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ORIGINAL ARTICLE

Examining the Impact of Motivational Factors on Sports Participation Among Individuals with a disability

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Abstract: This quantitative study employed Partial Least Squares Structural Equation Modeling to examine the complex relationships between six motivational dimensions and sports participation among individuals with a disability. The research involved 150 Iranian individuals with a disability stratified by disability type, including deaf individuals, blind or visually impaired individuals, individuals with limb amputations or impairments, and those with other physical disabilities. Data collection utilized an adapted 26-item Sport Motivation Scale (SMS-II) administered through an online questionnaire platform with comprehensive accessibility support for participants who required additional support. Through rigorous analysis, the path analysis revealed that motivational dimensions interact in hierarchical patterns, with intrinsic motivation serving as the dominant driver of participation, followed by identified regulation, introjected regulation, and integrated regulation. The findings demonstrate that individuals with a disability operate under distinct motivational dynamics compared to populations without a disability, where autonomous and internalized forms of motivation substantially outweigh external incentives or controls. This research contributes nuanced understanding of how psychological motivation functions as a critical mechanism influencing athletic engagement, revealing that individuals with a disability respond most favorably to motivational strategies emphasizing genuine interest, personal relevance, social support, and identity integration rather than external rewards or compliance mechanisms.

Keywords: individuals with a disability, Intrinsic motivation, Motivational factors, Sports participation, Structural Equation Modeling.

Highlights

- Intrinsic motivation is the strongest predictor of sports participation among disabled individuals.



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- Autonomous and internalized forms of motivation substantially outweigh external incentives.
 - Amotivation represents a critical barrier to sustained athletic engagement in disabled populations.

Introduction

Sport represents a fundamental human activity that extends far beyond recreation, functioning as a gateway to cultural awareness, personal growth, and social integration (Varmus et al., 2021). Throughout human history, sport has served as a universal mechanism for developing physical capability, mental resilience, and meaningful social connections that enable individuals to achieve their fullest potential (Selviani et al., 2024; Anarbayev et al., 2021). Beyond individual benefits, sport plays a vital role in societal development, fostering essential life competencies such as discipline, teamwork, and goal-setting, while simultaneously providing constructive outlets and pathways for personal empowerment and positive behavioral development (Mukhopadhyay et al., 2022).

Regular sport participation yields substantial physical health improvements, including reduced cardiovascular disease risk, effective weight management, and enhanced musculoskeletal strength and functional capacity (Martín-Rodríguez et al., 2024). Simultaneously, the mental health benefits prove equally significant, with research demonstrating marked reductions in stress and depression, improved cognitive function, and substantially elevated self-esteem (Arsović et al., 2020). These psychological improvements are underpinned by neurochemical changes that facilitate emotional regulation and enhance social interaction capabilities (Fossati et al., 2021).

While sport offers considerable benefits to the general population, its significance becomes particularly pronounced for people with disabilities. For this population, sport transcends the role of recreation or general health promotion, instead functioning as a transformative agent that addresses rehabilitation, personal development, and social integration simultaneously (Obradović et al., 2021). Research consistently demonstrates that sport participation enables individuals with disabilities to overcome substantial physical, psychological, and social barriers that typically limit their quality of life and full societal engagement. The multidimensional benefits manifest across complementary dimensions: physically, through improved strength, coordination, endurance, and cardiovascular capacity; psychologically, through enhanced optimism, self-discipline, competitive drive, and personal autonomy; and socially, through the development of meaningful relationships, community integration, and reconstruction of personal identity and self-perception (E. Stangova et al., 2022; Mîndrescu et al., 2022).

However, a significant participation gap persists between individuals with disabilities and their counterparts without a disability. Sport England research reveals that children with disabilities consistently demonstrate substantially lower participation rates than peers without a disability, with adults with disabilities visiting natural recreational areas approximately 50% less frequently despite reporting similar interests in physical activity (Nhamo & Sibanda, 2019). Notably, participation patterns vary considerably within the disability community itself, determined

substantially by individual support requirements and disability classification. Individuals with lower support needs exhibit participation levels comparable to populations without a disability, whereas those requiring high to very high support experience markedly diminished participation. Support needs level emerges as the most significant predictor of participation likelihood, superseding disability type as a determining factor (Darcy, Lock & Taylor, 2017). Individuals with learning disabilities and profound multiple disabilities face the most substantial participation barriers and consequently show the lowest engagement rates (Nhamo & Sibanda, 2019).

This participation disparity stems from multifaceted systemic obstacles that extend beyond individual capacity. Critical barriers include inadequate infrastructure characterized by inaccessible facilities, transportation difficulties particularly affecting wheelchair users and individuals with visual impairments, economic constraints limiting access to equipment and participation fees, and insufficient community support including inadequately trained personnel (Jaarsma et al., 2014). Equipment requirements present especially significant challenges for wheelchair users who depend on specialized adaptive apparatus (Darcy et al., 2017). Importantly, research indicates these obstacles are not insurmountable; when individuals with disabilities do participate in sports despite these barriers, they experience substantial quality-of-life improvements, markedly enhanced self-esteem, and strengthened social connections (Yazıcıoğlu et al., 2012). The psychological and social benefits prove particularly significant, encompassing feelings of belonging, genuine companionship, and personal achievement (Darcy et al., 2013). This pattern suggests that elevated participation rates occur when barriers are systematically reduced and quality experiences are actively facilitated, indicating that lower participation rates reflect addressable environmental and organizational obstacles rather than inherent limitations of individuals with disabilities (Nhamo & Sibanda, 2019).

This participation disparity stems from multifaceted systemic obstacles that extend beyond individual capacity. Critical barriers include inadequate infrastructure characterized by inaccessible facilities, transportation difficulties particularly affecting wheelchair users and individuals with visual impairments, economic constraints limiting access to equipment and participation fees, and insufficient community support including inadequately trained personnel (Edmore Nhamo et al., 2021; S. Darcy et al., 2017; Eva A. Jaarsma et al., 2014). Equipment requirements present especially significant challenges for wheelchair users who depend on specialized adaptive apparatus (S. Darcy et al., 2017). Importantly, research indicates these obstacles are not insurmountable; when individuals with disabilities do participate in sports despite these barriers, they experience substantial quality-of-life improvements, markedly enhanced self-esteem, and strengthened social connections (K. Yazıcıoğlu et al., 2012; S. Scarpa et al., 2011). The psychological and social benefits prove particularly significant, encompassing feelings of belonging, genuine companionship, and personal achievement (S. Darcy et al., 2013). This pattern suggests that elevated participation rates occur when barriers are systematically reduced and quality experiences are actively facilitated, indicating that lower participation rates reflect

addressable environmental and organizational obstacles rather than inherent limitations of individuals with disabilities (Edmore Nhamo et al., 2021).

Understanding the motivational underpinnings of sports participation is essential to addressing this engagement gap. Motivation, defined as the inner psychological force that drives individuals to take action toward achieving their goals, represents a fundamental determinant of all human activity, including sports participation (Buzdar et al., 2024). In the sports context, motivation functions as the foundational element upon which all athletic achievement depends, operating as a complex, multidimensional process that determines success across all developmental stages. Research demonstrates that without an athlete's desire and determination to progress, other psychological and physical factors—including confidence, strength, and technical focus—become substantially diminished in their effectiveness (Pandey, 2024). Motivation operates through two primary psychological mechanisms that influence how individuals engage in sports: intrinsic motivation, which arises from internal satisfaction and natural enjoyment of the sport itself, and extrinsic motivation, which stems from external rewards, recognition, competitive achievement, and material incentives (Hennessey et al., 2015). Intrinsic motivation reflects the natural human drive toward learning, exploration, and personal growth without external pressure, characterizing activities undertaken because they are inherently satisfying and meaningful (Azid et al., 2023). Conversely, extrinsic motivation encompasses activities undertaken to obtain external rewards or avoid negative consequences, often involving tangible incentives, social recognition, or achievement of specific outcomes (Hennessey et al., 2015).

Motivation is not a static attribute but rather a dynamic formation that evolves throughout an individual's athletic career and actualizes through interaction with situational factors including task complexity, perceived success probability, and environmental conditions (Panchuk et al., 2024). Research reveals a distinct progression across athletic development stages: initial participation phases demonstrate multiple motivational drivers including intrinsic motivation, team belonging, health consciousness, and competitive aspirations, with intrinsic and winning motivations proving most significant. However, motivational profiles shift substantially as athletes progress, with continuation of participation increasingly dependent upon intrinsic motivation, team affiliation, and competitive achievement (Orbach et al., 2021). This dynamic shift underscores that sustaining long-term sports engagement requires understanding not only what initially attracts individuals to sport but also what maintains their commitment through progressive athletic development (Panchuk et al., 2024). When intrinsic and extrinsic motivations complement one another effectively, they produce optimal outcomes, suggesting that understanding the interplay between these motivational forces is crucial for promoting sustained participation (Pandey & Awasthi, 2024).

Emerging research has established that motivation represents a critical determinant of sports participation outcomes among individuals with a disability, with substantial evidence demonstrating that motivational profiles vary significantly based on disability type, competitive

level, and demographic characteristics. Studies examining motivational patterns across different disability categories reveal that Kızır et al., (2021); Yılmaz et al., (2020) physically athletes with a disability consistently demonstrate higher intrinsic and extrinsic motivation scores compared to visually impaired and hearing impaired athletes, with these differences remaining statistically significant across national, provincial, and international competitive levels. Furthermore, Zar et al., (2022) personality factors including adaptability, extraversion, neuroticism, and duty orientation show significant correlations with sports performance across all competitive levels, suggesting that motivational capacity is deeply intertwined with individual psychological characteristics. Research employing self-determination theory and qualitative methodologies has Balls et al., 2020 identified that primary and secondary educational settings function as particularly influential environments for developing sustained sports interest and establishing foundational motivation among individuals with disabilities. Additionally, D'Isanto, (2020) targeted, disability-specific training interventions have demonstrated substantial performance improvements among athletes with a disability compared to able-bodied counterparts receiving conventional training, indicating that motivation combined with appropriate support structures produces measurable athletic outcomes. However, existing literature emphasizes that Tüzer & Demirel, (2020); Bastık et al., (2023) motivation for individuals with disabilities extends beyond athletic performance to encompass broader psychosocial benefits, including enhanced self-perception, increased life expectancy through emotional and physical engagement, and strengthened emotional resilience. Importantly, Kızır et al., (2021); Pochstein, (2023) research has identified significant variability in motivation based on educational attainment and economic status, with athletes having primary education and lower economic status demonstrating higher motivational scores, while also highlighting that coaching vision, commitment, and trainer preparation remain critical organizational factors affecting sustained participation.

While considerable progress has been made in understanding motivational processes among individuals with a disability, research gaps remain regarding how different motivational regulation types influence sports participation decisions among this population. Limited research has examined the full spectrum of motivational factors specifically within populations with a disability and across diverse disability categories. This analysis therefore examines the motivational factors affecting sports participation among individuals with a disability, seeking to provide comprehensive insights that inform evidence-based interventions and inclusive sports policies.

Methodology

Participants. The statistical population comprises all Iranian individuals with a disability aged 18 to 65 years who are registered in specialized sports clubs and rehabilitation centers across the country. The statistical sample was selected using stratified random sampling based on disability type to ensure adequate representation across different groups. According to Houman's (2005) recommendation that structural equation modeling requires a minimum of 5 to 15 observations per

variable, the minimum required sample size was estimated at 130 participants (5×26 items). The actual sample size of 150 participants exceeded this minimum threshold, providing adequate statistical power for analysis.

The final sample ($N=150$) comprised deaf individuals ($n=25$), blind or visually impaired individuals ($n=38$), individuals with limb amputations or impairments ($n=42$), and individuals with other physical disabilities including spinal cord injuries ($n=45$). The stratified random sampling approach ensured proportional representation of each disability category across geographic regions and sports clubs, thereby enabling comparative analysis across different disability groups and enhancing the generalizability of findings to the broader population of Iranian individuals with a disability. Participants met the following inclusion criteria: (1) a minimum of one year of regular participation in sports activities, and (2) voluntary willingness to participate in the research.

Instruments The data collection instrument was the Sport Motivation Scale (SMS-II) from Pelletier et al. (2013), which was adapted to align with the research context and the specific experiences of individuals with a disability. The adaptation process involved: (1) obtaining input from five academic experts in the field of sport psychology; (2) consultation with three experienced practitioners working directly with individuals with a disability to ensure cultural and contextual relevance; and (3) cognitive interviews with four representative participants from each disability category to assess comprehension and clarity. Based on expert opinions and calculation of the Content Validity Ratio (CVR), items with coefficients below 0.60 were eliminated, and two items were reworded for enhanced clarity based on participant feedback. This process resulted in a final questionnaire comprising 26 items.

Procedure. This research employs a descriptive-survey methodology to analyze motivational factors affecting sports participation among individuals with a disability. Data collection was conducted over a two-month period through an online questionnaire platform. Participants accessed the questionnaire via a shared link to an online form and completed it independently when possible. To ensure accessibility and valid response collection across all disability types, a dedicated telephone support line was available throughout the data collection period to provide real-time guidance, answer clarification questions, and assist participants who encountered difficulties. For deaf individuals, family members proficient in sign language provided support to facilitate comprehension of items. For blind and visually impaired individuals, family members and telephone interviews were utilized when participants required assistance in completing the questionnaire.

Analysis. Prior to selecting the appropriate analytical method, the normality of data distribution was assessed using the Kolmogorov-Smirnov test, which revealed that the assumption of normal distribution was not supported. Given the presence of latent variables in the conceptual research model, the violation of the normality assumption, and the diverse sample composition, Partial Least Squares Structural Equation Modeling (PLS-SEM) was employed for data analysis. This method was preferred over covariance-based approaches as it utilizes a component-based approach

and is more suitable for analyzing non-normally distributed data, relatively smaller sample sizes, situations involving multicollinearity among variables, and heterogeneous populations.

To ensure the effectiveness and quality of the combined 26-item questionnaire, its validity was rigorously evaluated through three indicators: cross-loadings of items, convergent validity (Average Variance Extracted, $AVE \geq 0.50$), and discriminant validity (Fornell-Larcker criterion). Additionally, the reliability of the questionnaire was assessed and confirmed through calculation of composite reliability ($CR \geq 0.70$) and Cronbach's alpha coefficient ($\alpha \geq 0.70$) for each construct. All statistical analyses and evaluations of the measurement model and structural model were conducted using SmartPLS version 3 software.

Results

Measurement Model Assessment

Table 1 displays the Average Variance Extracted (AVE), Composite Reliability (CR), and Cronbach's Alpha values.

Table 1. Average Variance Extracted, Composite Reliability, and Cronbach's Alpha Indices

Research Variables	Cronbach's Alpha	Composite Reliability	Average Variance Extracted
Amotivation	0.838	0.903	0.756
External Regulation	0.778	0.870	0.692
Identified Regulation	0.887	0.930	0.815
Integrated Regulation	0.859	0.914	0.781
Intrinsic Motivation	0.918	0.948	0.859
Introjected Regulation	0.892	0.933	0.823
Motivational Factors	0.834	0.903	0.757
Sports Participation	0.892	0.920	0.700

During the following stage, item factor loadings were assessed. The analysis revealed that all loadings met acceptable criteria, with findings displayed in Table 2.

Table 2. Factor Loadings of Items

	Motivatio nal Factors	Amotivation	Introjected Regulation	External Regulation	Intrinsic Motivation	Integrated Regulation	Identified Regulation	Sports Participation
Q01	0.860							
Q02	0.863							
Q03	0.774							

Q0	0.805			
4				
Q0	0.896			
5				
Q0	0.887			
6				
00		0.890		
7				
Q0		0.882		
8				
Q0		0.707		
9				
Q1			0.943	
0				
Q11			0.846	
Q1			0.883	
2				
Q1			0.916	
3				
Q1			0.919	
4				
Q1			0.909	
5				
Q1				0.920
6				
Q1				0.946
7				
Q1				0.917
8				
Q1				0.883
9				
Q2				0.907
0				
Q2				0.914
1				
Q2				0.848
2				

Q2 3	0.876
Q2 4	0.884
Q2 5	0.824
Q2 6	0.763

As part of the ongoing measurement model evaluation, cross-validation procedures were conducted, with findings reported in Table 3. A key metric for assessing model adequacy is the cross-validated redundancy index (Q^2) for unobserved variables. Positive Q^2 values for these latent constructs confirm satisfactory measurement model quality.

Table 3. Index of Construct Cross validity

	SSO	SSE	Q
Amotivation	750.000	556.077	0.298
External Regulation	750.000	649.367	0.180
Identified Regulation	750.000	514.197	0.351
Integrated Regulation	750.000	423.764	0.465
Intrinsic Motivation	750.000	489.621	0.382
Introjected Regulation	750.000	562.601	0.290
Motivational Factors	750.000	792.000	
Sports Participation	1,250.000	532.449	0.597

Results demonstrated that Q^2 values for every latent variable were positive, validating the measurement instrument's satisfactory quality.

To further assess the model, discriminant validity was investigated by contrasting how constructs relate to their own indicators compared to other constructs within the model. The Fornell-Larcker matrix served as the analytical tool for this assessment in PLS-SEM.

Table 4. Loadings and Cross Loadings

	1	2	3	4	5	6	7	8
Amotivation	0.893							
External Regulation	0.695	0.946						
Identified Regulation	0.814	0.823	0.900					

Integrated Regulation	0.761	0.552	0.591	0.913				
Intrinsic Motivation	0.805	0.554	0.661	0.814	0.869			
Introjected Regulation	0.836	0.742	0.792	0.631	0.756	0.852		
Motivational Factors	0.671	0.485	0.556	0.769	0.780	0.671	0.821	
Sports Participation	0.776	0.566	0.672	0.717	0.797	0.711	0.606	0.901

Analysis of this matrix demonstrated that the square root of Average Variance Extracted (\sqrt{AVE}) for each construct exceeded its correlations with all other constructs, thereby confirming adequate discriminant validity of the measurement model.

Table 5 displays the Heterotrait-Monotrait Ratio (HTMT) results, which satisfy the standards established by Henseler, Ringle, and Sarstedt (2015). Notably, all variables remained below the 0.85 threshold (Raza, Qazi, & Umer, 2016).

Table 5. Correlation Matrix

	1	2	3	4	5	6	7	8
Amotivation								
External Regulation	0.807							
Identified Regulation	0.840	0.599						
Integrated Regulation	0.716	0.605	0.648					
Intrinsic Motivation	0.789	0.835	0.730	0.811				
Introjected Regulation	0.779	0.534	0.821	0.737	0.785			
Motivational Factors	0.846	0.620	0.626	0.779	0.800	0.801		
Sports Participation	0.785	0.701	0.745	0.810	0.795	0.839	0.696	

A critical assumption underlying structural model analysis is the absence of multicollinearity among latent variables. This index is employed to verify the absence of multicollinearity among

the research variables. VIF (Variance Inflation Factor) values below 5 indicate that multicollinearity is not problematic.

Table 6. Result of VIF

Research Variables	VIF	Result
Amotivation	2.400	Acceptable
External Regulation	1.000	Acceptable
Identified Regulation	1.000	Acceptable
Integrated Regulation	1.000	Acceptable
Intrinsic Motivation	1.000	Acceptable
Introjected Regulation	1.000	Acceptable
Motivational Factors	1.000	Acceptable

Structural Model Analysis

After measurement model analysis was finalized, the research advanced to structural model assessment. The structural component delineates inter-relationships among latent constructs. The study's conceptual model is depicted in Figure 1, where pathway numbers denote standardized regression coefficients obtained from variable analyses.

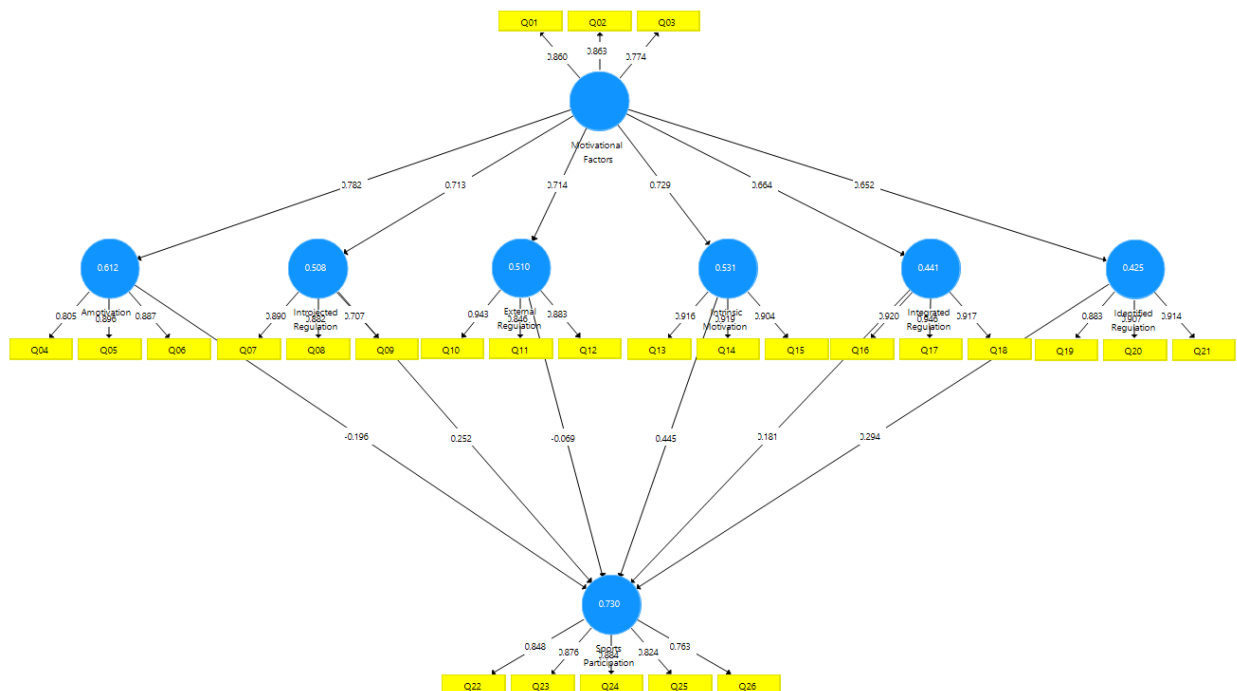


Figure 1. Path Coefficients

Within PLS-SEM software, the t-statistic functions as the key metric for determining whether variables significantly influence one another, forming the basis for hypothesis acceptance or rejection. Based on standard thresholds, t-statistic values greater than 1.96 confirm hypotheses at the 95% confidence level, whereas values exceeding 2.58 validate hypotheses at the 99% confidence level. Put differently, t-statistics above 1.96 demonstrate statistical significance at the 0.05 level, while those above 2.58 indicate significance at the 0.01 level.

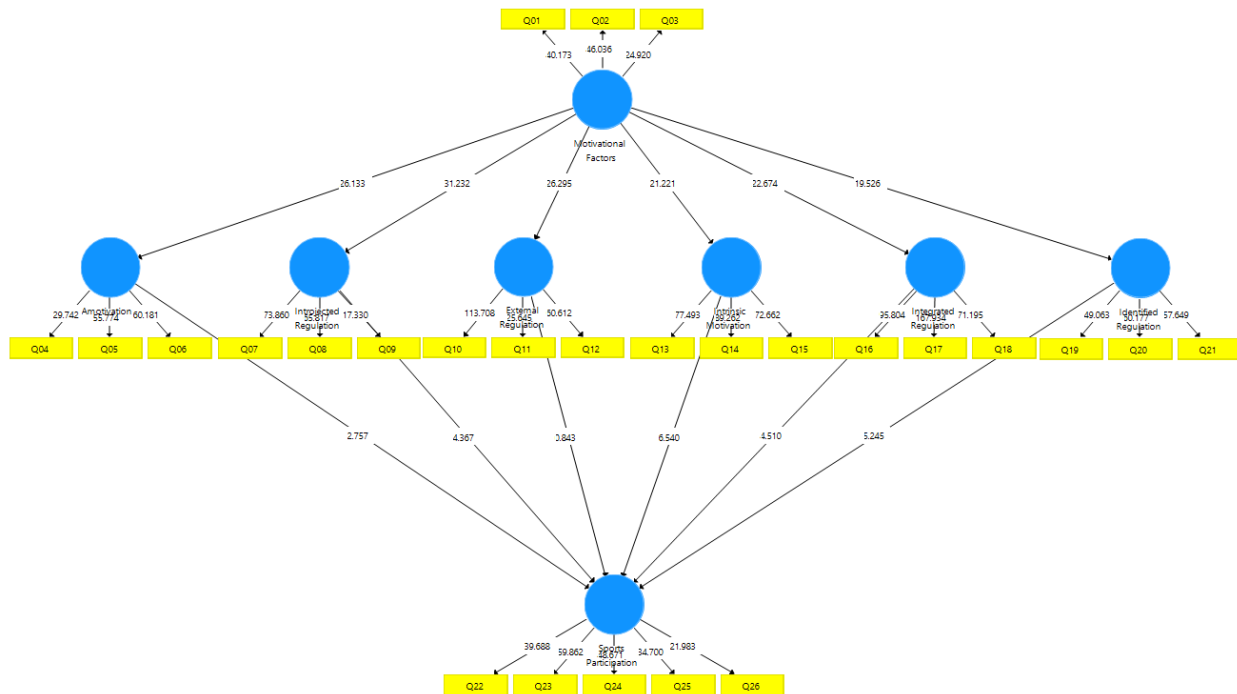


Figure 2. t-statistic Values for Assessing the Significance of Path Coefficients and Factor Loadings

Table 6 presents the results of the structural model analysis. This table includes the path coefficient value, standard deviation, t-statistic value, and significance level for each of the paths in the model.

Table 7. Path Coefficients and t-test of the Structural Model

Research Variables	Path Coefficient	S. D	T-statistic	Sig.
Amotivation → Sports Participation	-0.196	0.071	2.757	0.006
External Regulation → Sports Participation	-0.069	0.082	0.843	0.400
Identified Regulation → Sports Participation	0.294	0.056	5.245	0.001

Integrated Regulation → Sports Participation	0.181	0.040	4.510	0.001
Intrinsic Motivation → Sports Participation	0.445	0.068	6.540	0.001
Introjected Regulation → Sports Participation	0.252	0.058	4.376	0.001

Based on the path analysis results, five of the six motivational dimensions demonstrated statistically significant effects on sports participation among individuals with a disability. Intrinsic motivation exhibited the strongest influence on sports participation with a path coefficient of 0.445 and a t-statistic of 6.540 ($p=0.001$), underscoring the critical importance of enjoyment and genuine interest in sport. Identified regulation ranked second with a coefficient of 0.294 and a t-statistic of 5.245 ($p=0.001$), followed by introjected regulation ($\beta=0.252$, $t=4.376$, $p=0.001$) in third place. Integrated regulation also demonstrated a substantial effect with a coefficient of 0.181 and a t-statistic of 4.510 ($p=0.001$). Notably, amotivation exerted a significant negative effect on sports participation ($\beta=-0.196$, $t=2.757$, $p=0.006$), indicating that lack of motivation substantially diminishes athletic engagement among individuals with a disability. In contrast, external regulation ($\beta=-0.069$, $t=0.843$, $p=0.400$) did not demonstrate a statistically significant effect on participation, as the t-statistic fell below the critical threshold of 1.96.

R^2 is a key criterion in structural equation modeling and the PLS method that measures the predictive power of exogenous independent variables on endogenous dependent variables. This criterion, which ranges from zero to one, is used to assess the fit of the structural model, and the higher its value for endogenous constructs, the better the model fit. Values above 0.19 are considered acceptable, while lower values are regarded as weak.

Table 8. Result of R^2

Research Variables	R^2	R^2 Adjusted
Amotivation	0.417	0.415
External Regulation	0.280	0.277
Identified Regulation	0.455	0.453
Integrated Regulation	0.635	0.633
Intrinsic Motivation	0.470	0.468
Introjected Regulation	0.373	0.371
Sports Participation	0.924	0.923

Based on the results presented in Table 11, the R^2 values for all research variables fall within the acceptable range (above 0.19), indicating adequate explanatory power of the independent variables relative to the dependent variables.

The SRMR and NFI indices are among the important criteria for assessing model fit in structural equation modeling. The SRMR (Standardized Root Mean Square Residual), which ranges from 0 to 1, indicates better model fit as it approaches zero; for models with adequate fit, it should be below 0.05, although values below 0.08 are also considered acceptable. Additionally, the NFI (also known as the Bentler-Bonett Index) is acceptable for values above 0.8 and indicates desirable model fit. These two indices, in a complementary manner, provide a comprehensive evaluation of the quality and accuracy of the structural model.

Table 8. Result of SRMR and NFI

Index	Value	Result
SRMR	0.056	Acceptable
NFI	0854	Acceptable

Conclusion

This study examined the impact of six motivational factors on sports participation among individuals with a disability, using path analysis to determine which dimensions of motivation most significantly influence athletic engagement in this population. The findings revealed a complex motivational landscape, with five of the six motivational dimensions demonstrating statistically significant effects on sports participation.

Intrinsic motivation emerged as the strongest predictor of sports participation among individuals with a disability. This dominant effect indicates that enjoyment, genuine interest, and inherent satisfaction derived from sports are the most powerful influences on athletic participation. Individuals with a disability are primarily motivated to engage in sports because they find the activity itself rewarding and personally meaningful, rather than through external incentives or obligatory factors. This finding demonstrates that when individuals with a disability experience genuine pleasure and satisfaction from sports activities, they are significantly more likely to maintain consistent participation. The power of intrinsic motivation in this context suggests that the inherent rewards of sports—such as the thrill of competition, the joy of skill development, and the satisfaction of personal achievement—resonate particularly strongly with this population. Bozkurt et al. (2019) found that the motivation of physically, auditory and visually impaired individuals to participate in sports was high in the intrinsic motivation sub-dimension and that the intrinsic motivations of national athletes were significantly higher. Tüzer et al. (2024) also confirmed significant differences in motivation levels among individuals with a disability, noting that female participants were found to have higher levels of both internal and external motivation compared to males and that intrinsic motivation showed positive correlations with sustained participation.

Identified regulation demonstrated the second-strongest influence on sports participation. This finding suggests that individuals with a disability are significantly motivated when they recognize and value the personal relevance and benefits of sports participation. When individuals understand how sports participation aligns with their personal goals, physical health, or broader life aspirations, they are more likely to engage in athletic activities. This internalized form of motivation reflects a conscious recognition of the value of sports, demonstrating that cognitive awareness of sports benefits plays an important role in sustaining participation. For individuals with a disability, this may include recognizing how sports participation contributes to physical rehabilitation, improved mental health, enhanced social connections, or increased independence. The substantial effect size suggests that helping individuals understand these personal benefits is a valuable intervention strategy. Tüzer et al., 2024 emphasizes that targeted interventions can address motivational barriers, highlighting the importance of comprehensive regulatory approaches to promoting sports participation among individuals with a disability. Additionally, Cottingham et al. (2023) found that individuals' motivations included "physical and mental health, self-reliance, independence, and athletic competition," further confirming that individuals with a disability are significantly motivated when they understand how sports align with their personal goals and broader life aspirations, whether for rehabilitation, social connections, or enhanced independence.

Introjected regulation ranked third in its influence on sports participation. This dimension of motivation, characterized by participation driven by internalized social pressures and the desire to avoid guilt or shame, still demonstrated a statistically significant and substantial effect on participation. While less powerful than intrinsic and identified motivations, introjected regulation suggests that individuals with a disability are substantially influenced by social expectations and the internalization of external demands. For individuals with a disability, this may manifest as participation motivated by not wanting to disappoint family members, desiring to prove their capabilities to others, or seeking social acceptance within sports communities. The significant effect demonstrates that the desire to maintain a positive social image and meet perceived social expectations remains an important factor in sports engagement, even among individuals who may face additional societal pressures related to disability stigma. Jurate Pozeriene et al. (2008) found that meeting friends and social group belonging were important motivators, noting that sports activity provides ample opportunities for individuals with a disability to interact with others. Shirazipour et al (2018) specifically noted that group-based programming can foster a sense of belongingness, while (Tara Joy Knibbe et al., (2017) emphasized that supportive social environments play a critical role in promoting health and well-being for young people with disabilities.

Findings show integrated regulation contributed significantly to sports participation. This form of motivation reflects the harmonious integration of sports participation into an individual's core sense of self and personal values. The positive effect of integrated regulation indicates that when sports become aligned with an individual's identity and broader life philosophy, meaningful and

sustained engagement follows. Miquelon & Castonguay (2017) demonstrated that integrated regulation was uniquely associated with physical activity, with individuals who sustained activity because it was congruent with their sense of self showing greater long-term adherence.

Findings reveal amotivation exerted a significant negative effect on sports participation. This finding underscores that the absence of motivation—the lack of any clear reason or desire to participate in sports—represents a substantial barrier to athletic engagement. When individuals with a disability experience amotivation, they lack both intrinsic enjoyment and identified reasons for participation, resulting in significantly diminished athletic involvement. Amotivation reflects a state of helplessness or hopelessness where individuals question the value and feasibility of sports participation, often stemming from repeated experiences of failure, perceived discrimination, inaccessible facilities, or social exclusion. For individuals with a disability, amotivation may be particularly prevalent due to numerous environmental and social barriers that can accumulate and reinforce feelings of futility about sports engagement. This negative state manifests as individuals withdrawing from athletic opportunities, experiencing reduced effort and persistence, and ultimately abandoning sports participation altogether. Kouali et al. (2021) emphasized that amotivation reflects a state where athletes question "what's the point" of their participation, leading to withdrawal from athletic opportunities and ultimately abandoning sports participation altogether. External regulation did not demonstrate a statistically significant effect on sports participation. This finding reveals a surprising and important pattern: external rewards, punishments, or controls alone do not significantly drive sports participation among individuals with a disability. Individuals in this population appear to be largely unaffected by externally imposed incentive systems such as monetary rewards, trophies, medals, or threat-based compliance mechanisms. This suggests that traditional extrinsic motivational strategies commonly used in mainstream sports—including performance-based rewards, penalties for non-compliance, and competitive incentives—may not effectively engage individuals with a disability in the way they engage populations without a disability. The absence of a significant effect for external regulation indicates that individuals with a disability fundamentally operate under different motivational dynamics, where external controls neither substantially enhance nor reliably sustain participation. However, this finding contradicts evidence from two studies (Tüzer et al., 2024; Harthy et al., 2024) which reveal complex external motivation patterns. These studies demonstrate that external factors like winning medals, social status, and peer interactions substantially drive sports participation among individuals with a disability, suggesting that external regulation does significantly influence sports participation in this population.

Collectively, these findings paint a comprehensive picture of the motivational landscape among individuals with a disability. The hierarchical pattern of motivation—with intrinsic motivation as the dominant driver, followed by identified, introjected, and integrated regulations—demonstrates that more autonomous and internalized forms of motivation are substantially more influential than controlled or external forms. The significant negative effect of amotivation and the non-

significance of external regulation together suggest that individuals with a disability respond most favorably to motivational strategies that foster genuine interest, personal relevance, social support, and identity integration rather than external incentives or controls.

Based on these findings, several recommendations emerge for future research and practical application. Future studies should employ longitudinal designs to examine how motivational profiles change over time and which interventions most effectively enhance intrinsic motivation among individuals with a disability. Future research should specifically investigate participation motives separately for each disability category using larger, disability-specific samples to identify unique motivational dynamics and tailor interventions accordingly. Research should also explore potential moderating factors, including specific disability types, age groups, gender, and cultural contexts, to better understand how motivation operates across diverse populations. Interventions designed to strengthen intrinsic and identified regulation while addressing amotivation should be developed and empirically tested. Sports organizations and coaches should prioritize creating inclusive, enjoyable, and autonomy-supportive environments that foster genuine passion for sports participation. Furthermore, programs should emphasize helping individuals with a disability understand the personal value and relevance of sports participation while building peer support networks that reinforce positive motivational pathways. Finally, policymakers should advocate for accessible and high-quality sports programming that removes structural barriers to participation, enabling individuals with a disability to engage in sports driven by authentic motivation rather than external constraints.

Limitations

While this study provides valuable insights into motivational factors affecting sports participation among individuals with a disability, several limitations should be acknowledged. Although stratified random sampling was used to represent different disability types, the sample of 150 Iranian individuals with a disability from registered sports clubs and rehabilitation centers limits generalizability to other geographical regions, cultural contexts, and unregistered individuals. The cross-sectional design, with data collected over a two-month period, prevents establishing causal relationships or tracking how motivation changes over time. The reliance on self-reported online questionnaires may introduce social desirability bias or recall limitations, particularly for participants requiring family or telephone assistance. Another limitation is that motivational factors were analyzed collectively across all disability types rather than separately for each category. Additionally, individual differences in disability severity, facility access, and socioeconomic factors were not fully explored as moderating variables, and unmeasured contextual factors such as coaching quality, program inclusivity, and family support systems may influence the strength of motivational effects on participation.

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Competing Interests

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Informed Consent

Comprehensive written consent was obtained from all participants prior to questionnaire administration. The consent process covered study purpose, voluntary participation, confidentiality measures, data storage timelines, and publication plans.

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