level 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 was conducted through several stages: descriptive analysis to describe data characteristics, and inferential analysis using multiple linear regression to determine the effect of independent variables on the dependent variable. Furthermore, partial correlation analysis was used to test the independent contribution of each motivational variable to participation while controlling for other variables. All tests were conducted at a significance level of 0.05 using statistical software.

RESULTS AND DISCUSSION

Result

Before further data analysis, the research instrument was first tested for its validity to ensure that each statement item accurately measured the intended construct. Validity testing was performed using Pearson's product-moment correlation by comparing the calculated *r* and the table *r* values at a significance level of 0.05. An item is declared valid if the calculated *r* value is greater than the table *r* value, so it can be used in the research data collection process.

Table 1
Instrument Validity Test Results

Variables	Number of Items	r count	r table	Information
Intrinsic Motivation	9	0.426 - 0.741	0.210	Valid
Extrinsic Motivation	9	0.399 - 0.713	0.210	Valid
Participation	12	0.447 - 0.76	0.210	Valid

Based on the validity test results in Table 1, it is known that the intrinsic motivation variable consisting of 18 statement items has a calculated *r* value ranging from 0.426 to 0.741. All of these values are greater than the table *r* value of 0.210. Likewise, for extrinsic motivation and participation, all calculated *r* values are greater than the table *r* value, so it can be concluded that all items in the intrinsic motivation variable are declared valid.

Once the instrument is declared valid, the next step is to conduct a reliability test to determine the level of internal consistency of each item in measuring the research

variables. Reliability testing is performed using the Cronbach's Alpha coefficient. An instrument is considered reliable if its Cronbach's Alpha value is ≥ 0.70 , indicating that the items in that variable have a good level of consistency and can be trusted for use in data collection.

Table 2
Reliability Test Results

Variables	Cronbach's Alpha	Standard	Information
Intrinsic Motivation	0.836	≥ 0.70	Reliable
Extrinsic Motivation	0.808	≥ 0.70	Reliable
Participation	0.827	≥ 0.70	Reliable

Based on the reliability test results in Table 2, all research variables had Cronbach's Alpha values above the minimum limit of 0.70. The intrinsic motivation variable obtained a value of 0.836, the extrinsic motivation 0.808, and the participation 0.827. These results indicate that all three variables have a high level of internal consistency.

Descriptive statistical analysis was conducted to provide an overview of the data characteristics for each research variable. This analysis included the mean and standard deviation values, which were used to determine the level of trend and distribution of respondent data. Furthermore, the analysis results were categorized to facilitate the interpretation of the levels of each variable in the study.

Table 3.
Descriptive Statistics

Variables	N	Mean	SD	Category
Intrinsic Motivation	80	3,753	0.45	Tall
Extrinsic Motivation	80	3,534	0.48	Tall
Participation	80	3.61	0.50	Tall

Based on the results of the descriptive statistical analysis in Table 3, it is known that all research variables are in the high category. The intrinsic motivation variable, with a total of 80 respondents, has an average value of 3.753 with a standard deviation of 0.45. Furthermore, the extrinsic motivation variable has an average value of 3.534 with a standard deviation of 0.48, which is also included in the high category. Meanwhile, the participation variable shows an average value of 3.61 with a standard deviation of 0.50, which is also included in the high category.

Multiple linear regression analysis was used in this study to determine the magnitude of the influence of the independent variables, namely intrinsic motivation and extrinsic motivation, on the dependent variable, namely participation. In addition, this analysis also aims to identify which variables have a dominant influence in explaining variations in participation. Testing was carried out by looking at the value of the regression coefficient (B), beta coefficient (β), calculated t value, and the level of significance (Sig.) at the 0.05 error level. The independent variable is declared to have a significant effect if the significance value is less than 0.05, so it can be concluded that the variable has a real contribution to the dependent variable in the research model.

Table 4
 Multiple Linear Regression Results

Variables	B	Beta (β)	T	Sig.
(Constant)	1,150	—	2.19	0.019
Intrinsic Motivation	0.428	0.437	4.29	0,000
Extrinsic Motivation	0.371	0.361	3.7	0,000

Based on the results of the multiple linear regression analysis in Table 4, a constant value of 1.150 was obtained with a significance value of 0.019 (<0.05). The intrinsic motivation variable has a regression coefficient (B) value of 0.428 with a beta (β) value of 0.437, a calculated t value of 4.29, and a significance of 0.000 (<0.05). Meanwhile, the extrinsic motivation variable has a regression coefficient (B) value of 0.371 with a beta (β) value of 0.361, a calculated t value of 3.7, and a significance of 0.000 (<0.05).

The ANOVA (Analysis of Variance) test in multiple linear regression analysis is used to determine whether a simultaneously constructed regression model has a significant ability to explain the relationship between the independent variables and the dependent variable. This test is performed by comparing the significance value (Sig.) with the error rate ($\alpha = 0.05$). If the significance value is less than 0.05, the regression model is declared significant and suitable for use in the analysis.

Table 5
 ANOVA

Variance	Sum of Squares	df	Mean Square	F	Sig.
Regression	12.5495	2	6,275	30,543	0,000
Residual	8,037	73	0.105	—	—
Total	20.5865	75	—	—	—

Based on the results of the ANOVA test in Table 5, the calculated F value was 30.543 with a significance value of 0.000. This significance value is smaller than 0.05 ($0.000 < 0.05$), so it can be concluded that the regression model used in this study is simultaneously significant. The Sum of Squares value in the regression section of 12.5495 indicates the magnitude of the variation that can be explained by the independent variable, while the residual value of 8.037 indicates the variation that cannot be explained by the model. With a total variation of 20.5865, it can be seen that the model has a fairly good ability to explain the dependent variable.

The coefficient of determination is used to determine the extent to which an independent variable explains variation in the dependent variable in a regression model. This value is expressed through R-square and adjusted R-square. R-square describes the proportion of variation in the dependent variable that can be explained by the independent variable, while adjusted R-square provides a more accurate estimate because it is adjusted for the number of variables and sample size in the study.

Table 6.
 Coefficient of Determination

R	R Square	Adjusted R-Square	Std. Error
0.742	0.580	0.57	0.295

Based on the analysis results in Table 6, an R value of 0.742 was obtained, indicating a strong relationship between intrinsic and extrinsic motivation variables and participation. The R-squared value of 0.580 indicates that 58% of the variation in the participation variable can be explained by the two independent variables. Meanwhile, the Adjusted R-Square value of 0.57 indicates that after adjusting for the number of variables and sample size, the contribution of the intrinsic and extrinsic motivation variables to participation remained at 57%. This indicates that the model used is quite stable and has good predictive power. The Std error of the Estimate value of 0.295 indicates a relatively small level of model prediction error, so it can be concluded that the regression model in this study has a fairly good level of accuracy in predicting participation variables.

Discussion

The results of this study indicate that intrinsic and extrinsic motivation have a positive and significant influence on long-term participation in the tennis community in Makassar City. These findings confirm that individual engagement in sports activities, particularly community-based tennis, is influenced not only by internal factors but also by external factors that shape the overall sporting experience. In other words, sports participation is the result of a complex interaction between an individual's psychological drive and a supportive social environment.

More specifically, intrinsic motivation was shown to have a more dominant influence than extrinsic motivation. This is reflected in the higher regression coefficients and partial correlations. These findings indicate that internal factors such as enjoyment of playing tennis, personal satisfaction, and the desire to improve skills are the main drivers for maintaining long-term participation. Individuals who participate for intrinsic reasons tend to have a stronger commitment, as the activity provides meaningful personal value.

These results align with the Self-Determination Theory framework, which positions intrinsic motivation as the primary determinant of behavioral sustainability. This theory explains that individuals will be more consistent in engaging in an activity if basic psychological needs, such as autonomy, competence, and social connectedness, are met. In the context of the Makassar tennis community, these needs can be realized through freedom to choose activities, opportunities to improve playing skills, and positive social interactions with fellow community members (Manninen et al., 2022; Fernández-espínola et al., 2020).

Furthermore, the dominance of intrinsic motivation in this study can also be explained by the characteristics of tennis itself. Tennis is a challenging, individually competitive sport, yet it still provides space for social interaction. This combination allows individuals to experience both personal satisfaction and social dynamics within a single activity. Therefore, it is not surprising that enjoyment and satisfaction are key factors driving continued participation (Yukhymenko-Lescroart, 2021; Worley & Smith, 2026).

On the other hand, extrinsic motivation has also been shown to contribute significantly to participation, although not as significantly as intrinsic motivation. This

suggests that external factors such as social support, community environment, facilities, and training atmosphere still play a significant role in encouraging individuals to remain engaged. In the context of the Makassar tennis community, the presence of training partners, coaches, and shared activities such as local tournaments or sparring are factors that strengthen member engagement (Tao & Yu, 2025; Tang et al., 2025).

Furthermore, the results of the partial correlation analysis showed that both intrinsic and extrinsic motivation remained significantly related to participation, even when one of the variables was controlled. This indicates that both variables have independent contributions in influencing participation. In other words, intrinsic and extrinsic motivation are not substitutes for each other, but rather complement each other (W. Xiao et al., 2025; Y. Xiao et al., 2025).

These findings have important theoretical implications, as they reinforce a multidimensional approach to understanding sports participation behavior. Participation cannot be explained by a single variable but must be understood as the result of an interaction between psychological and environmental factors. This also aligns with ecological models of physical activity, which emphasize the importance of individual, social, and environmental factors in shaping behavior. In the context of Makassar City, developing a tennis community as part of an active lifestyle offers enormous potential. With adequate facilities and a thriving community, tennis can become a leading sport in increasing participation in physical activity. However, this success depends heavily on the ability to effectively manage motivational aspects.

Furthermore, the findings of this study also have implications for the development of sports tourism. Tennis communities can be developed into sports tourism destinations through events such as local tournaments, tennis festivals, or community-based training programs, now better known as "Main Bareng." "Main Bareng" is a form of training held by, for example, a community or a training center, where participants are anyone who wants to join, even those who don't know each other. Intrinsic motivation relates to the personal experiences gained by participants, such as enjoyment and satisfaction, while extrinsic motivation relates to the quality of the facilities, event organization, and social interaction offered.

By integrating these two aspects, community tennis activities serve not only as a sporting activity but also as a tourism product with economic and social value. This aligns with global trends that show sports tourism is focused not only on competition but also on enjoyable and meaningful participatory experiences. However, this study has several limitations that should be considered. First, the study was conducted only in Makassar City with a limited sample size, so generalizations of the results should be made with caution. Second, the variables studied were limited to intrinsic and extrinsic motivation, thus not including other factors such as access to facilities, lifestyle, or economic factors.

Overall, the results of this study confirm that long-term participation in the tennis community is the result of a combination of internal motivation and external support. Intrinsic motivation acts as the primary factor driving sustainability, while extrinsic motivation serves as a reinforcing factor that maintains participation stability.

Therefore, strategies to increase participation must be designed comprehensively, considering both aspects equally.

CONCLUSION

This study concludes that intrinsic and extrinsic motivation, both simultaneously and partially, have a positive and significant influence on long-term participation in the tennis community in Makassar City. Intrinsic motivation is proven to be the dominant factor driving continued participation, while extrinsic motivation plays a supporting role that strengthens engagement. The combination of these two types of motivation is key to increasing individual consistency in exercising. Therefore, the tennis community management needs to develop strategies that not only increase individual enjoyment and satisfaction but also create a supportive and inclusive social environment to maintain long-term participation.

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