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SportMont

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Exploring Motivation and Enjoyment as Key Determinants of Sustained Physical Activity Across Diverse Demographics

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Abstract

This study explores the relationship between motivation for physical activity participation and enjoyment levels across various demographic groups. A total of 384 participants (44.5% female, 55.5% male) were selected using a convenience sampling method in Turkiye. All participants were either high school (32.3%) or university (67.7%) students, representing varied educational backgrounds and sports experience, with 47.7% holding a sports license. Participants completed the Motivation Scale for Participation in Physical Activity (MSPPA) and the Physical Activity Enjoyment Scale (PACES). Findings indicate that female participants scored significantly higher than males in both PACES (M=49.88 vs. M=48.05; p=0.05) and MSPPA (M=65.56 vs. M=62.33; p<0.01), highlighting gender-based differences in motivation and enjoyment. Surprisingly, possessing a sports license did not significantly impact motivation or enjoyment, suggesting that formal sports involvement may not be a primary determinant of sustained engagement. Educational level played a role. High school students showed greater motivation from environmental factors (M=22.37 vs. M=21.15; p=0.04), while university students reported higher demotivation (M=16.99 vs. M=14.62; p<0.01). A weak but significant positive correlation was found between age and both motivation (r=0.16; p<0.01) and enjoyment (r=0.14; p<0.01), suggesting that older individuals may experience greater intrinsic benefits from physical activity. These findings provide valuable insights for designing intervention programs prioritizing intrinsic motivation and enjoyment in physical activity. Such programs should foster autonomy, competence, and relatedness in various settings, including schools, workplaces, and community sports initiatives. Future research should examine how motivation and enjoyment influence the long-term adoption of physical activity as a lifestyle.

Keywords: *motivation, internal-external, well-being, physical exercise*

Introduction

Research on public health must focus on understanding individual motives for exercise and their enjoyment of physical activity because these elements act as vital maintainers for lifelong physical participation (Yan et al., 2023; Wang et al., 2024). Researchers need to investigate demographic variable motivations as these findings form the foundation to develop specific interventions which boost physical activity levels and health outcomes (Jamous et al., 2024; Peels et al., 2020; Rodrigues et al., 2023). The importance of physical activity guidelines stands crucial for cardiovascular health as well as hypertension management which requires systematic exercise programs (Börjesson et al., 2016; Singh, Pattisapu, & Emery, 2020). Research evidence supports that enjoying physical exercise and exercise barriers influences the extent to which people maintain active lifestyles (Orhan et al., 2024; Rodrigues et al., 2020).

Physical activity guidelines establish an essential system to develop widespread exercise habits (Alawamleh &

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AlKasasbeh, 2024; Olson et al., 2023). The motivational climate analysis demonstrates how it affects enjoyment and activity participation levels, thus highlighting the need for physical activity-supportive settings (Escartí & Gutiérrez, 2001; Robinson, 2023). Research on motivation and enjoyment in physical activity has not adequately explained how these elements connect with educational characteristics and sports participation among different demographic groups. The scientific research community lacks sufficient investigation of social environment impacts on physical activity and the availability of exercise facilities for minorities based on economic levels and educational classification. A noticeable difference in population exists mainly among diverse demographic groups, which base their behaviour patterns on their cultural heritage and economic and social conditions (Fazelpour & Steel, 2022; Virgona & Kashima, 2024). Participation in physical exercise leads to prolonged durations and superior public health effects when health promotion methods combine various human life experiences (Roychowdhury, 2020; Swift et al., 2018).

Physical activity participation by people primarily depends on motivational levels (Cheval & Boisgointer, 2021; Orhan et al., 2024). Research using the Self-Determination Theory (SDT) shows that motivation develops along intrinsic and then extrinsic stages since people first reach intrinsic motivation through internal satisfaction, yet external rewards support intrinsic motivation (Deci et al., 2017; Legault 2017; Manninen et al., 2022). Multiple studies demonstrate how intrinsic motivation enables people to sustain physical exercise practices and obtain greater satisfaction throughout the activity duration (Almagro et al., 2020; Ednie & Stibor, 2017; Esmaeilzadeh et al., 2022). Research evidence demonstrates that improved self-confidence drives individuals to participate actively in physical exercise (Bond et al., 2016; Yu et al., 2024). World Health Organization guidelines specify that physical activity promotion and sedentary behaviour reduction depends strongly on motivation (Bull et al., 2020; WHO, 2020). People face multiple perception barriers preventing their physical activity motivation because they do not have enough time to participate and lack suitable support systems and adequate physical facilities (Hasan et al., 2023; Orhan et al., 2024; Salmi et al., 2023). Building effective exercise-level enhancement strategies requires a basic understanding of individual population barriers and motivational enhancement approaches (Rodrigues et al., 2020; Spiteri et al., 2019).

Physical exercise demands sustained enjoyable experiences (Orhan et al., 2024; Rodrigues et al., 2021). Studies show that exercise sustainability remains longer among people who find pleasure in their workout routines (Gjestvang et al., 2021; Teixeira et al., 2022). The connection between enjoyment as a motivational element produces enhanced exercise engagement that results in greater rewards (Denford et al. 2019; Kuvaja-Köller et al. 2023). A strong relationship exists between physical exercise and enjoyment because it promotes the maintenance of active behavior while enhancing psychological wellness (Akroush et al., 2024). Studies confirm that disabled individuals maintain their physical exercise schedules because of enjoyment (Hollomotz 2018; Orhan et al. 2023). Research demonstrates that exercise adherence relies directly on enjoyment levels while these elements constitute essential aspects of motivational theory (Rodrigues et al., 2020). Children and adolescents mainly decide to participate in sports based on how they believe in their competency skills and the motivational elements of their physical activities (Cairney et al., 2012; Navarro et al., 2020).

Physical activity motivation, enjoyment, and other aspects respond to individual characteristics, including age groups, gender and socio-economic position. The motivational elements that drive different age categories and male and female populations differ (Mocanu et al., 2021; Portela-Pino et al., 2019). People who face barriers to physical activity access because of their social status and financial constraints (Ilić et al., 2024; Orhan et al., 2024) will experience reduced motivation and happiness. Physical activity participation rates alongside health outcomes vary among different population segments; thus, the participation levels and health outcomes are affected (Ke et al., 2022; Pedersen et al., 2021). The environment and social components determine the ease and obstacles people encounter when they want to participate in physical activities. Research discovered multiple elements influencing middle-aged and older adults to participate in physical exercise while examining the barriers preventing them (Meredith et al., 2023; Spiteri et al., 2019). The motivation patterns between males and females and their exercise barriers present distinct differences in adolescent populations (Ivanović & Ivanović, 2022; Portela-Pino et al., 2020).

This study provides evidence for creating specific intervention programs to enhance motivation and enjoyment levels in physical activities and establish healthier lifestyles for different populations. Such interventions are essential for breaking down barriers to physical activity and enhancing quality of life through consistent exercise engagement. The research explores how motivation toward physical exercise influences enjoyment levels based on specific demographic factors among individuals.

Materials and Methods

This research, which aims to examine the relationship between individuals' motivations for participating in physical activity and their levels of enjoyment from physical activity along with some demographic variables, is a descriptive study in a relational screening model. While relational studies do not establish causality, they allow for reasonable inferences about cause-and-effect relationships when employing advanced statistical techniques (Fraenkel & Wallen, 2009).

Study Group

The research study group was formed using the convenience sampling method. The research study group was formed using convenience sampling, with all data collected from participants residing in Türkiye. This method was chosen for its practicality, though it may limit the generalizability of findings. Convenience sampling, based on accessibility and feasibility, is a method preferred for quickly collecting information on some research topics (Büyüköztürk, 2010). Of the 384 people selected through convenience sampling, 44.5% (n=171) are female, and 55.5% (n=213) are male. All participants were current students at the time of data collection, having either completed high school (32.3%, n=124) or being actively enrolled in a university program (67.7%, n=260); no other educational levels were represented. Additionally, 47.7% (n=183) of the participants held an active sports license, while 52.3% (n=201) did not. The mean age of the participants was 23.52 years. Data were collected via an online survey form (see Table 1).

Table 1. Distribution of participants in the research sample by gender, sports license status, and education level

Variable	Category	n	%	Total (n)	Total (%)
Gender	Female	171	44.5	384	100.0
	Male	213	55.5		
Sports License	Yes	183	47.7	384	100.0
	No	201	52.3		
Education Level	High School	124	32.3	384	100.0
	University	260	67.7		

Data Collection Tool

In the study, the Motivation Scale for Participation in Physical Activity (MSPPA) developed by Demir and Cicioğlu (2018) and the "Enjoyment of Physical Activities Scale" (PACES) adapted into Turkish by Özkurt et al. (2022) were used. A personal information form containing demographic information was created to determine the individuals' age, education level, and whether they have a sports license.

Motivation Scale for Participation in Physical Activity (MSPPA)

The scale was developed by Demir and Cicioğlu (2018). The scale items are rated on a 5-point Likert scale (1 = Strongly Disagree, ..., 5 = Strongly Agree). The analyses revealed a three-factor structure with eigenvalues above 1: Individual Reasons, Environmental Reasons, and Lack of Motivation. The Individual Reasons factor includes items 1, 2, 3, 4, 5, and 6, with an explained variance of 25.53% and a Cronbach's Alpha of 0.89. The Environmental Reasons factor includes items 7, 8, 9, 10, 11, and 12, with an explained variance of 20.52% and a Cronbach's Alpha of 0.86. The Lack of Motivation factor includes items 13, 14, 15, and 16, with an explained variance of 8.62% and a Cronbach's Alpha of 0.82. The eigenvalues of these factors are 4.08, 3.28, and 1.37, respectively. The measurement tool, consisting of 16 items, explains 54.69% of the total variance. The fit indices resulting from the DFA analysis applied to the scale are as follows: χ^2=239.34; df=101; χ^2/df=2.36; RMSEA=0.06; AGFI=0.88; NFI=0.91; CFI=0.95; GFI=0.91; PNFI=0.68; IFI=0.95. Scores obtained from the MSPPA indicate very low motivation for participation in physical activity (1-16), low (17-32), moderate (33-48), high (49-64), and very high (65-80). Items 3, 9, 13, 14, 15, and 16 are reverse-scored.

Physical Activity Enjoyment Scale (PACES)

The scale was adapted into Turkish by Özkurt et al. (2022). It consists of a single dimension and eight items that evaluate positive emotions such as expected or perceived pleasure and enjoyment from physical activities. The scale items are rated on a 7-point Likert scale (1 = Strongly Disagree, ..., 7 = Strongly Agree). There are no reverse-scored (negative) items in the scale. A higher average score on the scale indicates a high level of enjoyment from physical activities, while a lower average score indicates a low level of enjoyment. In their analysis, Özkurt et al. (2022) determined that the Turkish scale version explains 76% of the total variance. The fit indices obtained from the DFA showed that they are within acceptable and good fit ranges (χ^2/df=2.368, GFI=0.98, CFI=0.99, TLI=0.99, RMSEA=0.042, SRMR=0.010).

Analysis of Data

Before analysis, the dataset was screened for errors, outliers, normality violations, and multicollinearity issues. It was observed that no data had been entered erroneously. The data analysis was performed using IBM SPSS Statistics for Windows, Version 25.0 (IBM Corp., Armonk, NY, USA). The Shapiro-Wilk Test was used to determine the normality of the distribution, and it was found that the data followed a normal distribution ($p>0.05$). The t-test was used for pairwise comparisons. Pearson's Product-Moment Correlation Coefficient was used to determine the relationships between variables. The significance level was set at $p<0.05$. T-tests were selected to compare gender, education level, and sports license status due to the binary nature of these variables.

Results

Table 2 reveals that female participants scored significantly higher than males in overall PACES and MSPPA measures, particularly in the Individual Reasons and Lack of Motivation sub-dimensions ($p<0.05$). The observed gender difference in motivation ($t=2.84$, $p<0.05$) corresponded to Cohen's d of 0.29, indicating a small-to-moderate effect size. Similarly, the correlation between age and enjoyment ($r=0.14$, $p<0.01$) suggests a weak but significant positive relationship. This suggests that female participants are better than males in terms of motivation for participation in physical activity and enjoyment from physical activity.

Table 2. T-test results of individuals' motivation for participation in physical activity and enjoyment from physical activities by gender

Variables	Female (n = 171)		Male (n = 213)		t	p
	$\bar{X}$	S	$\bar{X}$	S		
PACES	49.88	7.82	48.05	8.91	1.89	0.05*
MSPPA	65.56	9.82	62.33	10.03	2.84	0.00*
Individual Reasons	26.53	4.02	25.35	3.96	2.60	0.01*
Environmental Reasons	22.08	5.05	21.33	5.36	1.25	0.20
Lack of Motivation	16.94	4.09	15.64	4.87	2.47	0.01*

* $p<0.05$

Table 3 demonstrates that possessing a sports license did not yield significant differences in PACES and MSPPA scores, challenging assumptions that formal sports participation inherently enhances motivation and enjoyment.

Upon examining Table 4, it is seen that there is a significant difference between the sub-dimension scores of Environmental Reasons and Lack of Motivation and the education levels of the individuals ($p<0.05$). It is observed that this difference is in favour of high school students in the Environmental Reasons sub-dimension and favour of university students in the Lack of Motivation sub-dimension. However, there is no significant difference between the total scores of PACES, the total scores of MSPPA, the sub-dimension scores of Individual Reasons, and the individuals' education levels ($p>0.05$).

Table 3. T-test results of individuals' motivation for participation in physical activity and enjoyment from physical activities by sports license variable

Variables	Yes (n = 183)		No (n = 201)		t	p
	$\bar{X}$	S	$\bar{X}$	S		
PACES	49.24	9.02	48.36	8.26	0.91	0.36
MSPPA	64.36	10.09	62.93	10.03	1.26	0.20
Individual Reasons	26.07	3.81	25.59	4.14	1.07	0.28
Environmental Reasons	21.78	5.38	21.48	5.16	0.52	0.60
Lack of Motivation	16.49	4.43	15.86	4.77	1.22	0.22

* $p<0.05$

Table 4. T-test results of individuals' motivation for participation in physical activity and enjoyment from physical activities by education level

Variables	High School (n = 124)		University (n = 260)		t	p
	$\bar{X}$	S	$\bar{X}$	S		
PACES	48.11	10.02	49.06	7.58	-0.98	0.32
MSPPA	62.45	10.54	64.12	9.74	-1.46	0.14
Individual Reasons	25.45	4.70	25.98	3.54	-1.16	0.24
Environmental Reasons	22.37	5.08	21.15	5.29	2.06	0.04*
Lack of Motivation	14.62	5.29	16.99	3.97	-4.62	0.00*

* $p<0.05$

Upon examining Table 5, it is seen that there is a positive and significant relationship between the total scores of PACES and MSPPA, the sub-dimension scores of Individual Reasons and Environmental Reasons, and their ages ($p<0.01$). However, no relationship was found between age and the Lack of Motivation sub-dimension ($p>0.05$).

Upon examining Table 6, it is seen that there is a positive and significant relationship between the total scores of PACES and MSPPA (r=0.59), Individual Reasons (r=0.68), Environmental Reasons r=0.39), and Lack of Motivation (r = 0.25) ($p<0.01$).

Table 5. Relationship between individuals' motivation for participation in physical activity and enjoyment from physical activities and age

Variables	n	PACES	MSPPA	Individual Reasons	Environmental Reasons	Lack of Motivation
Age	384	0.14**	0.16**	0.17**	0.19**	-0.01

**p<0.01, *p<0.05

Table 6. Relationship between individuals' total motivation scores for participation in physical activity and its sub-dimensions and enjoyment levels from physical activities

Variables	1	2	3	4	5
1. PACES	1.00	0.59**	0.68**	0.39**	0.25**
2. MSPPA		1.00	0.79**	0.74**	0.64**
3. Individual Reasons			1.00	0.46**	0.32**
4. Environmental Reasons				1.00	0.18**
5. Lack of Motivation					1.00

**p<0.01, *p<0.05

Discussion

This study examined the relationship between participants' motivation for physical activity and enjoyment levels, contributing to the existing literature on motivational dynamics. A key finding of this study was that female participants exhibited significantly higher motivation and enjoyment levels than males, aligning with prior research suggesting that social and environmental factors may contribute to these disparities

(Moradi et al., 2020; Pedersen et al., 2021; Rosselli et al., 2020). The study results demonstrate how attributes like gender and age influence motivation levels, which supports the need to develop targeted intervention approaches for better engagement between different population groups. The higher levels of intrinsic motivation and enjoyment observed among females may stem from a stronger internal drive for health and well-being, as well as social and cultural factors that encourage or support physical activity more among women in certain contexts (Navarro et al., 2020; Portela-Pino et al., 2020). The social expectations and cultural traditions contribute to gender-specific motivations for physical exercise. Additionally, studies have documented gender differences in physical activity preferences and barriers, suggesting that interventions aimed at enhancing motivation and enjoyment may need to be tailored to address gender-specific needs (Liu et al., 2023; Logan et al., 2022; Oyibo & Vassileva, 2020).

Research findings show that having a sports license does not consistently boost the motivation or enjoyment of physical exercise participation. Having a sports license does not create better intrinsic motivation and greater physical activity enjoyment for individuals. Research indicates that participation in recreational sports does not enhance motivation or pleasure, while other variables control these effects (Rodrigues et al., 2020). People's performance depends more heavily on internal aspects such as personal interest, environmental support, and self-efficacy. According to research on exercise dependence, many elements drive individuals to exercise. The relationship between formal sports interaction and enjoyment remains complex because participants seek recognition from outside sources or find satisfaction within themselves (Ahorsu et al., 2023; Astuti et al., 2024).

The educational levels of participants directly affected their motivation since high school students received external reinforcement, which led to increased motivation, yet university students displayed decreased motivation as a result. High school students demonstrated greater environmental motivation, while university students showed higher demotivation. Personnel at different educational levels display various life priorities because of their changing circumstances. High school students are likely to make decisions regarding their physical activity based on social environments and community involvement. University students struggle with internal stresses and time limitations, leading to reduced motivation for physical activity (Spiteri et al., 2019). Previous studies demonstrate that education influences physical activity since more educated individuals tend to have better health understanding and additional responsibilities restricting their exercise time (Bull et al., 2020; Orhan et al., 2024).

The relationship between user age and enjoyment connects directly to motivation, demonstrating the requirement for development teams to consider different life stages while designing apps for exercise promotion. Physical activity produces greater motivation and enjoyment benefits for people of advanced ages because they have greater health awareness and changing life priorities (Logan et al., 2022). However, the weak correlation suggests that other confounding factors, such as prior exercise experience and social support, may also play a role. Research shows that physical activity relates to age, where older adults get motivated by healthcare reasons and social contact to enjoy exercising better and stay with their fitness routines (Weinstein & Szabo, 2023). This study's strong relationship between motivation and enjoyment underscores their interconnectedness. As intrinsic motivation increases, so does enjoyment of physical activities, which likely enhances adherence to regular exercise. The results support the Self-Determination Theory, which states that intrinsic motivation derived from personal satisfaction and enjoyment is the foundation for continuing behaviours like physical activity for long-term periods (Rodrigues et al., 2020). Research has established activities that increase autonomy levels, competence, and relatedness and reduce barriers for people to begin exercising more. Numerous studies confirm that intrinsic motivation supports long-term physical exercise adoption because it leads to successful intervention development (Antunes et al., 2024; Kelso et al., 2020).

The study produces important findings about physical exercise motivation and enjoyment patterns to support population-specific intervention design. Intervention programs for physical activity need to boost enjoyment and intrinsic motivation specifically among unaffiliated adults with limited education access to sports activities (Spiteri et al., 2019). Interdisciplinary research (Ahorsu et al., 2023; Orhan et al., 2024; Orhan et al., 2025) confirms exercise enjoyment and motivation serve as essential influences for promoting regular exercise practice among individuals with higher participation hurdles. Different movement patterns in female groups call for creating gender-specific physical activity enhancement tactics. The targeted application of practices leads to enhanced outcomes when we want different age groups to maintain their physical activity practices. Researchers who design tailored health programs matching demographic groups and their motivation needs achieve better health intervention results with greater outcomes (AlKasasbeh & Amawi, 2023; Chaeroni et al., 2024; Weinstein & Szabo, 2023). This study needs qualitative methodologies such as interviews and focus groups for detailed work on individual drivers and obstacles because it depends on quantitative findings. The development of successful programs through general health practice depends heavily on understanding the motivational aspects of humans and their experiences with physical activity and pleasure. Activating internal motivation drives and eliminating barriers to work satisfaction for various demographic groups will improve health outcomes and participant rates.

Further studies must explore the extended impacts of motivation-based research and cultural factors on physical activity patterns. Research examining the modifications of motivation patterns through different stages in life would reveal more information about maintaining physical activity practice. The obtained knowledge allows designers to create school-based workplace and community fitness programs with enjoyment-driven motivation strategies. Health professionals and policymakers need to create solutions that specifically address demographic requirements. Future research needs to use longitudinal research methods to track motivational developments affecting different age groups across social-economic settings. Additional research will generate a deeper understanding of keeping different activities and populations actively involved.

Conclusions

This study highlights the critical role of intrinsic motivation in sustaining physical activity participation among individuals with diverse demographic characteristics. The

research demonstrates that females exhibit better levels of motivation and enjoyment than males, and the presence of a sports license does not influence these results. Education level also influences motivation, with high school students being more affected by environmental factors and university students experiencing higher demotivation. According to research, older participants demonstrated more motivation and enjoyed exercising to a greater degree. These insights emphasize the need for interventions that foster intrinsic motivation through enjoyable, supportive environments in gyms, schools, and community programs. Future interventions should incorporate gender-specific approaches, addressing barriers that limit male participation while leveraging social and enjoyment-driven strategies to sustain female engagement. Age-adapted programs can increase individuals' participation in physical activity if they are compatible with their wellness goals.

The results indicated that female participants had significantly higher motivation and enjoyment scores than males, particularly in subdimensions such as Individual Reasons and Lack of Motivation. High school students were more motivated by environmental factors, while university students reported higher levels of demotivation. The absence of significant differences based on sports license status suggests that formal athletic involvement alone does not enhance intrinsic motivation. Moreover, age positively correlated with motivation and enjoyment, reflecting a potential increase in intrinsic value placed on physical activity in older individuals.

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Conflict of Interest

The authors report no conflict of interest.

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