Research Square

Preprints are preliminary reports that have not undergone peer review.
They should not be considered conclusive, used to inform clinical practice,
or referenced by the media as validated information.

Examining Health and Well-Being Through Recreational Rugby: A Phenomenological Perspective on Leisure Participation in Türkiye

Ali Çağrı Gücal

alicagri.gucal@nisantasi.edu.tr

İstanbul Nişantaşı Üniversitesi

Rıfat Kerem Gürkan

Kırıkkale University

Sevdanur Bozkurt

Kırıkkale University

Research Article

Keywords: leisure constraints, health, physical activity, facilitators, hierarchical model, rugby

Posted Date: September 11th, 2026

DOI: https://doi.org/10.21203/rs.3.rs-10785943/v1

License: This work is licensed under a Creative Commons Attribution 4.0 International License.
Read Full License

Additional Declarations: No competing interests reported.

Abstract

Background

Leisure activities promote physical activity, psychological well-being, and social development. In physically demanding sports such as rugby, understanding the constraints and facilitators influencing participation is important. Grounded in the Hierarchical Model of Leisure Constraints and the Facilitators Approach, this study examines the meanings individuals attribute to rugby, the intrapersonal, interpersonal, and structural constraints they encounter, and the factors facilitating sustained participation. It also explores the experiential meaning of recreational rugby in relation to physical activity and health promotion.

Methods

A qualitative research approach was adopted, and the study was designed within a phenomenological framework situated in an interpretivist paradigm, with a particular emphasis on how individuals construct meaning around and make sense of their lived experiences and personal worlds. The study group comprised 11 male participants, aged between 20 and 33 years, who engaged in rugby at a recreational level in Türkiye and were recruited through criterion sampling. Data were collected between February and April 2026 through semi-structured interviews conducted both face-to-face and online. The data were analyzed using thematic analysis, with codes organized deductively into intrapersonal, interpersonal, and structural dimensions in accordance with the hierarchical model.

Results

The findings revealed that intrapersonal constraints, including initial apprehension and perceived injury risk, were offset by achievement motivation, emotional release, and character development, supporting psychological well-being and an active lifestyle. Interpersonal constraints, including familial resistance and societal prejudice, were mitigated by belonging and social solidarity. Structural constraints, including time demands, inadequate infrastructure, and financial burdens, were addressed through institutional support and practical compatibility.

Conclusions

Overall, within the Hierarchical Model of Leisure Constraints and Facilitators, intrapersonal constraints such as initial apprehension and injury concerns are balanced by achievement motivation, emotional release, and character development. Interpersonal constraints, including familial resistance, are reduced through team camaraderie and belonging, while structural barriers such as infrastructure and financial limitations are addressed through institutional support. Despite rugby's emerging status in Türkiye,

participants view it as a means of character development, social belonging, and healthy living. Future research should examine these dynamics across sports and among female athletes.

Introduction

Leisure is defined as a set of activities in which individuals voluntarily engage at their own discretion, independently of obligatory responsibilities, and which acquire meaning within a particular context (1). In this context, leisure should not be understood merely as a means of filling leisure; rather, it constitutes a domain of experience in which individuals engage in meaningful and satisfying activities in accordance with their interests, abilities, and available resources, while simultaneously promoting participation in physical activity and healthy lifestyle behaviors. Stebbins (2) conceptualizes leisure as a meaningful and enduring domain of life that contributes to personal development and emphasizes its substantial influence on individuals' processes of self-realization. With regard to individuals' participation in leisure activities, walking, swimming, and football have been identified as the most popular activities. In contrast, participation in nature-based sports, fitness-oriented exercise, and racket sports remains relatively limited, with a substantial proportion of individuals reporting no prior experience in these areas (3).

The conceptualization of leisure as a contextual domain enables individuals to recognize their strengths and utilize these strengths effectively (4). Thus, leisure provides a space beyond the routines of everyday life in which individuals can express themselves while supporting their physical, cognitive, and emotional capacities and potentially contributing positively to indicators of physical and psychological health (5). Deep concentration and intrinsic satisfaction experienced during leisure activities can alter individuals' perception of time, thereby fostering an intense state of integration and immersion. Such experiences enhance self-awareness, stimulate creativity, and provide a strategic foundation for the development of existing skills (6). Within this broader framework, the benefits that leisure activities offer to individuals become more tangible. The literature emphasizes that participation in leisure activities strengthens individuals' capacity for self-directed behavior, facilitates self-expression, and provides experiential contexts that support their ability to cope with diverse life circumstances (7). Accordingly, leisure can be conceptualized as a process that supports physical, psychological, and social well-being while fostering personal development in a multidimensional manner (8).

Particularly among young people, the engagement of leisure through structured, meaningful, and positively oriented activities is of particular importance (9). Encouraging young individuals to participate in such activities can facilitate positive developmental outcomes, foster the development of regular physical activity habits, and support the adoption of healthy lifestyle behaviors over the long term. Moreover, these activities may serve a protective function by reducing the likelihood of adverse outcomes, such as premature withdrawal from education (10). In this context, placing greater emphasis on healthy lifestyle habits among young people reflects the perspective that regular participation in sports and exercise during this developmental period can become an enduring lifestyle pattern that persists into adulthood (11). Thus, sport- and exercise-oriented physical activity has emerged as one of

the key areas of contemporary concern. It is increasingly evident that maintaining a regular and active lifestyle can exert beneficial effects on personal happiness, quality of life, and life satisfaction (12). Although sport offers significant benefits to individuals across all segments of the population, among young people it stands out as an important health-promoting physical activity behavior that supports not only physical development but also psychological and emotional well-being (13). Individuals between the ages of 20 and 33 have been reported to experience higher levels of stress compared with other age groups, with this stress largely attributable to academic demands and expectations, and potentially impairing individual functioning in the long term (14). In contrast, participation in sporting activities has been shown to be effective in reducing individuals' stress levels while contributing to greater happiness and enhanced psychological well-being (15).

Despite the multifaceted benefits that leisure activities offer individuals, it is difficult to assume that all individuals are equally able to participate in such activities. This underscores the need to consider the constraining and facilitating factors that shape leisure participation. For many years, factors limiting participation in leisure activities were examined from a relatively narrow perspective and were primarily conceptualized as constraints intervening between individuals' preferences and their actual participation. This approach was reflected in early conceptualizations that viewed constraints primarily as constraints to participation (16). Thus, one of the most widely recognized models developed to explain the influence of leisure constraints on participation is the Hierarchical Model of Leisure Constraints proposed by Crawford, Jackson, and Godbey (17). The model categorizes constraints into three principal dimensions intrapersonal, interpersonal, and structural and posits that individuals must first overcome intrapersonal constraints in the process of engaging in leisure activities.

Over time, the constraints perspective has evolved from a narrow focus on "non-participation" into a more comprehensive framework that explains how, to what extent, and under which conditions leisure participation occurs. In this context, constraints are conceptualized as perceived factors that limit leisure preferences and hinder the attainment of satisfaction from leisure activities (18). The nature and extent of these constraints may vary depending on the structural characteristics of the activity in question. Accordingly, rugby, a physically demanding collision sport characterized by an intermittent pattern in which high-intensity activities alternate with periods of lower intensity, places substantial physical demands on players. As physical contact constitutes both a technical requirement and a defining feature of the sport (19), rugby offers an experience involving high levels of physical activity while, by its very nature, potentially presenting participants with various physical and perceptual constraints. However, focusing solely on constraining factors in high-intensity sports such as rugby is insufficient; attention must also be given to the conditions that facilitate participation (20, 21). Accordingly, Raymore's (22) facilitators approach focuses on factors within the individual, social relationships, and structural conditions that support participation in leisure activities. Rather than being viewed merely as the opposite of constraints, facilitators are conceptualized as complementary components that enable and strengthen the process of leisure participation.

Moreover, research examining the interplay between leisure, physical activity, and health has predominantly focused on conventional forms of physical activity and quantitative measures of participation (23, 24). In particular, within the Turkish context, comparatively limited attention has been devoted to individuals' participation experiences, leisure constraints, and facilitating factors in recreational sports characterized by high physical demands and physical contact, such as rugby. This gap is particularly significant during young adulthood, a life stage in which patterns of physical activity participation are shaped, underscoring the need for a more in-depth examination of distinctive recreational sport experiences, such as recreational rugby, that involve substantial physical demands. Accordingly, examining young adults' experiences of rugby can contribute to a more comprehensive understanding of their physical activity participation processes, health-related outcomes, and leisure behaviors. The selection of young adults as the target population is primarily justified by the fact that this group occupies a critical developmental period in which physical activity habits are shaped amid academic responsibilities, lifestyle transitions, and influences from social environments. Participation in recreational rugby may, in turn, provide multidimensional health-related benefits, including enhanced physical fitness, active lifestyle habits, psychological well-being, social connectedness, and a sense of belonging. Thus, the present study aims to examine young adults' experiences of recreational rugby participation through the lens of the leisure constraints and facilitators perspective, thereby contributing to a deeper understanding of the conditions that hinder or support engagement in physical activity.

Based on this theoretical framework, the present study adopts a qualitative approach to examine young adults' experiences of recreational rugby, with particular emphasis on the constraints and facilitators encountered throughout their participation. Identifying the motivational, environmental, and perceptual factors that influence participation in sports characterized by high levels of risk and intense physical contact, such as rugby, can contribute substantially to understanding the sustainability of physical activity engagement, health-promoting behaviors, and the dynamics of leisure participation from a holistic perspective. Accordingly, the primary aim of this study is to explore in depth the constraining and facilitating factors that shape young adults' participation in recreational rugby and to provide a contextual and explanatory framework for understanding the process of leisure participation.

Addressing these theoretical and contextual gaps, the current study adopts the Hierarchical Model of Leisure Constraints and the Leisure Facilitators Approach as interpretive frameworks to examine how young adults in Türkiye experience and interpret recreational rugby participation. Rather than focusing solely on participation constraints, the study explores how intrapersonal, interpersonal, and structural factors shape participation and how facilitators support its initiation and continuation. Understanding these constraints and facilitating conditions is also essential for promoting young adults' physical, psychological, and social health. The study offers three key contributions. First, it advances the leisure constraints perspective by examining constraints and facilitators simultaneously, providing a more comprehensive understanding of recreational sport participation. Second, it conceptualizes rugby as a multidimensional leisure experience that may foster physical, psychological, and social outcomes, including stress management, self-esteem, resilience, leadership, belonging, and social connectedness. Third, by highlighting contextual factors such as family and societal perceptions, institutional support,

infrastructure, financial requirements, and social relationships, it provides a context-specific contribution to the literature on leisure participation, recreational sport, and physical activity in Türkiye.

Accordingly, the study addresses the following research questions:

1) What intrapersonal, interpersonal, and structural constraints influence young adults' participation in recreational rugby as a form of physical activity in Türkiye?

2) What intrapersonal, interpersonal, and structural facilitators support young adults' initiation and sustained participation in recreational rugby as a form of physical activity in Türkiye?

3) How do young adults make sense of their rugby experiences and the physical, psychological, and social health benefits associated with their participation?

The Relationship Between Recreational Rugby Participation, Physical Activity, and Health in Türkiye

Rugby Union is one of the world's most popular contact sports, with more than 46 million participants across 123 countries (25). Its various forms include Rugby League, Rugby Tens, Touch Rugby, and Rugby Sevens (26). Rugby combines high levels of physical exertion with teamwork, communication, and social interaction, making it a meaningful leisure activity (27). Regular participation may enhance physical activity through running, acceleration, changes of direction, tackling, strength, and endurance (28). Different forms of rugby can also provide health-promoting physical activity, with non-contact and wheelchair rugby offering physical and psychological benefits (29). Nevertheless, injury and concussion risks in contact rugby highlight the need for safe and sustainable participation. Thus, rugby should be viewed not only as a physically demanding sport but also as a recreational activity supporting psychological well-being, social interaction, and quality of life (30).

According to the data reported in the activity report of the Turkish Rugby Federation, the number of active athletes increased from 3.939 at the end of 2023 to 5.320 at the end of 2024, representing a 35.1% increase. During the same period, the number of active clubs increased from 67 to 131 (95.5%), while the number of active provinces rose from 46 to 59 (28.3%), demonstrating a growing trend in the geographical dissemination of rugby across Türkiye (31). These indicators suggest that active participation in rugby in Türkiye is increasing and that the sport has considerable potential to reach and engage diverse segments of society. In this context, participation in rugby may be considered to have significant potential for promoting physical activity habits and supporting healthy lifestyle behaviors (32). The team-based nature of rugby may facilitate individuals' engagement in regular physical activity while also fostering social interaction. Rugby can contribute to the development of various components of physical fitness, including endurance, strength, speed, agility, and coordination. However, the limited existing research addressing this field in Türkiye highlights the need for further investigation into the constraints and challenges encountered in recreational rugby participation.

Theoretical Framework

This study is grounded in the Hierarchical Model of Leisure Constraints and the Leisure Facilitators approach to explore the recreational rugby participation experiences of young adults. Developed by Crawford, Jackson, and Godbey (17), the Hierarchical Model of Leisure Constraints conceptualizes the constraints individuals encounter throughout the process of engaging in leisure activities across three dimensions: intrapersonal, interpersonal, and structural constraints. The model posits that individuals' leisure preferences and participation behaviors are shaped not solely by personal characteristics, but also by their social environment, interpersonal relationships, and prevailing structural conditions. Within this framework, the model provides a comprehensive basis for examining constraints operating at multiple levels that young adults may encounter in participating in recreational rugby, including initial apprehension, perceptions of injury risk, lack of social support, societal attitudes, and temporal, facility-related, and economic constraints.

Given that participation in leisure activities cannot be adequately explained solely in terms of constraints, the Leisure Facilitators approach, developed by Raymore (22), focuses on the individual, social, and environmental factors that facilitate and sustain individuals' participation in leisure activities. Within this approach, factors such as motivation, perceived competence, social belonging, team support, and institutional resources are conceptualized as facilitating conditions that strengthen participation in leisure activities. In the present study, these two theoretical perspectives are considered in conjunction to examine young adults' participation in recreational rugby in terms of the constraints and facilitators that shape their engagement in physical activity, health-related experiences, and leisure-time behaviors.

Methodology

Research design

The present study was designed within an interpretive paradigm, employing a phenomenological research design that explores how individuals make sense of their lived worlds and experiences (33). The study aimed to provide an in-depth account of participants' subjective perceptions of rugby, the meanings they ascribe to the sport, and how they interpret the personal, interpersonal, and structural constraints encountered throughout their participation. Accordingly, the dynamic interplay between the hierarchical levels posited by the model and the facilitating mechanisms operating across these levels was examined through participants' lived experiences.

Participants and setting

The study was conducted in Türkiye, and the study group comprised individuals who were either enrolled at universities in Türkiye or had continued their active sporting involvement at a recreational level following graduation, and who participated in rugby voluntarily and recreationally. Criterion sampling, a purposive sampling strategy aimed at identifying participants who most closely align with the objectives

of the study, was employed for participant selection. Criterion sampling seeks to recruit individuals who have directly experienced the phenomenon under investigation and who can provide rich, information-dense data relevant to the research questions (34).

The inclusion criteria were defined as follows: participants had to be young adults who were either university students or had continued their active sporting involvement at a recreational level following graduation, participated in rugby outside a professional capacity, and were actively engaged in rugby-related activities. Although the study group consisted predominantly of currently enrolled university students, graduates who continued to participate in rugby within the university team context were also included to capture greater diversity in participants' experiences. The appropriateness of the purposive sampling strategy, data richness, and the extent to which the data adequately address the research objectives are considered more important than sample size alone. Similarly, the concept of information power suggests that relatively small samples may be sufficient in qualitative research when the research aim is clearly defined, the sample is relatively homogeneous, the theoretical framework is well established, and the data are rich (35). Accordingly, Guest et al. (36) reported that thematic saturation can generally be achieved within 6–12 interviews in relatively homogeneous samples. In the present study, a sample of eleven participants was considered adequate. Purposive sampling enabled the recruitment of participants with experience in recreational rugby, and the interview data provided sufficient depth and richness of information to address the research aims and questions. Profiles of all participants, with their identities anonymized, are presented in Table 1.

Table 1
Participant demographic characteristics

Participant	Age	Gender	Department	Academic Status	Rugby Experience	Sporting Experience
P1	21	Male	Sport Sciences	Fourth-Year Student	3 years	5 years
P2	20	Male	Sport Sciences	First-Year Student	3 years	10 years
P3	33	Male	Law	Graduate	20 years	28 years
P4	22	Male	Public Finance	First-Year Student	5 years	8 years
P5	23	Male	Sport Sciences	Graduate	5 years	15 years
P6	28	Male	International Trade	Graduate	15 years	24 years
P7	20	Male	Culinary Arts	Second-Year Student	1 years	7 years
P8	23	Male	Business Administration	Third-Year Student	8 years	18 years
P9	28	Male	Business Administration	Second-Year Student	5 years	6 years
P10	31	Male	Sport Sciences	Graduate	16 years	20 years
P11	21	Male	Sport Sciences	Fourth-Year Student	3 years	13 years

The study group comprised 11 male participants, ranging in age from 20 to 33 years. Examination of the participants' profiles revealed representation from diverse academic disciplines, including Sport Sciences, Law, Business Administration, Public Finance, International Trade, and Culinary Arts, as well as individuals who continued their recreational participation following graduation. The participants' rugby-specific experience ranged from 1 to 20 years, while their overall sporting backgrounds varied from 5 to 28 years, indicating that the sample generally comprised individuals with an established sporting lifestyle. The inclusion of graduate participants enriched the data by providing insights into the extent to which rugby experiences initiated during university could be sustained as a leisure activity following graduation.

Data collection

The data collection process commenced following the receipt of ethical approval from the Ethics Committee of İstanbul Nişantaşı University (Date: 07/01/2026, Issue: 2026-01-02). Interviews were scheduled based on participants' voluntary participation and availability. Data were collected between

February and April 2026 through face-to-face interviews and, where necessary, online interviews. Prior to each interview, participants were informed about the purpose, procedures, and ethical principles of the study, and written informed consent was obtained from all participants.

The semi-structured interview form used as the data collection instrument comprised open-ended questions designed to facilitate an in-depth understanding of participants' demographic characteristics, their pathways to becoming involved in rugby, and their experiences within the sport. The interview form was developed by the researchers specifically for the present study and was not previously published or used in another study. The questions were developed based on the study objectives, the Hierarchical Model of Leisure Constraints, the Facilitators Approach, and the phenomenological perspective adopted in the research. The English-language version of the semi-structured interview form is provided as Supplementary File 1. The core questions addressed themes such as: "*What are the most compelling personal factors that keep you engaged in playing rugby?*", "*What personal factors made you hesitant prior to starting rugby?*", "*How has the contact-intensive and risky nature of rugby impacted you personally?*", and "*How did your family react when you started playing rugby? Did they have any concerns or objections?*" Through these questions, the study explored not only participants' physical engagement in rugby but also the meanings they attributed to the sport and the coping strategies they developed throughout their participation, adopting a phenomenological perspective. The interviews were conducted with participants' consent and were audio-recorded, with each interview lasting approximately 20–30 minutes.

Data analysis

The data obtained through semi-structured interviews were analyzed using thematic analysis. The analysis commenced with the verbatim transcription of the audio recordings, followed by repeated reading of the transcripts by the researcher to develop familiarity with the data. At this stage, participants' perceptions, experiences, and accounts concerning their participation in recreational rugby were examined from a holistic perspective. In the second stage, the transcripts were analyzed line by line to identify meaningful units of expression, which were subsequently used to generate initial codes. In the third stage, codes with similar content were grouped together, and subthemes were developed around the perceived constraints and facilitators associated with young adults' participation in rugby. In the fourth stage, the resulting subthemes were organized into overarching themes comprising intrapersonal, interpersonal, and structural constraints, as well as facilitating factors, in accordance with the Hierarchical Model of Leisure Constraints developed by Crawford, Jackson, and Godbey (17). In the final stage, the themes were reviewed, their consistency with the research questions and relevant literature was assessed, and they were subsequently presented as findings, supported by direct quotations from participants.

Credibility, transferability, dependability, and confirmability

In qualitative research, the conventional concepts of validity and reliability have been addressed through the criteria of credibility, transferability, dependability, and confirmability to ensure methodological rigor (37, 38). To enhance the credibility of the study, sensitive data concerning risk perceptions and motivational factors arising from the inherent nature of rugby were described in detail, while participants' demographic and experiential profiles, including age, years of sport-specific experience, and athletic background, were provided to strengthen the depth and contextual richness of the data. In this process, the interpretations of rugby-specific phenomenological meanings were further substantiated through consultation with an academic experienced in qualitative research methods and a specialist with expertise in rugby and recreation. With regard to transferability, which concerns the extent to which the findings may be applicable to comparable sporting contexts, participant quotations were reported transparently and in a manner that preserved the contextual richness of their experiences. To ensure dependability, interview transcripts were independently coded by three researchers, and the themes emerging from participants' rugby experiences were subjected to comparative analysis. Discrepancies arising during the coding process were discussed with reference to the terminology specific to the discipline and the participants' own expressions, ultimately leading to consensus among the researchers. Finally, to establish the confirmability of the research, audio recordings of the participants' accounts of their rugby experiences, verbatim transcripts, and analytical forms were digitally archived and securely retained.

Ethical considerations

The study was conducted in accordance with the ethical approval granted by the Social Sciences and Humanities Ethics Committee of İstanbul Nişantaşı University (Date: 07/01/2026, Issue: 2026-01-02). Participants' identities were kept strictly confidential, and the interview recordings were used exclusively for scholarly purposes. Participation in the study was entirely voluntary, and participants were informed of their right to withdraw from the study at any stage without consequence.

Findings

The data concerning young adults' experiences of rugby were analysed using a deductive approach, guided by the Hierarchical Model of Leisure Constraints developed by Crawford, Jackson, and Godbey (17). Within this analytical framework, participants' experiences were categorised according to the model's three conceptual dimensions intrapersonal, interpersonal, and structural constraints and subsequently examined in terms of the constraints and facilitators influencing participation in recreational rugby.

Recreational rugby participation: constraints

The data obtained from the in-depth interviews conducted within the scope of the study indicate that young adults' leisure-time participation in rugby is shaped by a multidimensional constellation of

constraints. In accordance with the hierarchical model, these constraints were classified into three overarching themes: “Intrapersonal Constraints” encompassing individuals’ internal reservations and apprehensions; “Interpersonal Constraints” arising from interactions with their social environment; and “Structural Constraints” stemming directly from systemic and contextual conditions. The full range of constraining factors experienced by the participants from initial apprehensions and financial burdens to societal prejudices and institutional deficiencies along with their corresponding thematic clustering, is presented in Table 2.

Table 2
Constraints to leisure participation

Theme	Subtheme	Codes
Intrapersonal Constraints	Initial Apprehension	• Lack of knowledge • Perceived physical inadequacy
	Perceived Risks	• Fear of injury • Concerns about returning to participation
Interpersonal Constraints	Family Resistance	• Lack of family approval / Concealed participation • Objections from a spouse/fiancé(e)
	Societal Prejudice	• Perception of rugby as “rough/barbaric” • Confusion with American football
Structural Constraints	Time Management Constraints	• Academic workload • Work-related scheduling conflicts
	Inadequate Infrastructure	• Lack of facilities • Logistical constraints
	Financial Burdens	• Cost of imported equipment • Away-game travel expenses

Theme 1: intrapersonal constraints

The findings indicate that constraints encountered by individuals in their participation in recreational rugby were initially examined at the intrapersonal level. The findings indicate that participants experienced various forms of apprehension regarding their initial engagement with the sport. Among these concerns, the most prominent was their limited knowledge and familiarity with rugby as a sporting discipline.

"*(…) Rugby was not a widely known sport when we first started. We were not as familiar with the internet as people are today, and we did not have smartphones. We started through word-of-mouth information and guidance from those who were older and more experienced.*" (P3)

Another source of initial apprehension was the perception of physical inadequacy, particularly given the contact- and combat-oriented nature of rugby.

"*Since rugby does not have weight categories, you can find yourself facing someone who is much taller, stronger, or more experienced. No one on the field considers your level of experience or your physical conditioning because there are several people involved. Therefore, when I first started, I felt somewhat inadequate.*" (P5)

Another intrapersonal constraint identified in the findings was perceived risk. The most prominent concerns involved fear of injury and apprehension about returning to participation following an injury.

"*I was both hesitant and very afraid of getting injured because it is such a physically demanding sport. When I looked online, I kept coming across people who had suffered very serious injuries. I wondered what might happen because I work as a chef and earn my living by constantly using my body, so this inevitably made me hesitant.*" (P7)

Theme 2: interpersonal constraints

Another dimension influencing young adults' participation in recreational rugby concerns interpersonal factors. The findings indicate that some young adults encountered family disapproval due to the nature of the sport and consequently concealed their participation from their families for a period of time. In addition to parental objections, participants who were married or engaged also reported pressure from their partners to refrain from playing rugby.

"*I initially started in secret; I played quite secretly for some time, but eventually it inevitably came to light. When my family found out, naturally, no parent wants their child to go somewhere to get hit and potentially injured. I explained to them that, rather than simply being about physical contact, rugby is actually a highly tactical sport. Every physical action has a purpose; just like a move in chess, there is a rationale behind how and when you make each move. That is why I explained it to them this way (…).*" (P4)

The findings also indicate the presence of societal prejudice toward rugby. Participants emphasised that individuals involved in rugby are often perceived by members of the wider public as "rough" or "barbaric".

"*When I meet someone and tell them that I am a rugby player, they look at me from a very different perspective. To put it somewhat colloquially, they see us as barbarians. They assume that rugby players must be extremely aggressive and physically rough people who do not think things through strategically but simply charge in headfirst.*" (P5)

Another prevalent societal misconception is the tendency to confuse rugby with American football. Participants attributed this confusion, in part, to the considerably greater visibility of American football compared with rugby.

"*American football has a certain level of visibility. Television programmes, series, and films portray it. We do not have that kind of exposure. With rugby, people have to experience it for themselves. People need to become more familiar with the sport. Of course, we are also working hard to increase its visibility.*" (P3)

Theme 3: structural constraints

The final dimension influencing participation in recreational rugby, structural constraints emerged as a significant factor. The findings suggest that effective time management is essential for young adults to sustain participation in rugby. Participants reported having demanding academic schedules as students, which adversely affected their ability to engage in regular rugby participation.

"*One or two years ago, particularly over the past two years, my coursework became more demanding, which made it somewhat more difficult for me to participate in rugby. The intensity of my classes, along with examinations and other academic responsibilities, made participation more challenging.*" (P11)

Some participants were simultaneously managing their academic commitments, employment, and rugby participation, creating a particularly demanding set of competing responsibilities.

"*The timing of training sessions is very important. Since we do not receive any financial compensation and rugby is essentially a hobby, we also have to maintain our working lives alongside it. Therefore, we try to schedule training sessions on weekends, during available leisure time, or in the evenings so that they do not interfere with the work commitments of those who are employed or the academic commitments of those who are students.*" (P2)

Another structural constraint identified was inadequate infrastructure. Participants reported deficiencies in both training facilities and the logistical resources required to sustain rugby participation.

"*Throughout all eight years, we have never had a proper rugby field. We have played matches on artificial-turf football pitches. These are not appropriate for rugby. Rugby is not supposed to be played on such pitches, for example. Yet, after eight years, nothing has really changed; there has been no meaningful development.*" (P8)

The final subtheme within structural constraints concerned financial burdens. A major source of financial strain was the high cost and limited availability of imported rugby equipment.

"*Things like pads and other equipment (…) unfortunately, because they are not manufactured in Türkiye and are not readily available, we experience shortages in this regard. The more well-equipped we are, the more effectively and comprehensively we can train.*" (P2)

Another significant financial burden involved the travel expenses incurred by participants when travelling to away fixtures and tournaments.

"*To be honest, let me give you the most recent tournament as an example. We travelled to Antalya this weekend, and we covered our own transportation costs. (…) Although it is an amateur sport, our club does provide some support it is not that they provide none but resources are naturally limited. For example, we have to cover our own transportation expenses.*" (P9)

Recreational rugby participation: facilitators

A further significant dimension of the study concerns the facilitating factors that enable participants to overcome the constraints they encounter and reinforce their commitment to rugby. The findings demonstrate that participation is not shaped solely by constraining factors; rather, individual gains and structural support mechanisms play a complementary role in sustaining engagement. Accordingly, three overarching themes were identified: "Intrapersonal Facilitators" encompassing intrinsic motivation and psychological development; "Interpersonal Facilitators" representing trust and solidarity within the team and broader social support networks; and "Structural Facilitators" referring to the practical conditions and institutional resources that enable sustained participation. The full range of supportive components contributing to the sustainability of the rugby experience from emotional release and character development to mentoring support and institutional resources is detailed in Table 3.

Table 3
Facilitators of leisure participation

Theme	Subtheme	Codes
Intrapersonal Facilitators	Achievement Motivation	• National team aspirations • Desire for championship success
	Emotional Release	• Stress management • Relaxation • Anger regulation
	Character Development	• Discipline • Self-respect • Resilience • Leadership
Interpersonal Facilitators	Sense of Belonging and Commitment	• Sense of brotherhood • Loyalty
	Social Solidarity	• Mutual trust • Off-field friendships • Veteran mentorship
Structural Facilitators	Institutional Support and Resources	• Dedicated training facilities • Equipment support
	Practical Compatibility	• Flexible scheduling • Coach's supportive approach

Theme 1: intrapersonal facilitators

The findings first examined the intrapersonal dimension of the factors facilitating individuals' participation in recreational rugby. Among the intrapersonal facilitators, participants reported deriving motivation from a sense of achievement associated with playing rugby. This motivation was primarily driven by national team aspirations and a desire to win championships.

"*I am currently on the bench, so my next goal is to make the starting fifteen. After that, my goal is to be invited to a national team training camp one day. These are the steps I have set for myself, and this is my greatest source of motivation.*" (P7)

"*We have certain goals, such as winning the league championship or the Balkan Championship, as well as goals such as being selected for the national team (…).*" (P5)

Another finding was that participants experienced emotional relief through playing rugby. Participants indicated that their involvement in the sport enabled them to develop more effective stress-management strategies.

"*You release your stress during both training and matches, especially. You distance yourself from the outside world and spend two enjoyable hours. At the same time, you experience stress during matches and even in the training sessions before them. Perhaps you can learn to control that stress, or at least discuss how to manage it, both during and before the match.*" (P1)

In addition, the findings suggest that participants were able to release accumulated tension through rugby and regulate their anger more effectively.

"*When you play rugby, it brings out a certain aggressiveness in you I'm not sure how else to put it. You are calmer outside, but in a match environment, you can release some of your anger. In a way, it actually makes you feel calmer and more composed.*" (P8)

Another subtheme within the intrapersonal facilitators was character development. The findings indicate that participation in recreational rugby contributed to positive changes and development in participants' personal characteristics. Participants reported becoming more disciplined and developing a stronger sense of self-respect as a result of their involvement in the sport.

"*Even a young person who has just started playing rugby cannot simply be mocked by their friends for playing it. Rugby is taken very seriously and is actually a demanding sport, which is why it commands a great deal of respect. Even from a distance, people can recognise how difficult the sport is.*" (P3)

Participation in rugby was also found to contribute to greater physical strength, explosive power, and coordination, with participants describing themselves as more resilient both physically and psychologically as a result of these acquired capabilities.

"*Rugby has made me a stronger person. It has also made me much more confident. At first, I was very afraid of making contact. Now, regardless of who is in front of me even if they weigh 140 or 120 kilograms, or are 30–40 kilograms heavier than me I will still make the tackle when they run toward me. I have completely overcome that fear.*" (P7)

The final code within the character development subtheme was leadership. Participants indicated that rugby had contributed significantly to the development of their leadership qualities, with their experience and seniority naturally positioning them in leadership roles within the team.

"*I see myself as a leader. I think that, because of my experience, the responsibility of leading the team naturally comes to me; even if that role is not explicitly assigned to you, it is reflected in you through both*

your age and experience." (P10)

Theme 2: interpersonal facilitators

The interviews with recreational rugby participants revealed interpersonal facilitators as another key theme. The first prominent subtheme within this category was a sense of belonging and commitment. Participants described developing a strong sense of brotherhood with their teammates and emphasised the profound loyalty and mutual commitment that characterised these relationships.

"*We actually have a family environment within our team. We are not just a team; we are like a family. In that respect, we have developed strong bonds with one another, both materially and emotionally. The sense of friendship and camaraderie is really strong, and I genuinely value it. It also keeps me committed to the team to some extent.*" (P8)

In addition, the findings indicate the presence of social solidarity within the team, underpinned primarily by mutual trust among team members.

"*As I said, there is a sense of belonging. Emotionally, you tend to do more for people because, after all, you are essentially fighting alongside one another on the field. You trust your teammates, and that creates a very strong sense of trust.*" (P1)

Another important dimension of social solidarity was the friendships developed beyond the playing field.

"*I have very close friends whom I see frequently in my social life. Almost everyone on the team has that team spirit with one another, both on and off the field. It is not something that exists only during matches or training sessions. Because we are also close outside the field, this further strengthens the team spirit.*" (P9)

The final code identified within the social solidarity subtheme was veteran mentorship. The findings indicate that experienced players who joined rugby earlier, developed their skills, and accumulated substantial experience provide guidance and support to newcomers and players who are still progressing. Participants regarded this mentorship as a highly valued source of support that contributed to their sense of being valued within the team.

"*As I said, it is based on volunteering, so we generally follow what our senior teammates tell us. We know that they always want what is best for us.*" (P8)

"*The greatest source of motivation is actually the team aspect, as well as the sense of family that develops within the team. More than simply being a team, I would say it is the way the senior players those who are more experienced and hold greater responsibility treat the newcomers and younger members of the team.*" (P7)

Theme 3: structural facilitators

The final dimension within the facilitators theme is represented by structural facilitators. For participants, a particularly salient factor was the institutional support provided by the university for training sessions and competitive fixtures. The provision of free equipment and dedicated training facilities was identified as an important factor in both enabling participation and sustaining continued engagement in rugby.

"*It actually varies depending on the university. At the university I attended, the institution provided us with excellent facilities. We had everything we needed: a grass pitch, a dedicated room for the team, and all the necessary equipment. They also provided us with new uniforms every year, and we did not have to pay a single penny out of our own pockets.*" (P10)

Another subtheme within structural facilitators was practical compatibility. This refers to the extent to which participants' workloads and broader responsibilities were taken into consideration in facilitating their participation in rugby, with flexible schedules being arranged to accommodate their individual circumstances.

"*Since I am not currently working, I can organise my schedule accordingly. However, because some of the others are employed, training sessions are generally scheduled on weekends. Consideration is given to their availability, and the timing is arranged accordingly.*" (P1)

A key component of practical compatibility was the coaches' approach to participants. The findings emphasised that coaches' interpersonal approach and supportive attitude were important factors in enhancing both participation and performance in rugby.

"*This is very important. If you do not have a good relationship with your coach, you do not feel like going to training. You receive all the drills, all the training instructions, and all the feedback through your interactions with the coach. If you do not have a good relationship with that person, you cannot effectively engage with the training or perform well. That is why, in my view, having a good relationship with my coach makes a significant difference, and it has a direct impact on my performance.*" (P5)

Discussion

The findings of the study, which examined the constraints and facilitators influencing young adults' participation in recreational rugby, are discussed and interpreted in this section under three principal dimensions: intrapersonal, interpersonal, and structural factors.

Intrapersonal factors

Among the primary constraints influencing young adults' participation in recreational rugby is initial apprehension toward the sport. Participants' limited knowledge of rugby and their perceptions of physical inadequacy emerged as the principal sources of this apprehension. Previous research has indicated that possessing knowledge about a particular sport or physical activity can serve as a

motivational factor that enhances individuals' participation (39). Similarly, physical competence plays an important role in both initiating and sustaining individuals' participation in rugby (40). This is also important for sustaining regular engagement in physical activity (41). Positive perceptions of one's physical competence may reinforce self-efficacy for physical activity, thereby contributing to the development of more favourable attitudes toward sport participation. Given the established physical and psychological health benefits of regular physical activity, enhancing individuals' access to recreational sport settings is likewise important for promoting and supporting health (42). Another subtheme concerns perceived risks. Given the physically demanding and contact-intensive nature of rugby, participants reported concerns about sustaining injuries, consistent with evidence that the sport is associated with a considerable incidence of injury (43). In addition, participants expressed apprehension regarding their return to sport following injury (44). These findings suggest that young adults' decisions to participate in recreational rugby are shaped not only by the sport's physical demands but also by perceptual concerns arising from limited knowledge and individual assessments of injury risk. Accordingly, promoting participation in rugby requires a balanced and accurate communication of both the health benefits of physical activity and the injury risks associated with the sport (43). In this context, appropriate warm-up routines, physical conditioning, technical instruction, and injury-prevention practices may contribute not only to protecting individuals' physical health but also to fostering greater confidence in and familiarity with the sport.

The findings further highlight the role of intrapersonal facilitators as important factors encouraging young adults' participation in recreational rugby. These include achievement motivation, which nurtures individuals' aspirations for self-actualisation; emotional release, which enables them to disengage from the stresses of everyday life; and character development, shaped by the discipline inherent in sport. Achievement motivation is primarily driven by the aspiration to be selected for the national team (45), followed by the desire to achieve championship success with their teams (46). In terms of emotional release, participation in rugby appears to support stress management (47), facilitate the release of accumulated tension, and contribute to anger regulation (48). These findings suggest that recreational rugby is not merely an activity aimed at enhancing physical capacity, but also provides a physical activity environment that supports individuals' psychological well-being. In conjunction with these developmental outcomes, participation in rugby appears to facilitate the development of a renewed sense of identity, as well as attributes such as discipline, self-esteem, resilience, and leadership (49). The benefits afforded by rugby further indicate that participation in the sport extends beyond physical activity, providing individuals with aspirational goals, psychological relief, and opportunities for character development. Thus, recreational rugby can be regarded as a recreational activity capable of contributing not only to increased levels of physical activity but also to the holistic promotion of physical, psychological, and social well-being. Accordingly, promoting and expanding recreational rugby programmes within universities and other institutions may be important for preserving and further enhancing the comprehensive benefits derived by participants.

Interpersonal factors

The findings underscore how interpersonal influences can constrain young adults' participation in recreational rugby, particularly through family resistance and societal prejudice. The findings indicate that participants encountered difficulties in obtaining family approval for their involvement in rugby and, in many cases, participated without their families' knowledge. A central issue in this regard is the reluctance of parents to allow their children to participate in the sport due to concerns about the inherent risks associated with sporting activities (50). Similarly, owing to concerns regarding these risks, participants' spouses or fiancés were also found to be unsupportive of their involvement in rugby. The final interpersonal constraint concerns societal prejudice. Participants reported that rugby is commonly perceived within society as a violent, overly aggressive, or even "barbaric" sport, which negatively shapes broader perceptions of and attitudes toward the sport (51). Another prevalent misconception within society is the confusion of rugby with American football. This situation indicates that, despite their interest in rugby, participants were compelled to conceal their involvement in the sport in order to overcome family pressure stemming from concerns about injury, while also having to contend with the lack of knowledge arising from the public's tendency to conflate rugby with American football. Such interpersonal and societal perceptions may shape individuals' decisions regarding physical activity participation not merely through personal preferences, but also through the support they receive or the pressure they experience from their social environment.

The findings highlight the pivotal role of interpersonal facilitators in sustaining young adults' engagement in recreational rugby despite family- and society-level resistance. In this context, the sense of belonging and commitment developed within the team, together with social solidarity among participants, emerges as a strong support mechanism against external pressures. A strong sense of belonging and commitment represents one of the fundamental benefits of participation in team sports, while this process is reinforced by an extensive social network and a sustained environment of social interaction. Within this dynamic context, relationships among team members appear to be particularly strong, with these bonds fostering high levels of loyalty and dedication to the team among individuals (52, 53). Another dimension of interpersonal facilitators is social solidarity, which is shaped by a foundation of mutual trust within the team (52, 54). The bonds that develop among athletes over time extend beyond the training environment and evolve into friendships outside the playing field (55), while this culture of solidarity is further strengthened through veteran mentorship provided by experienced athletes (56). Accordingly, the social support environment fostered within the team may be regarded as an important factor that not only sustains individuals' regular engagement in physical activity but also promotes their psychological and social well-being. Therefore, the participation of young adults in recreational sports should be actively supported, with emphasis placed not solely on physical activity but also on leisure activities that foster peer mentorship and strengthen social bonds and interpersonal connections.

Structural factors

Structural factors constitute the final dimension of the constraints influencing participants' engagement in recreational rugby. In this context, time-management challenges, inadequate infrastructure, and

financial burdens appear to hinder individuals' sustained participation in recreational sport. Alongside their involvement in rugby, participants continue to face demanding academic schedules (57), while many are also required to engage in paid employment to support their livelihoods (58). These circumstances indicate that the time individuals can devote to physical activity may be constrained by their academic and economic responsibilities. Accordingly, despite the health benefits associated with physical activity, appropriate structural conditions in terms of both accessibility and time availability need to be established to enable individuals to derive these benefits on a regular and sustained basis. Another structural constraint was the inadequacy of sports infrastructure, particularly the lack of appropriate facilities. Given rugby's need for extensive playing areas, specialised goalposts, and suitable playing surfaces, insufficient access to appropriate facilities directly constrains participation. Structural constraints are recognised as significant determinants of sports participation (59). Moreover, limited access to rugby-specific protective equipment, regulation-standard playing fields, and adequate organisational coordination further restricts participation (60). Financial burdens constitute another key structural constraint. The high cost of predominantly imported protective equipment, together with travel and accommodation expenses for away fixtures, may pose substantial barriers, particularly for students (61, 62). Overall, the findings highlight the need for institutional and financial support, including equipment provision, transportation assistance, and appropriate facility access, to facilitate participation and sustain engagement in rugby. Such measures may also promote regular physical activity and support the maintenance of an active lifestyle.

Institutional resources and practical compatibility emerge as key facilitators of sustained participation in recreational rugby. Regarding institutional resources, the provision of dedicated facilities, sport-specific equipment, and protective gear by universities appears to directly facilitate participation by alleviating individuals' financial and logistical burdens (63, 64). These university-provided resources may not only facilitate individuals' access to physical activity but also contribute to the development of regular exercise habits and the promotion of physical health. Another important facilitator in overcoming structural constraints is practical compatibility. Flexible training schedules that take participants' academic demands and employment commitments into account, together with a supportive coaching approach responsive to athletes' needs, may promote sustained participation in recreational rugby (63, 65). Collectively, institutionally provided infrastructural support and flexibility within recreational programmes emerge as key mechanisms for minimising structural constraints and strengthening individuals' commitment to and continued engagement in rugby.

Conclusions

This study demonstrates that young adults' participation in recreational rugby is shaped by the interplay of intrapersonal, interpersonal, and structural constraints and facilitators. At the intrapersonal level, limited knowledge, perceived physical inadequacy, and concerns about injury were identified as key constraints; at the interpersonal level, family resistance and societal prejudice emerged as significant barriers; while at the structural level, time-management demands, inadequate facilities and equipment, and financial burdens were identified as primary constraints on participation. Conversely, achievement

motivation, stress management, self-esteem, and discipline emerged as intrapersonal benefits, while team belonging, social solidarity, and peer support, together with university-provided facilities, equipment, and flexible training arrangements, facilitated sustained participation. These findings indicate that recreational rugby participation extends beyond a purely sporting activity, representing a multidimensional leisure experience that supports individuals' sustained engagement in physical activity and fosters social interaction. Overall, recreational rugby has considerable potential to enhance physical activity, physical capacity, and psychological well-being among young adults. Given the injury risks associated with its contact-based nature, safe training practices, appropriate equipment, and qualified coaching are essential. Accessible facilities, financial support, flexible training schedules, and social support may further promote sustained participation. Thus, under appropriate safety and accessibility conditions, recreational rugby can serve as a sustainable model for promoting young adults' physical, psychological, and social well-being.

Theoretical Implications

The primary theoretical contribution of this study lies in integrating the Leisure Constraints Hierarchy Model and the Leisure Facilitators Approach to explain young adults' participation in recreational rugby. The findings indicate that leisure participation is shaped not only by intrapersonal, interpersonal, and structural constraints, but also by facilitators that mitigate their effects. Initial apprehension, perceived injury risk, physical competence concerns, family resistance, societal prejudice, and temporal and financial constraints highlight the applicability of this framework to recreational sports characterised by high physical demands and contact. Furthermore, achievement motivation, stress management, self-esteem, social belonging, team solidarity, institutional support, and flexible training arrangements emerged as key facilitators of sustained participation. These findings reinforce the view of leisure participation as a dynamic and multidimensional process that extends beyond leisure behaviour to encompass physical activity, psychological well-being, social connectedness, and health-promoting behaviours. In the Turkish context, where rugby remains an emerging sport, the findings further emphasise the importance of considering leisure constraints and facilitators alongside the sport's physical, social, and institutional characteristics.

Practical Implications

The practical implications of the findings suggest that comprehensive programmes addressing intrapersonal, interpersonal, and structural factors are needed to increase young adults' participation in recreational rugby. Universities and sports clubs could develop informational programmes highlighting the physical and psychological health benefits of rugby, thereby helping to address limited knowledge of the sport, perceived physical inadequacy, and concerns about injury. In addition, creating safe rugby environments, providing appropriate facilities and equipment, offering training schedules compatible with participants' academic and employment commitments, and reducing transportation and travel costs could support sustained participation. Strengthening social mechanisms such as team belonging, peer mentorship, and guidance from experienced players may further promote participation continuity

and social well-being. Accordingly, recreational rugby programmes should be structured not solely around sporting performance, but as health-promoting recreational programmes that foster regular physical activity habits, support physical fitness, enhance stress management and psychological well-being, and strengthen social connectedness.

Limitations and Future Research

This study has some limitations. The study was conducted with 11 recreational rugby participants, all of whom were male, aged 20–33 years, and either university students in Türkiye or young adults who had continued their sporting involvement at a recreational level following graduation. This sample composition may limit the generalizability of the findings to different age groups, female athletes, and individuals with varying levels of sport participation. Moreover, as the data were collected exclusively through qualitative interviews based on participants' subjective experiences, the study did not permit an objective assessment of physical activity levels or health-related outcomes. Future research should seek to recruit more diverse participant groups from different universities and regions and compare the experiences of male and female participants. In addition, quantitative and longitudinal studies may provide a more comprehensive assessment of the qualitative findings and further clarify the factors shaping participation in recreational rugby.

Declarations

Ethics approval and consent to participate

This research complies with the Declaration of Helsinki. The research, permission was obtained from the Ethics Committee Chair (İstanbul Nişantaşı University Ethics Committee, Reference Number: 2026-01-02, Date: 7 January 2026) about the ethical suitability of the study. Participants were informed about the purpose and scope of the study prior to data collection, and written informed consent was obtained from all participants before the interviews were conducted.

Human ethics and consent to participate

The study involving human participants was reviewed and approved by the İstanbul Nişantaşı University Ethics Committee (Reference Number: 2026-01-02; Date: 7 January 2026) in accordance with the principles of the Declaration of Helsinki. Prior to data collection, all participants were informed about the purpose and scope of the study. Written informed consent to participate in the study was obtained from all participants before the interviews were conducted.

Consent for publication

Not Applicable

Competing interests

The authors declare that they have no competing interests.

Funding

Author Contribution

All the authors listed in this study have substantially participated in the research and the writing of the paper. A.Ç.G., R.K.G., S.B. was responsible for data collection, A.Ç.G., R.K.G. was responsible for writing the first draft, and A.Ç.G., R.K.G., S.B. was responsible for the research design and data analysis. All three authors reviewed and approved the final version of the manuscript.

Acknowledgement

The authors would like to thank all participants for their valuable time and contributions to this study.

Data Availability

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

References

1. Borovica T, Kokanović R, Seal EL, Flore J, Boydell K, Blackman L, et al. What does leisure have to do with mental health–arts, creative and leisure practices and living with mental distress. Leisure Stud. 2026;45(1):1–15. 10.1080/02614367.2024.2376016.
2. Stebbins RA. Leisure's legacy: Challenging the common sense view of free time. Basingstoke: Palgrave Macmillan; 2017. 10.1007/978-3-319-59794-2.
3. Gürbüz B, Yenel F, Özdemir AS, Akgül BM, Karaküçük S. Recreational behaviours of Turkish society: A sample of Ankara. Gazi J Phys Educ Sport Sci. 2011;16(4):41–51.
4. Gürbüz B, Henderson KA. Leisure activity preferences and constraints: Perspectives from Turkey. World Leis J. 2014;56(4):300–16. 10.1080/16078055.2014.958195.
5. Cui D, Wei X, Wu D, Cui N, Nijkamp P. Leisure time and labor productivity: A new economic view rooted from sociological perspective. Economics. 2019;13:2019. 10.5018/economics-ejournal.ja.2019-36.
6. Kruger S, Sirgy MJ, Lee DJ, Yu G. Does life satisfaction of tourists increase if they set travel goals that have high positive valence? Tourism Anal. 2015;20(2):173–88.

10.3727/108354215X14265319207353.

7. Sirgy MJ, Uysal M, Kruger S. Towards a benefits theory of leisure well-being. Appl Res Qual Life. 2017;12(1):205–28. 10.1007/s11482-016-9482-7.
8. Caldwell LL, Faulk M. Adolescent leisure from a developmental and prevention perspective. Positive leisure science: from subjective experience to social contexts. Dordrecht: Springer Netherlands; 2012. pp. 41–60. 10.1007/978-94-007-5058-6_3.
9. Wittke TC. Rugby as a health and well-being intervention for young people in custody: Reflections from a German youth correctional facility (JA Hameln). Int J Prison Health. 2026;1–10. 10.1108/IJOPH-01-2026-0008.
10. Leversen I, Torsheim T, Samdal O. Gendered leisure activity behavior among Norwegian adolescents across different socio-economic status groups. Int J Child Youth Fam Stud. 2012;3(4):355–75. 10.18357/ijcyfs34201211482.
11. Cho D, Price T. Leisure constraints to participation in competitive activities and intramural sports: Comparing international and domestic students. J Int Stud. 2018;8(2):884–900. 10.32674/jis.v8i2.119.
12. Mutz M, Reimers AK, Demetriou Y. Leisure time sports activities and life satisfaction: Deeper insights based on a representative survey from Germany. Appl Res Qual Life. 2021;16(5):2155–71. 10.1007/s11482-020-09866-7.
13. McMahon EM, Corcoran P, O'Regan G, Keeley H, Cannon M, Carli V, et al. Physical activity in European adolescents and associations with anxiety, depression and well-being. Eur Child Adolesc Psychiatry. 2017;26(1):111–22. 10.1007/s00787-016-0875-9.
14. Lawson SM. A multifaceted approach to examining academic stress, quality of life, coping styles, and advisor support among emerging adult college students [doctoral dissertation]. Jackson (MS): Jackson State University; 2025.
15. Judge J. Stress, happiness and psychological well-being among college students: Role of sports in mental health. Int J Phys Educ Sports Health. 2018;5(2):22–5.
16. Samdahl DM, Jekubovich NJ. A critique of leisure constraints: Comparative analyses and understandings. J Leisure Res. 1997;29(4):430–52. 10.1080/00222216.1997.11949807.
17. Crawford DW, Jackson EL, Godbey G. A hierarchical model of leisure constraints. Leisure Sci. 1991;13(4):309–20. 10.1080/01490409109513147.
18. Jackson EL. In the eye of the beholder: a comment on Samdahl & Jekubovich (1997), A critique of leisure constraints: Comparative analyses and understandings. J Leisure Res. 1997;29(4):458–68. 10.1080/00222216.1997.11949809.
19. Roberts CJ, Gough LA. Contemporary themes in dietary intake in rugby union players: A narrative review. Nutrients. 2024;16(17):3011. 10.3390/nu16173011.
20. Chiwaridzo M, Ferguson G, Smits-Engelsman BCM. High-school adolescents' motivation to rugby participation and selection criteria for inclusion in school rugby teams: Coaches' perspective (the SCRuM project). BMC Res Notes. 2019;12(1):103. 10.1186/s13104-019-4138-y.

21. Indriarsa N, Prabowo SA, Priambodo A, Utomo RS, Rizki AZ, Afandi A. Motivation analysis in rugby: A systematic review. J Hum Sport Exerc. 2026;21(1):214–26. 10.55860/dbyf0235.
22. Raymore LA. Facilitators to leisure. J Leisure Res. 2002;34(1):37–51. 10.1080/00222216.2002.11949959.
23. Chen Y, Yuan Y. Built environment determinants of residents' running activity in Guangzhou, China: What are the nonlinear relationship and pathways? BMC Public Health. 2026;26(1):203. 10.1186/s12889-025-25436-8.
24. Yu W, Deng Y, Yang C, Amini H. Maternal and paternal pathways linking health literacy, physical activity, and BMI to adolescent physical activity and mental health: A structural equation modeling study. Ment Health Phys Act. 2026;100778. 10.1016/j.mhpa.2026.100778.
25. World Rugby. Global rugby participation increasing ahead of Rugby World Cup. 2023. 2023. https://www.world.rugby/news/836825/global-rugby-participation-increasing-ahead-of-rugby-world-cup-2023. Accessed 2 May 2026.
26. Van den Berg PH. Time-motion analysis via global positioning systems that discriminate between successful and less-successful South African, U/18 provincial sevens rugby teams. Afr J Phys Health Educ Recreat Dance. 2013;19(41):918–27. 10.10520/EJC145175.
27. Humphreys C, Liddelow C, Poulus D. The psychological landscape of elite rugby league: A scoping review. Int J Sport Exerc Psychol. 2026:1–27. 10.1080/1612197X.2026.2637008
28. Moolman B, Broodryk R, Van den Berg PH. Shared benefits for rugby union and rugby union sevens players: A comparative analyses of performance indicators. Int J Perform Anal Sport. 2026;26(2):328–39. 10.1080/24748668.2025.2491961.
29. Hu T, Cottingham M, Silva C, Cuevas C, Martinez DA, Sons CB. Minority in a minority: Exploring marginalisation in wheelchair rugby in the USA. Leisure Stud. 2026;45(3):574–90. 10.1080/02614367.2025.2451293.
30. Robinson D, Pill S, SueSee B. What's so special about rugby? Volunteer coaches' perceptions of how the features unique to rugby union influence the development of life skills in players. Ann Leis Res. 2026;1–15. 10.1080/11745398.2026.2620722.
31. Türkiye RF. 2023–2024 activity report of the Türkiye Rugby Federation. 2024. https://trf.gov.tr/wp-content/uploads/2024/09/FAALIYET-RAPORU.pdf?utm_source. Accessed 5 May 2026.
32. Pekel AÖ, Kırıkoğlu N, Yatak S, Aydos L. Metaphorical perceptions of rugby athletes towards the concept of rugby. Gazi J Phys Educ Sport Sci. 2023;28(4):253–9. 10.53434/gbesbd.1273351.
33. Creswell JW, Poth CN. Qualitative inquiry and research design: Choosing among five approaches. 4th ed. Thousand Oaks (CA): SAGE; 2016.
34. Tajik O, Golzar J, Noor S. Purposive sampling. Int J Educ Lang Stud. 2024;2(2):1–9. 10.22034/ijels.2025.490681.1029.
35. Malterud K, Siersma VD, Guassora AD. Sample size in qualitative interview studies: Guided by information power. Qual Health Res. 2016;26(13):1753–60. 10.1177/1049732315617444.

36. Guest G, Bunce A, Johnson L. How many interviews are enough? An experiment with data saturation and variability. Field Methods. 2006;18(1):59–82. 10.1177/1525822X05279903.
37. Creswell JW, Hanson WE, Clark Plano VL, Morales A. Qualitative research designs: Selection and implementation. Couns Psychol. 2007;35(2):236–64. 10.1177/0011000006287390.
38. Guba EG, Lincoln YS. Epistemological and methodological bases of naturalistic inquiry. Educ Commun Technol J. 1982;30(4):233–52. 10.1007/BF02765185.
39. Oja L, Piksööt J. Physical activity and sports participation among adolescents: Associations with sports-related knowledge and attitudes. Int J Environ Res Public Health. 2022;19(10):6235. 10.3390/ijerph19106235.
40. Gabbett TIM, Kelly J, Pezet T. Relationship between physical fitness and playing ability in rugby league players. J Strength Cond Res. 2007;21(4):1126–33. 10.1519/R-20936.1.
41. Gasser M, Nadenbousch AM, Egger F, Kamer M, Valkanover S, Schmidt M. Effectiveness of the active school quasi-experimental cluster-controlled trial: Impact on objectively measured physical activity in Swiss secondary school students after 12 months. BMC Public Health. 2026. 10.1186/s12889-026-28690-6.
42. Jones G, Kent S, Longbon K, Williams S. Co-designing a framework of the influences for the implementation of whole school approaches to physical education, school sport and physical activity (PESSPA) in UK primary schools: Development of the PESSPA Improvement Framework (PIF). BMC Public Health. 2026. 10.1186/s12889-026-28832-w.
43. Murray L, Vuoskoski P, Wellman J, Hebron C. It was the end of the world–The lifeworld of elite male rugby union players living with injury: an interpretative phenomenological analysis. Physiother Theory Pract. 2022;38(9):1219–32. 10.1080/09593985.2020.1825578.
44. Borman A, Derman W, Grobbelaar H. Psychosocial experiences of competitive rugby players on the long, long journey to recovery following ACL ruptures and reconstruction. Scand J Med Sci Sports. 2024;34(4):e14604. 10.1111/sms.14604.
45. DiFiori JP, Benjamin HJ, Brenner JS, Gregory A, Jayanthi N, Landry GL, et al. Overuse injuries and burnout in youth sports: A position statement from the American Medical Society for Sports Medicine. Br J Sports Med. 2014;48(4):287–8. 10.1136/bjsports-2013-093299.
46. Güllich A, Barth M, Hambrick DZ, Macnamara BN. Participation patterns in talent development in youth sports. Front Sports Act Living. 2023;5:1175718. 10.3389/fspor.2023.1175718.
47. Husain H, Samsudin S, Ayub AFM, Ahmad MF, Afwan NSZS. A systematic literature review on the impact of participation in sport and physical activities on psychological resilience. Int J Public Health Sci. 2024;13(4):1727. 10.11591/ijphs.v13i4.24345.
48. Pinkerton RS, Hinz LD, Barrow JC. The college student-athlete: Psychological considerations and interventions. J Am Coll Health. 1989;37(5):218–26. 10.1080/07448481.1989.9939063.
49. Weaver A, Simet K. Intercollegiate athlete as student leader. New Dir Student Leadersh. 2015;14753–63. 10.1002/yd.20143.

50. Nunomura M, Oliveira MS. Parents' support in the sports career of young gymnasts. Sci Gymnast J. 2013;5(1):5–17. 10.52165/sgj.5.1.5-17.
51. de Moura GX, Pike E, Malagutti JPM, Starepravo FA. Male, violent and dangerous': The gender prejudices in rugby from the perception of current and former athletes of the Brazil women's rugby 7's national team. Int Rev Sociol Sport. 2024;59(3):361–80. 10.1177/10126902231204726.
52. Andersen MH, Ottesen L, Thing LF. The social and psychological health outcomes of team sport participation in adults: An integrative review of research. Scand J Public Health. 2019;47(8):832–50. 10.1177/1403494818791405.
53. Oramas JE. Psychological, motivational, and contextual factors impacting student sport participation. J Multidiscip Res. 2021;13(1):71–85.
54. Habeeb CM. The tripartite model of relational efficacy beliefs in sport: A scoping review. Int Rev Sport Exerc Psychol. 2023;16(1):1–26. 10.1080/1750984X.2020.1815233.
55. Hyatt R. Barriers to persistence among African American intercollegiate athletes: A literature review of non-cognitive variables. Coll Stud J. 2003;37(2):260–76.
56. Hoffmann MD. Considerations for facilitating the development of peer mentoring relationships between athletes. J Sport Psychol Action. 2019;10(1):59–72. 10.1080/21520704.2018.1509164.
57. Alkhawaldeh A, Abdalrahim A, LBashtawy MA, Al-Faouri I, Al-Hassan MA, Al-Tawarah NM. University students' physical activity: Perceived barriers and benefits to physical activity and its contributing factors. SAGE Open Nurs. 2024;10:1–11. 10.1177/23779608241240490.
58. Pedroso JE, Alcarde ML, Gordon AJ, Ponesto CB. Challenges and opportunities faced by working students amidst pandemic. J Digit Learn Distance Educ. 2022;1(5):168–79. 10.56778/jdlde.v1i5.38.
59. Pandya NK. Disparities in youth sports and barriers to participation. Curr Rev Musculoskelet Med. 2021;14(6):441–6. 10.1007/s12178-021-09716-5.
60. Westerbeek H, Eime R, Owen K. The costs of participation in and delivery of community sport in Australia-a narrative review. Front Sports Act Living. 2025;7:1641527. 10.3389/fspor.2025.1641527.
61. Bell DR, DiStefano L, Pandya NK, McGuine TA. The public health consequences of sport specialization. J Athl Train. 2019;54(10):1013–20. 10.4085/1062-6050-521-18.
62. Ferreira Silva RM, Mendonca CR, Azevedo VD, Raoof Memon A, Noll PRES, Noll M. Barriers to high school and university students' physical activity: A systematic review. PLoS ONE. 2022;17(4):e0265913. 10.1371/journal.pone.0265913.
63. De Maio M, Montenegro S, Papale O, Serafini S, Prestanti I, Izzicupo P, et al. A scoping review of student athletes' perspectives on dual career policies, provisions and challenges. Front Sports Act Living. 2025;7:1566208. 10.3389/fspor.2025.1566208.
64. Volf K, Kelly L, García Bengoechea E, Casey B, Gelius P, Messing S, et al. Evidence of the impact of sport policies on physical activity and sport participation: a systematic mixed studies review. Int J Sport Policy Polit. 2022;14(4):697–712. 10.1080/19406940.2022.2127835.

65. Sheridan D, Coffee P, Lavallee D. A systematic review of social support in youth sport. Int Rev Sport Exerc Psychol. 2014;7(1):198–228. 10.1080/1750984X.2014.931999.

Supplementary Files

This is a list of supplementary files associated with this preprint. Click to download.

- SupplementaryFile1.docx