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Investigation of Activity Level, Sitting Time and Quality of Life in Adult Individuals: A Case Study in Antalya Province

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Abstract: Background: The aim of this study was to assess physical activity, sedentary behaviour, and quality of life in adults by gender and activity level. **Methods:** A total of 257 female and 415 males participated in the study. Height, weight, physical activity and sedentary behaviour (sitting time) were measured using the IPAQ questionnaire and the SF-36 quality of life scale. Normality tests, Mann-Whitney U, Kruskal-Wallis and Tamhane's T2 tests were used to compare results by gender and activity level, and Spearman's correlation was used for variable relationships. **Results:** Female were shorter, lighter and had a lower BMI than male, who had less sitting time and higher weekly MET activity scores. Male scored higher in physical functioning (PF) and role emotional (RE) on the SF-36, whereas female had better mental health (MH) scores. Female were more likely to engage in moderate-intensity activities, while male preferred high-intensity activities. Significant differences in age, BMI and sitting time were observed between activity levels for both sexes. **Conclusion:** Differences in SF-36 scores and sitting time suggest that male's physical roles and societal expectations contribute to higher PF and RE scores, whereas female's mental health benefits may have related to their use of emotion regulation strategies. Female's higher intensity activity was also correlated with fewer emotional problems and better general health. Overall, regular physical activity, even at lower intensity levels, has a positive effect on emotional wellbeing by reducing the risk of stress, depression and anxiety.

Key Words: Physical Activity, Quality of Life, Sitting Time, Sedentary Time

INTRODUCTION

Epidemiological studies investigating physical activity have aimed to elucidate the relationships between energy expenditure and its associated health benefits. The outcomes of physical activity recommendations put forth in these studies have predominantly focused on promoting increased physical activity within populations, rather than on the reduction of sedentary behaviour. Nonetheless, numerous researchers have documented the amount of sedentary time that occurs alongside physical activity in contexts such as transportation, the workplace, household tasks, and leisure activities [1]. Paradoxically, a concept has emerged indicating that elevated levels of sedentary time can coexist with high levels of physical activity [2]. Sedentary behaviour is defined as activities that result in energy expenditure below 1.5 METs (metabolic equivalents), typically while sitting or lying down (for instance, watching television, using a computer, or driving) [3,4].

Physical inactivity, characterized by sedentary behaviour, has been associated with an increased risk of numerous diseases, including hypertension, stroke, and cardiovascular disease [3,4]. It was reported that in 2008, physical inactivity caused over 5.3 million premature deaths globally, accounting for 9% of all premature fatalities [5]. The prevalence of inactivity is particularly pronounced in certain communities; for example, it has been reported that at least 20% of deaths attributable to heart disease in the South Asian community residing in England in 2011 were linked to sedentary behaviour [3]. It has been observed that among adults who adhere to public health physical activity guidelines, those who engage in prolonged sitting tend to experience higher rates of obesity and poorer mental and physical health compared to their counterparts who sit less [1].

In a study conducted within a European community comprising 334,161 adults, it was estimated that transitioning

individuals' sedentary behaviours to moderate physical activity (equivalent to a daily 20-minute walk) could lead to a 7.35% reduction in all-cause mortality [6].

Numerous studies indicate that physical activity begins to decline during adolescence; however, research examining the extent of this decline is limited. Moreover, the reduction in physical activity and the increase in sedentary behaviour may persist into adulthood, potentially exacerbating disease risk in the future. The transition to adulthood is marked by significant life changes, including new social roles, career transitions, and alterations in lifestyle patterns.

In light of this context, our study aimed to evaluate (1) the levels of physical activity; (2) the duration of sedentary behaviour, and; (3) the quality of life among adult individuals, stratified by gender and activity levels.

Materials and Methods

Participants

The sample for this study comprised 672 adult volunteers, including 257 female with a mean age of 38.14±8.60 years and 415 male with a mean age of 35.06±9.79 years. All participants resided in the city centre of Antalya and were employed in various public institutions and organizations. To ensure effective communication and participation in physical activities, individuals with any conditions that could hinder these aspects were excluded from the study.

Ethics Committee

Prior to participation, all individuals were thoroughly informed about the study objectives and procedures. Consent was obtained from each participant before administering questionnaires. The research was approved by the Institutional Research Ethics Committee at Akdeniz University in Antalya, Turkey, and it was conducted in accordance with the ethical principles outlined in the Declaration of Helsinki.

Protocol

The IPAQ is specifically designed for adults aged 18 to 65 and has undergone validity and reliability testing across twelve countries [7]. In Turkey, the validity and reliability of this questionnaire were verified by Öztürk in 2005 [8]. Participants' MET (Metabolic Equivalent of Task) values for all sections of the questionnaire were calculated based on the scoring protocol established by the IPAQ. Physical activity levels were categorized as low intensity (<600 MET-min/week), moderate intensity (600–2999 MET-min/week), or vigorous intensity (≥3000 MET-min/week), according to the guidelines from the IPAQ Research Committee [9]. The SF-36 Quality of Life Scale, developed by Ware and Sherbourne [10], consists of 36 items that assess 8 dimensions of health: physical functioning (PF), role limitations due to physical problems (RP), bodily pain (BP), general health (GH), vitality (VT), social functioning (SF), role limitations due to emotional problems (RE), and mental health (MH). The scoring for the SF-36 ranges from to 100, with higher scores indicating better health status. The scale's reliability and validity in Turkey were established by Koçyiğit *et al.* [11], while the community norm values for the Turkish population were determined by Demiral *et al.* [12] and further referenced by Aydemir *et al.* [13].

Statistical Analysis

The statistical analysis of the data involved several steps to ensure robust comparisons and relationships among the variables. First, the distribution of data was assessed using the Kolmogorov-Smirnov test to determine whether the data followed a normal distribution.

For gender-specific comparisons, the Mann-Whitney U test, a nonparametric test, was employed due to the non-normal distribution of the data. When comparing groups based on different activity levels, the Kruskal-Wallis test was utilized, followed by the Post Hoc nonparametric Tamhane's T2 test to identify specific group differences in cases of non-homogeneous variances.

To explore relationships between variables, Spearman correlation analysis was conducted, which is appropriate for assessing the strength and direction of association between ranked variables.

All statistical analyses were performed using IBM SPSS Statistics version 22, with a 95% confidence interval. The significance level was set at $p<0.05$, which is commonly used to determine statistical significance in research. This comprehensive approach to data analysis helps to ensure the findings are meaningful and reliable.

Findings

It was found that female participating in the study were older, shorter, lighter, and naturally had a lower body mass index (BMI) compared to male (Table 1).

The sitting times of male participants were found to be statistically lower, and their weekly physical activity MET values were higher compared to females ($p<0.05$). When comparing the quality-of-life index and its sub-dimensions by gender, it was found that only the PF and role of RE values were higher in males, while the MH values were higher in females ($p<.05$) (Table 2).

The distribution of activity levels of male and female participants is shown in Table 3. The weekly MET value in minutes was found to be less than 600 (low) for 20.6% of

Table 1: Mean and Standard Deviations (Mean (Sd)) of the Anthropometric Characteristics of the Individuals Participating in the Study and Comparison according to Gender

Parameters	Gender	Mean(SD)	t	p
Age (year)	Female	38.14(8.60)	-4.444	.000*
	Male	35.06(9.79)		
Height (cm)	Female	166.26(6.89)	-17.209	.000*
	Male	177.50(6.43)		
Weight (kg)	Female	65.48(10.59)	-16.173	.000*
	Male	81.50(8.78)		
BMI (kg/m^2)	Female	23.71(3.85)	-9.608	.000*
	Male	25.88(2.59)		

t: T-test; p: statistical significance; SD: standard deviation *statistical significance $p<0.05$

Table 2: Physical Activity (MET), Quality of Life Indices and Sitting Time and their Comparison according to Gender

Parameters	Gender	Mean(SD)	z	p
Sitting (min/week)	Female	756.15(340.61)	-4.574	0.000*
	Male	635.18(287.00)		
PA (MET-min/week)	Female	2827.01(4172.54)	-4.177	0.000*
	Male	4652.64(6107.24)		
PF	Female	89.36(15.06)	-2.987	0.003*
	Male	92.73(11.89)		
RP	Female	86.19(26.77)	-1.529	0.126
	Male	90.00(22.44)		
BP	Female	84.74(18.38)	-.030	0.976
	Male	85.49(16.34)		
GH	Female	67.78(18.10)	-1.376	0.169
	Male	69.49(15.69)		
VT	Female	70.53(18.31)	-1.217	0.224
	Male	69.94(15.56)		
SF	Female	79.33(20.82)	-1.153	0.249
	Male	77.74(20.82)		
RE	Female	77.17(33.43)	-4.472	0.000*
	Male	87.87(25.70)		
MH	Female	74.40(14.89)	-2.520	0.012*
	Male	71.42(15.35)		

PA: Physical activity; PF: Physical functioning; RP: Role-functioning physical; BP: Body pain; GH: General health; VT: Vitality, SF: Social functioning; RE: Role-functioning emotional; MH: Mental health; M: mean; SD: Standard deviation; *statistical significance p<0.05

Table 3: Distribution of Participants Regarding their Physical Activity Levels

Parameters		PA level			Total
		Low (<600 MET)	Moderate (>599-<3000 MET)	High (>2999 MET)	
Female	Count	53	135	69	257
	Within sex (%)	20.6%	52.5%	26.8%	100.0%
Male	Count	80	146	189	415
	Within sex (%)	19.3%	35.2%	45.5%	100.0%

PA: Physical activity; MET: Metabolic equivalent

Table 4: Comparison of Age, Weight, Body Mass Index and Sitting Time according to Physical Activity Levels of Female

Parameters	PA Level	Female						
		n	Mean (SD)	Kruskal Wallis H			Post Hoc	
				Mean Rank	Chi-Square	p	Mean Diff.	p
Age (year)	L	53	40.51(7.12)	150.08	22.903	0.000*	6.755	(L-H) *
	M	135	39.44(7.63)	139.10				
	H	69	33.75(9.88)	93.04				
Weight (kg)	L	53	67.53(10.93)	144.54	6.452	0.040*	4.644	(L-H) *
	M	135	66.00(10.36)	131.94				
	H	69	62.88(10.43)	111.31				
BMI (kg/m)	L	53	25.24(5.05)	153.54	8.643	0.013*	2.394	(L-H) *
	M	135	23.56(3.41)	126.97				
	H	69	22.84(3.28	114.12				
Sitting (min/week)	L	53	882.26(286.18)	162.72	47.351	0.000*	349.511	(L-H) *
	M	135	820.81(361.41)	141.75			288.061	(M-H) *
	H	69	532.75(213.05)	78.16				

PA: Physical activity, L: Low, M: Moderate, H: High, M: Mean, SD: Standard deviation, *Statistical significance p<0.05

females and 19.3% of males. While the percentage of moderate-intensity activities was higher in females, high-intensity activities were found to be more frequently performed by males.

A statistically significant difference was found between age, weight, body mass index (BMI), and sitting times among the physical activity level categories of female participants (Kruskal-Wallis H- p<0.05). According to these results, significant differences were found in age, weight, BMI, and sitting time (min/week) between low-intensity physical activity and high-intensity activity levels in females (Post Hoc Multiple Comparisons (Tamhane's T2), p<0.05) (Table 4-5).

In male participants, there were also significant differences identified among physical activity levels concerning age, BMI, and sitting times (Kruskal-Wallis H test; p<0.05). The Tamhane's T2 test further revealed that age and weekly sitting times significantly differed across all activity categories, while BMI showed a significant difference specifically between low and high-intensity activity levels.

These results underscore the influence of physical activity intensity on various health-related metrics, highlighting the importance of considering gender differences when analysing physical activity data. The findings are detailed in table 4a and 4b, which likely summarizes the statistics and comparisons for clarity.

Table 5: Comparison of Age, Weight, Body Mass Index and Sitting Time according to Physical Activity Levels of Male

				Kruskal Wallis H			Post Hoc	
Male	PA Level	n	Mean (SD)	Mean Rank	Chi-Square	p	Mean Diff.	p
Age (year)	L	80	43.71 (7.12)	316.03	133.681	0.000*	6.766	(L-M)*
	M	146	36.95 (7.97)	236.63			7.009	(M-H)*
	H	189	29.94 (8.94)	140.16			13.775	(L-H)*
Weight (kg)	L	80	82.88 (8.82)	223.19	1.988	0.370	-	-
	M	146	81.38 (7.85)	209.02				
	H	189	81.02 (9.41)	200.78				
BMI (kg/m)	L	80	26.72 (2.85)	240.09	12.442	0.002*	0.72230	(L-H)*
	M	146	26.00 (2.37)	217.58				
	H	189	25.43 (2.56)	187.02				
Sitting (min/week)	L	80	851.25 (257.32)	306.90	120.426	0.000*	157.483	(L-M)*
	M	146	693.77 (273.52)	238.31			195.302	(M-H)*
	H	189	498.47 (233.54)	142.72			352.784	(L-H)*

PA: Physical activity; L: Low; M: Moderate; H: High; M: Mean; SD: Standard deviation; *Statistical significance p<0.05

Table 6: Comparison of Quality-of-Life Index Categories according to Physical Activity Levels in Female

				Kruskal Wallis H			Post Hoc	
Female	PA Level	n	Mean (SD)	Mean Rank	Chi-Square	p	Mean Diff.	P
PF	L	53	85.00 (18.61)	105.88	12.125	0.002*	-7.464	(L-H)*
	M	135	89.48 (13.61)	127.00				
	H	69	92.46 (14.13)	150.68				
RE	L	53	73.58 (35.42)	122.15	9.492	0.009*	-1.482	(L-H)*
	M	135	72.84 (35.78)	121.34			-15.566	(M-H)*
	H	69	88.41 (23.45)	149.25				
SF	L	53	78.77 (21.31)	127.13	0.337	0.845	-	-
	M	135	80.00 (20.73)	131.42				
	H	69	78.44 (20.88)	125.7				
GH	L	53	62.55 (16.22)	106.74	17.565	0.000*	-12.091	(L-H)*
	M	135	66.33 (17.96)	122.21			-8.304	(MH)*
	H	69	74.64 (17.99)	159.39				

PF: Physical functioning; GH: General health; SF: Social functioning; RE: Role-functioning emotional, PA: Physical activity; L: Low; M: Moderate; H: High; M: Mean; SD: Standard deviation; * Statistical significance p<0.05

Table 7: Comparison of Quality-of-Life Index Categories according to Physical Activity Levels in Male

	Male			Kruskal Wallis H			Post Hoc	
Parameters	PA Level	n	Mean (SD)	Mean Rank	Chi-Square	P	Mean Diff.	p
PF	L	80	87.50 (16.42)	174.90	14.482	0.001*	-5.548	(L-M)*
	M	146	93.05 (10.83)	199.40			-7.209	(L-H)*
	H	189	94.71 (9.58)	220.65				
RE	L	80	91.67 (20.88)	218.31	2.055	0.358	-	-
	M	146	86.53 (26.43)	201.24				
	H	189	87.30 (26.92)	208.86				
SF	L	80	86.56 (18.63)	260.49	20.256	0.000*	11.134	(L-M)*
	M	146	75.43 (22.72)	197.72			10.769	(L-H)*
	H	189	75.79 (19.24)	193.72				
GH	L	80	77.74 (20.82)	158.79	18.918	0.000*	-6.172-	(L-M)*
	M	146	62.94 (17.17)	209.35			9.629	(L-H)*
	H	189	72.57 (15.17)	227.79				

The analysis of the quality-of-life index revealed significant variations in specific sub-dimensions based on physical activity levels among male both female participants (Table 6-7).

For female participants, the Kruskal-Wallis H test indicated statistically significant differences in the PF, RE, and GH sub-dimensions of the quality-of-life index across different physical activity categories. Notably, the PF sub-dimension showed significant differences between low and high-intensity physical activity levels. Additionally, the RE and GH sub-dimensions were significantly different in females engaged in high-intensity activities compared to those involved in other activity levels, as indicated by the Post Hoc Multiple Comparisons using Tamhane's T2 (p<0.05).

In male participants, significant differences were also found in the PF, SF, and GH sub-dimensions (Kruskal-Wallis H test; p<0.05). The Post Hoc analysis revealed that the PF, SF, and GH values for males with low-intensity activity levels differed significantly from those of males with moderate and high-intensity activity levels (Tamhane's T2; p<0.05).

These findings suggest that physical activity intensity has a considerable impact on quality-of-life dimensions, with distinct patterns observed between genders. The detailed statistical comparisons and results are summarized in Table 7, which likely provides additional clarity on the specific differences in quality-of-life metrics related to physical activity levels.

DISCUSSION

The results of our study highlight the significant influence of physical activity levels, particularly moderate and high-intensity activities, on various individual characteristics related to quality of life. In this study, It was found that a sedentary lifestyle, characterized by prolonged sitting times, along with factors such as age and body mass index (BMI), adversely affects functional mobility. This decline in mobility is closely linked to health outcomes and the ability to meet daily needs, emphasizing the detrimental impact of low physical activity levels on individuals' overall well-being.

This research revealed that male participants were generally taller and heavier than female participants, leading to higher BMI values among males. This observation aligns with well-documented trends in our country, where males typically exhibit greater height and weight compared to females in this age group. These physical differences may also contribute to variations in health outcomes and quality of life between genders, further emphasizing the need for tailored interventions that consider these disparities.

It is observed that males exhibited higher levels of physical activity, PF, and role of RE scores, while females scored higher in Mental Health. Interestingly, males also reported lower sitting times than females. These differences may be attributed to various factors, including occupational demands and societal expectations. Males are often engaged in physically demanding jobs and are culturally encouraged to participate more actively in the workforce. This engagement not only promotes physical health but may also lead males to adopt problem-solving strategies for emotional regulation, as suggested by Tamres *et al.* [14].

In contrast, females frequently utilize a broader range of emotion regulation strategies, including rumination, re-evaluation, and seeking social support [15]. This comprehensive approach to managing emotions likely contributes to the higher mental health scores observed in our female participants. However, it's important to note that other research has highlighted a concerning trend among males, where there is a stronger association between depressive symptoms and alcohol use compared to females [16-17]. This tendency for males to resort to alcohol as a coping mechanism could further compromise their mental health, contrasting with the protective strategies employed by females.

The literature supports the notion that regular physical activity plays a critical role in enhancing both physical and mental health. Engaging in physical activity has been linked to a reduced risk of depression [18], lower cardiovascular disease risk, and effective weight management [19]. Consequently, promoting physical activity is often viewed as a highly effective public health strategy [20]. In the UK, public health authorities recommend at least 150 minutes of moderate to vigorous physical activity per week; however, participation remains disappointingly low, with only 39% of male and 29% of female meeting these guidelines [5].

Moreover, sedentary behaviour has been found to disproportionately affect lower socio-economic groups. A study involving 163,099 adults revealed that individuals in the lowest socio-economic strata were nearly 10% more inactive than those in the highest strata [6]. Furthermore, young adults (ages 18–35) have been identified as a high-risk group characterized by low physical activity and increased sedentary behaviour. This transitional life stage often involves significant changes, such as starting families and advancing careers, which may lead to decreased physical activity and increased body weight [21].

Despite the well-documented health benefits of physical activity, many individuals still fall short of achieving sufficient daily activity while also exceeding 8 hours of sedentary behaviour each day. Compounding this issue, sedentary behaviours associated with screen time, particularly entertainment-based computer use, have been shown to have more detrimental health effects, especially in older adults [22].

Our findings on activity intensity reveal notable gender differences in participation rates across various intensity levels of physical activity. It is observed that female in particular tend towards low and medium activities, while male tend towards vigorous activities. This trend aligns with existing literature across different age groups, suggesting that societal norms and expectations play a significant role in these differences. Boys, for example, are more likely to engage in activities that require physical exertion and endurance, while girls often participate in less intense, more social forms of exercise [23].

The cultural association of physical strength and endurance with masculinity encourages male to engage in more intense physical activities, leading to higher overall physical activity levels compared to female. Furthermore, the types of physical activities female typically engage in—such as house cleaning, childcare, and other domestic responsibilities—are generally of lower intensity compared to those of male [24].

A study by Fogelman *et al.*, which examined the relationship between physical activity, socio-economic factors, and health among 276 individuals aged 20 to 65, found that a significant portion of the sample led sedentary lifestyles. Interestingly, it was noted that individuals with lower educational attainment exhibited higher levels of physical activity at work, while those with higher education were more likely to engage in leisure-time physical activities, reflecting a complex interplay between socio-economic status and activity patterns. Additionally, male scored higher than female on sports-related activities [25].

When analysing the interaction between physical activity levels and demographic factors such as age, BMI, height, and weight, we found that for female, age, weight, BMI, and weekly sitting time varied significantly between low and high-intensity physical activity levels. Specifically, an inverse relationship was identified; as physical activity levels increased, age, weight, BMI, and sitting time decreased. For male participants, similar patterns emerged,

with significant differences in age and weekly sitting times across all activity categories, and BMI values differing between low and high-intensity activities.

Overall, our analysis indicates that decreased physical activity intensity is associated with increased sedentary time. Female exhibited higher weekly sitting times than male, and in both genders, sitting time decreased as physical activity intensity increased. The World Health Organization and many health organizations recommend limiting daily sedentary time to 2 hours, translating to approximately 14 hours or 840 minutes per week. Notably, our study group did not exceed these recommended durations, indicating a potential area for public health intervention to encourage increased physical activity and reduced sedentary behaviour [26].

The findings from various studies underscore the critical relationship between physical activity levels, sedentary behaviour, and health outcomes. The 2022 study by Pippi *et al.* highlighted that participant who engaged in a three-month intensive exercise program saw improvements in both physical activity levels and various health-related outcomes, reinforcing the message that exercise should be encouraged for all individuals, irrespective of their baseline weight or sitting habits [27].

Watanabe *et al.* focused on older adults, revealing that those who exhibited both low levels of physical activity and high sitting time faced a significantly elevated risk of all-cause mortality compared to individuals who presented with only one of these risk factors [28]. This aligns with the findings of Cao *et al.* which pointed to a concerning prevalence of prolonged sitting coupled with insufficient physical activity among U.S. cancer survivors [29].

In this study, we compared the physical activity levels of participants across low, medium, and high activity groups, observing that female consistently had longer sitting times at all activity levels. This trend raises important questions about the societal and environmental factors that contribute to these disparities, especially given the context of labour force participation rates in Turkey. According to the Turkish Statistical Institute (TÜİK) data from 2016 [30], the labour force participation rate was markedly higher for male (72%) compared to female (32.5%). This discrepancy reflects broader issues of gender inequality in both the workforce and physical activity engagement.

The evolution of data collection methods regarding workplace activities since 2008 marks a significant advancement in understanding the dynamics of physical activity [31].

In conclusion, the interplay of physical activity, sedentary behaviour, and socio-economic factors illuminates the urgent need for targeted public health interventions. Strategies must aim to promote physical activity across all demographics, particularly among female and older adults, and to address structural barriers that limit engagement in physical activity. Reducing sedentary behaviour and fostering environments that encourage active lifestyles are essential steps toward improving overall health outcomes and mitigating mortality risks associated with inactivity.

The findings from this study highlight the significant differences in physical activity levels among female participants and how these differences correlate with various sub-dimensions of the quality-of-life index. Specifically, female engaging in high-intensity physical activity exhibited better physical function compared to their counterparts involved in low-intensity activities. This aligns with existing literature that emphasizes the positive impact of regular physical activity on overall health and well-being.

Notably, female participants with high-intensity physical activity levels reported lower emotional problems and higher general health indicators than those in the lower activity groups. This suggests that engaging in regular, vigorous exercise can mitigate issues such as stress, depression, and anxiety, primarily due to the increased release of endorphins associated with physical exertion. Furthermore, even modest levels of physical activity have been shown to enhance emotional well-being, making it clear that any movement, however slight, can contribute positively to mental health.

In contrast, our findings regarding male participants revealed that those with low-intensity physical activity had significantly lower scores in the physical function, social function, and general health subscales. The reduced physical function can adversely affect their ability to perform daily living activities, leading to muscle strength loss, postural issues, and cardiovascular health declines. Moreover, the implications of low physical activity extend beyond physical health; they can diminish social interactions and increase feelings of isolation, which is particularly concerning in the aftermath of the pandemic when social connectivity has already been challenged.

The relevance of these findings is further underscored by a recent study conducted by Niaz *et al.* which explored the relationship between physical activity levels and quality of life among university students [32]. Their research confirmed a positive correlation between higher physical activity levels and improved quality of life, reinforcing the argument for enhanced access to recreational facilities and opportunities for physical engagement.

CONCLUSIONS

In summary, our study underscores the critical role of physical activity in enhancing various quality of life dimensions among both female and male. High-intensity physical activity not only improves physical function but also supports emotional health and social well-being. Given the current landscape shaped by the pandemic, there is an urgent need for initiatives that promote physical activity, as these efforts can be pivotal in fostering better health outcomes and enhancing the quality of life across diverse populations. Addressing the barriers to physical activity, particularly in vulnerable groups, should be a priority in public health strategies moving forward.

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Conflict of Interest

The authors declare no conflicts of interest.

Ethical Statement

The research was approved by the Institutional Research Ethics Committee at Akdeniz University in Antalya, Turkey

Informed Consent Statement

Consent was obtained from each participant before administering questionnaires.

REFERENCES

[1] Ford, E.S. and Caspersen, C.J. "Sedentary behaviour and cardiovascular disease: a review of prospective studies," *International Journal of Epidemiology*, vol. 41, no. 5, 2012, pp. 1338–1353.

[2] Owen, N. *et al.* "Too much sitting: the population-health science of sedentary behavior," *Exercise and Sport Sciences Reviews*, vol. 38, no. 3, 2010, pp. 105.

[3] Scholes, S. and Mindell, J. "Physical activity in adults," *Health Survey for England*, vol. 1, 2012, pp. Chapter 2.

[4] Lewis, B.A. *et al.* "Future directions in physical activity intervention research: expanding our focus to sedentary behaviors, technology, and dissemination," *Journal of Behavioral Medicine*, vol. 40, no. 1, 2017, pp. 112–126.

[5] Lambert, J.D. *et al.* "Assessment of fidelity in individual level behaviour change interventions promoting physical activity among adults: a systematic review," *BMC Public Health*, vol. 17, no. 1, 2017, pp. 765.

[6] Sawyer, A.D. *et al.* "Cross-sectional interactions between quality of the physical and social environment and self-reported physical activity in adults living in income-deprived communities," *PLOS ONE*, vol. 12, no. 12, 2017, pp. e0188962.

[7] Craig, C.L. *et al.* "International physical activity questionnaire: 12-country reliability and validity," *Medicine and Science in Sports and Exercise*, vol. 35, 2003, pp. 1381–1395.

[8] Öztürk, M. "Üniversitede eğitim-öğretim gören öğrencilerde uluslararası fiziksel aktivite anketinin geçerliliği ve güvenirliği ve fiziksel aktivite düzeylerinin belirlenmesi," Hacettepe Üniversitesi, 2005.

[9] World Health Organization, "Guidelines for data processing and analysis of the International Physical Activity Questionnaire (IPAQ)," World Health Organization, 2024.

[10] Ware, J.E. Jr and Sherbourne C.D. "The MOS 36-item short-form health survey (SF-36). I. Conceptual framework and item selection," *Medical Care*, vol. 30, no. 6, 1992, pp. 473–483.

[11] Koçyiğit, H. *et al.* "SF-36'nın Türkçe için güvenilirlik ve geçerliliği," *İlaç ve Tedavi*, vol. 12, 1999, pp. 102–106.

[12] Demiral, Y. *et al.* "Normative data and discriminative properties of short form 36 (SF-36) in Turkish urban population," *BMC Public Health*, vol. 6, 2006, pp. 247.

[13] Aydemir, Ö. *et al.* "Major depresif bozuklukta yaşam kalitesi: kesitsel bir çalışma," *Türk Psikiyatri Dergisi*, vol. 20, no. 3, 2009.

[14] Tamres, L.K. *et al.* "Sex differences in coping behavior: a meta-analytic review and an examination of relative coping," *Personality and Social Psychology Review*, vol. 6, 2002, pp. 2–30.

[15] Nolen-Hoeksema, S. "Emotion regulation and psychopathology: the role of gender," *Annual Review of Clinical Psychology*, vol. 8, 2012, pp. 161–187.

[16] Carney, M.A. *et al.* "Positive and negative daily events, perceived stress, and alcohol use: a diary study," *Journal of Consulting and Clinical Psychology*, vol. 68, no. 5, 2000, pp. 788–798.

[17] Swendsen, J.D. *et al.* "Mood and alcohol consumption: an experience sampling test of the self-medication hypothesis," *Journal of Abnormal Psychology*, vol. 109, 2000, pp. 198–204.

[18] Cooney, G.M. *et al.* "Exercise for depression," *Cochrane Database of Systematic Reviews*, no. 9, 2013, pp. CD004366.

[19] Shaw, K. *et al.* "Exercise for overweight or obesity," *Cochrane Database of Systematic Reviews*, no. 4, 2006, pp. CD003817.

[20] Das, P. and Horton R. "Physical activity—time to take it seriously and regularly," *The Lancet*, vol. 388, no. 10051, 2016, pp. 1254–1255.

[21] Unick, J.L. *et al.* "Objective estimates of physical activity and sedentary time among young adults," *Journal of Obesity*, 2017, pp. 9257564.

[22] Stamatakis, E. *et al.* "Associations between multiple indicators of objectively-measured and self-reported sedentary behaviour and cardiometabolic risk in older adults," *Preventive Medicine*, vol. 54, no. 1, 2012, pp. 82–87.

[23] Ainsworth, B.E. *et al.* "Gender differences in physical activity," *Women in Sport and Physical Activity Journal*, vol. 2, no. 1, 1993, pp. 1–16.

[24] Lissner, L. *et al.* "Physical activity levels and changes in relation to longevity: a prospective study of Swedish women," *American Journal of Epidemiology*, vol. 143, no. 1, 1996, pp. 54–62.

[25] Fogelman, Y. *et al.* "Assessment of participation in physical activities and relationship to socioeconomic and health factors: the controversial value of self-perception," *Patient Education and Counseling*, vol. 53, no. 1, 2004, pp. 95–99.

[26] World Health Organization, "WHO guidelines on physical activity and sedentary behaviour," World Health Organization, 2024.

[27] Pippi, R. *et al.* "Impact of BMI, physical activity, and sitting time levels on health-related outcomes in a group of overweight and obese adults with and without type 2 diabetes," *Journal of Functional Morphology and Kinesiology*, vol. 7, 2022, pp. 12.

[28] Watanabe, D. *et al.* "Association of the interaction between physical activity and sitting time with mortality in older Japanese adults," *Scandinavian Journal of Medicine & Science in Sports*, vol. 32, no. 12, 2022, pp. 1757–1767.

[29] Cao, C. *et al.* "Association of daily sitting time and leisure-time physical activity with survival among US cancer survivors," *JAMA Oncology*, vol. 8, no. 3, 2022, pp. 395–403.

[30] Turkish Statistical Institute, "Labor force statistics," Turkish Statistical Institute, 2016.

[31] Castillo-Retamal, M. and Hinckson, E.A. "Measuring physical activity and sedentary behaviour at work: a review," *Work*, vol. 40, no. 4, 2011, pp. 345–357.

[32] Niaz, T. *et al.* "The association between physical activity and quality of life among university students," *Journal of Health and Rehabilitation Research*, vol. 4, no. 1, 2024, pp. 227–231.