



Understanding athlete experiences in 3×3 basketball: a latent class analysis of service quality and satisfaction profiles

Comprensión de las experiencias de los deportistas en el baloncesto 3×3: un análisis de clases latentes de los perfiles de calidad del servicio y satisfacción

Authors

Dimitrios Stavropoulos¹
Georgia Stavropoulou¹
Panteleimon Bakirtzoglou²
Apostolia Ntovoli^{1,3}
Evangelos Kontaxakis⁴
Afroditi Lola³

¹ Aristotle University of Thessaloniki, Thessaloniki, Greece

² Aristotle University of Thessaloniki, Thessaloniki, Greece

³ Frederick University, Limassol, Cyprus

⁴ Keele University, Greece / Aristotle University of Thessaloniki, Serres, Greece

Corresponding author:
Georgia Stavropoulou
gnstavro@auth.gr

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Abstract

Introduction: The rapid global expansion of 3×3 basketball has transformed the sport into one of the most accessible and socially engaging forms of urban recreation. Despite its increasing popularity and inclusion in the Olympic Games, limited research has examined how participants evaluate their experiences in organized 3×3 basketball tournaments and whether distinct groups of athletes can be identified according to their perceptions of service quality and satisfaction.

Objective: The purpose of this study was to identify latent athlete profiles based on perceptions of satisfaction, facilities, personnel, responsiveness, reliability, and participation outcomes in 3×3 basketball tournaments. Additionally, the study examined whether demographic and experiential characteristics, including age, years of team participation, coaching experience, and years of involvement in basketball, predicted membership in the identified profiles.

Methodology: A total of 300 athletes participating in official 3×3 basketball tournaments across Greece completed validated questionnaires assessing service quality and satisfaction dimensions. Latent Class Analysis (LCA) was employed to identify homogeneous participant profiles, while demographic and experiential variables were incorporated as covariates.

Results: The findings revealed three distinct athlete profiles. The first profile, labelled *Low Evaluation of 3×3* (44.97%), was characterized by low levels of satisfaction and unfavorable evaluations across all service quality dimensions. The second profile, *Moderate Evaluation of 3×3* (31.44%), demonstrated moderate perceptions across all variables. The third profile, *High Evaluation of 3×3* (23.59%), reported consistently high levels of satisfaction, service quality perceptions, and participation outcomes. Among the examined covariates, only coaching experience significantly predicted profile membership, whereas age, years of team participation, and years of involvement in basketball were not significant predictors.

Discussion: The study provides novel evidence regarding the heterogeneous nature of athlete experiences in 3×3 basketball and highlights the usefulness of person-centered analytical approaches in sport management research. **Conclusion:** The findings offer practical implications for event organizers, sport federations, and local authorities seeking to enhance participant experiences, increase satisfaction, and strengthen long-term engagement in urban sport events.

Keywords

3×3 basketball; service quality; athlete satisfaction; latent class analysis; sport participation.

Resumen

Introducción: La rápida expansión mundial del baloncesto 3×3 ha transformado este deporte en una de las formas de ocio urbano más accesibles y con mayor participación social. A pesar de su creciente popularidad y de su inclusión en los Juegos Olímpicos, son escasos los estudios que han analizado cómo valoran los participantes sus experiencias en torneos organizados de baloncesto 3×3 y si es posible identificar grupos diferenciados de deportistas en función de sus percepciones sobre la calidad del servicio y su satisfacción.

Objetivo: El propósito de este estudio fue identificar perfiles latentes de deportistas basados en sus percepciones sobre la satisfacción, las instalaciones, el personal, la capacidad de respuesta, la fiabilidad y los resultados de participación en torneos de baloncesto 3×3. Además, el estudio examinó si las características demográficas y de experiencia como la edad, los años de participación en equipos, la experiencia como entrenador y los años de práctica del baloncesto— permitían predecir la pertenencia a los perfiles identificados.

Metodología: Un total de 300 deportistas que participaban en torneos oficiales de baloncesto 3×3 en toda Grecia completaron cuestionarios validados que evaluaban la calidad del servicio y las dimensiones de satisfacción. Se empleó el análisis de clases latentes (LCA) para identificar perfiles homogéneos de participantes, mientras que las variables demográficas y de experiencia se incorporaron como covariables.

Resultados: Los resultados revelaron tres perfiles distintos de deportistas. El primer perfil, denominado «Baja valoración del 3×3» (44,97%), se caracterizó por bajos niveles de satisfacción y valoraciones desfavorables en todas las dimensiones de la calidad del servicio. El segundo perfil, «Evaluación moderada del 3×3» (31,44%), mostró percepciones moderadas en todas las variables. El tercer perfil, «Evaluación alta del 3×3» (23,59%), presentó niveles consistentemente altos de satisfacción, percepciones de la calidad del servicio y resultados de participación. Entre las covariables examinadas, solo la experiencia como entrenador predijo de forma significativa la pertenencia a un perfil, mientras que la edad, los años de participación en el equipo y los años de práctica del baloncesto no fueron predictores significativos.

Discusión: El estudio aporta nuevos datos sobre la naturaleza heterogénea de las experiencias de los deportistas en el baloncesto 3×3 y destaca la utilidad de los enfoques analíticos centrados en la persona en la investigación sobre gestión deportiva.

Conclusión: Los resultados ofrecen implicaciones prácticas para los organizadores de eventos, las federaciones deportivas y las autoridades locales que buscan mejorar las experiencias de los participantes, aumentar la satisfacción y reforzar el compromiso a largo plazo en los eventos deportivos urbanos.

Palabras clave

Baloncesto 3×3; calidad del servicio; satisfacción de los deportistas; análisis de clases latentes; participación deportiva.



Introduction

Participation in sport and recreational physical activity has changed considerably over the past decades. Contemporary leisure behavior is increasingly characterized by flexible, accessible, and experience-oriented forms of participation that can be integrated into everyday life and urban environments. According to Wheaton (2013), modern sport participation is no longer confined to traditional club structures and formal competition but increasingly reflects lifestyle choices that emphasize enjoyment, social interaction, personal fulfillment, and self-expression. As a result, urban and outdoor recreational activities have become important vehicles for promoting active lifestyles and enhancing individual and community well-being.

The positive contribution of recreational sport participation to physical, psychological, and social health has been extensively documented. Research has consistently shown that regular engagement in physical activity contributes to improved quality of life, psychological well-being, social integration, and community cohesion. In particular, Sjøgaard et al. (2016) highlighted that participation in sport and exercise contributes not only to health outcomes but also to productivity, social functioning, and overall well-being. Similarly, leisure-based sport participation provides opportunities for social interaction and relationship development, factors that are strongly associated with sustained engagement and positive participation experiences.

Within this evolving recreational sport landscape, 3×3 basketball has emerged as one of the fastest-growing forms of urban sport worldwide. Originally developed as an informal variation of traditional basketball, 3×3 has evolved into a globally recognized discipline governed by the International Basketball Federation (FIBA) and officially introduced into the Olympic Games. Its rapid growth can be attributed to several characteristics, including reduced facility requirements, simplified organizational structures, accessibility, and adaptability to urban environments. Unlike traditional basketball, which often requires formal club membership and extensive infrastructure, 3×3 basketball can be organized in public spaces, city centers, parks, and community venues, making participation more accessible to diverse populations. These characteristics have positioned 3×3 basketball as a unique combination of sport, recreation, entertainment, and social interaction.

The growth of 3×3 basketball has generated increasing academic interest regarding the motivations, experiences, and outcomes associated with participation. Existing evidence suggests that participation in recreational basketball extends beyond physical activity and competition. In their examination of basketball participation among university students, Heo and Lee (2007) demonstrated that involvement in basketball was closely associated with social integration, interpersonal relationship development, and the formation of meaningful leisure experiences. Their findings were consistent with the Serious Leisure Perspective proposed by Stebbins (1992), which suggests that individuals often develop long-term commitment, identity, and personal fulfillment through sustained participation in leisure activities. More recently, Yazici (2023) reported significant differences in serious leisure perceptions among street basketball participants, indicating that athletes may differ substantially in the way they experience and evaluate their involvement in recreational basketball settings.

These findings are particularly relevant because participant experiences have become a central concern within sport management research. Contemporary sport participants increasingly evaluate events not only on the basis of competition quality but also according to the overall experience provided by organizers. Consequently, dimensions such as facilities, staff performance, responsiveness, reliability, and organizational effectiveness have become critical determinants of successful sport experiences. Within this context, service quality has emerged as one of the most influential constructs for understanding participant satisfaction and future behavioral intentions.

The importance of service quality has been extensively documented across sport and recreation settings. According to Cronin and Taylor (1994), perceptions of service performance constitute a primary determinant of satisfaction judgments. Expanding this perspective, Cronin et al. (2000) demonstrated that service quality indirectly influences future behavioral intentions through satisfaction and perceived value. Within sport organizations, Alexandris et al. (2004) found that participants who perceived higher levels of service quality reported greater satisfaction and stronger psychological commitment. Similar findings were reported by Howat et al. (1996), who showed that satisfied participants were more likely to continue participating and recommend activities to others. Furthermore, McDougall and Levesque



(2000) highlighted that perceived service quality contributes directly to customer retention and loyalty intentions.

The relationship between service quality and leisure involvement has also received considerable attention. For example, Alexandris et al. (2012) demonstrated that service quality contributes significantly to participants' involvement in active leisure activities, suggesting that positive service experiences can strengthen long-term engagement. Likewise, Ko and Pastore (2005) proposed a multidimensional model of service quality in recreational sport that emphasized the importance of facilities, personnel, program quality, and interaction quality in shaping participant evaluations. Collectively, these studies suggest that organizational quality constitutes a critical component of successful sport experiences.

Recent evidence from the 3×3 basketball context further supports these conclusions. Research conducted among participants in Greek 3×3 basketball tournaments (Stavropoulos et al., 2026a, b, c) demonstrated that perceptions of facilities, personnel, responsiveness, reliability, and organizational effectiveness were positively associated with athlete satisfaction. Similarly, studies examining the psychosocial dimensions of 3×3 basketball participation have shown that social interaction, enjoyment, and well-being represent important outcomes of participation (Stavropoulos et al., 2026a, b, c). Together, these findings suggest that athletes' experiences in 3×3 basketball are multidimensional and shaped by both organizational and psychosocial factors.

Despite the substantial body of literature examining service quality and satisfaction in sport settings, an important methodological limitation remains. The overwhelming majority of previous studies have adopted variable-centered approaches, including correlation analysis, regression modeling, confirmatory factor analysis, and structural equation modeling. Although these methodologies provide valuable information regarding relationships among variables, they assume that participants represent a relatively homogeneous population. Consequently, conclusions are generally based on average effects and may overlook meaningful differences among individuals who experience the same sport environment in fundamentally different ways.

This limitation is particularly important in recreational sport contexts. Participants attending the same event often differ in their motivations, expectations, previous experiences, and levels of involvement. Consequently, it is unlikely that all athletes evaluate organizational quality and participation outcomes in the same manner. As Collins and Lanza (2013) argue, person-centered approaches provide an opportunity to identify unobserved subgroups within populations that may otherwise remain hidden when relying exclusively on traditional variable-centered analyses.

To address such heterogeneity, researchers have increasingly adopted person-centered methodologies, including Latent Class Analysis (LCA) and Latent Profile Analysis (LPA). These approaches focus on identifying groups of individuals who share similar patterns of responses across multiple indicators. Rather than examining average relationships among variables, person-centered approaches reveal meaningful participant profiles and provide a more nuanced understanding of behavioral and experiential differences. Recent methodological literature has highlighted the growing value of latent profile and latent class approaches for identifying meaningful subpopulations that may remain undetected through traditional variable-centered techniques (Pastor et al., 2007; Spurk et al., 2020). Such approaches are particularly useful when researchers seek to understand how individuals combine multiple experiences and perceptions into distinct patterns of responses. According to Morin et al. (2018), person-centered methodologies have become increasingly valuable across behavioral sciences because they facilitate the identification of meaningful subpopulations and support the development of targeted interventions.

Despite their growing popularity in psychology, education, and health sciences, person-centered approaches remain underutilized in sport management research and are particularly scarce within the context of 3×3 basketball. Existing studies have primarily examined participation motives, leisure experiences, service quality, satisfaction, social interaction, and well-being. However, little is known about whether athletes participating in 3×3 basketball tournaments can be classified into distinct experiential profiles based on their evaluations of organizational quality and participation outcomes. Similarly, there is limited evidence regarding the extent to which demographic and experiential characteristics influence membership in such profiles.



Addressing this gap is important for both theoretical and practical reasons. From a theoretical perspective, identifying latent participant profiles may advance understanding of heterogeneity in athlete experiences and extend existing service quality and satisfaction frameworks. From a practical perspective, understanding how different groups of athletes perceive tournament experiences may help organizers, municipalities, national federations, and event managers develop targeted strategies aimed at improving participant satisfaction, enhancing organizational quality, and promoting long-term engagement in 3×3 basketball.

Therefore, the purpose of the present study was to identify latent athlete profiles in 3×3 basketball based on perceptions of satisfaction, facilities, personnel, responsiveness, reliability, and outcomes. Furthermore, the study examined whether demographic and experiential characteristics, including age, years of participation, coaching experience, and years of involvement in basketball, predict membership in the identified profiles. By adopting a person-centered analytical framework, the present study seeks to extend current knowledge regarding athlete experiences in urban sport settings and contribute to the growing literature on service quality, satisfaction, and participant segmentation in sport management.

Method

Participants

Participants were 305 athletes (65 females, 22%, and 238 males, 78%) who participated in official 3×3 basketball tournaments organized under the auspices of the Hellenic Basketball Federation (HBF) across Greece. Participants had a mean age of 20.78 years ($SD = 8.76$). Data were collected from tournaments held in Thessaloniki, Kavala, Preveza, Katerini, and Volos during the competitive season. Participants represented various age categories and competitive levels, reflecting the broad participation base of Greek 3×3 basketball. A convenience sampling strategy was employed, whereby athletes voluntarily agreed to participate in the study during tournament events. Data collection was conducted at a single time point during tournament participation. Prior to data collection, official permission was obtained from the Hellenic Basketball Federation. Participation was voluntary and anonymous, and all procedures complied with ethical standards for research involving human participants. The study protocol was approved by the Research Ethics Committee of the University (Approval No. 289/2025).

Measures

Satisfaction

Athlete satisfaction was assessed using an adapted version of the sport event satisfaction scale developed by Alexandris et al. (2004, 2012) and previously applied in the context of 3×3 basketball tournaments in Greece. The scale consisted of 17 items measuring participants' overall satisfaction with their tournament experience (e.g., satisfaction with the entertainment value of the event). Responses were recorded on a seven-point Likert-type scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*), with higher scores indicating greater satisfaction. Previous validation analyses supported the unidimensional structure of the scale and demonstrated satisfactory internal consistency (Cronbach's $\alpha = .84$).

Service Quality

Perceived service quality was assessed using the five-dimensional Sport Service Quality Scale developed by Alexandris et al. (2004) and further applied in sport event settings. The instrument evaluates five dimensions of service quality: facilities, personnel, responsiveness, reliability, and outcomes. Participants responded using a seven-point Likert-type scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*), with higher scores reflecting more favorable evaluations of service quality.

Demographic Variables

Participants also reported their age, years of basketball participation, years of participation with their current team, and years of cooperation with their current coach. These variables were included as covariates in the latent class analysis to examine demographic differences among the identified athlete profiles.

Procedure

Data collection took place during official 3×3 basketball tournaments organized throughout Greece. Athletes were approached before or after competition and were informed about the purpose of the study. After providing informed consent, participants completed the questionnaires individually. The administration procedure required approximately 10–15 minutes. All questionnaires were completed anonymously to ensure confidentiality and reduce social desirability bias.

Statistical Analysis

Data analyses were conducted in two stages. Initially, descriptive statistics were calculated for all study variables, including means, standard deviations, minimum and maximum values, and distribution characteristics. These analyses provided an overall description of athletes' perceptions regarding satisfaction, facilities, personnel, responsiveness, reliability, and outcomes. Subsequently, Latent Class Analysis (LCA) was employed to identify homogeneous subgroups of athletes based on their evaluations of satisfaction, facilities, personnel, responsiveness, reliability, and outcomes. Latent Class Analysis is a person-centered statistical approach that enables the identification of unobserved population subgroups based on patterns of responses across multiple indicators (Collins & Lanza, 2013). Such approaches have increasingly been recommended when the objective is to identify meaningful participant profiles rather than estimate average relationships among variables (Pastor et al., 2007; Spurk et al., 2020). A series of competing models ranging from one to five latent classes was estimated and compared using model fit indices, including the Bayesian Information Criterion (BIC), log-likelihood values, classification error, and model parsimony criteria. The final model selection was based primarily on the lowest BIC value combined with theoretical interpretability and classification quality. Following profile identification, age, years of team participation, years of coaching experience, and years of involvement in basketball were included as covariates in the latent class model to examine their effects on profile membership probabilities. Regression coefficients were estimated to determine whether these demographic and experiential characteristics significantly predicted class membership.

Results

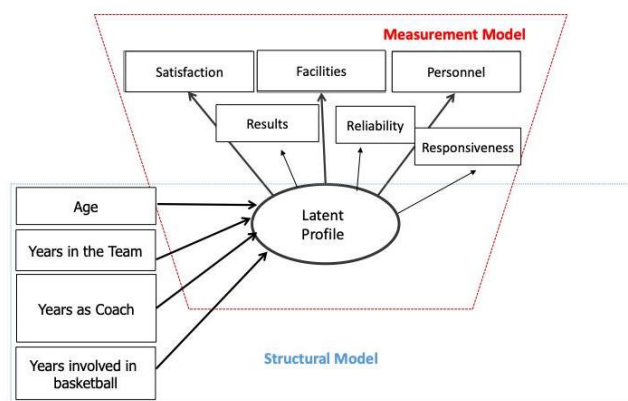
The Table 1 presents the descriptive statistics for Satisfaction, Facilities, Personnel, Responsiveness, Reliability, and Outcome.

Table 1. Descriptive Statistics for Satisfaction, Facilities, Personnel, Responsiveness, Reliability and Outcome.

	Mean	Std. Deviation	Skewness	Kurtosis	Minimum	Maximum
Satisfaction	5.16	.91	-.17	-.41	2.71	7.59
Facilities	4.51	1.28	-.26	-.29	1	7
Personnel	5.01	1.39	-.35	-.56	1	7
Responsiveness	4.96	1.36	-.34	-.43	1.50	7
Reliability	5.19	1.27	-.42	-.32	1	7
Outcome	5.34	1.26	-.77	.71	1	7

The latent class model was used to identify athlete profiles in relation to those recruited from 3x3. Specifically, the model was structured around satisfaction, evaluations of personnel and facilities, responsiveness, reliability, and outcomes. In addition, the independent variables of age, years of playing on the team, years of coaching, and years of involvement in basketball were added. The method of creating the model is shown in Figure 1.

Figure 1. Measurement Model and Structural Model for Constructing Latent Profiles.



The three-profile solution emerged as the most appropriate based on the principle of parsimony (parsimonious) modeling of latent classes, mainly because it presented lower BIC values while maintaining a balance between the number of parameters and the classification error (Table 2). These three clusters reflect distinct profiles, representing groups of individuals who share similar levels of satisfaction, assessment of staff and facilities, responsiveness, reliability, and the results they derive from their experience at 3x3.

Table 2. Latent class results and model fit indices.

		LL	BIC(LL)	Npar	L ²	df	p-value	Class.Err.
Model1	1-Cluster	-5029,36	10886,24	145	9951,574	156	3,5e-1990	0
Model2	2-Cluster	-4810,89	10512,08	156	9514,632	145	1,0e-1906	0,0559
Model3	3-Cluster*	-4754,36	10461,8	167	9401,572	134	1,3e-1892	0,1079
Model4	4-Cluster	-4736,85	10489,57	178	9366,57	123	2,2e-1895	0,138
Model5	5-Cluster	-4722,79	10524,23	189	9338,444	112	7,8e-1900	0,1775
Model6	0-Cluster							

Figure 2 presents the conditional probabilities associated with the three unique clusters or profiles, while Table 3 provides a descriptive summary of these profiles, highlighting their key characteristics and relative proportions. Profile 1, "Low Evaluation of 3x3" (44.97%), consists of individuals who show low levels of satisfaction, facilities, staff, responsiveness, reliability, and results. Profile 2, "Moderate Evaluation of 3x3" (31.44%), consists of individuals who show moderate levels in all variables, and Profile 3, "Positive Assessment of 3x3" (23.59%), consists of individuals who show high levels in all variables.

Figure 2. The conditional probabilities of the three profiles.

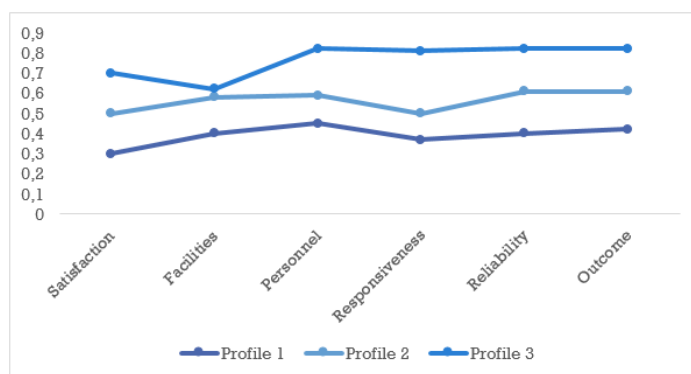


Table 3. Descriptive characteristics of the three profiles.

	Profile 1	Profile 2	Profile 3
	Low	Moderate Valuation of 3x3	High
	Valuation of 3x3		Valuation of 3x3
Cluster Size	44.97%	31.44%	23.59%
Satisfaction	Low	Moderate	High
Facilities	Low	Moderate	High
Personnel	Low	Moderate	High
Responsiveness	Low	Moderate	High
Reliability	Low	Moderate	High
Outcome	Low	Moderate	High

The three profiles as dependent variables

Subsequently, the Latent Class Model showed how the distribution of individuals in the classes was predicted by independent variables, such as age, years of involvement in basketball, years of playing on the team, and years of coaching. Table 4 and Figure 3 highlight these effects. The table presents the effects of the four covariates (age, years on the team, years as a coach, and years of involvement) on the three profiles that emerged from the latent class analysis. Age shows very low values (.03, -.04, and .01) and in all cases is insignificant (ns), suggesting that age does not affect the three profiles. A similar pattern is observed for years in the team, where the values are almost zero (-.01, .01, -.00) and are not statistically significant, indicating that the length of time spent in a particular team does not affect the distribution across classes. In contrast, years as a coach have a statistically significant negative effect on Profile 1 ($\beta = -.08^{***}$, $p < .001$), while for Profile 2 it is positive ($\beta = .10^{***}$, $p < .001$), which means that the more years of experience someone has as a coach, the more likely they are to belong to Profile 2. Finally, the years of involvement show values (.03, -.06, .03) without statistical significance, indicating that the total duration of involvement in the sport or activity does not distinguish the three profiles.

Table 4. The three latent profiles as dependent variables were influenced by age, years in the team, years as a coach, and years of involvement

Covariates	Profile 1 Low Valuation of 3x3	Profile 2 Moderate Valuation of 3x3	Profile 3 High Valuation of 3x3
Age	.03ns	-.04ns	.01
Years in the Team	-.01ns	.01ns	-.00
Years as Coach	-.08***	.10***	-.02
Years involved in basketball	.03ns	-.06ns	0.03ns

Note: $p < .001^{***}$, ns=non-significant

Figure 3. Effects of independent variables on the three profiles.



Discussion

The purpose of the present study was to identify latent athlete profiles in 3×3 basketball tournaments based on perceptions of satisfaction, facilities, personnel, responsiveness, reliability, and outcomes, as well as to examine whether demographic and sport-related characteristics predicted membership in the identified profiles. The findings supported the existence of three distinct athlete profiles, namely a Low Evaluation profile, a Moderate Evaluation profile, and a High Evaluation profile. These findings provide evidence that athletes participating in the same 3×3 basketball events do not constitute a homogeneous population but rather differ substantially in the way they perceive and evaluate their tournament experiences. Beyond the identification of distinct participant groups, the findings suggest that athletes' experiences in 3×3 basketball may be conceptualized as a continuum of perceived event quality rather than as isolated evaluations of specific service dimensions. Athletes who reported positive perceptions regarding facilities, personnel, responsiveness, and reliability also tended to report higher satisfaction and more favorable participation outcomes, whereas negative evaluations similarly clustered together. This pattern highlights the interconnected nature of organizational and experiential aspects of sport participation and suggests that participants may evaluate tournaments holistically rather than through independent assessments of individual service components. Consequently, the findings support the view that overall perceptions of event quality represent an integrated experience shaped by multiple organizational factors operating simultaneously.

The identification of three distinct profiles represents one of the main contributions of the present study. Previous research in sport management has primarily relied on variable-centered approaches to investigate relationships among service quality, satisfaction, and behavioral outcomes (Alexandris et al., 2004; Cronin et al., 2000; Ko & Pastore, 2005). Although these studies have consistently demonstrated positive associations between service quality and participant satisfaction, they generally assume that participants respond similarly to the same service environment. The present findings challenge this assumption by demonstrating that athletes can be classified into distinct experiential profiles based on their evaluations of organizational quality and participation outcomes. This observation supports the arguments of Collins and Lanza (2013) and Morin et al. (2018), who emphasized that person-centered approaches provide a more nuanced understanding of population heterogeneity by identifying meaningful subgroups that may remain undetected when using traditional analytical techniques. The present findings are also consistent with recent methodological recommendations emphasizing the value of latent profile approaches for capturing population heterogeneity and facilitating more targeted interpretations of behavioral phenomena (Pastor et al., 2007; Spurk et al., 2020). An additional observation concerns the nature of the identified profiles. Although the three profiles followed a quantitative rather than qualitative differentiation pattern, their identification remains theoretically meaningful because it demonstrates that athletes do not respond uniformly to tournament experiences. Rather than revealing isolated strengths or weaknesses across specific service dimensions, the findings suggest that perceptions of service quality and satisfaction tend to co-occur, creating distinct levels of overall evaluation. This pattern indicates that athletes who evaluate one aspect of the event positively are also likely to report favorable perceptions across other organizational dimensions, whereas negative evaluations similarly tend to cluster together. These findings indicate that athlete evaluations are organized around global experiential judgments rather than isolated service attributes, reinforcing the argument that sport event experiences should be understood as integrated experiential systems. This perspective extends existing service quality research by suggesting that athletes may evaluate tournaments holistically, combining organizational, social, and experiential elements into a single overarching assessment of event quality.

A particularly important finding was that nearly half of the participants belonged to the Low Evaluation profile. Despite the increasing popularity of 3×3 basketball and the growing investment in tournament organization, a substantial proportion of athletes reported relatively low levels of satisfaction and unfavorable evaluations across all dimensions of service quality. This finding suggests that participation in an attractive and rapidly expanding sport format does not automatically guarantee positive experiences. Instead, the quality of the organizational environment appears to play a crucial role in shaping athletes' perceptions. Similar conclusions have been reported by Howat et al. (1996), who found that service quality deficiencies negatively influence participant evaluations, as well as by McDougall and Levesque (2000), who demonstrated that perceptions of service quality are strongly associated with satisfaction and future behavioral intentions.

In contrast, athletes classified within the High Evaluation profile reported consistently favorable evaluations across all dimensions examined. These findings are consistent with previous research indicating that positive perceptions of service quality contribute to higher levels of satisfaction, commitment, and continued participation (Alexandris et al., 2004; Alexandris et al., 2012). Moreover, the findings align with the work of Yoshida and James (2010), who reported that participants' overall satisfaction is influenced not only by the core sport experience but also by the quality of services surrounding the event. Athletes within the High Evaluation profile may therefore represent individuals who perceive both the competitive and organizational aspects of the tournament positively, resulting in a more satisfying overall experience.

The present findings may also be interpreted within the broader context of recreational and urban sport participation. Previous studies have shown that participation in basketball and other recreational sport activities is often associated with social interaction, personal development, and meaningful leisure experiences (Heo & Lee, 2007; Stebbins, 1992). More recently, research conducted within the context of 3×3 basketball demonstrated that participation is associated with social interaction, enjoyment, motivation, well-being, and positive leisure experiences (Stavropoulos et al., 2026a, b, c). These findings suggest that athletes' experiences in 3×3 basketball are multidimensional and extend beyond competitive outcomes alone. Consequently, participants who evaluate organizational aspects positively may also be more likely to experience the broader psychosocial benefits associated with tournament participation.



An additional contribution of the present study concerns the predictors of profile membership. Contrary to expectations, age, years of basketball participation, and years of team participation did not significantly differentiate athletes across profiles. These findings suggest that positive and negative evaluations of tournament experiences are not necessarily determined by demographic characteristics or accumulated playing experience. Similar observations have been reported in leisure and sport participation research, where situational and contextual factors often exert stronger influences on participant evaluations than demographic variables alone (Alexandris et al., 2007; Funk et al., 2009).

Interestingly, coaching experience emerged as the only significant predictor of profile membership. Athletes with greater coaching experience were less likely to belong to the Low Evaluation profile and more likely to belong to the Moderate Evaluation profile. One possible explanation is that coaching experience provides individuals with a greater understanding of the challenges associated with planning, organizing, and delivering sports events. As a result, coaches may evaluate organizational processes more realistically and adopt a more balanced perspective when assessing facilities, personnel, responsiveness, and event outcomes. This interpretation is consistent with the work of Côté and Gilbert (2009), who argued that accumulated coaching knowledge influences how individuals perceive and evaluate sport environments.

From a theoretical perspective, the present study extends existing literature by introducing a person-centered approach to the study of service quality and satisfaction in 3×3 basketball. While previous investigations have focused primarily on average relationships among variables, the current findings demonstrate that distinct experiential profiles exist within the athlete population. This contribution is particularly important because it highlights the need to move beyond traditional variable-centered analyses when examining athlete experiences. Consistent with Gillet et al. (2019), the findings suggest that person-centered methodologies can provide valuable insights into individual differences and improve understanding of how participants experience sport environments. More importantly, the findings suggest that service quality dimensions and satisfaction should not always be examined as independent constructs, as participants may perceive them as elements of a broader and integrated event experience. Future research should therefore consider the possibility that athlete evaluations are organized around global experiential judgments rather than isolated assessments of specific service attributes.

The findings also have several practical implications. First, the large proportion of athletes classified within the Low Evaluation profile indicates a need for continuous monitoring and improvement of tournament organization. Particular attention should be given to facilities, personnel training, responsiveness, and service reliability, as these factors appear to contribute substantially to participants' evaluations. Second, organizers should adopt participant-centered assessment strategies and systematically collect feedback following tournaments. Third, the identification of distinct athlete profiles suggests that segmentation approaches may be useful for tailoring services to the needs of different participant groups. As suggested by Funk et al. (2009), understanding differences among participants may facilitate the development of more effective management and marketing strategies that enhance satisfaction and long-term participation.

Limitations and Future Research

Several limitations should be acknowledged. First, the study employed a cross-sectional design, preventing conclusions regarding causal relationships among the examined variables. Second, data were collected exclusively from Greek 3×3 basketball tournaments, which may limit the generalizability of the findings to other cultural and organizational contexts. Third, all data were obtained through self-report measures and may therefore be influenced by response bias. Additionally, some service quality dimensions demonstrated relatively low internal consistency coefficients, which should be considered when interpreting the findings. Future research should examine the stability of athlete profiles across different tournaments and countries using longitudinal designs. Moreover, additional psychosocial variables such as motivation, involvement, serious leisure, sense of community, and well-being should be incorporated into future latent profile models to provide a more comprehensive understanding of participant experiences in 3×3 basketball and other urban sport settings.

Conclusions



The present study contributes to the growing body of literature on 3×3 basketball by providing a person-centered perspective on athlete experiences in organized tournaments. Using Latent Class Analysis, three distinct athlete profiles were identified, characterized by low, moderate, and high evaluations of satisfaction, facilities, personnel, responsiveness, reliability, and participation outcomes. These findings demonstrate that athletes participating in the same event do not perceive their experiences uniformly, highlighting the heterogeneous nature of participation in contemporary urban sport settings. Beyond confirming the importance of service quality and satisfaction in shaping athlete experiences, the study extends previous research by demonstrating that meaningful subgroups of participants exist within the 3×3 basketball population. This finding supports the growing use of person-centered approaches in sport management research and suggests that relying solely on average relationships among variables may overlook important differences in how participants experience sport events. The findings also have important practical implications. Event organizers, sport federations, and local authorities should recognize that athletes differ in their expectations and evaluations of tournament experiences. Consequently, systematic monitoring of participant perceptions and the implementation of targeted service improvement strategies may contribute to enhanced satisfaction, more positive event experiences, and stronger long-term engagement in 3×3 basketball. Particular attention should be directed toward improving organizational aspects such as facilities, staff support, responsiveness, and reliability, as these dimensions appear to play a central role in shaping athlete evaluations. Overall, the present study highlights that the success of 3×3 basketball tournaments depends not only on the competitive aspects of the sport but also on the quality of the experience provided to participants. As 3×3 basketball continues to expand internationally, understanding the diverse needs and perceptions of athletes will be essential for developing sustainable participation opportunities and maximizing the social, recreational, and developmental benefits associated with this rapidly growing sport.

Author Affiliations

Dimitrios Stavropoulos¹, Georgia Stavropoulou¹, Panteleimon Bakirtzoglou², Apostolia Ntovoli¹³, Evangelos Kontaxakis⁴, Afroditi Lola³

¹ Laboratory of Management of Sports, Recreation, and Tourism, School of Physical Education and Sport Science, Aristotle University of Thessaloniki, Thessaloniki, Greece.

² School of Physical Education and Sports Science, Aristotle University of Thessaloniki, Thessaloniki, Greece.

³ School of Health Sciences, Department of Life and Health Sciences, Frederick University, Limassol, Cyprus.

⁴ Keele University, Greece; Laboratory of Adapted Physical Education, Department of Physical Education and Sport Science, Aristotle University of Thessaloniki, Serres, Greece.

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Authors' details:

Dimitrios Stavropoulos	dnstavro@phed.auth.gr	Author
Georgia Stavropoulou	gnstavro@auth.gr	Author
Panteleimon Bakirtzoglou	bakirtzoglou@phed.auth.gr	Author
Apostolia Ntovoli	antovoli@phed.auth.gr	Author
Evangelos Kontaxakis	vkontaxakis@keelegreece.edu.gr	Author
Afroditi Lola	alola@phed.auth.gr	Author

