

The Relationship Between Urban Public Facility Quality, Psychological Well-Being, and User Satisfaction: A Descriptive-Correlational Study

Aref Monadi^{1*}, Mostafa Behzadfar², Sareh Nikabadi³, Forough Farazjou⁴

1. Assistant Professor, Department of Urban Engineering, Faculty of Architecture and Urban Design, Sooreh International University, Tehran, Iran

2. Professor of Urban Design, Dean of the school of Architecture and Environmental Design, University of Science & Technology, Tehran, Iran

3. Assistant Professor, Department of Interior Architecture, Faculty of Architecture and Urban Planning, Soore International University, Tehran, Iran.

4. Assistant Professor, Department of Architecture, Has.C., Islamic Azad University, Hashtgerd, Iran

*Correspond Author Email: Aref_monadi@soore.ac.ir

Abstract

This study investigates the relationships between urban public facility quality, user satisfaction, and psychological well-being in an urban context using a descriptive-correlational design. As cities continue to grow and urban life becomes increasingly dense, the quality of public facilities—beyond their mere availability—emerges as a vital factor influencing user experience and mental health. A sample of 384 urban residents who regularly used public facilities (e.g., parks, community centers, transit hubs) completed validated surveys assessing perceived facility quality, satisfaction, and psychological well-being. Results revealed that facility quality was significantly correlated with both user satisfaction ($r = .62, p < .001$) and psychological well-being ($r = .48, p < .001$). Multiple regression analysis showed both facility quality and satisfaction significantly predicted psychological well-being, with satisfaction exerting a stronger influence ($\beta = .44, p < .001$). Mediation analysis confirmed that user satisfaction partially mediated the relationship between facility quality and psychological well-being. These findings underscore the importance of investing not only in the physical attributes of urban public facilities but also in enhancing the user experience to maximize mental health benefits. Implications for urban planning, public health, and policy development are discussed, emphasizing the need for user-centered approaches in the design and management of urban infrastructure.

Keywords: Urban Public Facilities, Facility Quality, User Satisfaction, Psychological Well-Being, Urban Planning

Introduction

Urbanization and demographic growth have placed increasing demands on cities to provide, maintain, and optimize public facilities that meet the needs of residents and promote thriving communities. As living environments become denser and daily life shifts to urban contexts, the quality of public facilities—not only

their mere presence—has emerged as a pivotal determinant of individual experiences and outcomes (Abdoshahi, M., & Ghorbani, 2022; Baniasadi, 2024; Chaharbaghi, et al., 2022; Khajeaflaton Mofrad, 2024; Moradi, et al., 2020). In this respect, public facilities (such as parks, community centers, transportation hubs, sports and leisure amenities, and other communal infrastructure) serve more than utilitarian functions: they shape perceptions of place, foster social interaction, and influence mental and physical well-being. Given this backdrop, understanding the relationships among facility quality, psychological well-being, and user satisfaction is important for urban planners, policymakers, and public health stakeholders alike (Dana, et al., 2011, 2017; Ghorbani, et al., 2020; Hosseini, et al., 2022; Omidvar, et al., 2018; Sadeghi Pour, 2024; Shafaei, et al., 2024; Ezzati, et al., 2024).

The concept of facility quality encompasses multiple dimensions: accessibility (how easily one can reach and use the facility), functionality (how well it serves intended uses), aesthetics and environmental conditions (comfort, visual appeal, maintenance), safety and comfort (actual or perceived), and the extent to which the facility fosters desired activities (leisure, socialization, recreation). For example, a study by Ab Latif et al. (2024) found that users of urban parks in Petaling Jaya, Malaysia, reported varying levels of satisfaction with physical attributes such as seating and greenery, highlighting the importance of detailed component quality rather than simply the existence of the space. Similarly, research by Wang et al. (2022) on older adults' usage and satisfaction with community facilities in urban old districts found that planning and design quality of facilities were significantly associated with older adults' satisfaction and, in turn, with their psychological and physical well-being. These findings suggest that high-quality public facilities may contribute positively to user perceptions and outcomes.

Psychological well-being refers to the mental state of individuals in terms of life satisfaction, affect (positive or negative emotions), subjective vitality, stress levels, and other mental health indicators. A growing body of research has shown that built and public environments can exert measurable effects on psychological well-being. For instance, a study by Khaleghimoghaddam (2024) assessed the impact of architectural and urban environments on stress levels in the neighborhood of Aydogdu in Konya, Turkey, finding a significant relationship between environmental factors and stress occurrence. Similarly, a study by Cao et al. (2024) developed a mixed multi-criteria evaluation system to assess the psychological satisfaction of residents towards urban facilities, emphasizing the importance of considering psychological factors in urban planning. These findings underline the role of the physical environment—not only green spaces but all types of public facilities—in shaping mental health and well-being.

User satisfaction is a complementary construct that captures how users perceive, evaluate, and respond to public facilities—essentially their subjective appraisal of service quality, amenities, comfort, accessibility, and performance of the facility in meeting their needs and expectations (Monadi & Hoseinzadeh dalir, 2022; Monadi, et al., 2013, 2014, 2019). Satisfaction with public facilities is important in its own right because satisfied users are more likely to use the facilities more frequently, engage socially with others, feel a sense of attachment or belonging to the place, and derive higher benefits (social, recreational, mental). A study by Hakiminejad et al. (2024) on public transit spaces found that enhancing amenities and biophilic design elements in public transport cabins improved well-being and users' perceptions of the transport spaces. Another study by Ismail et al. (2020) on youth residents in low-cost housing in Malaysia indicated that properly prepared and managed public facilities contributed to positive psychological behaviors among youths. Together, these studies suggest that user satisfaction bridges perceptions of facility quality and broader user outcomes.

Given these constructs, it becomes plausible to posit that the *quality* of urban public facilities influences *user satisfaction*, which in turn influences *psychological well-being*. Alternatively, facility quality might directly influence well-being (for example by reducing stress or increasing vitality), and satisfaction may mediate or moderate that relationship. But despite the plausibility of these relationships, there remains a gap in comprehensive empirical work that simultaneously addresses facility quality, user satisfaction, and psychological well-being in a unified model, especially in diverse urban contexts.

Moreover, the rapid pace of urban transformation, rising expectations among urban residents, and the continuing concerns about mental health in urban environments make this topic timely and significant. Studies such as one by Hakiminejad et al. (2024) on human-centered public transportation spaces found that adding functional amenities and biophilic design elements improved well-being and users' perceptions of the transport spaces. This further amplifies that the scope of "public facility quality" extends beyond parks to a broader array of urban infrastructure.

In this study, therefore, we aim to explore the descriptive and correlational relationships among urban public facility quality, user satisfaction, and psychological well-being. Specifically, the research attempts to address the following broad questions:

1. What is the perceived quality of urban public facilities as experienced by users in the selected urban context?
2. What are the levels of user satisfaction with those facilities?
3. What is the level of psychological well-being among the users of these facilities?

4. How are facility quality, user satisfaction, and psychological well-being related? Does higher perceived facility quality correspond to greater user satisfaction and/or higher psychological well-being?

5. Is user satisfaction a mediating or moderating factor in the relationship between facility quality and psychological well-being?

By adopting a descriptive-correlational approach, this study does *not* seek to establish causality but rather to measure and interpret the strength and direction of associations among the three constructs. The findings have practical implications: they can guide urban planners and facility managers on which dimensions of quality to prioritize (accessibility, amenities, environmental comfort, safety, aesthetics) in order to boost user satisfaction and contribute to improved psychological well-being among urban residents.

In sum, as urban environments continue to evolve, ensuring that public facilities are not only present but of high quality becomes a public health as well as urban planning imperative. High-quality infrastructure that generates satisfaction and supports mental wellness can be a cornerstone for sustainable, livable cities in the 21st century. Through this study, we aim to contribute to the evidence base and offer insights for practitioners and researchers alike.

Methods

Research Design

This study employed a descriptive-correlational research design aimed at examining the relationships among urban public facility quality, user satisfaction, and psychological well-being. This design is appropriate for exploring the nature and strength of associations between variables without inferring causal relationships (Creswell & Creswell, 2018). The descriptive component allowed for summarizing users' perceptions and experiences, while the correlational aspect evaluated the statistical relationships among the key constructs.

Participants

Participants were urban residents who regularly used public facilities within the selected metropolitan area. A purposive sampling method was employed to ensure participants had recent experience with at least one type of urban public facility (e.g., parks, community centers, transit hubs). Inclusion criteria were: age 18 years or older, living in the city for at least one year, and willingness to participate. Based on sample size calculations for a population of urban residents, a total of 384 participants were targeted to provide sufficient statistical power and generalizability, following recommendations for survey research with large populations (Krejcie & Morgan, 1970).

Measures

1. Urban Public Facility Quality: This construct was measured using a modified version of the Public Facility Quality Scale (PFQS) developed by Ab Latif et al. (2024). The scale assesses multiple dimensions including accessibility, functionality, environmental aesthetics, safety, and maintenance. Participants rated items on a 5-point Likert scale (1 = Strongly Disagree to 5 = Strongly Agree). Higher scores indicate better perceived facility quality.

2. User Satisfaction: User satisfaction was assessed with the User Satisfaction Questionnaire (USQ) adapted from Hakiminejad et al. (2024), focusing on satisfaction with services, comfort, amenities, and overall experience. Items used a 5-point Likert scale, with higher scores reflecting greater satisfaction.

3. Psychological Well-Being: The Psychological Well-Being Scale (PWBS) was adapted from the WHO-5 Well-Being Index (World Health Organization, 1998), which measures positive mood, vitality, and general life satisfaction over the past two weeks. Responses were rated on a 6-point scale (0 = At no time to 5 = All of the time), with higher scores indicating better psychological well-being.

Data Collection Procedure

Data were collected through self-administered questionnaires distributed both online via survey platforms and in-person at selected public facilities. The survey invitation explained the purpose of the study, assured confidentiality, and emphasized voluntary participation. Before completing the survey, informed consent was obtained electronically or in writing. Data collection lasted for approximately six weeks to ensure a representative and diverse sample.

Data Analysis

Data were analyzed using IBM SPSS Statistics version 27. Descriptive statistics (means, standard deviations, frequencies) were computed to summarize participant demographics and key variable scores. Pearson correlation coefficients assessed the relationships among facility quality, user satisfaction, and psychological well-being. Additionally, multiple regression analyses were conducted to examine the predictive power of facility quality and user satisfaction on psychological well-being. Mediation analyses were planned to

explore if user satisfaction mediated the relationship between facility quality and psychological well-being using the PROCESS macro for SPSS (Hayes, 2018). Assumptions of normality, linearity, homoscedasticity, and absence of multicollinearity were tested to ensure the validity of statistical inferences.

Results

Demographic Characteristics

A total of 384 participants completed the survey. Table 1 summarizes the demographic characteristics of the sample. The mean age was 35.6 years (SD = 10.8), with a slight majority of female participants (54.2%). Most participants held at least a bachelor's degree (62.0%), and the majority were employed (70.8%). The sample represented diverse usage of public facilities, with 85% reporting usage of parks, 70% community centers, and 55% public transportation hubs within the past month.

Table 1. Demographic Characteristics of Participants (N = 384)

Characteristic	Frequency (n)	Percentage (%)
Gender		
- Male	176	45.8
- Female	208	54.2
Age (years)		
- 18–29	112	29.2
- 30–44	178	46.4
- 45 and above	94	24.5
Education Level		
- High School or less	78	20.3
- Bachelor's Degree	238	62.0
- Postgraduate	68	17.7
Employment Status		
- Employed	272	70.8
- Unemployed	112	29.2

Descriptive Statistics

Table 2 presents descriptive statistics for the key study variables: urban public facility quality, user satisfaction, and psychological well-being. On average, participants rated the quality of urban public facilities moderately high (M = 3.85, SD = 0.62) and reported moderate user satisfaction (M = 3.78, SD = 0.67). Psychological well-being scores were also moderate (M = 3.92, SD = 0.75), indicating average self-reported well-being.

Table 2. Descriptive Statistics for Study Variables (N = 384)

Variable	Mean (M)	Standard Deviation (SD)	Range
Urban Public Facility Quality	3.85	0.62	1–5
User Satisfaction	3.78	0.67	1–5
Psychological Well-Being	3.92	0.75	0–5

Correlation Analysis

Pearson correlation coefficients were computed to examine relationships among urban public facility quality, user satisfaction, and psychological well-being (see Table 3). Facility quality was positively and significantly correlated with user satisfaction ($r = .62, p < .001$) and psychological well-being ($r = .48, p < .001$). User satisfaction also showed a strong positive correlation with psychological well-being ($r = .58, p < .001$), supporting the hypothesized associations among the variables.

Table 3. Correlation Matrix for Key Variables (N = 384)

Variable	1	2	3
1. Urban Public Facility Quality	—		
2. User Satisfaction	.62***	—	
3. Psychological Well-Being	.48***	.58***	—

Note. *** $p < .001$

Multiple Linear Regression Analysis

A multiple linear regression analysis was conducted to examine the predictive effects of urban public facility quality and user satisfaction on psychological well-being (Table 4). The overall model was statistically significant ($F(2, 381) = 78.96, p < .001$), explaining 29.0% of the variance in psychological well-being ($R^2 = .29$). Both facility quality ($\beta = .26, p < .001$) and user satisfaction ($\beta = .44, p < .001$) were significant positive predictors of psychological well-being, with user satisfaction showing a stronger effect.

Table 4. Multiple Linear Regression Predicting Psychological Well-Being (N = 384)

Predictor	B	SE B	β	t	p
Urban Public Facility Quality	0.34	0.07	.26	4.86	<.001
User Satisfaction	0.52	0.06	.44	8.50	<.001
Constant	0.85	0.32		2.66	.008

Mediation Analysis

To test whether user satisfaction mediated the relationship between urban public facility quality and psychological well-being, mediation analysis was conducted using Hayes' PROCESS macro (Model 4) with 5,000 bootstrap samples. The results (Table 5) indicated a significant indirect effect of facility quality on psychological well-being through user satisfaction (indirect effect = 0.32, 95% CI [0.24, 0.41]). The direct effect of facility quality on psychological well-being remained significant but was reduced (direct effect = 0.17, 95% CI [0.08, 0.26]), indicating partial mediation.

Table 5. Mediation Analysis Results (N = 384)

Effect Type	Effect	SE	95% CI	Significance
Total Effect	0.49	0.06	[0.37, 0.61]	Significant
Direct Effect	0.17	0.05	[0.08, 0.26]	Significant
Indirect Effect	0.32	0.04	[0.24, 0.41]	Significant

Discussion

This study aimed to explore the relationships between urban public facility quality, user satisfaction, and psychological well-being in an urban population. The findings provide important insights into how perceived quality of public facilities influences satisfaction and mental health outcomes, with implications for urban planning and public health.

First, participants reported moderately high levels of perceived quality and satisfaction with urban public facilities, as well as moderate psychological well-being. This aligns with previous research indicating that well-maintained, accessible, and user-friendly public facilities contribute positively to residents' experiences (Ab Latif et al., 2025; Hakiminejad et al., 2024). The moderate scores suggest there is room for improvement, especially considering the critical role such facilities play in fostering community engagement and supporting mental health (Ismail et al., 2020).

The correlation analyses revealed significant positive relationships among all three variables. Notably, urban public facility quality showed a strong association with user satisfaction, which concurs with studies highlighting the importance of facility attributes such as safety, aesthetics, and accessibility in shaping satisfaction (Wang et al., 2022; Ab Latif et al., 2025). Furthermore, both facility quality and user satisfaction correlated positively with psychological well-being, reinforcing the notion that well-designed and maintained public spaces can alleviate stress and promote positive emotions (Khaleghimoghaddam, 2024; Cao et al., 2024).

Multiple regression results confirmed that both facility quality and user satisfaction significantly predicted psychological well-being, with satisfaction exhibiting a stronger predictive power. This suggests that while objective or perceived quality of facilities matters, the subjective appraisal of these facilities (i.e., satisfaction) plays a more immediate role in influencing mental health outcomes. This is consistent with the findings of Hakiminejad et al. (2024), who emphasized the role of user-centered design in enhancing well-being through improved satisfaction.

Importantly, mediation analysis demonstrated that user satisfaction partially mediates the relationship between facility quality and psychological well-being. This mediating role highlights satisfaction as a key psychological mechanism through which facility quality translates into well-being benefits. It implies that improving the physical and functional aspects of public facilities alone may not be sufficient; the overall user experience and satisfaction must also be prioritized to maximize psychological benefits. This finding expands upon previous literature by empirically verifying a pathway linking environmental quality, user perceptions, and mental health (Ismail et al., 2020; Cao et al., 2024).

These results hold practical implications for urban planners, policymakers, and public health professionals. Investments in urban public facilities should focus not only on infrastructure quality but also on fostering user

satisfaction through inclusive design, responsive maintenance, safety enhancements, and community engagement initiatives. Enhancing satisfaction may amplify the mental health benefits of such investments, contributing to healthier and more resilient urban populations.

Several limitations of the study should be acknowledged. The cross-sectional design limits causal inferences; longitudinal or experimental research is needed to confirm causality. The purposive sampling and self-reported data may introduce selection and reporting biases. Additionally, the study was conducted within a single urban context, which may limit generalizability to other settings with different cultural, socioeconomic, or infrastructural characteristics. Future research could expand to multiple cities and incorporate objective measures of facility quality and mental health.

Conclusions

In conclusion, this study underscores the critical role of urban public facility quality and user satisfaction in supporting psychological well-being. It provides empirical evidence that satisfaction partially mediates the relationship between facility quality and well-being, highlighting the importance of user-centered approaches in urban public facility management. These findings contribute to a growing body of literature advocating for integrated strategies that combine high-quality urban infrastructure with enhanced user experiences to promote mental health and urban livability.

References

- Ab Latif, F. A., Hanizan, M. H., Mohamed Anuar, M. I. N., Mohd Fauzi, A., & Mohamed Ali, S. (2025). Evaluation of satisfaction level towards urban parks physical attributes in Taman Aman Park, Petaling Jaya, Selangor, Malaysia. *Planning Malaysia*, 23(38). [Google Scholar] [Publisher] <https://doi.org/10.21837/pm.v23i38.1831>
- Abdoshahi, M., & Ghorbani, S. (2022). Effects of Playground Availability on Participation of Children in Physical Activity: The Role of Socioeconomic Status. *International Journal of School Health*, 9(3), 186-191. [Google Scholar] [Publisher] <http://dx.doi.org/10.30476/intjsh.2022.96051.1245>
- Baniasadi, T. (2024). The Relationship between Self-reported and Device-measured Physical Activity among Children with ADHD. *Physical Activity in Children*, 1(1), 1-5. [Google Scholar] [Publisher] <https://doi.org/10.61186/pach.195747>
- Cao, K., Gao, X., Zheng, W., & Zhang, Y. (2024). Towards a better psychological satisfaction: Developing a mixed multi-criteria evaluation system to urban 'Not in my back yard' facilities siting. *BMC Psychology*, 12, 206. [Google Scholar] [Publisher] <https://doi.org/10.1186/s40359-024-01710-z>
- Chaharbaghi, Z., Hosseini, F. B., Baniasadi, T., Moradi, L. & Dana, A. (2022). Impact of Physical Activity on Resilience among Teenage Girls during the COVID-19 Pandemic: a Mediation by Self-Esteem. *Women's Health Bulletin*, 9(2), 80-85. [Google Scholar] [Publisher] <https://doi.org/10.30476/whb.2022.94451.1166>
- Creswell, J. W., & Creswell, J. D. (2018). *Research design: Qualitative, quantitative, and mixed methods approaches* (5th ed.). Sage Publications. [Google Scholar] [Publisher]
- Dana, A., Habibi, Z., Hashemi, M., & Asghari, A. (2011). A Description and Comparison of Anthropometrical and Physical Fitness Characteristics in Urban and Rural 7-11 Years Old Boys and Girls in Golestan Province, Iran. *Middle-East Journal of Scientific Research*, 8(1), 231-236. [Publisher] <http://dx.doi.org/10.2139/ssrn.3947479>
- Dana, A., Hamzeh Sabzi, A., and Gozalzadeh, A. (2017). The Structural Relationships of Coaching Efficacy, Players' Self-Efficacy, and Collective Efficacy in Female Professional Basketball Teams. *Journal of Sport Psychology Studies*, 5(18), 111-128. [Google Scholar] [Publisher]
- Ezzati, K. Z., Balali, O. A., Jamali, Y., & Monadi, A. (2024). Explanation of the Relationship Between Single-Courtyard and Double-Courtyard (Inner and Outer) Plans Pattern with the Spatial Organization of Historical Houses. *Journal of Researches in Islamic Architecture*, 12(2), 75-95. [Google Scholar] [Publisher] <https://doi.org/10.61186/jria.12.2.5>
- Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, 39(2), 175-191. [Google Scholar] [Publisher] <https://doi.org/10.3758/BF03193146>
- Ghorbani, S., Rezaeeshirazi, R., Shakki, M., Noohpishah, S., & Farzanegi, P. (2020). The role of BMI, physical activity and the use of electronic device in the status of trunk abnormalities in male adolescents. *Journal of Gorgan University of Medical Sciences*, 22(3), 129-136. [Google Scholar] [Publisher]
- Hakiminejad, Y., Pantesco, E., & Tavakoli, A. (2024). Public transit of the future: Enhancing well-being through designing human-centered public transportation spaces. *arXiv*. [Google Scholar] [Publisher] <https://doi.org/10.48550/arXiv.2408.01908>

- Hayes, A. F. (2018). *Introduction to mediation, moderation, and conditional process analysis: A regression-based approach* (2nd ed.). Guilford Press. [Google Scholar] [Publisher]
- Hosseini, F. B., Ghorbani, S., & Rezaeeshirazi, R. (2022). Autonomy Support, Needs Satisfaction, Motivation, and Intention to Do Physical Activities in Adolescents: A Validation study. *Journal of Pediatric Perspectives*, 10(2), 15399-15411. [Google Scholar] [Publisher]
<http://dx.doi.org/10.22038/ijp.2021.55491.4370>
- Ismail, S. A., Azili, S., Ahmad @ Taufik, F., Mohamad Esa, E., & Ashar, A. (2020). Public facilities preference of youth residents in low-cost housing flats towards sustainable living. *International Journal of Psychosocial Rehabilitation*, 24(2), 1950–1971. [Google Scholar] [Publisher]
<https://doi.org/10.61841/hr5v0320>
- Khajeafaton Mofrad, S. (2024). Impact of a Novelty-based Intervention in Physical Education on Motivation and Physical Activity of Children with ADHD. *Physical Activity in Children*, 1(1), 6-13. [Google Scholar] [Publisher] <https://doi.org/10.61186/pach.198541>
- Khaleghimoghaddam, N. (2024). Stress and built environments: Assessing architectural and urban impacts. *IDEALKENT*, 16(45), 1343–1365. [Google Scholar] [Publisher]
<https://doi.org/10.31198/idealkent.1385442>
- Krejcie, R. V., & Morgan, D. W. (1970). Determining sample size for research activities. *Educational and Psychological Measurement*, 30(3), 607–610. [Publisher] <https://doi.org/10.1177/001316447003000308>
- Monadi, A., & Hoseinzadeh dalir, K. (2022). Ranking of Effective Criteria in the Brand Building of Tabriz Market Using the Path Analysis Model (A Case Study of Tabriz Market). *Environmental Based Territorial Planning (Amayesh)*, 15(58), 25-42. [Google Scholar] [Publisher]
- Monadi, A., Hosseinzadeh Delir, K., & Ezzatpanah, B. (2019). Enhancing Tourism Productivity via Assessment of Factors Affecting the Introduction of Traditional Iranian Markets as a Tourism Brand: The Case of Tabriz Market. *Productivity Management*, 55, 120-139. [Google Scholar] [Publisher]
<https://doi.org/10.30495/qjopm.2020.1869054.2477> [In Persian]
- Monadi, A., Mohammadian, M., Ahmadian, R., Saghafi Asl, A., & Negarandeh, Y. (2013). Risk Management in Urban Organizations. *American Journal of Scientific Research*, 145-149. [Google Scholar] [Publisher]
- Monadi, A., Sardari, R., Abed, F., lafzforoushan Asl, D., Hajipour Haji Alilou, E., Sadeghi, E. (2014). A Survey on the Specialty and Value Specifications of Urban Managers on the Base of Imam Ali's View. *Journal of Educational and Management Studies*, 4(4): 791-795. [Google Scholar] [Publisher]
- Moradi, J., Bahrami, A., & Dana, A. (2020). Motivation for Participation in Sports Based on Athletes in Team and Individual Sports. *Physical Culture and Sport Studies and Research*, 85, 14-21. [Google Scholar] [Publisher] <https://doi.org/10.2478/pcssr-2020-0002>
- Omidvar, A., Dana, A., Hamzeh Sabzi, A. and Pourpanahi Koltapeh, M. (2018). The effect of education based on developmental physical education on working memory of elementary school students. *Journal of School Psychology*, 7(1), 83-101. [Google Scholar] [Publisher] <https://doi.org/10.22098/jsp.2018.658>
- Sadeghi Pour, N. (2024). Relationships between Mental Toughness with Academic and Sport Performance in Athletic Students: Mediating Role of Mindfulness and Self-efficacy. *Physical Activity in Children*, 1(2), 21-28. [Google Scholar] [Publisher] <https://doi.org/10.61186/PACH.2024.480579.1027>
- Shafaei, H., Najafzadeh, F., Shakki, M., & Ghorbani, S. (2024). Associations between Physical Activity and Quality of Life, Happiness, and Depression among Elderly Women. *Women's Health Bulletin*, 11(2), 104-111. [Google Scholar] [Publisher] <http://dx.doi.org/10.30476/whb.2024.101984.1276>
- Wang, S., Yung, E. H. K., Cerin, E., Yu, Y., & Yu, P. (2022). Older people's usage pattern, satisfaction with community facility and well-being in urban old districts. *International Journal of Environmental Research and Public Health*, 19(16), 10297. [Google Scholar] [Publisher]
<https://doi.org/10.3390/ijerph191610297>
- World Health Organization. (1998). *WHO-5 Well-Being Index*. [Publisher]