



## Women's sports tourism as a tool for empowerment and continued participation in sports

*Turismo deportivo femenino como herramienta de empoderamiento y permanencia en la práctica deportiva*

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### Abstract

**Introduction:** Women's dropout from sports practice remains a persistent challenge despite growing participation in sports tourism activities. Transformative Sport Tourism Theory (TSTT) suggests that challenging and meaningful sport experiences may foster empowerment and long-term adherence.

**Objective:** This study aimed to analyze how transformative sports tourism experiences contribute to women's empowerment and retention in sports practice by examining the interplay between intrinsic motivation, experience quality, perceived benefits, social support, group identification, and prior empowerment.

**Method:** A quantitative design was applied to a sample of 491 hotel employees from the Ecostar database (1,200 hotels). Data were analyzed using Partial Least Squares Structural Equation Modeling (PLS-SEM) and Multi-Group Analysis (MGA) to compare Adventure/Risk-Based and Wellness/Active Leisure contexts.

**Results:** Experience quality emerged as the strongest predictor, significantly influencing intrinsic motivation, perceived benefits, social support, and retention. Intrinsic motivation directly predicted retention, while group identification and social support reinforced adherence pathways. Multi-group analysis revealed that Adventure/Risk contexts strengthened motivational mechanisms, whereas Wellness contexts emphasized relational support.

**Conclusions:** Transformative sports tourism experiences can function as structured empowerment environments that promote sustained sports participation among women. Retention emerges from the interaction of motivational, relational, and experiential factors, with context shaping the dominant pathway to long-term engagement.

### Keywords

Adherence; empowerment; experience quality; intrinsic motivation; sports tourism; women's sports retention.

### Resumen

**Introducción:** El abandono deportivo femenino continúa siendo un desafío persistente, pese al incremento de la participación en actividades de turismo deportivo. La Teoría del Turismo Deportivo Transformativo (TSTT) plantea que las experiencias desafiantes y significativas pueden generar procesos de empoderamiento y favorecer la permanencia deportiva.

**Objetivo:** Analizar cómo las experiencias transformativas de turismo deportivo contribuyen al empoderamiento y a la permanencia en la práctica deportiva femenina, examinando la interacción entre motivación intrínseca, calidad de la experiencia, beneficios percibidos, apoyo social, identificación grupal y empoderamiento previo.

**Metodología:** Se aplicó un diseño cuantitativo con una muestra de 491 empleados hoteleros pertenecientes a la base de datos Ecostar (1.200 hoteles). Los datos fueron analizados mediante Modelos de Ecuaciones Estructurales con mínimos cuadrados parciales (PLS-SEM) y análisis multigrupo (MGA) comparando contextos de aventura/riesgo y bienestar/ocio activo.

**Resultados:** La calidad de la experiencia se identificó como el predictor más robusto, influyendo significativamente en la motivación intrínseca, los beneficios percibidos, el apoyo social y la permanencia deportiva. La motivación intrínseca predijo directamente la permanencia, mientras que la identificación grupal y el apoyo social reforzaron las vías de adherencia. El análisis multigrupo mostró que los contextos de aventura potencian los mecanismos motivacionales, mientras que los de bienestar enfatizan el apoyo relacional.

**Conclusiones:** Las experiencias transformativas de turismo deportivo pueden funcionar como entornos estructurados de empoderamiento que favorecen la continuidad en la práctica deportiva femenina. La permanencia emerge de la interacción entre factores motivacionales, relacionales y experienciales, condicionados por el contexto de práctica.

### Palabras clave

Adherencia; empoderamiento; género y deporte; motivación intrínseca; permanencia deportiva femenina; turismo deportivo.

## Introduction

Sports tourism has become an established field of inquiry, traditionally examined through marketing, tourism economics, and consumer behavior. Although this scholarship offers insights into segmentation, expenditure patterns, and destination competitiveness, it overlooks a central issue related to gender equity and public health: whether sports tourism can promote women's empowerment and long term retention in sports practice. Existing studies continue to privilege market-oriented variables such as income, demographics, and travel motivations (Qian, 2022; Apollo et al., 2023), leaving aside psychological, educational, and developmental impacts. Consequently, sports tourism remains framed as transactional consumption rather than a transformative mechanism capable of generating durable behavioral change.

This limitation becomes especially evident in research on women's participation. Despite increased female involvement, dominant consumption-based perspectives fail to explain how tourism experiences shape continuity in sports practice (Moreno Vitoria et al., 2025). Paradoxically, adventure tourism research reports male dominated participation rates, yet women often achieve higher completion and goal attainment levels (Apollo et al., 2023). This contradiction reveals a deeper conceptual gap: traditional participation metrics obscure processes through which women renegotiate limitations, strengthen self-efficacy, and redefine agency in risk based contexts (Doran, 2016). These empowerment mechanisms remain underdeveloped in tourism theory.

Sport psychology research shows that sustained physical activity enhances autonomy, confidence, and social competence—key empowerment dimensions (Perrino Peña & Fernández Díaz, 2024). However, such findings remain siloed from tourism scholarship. This disciplinary fragmentation limits understanding of how embodied tourism experiences influence identity formation, intrinsic motivation, and behavioral continuity.

Against this backdrop, the present study addresses a central research question:

How do transformative sports tourism experiences contribute to women's empowerment and long term retention in sports practice?

More specifically, the study examines how intrinsic motivation, perceived physical, psychological, and social benefits, social support, identification with the activity group, and prior empowerment interact to reduce dropout and sustain engagement among women and adolescents.

Transformative Sport Tourism Theory (TSTT) provides a robust framework for exploring this question. TSTT argues that extraordinary, embodied, and liminal experiences—marked by challenge, reflection, and social interaction—can generate lasting identity and behavioral transformations (Mirehie & Gibson, 2020). In women's adventure and active tourism, these mechanisms facilitate the confrontation of gender norms, the reinforcement of perceived competence, and the integration of sport into self concept (Mackenzie, 2020).

The theoretical contribution of this study lies in integrating empowerment, motivation, group identification, perceived benefits, and experience quality into a unified, empirically tested model, addressing gaps in research on retention (Eime et al., 2024; Moreno Vitoria et al., 2024). By bridging sports tourism, gendered empowerment, and long-term participation (Miller & Cave, 2025), the study reframes sports tourism as a strategic tool for wellbeing, empowerment, and sustained engagement, advancing TSTT and informing inclusive tourism design and gender-responsive policy (Apollo et al., 2023; Yiapanas, 2025). This study also contributes by developing a predictive model that estimates the probability of retention in women's sports practice based on the combined influence of its key predictive variables.

### **Conceptual Framework and Variable Selection**

Consistent with the Introduction's aim of repositioning sports tourism as a transformative mechanism for empowerment and long term retention, this study's conceptual framework was developed through a structured dialogue between theory and managerial practice. Rather than relying solely on deductive reasoning, the model integrates insights from hotel directors and senior managers who design and oversee women focused sports tourism programs. Positioned at the crossroads of experience design, physical training facilitation, and post program follow up, these practitioners observe long-term patterns: while some women internalize the experience and sustain sports practice, others disengage once the



tourism episode ends. This practical knowledge offered a grounded foundation for refining the theoretical model.

The variable selection process followed a two stage pretest involving ten Spanish hotels specializing in wellness, adventure, and active sport programs, including SHA Wellness Clinic, Playitas Resort, La Zambra Resort, ARVA Spa & Sport Hotel, Hotel Santa Marta, Sport Hotel Hermitage & Spa, Royal Hideaway Sancti Petri, Parador de Vielha, Eco Resort Can Martí, and Hotel Rural Mas de la Serra. Following the methodological guidance of Sanchez Oro and Robina Ramírez (2020), an initial online focus group defined retention in women's sports practice (WSP) as continued physical activity beyond the tourism experience. Managers emphasized that satisfaction alone did not guarantee continuity; sustained behavior was the key indicator.

Nine variables initially emerged: Intrinsic Motivation (IM), Quality of the Tourist Experience (QTE), Physical, Psychological, and Social Benefits (PPSB), Social Support (SS), Identification with the Activity Group (IAG), Prior Empowerment Level (PEL), Perceived Risk (PR), Prior Experience (PER), and Perceived Gender Barriers (PGB). This diversity reflected managers' belief that retention results from interdependent psychological, relational, and contextual factors.

In the second pretest stage, each hotel rated the influence of these variables. QTE received the highest score, followed by IM and PPSB. Managers across leading establishments agreed that high quality, well structured, and relationally sensitive experiences convert initial uncertainty into confidence and commitment. A second cluster—SS, IAG, and PEL—highlighted the relational foundations of retention, with managers noting that collective experiences, belonging, and mutual reinforcement reduce dropout.

Variables such as PR, PER, and PGB were not discarded but conceptually integrated as contextual modifiers of selected constructs. Managers noted that risk perception decreases with strong experience design, prior experience shapes empowerment, and gender barriers are mitigated through social support and group identity.

The resulting framework positions IM as the central driver of retention, shaped by QTE, multidimensional benefits, and social identification, with PEL amplifying these pathways. Thus, the final model synthesizes theory and professional evidence, showing how sports tourism can evolve from a temporary activity into sustained sports engagement among women.

## Literature review

Retention in women's sports practice results from the combined influence of intrinsic motivation, high quality experiences, social support, group identification, and prior empowerment. Challenging and reflective tourism experiences integrate these factors, transforming short-term participation into sustained long term engagement.

### ***Dependent Variable: Retention in Women's Sports Practice (WSP)***

Retention in women's sports practice refers to the sustained continuity and regularity of physical and sports activity over time, particularly following participation in transformative and risk-based sports tourism experiences (Eime et al., 2020; Perrino-Peña & Fernández Díaz, 2024). In this study, retention represents a key outcome through which sports tourism contributes to long-term empowerment, reflecting the internalization of sport as a meaningful and self-directed practice rather than a temporary engagement.

As the dependent variable, retention captures the capacity of sports tourism experiences to prevent dropout and foster lasting behavioral change. Sustained participation is associated with improvements in physical health, psychological well-being, self-efficacy, and autonomy, especially in adventure contexts where challenge and risk play a formative role. Empirical research indicates that women's sports adherence is mediated by psychosocial factors such as perceived competence, social support, identity integration, and the ability to overcome contextual and gender-related barriers (Willinger et al., 2021).

Longitudinal evidence further suggests that positive and empowering initial experiences increase commitment to continued practice, consolidating sport as a transformative element within women's life trajectories (Guo et al., 2024; Eynon et al., 2019).



### ***Intrinsic Motivation (IM)***

Intrinsic motivation is a core explanatory variable in understanding how transformative sports tourism experiences contribute to women's empowerment and long-term retention in sports practice. From a Transformative Sport Tourism Theory (TSTT) perspective, intrinsic motivation allows women to frame challenge, risk, and physical effort as meaningful and self-affirming elements of the experience, facilitating transformation rather than avoidance.

Intrinsic motivation directly influences retention in women's sports practice by fostering autonomous and internally regulated engagement. Women driven by enjoyment, interest, and personal satisfaction are more likely to internalize sports participation as a stable habit instead of an episodic activity (Moreno-Vitoria et al., 2024; Eime et al., 2020). In adventure and active tourism contexts, intrinsically rewarding experiences stimulate curiosity, enhance perceived competence, and strengthen intentions to continue, while moderating risk perception and increasing resilience when facing uncertainty.

Within TSTT, intrinsic motivation operates as a key mechanism linking extraordinary sport tourism experiences—characterized by challenge, liminality, and reflection—to sustained behavioral change. Women who participate for intrinsically oriented reasons, such as personal growth or connection with nature, exhibit higher life satisfaction, reduced burnout, and lower dropout probability, consolidating empowerment and long-term sports retention (Zhang et al., 2024; Wu et al., 2024). Drawing from the preceding discussion, a hypothesis may be developed:

H1: Intrinsic Motivation (IM) positively influences retention in women's sports practice (WSP).

### ***Identification with the Activity Group (IAG)***

From the perspective of Transformative Sport Tourism Theory (TSTT), identification with a participant group plays a pivotal role in sustaining women's engagement in sports over time. Strong group identification fosters commitment, intrinsic motivation, and a sense of responsibility toward the activity, while also creating social support networks that buffer against dropout (Yiapanas, 2025; Miller & Cave, 2025). Within sports tourism contexts, shared experiences and group cohesion facilitate collaborative learning, emotional reinforcement, and the internalization of group norms, transforming episodic participation into sustained engagement (Liddelow et al., 2025). For women, these dynamics are particularly empowering: group belonging legitimizes participation in traditionally male-dominated sports, provides visible role models, and counters limiting gender stereotypes (Liu et al., 2023). By embedding the activity within their social identity, women not only retain their practice but also experience personal transformation, as sports become an integral component of self-concept and a platform for broader social and psychological empowerment (Toffoletti, 2017). The evidence and concepts outlined above provide a foundation for formulating testable hypotheses:

H2: Identification with the Activity Group (IAG) positively influences retention in women's sports practice (WSP).

H3: Identification with the Activity Group (IAG) positively influences Intrinsic Motivation (IM)..

### ***Physical, Psychological, and Social Benefits (PPSB)***

From a transformative sports tourism perspective, the perception of physical, psychological, and social benefits is a critical driver of women's sustained engagement in sports (Sanchez-Fernández & Cardona, 2025; Perrino-Peña & Fernández Díaz, 2024). Active tourism experiences offer tangible gains—enhanced fitness, skill mastery, and well-being—that reinforce psychological outcomes such as self-efficacy, confidence, and resilience. Socially, these experiences foster meaningful connections, peer support, and social capital, which buffer against motivation lapses and dropout (Holland-Smith, 2017; Li et al., 2022). The interplay of empowerment, intrinsic motivation, perceived risk, and group belonging creates a synergistic effect, embedding sports practice within women's self-concept. By internalizing these multidimensional benefits, participants construct coherent personal narratives that validate continued investment of time and effort, even amid life transitions (Quinton & Brunton, 2023). Holistic engagement transforms episodic participation into enduring practice, simultaneously promoting gender equality, personal growth, and the consolidation of physical, psychological, and social competencies (Sun et al., 2017). Based on the previous analysis, specific hypotheses can be proposed to guide empirical investigation:



H4: Physical, Psychological, and Social Benefits (PPSB) positively influence Intrinsic Motivation (IM).

H5: Physical, Psychological, and Social Benefits (PPSB) positively influence retention in women's sports practice (WSP).

### **Quality of the Experience (QTE)**

Within the Transformative Sport Tourism Theory (TSTT) framework, the perceived quality of sports tourism experiences is a decisive factor in women's retention and empowerment in sports practice (Mirehie & Gibson, 2020; Mackenzie, 2020). High-quality experiences—characterized by safety, professional guidance, and meticulous organization—enhance confidence, reinforce self-efficacy, and transform episodic participation into sustained engagement (Robina-Ramírez et al., 2023, 2023a). Beyond technical proficiency, relational dimensions such as empathy, inclusive communication, and gender-sensitive facilitation are crucial for female participants, fostering a sense of belonging and validation (Saidon et al., 2024). Positive experiences generate motivational anchors through episodic memory, serving as cognitive and emotional reference points that sustain commitment when faced with everyday challenges (Zhao et al., 2023). By enabling women to attribute achievements to personal capabilities rather than external conditions, well-designed experiences not only consolidate sports habits but also catalyze empowerment, supporting transformative identity development and reinforcing long-term adherence to active lifestyles (Lee et al., 2024). The insights presented suggest potential hypotheses that can be explored in future research:

H6: Quality of the Tourist Experience (QTE) positively influences Physical, Psychological, and Social Benefits (PPSB).

H7: Quality of the Tourist Experience (QTE) positively influences Intrinsic Motivation (IM).

H8: Quality of the Tourist Experience (QTE) positively influences retention in women's sports practice (WSP).

### **Social Support (SS)**

Social support is a pivotal mechanism in sustaining women's engagement in sports, particularly within transformative sports tourism contexts. Families, peers, and participant groups reinforce intrinsic motivation, commitment, and accountability, reducing dropout risk (Eime et al., 2020; Yiapanas, 2025). Active tourism experiences amplify these effects by fostering group cohesion, shared learning, and enduring social networks that transform episodic participation into habitual practice. For women engaging in adventure or risk sports, supportive environments enhance perceptions of safety, recognition, and legitimacy—critical factors for retention. Empirical evidence demonstrates that social support moderates the impact of structural and psychological barriers, buffering challenges that could disrupt continuity (Laird et al., 2016). Emotional support from women-only sports groups cultivates communities of practice, validates experiences, and reinforces collective identity, while instrumental support—access to equipment, guidance, or transport—facilitates the transition from occasional tourism participation to autonomous, long-term practice (Thorpe & Olive, 2016; Ahmed et al., 2020). These dynamics collectively empower women, embedding sports as an enduring dimension of self-concept. Following the arguments discussed, it is possible to articulate hypotheses regarding the observed phenomena:

H9: Identification with the Activity Group (IAG) positively influences Social Support (SS).

H10: Social Support (SS) positively influences retention in women's sports practice (WSP).

H11: Quality of the Tourist Experience (QTE) positively influences Social Support (SS).

### **Prior Level of Empowerment (PEL)**

The prior level of empowerment directly influences sports retention. Women with greater autonomy, self-esteem, and confidence show higher commitment and resilience when facing the challenges of risk-based tourism (Doran, 2016; Perrino-Peña & Fernández Díaz, 2024).

This prior empowerment allows women to overcome fears and negotiate personal or social barriers, facilitating continuity in sports practice. Empowered women thus transform the tourism experience into a catalyst for consolidating sustainable and long-term exercise habits, strengthening both physical well-

being and intrinsic motivation. Contemporary research demonstrates that prior psychological empowerment acts as a crucial mediator between the intention to participate in sports activities and actual adherence, particularly in adventure contexts where women face deeply rooted gender stereotypes (Alvarez & Cohen, 2023).

Empowerment also facilitates the emotional self-regulation required to manage stress associated with risk activities, enabling participants to transform challenges into opportunities for personal growth (Cazenave et al., 2007). Recent studies confirm that women with high levels of prior empowerment report greater satisfaction with challenging sports experiences and a higher likelihood of continuing to practice adventure sports autonomously after initial tourism experiences (Ali et al., 2025). The patterns and relationships identified above support the derivation of research hypotheses:

H12: Identification with the Activity Group (IAG) positively influences Prior Empowerment Level (PEL).

H13: Social Support (SS) positively influences Prior Empowerment Level (PEL).

H14: Quality of the Tourist Experience (QTE) positively influences Prior Empowerment Level (PEL).

H15: Prior Empowerment Level (PEL) positively influences Intrinsic Motivation (IM).

## Method

### Population and Sample

For this study, interviews were conducted with 391 hotel employees from Ecostar Database, Version 3, which includes data from 1,200 hotels worldwide. Ecostar tracks sustainability, operational practices, and service quality. Frontline staff are uniquely positioned to observe how adventure/risk-based and wellness/active leisure experiences foster women's empowerment, motivation, and retention. Their insights capture practical, lived experiences, revealing how social and contextual factors shape sustained sports participation, central to Transformative Sport Tourism Theory (TSTT). Table 1 presents a balanced distribution of key socio-demographic and contextual factors within the sample. Most participants are aged 26–40, with a predominance of university education and middle-income levels. This distribution reflects typical profiles in sports tourism and highlights how structural conditions interact with empowerment and retention in women's sports practice.

Table 1. Socio-demographic and contextual factors

Factor	Category	Percentage (%)
Age and Life Stage	18–25 years	22%
	26–40 years	41%
	41–55 years	25%
	56+ years	12%
Years of Professional Experience	0–5 years	26%
	6–10 years	34%
	11–20 years	28%
	21+ years	12%
Job Position (Hotel Staff)	Frontline staff (trainers, instructors, service staff)	38%
	Middle management (program coordinators, supervisors)	37%
	Senior management (directors, executives)	25%
Educational Level	Secondary education	28%
	University degree	52%
	Postgraduate	20%
Income / Economic Access	Low income	24%
	Middle income	51%
	High income	25%
Accessibility & Infrastructure	Limited access (rural/low facilities)	27%
	Medium access to infrastructure	46%
	High access (urban/high-quality facilities)	27%

Note: authors' own elaboration.

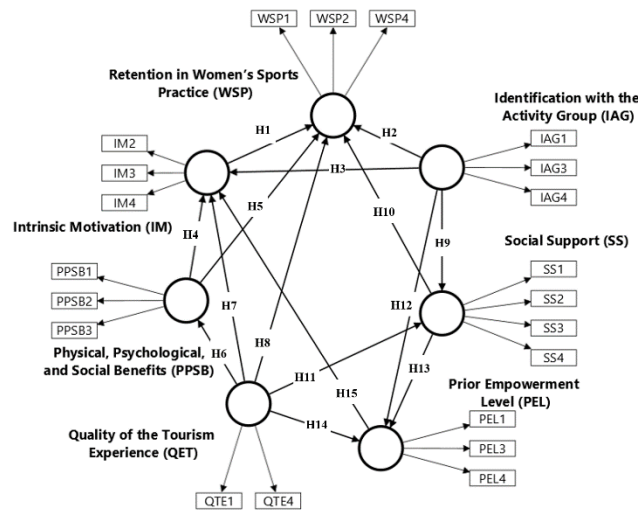
### Hypotheses and Structural Model

This study proposes a model linking transformative sports tourism experiences to women's empowerment and sustained sports participation. Drawing on TSTT, the model integrates prior empowerment,



social support, intrinsic motivation, group identification, perceived benefits, and experience quality to formulate hypotheses explaining retention pathways and mechanisms underlying long-term engagement in adventure and wellness sports.

Figure 1. Model.



Note: authors' own elaboration.

### Hypotheses:

- H1: Intrinsic Motivation (IM) positively influences retention in women's sports practice (WSP).  
 H2: Identification with the Activity Group (IAG) has a direct positive effect on women's sports practice (WSP).  
 H3: Identification with the Activity Group (IAG) positively influences Intrinsic Motivation (IM).  
 H4: Physical, Psychological, and Social Benefits (PPSB) positively influence Intrinsic Motivation (IM).  
 H5: Physical, Psychological, and Social Benefits (PPSB) positively influence retention in women's sports practice (WSP).  
 H6: Quality of the Tourist Experience (QTE) positively influences Physical, Psychological, and Social Benefits (PPSB).  
 H7: Quality of the Tourist Experience (QTE) positively influences Intrinsic Motivation (IM).  
 H8: Quality of the Tourist Experience (QTE) positively influences retention in women's sports practice (WSP).  
 H9: Identification with the Activity Group (IAG) positively influences Social Support (SS).  
 H10: Social Support (SS) positively influences retention in women's sports practice (WSP).  
 H11: Quality of the Tourist Experience (QTE) positively influences Social Support (SS).  
 H12: Identification with the Activity Group (IAG) positively influences Prior Empowerment Level (PEL).  
 H13: Social Support (SS) positively influences Prior Empowerment Level (PEL).  
 H14: Quality of the Tourist Experience (QTE) positively influences Prior Empowerment Level (PEL).  
 H15: Prior Empowerment Level (PEL) positively influences Intrinsic Motivation (IM).

### Measurement Instruments and Indicators

Retention in women's sports practice is influenced by prior empowerment, social support, intrinsic motivation, group identification, perceived physical, psychological, and social benefits, and the quality of tourism experiences. Together, these factors shape consistent engagement, long-term habit formation,

and self-efficacy. High-quality, supportive, and socially cohesive sports tourism experiences facilitate empowerment, reinforce identity, and sustain participation in adventure and wellness activities (Table 2).

Table 2. Indicators

Item	Indicator	Author
<b>Retention in Women's Sports Practice (WSP)</b>		
WSP1	According to my perception, participants tend to maintain regular sports practice after their initial adventure sports tourism experiences.	Eime et al. (2020)
WSP2	In my experience, participants generally appear to maintain a consistent weekly frequency of physical activity after engaging in risk-based sports programs.	Willinger et al. (2021)
WSP3	Participants usually express or demonstrate a strong intention to continue practicing women's sports in the long term.	Guo et al. (2024)
WSP4	From what I observe, many participants seem to integrate sports activity as a stable habit in their daily lives after the program.	Eynon et al. (2019)
<b>Prior Empowerment Level (PEL)</b>		
PEL1	Participants generally show personal confidence to face demanding physical and emotional sports challenges.	Doran (2016)
PEL2	Participants appear to display autonomy when making sports-related decisions during the program.	Castillo-Jiménez et al. (2022)
PEL3	At the beginning of activities, participants usually show signs of high self-esteem when engaging in risk-based sports tourism.	Perrino-Peña & Fernández Díaz (2024)
PEL4	Participants tend to demonstrate prior capacity for emotional self-regulation in challenging sports situations.	Cazenave et al. (2007)
<b>Social Support (SS)</b>		
SS1	Participants often mention or show that they receive emotional support from family encouraging continued sports practice.	Eime et al. (2020)
SS2	Participants frequently report positive reinforcement from friends that helps them maintain sports participation.	Yiapanas (2025)
SS3	Participants generally appear to have access to instrumental support that enables them to sustain regular sports practice.	Ahmed et al. (2020)
SS4	Participants seem to feel socially supported when facing sports-related difficulties.	Laird et al. (2016)
<b>Intrinsic Motivation (IM)</b>		
IM1	Participants appear motivated by enjoyment and personal satisfaction, which seems to sustain their sports participation.	Eime et al., 2020
IM2	Participants generally show genuine interest in the sports activity regardless of external rewards.	Zhang et al., 2024
IM3	Participants often express curiosity and a desire for personal growth that drives persistence in adventure or active tourism experiences.	Wu et al., 2024
IM4	Participants frequently cite intrinsic reasons—such as connecting with nature—as factors that enhance resilience and retention.	Moreno-Vitoria et al., 2024
<b>Identification with the Activity Group (IAG)</b>		
IAG1	Participants generally appear to feel a sense of belonging to the sports group during tourism activities.	Stevens et al. (2023)
IAG2	Participants often express personal identification with the group involved in adventure sports.	Toffoletti (2017)
IAG3	It is common to observe participants reinforcing their commitment through group cohesion.	Thorpe & Olive (2016)
IAG4	Participants typically develop or reinforce their women's sports identity through group membership.	Liu et al. (2023)
<b>Physical, Psychological, and Social Benefits (PPSB)</b>		
PPSB1	Participants often report or show signs of improved physical condition from ongoing sports practice.	Li et al. (2022)
PPSB2	Participants appear to experience increased psychological well-being associated with continued women's sports.	Guo et al. (2024)
PPSB3	Participants frequently mention developing positive social relationships through sports practice.	Holland-Smith (2017)
PPSB4	Participants tend to perceive overall positive benefits from maintaining sports practice.	Sun et al. (2017)
<b>Quality of the Tourism Experience (QTE)</b>		
QTE1	From my professional perspective, experience quality—including safety, guidance, organization, professionalism, and relational factors—seems to influence participants' sports retention.	Mirehie & Gibson (2020)
QTE2	Participants often perceive professionalism, care, and structure as factors that increase their confidence and safe participation.	Saidon et al. (2024)
QTE3	Participants commonly describe high-quality experiences as generating positive memories that reinforce continuation of sports habits.	Zhao et al. (2023)
QTE4	Participants usually interpret well-facilitated experiences as enhancing self-efficacy and strengthening belief in future sports competence.	Lee et al. (2024)

Note: authors' own elaboration.

## Data processing

The dataset was examined using partial least squares (PLS) regression via SmartPLS version 4.1.0.3, which facilitates the refinement of structural model estimates by reducing unexplained variance (Hair et al., 2013). This technique is particularly suitable for research involving smaller samples or data that



do not meet normality assumptions. The procedure assessed direct, indirect, and moderating effects, enabling a thorough evaluation of the hypothesized relationships and their influence on the outcome constructs.

### **Logistic Regression Model**

Using composite scale means and a binary threshold (1–5 = 0; 6–10 = 1), four logistic regression models were estimated to examine how academic and psychosocial factors predict students' perceived personal development (PPD). Across models, learning experiences (PEL) and personal support behaviors (PPSB) consistently emerged as the strongest positive predictors, indicating that richer learning environments and supportive interactions substantially increase the likelihood of higher PPD scores. Teaching quality (QTE) also contributed meaningfully, particularly for PPD2 and PPD4, suggesting that instructional effectiveness enhances certain aspects of development. Academic integration (IAG) showed mixed, often negative effects, revealing possible misalignments between integration processes and students' developmental perceptions. Notably, PPD4 differed from the other dimensions: it increased with strong learning experiences and teaching quality but decreased with personal support, implying a more academically oriented construct. Overall, the results highlight that different PPD dimensions are shaped by distinct combinations of academic quality, support, and integration experiences.

## **Results**

In SEM-PLS, the measurement (external) model specifies how latent constructs are operationalized through their observed indicators and is used to assess the reliability and validity of the constructs. The structural (internal) model, in turn, defines the hypothesized relationships among latent constructs, estimating path coefficients, their direction, and predictive strength. Taken together, the measurement model ensures the robustness and adequacy of the constructs, while the structural model evaluates the proposed theoretical relationships and underlying causal mechanisms.

### **Statistical Report: Type II ANOVA and Logistic Regression**

This comprehensive statistical report integrates Type II ANOVA and logistic regression to evaluate the validity and predictive power of the model assessing students' perceived personal development. The Type II ANOVA examines the independent contribution of each predictor to the composite outcome PPD\_prom, confirming that the linear model is highly significant. Several predictors display strong effects, supported by high F values and very low p values, indicating robust explanatory capacity. Model diagnostics using VIF reveal moderate but expected multicollinearity due to the use of Likert type items grouped into psychometric scales; while acceptable for prediction, future studies may benefit from item aggregation or factor analysis.

The logistic regression model, applied to predict permanence (PPD\_bin), demonstrates exceptional performance, achieving an AUC of 1.0 and perfect classification in the confusion matrix. This flawless separation reflects both the model's discriminative power and the pronounced class imbalance (362 positive cases vs. 29 negative). Additional diagnostic graphs—including residual plots, QQ plots, VIF distributions, and the ROC curve—reinforce the model's adequacy while highlighting the need for cautious interpretation of the logistic results. Overall, the findings support the robustness of the analytic approach while underscoring areas for methodological refinement.

### **External Model**

Indicator reliability requires external loadings above 0.70 (Carmines & Zeller, 1979). Table 3 shows all items meet this standard except IAG2, IM1, PEL2, WSP3, PPSB4, QTE2, QTE3.

Table 3. Outer model loadings

	IAG	IM	PEL	WSP2	PPSB	QTE	SS
IAG1	0,857						
IAG3	0,904						
IAG4	0,902						
IM2		0,886					
IM3		0,743					
IM4		0,834					



PEL1	0,930			
PEL3	0,894			
PEL4	0,868			
WSP1		0,800		
WSP2		0,901		
WSP4		0,795		
PPSB1			0,898	
PPSB2			0,874	
PPSB3			0,825	
QTE1				0,925
QTE4				0,934
SS1				0,878
SS2				0,874
SS3				0,833
SS4				0,876

Internal consistency of the measurement scales was evaluated using Cronbach's alpha and composite reliability. Cronbach's alpha exceeded the 0.70 benchmark (Nunnally & Bernstein, 1994), and composite reliability values also surpassed 0.70 (Werts et al., 1974), confirming robust construct reliability.

Convergent validity was assessed through average variance extracted (AVE), with all constructs exceeding the 0.50 threshold (Fornell & Larcker, 1981), demonstrating adequate shared variance. Detailed results for Cronbach's alpha, Rho\_A, composite reliability, and AVE are presented in Table 4.

Table 4. Validity and Reliability

	Cronbach's alpha	Composite reliability (rho_a)	Composite reliability (rho_c)	Average variance extracted (AVE)
IAG	0,866	0,867	0,918	0,789
IM	0,758	0,758	0,862	0,677
PEL	0,880	0,913	0,925	0,806
WSP2	0,777	0,775	0,871	0,694
PPSB	0,833	0,835	0,900	0,750
QTE	0,843	0,845	0,927	0,864
SS	0,888	0,894	0,923	0,749

Fornell and Larcker (1981) recommend that a construct's square root of AVE exceed its correlations with other constructs to demonstrate discriminant validity. As presented in Table 5, this criterion is met for all constructs, confirming that each one is distinct and adequately differentiated from the others.

Table 5. Discriminant validity matrix (Fornell-Larcker Criterion)

	IAG	IM	PEL	WSP2	PPSB	QTE	SS
IAG	0,888						
IM	0,393	0,823					
PEL	0,396	0,335	0,898				
WSP2	0,458	0,592	0,670	0,833			
PPSB	0,405	0,459	0,328	0,411	0,866		
QTE	0,420	0,567	0,554	0,681	0,635	0,930	
SS	0,392	0,331	0,421	0,504	0,347	0,517	0,865

Discriminant validity was further evaluated using the Heterotrait–Monotrait (HTMT) ratio (Henseler et al., 2015). All values fell below the 0.90 threshold, confirming that the constructs are adequately distinct and exhibit robust discriminant validity (see Table 6).

Table 6. Discriminant validity matrix (Heterotrait-Monotrait Ratio Criterion)

	IAG	IM	PEL	WSP2	PPSB	QTE	SS
IAG							
IM	0,487						
PEL	0,442	0,401					
WSP2	0,557	0,770	0,801				
PPSB	0,476	0,575	0,373	0,509			
QTE	0,494	0,706	0,629	0,837	0,757		
SS	0,439	0,399	0,469	0,605	0,402	0,595	

These results provide strong evidence of discriminant validity for our measures of transformational leadership at both the group and individual levels (Henseler et al., 2015). Model fit was assessed using the standardized root mean square residual (SRMR), with values below 0.08 indicating a good fit between the proposed model and observed data.

### Structural model analysis

The  $R^2$  coefficient assesses the model's explanatory and predictive strength (Chin, 1998). Results reveal substantial explanatory power, with  $R^2$  values exceeding 0.168 for nearly all constructs (Table 7). Additionally, cross-validated redundancy measures confirm the model's predictive relevance, demonstrating both robustness and practical applicability.

Table 7. Structural model results

Constructs	R-square	Q <sup>2</sup> predict
IM	0,360	0,342
PEL	0,353	0,327
WSP	0,573	0,493
PPSB	0,403	0,398
SS	0,305	0,217

According to Table 8, the structural model clarifies how sports tourism experiences shape long term retention in women's sports practice (WSP), yet these results reveal important theoretical tensions when compared with existing literature. The strongest pattern is the dominant role of Quality of the Tourist Experience (QTE), which significantly predicts PPSB (H6,  $\beta = 0.635$ ,  $p < 0.001$ ), IM (H7,  $\beta = 0.418$ ,  $p < 0.001$ ), WSP (H8,  $\beta = 0.456$ ,  $p < 0.001$ ), SS (H11,  $\beta = 0.428$ ,  $p < 0.001$ ), and PEL (H14,  $\beta = 0.410$ ,  $p < 0.001$ ). This aligns with TSTT's emphasis on transformative, embodied experiences (Mirehie & Gibson, 2020). However, when contrasted with research demonstrating the primacy of social mechanisms in predicting women's participation (Ahmed et al., 2020), QTE's overwhelming influence suggests that transformative conditions in tourism may overshadow relational dynamics typically observed in sport settings.

Building on this, Intrinsic Motivation (IM) emerges as a key predictor of retention (H1,  $\beta = 0.279$ ,  $p < 0.001$ ), mediating benefits, empowerment, and group processes. Yet this centrality contradicts empowerment-focused models where empowerment precedes motivation (Doran, 2016). This inconsistency becomes clearer when considering that Prior Empowerment Level (PEL) does not predict IM (H15,  $\beta = -0.005$ ,  $p = 0.919$ ), despite theories arguing that empowerment drives women's persistence in risky environments (Ali et al., 2025).

Similarly, Identification with the Activity Group (IAG) shows moderate yet significant effects on IM, SS, PEL, and WSP (H2, H3, H9, H12), but these values are weaker than expected when compared with adventure tourism studies highlighting strong gendered cohesion and resilience (Apollo et al., 2023). PPSB enhances IM (H4,  $\beta = 0.127$ ,  $p = 0.022$ ) but unexpectedly reduces WSP (H5,  $\beta = -0.121$ ,  $p = 0.009$ ), contradicting evidence that psychological and social benefits reinforce sustained activity (Guo et al., 2024).

Overall, the model reinforces TSTT principles but exposes contradictions with empowerment and social support oriented research, suggesting that tourism contexts may reshape the balance between experiential, motivational, and relational drivers.

Table 8. Structural model results

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics  O/STDEV	P values
H1: IM -> WSP	0,279	0,189	0,367	6,095	0,000***
H2: IAG -> WSP	0,142	0,058	0,235	3,157	0,002**
H3: IAG -> IM	0,168	0,068	0,272	3,266	0,001**
H4: PPSB -> IM	0,127	0,018	0,234	2,298	0,022*
H5: PPSB -> WSP	-0,121	-0,211	-0,028	2,607	0,009*
H6: QTE -> PPSB	0,635	0,578	0,691	22,080	0,000***
H7: QTE -> IM	0,418	0,303	0,525	7,384	0,000***
H8: QTE -> WSP	0,456	0,353	0,550	9,093	0,000***
H9: IAG -> SS	0,213	0,123	0,302	4,681	0,000***
H10: SS -> WSP	0,162	0,088	0,250	3,968	0,000***
H11: QTE -> SS	0,428	0,322	0,529	8,216	0,000***



H12: IAG -> PEL	0,168	0,055	0,282	2,920	0,004**
H13: SS -> PEL	0,143	0,046	0,256	2,655	0,008*
H14: QTE -> PEL	0,410	0,254	0,552	5,381	0,000***
H15: PEL -> IM	-0,005	-0,094	0,087	0,102	0,919

Note: significant differences \*p < 0.05 \*\*p < .01 \*\*\* p < .001.

The  $f^2$  values in Table 9 reveal that Quality of the Tourism Experience (QTE) exerts disproportionately large effects—especially QTE → WSP2 (0.675)—suggesting that experience quality dominates retention pathways. However, this contrasts with studies showing that social support is often a stronger predictor of sustained participation among women (Ahmed et al., 2020), whereas here SS has only small effects. Similarly, empowerment research in women’s tourism contexts emphasizes psychological empowerment and identity negotiation as central drivers (Ali et al., 2025), yet PEL shows weak or nonsignificant effects in your model. Adventure tourism studies highlight gender linked resilience and risk negotiation (Apollo et al., 2023), but your small  $f^2$  values for IAG and PPSB indicate milder influences. These inconsistencies suggest contextual variability and potential measurement differences across studies, highlighting the need for careful cross study interpretation.

Table 9. f-square

	IAG	IM	PEL	WSP2	PPSB	QTE	SS
IAG		0,033	0,034	0,034			0,054
IM				0,117			
PEL		0,000					
WSP2							
PPSB		0,014		0,019			
QTE		0,125	0,176	0,211	0,675		0,217
SS			0,022	0,043			

The MGA PLS-SEM analysis comparing Adventure/Risk-Based (AR) and Wellness/Active Leisure (WAL) companies highlights how contextual factors shape retention pathways in women’s sports participation (WSP2), aligning with Transformative Sport Tourism Theory (TSTT) (Mirehie & Gibson, 2020; Mackenzie, 2020). In AR settings, Intrinsic Motivation (IM → WSP2, 0.296, p < 0.001) and Quality of the Tourist Experience (QTE → WSP2, 0.464, p < 0.001) emerge as the strongest drivers, indicating that risk-oriented, challenging experiences enhance empowerment, self-efficacy, and sustained engagement (Doran, 2016; Apollo et al., 2023; Eime et al., 2020).

Conversely, WAL contexts depend more on relational mechanisms, with Social Support (SS → WSP2, 0.364, p < 0.001) and Identification with the Activity Group (IAG → SS, 0.304, p < 0.001) highlighting the importance of emotional backing and group cohesion (Ahmed et al., 2020; Castillo-Jiménez et al., 2022; Laird et al., 2016).

Across both tourism types, QTE consistently strengthens IM, Physical Enjoyment and Leisure (PEL), and Perceived Physical and Social Benefits (PPSB), demonstrating that well-designed, inclusive experiences act as transformative catalysts. Overall, these findings confirm that TSTT’s core mechanisms—challenge, reflection, and empowerment—manifest differently depending on tourism context, providing evidence-based insights into enhancing female retention in sports participation.

Table 10. MGA groups between Adventure/Risk-Based (AR) and Wellness/Active Leisure (WAL)

	Orig AR	Orig WAL	Mean AR	Mean WAL	STDEV AR	STDEV WAL	t value AR	t value WAL	pvalue AR	pvalue WAL
IAG -> IM	0,160	0,187	0,164	0,197	0,062	0,095	2,596	1,962	0,009	0,050
IAG -> PEL	0,177	0,111	0,180	0,118	0,071	0,094	2,499	1,180	0,012	0,238
IAG > WSP2	0,161	0,064	0,165	0,069	0,056	0,075	2,862	0,853	0,004	0,394
IAG -> SS	0,178	0,299	0,180	0,304	0,058	0,076	3,084	3,920	0,002	0,000
IM -> WSP2	0,296	0,204	0,292	0,202	0,055	0,088	5,353	2,309	0,000	0,021
PEL -> IM	0,026	-0,066	0,025	-0,068	0,055	0,083	0,465	0,796	0,642	0,426
PPSB -> IM	0,131	0,121	0,129	0,126	0,068	0,099	1,931	1,220	0,054	0,222
PPSB>WSP2	-0,118	-0,127	-0,117	-0,128	0,056	0,080	2,108	1,583	0,035	0,113
QTE> IM	0,403	0,449	0,403	0,441	0,071	0,099	5,700	4,536	0,000	0,000
QTE>PEL	0,444	0,275	0,437	0,253	0,087	0,151	5,129	1,823	0,000	0,068
QTE>WSP2	0,464	0,394	0,458	0,384	0,062	0,085	7,451	4,647	0,000	0,000
QTE ->PSB	0,645	0,614	0,646	0,617	0,035	0,053	18,609	11,671	0,000	0,000



QTE -> SS	0,398	0,505	0,398	0,505	0,066	0,078	5,988	6,504	0,000	0,000
SS -> PEL	0,064	0,394	0,067	0,409	0,058	0,127	1,103	3,103	0,270	0,002
SS -> WSP2	0,116	0,364	0,120	0,370	0,044	0,072	2,662	5,064	0,008	0,000

The PLS-SEM mediation analysis highlights how psychological and relational processes shape women's sports participation (WSP), providing insight into Transformative Sport Tourism Theory (TSTT) mechanisms of challenge, reflection, and empowerment (Mirehie & Gibson, 2020; Mackenzie, 2020). Table 9 shows that Partial mediation is evident in pathways such as QTE → IM → WSP ( $O = 0.117$ ,  $p < 0.001$ ) and QTE → SS → WSP ( $O = 0.069$ ,  $p = 0.002$ ), where Quality of the Tourist Experience (QTE) influences participation both directly and indirectly via Intrinsic Motivation (IM) or Social Support (SS). This indicates that engaging, well-structured tourism experiences enhance empowerment and self-efficacy while relational support reinforces continued engagement (Doran, 2016; Apollo et al., 2023; Eime et al., 2020). Full mediation occurs in sequences such as IAG → SS → PEL → IM → WSP ( $O = 0.000$ ,  $p = 0.926$ ), suggesting that Identification with the Activity Group (IAG) exerts influence only through social and psychological intermediaries, emphasizing the centrality of group cohesion, social support, and perceived benefits (Ahmed et al., 2020; Castillo-Jiménez et al., 2022; Laird et al., 2016). Overall, these findings illustrate that TSTT operates differently depending on the context: adventure or wellness tourism shapes participation via motivational or relational pathways, respectively. By identifying these full and partial mediation pathways, the study clarifies how transformative experiences and supportive networks facilitate long-term retention in women's sports, directly addressing the research question regarding mechanisms of sustained engagement.

Table 11. Specific indirect effect

	Original sample (O)	Sample mean (M)	Standard deviation (STDEV)	T statistics	P values
QTE -> SS -> PEL	0,061	0,063	0,027	2,234	0,026
IAG -> IM -> WSP	0,047	0,047	0,016	2,973	0,003
QTE -> PPSB -> IM	0,080	0,080	0,036	2,258	0,024
QTE -> SS -> WSP	0,069	0,071	0,023	3,082	0,002
PEL -> IM -> WSP	-0,001	0,000	0,013	0,101	0,920
QTE -> PEL -> IM	-0,002	-0,001	0,019	0,099	0,921
QTE -> PPSB -> WSP	-0,077	-0,076	0,030	2,585	0,010
SS -> PEL -> IM	-0,001	-0,001	0,007	0,094	0,925
PPSB -> IM -> WSP	0,035	0,035	0,017	2,067	0,039
QTE -> IM -> WSP	0,117	0,115	0,022	5,340	0,000
IAG->SS->PEL->IM	0,000	0,000	0,002	0,091	0,927
IAG>SS>PEL>IM>WSP	0,000	0,000	0,000	0,093	0,926
IAG->PEL->IM->WSP	0,000	0,000	0,002	0,095	0,924
SS->PEL->IM->WSP	0,000	0,000	0,002	0,097	0,923
QTE->PEL->IM->WSP	-0,001	0,000	0,006	0,097	0,923
QTE->SS->PEL->IM	0,000	0,000	0,003	0,090	0,928
QTE->PPSB>IM->WSP	0,022	0,022	0,011	2,035	0,042
IAG -> SS -> PEL	0,030	0,031	0,014	2,172	0,030
IAG -> SS -> WSP	0,034	0,035	0,012	2,850	0,004
QTE>SS>PEL>IM>WSP	0,000	0,000	0,001	0,094	0,925
IAG->PEL->IM	-0,001	-0,001	0,008	0,095	0,925

## Discussion

This study advances the understanding of how transformative sports tourism experiences contribute to women's empowerment and long-term retention in sports practice, going beyond prior literature by integrating multiple mechanisms—*intrinsic motivation (IM)*, *identification with the activity group (IAG)*, *social support (SS)*, *physical, psychological, and social benefits (PPSB)*, *quality of the tourism experience (QTE)*, and *prior empowerment level (PEL)*—into a single empirically tested model. While previous studies have largely explored these factors in isolation (Eime et al., 2020; Toffoletti, 2017; Wu et al., 2024), this research demonstrates how these variables interact synergistically, providing a comprehensive explanation for sustained sports engagement.

Using composite scale means derived from the data and applying a binary threshold ( $1-5 = 0$ ;  $6-10 = 1$ ) directly strengthens the response to the research question—how women's sports tourism contributes to empowerment and retention—by shifting the analysis from explanation to probabilistic prediction of

permanence. Through logistic regression, constructs such as intrinsic motivation (IM), quality of experience (QTE), and social support (SS) are transformed into estimated probabilities of sustained sports practice, thereby operationalizing empowerment as a measurable behavioral outcome.

Critically, prior research in sports and tourism has largely emphasized statistical significance without translating results into predicted probabilities, limiting practical applicability. Moreover, the conventional 0.5 cutoff point, while widely used, may not always be optimal under conditions of class imbalance or contextual variability, potentially biasing retention estimates (Hosmer et al., 2013). Additionally, logistic models rely on assumptions such as adequate sample size and limited multicollinearity, which may constrain interpretation in complex psychosocial settings (Menard, 2010).

Thus, this study advances the field by integrating explanatory and predictive approaches, although careful calibration of thresholds and validation remains essential.

The structural model explains over 57% of the variance in retention (WSP), confirming that women's participation is shaped by an interconnected system of psychological, social, and experiential factors (Hair et al., 2013).  $Q^2$  predict values further establish the model's predictive relevance, indicating that these mechanisms can reliably forecast women's continued sports practice beyond the sample, a contribution rarely addressed in prior tourism and sport retention research (Henseler et al., 2015).

The results underscore the central role of experience quality as a transformative catalyst. Hypothesis H6 (QTE → PPSB,  $T = 22.080$ ) and H8 (QTE → WSP,  $T = 9.093$ ) confirm that well-structured, gender-sensitive tourism experiences generate multidimensional benefits and directly reinforce retention (Saidon et al., 2024; Zhao et al., 2023; Lee et al., 2024). Previous studies have acknowledged experience quality as a facilitator of satisfaction or engagement (Mirehie & Gibson, 2020; Mackenzie, 2020), but this study explicitly demonstrates its dual-pathway effect, simultaneously producing physical, psychological, and social gains while directly strengthening participation continuity. This empirical evidence advances TSTT by highlighting the transformative potential embedded in well-designed tourism experiences rather than treating participation outcomes as linear or isolated.

Full and partial mediation analyses reveal additional contributions. For example, QTE → PPSB → IM → WSP and IAG → SS → WSP illustrate cascading mechanisms where experiences foster social, cognitive, and emotional resources that reinforce retention and empowerment (Eime et al., 2020; Thorpe & Olive, 2016; Ahmed et al., 2020). Prior literature has noted mediating effects of social support or motivation (Cazenave et al., 2007; Castillo-Jiménez et al., 2022), but this study systematically integrates multiple mediators, showing how synergistic effects enhance transformation and highlighting latent pathways that may only emerge under specific experiential conditions.

The MGA analysis between Adventure/Risk-Based (AR) and Wellness/Active Leisure (WAL) contexts provides further novel insights. In AR contexts, IAG exerts stronger effects on IM and WSP2, indicating that challenge and risk amplify group cohesion and intrinsic motivation. Conversely, in WAL experiences, SS has a stronger influence on retention, reflecting the relational and supportive nature of wellness tourism (Ali et al., 2025; Apollo et al., 2023; Doran, 2016). These findings demonstrate that transformative mechanisms are context-sensitive, revealing modality-specific pathways to empowerment that prior studies have rarely quantified (Miller & Cave, 2025; Liddelow et al., 2025).

The study also clarifies the distinction and interplay between empowerment and retention. IM strengthens habit internalization, PPSB translates quality experiences into perceived self-efficacy, and SS buffers structural and psychological barriers (Eynon et al., 2019; Holland-Smith, 2017; Willinger et al., 2021). This nuanced understanding extends TSTT by illustrating that sustained engagement emerges not solely from individual motivation but from multi-level psychological, social, and experiential interactions.

Practically, the findings guide tourism operators to design experiences that maximize empowerment and retention: enhancing experience quality, facilitating group identification, and fostering supportive social networks tailored to tourism modality. Theoretically, the research advances TSTT by empirically demonstrating how transformative tourism experiences operationalize empowerment, translating episodic participation into long-term sports identity, resilience, and sustained behavior.

This study contributes to literature by offering an integrated, empirically validated model, revealing cascading and context-specific mechanisms, highlighting the dual-pathway role of experience quality,

and demonstrating how TSTT can guide both theoretical development and practical interventions to support women's empowerment and long-term engagement in sports.

## Conclusions

This study demonstrates that transformative sports tourism experiences generate multi-layered empowerment processes for women, integrating psychological, social, and experiential dimensions. Beyond retention, these experiences reshape self-perception, social identity, and motivation, highlighting how extraordinary tourism activities function as catalysts for sustained behavioral change, fostering autonomy, resilience, and social capital in women's sports participation.

### *Theoretical Conclusions*

The findings reveal that empowerment in women's sports participation emerges from the interplay between intrinsic motivation, social support, group identification, and experiential quality. Unlike previous studies that considered these factors in isolation, this research demonstrates a holistic mechanism, whereby social and psychological processes interact dynamically to produce long-term retention. This supports TSTT's proposition that transformative experiences operate as multi-level catalysts, translating episodic tourism activities into enduring personal and social transformation (Toffoletti, 2017; Zhang et al., 2024; Wu et al., 2024).

The differential impacts of Adventure/Risk-Based versus Wellness/Active Leisure modalities confirm that context shapes the pathways to empowerment and retention. In risk-based contexts, challenge and group cohesion amplify intrinsic motivation, whereas in wellness-oriented tourism, relational support predominates. This insight extends TSTT by demonstrating that transformative outcomes are not universally fixed but context-dependent, emphasizing the importance of aligning experiential design with activity characteristics to maximize empowerment (Ali et al., 2025; Miller & Cave, 2025).

Experience quality functions both as a direct driver of retention and as an indirect generator of multidimensional benefits. This dual role highlights a synergistic mechanism previously underexplored: high-quality, professional, and inclusive experiences create immediate confidence, safety, and satisfaction while simultaneously enhancing long-term psychological, physical, and social resources. Theoretically, this finding advances TSTT by demonstrating how structured experiences operationalize empowerment, linking perceived excellence with sustained behavioral transformation (Saidon et al., 2024; Lee et al., 2024).

### *Managerial Practices*

Managers should tailor sports tourism experiences to the modality-specific drivers of empowerment. For Adventure/Risk-Based activities, strategies should emphasize group cohesion, challenge framing, and intrinsic motivation enhancement, such as structured skill progression and collaborative risk-based exercises. For Wellness/Active Leisure experiences, operators should prioritize relational and supportive features, including mentoring, social networking opportunities, and cooperative goal-setting. This approach ensures that tourism interventions leverage the contextual factors that most strongly sustain long-term participation (Apollo et al., 2023; Doran, 2016).

Investing in both technical and relational aspects of experience quality is essential. Technical dimensions, such as expert guidance, safety protocols, and equipment, must combine with relational factors, including empathy, inclusivity, and gender sensitivity. Managers should focus on creating experiences that generate immediate satisfaction and lasting self-efficacy, enabling women to internalize participation as a stable habit. Furthermore, structured reflection sessions and debriefings can enhance the cognitive integration of the experience, transforming episodic participation into long-term behavioral change and empowerment (Mirehie & Gibson, 2020; Zhao et al., 2023).

Future research could explore the role of digital and hybrid sports tourism experiences in fostering empowerment and retention, analyzing how virtual or augmented reality interventions enhance social identification, intrinsic motivation, and experiential quality, potentially extending TSTT into technology-mediated contexts that create transformative outcomes beyond traditional in-person tourism activities.



## Future Research Directions

Future research could explore the role of digital and hybrid sports tourism experiences in fostering empowerment and retention, analyzing how virtual or augmented reality interventions enhance social identification, intrinsic motivation, and experiential quality, potentially extending TSTT into technology-mediated contexts that create transformative outcomes beyond traditional in-person tourism activities.

## Limitations

The study does not address cultural variability in perceptions of empowerment, which may influence social support dynamics, intrinsic motivation, and group identification, potentially affecting the generalizability of findings across diverse sociocultural contexts.

A key methodological limitation concerns the provenance of the data, as all information was provided by hotel employees acting as key informants rather than by the women participants themselves. Although employees possess valuable professional insight, their evaluations rely on indirect impressions, shaped by interaction frequency, client feedback, and observational cues within the tourism setting. This may introduce informant bias, selective recall, and limited visibility of long term behavioral outcomes. Additionally, relying on a single informant type restricts triangulation, reducing the capacity to validate perceptions against objective or participant reported retention measures.

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