ASPI | Afarand Scholarly Publishing Institute; Turkey
ISSN: 2980-969X Iranian Journal of War & Public Health 2026;18(2):115-128. 10.58209/ijwph.18.2.115

The Mechanisms of Adapted Sport Development for Veterans in Iran

ARTICLE INFO

Article Type
Qualitative Research

Authors
Rezaei Sh.*[1] *PhD*

How to cite this article
Rezaei Sh. The Mechanisms of Adapted Sport Development for Veterans in Iran. Iranian Journal of War & Public Health. 2026;18(2):115-128.

[1]Department of Sport Sciences, Faculty of Human Sciences, Ilam University, Ilam, Iran

Correspondence
Address: Department of Sport Sciences, Faculty of Human Sciences, Ilam University, Research Boulevard, Ilam, Iran. Postal Code: 69315516
Phone: +98 (84) 59241000
sh.rezaei10@gmail.com

Article History
Received: January 7, 2026
Accepted: February 23, 2026
ePublished: March 20, 2026

ABSTRACT

Aims This study aimed to explore the mechanisms underlying the development of sport for veterans in Iran.

Instrument & Methods This qualitative study employed Strauss and Corbin's grounded theory approach. Data were collected through a literature review and semi-structured interviews with 13 experts in the field of sport for veterans and persons with disabilities. Participants were selected using purposive and snowball sampling. Validity was ensured through member checking and expert review. Reliability was assessed through a process audit, yielding 94.8% agreement. Data analysis was conducted using the constant comparative method across the open, axial, and selective coding stages.

Findings A total of 365 primary codes and 142 secondary codes were identified from the interview data. These were refined and organized into 64 concepts and 28 subcategories, which were ultimately consolidated into 13 main categories. The core categories comprised technological and digital requirements; physical and psychological needs; cultural consumption patterns and active lifestyle; development of sport for veterans and persons with disabilities; development of standard sport infrastructures and facilities; demographic factors and social identity; sport management and governance mechanisms; environmental and organizational context; legal and institutional frameworks; education and learning mechanisms; structural and process reforms; supportive measures and demand-oriented approaches; and social, economic, cultural, and psychological outcomes.

Conclusion Sport development for veterans with disabilities in Iran results from complex interactions among technology, human needs, governance, infrastructure, legal frameworks, and supportive actions.

Keywords Exercise; Grounded Theory; Iran; Veterans

CITATION LINKS

[1] Effect of group exercise program on quality of life in post-traumatic ... [2] Effect of eight weeks of sports exercises in water on sleep disturbance and ... [3] Effect of aquatic exercises on emotional intelligence and quality ... [4] Type of injury and quality of life among veterans ... [5] Modeling the structural equations of the corona anxiety level based on psychological hardness and physical ... [6] The effectiveness of eight weeks of exercise training in water on marital ... [7] Global levels of physical inactivity ... [8] Physical activity ... [9] Identifying and analyzing the effective drivers ... [10] Effect of adaptive sports on quality of life in individuals with ... [11] Analysis of effective factors in development of Iran sport industry ... [12] Identifying the key drivers of the development of sport ... [13] The pattern of factors affecting the quality of women's leisure ... [14] Effects of sport or physical recreation for adults ... [15] Digital platforms to facilitate physical activities for people ... [16] Thriving through adaptation ... [17] Developing a model for elite sport ... [18] Sequential treadmill exercise and cognitive training synergistically ... [19] Understanding the role of invictus games in supporting ... [20] Relationship between quality of life and sports performance among ... [21] Playing for freedom: A phenomenological exploration ... [22] Designing a revenue model for ... [23] Application of grounded theory in practice ... [24] Basics of qualitative research ... [25] Designing a model for the development of disability ... [26] Barriers to the absence of the disabled and veterans ... [27] Physical activity and sport participation in veterans with extremity ... [28] Designing the privatization model in Iran's sports ... [29] Broadcasting rights in the Iranian football ... [30] Research patterns in sports law and sports governance ...

Copyright© 2026, the Authors | Publishing Rights, ASPI. This open-access article is published under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License which permits Share (copy and redistribute the material in any medium or format) and Adapt (remix, transform, and build upon the material) under the Attribution-NonCommercial terms.

Introduction

War, as one of the most complex and destructive forms of human conflict, represents a multifaceted phenomenon with extensive biological, psychological, social, and economic consequences. Such events not only disrupt societies' physical and economic infrastructure but also leave profound and lasting impacts on individuals' physical health, mental well-being, and social functioning. Prolonged exposure to life-threatening situations, violence, loss, injury, and social instability generates a range of enduring impairments that often persist beyond the official cessation of hostilities [1]. Iran's historical experience during the Iran–Iraq War (1980-1988) exemplifies these widespread consequences. This eight-year conflict, in addition to causing substantial economic and infrastructural damage, imposed a heavy burden of human suffering on Iranian society. According to the Foundation of Martyrs and Veterans Affairs (FMVA) (2023), between 213,000 and 225,000 Iranian citizens were martyred, and more than 574,000 were officially registered as veterans, of whom over 260,000 have a disability rating exceeding 25%. These statistics indicate the emergence of a significant population of individuals with physical, psychological, or combined impairments who require ongoing medical, rehabilitative, social, and psychological support. War veterans represent one of the most affected groups and face multidimensional challenges. Based on the nature and severity of their injuries, they are categorized into groups such as neuropsychiatric, chemical, amputee, special, and combined disabilities. These impairments produce not only physical consequences (e.g., limb loss, chronic pain, motor dysfunction) but also psychological (e.g., anxiety, depression, post-traumatic stress disorder (PTSD)), social (e.g., social isolation, role disruption), and occupational outcomes (e.g., reduced productivity, limited participation) [2]. Research further indicates that secondary consequences of war-related injuries—including reduced quality of life, impaired psychological adaptation, and increased caregiving burden on families—constitute major public health concerns in post-conflict societies [3].

A substantial proportion of veterans and persons with disabilities experience chronic physical and motor limitations. These limitations often include overweight and obesity, reduced mobility, musculoskeletal abnormalities, chronic pain, and diminished functional capacity [4]. The consequences of these impairments extend beyond physical health, profoundly affecting individuals' personal and social lives. Reduced mobility and functional decline can undermine personal independence, decrease social participation, limit the fulfillment of family roles, and increase dependency. The co-occurrence of physical challenges with psychological issues such as anxiety, depression, and diminished self-esteem exacerbates a cycle of social restriction and reduced quality of life [2]. Within this context, sport and physical activity serve as multidimensional, non-medical interventions that play a pivotal role in enhancing physical health, facilitating psychological rehabilitation, and improving overall quality of life for individuals with physical and motor impairments. Regular participation in sport activities enhances physical fitness, improves functional capacity, reduces metabolic complications, promotes emotional regulation, and strengthens psychological resilience [3]. From a physiological perspective, regular physical activity contributes to improved cardiovascular performance, weight management, the prevention of chronic diseases, such as type 2 diabetes and obesity, strengthened immune function, increased longevity, and better sleep quality [5].

Moreover, sport offers social and psychological benefits by fostering social interaction, reconstructing personal identity, and enhancing self-efficacy and social capital [6]. Psychologically, sport can reduce stress, improve body image, increase life satisfaction, motivation, and personal self-efficacy, and promote overall mental health [3]. The World Health Organization (WHO) and UNICEF recognize sport as a fundamental human right and an effective means to promote social participation, social capital, and an active lifestyle, highlighting its critical importance for vulnerable populations, including veterans and persons with disabilities [7, 8]. Despite these well-documented benefits, participation by veterans and individuals with disabilities in sports activities continues to face structural, social, and economic barriers. International evidence indicates that financial constraints, social and gender inequalities, institutional discrimination, inadequate infrastructure, and the lack of cohesive, integrated policy frameworks are among the primary obstacles to sustained access to sport for these populations [3, 9]. These barriers are particularly pronounced for female veterans and persons with disabilities, hindering their full engagement in the physical, psychological, and social aspects of sport. Such obstacles not only affect sport participation but also restrict opportunities for rehabilitation, quality-of-life enhancement, and social integration, underscoring the need for targeted policies and strategic planning to address these limitations [2].

In addition, the scarcity of empirical, locally grounded research on the effectiveness of adapted sport programs poses significant challenges for policy design and program planning. This situation emphasizes the urgent need for evidence-based, contextually relevant studies tailored to national and cultural conditions [10]. According to WHO, approximately 31% of adults and 80% of adolescents worldwide do not engage in sufficient physical

activity, and female participation is 5% lower than that of males. This gap is particularly pronounced in low- and middle-income countries, among older adults, and within populations with physical impairments [7]. In Iran, despite the formulation of high-level policy documents such as the "Comprehensive Scientific Map of the Country" and the "Strategic Plan for the Development of Mass Sport," over 75% of the population does not engage in regular physical activity, and women's participation is approximately 10% lower than men's [11]. These statistics highlight the critical need for focused sport development, particularly for vulnerable groups and individuals with physical impairments, requiring precise planning, adequate infrastructure, and targeted interventions. Research indicates that the development of sport for veterans and persons with disabilities can be enhanced through a set of facilitating factors. Key enablers include legal and institutional support, training for specialized coaches, multi-level information dissemination and promotion, active family involvement, access to appropriate sports facilities, and the design and implementation of adapted sports programs [12, 13]. International experience similarly demonstrates that economic, social, cultural, political, and technological drivers play decisive roles in the success of adapted sport programs. Without leveraging these factors, sustainable access and ongoing participation remain limited. Additionally, low-cost, group-based activities such as walking, mass-participation sports, online training, and hybrid programs can significantly enhance psychological resilience, social interactions, and support networks for veterans and persons with disabilities [14]. The use of modern technologies and digital tools, particularly in adapted sport, increasingly facilitates access and participation. Online programs, training applications, and activity-tracking devices not only enhance participants' motivation and self-efficacy but also allow performance monitoring, personalized feedback, and tailored exercise programming based on individual needs [15].

Moreover, integrating adapted sport with advanced rehabilitation methods—including sports physiotherapy and neuroscience-based strengthening programs—can substantially improve the effectiveness of interventions and physical performance. Scientifically and practically, designing training and sport programs tailored to the type of injury, severity of disability, and individuals' psychological and social needs is critical, providing a pathway to improved physical, psychological, and social health [16].

Recent studies demonstrate that participation in goal-oriented and needs-adapted exercise programs yields broad positive effects on physical health, social interaction, and psychosocial integration among veterans and persons with disabilities [17]. Ávila-Gámiz *et al.* report that physical and mental exercises have a significant positive effect on hippocampal neurogenesis [18]. Kheiri *et al.* [3] and Rezaei *et al.* [2] found that aquatic exercise significantly improves emotional intelligence, quality of life, emotional expression abilities, and sleep quality among inactive veterans in Ilam. These findings underscore the importance of targeted and adapted exercise programs for improving physical, psychological, and neurological functioning in individuals with physical impairments and veterans. Mackintosh *et al.* demonstrated that participation in sporting events such as the Invictus Games facilitates identity redefinition, enhances mental health, and strengthens the sense of social belonging among veterans with disabilities, positioning sport as an effective tool for social rehabilitation [19]. Similarly, Ahmadi *et al.* found that higher athletic performance among athletes with disabilities, including veterans, is associated with better physical, psychological, and social quality of life, emphasizing the key role of regular sport participation in improving physical and mental function and enhancing social capital [20]. Furthermore, Ward reported that team and collective sports can reduce symptoms of PTSD among veterans, enhance peer support, and increase motivation to reengage in social roles. These findings indicate that targeted planning of adapted sport programs, with an emphasis on group-based activities, can substantially improve veterans' mental health and social integration [21]. Collectively, this body of evidence highlights the necessity of designing sport programs tailored to the physical, psychological, and social needs of veterans and persons with disabilities. Providing standardized infrastructure, training specialized coaches, leveraging modern technologies, and creating opportunities for group and adapted sport are among the most effective strategies for developing sport participation among these populations. Such interventions not only promote physical and mental health but also help reduce social harm, enhance active community participation, and improve overall quality of life at the societal level [6].

Mass sport is recognized as one of the most effective tools for promoting public health and fostering sustainable social development. Given the extensive social, health, and economic consequences of physical inactivity and motor deficiencies, continued trends may lead to increased healthcare costs, reduced workforce productivity, and exacerbated social harms.

Accordingly, this study aimed to identify and analyze the factors influencing the development of sport for veterans and persons with disabilities in Iran and to provide scientific and practical recommendations. The study sought to establish a foundation for designing targeted sports policies and programs that not only enhance the physical and psychological well-being of this population but also strengthen their social participation and resilience.

Instrument and Methods

This qualitative study employed the grounded theory approach and was performed on experts and specialists familiar with the field of sport for veterans and persons with disabilities in Iran, which included managers and specialists from organizations responsible for veterans and disability sports at the provincial level, directors and deputies of Departments of Sports and Youth, managers across different levels of the Federation of Veterans and Disabled Sports, presidents of provincial veterans' sport committees, university faculty members in sport sciences and sociology, and researchers active in adapted sport and rehabilitation. From this population, 13 participants with a mean age of 44.2±7.9 years and 17 years of work experience were selected through purposive and snowball sampling (Table 1).

Table 1. Demographic characteristics of participants

Row	Gender	Age (years)	Education level	Work (years)	Job position
1	Male	38	Bachelor	11	Expert
2	Male	43	Master	16	Manager
3	Male	35	Master	18	Manager
4	Female	52	Master	19	Deputy
5	Male	46	PhD	23	Faculty member
6	Male	44	Bachelor	7	Expert
7	Male	49	Master	18	Deputy
8	Male	53	PhD	25	Faculty member
9	Male	41	Master	22	Manager
10	Male	45	Bachelor	12	Expert
11	Male	51	PhD	21	Faculty member
12	Female	38	Bachelor	12	Expert
13	Male	39	Master	17	Manager

Data collection included a literature review, analysis of relevant policy documents and national-level directives concerning veterans and disability sport in Iran, and in-depth, semi-structured interviews. Data saturation was observed after the sixth interview, with complete saturation achieved by the eleventh interview; nevertheless, interviews continued until the thirteenth participant to ensure robustness. The in-depth interviews began with questions addressing the causal, intervening, and contextual conditions influencing the development of sport for veterans and persons with disabilities in Iran. Additional questions were iteratively developed based on participant responses and the categories of the Strauss and Corbin paradigm. Data analysis followed the three main coding stages of the systematic grounded theory approach: open coding, axial coding, and selective coding, enabling the identification, categorization, and integration of emergent themes and concepts. The initial interviews were conducted using an exploratory and descriptive approach, and the data-coding process commenced immediately after each interview. To extract theoretical codes, the constant comparative method was employed. Accordingly, open coding was undertaken through a detailed decomposition and rigorous analysis of the data. In this phase, coding of 13 interviews, along with findings from the literature review, was completed.

Validity was assessed through member checking. The findings and the draft of the generated theory were shared with the participants, and their corrective and critical feedback was incorporated into the final analysis. Additionally, the final version of the theory was reviewed by academic supervisors and subject-matter experts, and their recommendations for refining and completing the conceptual framework were incorporated. Reliability in qualitative research, analogous to reproducibility in quantitative studies, indicates whether repeating the study procedures by another researcher would yield similar results. To ensure reliability, inter-coder agreement was employed. A second coder with a background in statistics and familiarity with qualitative methods participated in the coding process. Following training in coding procedures, both coders independently analyzed three interviews, and agreements and disagreements for each code were identified. Subsequently, the inter-coder agreement percentage was calculated as 100 × number of agreements / total number of codes = inter-coder agreement (%).

The total number of codes independently extracted by the two coders (the researcher and the research assistant) was 329. Among these, 156 codes were identified as shared (complete agreement), while 34 codes showed disagreement. Specifically, in the second interview, there were 46 agreements and 13 disagreements across 98 data units, yielding a test-retest reliability of 93%. In the ninth interview, there were 61 agreements and 10 disagreements out of 128 data units, with a test-retest reliability of 95%. Test-retest reliability within individual interviews thus ranged from 93% to 95%. Overall, the inter-coder reliability, calculated across all three interviews using the formula above, was 94.8%. Since this value exceeded the commonly accepted threshold of 60%, the coding process was considered reliable [22].

Findings

After consolidating and refining the interview data, 365 primary codes and 142 secondary codes were identified. Through subsequent refinement and categorization, these were organized into 64 concepts and 28 subcategories, which were ultimately consolidated into 13 main categories.

Step one was open coding, which included three stages. In the initial stage, all interviews underwent initial coding.

In the subsequent stage (secondary coding and category development), the initial (open) codes were systematically refined into secondary codes. These secondary codes were then further abstracted into higher-level concepts, which were ultimately integrated into broader categories. This hierarchical process of abstraction enabled the systematic

organization and conceptual consolidation of the data.

The results of the open coding phase—including secondary coding, conceptualization, and category development—are presented in the following section (Table 2). After identifying the subcategories, the next stage was the development of the core, or theoretical, categories (Table 3).

Table 2. Secondary coding, conceptual coding, and category formation

Interviewee codes	Secondary coding	Conceptual codes	Categories
M1, M3, M5, E3, E4, P2, P3	Preserving the human dignity of both male and female individuals with disabilities in national sport policies	Equality and the elimination of discrimination	Strengthening participation culture and teamwork
M1, M2, M3, M5, P1, P3	Ensuring compliance with rules and regulations specific to veterans and persons with disabilities		
M2, M3, M6, M1, E2, E4, P1, P2	Increasing budget allocation and ensuring equitable distribution of sport facilities across the country		
M2, M3, M4, E1, P1, P2, P3	Recognizing the physical and psychological differences of individuals with disabilities and promoting gender equality in access to sport opportunities		
M1, M2, M3, M5, E2, P1, P2, P3	Conducting diagnostic and analytical studies to identify barriers to mass sport participation among veterans and persons with disabilities		
P1, P2, P3, M1, M2, E3, E2	Strengthening cultural coexistence and localizing sport models in accordance with the needs of persons with disabilities		
M1, M2, M4, M5, M6, E1, E2, P1	Safeguarding the civil rights of men and women with disabilities in the design and implementation of sport programs		
M1, M3, M4, M5, M6, E1, E2, P1	Ensuring safe, inclusive, and accessible access to sport facilities for women and girls with disabilities		
M1, M2, M4, M5, M6, E3, P1, P2, P3	Revising managerial processes within sport organizations serving veterans and persons with disabilities	Change management and transformation	
M4, M5, E1, P1, P3, P2	Establishing innovative and adaptive organizational structures in disability sport		
M1, M2, M3, M6, E2, P1, P3, P2	Redesigning monitoring, evaluation, and resource allocation systems		
M1, M2, M4, M5, E1, P1, P2, P3	Responding to emerging needs and identifying evolving patterns in disability sport		
M1, M2, M3, M5, M6, P1, P2, P3	Leveraging digital and virtual environments to enhance sport participation and promote active lifestyles		
P2, P3, M1, E1, E3, E2	Addressing the recreational needs of new generations of veterans and persons with disabilities		
M1, M2, M4, M5, M6, E1, E2, P1	Moving beyond traditional structures toward diversity- and needs-based approaches		
M2, M3, M4, M5, M6, P1, P2, P3	Developing and institutionalizing social policies at local and national levels		
M1, M2, M3, M5, M6, P1, P2, P3	Establishing an independent, specialized institution for policymaking and program implementation in disability sport		
M1, M2, M3, M6, E1, P1, P2, P3	Emphasizing collective intelligence and participatory approaches in disability sport	Collective intelligence and group decision-making	
M2, M3, M6, E1, E2, P2	Strengthening accountability and active engagement among athletes with disabilities		
M1, M2, M4, M5, E1, P1, P2, P3	Promoting group- and team-based decision-making over individualistic approaches		
M1, M2, M3, M5, M6, P1, P2, P3	Reinforcing shared ethical values among athletes with disabilities		
P2, P3, M1, E1, E3, E2	Encouraging broad-based participation and minimizing partisan biases		
M1, M2, M4, M5, M6, P1, P2, P3	Enhancing networking and team-building among athletes with disabilities		
M1, M2, M3, M6, E1, P1, P2, P3	Strengthening the role of specialized coaches in adapted and disability sport	Human capital empowerment	Hardware and software development
M1, M2, M3, M4, M5, M6, P1, P2	Recruiting and developing sport-supportive managers with an active lifestyle orientation		
M2, M4, E2	Enhancing sport literacy and public awareness		
M3, M4, M5, M6, E1, P1, P3	Institutionalizing a culture of physical activity and healthy lifestyles		
M4, M5, M6, E1, E2, P1, P2	Establishing continuous professional development systems and supportive mechanisms		
M1, M2, M3, M4, E1, E3, E4, P3	Expanding multifunctional sport centers for veterans and persons with disabilities	Development of accessible and standardized infrastructure	
M2, M4, M3, M6, E2, E4, P1	Structuring mass sport systems with emphasis on rules, regulations, and equipment		
M2, M4, M5	Developing dedicated recreational sport spaces		
M3, M4, E1, P1	Enhancing accessibility while reducing economic barriers		
M4, M5, M6, E1, E2, P1, P2	Standardizing facilities and equipment in public sport environments		
M1, M2, M4, M6, E1, P1, P2, P3	Incorporating universal design principles and improving aesthetic quality		

Continue of Table 2 from the last page.

M3, M4, P1, P2, P3, E4	Expansion of globalization and promotion of "body democracy" and equitable access to physical activity	Globalization and physical modernity transformations	Reconstruction of contemporary lifestyles and its consequences
M2, M5, P1, P2, P3	The role of modern, multifunctional markets and flexible service systems in reducing temporal and spatial constraints in sport		
M1, M5, M6, E3, P1, P2, P3	The impact of urbanization and mechanization on declining physical activity levels		
M1, M4, E2, E4, P1, P2, P3	Transformation of sport socialization through digital media and social networking platforms		
M1, M2, M5, P1	Increased social interactions within virtual environments	Digital lifestyle and leisure competition	
P2, P3, M1, M4	Dominance of sedentary, screen-based leisure patterns		
M1, M2, M4, M5, M6, E1, E2, P1	High attractiveness of digital entertainment as a competitor to physical activity		
M2, M3, M4, M5, M6, P1, P2, P3	Influence of video games and digital content on behavioral patterns and mental health		
M1, M2, M3, M5, P1, P3	Commodification of sport and its transformation into a form of cultural consumption	Emerging challenges in recreational sport	
M2, M4, M3, P1	Overlapping of occupational, familial, and leisure roles		
M2, M4, M4	Social structural changes and evolving participation norms		
M3, M4, E1, P1	Reduction of physical spaces for activity in urban contexts		
M4, M5, P1	Generational gaps and supply-oriented sport planning		
M4, P1, P2, P3	Emergence of multiple and choice-based identities	Fluid identities and reinterpretation of sport practice	
M2, M4, P2, P3	Increasing individual agency in lifestyle decision-making		
M2, P1, P2, P3, E4, E3	The role of social interactionism in interpreting leisure behaviors		
M1, P1, P2, P3, E2, E4	Integration of physical, social, and psychological dimensions of identity		
M3, M5, P1, P3	Challenges associated with emerging forms of social interaction		
M1, M2, M3, M4, M5, M6, E2, E4, E1, E3, P1, P2, P3	Iran's four-season climatic diversity and unique natural endowments offer extensive opportunities for sports development, including mountaineering, rock climbing, and river-based swimming in natural environments. The potential of caves, gorges, and pristine natural landscapes for adventure sport and sport-oriented ecotourism. Availability of water-based recreational and tourism resources such as rivers, dams, and lakes. Presence of prominent peaks and highlands suitable for mountain sports. Forest ecosystems offering opportunities for the development of forest parks and sport-oriented camping. Favorable climatic conditions, particularly in temperate and forested regions, supporting the expansion of nature-based and mountain sport activities	Climate diversity and natural attractions	Governance and enabling ecosystem
M3, M4, M3, M5, E2, E3, E4, P1	Revitalization and integration of indigenous and traditional games into sport development programs	Indigenous and local culture	
M1, M2, M4, M6, E1, E2	Reflection of social, cultural, and economic conditions in the planning of sport-for-all initiatives		
M3, M4, E1, P1, P2, P3	Challenges related to underdeveloped infrastructure and limited access to sport spaces		
M1, M5, M6, E1, E2, P1, P3	Utilization of cultural capacities and traditional sport forms as a foundation for participation enhancement		
M2, M4, M5, M6, E1, P2, P3	Monitoring and managing disruptive behaviors in sport and public environments	Safety, security, and standardization	
M2, M3, M6, E1, E4, P3	Ensuring comprehensive safety across social, economic, ethical, psychological, and physical dimensions in sport settings		
M4, M5, M6, E1, E2, P1, P2	Necessity of improving structural safety and standardizing sport equipment and facilities		
M1, M2, M3, M4, E1, E3, E4, P1, P2, P3	Development of human capital through leveraging the knowledge, experience, and expertise of specialized coaches and athletes in adapted sport	Specialized adapted coaches	
M3, M5, M6, E1, E2, P2	The role of coaches' personal appeal and charisma in enhancing motivation and sport participation		
M3, M4, E1, P1, P2, P3	Key success attributes of coaches, including perseverance, patience, and environmental adaptability		
M1, M4, P1, P3, P2, E1	Influence of traditional beliefs and cultural norms on shaping mass leisure patterns	Reproduction of healthy leisure and active lifestyles	
M4, M5, P1, P2, P3, E2	Emergence of high-risk behaviors in the absence of structured leisure (e.g., conflict, vandalism, and public disorder)		
M1, M4, M6, E1, P1, P2, P3	Inclination toward substance use and other harmful behaviors due to lack of purposeful and healthy leisure opportunities		
M1, M2, M3, E3, E4, P1, P2, P3	Interaction of social, economic, and cultural inequalities and their impact on leisure quality		
M3, M4, M5, E2, E4, P1, P2, P3	The role of unemployment and its consequences on lifestyle patterns and sport-related leisure engagement		

Continue of Table 2 from the last page.

M1, M2, M3, M4, M5, M6, E2, E4, E1, E3, P1, P2, P3	Engagement in outdoor recreational activities such as visiting parks, green spaces, and nature-based environments (e.g., hiking, plains, and forest areas), Participation in educational and non-educational reading activities, Consumption of media content, including films, satellite television, series, and cinema, Involvement in digital and virtual leisure activities (e.g., mobile gaming, computer games, console gaming, and online interactions), Engagement in artistic and educational pursuits, Shopping and mall-based leisure activities, Travel and tourism-related activities, Participation in religious and traditional ceremonies, Involvement in physical and sport activities (e.g., football, volleyball, swimming, fitness training), Social gatherings and informal interactions (e.g., parties and group meetings), Listening to music and engaging in telephone or virtual communication, Participation in casual games (e.g., card games, puzzles), Resting and sleep as components of daily lifestyle patterns	Leisure patterns and lifestyle orientations	Individual and family characteristics
M1, M2, P1, P2, P3, E1, E2	Participation in sport as a means of facilitating social bonding and friendship formation	Personality traits	
M5, M6, P1, P2, P3, E3	Enhancement of extraversion and expansion of social networks through sport environments		
M1, M4, M6, E1, P1, P2, P3	Promotion of teamwork and collective social interaction within sport contexts		
M1, M2, M3, E3, E4, P1, P2, P3	Improvement of self-confidence and self-esteem through regular sport participation		
M1, M6, P2, P3, P1	Utilization of targeted incentives and motivational schemes to promote participation in sport-for-all programs	Motivation	
M1, M2, M6, P1, P2, P3, E4	Consideration of psychological and cognitive characteristics within the Iranian sociocultural context		
M1, M2, M3, P1, P2, P3, E2	The influential role of veterans, elite athletes, and public figures in promoting sport participation		
M3, M5, M6, P1, P2, P3, E2	Recognition of regular physical activity as a necessity for maintaining physical and mental health		
M1, M4, E1, E2, E4, P1, P2, P3	Reduction of musculoskeletal deformities and maladaptive behavioral patterns among veterans and persons with disabilities	Health and well-being factors	Sports medicine recommendations
M4, M6, P1, P2, P3	Decrease in medical and healthcare expenditures for families of veterans		
M1, M4, M6, E1, P1, P2, P3	Enhancement of cognitive recovery, psychological rehabilitation, and individual development		
M1, M2, M3, E3, E4, P1, P2	Weight management, improved body image acceptance, and prevention of physical and mental health disorders		
M1, M2, M4, P2, P3, E1, E4	Adoption of active rest and improvement of leisure quality through sport participation	Promotion of a culture of physical activity	
M5, M6, P1, P2, P3, E3	Reform and reorientation of both traditional and digital media toward promoting sport-for-all		
M1, M4, M6, E1, P1, P2, P3	Encouragement of continuous learning and active participation in at least one sport discipline		
M1, M2, M3, E3, E4, P1, P2	Expansion of physical education hours within school and university curricula		
M5, M6, P1, P2, P3, E1	Allocation of dedicated sport and physical activity time for employees in governmental organizations		
M2, M3, P1, P2, P3	Development and expansion of sport-for-all initiatives at the community level	Enhancement of sport participation	
M5, M6, E1	Growth of sport institutions, centers, and clubs nationwide		
M1, M4, M6, E1, P1, P2, P3	Support for non-governmental organizations (NGOs) in the domain of mass sport		
M2, M3, M5, E2, P2, P3	Institutionalization of sport participation among public sector managers and employees		
M1, M4, E1, E3, P1, P2, P3	Implementation of performance-based budgeting within federations and affiliated sport associations	Reform of budgeting systems and financial control mechanisms	Governance, monitoring, and institutional alignment
M5, M6, P1, P2, P3, E3	Systematic monitoring of financial resources, expenditures, and outputs		
M1, M4, M6, E1, P1, P2, P3	Design of integrated financial and non-financial evaluation frameworks		
M1, M2, M3, E3, E4, P1, P2	Addressing inefficiencies and structural limitations of traditional budgeting systems		
M1, M2, M3	Optimization of strategic financial decision-making processes		
M3, M6, E1, E2, P1, P2, P3	Strengthening financial transparency and accountability mechanisms		
M2, M3, M5, E2, E4, P2, P3	Promotion of national cohesion, motivation, and wealth creation in line with macro-level policy directives	Policy alignment with national laws and upstream documents	
M1, M2, M3, M5, M6, E1, E2, E4, P1, P3, P2	Emphasis on self-development, emotional well-being, and comprehensive physical, psychological, and social health (aligned with national vision statements)		
M2, M6, M1, E4	Expansion of distributive justice in sport development policies		
M1, M3, M4, E2, P1, P2, P3	Provision of structural foundations for social, economic, cultural, and political development		

M1, M2, M3, M5, E3, P1, P2, P3	Reduction of government intervention and facilitation of private sector engagement		
M2, M3, E2	Ensuring equitable financial resource allocation		
P1, P2, P3, M1, M2, E3, E2	Provision of tax incentives and financial support for individuals and organizations		
M2, M3, M4, M5, M6, E1, E2, P2	Alignment with national development plans (e.g., Fifth and Sixth Development Plans)		
M1, M2, M4, M5, E1, E2	Adherence to international frameworks such as the Universal Declaration of Human Rights		
M2, M4, M5, E3, P1, P2, P3	Utilization of modern media platforms (e.g., internet, social networks, digital platforms)	Strategic communication and media engagement	
M5, M6, P1, P2, P3, E3	Reframing the role of traditional media (e.g., television, radio, print media)		
M1, M4, M6, E1, P1, P2, P3	Design and implementation of public awareness and advocacy campaigns		
M1, M2, M3, E3, E4, P1, P2	Strengthening interactions between sport organizations and media institutions		
M1, M2, M3	Promotion of motivational, identity-building narratives		
M3, M6, E1, E2, P1, P2, P3	Addressing and challenging social stereotypes and stigmatization		
M2, M4, M6, P1, P2, P3	Managing social transformations within traditionally structured societies	Institutional development and professional discipline	Socio-economic, political, and cultural factors (governance, state, and legislative contexts)
M4, M6, P1, P2, P3, E3	Strengthening cultural, religious, and motivational capital to enhance sport participation		
M3, M4, M6, E2, P1, P2, P3	Facilitating family involvement and reinforcing social support systems		
M1, M2, M3, E1, E4, P1, P2	Addressing issues related to data manipulation and unreliable reporting practices		
M1, M2, M3, M4, E3, P3	The impact of economic stability (e.g., inflation and exchange rates) on access to sport participation		
M3, M6, P1, P2, P3	Development of standardized, accessible infrastructure and sport equipment		
M1, M6, E1, E2, P1, P2, P3	Institutionalization of professional discipline within sport management systems		
M1, M5, E1, P1, P2, P3	Influence of global cultural and media transformations on local sport participation patterns	Cultural and social constraints	
M3, M6, P1, P2, P3, E4	Necessity of reducing the financial costs associated with sport engagement		
M1, M2, M5, E4, P1, P2, P3	Challenges related to gender equity and equal access to sport opportunities		
M1, M2, M4, E3, E4, P1, P2	Consequences of currency devaluation on sport participation and access		
M1, M2, M5	Effects of political and ideological polarization		
M3, M6, E1, E2, P1, P2, P3	Dominance of political considerations over expert-driven decision-making		
M3, M6, P1, P2, P3, E4	Challenges associated with unreliable statistics and weak documentation systems		
M2, M4, E4	The necessity of managerial and policy stability and consensus	Good governance and macro-level stability	
M3, M4, E1, P1, P2, P3	Socio-economic consequences of inflation and livelihood instability		
M1, M4, E2, P1, P2, P3	Impact of international sanctions on sport resources and infrastructure		
M5, M6, E1, P2, P3	Role of macroeconomic policies in ensuring program sustainability		
M1, M4, M6, E1, P1, P2, P3	Importance of transparent, accountable, and effective governance systems		
M1, M3, E2, P1, P2, P3	Recognition of cultural, social, and identity diversity within sport policy design	Socialization and legal guarantees	
M3, M6, E2	Strengthening social and inter-institutional consensus		
M1, M4, E1	Implications of commercialization of leisure and sport		
M4, M6, M5, E1, P1, P3	Commitment to the effective implementation of approved sport development programs		
M1, M4, E2, P1, P2, P3	Role of legal frameworks and enforcement mechanisms in ensuring policy effectiveness		
M2, M3, M6, E2, E4, P3	Avoidance of political considerations in sport-related managerial decision-making	Efficient and effective management	Strategic management patterns and organizational culture
M1, M2, M3, M5, M6, E1, E2, P1	Implementation of performance-based management and professional self-regulation		
M2, M6, M1, P2, P3	Challenges associated with insufficient institutional autonomy in sport governance bodies		
M1, M3, M5, E1, P1, P2, P3	Necessity of professionalism and expertise-oriented management approaches		
M1, M2, M3, M5, E1, P1, P2, P3	Development of specialized managerial training in sport management		
P1, P2, P3, M1, M2, E3, E2	Establishment of transparent criteria for the selection and evaluation of sport managers		

Continue of Table 2 from the last page.

M2, M3, M4, M5, M6, E1, E2, P2	Strengthening organizational responsibility, work ethic, and accountability		
M1, M2, M4, E1, E2, P1, P2	Overlapping and ambiguous organizational roles and responsibilities	Institutional conflicts and anti-competitive organizational culture	
M4, M6, P1	Emergence of rivalrous and exclusionary organizational cultures		
M1, M4, E4	Presence of non-specialized and underqualified management		
M1, M2, M3, E2, E4, P1, P2	Dominance of informal relations and network-based decision-making		
M1, M2, M3	Marginalization of experts and erosion of professional human capital		
M3, M5, E1, E3, P1, P2, P3	Weakening of professional ethics and organizational transparency		
M1, M2, M5	Decline in inter-organizational trust and collaboration		
M2, M4, E1, E4, P1, P2, P3	Allocation of targeted subsidies and financial support mechanisms	Supportive measures and strengthening social participation	
M5, M6, E1, E3, P2, P3	Encouragement of sustained sport participation through incentive-based approaches		
M1, M4, P1	Promotion of a culture of regular physical activity		
M2, M3, E3	Strengthening family and community support systems		
M3, M4, E1, E4, P1, P2, P3	Role of managers, elites, and social leaders in advocating sport participation		
M1, M5, P3	Reduction of economic barriers to sport engagement		
M3, M4, E1, E4, P1, P2, P3	Development of community-based and motivational sport programs		
M1, M2, M3, M4, M5, M6, E2, E4, E1, E3, P1, P2, P3	Reduction in the prevalence of chronic diseases, including cardiovascular conditions and certain types of cancer, Decrease in osteoporosis and musculoskeletal degeneration, Reduction in psychological disorders such as depression, stress, dementia, and Alzheimer's disease, particularly among older adults, Enhancement of life expectancy, life satisfaction, and overall well-being, Improvement in cognitive functioning, learning capacity, and self-confidence, Facilitation of maternal health outcomes, including pregnancy and childbirth among women, Strengthening of family relationships and marital cohesion	Physical and psychological outcomes	Outcomes of adapted sport development for veterans and persons with disabilities
M1, M2, M3, M4, M5, M6, E2, E4, E1, E3, P1, P2, P3	Reduction in social harms such as violence, substance abuse, crime, and social isolation, Promotion of purposeful living and clearer individual life goals, Enhancement of employment opportunities and contribution to economic productivity, Strengthening of social capital and community cohesion, Enrichment and qualitative improvement of leisure time, Contribution to public health promotion and societal well-being	Social and spiritual outcomes	
M1, M2, M3, M4, M5, M6, E2, E4, E1, E3, P1, P2, P3	Promotion of environmental awareness and respect for nature, Development of nature-based sport culture, including hiking and mountaineering, Reinforcement of civic responsibility through initiatives such as "Our City, Our Home", Contribution to addressing environmental challenges such as drought and air pollution	Environmental outcomes	

Table 3. Core categories of the theory

Categories	Core categories	Paradigm model
• Digital transformation in sport services (role of ICT, online platforms, and data-driven approaches) • Application of artificial intelligence in disability sport (performance monitoring, smart training, and digital rehabilitation) • Digital divide and inequalities in access (technological barriers and accessibility challenges) • Legal and regulatory requirements of technology (compliance with laws and upstream policy documents) • Institutional adaptability to technological innovation (structural flexibility and organizational resistance)	Technological and digital requirements	Causal conditions
• Risks associated with sedentary lifestyles (physical inactivity and sedentary behaviors) • Physical health and functional performance (physical capacity, prevention, and rehabilitation) • Mental health and psychological well-being (anxiety, depression, and resilience) • Self-efficacy and body image (self-confidence and body perception) • Necessity of specialized sports medicine interventions (safety, exercise therapy, and program suitability)	Physical and psychological needs	
• Media representation of disability and sport (social imagery and stereotypes) • Promotion of an inclusive active lifestyle culture (encouraging physical activity) • Sport as a mechanism of social integration (social capital and belonging) • Education on healthy lifestyles (awareness and sustainable behavior)	Cultural consumption patterns and active lifestyle	
• Designing an optimal model for the development of sport for veterans and persons with disabilities • Enriching leisure time through sport and physical activity • Enhancing participation levels and institutionalizing a culture of mass sport participation	Development of sport for veterans	Core phenomenon

Continue of Table 3 from the last page.

• Accessibility and adaptation of sport facilities (barrier-free design and inclusive standards) • Equitable distribution of resources and facilities (geographical justice in resource allocation) • Institutionalization of sport within the education system (schools, universities, and adapted physical education) • Empowerment of specialized human capital (coaches, experts, and professional knowledge) • Utilization of indigenous and environmental capacities (natural spaces and local ecosystems)	Development of infrastructure and standard sport spaces	Intervening conditions
• Impact of demographic parameters on participation (age, gender, income, and social status) • Sport as a mechanism of identity formation (individual and collective identity) • Incentive systems and motivational mechanisms for participation (rewards and social support) • Role of sport in reproducing social capital (networks and sense of belonging) • Sociological analysis of participation among veterans and persons with disabilities (integration, cohesion, and equality)	Demographic factors and social identity	
• Inter-organizational coordination and unity of command (reducing parallel structures) • Monitoring, evaluation, and performance assessment (quality control) • Conflict and change management within organizations (institutional adaptability) • Strategic and program-based management (SWOT analysis and evidence-based policymaking) • Promotion of good governance in disability sport (transparency, accountability, and efficiency)	Sport governance and management mechanisms	
• Interaction of social, economic, and cultural factors in shaping societal attitudes toward disability and physical activity • Role of governmental institutions and public policies in legitimizing and prioritizing sport for veterans and persons with disabilities • Function of families and social support networks in facilitating or constraining sport participation • Impact of media and digital environments on representation, sport identity, and social motivation • Alignment of organizational environments and institutional culture with principles of inclusion, accessibility, and equity	Environmental and organizational context	Contextual conditions
• Integrated and coherent governance (institutional alignment and coordination across sport, rehabilitation, and health sectors) • Compliance with higher-level legal documents and upstream policies (alignment with national laws and international disability standards) • Supportive legislation ensuring accessibility and equal opportunities (enactment of specific laws and provision of financial and non-financial support for disability sport) • Clarification of roles and responsibilities (reducing institutional overlap and enhancing managerial clarity) • Effective monitoring, evaluation, and accountability mechanisms (performance tracking and policy effectiveness assurance)	Legal and institutional frameworks	
• Specialized training for coaches, managers, and experts (development of professional competencies for inclusive and adaptive program implementation) • Applied and evidence-based research (use of data and comparative studies for effective policymaking) • Empowerment of veteran and disabled athletes (enhancement of skills, self-efficacy, and confidence for active participation) • Social awareness and attitude transformation (reducing stigma and promoting positive representation in media) • Inter-sectoral learning and organizational knowledge transfer (strengthening collaboration among sport, health, rehabilitation, and education sectors to enhance effectiveness)	Education and learning mechanisms	
• Redesign of budgeting systems and internal organizational processes • Establishment of independent institutions and active professional associations • Encouragement of private and cooperative sector investment in mass sport (in accordance with relevant legal provisions) • Formulation of supportive and incentive-based regulations and bylaws • Participatory and scientific management approaches (Management by Objectives, MBO)	Structural and process reforms	Strategies (actions and interactions)
• Provision of tax exemptions and financial incentives for individuals and legal entities (in line with relevant legal articles) • Development of strategic documents and revitalization of the Supreme Council of Sport • Ensuring equity and liberalization of access to sport facilities and spaces • Hosting sport festivals and competitions with emphasis on indigenous culture • Establishment and restructuring of non-governmental guarantee funds • Sustainable financing and equitable distribution of financial resources	Supportive measures and demand-oriented approaches	
• Strengthening of national cohesion, enhancement of motivation, and reinforcement of economic capacity (in line with national policy directives) • Self-development and improvement of physical, psychological, and social health, as well as enhancement of emotional well-being (in accordance with national vision frameworks) • Advancement of distributive justice within the national sport system • Provision of necessary conditions for social, economic, cultural, and political development • Enhancement of psychological well-being, improvement in quality of life, and increased life expectancy among veterans and persons with disabilities	Social, economic, cultural, and psychological outcomes	Consequences

Step two was axial coding, aimed at establishing relationships among the codes generated during the open coding phase and guided by the paradigm model, enabling the researcher to navigate the theory-building process more systematically and coherently. Based on the literature review findings, analysis of upstream policy documents, and in-depth semi-structured interviews, 13 key categories influencing the development of sport for veterans and persons with disabilities in Iran were identified. These categories included technological and digital requirements; physical and psychological needs; cultural consumption patterns and active lifestyle; development of sport for veterans and persons with disabilities; development of standard sport infrastructures and facilities (in accordance with Clause 12 of Social Affairs and the opinion of the Integrated Planning Committee); demographic factors and social identity; sport management and governance mechanisms; environmental and organizational context; legal and institutional frameworks; education and learning mechanisms; structural and process reforms; supportive measures and demand-oriented approaches; and social, economic, cultural, and psychological outcomes (Figure 1).

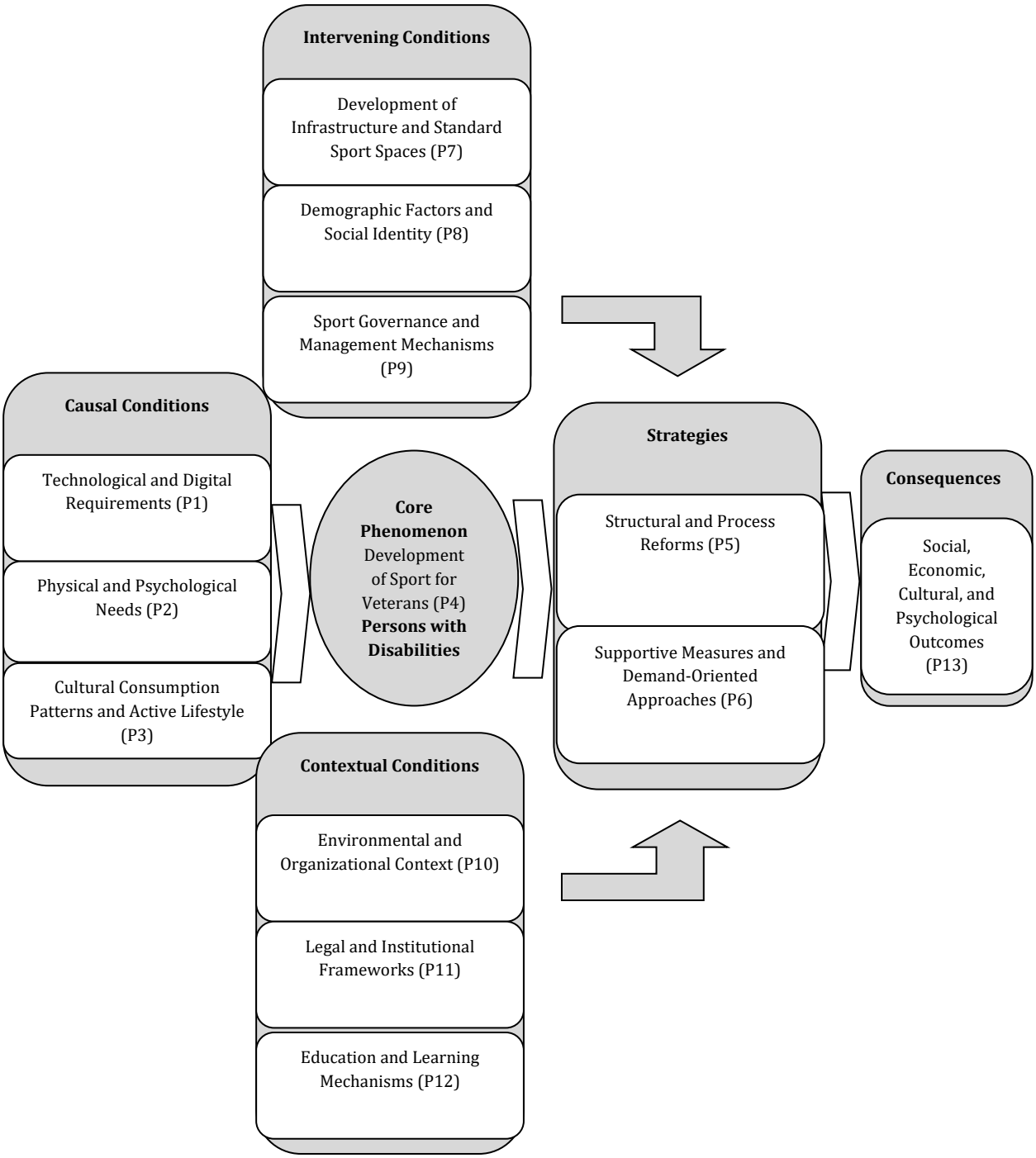

Figure 1. Axial coding based on the paradigmatic model (the development of sports for veterans and individuals with disabilities)

Step 3 was explanation and theorization (selective coding). To transform codes and analytical findings into a theory, the stages of coding must proceed systematically and in an interrelated manner. The selective coding stage, grounded in the findings of the previous two coding phases, is regarded as the central step in the theorization process. At this stage, the core category was systematically and integratively linked to other codes and coding stages, and the relationships among them were articulated within a conceptual framework or model. Furthermore, components requiring further development or refinement were revisited and revised accordingly.

Discussion

This study aimed to examine the mechanisms underlying the development of sports for veterans and individuals with disabilities in Iran. After the literature review, higher-level policy documents, and in-depth semi-structured interviews, and following systematic data categorization, 13 key categories were identified and extracted. These categories included technological and digital requirements; physical and psychological needs; cultural consumption patterns and active lifestyles; development of sport for veterans and persons with disabilities; development of standard sport infrastructures and facilities; demographic factors and social identity; sport management and governance mechanisms; environmental and organizational context; legal and institutional frameworks; education and learning mechanisms; structural and process reforms; supportive measures and demand-oriented approaches; and social, economic, cultural, and psychological outcomes.

Within the framework of the paradigmatic model proposed by Strauss and Corbin, causal conditions are those that give rise to the central phenomenon [24]. "Technological and digital requirements (P1)", "physical and psychological needs (P2)", and "cultural consumption patterns and active lifestyles (P3)" were identified as causal conditions, each comprising several subcategories. The central phenomenon, as the core category, represents the focal point of theorizing and the foundation of the analytical model. Recurrence of concepts in the data and theoretical support, "the development of sports for veterans and individuals with disabilities in Iran (P4)", was identified as the core category [23]. The causal conditions contributed to the emergence, significance, and expansion of this phenomenon; in other words, social challenges and technological transformations have created a context in which the development of sports for veterans and individuals with disabilities has become a necessity.

Action and interaction (strategies) are defined as purposeful actions undertaken in response to the central phenomenon and shaped by intervening and contextual conditions. Strategies, such as "structural and process-oriented reforms (P5)" and "supportive measures and demand-oriented approaches (P6)" within governing institutions, were identified as key to achieving sustainable development in this domain. Intervening conditions are parameters that mediate the relationship between the central phenomenon and the strategies. In this model, factors such as "the development of standardized sports infrastructure and facilities (P7)", "demographic factors and social identity (P8)", and "sports management and governance mechanisms (P9)" were identified as intervening conditions. Contextual conditions include a set of parameters that indirectly influence actions and interactions. "Environmental and organizational factors (P10)", "legal and regulatory frameworks (P11)", and "education and learning mechanisms (P12)" were considered contextual elements within the paradigmatic model. Finally, outcomes are the changes and results that arise from implementing strategies and actions. The outcomes of actions and interactions were categorized as "social, economic, cultural, and psychological consequences (P13)", which reflect the partial realization of the objectives of developing sports for veterans and individuals with disabilities in Iran.

At the center of this study is the core phenomenon, "the development of sport for veterans and persons with disabilities in Iran," emerging from complex interactions among causal conditions, intervening factors, and contextual settings. This finding is consistent with that of Ghoreishi *et al.*, who report "the development of public sport participation" as the core category [25]. However, our model uniquely emphasized institutional governance and localization mechanisms within Iran's context. Hosseinzadeh Gonabadi *et al.* indicate that managerial, social, economic, and individual factors simultaneously function as barriers and drivers of participation, consistent with our model's "dynamic interaction of factors at micro and macro levels" [26].

Our model, by operationally distinguishing intervening conditions from contextual backgrounds, provides greater explanatory capacity for interventions. Sport development necessitates qualitative improvements, sustainable empowerment, standardized infrastructure, and strengthened institutional governance. The core phenomenon functions as a unifying axis [11], but our model introduced "local supportive institutions" and "social feedback mechanisms" as the missing link in Iranian sport policymaking.

Among intervening conditions, structural and demographic parameters are crucial. Standardized infrastructure ensures accessibility and quality. Demographic characteristics—age, gender, disability type/severity, and cultural capital—must underpin targeted policies. Faraji *et al.* report that 37.6% of veterans with extremity disorders participate in sport (65% for bilateral upper limb amputation),

with participation decreasing by age but increasing with disability severity [27]. This suggests "lived experience with disability" may act as compensatory motivation. Sport governance mechanisms ensure effectiveness, yet their absence in Iran represents a major structural barrier [28].

Operational actions include "structural-processual reforms" and "supportive demand-driven measures." Structural reforms create sustainable legal frameworks; supportive measures include financial assistance, motivational programs, and cultural and sports events. These strategies bridge the gap between intervening conditions and the core phenomenon, thereby impacting quality of life and community engagement [29]. Without coordination between these two levels, neither is sustainable. The contextual background comprises organizational factors, legal frameworks, and educational mechanisms. Legal voids and institutional misalignment challenge implementation, especially in underserved areas. Learning mechanisms establish a sustainable sport culture [30]. Ghoreishi *et al.* show high conceptual overlap with our model [25], but our precise distinction between the "micro level (individual-family)" and the "macro level (institutional-trans-institutional)" offers greater policy-prescriptive capacity. Consequences include improved physical/mental health, enhanced social welfare, increased participation, strengthened cultural identity, and improved quality of life. Strategy success, supported by intervening and contextual conditions, leads to tangible positive changes. This aligns with Hosseinzadeh Gonabadi *et al.* ("social growth and organizational success") [26], but our model emphasized that organizational success requires social growth, with sustainable development centered on the "empowerment of individual and social agency" among athletes. Thus, our model serves as a theoretical-practical framework for integrated policymaking, localized planning, and the effective evaluation of sport development for disability groups in Iran.

This study has several limitations, including the predominance of male participants (84.6%), a small sample size (13 participants), and a cross-sectional design that does not account for the effects of sanctions and inflation. Furthermore, the theoretical model has not been empirically tested in practice, and the study focuses solely on veterans of the Iran-Iraq War. The model also lacks quantitative evaluation indicators and does not address the implementation contradictions between national policy documents and the responsible organizations. Future research should address these shortcomings.

To develop sports for Iranian veterans and individuals with disabilities, ten operational recommendations are proposed. A strategic plan should be developed for both mass and elite sports, using IPC standards adapted to national conditions and accompanied by measurable performance indicators. Human resources and coaches should be empowered through specialized training, motivational courses, and incentive systems and a national and provincial media network should be established to produce educational content, train journalists, and launch an information system for athletes and families. Also, a needs-based approach should be adopted via field studies, with program designs based on athletes' physical and psychosocial profiles and personalized protocols, and intersectoral cooperation should be strengthened through provincial councils, unified policy documents, and monitoring mechanisms. In addition, infrastructure should be optimized by partnering with public and private entities, improving accessibility, and investing in appropriate equipment and equitable resource distribution must be ensured based on needs and regional disability populations; gender biases must be reduced, and inclusive recreational programs must be developed. Also, diverse events should be organized, including elite competitions, festivals, indigenous games, ecotourism, virtual activities, and group rehabilitation programs and financial support and private sector involvement should be encouraged through support funds, tax incentives, and NGO partnerships. Finally, continuous monitoring and evaluation should be implemented using health and social participation indicators, data analysis, and annual reporting.

Conclusion

Sport development for veterans with disabilities in Iran results from complex interactions among technology, human needs, governance, infrastructure, legal frameworks, and supportive actions.

Acknowledgments: The authors sincerely thank all the participants involved in this research, especially the veterans and individuals with disabilities in Iran.

Ethical Permissions: The authors declared that all relevant ethical principles were observed in this study, including ensuring data confidentiality, obtaining written informed consent from participants, and respecting their right to withdraw from the research at any stage.

Conflicts of Interest: The authors declared no conflicts of interest.

Authors' Contribution: Rezaei Sh (First Author), Introduction Writer/Methodologist/Main Researcher/Discussion Writer/Statistical Analyst (100%)

Funding/Support: The present study was not financially supported.

References

1- Mandani B, Hosseini SA, Saadat Abadi M, Farahbod M. Effect of group exercise program on quality of life in post-traumatic stress disorder war veterans. Iran J War Public Health. 2015;7(2):91-8.

2- Rezaei S, Kheiri A, Esmaeili M, Mahmoudi A. Effect of eight weeks of sports exercises in water on sleep disturbance and alexithymia of inactive veterans. Iran J War Public Health. 2023;15(3):285-93.

3- Kheiri A, Rezaei S, Alhasany M. Effect of aquatic exercises on emotional intelligence and quality of life of inactive veterans. Iran J War Public Health. 2024;16(2):181-9.
4- Gholiour S, Parhizgarkalat SZ, Gholipour M. Type of injury and quality of life among veterans Kermanshah province. J Soc Work Res. 2016;2(4):66-99. [Persian]
5- Rezaei S, Shams M, Azizifar A, Aibod S, Gohari Z. Modeling the structural equations of the corona anxiety level based on psychological hardness and physical activities in the treatment staff of Ilam Province with the mediator role of professional identity. J Educ Health Promot. 2024;13:249.
6- Rezaei S. The effectiveness of eight weeks of exercise training in water on marital conflicts and emotional self-regulation of inactive veterans of Ilam city. J Mil Med. 2023;25(5):2024-34. [Persian]
7- WHO. Global levels of physical inactivity in adults: Off track for 2030. Geneva: World Health Organization; 2024.
8- UNICEF. Physical activity and children's rights. New York: United Nations International Children's Emergency Fund; 2023.
9- Alfahham QMY, Asefi AA. Identifying and analyzing the effective drivers on the development of sport for all in Iraq using mutual influence analysis. Sport Manag J. 2025;17(1):161-39. [Persian]
10- Chen P, Yu H, Lin CF, Guo J, Elliott J, Bleakney A, et al. Effect of adaptive sports on quality of life in individuals with disabilities who use wheelchairs: A mixed-methods systematic review. Disabil Rehabil Assist Technol. 2024;19(8):2774-90.
11- Rezaei Sh, Salehipour M. Analysis of effective factors in development of Iran sport industry using grounded theory approach. Hum Resour Manag Sports. 2018;6(1):89-107. [Persian]
12- Gholami Torkesaluye S, Zareian H, Abdollahi MH, Abolhoseini A. Identifying the key drivers of the development of sport for all with a structural analysis approach. Sport Manag Stud. 2023;15(81):285-308. [Persian]
13- Rezaei S, Izadi B, Mahdiyeh M. The pattern of factors affecting the quality of women's leisure time with an emphasis on sport activities. Res Womens Sports. 2024;1(1):71-92. [Persian]
14- Hassett L, McKay MJ, Cole J, Moseley AM, Chagpar S, Geerts M, et al. Effects of sport or physical recreation for adults with physical or intellectual disabilities: a systematic review with meta-analysis. Br J Sports Med. 2024;58(5):269-77.
15- Lapierre N, Huet-Fiola C, Labrie D, Vincent-Blouin E, Côté C, Gagnon M, et al. Digital platforms to facilitate physical activities for people with physical or sensory disabilities: A scoping review. Disabil Health J. 2024;17(3):101626.
16- Bohn AS, Porter G, Penniman R, Leonard S. Thriving through adaptation: Adaptive sports after spinal cord injury. Phys Med Rehabil Clin N Am. 2025;36(1):173-94.
17- Rezaei S, Monazami A. Developing a model for elite sport development in Iran. Sport Manag Stud. 2026;(1):e4939. [Persian]
18- Ávila-Gámiz F, Pérez-Cano AM, Pérez-Berlanga JM, Mullor-Vigo RM, Zambrana-Infantes EN, Santín LJ, et al. Sequential treadmill exercise and cognitive training synergistically increase adult hippocampal neurogenesis in mice. Physiol Behav. 2023;266:114184.
19- Mackintosh C, Reavill N, O'Hanlon R, Roberts D. Understanding the role of invictus games in supporting the transition for UK disabled military veterans. Front Sports Act Living. 2025;7:1609967.
20- Ahmadi F, Khaleghi MM, Zar A, Tejaswi J, Govindasamy K, Ardelean VP, et al. Relationship between quality of life and sports performance among athletes with disabilities: A focus on individual sports. Healthcare. 2025;13(22):2919.
21- Ward JM. Playing for freedom: A phenomenological exploration into team sports' perceived influence on PTSD symptoms in military veterans. J Veterans Stud. 2026;12(1):36-54.
22- Rezaei S. Designing a revenue model for Iranian football clubs: With grounded theory approach. Appl Res Sport Manag. 2018;6(3):101-16. [Persian]
23- Danaeifard H, Eslami A. Application of grounded theory in practice: Constructing of organizational indifference. Tehran: Publications of Imam Sadiq University; 2010. p. 105-116. [Persian]
24- Strauss A, Corbin J. Basics of qualitative research: Techniques and procedures for developing grounded theory. 4th ed. Thousand Oaks: Sage Publications; 2015. p. 158-65.
25- Ghoreishi MS, Savadi M, Saybani H. Designing a model for the development of disability volunteering in sports based on data theory. Sport Manag Stud. 2022;14(75):17-48. [Persian]
26- Hosseinzadeh Gonabadi A, Safania AM, Poursoltani Zarandi H, Bagherian M, Naqshbandi S. Barriers to the absence of the disabled and veterans in sports activities based on data theory. J Disabil Stud. 2021;11:130.
27- Faraji E, Dabiri A, Allami M, Hosseini M, Barati AH. Physical activity and sport participation in veterans with extremity musculoskeletal disorders. Eur J Adapt Phys Act. 2023;16(2):1-10.
28- Rezaei S. Designing the privatization model in Iran's sports industry. J Sport Manag Dev. 2020;9(4):110-29. [Persian]
29-Rezaei S, Esmaeili M. Broadcasting rights in the Iranian football industry. J Sport Manag Dev. 2019;8(1):86-101. [Persian]
30- Kamenecka-Usova M, Korde Z, Zidens J, Luika S, Agapova O, Palkova K, et al. Research patterns in sports law and sports governance: A Scopus bibliometric study. Front Sports Act Living. 2025;7:1590858.