













ORIGINAL

Parks as urban nodes: effects of public space design on pedestrian mobility

Parques como nodos urbanos: efectos del diseño de espacios públicos en la movilidad peatonal

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ABSTRACT

The quality of urban public space and pedestrian mobility are two crucial aspects that significantly influence urban life, especially in the current context, where cities face growing challenges related to sustainability, public health and social welfare. In this context, the objective of this study was to determine how the quality of urban public space is related to pedestrian mobility; for this purpose, it was necessary to conduct a basic, correlational, non-experimental, cross-sectional study. A questionnaire with a reliability coefficient of 0,902 was used to collect the information, which was applied to a sample of 162 residents neighboring the unit of analysis. The results were a coefficient $Rho=0,728$ and a P value of 0,000, which indicate the existence of a positive and strong correlation between the quality of public urban space and pedestrian mobility, suggesting that as the quality of public urban space improves, pedestrian mobility also tends to improve. It is concluded that the quality of public urban space and pedestrian mobility are essential for the development of more livable, healthy and sustainable cities, and that professional, architecturally sound urban design planning is essential to meet the current and future challenges of urbanization.

Keywords: Architecture; Quality of Urban Space; Public Space; Pedestrian Mobility; Parks and Squares.

RESUMEN

La calidad del espacio urbano público y la movilidad peatonal son dos aspectos cruciales que influyen significativamente en la vida urbana, especialmente en el contexto actual, donde las ciudades enfrentan desafíos crecientes relacionados con la sostenibilidad, la salud pública y el bienestar social. Bajo este contexto, el objetivo del presente estudio fue determinar de qué manera la calidad del espacio urbano público se relaciona con la movilidad peatonal; para ello fue necesario realizar un estudio de tipo básico, correlacional, no experimental y transversal. Para la recolección de la información se utilizó un cuestionario cuyo coeficiente de fiabilidad fue de 0,902, el cual se aplicó a una muestra de 162 pobladores vecinos de la unidad de análisis. Los resultados fueron un coeficiente $Rho=0,728$ y un P valor de 0,000, los cuales indican la existencia de una correlación positiva y fuerte entre la calidad del espacio urbano público y la movilidad peatonal, sugiriendo que a medida que mejora la calidad del espacio urbano público, también tiende a mejorar la movilidad peatonal. Se concluye que la calidad del espacio urbano público y la movilidad peatonal son esenciales para el desarrollo de ciudades más habitables, saludables y sostenibles, por lo que, una planificación profesional y arquitectónica del diseño urbano es fundamental para enfrentar los desafíos actuales y futuros de la urbanización.

Palabras clave: Arquitectura; Calidad del Espacio Urbano; Espacio Público; Movilidad Peatonal; Parques y Plazas.

INTRODUCTION

In contexts of rapid urbanization, the quality of public urban spaces and pedestrian mobility emerge as fundamental aspects for the sustainable development of cities.⁽¹⁾ Parks and squares, in particular, play a crucial role in shaping healthy and accessible urban environments, acting as green lungs and spaces for social interaction. However, the planning and design of these spaces do not always promote efficient and pleasant pedestrian mobility, which can affect the urban experience of citizens.⁽²⁾ Thus, the expansion of urban areas and the increase in the number of people who travel daily highlights the importance of developing infrastructure that encourages and facilitates walking, which is even more relevant in the context of efforts to integrate sustainable transportation options and promote healthier lifestyles.⁽³⁾

In this regard, in Asia, Zou et al.⁽⁴⁾ determined that urban spaces on the Asian continent, such as parks, squares, gardens, and green areas, are related to urban ecosystems. In addition to beautifying the city, they play a crucial role in sustainability and improving the quality of life of its inhabitants by providing essential ecological resources, as well as offering places for recreation, leisure, and social interaction, thus promoting the health and well-being of the community. Luo et al.⁽⁵⁾ point out that the quality of urban green space is related to pedestrian mobility through outdoor physical activities, as these environments promote a healthy lifestyle and social cohesion, as well as the general well-being of inhabitants in an increasingly multicultural society. Similarly, in urban areas, the quality of public spaces represents a significant opportunity to encourage social interaction among older people, as indicated by Zhang et al.⁽⁶⁾ However, general urban design guidelines and standards often do not fully consider the specific requirements of social interaction, since it is crucial to design public spaces that address the special social behaviors, needs, and experiences of people. These spaces suitable for citizens can be found in central squares, open areas between residences, and side entrances on street corners. It should also be noted that street furniture is a necessary implementation for social coexistence.

In Europe, Anastasiadou et al.⁽⁷⁾ report that sustainable mobility is related to the quality of public space, through adequate infrastructure and other essential improvements to promote pedestrian mobility and urban sustainability. Santos et al.⁽⁸⁾ report that creating suitable environments that include appropriate pedestrian infrastructure, green spaces, and easy access is related to the development of more livable, healthy, and sustainable cities. They concluded that streets with higher urban quality were distinguished by their connectivity, convenience, and comfort, unlike streets of lower quality, which underscores the importance of adequate urban planning to promote adequate pedestrian mobility. Bajada et al.⁽⁹⁾ concluded that urban areas need to provide safe environments for children to play and participate in sustainable mobility and adopt healthier lifestyles, based on the relationship between the quality of public urban space and pedestrian mobility. Dawson et al.⁽¹⁰⁾ refer to a relationship between meeting points for people from different backgrounds and the promotion of coexistence and understanding between diverse communities, highlighting public space as a vital resource for physical and emotional well-being.

In Central America, Alvarado et al.⁽¹¹⁾ concluded that there is a relationship between quality public spaces and the sense of community, identity, and culture that they promote. However, the implementation of public space quality policies is affected by a lack of continuity in projects and discrepancies between efforts to promote inclusive and safe public spaces and a negative perception of society regarding the current conditions of these spaces. On the other hand, Krebs et al.⁽¹²⁾ emphasize the relevance of participatory planning in improving urban spaces, focusing on the right to public space as a fundamental right, and also highlighting the implementation of connections between areas, limiting the promotion of mobility alternatives that are accessible to all citizens. The improvement of public spaces requires urban planning that prioritizes the needs of the local community through detailed studies of the interaction between residents and tourists. It is essential to consider the influence of government policies, as these can affect local authenticity and identity. The preservation of these two concepts is important, and the design of these spaces must value community life and culture, ensuring inclusivity and representation of the diversity of the population.⁽¹³⁾

In South America, it was pointed out that adequate planning of quality public urban space is linked to improving citizens' quality of life, particularly in developing countries where socioeconomic disparities impact social and territorial cohesion. It is therefore crucial to involve the local population in decision-making processes through public participation. Bressane et al.⁽¹⁴⁾ point to the relationship between the quality of urban green space and the public well-being of residents in metropolitan areas of Brazil, highlighting the need and importance of promoting the integration of green infrastructure, such as parks, green corridors, and urban forests, that are accessible to all citizens, referring to successful examples of sustainable urban planning, such as the Eco-Courtyard project in São Paulo and green-centered urban planning in Copenhagen, Denmark. Similarly,

Rodrigues et al.⁽¹⁵⁾ concluded that there is a positive relationship between the quality of space characteristics and the provision of public mobility. Sánchez et al.⁽¹⁶⁾ found positive relationships between pedestrian mobility and accessibility where banking services prevail, reaffirming the need to promote projects that meet the real demands of cities and stimulate the development of active mobility for their residents and visitors.

At the national level, Dammert et al.⁽¹⁷⁾ mention a significant correlation between the quality of urban space and pedestrian mobility, in the sense that sidewalks have sufficient capacity for the significant number of people who use them, with furniture designed for resting, although they are underused because pedestrians' priority is to get to their offices. They highlight the presence of ramps and tactile paving for people with physical disabilities, although no citizens are seen using these elements. However, they point out the existence of places where the inadequacy of the built space with a high presence of street commerce, where public space has undergone few changes and suffers wear and tear due to intensive use, generates conflicts and negotiations between merchants and municipal authorities.

Araujo⁽¹⁸⁾ addresses the importance of the relationship between the quality of public urban space and pedestrian mobility in the context of housing policy and sustainable urban development in Peru by 2030, highlighting that urban planning should consider the creation of quality public spaces that promote social interaction, recreation, and citizen safety. He emphasizes the need to promote pedestrian mobility as a sustainable and healthy form of transportation in cities, prioritizing accessibility and safety for pedestrians in the urban environment. Luna⁽¹⁹⁾ addresses the relationship between the quality of urban public space and pedestrian mobility from different perspectives, concluding that it is important to measure the quality of public space through variables such as permeability, perception, visual richness, identity, and the social activity that takes place in it. He also mentions that the quality of public space is related to identity and is considered essential for measuring its quality.

In this context, the National Institute of Statistics and Informatics⁽²⁰⁾ reported that 26,4 % of urban households in Peru reported the existence of squares and small parks in their area; on the coast, 24,2 %; in the highlands, 28,7 %; Likewise, 61,8 % of urban households in Peru reported the existence of parks in their surroundings. However, what is the quality of these spaces and their relationship with pedestrian mobility?

With regard to the description of the problematic reality that motivated this study, it has been observed that in the district of San Miguel, urban public spaces, such as parks and squares, do not meet expectations in terms of accessibility, safety, and functionality, which could restrict their effective use by the community. The lack of adequate infrastructure for pedestrians, poor lighting, inadequate design, and poor connections to other modes of transportation are recurring problems that could discourage residents from using these spaces for recreation and transit. Additionally, the design of these spaces rarely takes into sufficient architectural consideration the needs of all demographic groups, including children, the elderly, and people with disabilities. This situation presents the challenge of understanding the relationship between the quality of these public spaces and the mobility needs of their citizens, highlighting the growing concern about whether these spaces are designed in a way that truly facilitates safe and enjoyable pedestrian mobility and whether they contribute positively to the quality of life of their residents. Therefore, the overall objective is to determine the correlation between the quality of urban public spaces and pedestrian mobility in the parks and squares of the San Miguel de Juliaca district.

Likewise, the present study is justified at the social level due to the importance of the quality of urban public spaces such as parks and squares, and their direct relationship to the social life of a community, since these spaces not only provide areas for leisure and recreation, but also act as social meeting points that foster interaction and community cohesion. As a result, in San Miguel, where urban growth has been significant, there is an urgent need to ensure that these spaces effectively fulfill their social role.

This study is justified, at a theoretical level, because it will contribute to increasing existing knowledge about urban planning and public space design, highlighting the importance of accessibility and pedestrian safety, since there is insufficient research evidence specifically linking these factors to quality of life in the context of urban parks and squares. Consequently, this study seeks to fill this gap by examining how the architectural planning and design of these spaces can facilitate or impede pedestrian mobility, and how this, in turn, affects the use of public space and community satisfaction.

It is justified on a practical level because, through its conclusions, urban planners and designers in the city of San Miguel will be able to make informed and scientifically based decisions, whose findings can be used to guide the future development of public spaces in San Miguel, ensuring that they are designed to maximize benefits for health, well-being, and environmental sustainability. The practical recommendations derived from this study will have the potential to transform San Miguel into a model of how well-designed urban spaces can improve the quality of urban life.

METHOD

The research was basic or pure, using a non-experimental cross-sectional design and a quantitative approach, which focuses on numerical measurements and uses observation to collect data that is then analyzed to answer

the research questions, with statistical analysis being essential for validating the hypothesis.

In this regard, Teodoro et al.⁽²¹⁾ argue that it is characterized by being motivated by scientific curiosity and the desire to understand natural, social, and thought phenomena, without an immediate objective, that is, it does not seek economic or derivative benefits. Ruiz⁽²²⁾ mentions that non-experimental designs are characterized by the absence of external manipulation of variables, allowing the observation of phenomena in their natural context without artificial intervention. This approach facilitates the subsequent analysis of the data obtained, since they more accurately reflect the dynamics and complexity of the events studied in their real environment. Thus, the level will be correlational, which, according to Salinas⁽²³⁾, is carried out after changes have occurred in the independent variable in natural situations, understanding the relationships between phenomena as they develop spontaneously.

The population for this research study consisted of citizens who use public spaces, including parks and squares in the district, numbering 280. The sample, applying the simple random sampling formula, was 162 citizens. According to Arias et al.⁽²⁴⁾ the population refers to a specific and accessible group of cases that meet pre-established criteria and will be used to select the sample.

Data collection was carried out using a survey technique and a questionnaire was used as the instrument, which was applied to the entire population of the unit of analysis. This questionnaire contained 20 questions: questions 1 to 10 corresponded to the first variable, and questions 11 to 20 to variable 2. In this regard, click or tap here to write text. They point out that the questionnaire is a standardized instrument used to formulate coherent questions for data collection, taking into account the structured objective, using quantitative analysis to describe the population or examine relationships between variables.

To validate the instrument, the expert judgment technique was used, whereby a panel of three professionals familiar with the issues and variables of the study reviewed and evaluated the items, rating their relevance, pertinence, and clarity. In addition, their level of reliability was established using Cronbach's alpha statistic, which was 0,000. For the purposes of inferential analysis, SPSS v.26 statistical software was used to initially perform a normality test using the Kolmogorov-Smirnov test for samples larger than 50 participants, the result of which suggested the use of Spearman's nonparametric Rho statistic.

RESULTS

Descriptive results

Table 1. Descriptive statistics			
			Statistic
Quality of Urban Public Space	Average		35,5
	95 % confidence interval for the mean	Lower limit	34,2
		Upper limit	36,7746
Pedestrian mobility	Average		34,8457
	95 % confidence interval for the mean	Lower limit	33,5963
		Upper limit	36,0950

Table 1 provides a summary of the results obtained when applying the analysis tool to the study unit. This table includes the descriptive values calculated from the data collected. A confidence interval of 95 % was used, indicating a high degree of certainty in the results obtained with the tools used. The values in the table indicate that, within this 95 % confidence interval, the mean of the variables analyzed is representative and reliable. This implies that the actual values of the mean of these variables are likely to fall within the upper and lower limits defined by the confidence interval. These results demonstrate that the information obtained using the instruments is robust and reliable for analysis and consideration in the study conducted.

Table 2. Descriptive results for the variable quality of urban public space				
	Symbolic	Symbiosis	Exchange	Civic
Low	40,1	56,2	53	44
Moderate	32,7	26,5	38,3	32,7
High	27,2	17,3	8,6	22,8
Total	100	100	100	100,0

The data presented in table 2 offer a detailed overview of the current state of urban public space quality in San Miguel. With regard to the quality of symbolic urban public space, it is observed that this is low (40,1

%), suggesting that a significant proportion of spaces fail to adequately symbolize or represent the values or cultural identity of the community. This may indicate a lack of visual or artistic elements that connect with local history or shared values. It is moderate (32,7 %) and high (27,2 %), although there is a notable presence of spaces with moderate and high quality, the percentage of spaces with low quality suggests the need to reevaluate and possibly redesign some spaces to strengthen their symbolic value.

The quality of symbiotic urban public space is low (56,2 %), indicating that more than half of the spaces do not facilitate a symbiotic relationship between users and the environment, possibly due to a design that does not promote harmonious interaction with the natural or built environment. It is average (26,5 %) and high (17,3 %), reflecting a critical opportunity to improve how these spaces promote positive interactions between the elements of the environment and users.

In relation to the quality of urban public space for exchange, it is low (53,1 %). This high percentage in the low category suggests a deficiency in facilitating social and economic interactions, which are vital for urban dynamism. This could be due to inadequate design that does not create areas conducive to community gathering and activity. It is average (38,3 %) and high (8,6 %), which is a warning sign that these spaces need to be reconfigured to improve social interaction and cultural exchange.

The quality of urban public space for civic engagement is low (44,4 %), reflecting a lack of promotion of civic and respectful behavior in public spaces. This could be related to the lack of facilities that promote inclusion and mutual respect among different social groups. It is average (32,7 %) and high (22,8 %), which means that it is crucial to improve these areas to encourage greater civic participation and respect in public spaces.

These data suggest an urgent need to rethink and improve the design of public spaces to raise their quality in all the dimensions analyzed. Interventions such as incorporating art and cultural elements that reflect local identity into public spaces, redesigning spaces to improve integration and interaction with the natural and built environment, creating more accessible and welcoming areas that promote social and economic exchange, and fostering civic-mindedness and mutual respect through community engagement, including adequate signage, inclusive meeting spaces, and facilities for diverse community activities. This analysis can serve as a starting point for more in-depth discussions on how to improve urban planning and the architecture of public spaces in San Miguel.

Table 3. Descriptive results for pedestrian mobility				
	Freq.	%	% Val.	% Accum.
Low	74	45,7	46	46
Moderate	67	41,4	41	87
High	21	13,0	13	100
Total	162	100	100	

Table 3 presents data on pedestrian mobility in parks and squares in San Miguel in 2024, revealing crucial aspects of the accessibility and design of these public spaces. Pedestrian mobility is low (47,5 %), suggesting that almost half of the spaces studied have significant problems in terms of pedestrian mobility. This could indicate the presence of physical barriers such as stairs, uneven surfaces, or the lack of ramps and adequately paved paths that hinder traffic, especially for people with reduced mobility or those who use non-motorized means of transportation such as bicycles. It also reflects a public space design that does not prioritize pedestrian traffic over vehicular traffic, resulting in an environment that is less safe and less attractive for walking.

Pedestrian mobility is moderate (41,4 %), indicating that many spaces allow for acceptable, but not yet optimal, mobility. This may be the result of a design that, although it considers pedestrian mobility, has aspects that can still be improved. For example, there are sidewalks and pedestrian crossings, but they are not well maintained or designed to handle peak pedestrian traffic efficiently.

There is high pedestrian mobility (13 %), indicating that only a minority of public spaces offer optimal conditions for pedestrian mobility. Therefore, there are significant areas for improvement in terms of accessibility and pedestrian-friendly design. Spaces that achieve high pedestrian mobility probably have characteristics such as smooth, well-maintained surfaces, sufficient width on paths and side, good signage and effective safety measures, and possibly also aesthetic elements that make walking a pleasant experience.

This information suggests the need to reevaluate and improve urban infrastructure and design to better facilitate pedestrian mobility in San Miguel. Some interventions could include: removing physical barriers and improving pavement and sidewalk maintenance. Likewise, the implementation of urban planning policies that prioritize pedestrians over vehicular traffic, especially in areas with high public use, ensuring that pedestrian routes are well signposted and safe, incorporating more lighting and traffic calming measures.

From an architectural perspective, these interventions would not only improve pedestrian mobility but could also positively influence citizens' quality of life by promoting a more active and sustainable lifestyle.

Inferential results

Table 4. Inferential results for general hypothesis

			Pedestrian mobility
Spearman's rho	Quality of Urban Public Space	Correlation coefficient	0,728**
		Sig. (bilateral)	0,000
		N	162
**. The correlation is significant at the 0,01 level (bilateral).			

In the context of this study, table 4 shows the statistical values reported through a Rho coefficient of 0,728 and a P value of 0,000, indicating a strong positive correlation between the quality of public urban space and pedestrian mobility, suggesting that as the quality of public urban space improves, pedestrian mobility also tends to improve. For its part, the p-value indicates that the observed correlation is statistically significant at the confidence level, so the researcher's hypothesis is accepted.

Table 5. Inferential results for specific hypotheses

Table 6: Inferential Results for Specific Hypotheses							
			Symbolic	Symbiosis	Exchange	Civic	Pedestrian mobility
Spearman's rho	Symbolic	CC	1,000				
		Sig. (bi)	0,000				
		N	162				
	Symbiotic	CC	0,555**	1,000			
		Next (bi)	0,000	0,000			
		N	162	162			
	Exchange	CC	0,253**	0,365**	1,000		
		Sig. (bi)	0,001	0	0,000		
		N	162	162	162		
	Civics	CC	0,648**	0,436**	0,298**	1,000	
		Next (bi)	0,000	0,000	0,00	0,000	
		N	162	162	162	162	
	Pedestrian Mobility	CC	0,574**	0,734**	0,388**	0,510**	1,000
		Next (bi)	0,000	0	0	0	0
		N	162	162	162	162	162
Note: CC=Correlation coefficient; Sig.=Significance; (bi)=Bilateral**. The correlation is significant at the 0,01 level (bilateral).							

The results presented in table 5 indicate the strength and direction of the relationship between the variables analyzed, and the p-values show the statistical significance of these relationships. In this case, all p-values are 0,000, indicating that the relationships are highly statistically significant.

Regarding the quality of symbolic urban space and its relationship with pedestrian mobility, the statistical value $Rho=0,574$ indicates that there is a moderate and positive correlation between the quality of symbolic urban space and pedestrian mobility. This suggests that improvements in the symbolic quality of spaces, which may include aspects such as monuments, public art, and elements that reflect local cultural identity, are associated with an increase in pedestrian mobility. Pedestrians tend to be attracted to and move more through spaces that have cultural or historical significance.

With regard to the quality of symbiotic urban space and its relationship with pedestrian mobility, the statistical value $Rho=0,734$ indicates that this correlation is strong and positive, meaning that the symbiotic quality of urban spaces, which implies a harmonious relationship between different uses of space, such as green areas integrated with rest or commercial areas, has a significant impact on pedestrian mobility. Spaces that effectively integrate multiple functions tend to encourage greater pedestrian activity.

Regarding the quality of urban exchange space and its relationship with pedestrian mobility, the correlation coefficient $Rho=0,388$ indicates that the correlation is positive but weaker compared to the others. This could be interpreted as meaning that, although there is a positive relationship between places designed for social

interaction, such as squares and outdoor cafés, and pedestrian mobility, other factors could be having a stronger influence on how pedestrians move in these spaces.

In terms of the quality of urban space for civic engagement and its relationship with pedestrian mobility, the statistic $Rho=0,510$ indicates a moderate correlation, suggesting that spaces that encourage civic engagement, such as those that facilitate civic interaction and respectful behavior, also attract pedestrians. These could include areas designed for public events, demonstrations, or community activities.

As a result, it is important to design, through professional architectural work, urban spaces that not only fulfill aesthetic or recreational functions, but also encourage social, cultural, and civic interaction, thus contributing to greater pedestrian mobility.

DISCUSSION

The results of this study suggest that planned architectural interventions aimed at improving the quality of public spaces could have a direct and positive impact on pedestrian mobility within these spaces. In line with Zou et al.⁽⁴⁾, improving the physical infrastructure of parks and squares, such as paving, adequate lighting, and the removal of physical barriers, can facilitate easier and safer access, encouraging more frequent use by a wider range of people.

The results are consistent with Luo et al.⁽⁵⁾, who point out that adopting and observing architectural urban design principles that improve the aesthetics of space and promote accessibility and safety for all users, including children, the elderly, and people with disabilities, could create spaces that encourage diverse activities, from quiet areas for rest to active areas for exercise and play, increasing the usefulness and attractiveness of public spaces, thereby indirectly improving pedestrian mobility by attracting more visitors and encouraging movement within these spaces. The results agree with Anastasiadou et al.⁽⁷⁾ in that effectively integrating these public spaces into the broader urban fabric ensures that they are easily accessible on foot from different parts of the community, strengthening the city's pedestrian mobility network.

These findings are consistent with Bajada et al.⁽²⁵⁾; Dawson et al.⁽¹⁰⁾; Alvarado et al.⁽¹¹⁾ and have important implications for the design and management of public spaces in the region, since improving the quality of parks and squares, addressing both aesthetic and functional and symbolic aspects, architecturally designed, could become an effective strategy to encourage greater pedestrian use of these spaces, thus promoting greater physical activity and social cohesion among residents.⁽²⁶⁾

The correlation found highlights the importance of designing and maintaining public spaces that not only fulfill recreational functions but also promote civic-mindedness. This approach can encourage greater use of these spaces, which in turn can contribute to social cohesion and community well-being. In line with Krebs et al.⁽¹²⁾, urban architectural design policies are needed that integrate components that promote active civic engagement, such as informative and educational designs and the programming of community activities that foster a sense of belonging and civic responsibility among users. Similar to Pratt et al.⁽¹³⁾, who emphasize the importance of well-designed public spaces for civic engagement in promoting greater pedestrian mobility, they suggest that urban planning should consider these aspects to improve urban life in communities such as San Miguel.

CONCLUSIONS

In relation to the general objective, and based on the results of this study, a strong, positive, and statistically significant correlation was found between the quality of public urban space and pedestrian mobility in the context of parks and squares in San Miguel during 2024. As a result, an increase in quality will be reflected in high pedestrian mobility. This study highlights the importance of architectural planning for the improvement and maintenance of the quality of public urban spaces as a strategy to promote greater pedestrian mobility. Such mobility is crucial not only for urban sustainability but also for public health and social well-being.

Based on the specific objective of determining how the quality of symbolic public urban space relates to pedestrian mobility, a moderate positive correlation between the two variables is concluded. This coefficient suggests that as the quality of symbolic urban spaces improves, pedestrian mobility also increases. In conclusion, efforts to improve the quality of symbolic urban spaces can play a crucial role in improving pedestrian mobility and, therefore, the quality of urban life in San Miguel.

In relation to the objective of determining how the quality of symbiotic public urban space relates to pedestrian mobility, the results of this study allow us to conclude that there is a high positive relationship between the variables, suggesting that as the quality of symbiotic public urban space increases, pedestrian mobility will also improve. The strong correlation observed highlights the importance of professionally designing and maintaining high-quality parks and squares to encourage greater pedestrian activity. This not only improves the quality of urban life but also contributes to the health and well-being of citizens.

With regard to the objective of determining how the quality of public urban exchange space relates to pedestrian mobility, the results indicate a moderate correlation, highlighting the importance of improving the

quality of urban exchange spaces to promote pedestrian mobility. Architectural improvements in the design, maintenance, and accessibility of these spaces can positively influence their use by pedestrians. Therefore, strategies that address multiple aspects of urban space, including safety, aesthetics, and functionality, need to be implemented to maximize their effect on pedestrian mobility.

In relation to the objective of determining how the quality of public urban space for civic behavior relates to pedestrian mobility, the results of this study conclude that there is a positive and moderately strong correlation between the quality of public urban space oriented toward civic behavior and pedestrian mobility in the parks and squares of San Miguel. This suggests that an improvement in the quality of these spaces, understood as the incorporation of elements that promote civic behavior, such as adequate signage, rest areas, and educational elements, is associated with an increase in pedestrian mobility.

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