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Evaluation of Urban Furniture Elements in Historic Mardin 1st Street in Terms of Urban Identity

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To ensure sustainability and preserve the vitality of historical cities and environments, it is critically important that urban furniture elements align with the urban identity. Urban furniture that supports cultural continuity and enhances visual diversity contributes to fulfilling human needs, fostering interactions among individuals, strengthening relationships with the environment, and ultimately improving the quality of urban life. This study categorizes and evaluates the urban furniture elements located on Historical Mardin 1st Street in terms of their ergonomic, aesthetic, and functional qualities to assess their impact on urban identity. The research methodology employed includes a literature review, field analysis, data collection, data analysis, and synthesis. The findings reveal that the existing urban furniture on 1st Street lacks sufficient harmony with the historical texture of the area regarding ergonomics, aesthetics, and functionality. Based on these results, proposals have been developed to enhance the aesthetic and functional qualities of urban furniture elements, considering the local culture and historical context of Mardin. This study is expected to contribute to strengthening Mardin's unique urban identity, ensuring the sustainability of its historical and cultural values, and enriching social interaction and community life.

KEYWORDS
urban, urban identity, urban furniture elements, 1st Street, Mardin

Tarihi Mardin 1. Caddesi'nde Kentsel Donatı Elemanlarının Kent Kimliği Açısından Değerlendirilmesi

Tarihi kent ve çevrelerin sürdürülebilirliğini sağlamak ve canlılığını korumak için kentsel donatı elemanlarının, kent kimliğine uyum sağlaması kritik bir öneme sahiptir. Kültürel sürekliliği destekleyen ve görsel çeşitliliği artıran kentsel donatı elemanları, insan ihtiyaçlarını karşılamak, bireyler arasındaki etkileşimi ve çevreyle olan ilişkileri desteklemek ve nihayetinde kentsel yaşam kalitesini iyileştirmeye katkıda bulunmaktadır. Bu çalışmada, Tarihi Mardin 1. Caddesi üzerinde yer alan kentsel donatı elemanları gruplandırılarak; ergonomik, estetik ve işlevsellik özellikleri kent kimliği açısından değerlendirilmesi amaçlanmıştır. Çalışmada literatür taraması, alan analizi ve veri toplama, veri analizi ve senteze dayalı peyzaj araştırma yöntemi kullanılmıştır. Bu bağlamda elde edilen bulgular, 1. Cadde'de kullanılan mevcut kentsel donatı elemanlarının ergonomik, estetik ve işlevsellik açısından bölgenin tarihi dokusuyla yeterli uyum sağlamadığını göstermiştir. Elde edilen sonuçlar doğrultusunda, Mardin'in yerel kültürü ve tarihsel bağlamı dikkate alınarak, kentsel donatı elemanlarının daha estetik ve işlevsel hale gelmesine ilişkin öneriler geliştirilmiştir. Bu çalışmanın, Mardin'in özgün kentsel kimliğini güçlendiren, tarihsel ve kültürel değerlerin sürdürülebilirliğini sağlayan aynı zamanda sosyal etkileşimi ve toplumsal yaşamı zenginleştiren bir katkı sunması beklenmektedir.

ANAHTAR KELİMELER
kent, kentsel kimlik, kentsel donatı elemanları, 1. Cadde, Mardin

1. INTRODUCTION

Since their first day of existence, cities have been shaped as dynamic spaces that have undergone constant transformation under the influence of social structure, economic conditions, and cultural traditions (Bolkaner et al., 2019). This transformation goes beyond the physical existence of cities and contributes to shaping social memories and individuals' perceptions of the city. While the structured and unstructured areas that make up the fabric of cities constitute the "urban space", these spaces have become complex structures where cultural, social, and environmental sustainability are carried out together, beyond being physical spaces that only meet people's sheltering needs (Bolkaner et al., 2019; Faragallah, 2018; Salama & Azzali, 2015).

Historic urban environments, as cultural heritage sites, play a critical role in shaping urban identity and supporting socio-cultural sustainability (Ahunbay, 2009; Cengiz, 2012). Identity can be defined as the identification of an object and its distinction from other objects (Lynch, 1960); urban identity can be defined as a manifestation of physical and cultural elements extending from the past to the future. As part of the environment to which they know they belong, residents need to reflect their attitudes to their lives with a sense of responsibility towards that environment at an individual and collective level (Bolkaner et al., 2019). In this context, urban sustainability policies and urban identity strategies are further strengthened by the preservation of historic urban fabrics and the development of public spaces within these fabrics.

Streets, as the basic elements of the urban environment, are public spaces where the movement that shapes the dynamics of urban life takes place consciously (Badawi & Farag, 2023; Balasubramanian et al., 2022; Wan, 2008). Urban furniture elements are defined as elements that reflect the urban identity, provide aesthetics and comfort, and increase the quality of life by supporting social interaction (Bolkaner et al., 2019). The geographical environment and climate are important factors that shape the identity of a place, its urban landscape and urban furniture elements (Kong, 2001; Krauel, 2007; Wan, 2008). Therefore, the selection and design of urban furniture elements should be part of a process that aims to preserve and enhance the values of historical areas (Bolkaner et al., 2019).

Urban furniture elements support the social integration of residents, strengthen community awareness and provide socialization opportunities for individuals (Grabiec et al., 2022). In the design of urban furniture elements, aesthetics and functionality are combined by focusing on the emotional and physical needs of users, thus creating positive experiences in urban areas (Wan, 2008). In addition, integration of social, economic, cultural and architectural elements is of great importance for the sustainability of historical environments and the preservation of local identity (Cengiz et al., 2018; Badawi & Farag, 2023). These elements, which increase visual aesthetics and functionality, while ensuring the safety of users, also carry the quality of urban life to an advanced level (Grabiec et al., 2022).

The problem of the research is to examine the critical role played by urban furniture elements in the formation of Mardin urban identity. In the study, it was aimed to evaluate the ergonomic, aesthetic, and functional characteristics of the urban furniture elements located on The Historical Mardin 1st Street in terms of urban identity by grouping them. Based on the recommendations developed as a result of the study, a balanced approach between preservation and use has been adopted, aiming to ensure spatial integrity, safeguard urban identity, and respond to contemporary user needs. In this way, the strong character of the city is intended to be supported, considering Mardin's local culture and historical context. As a result of the study, important findings were obtained regarding the impact of urban furniture elements on the quality of life of the city and the strengthening of urban identity. In addition, since there is no previous study on the evaluation of urban furniture elements in

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Mardin province in terms of urban identity, this research has the potential to make a unique contribution by filling an important gap in the academic field. It is one of the first studies to address the urban identity-facilities relationship with a holistic approach, using the example of the historical Mardin 1st Street.

2. MATERIAL AND METHOD

2.1. Study Area

Mardin province is located between the Tigris and Euphrates Basins, known as “El-Cezire” in history, and is in the Southeastern Anatolia Region of our country. Geographically located between 36°55’-37°45’ north latitude and 39°53’-41°54’ east longitude, Mardin has an altitude of approximately 1,083 m above sea level (Tekdamar & Tekdamar, 2024). The province has a surface area of approximately 8,784 km². It borders Syria to the south, Şanlıurfa to the west, Diyarbakır and Batman to the north, Şırnak to the east and Siirt provinces to the northeast. Mardin province, which became a metropolitan municipality with the law numbered 6447 in 2013, has a total of ten districts: Artuklu, Kızıltepe, Midyat, Nusaybin, Dargeçit, Derik, Mazıdağı, Ömerli, Yeşilli and Savur (Davutoğlu, 2019; Tekdamar & Tekdamar, 2024). According to TÜİK Address Based Population Registration System data, Mardin province reached 862,757 people in 2021, 870,374 in 2022 and 888,874 in 2023.

Mardin climate has characteristics like the Mediterranean climate, with hot and dry summers and mild and rainy winters. Mardin experiences cold weather conditions during the winter months due to the influence of high-pressure areas. Summers are quite hot in the plain region of the province because of the desert climate (Basra Low Pressure) in the south and the high mountains in the north preventing cool air masses from entering the region. Compared to its districts and surrounding provinces, Mardin is characterized by higher wind speed and rainfall, but lower humidity and temperature. According to 2023 data from the General Directorate of Meteorology, the annual average temperature in Mardin is 16.2 °C, the annual average sunshine duration is 8.1 hours, and the annual total precipitation is 673.5 mm. The hottest months of the year are July and August, with average temperatures reaching 35°C, while the coldest months are January and February, with average temperatures around 2°C (Davutoğlu, 2019; Tekdamar & Tekdamar, 2024).

The main material of the research consists of urban furniture elements on the 1st Street in the historical city area of Artuklu district of Mardin province. The 1st Street, which is the main axis of historical Mardin, is located within the region that was included in the UNESCO World Heritage Temporary List under the name of “Mardin Cultural Landscape Area” in 2000 and registered as an Urban Protected Area. In the research, the Mor Efrem Church, located within the boundaries of the Urban Protected Area, was determined as the starting point of the street and the area called Meydanbaşı was determined as the ending point. It is located on 37.313000° latitude and 40.735000° longitude (Figure 1). The 1st Street selected as the study area is surrounded by Diyarbakır Kapı Neighborhood to the west, Çabuk, Şar, Medrese and Gül Neighborhoods to the north, Latifiye, Ulucami, Teker and Şehidiye Neighborhoods to the south and Savurkapı Neighborhood to the east. The length of the street is approximately 2250 m, and its width varies between 8 m and 15 m.

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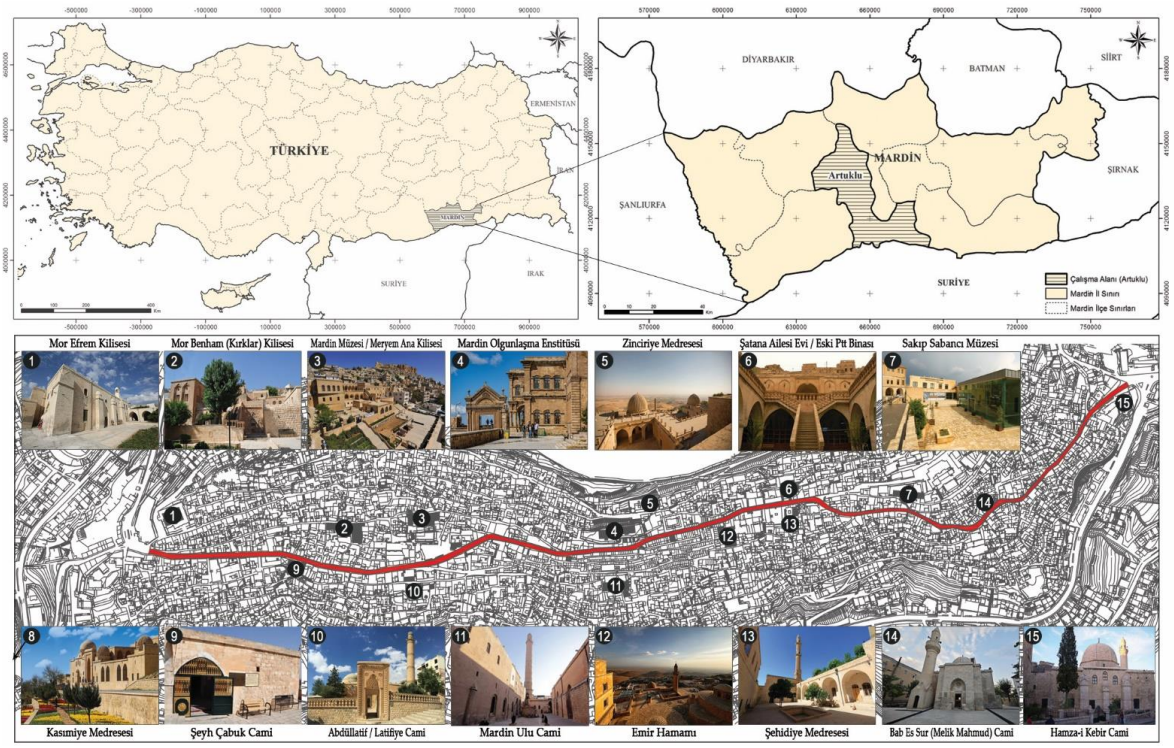


Figure 1. *Location map of the study area and important cultural values*

One of Turkey's leading cultural and religious tourism centers, 1st Street is an important area where traditional craftsmen are heavily involved and provides access to cultural values. Many important historical and cultural buildings such as Mardin Castle, Mardin Museum, Mardin Ulu Mosque, Latifiye Mosque, Zinciriye Madrasa, Kasımiye Madrasa, Kırklar Church, Mor Efrem Church and Mardin Protestant Church are located on this axis. These features provide the city with a lively trade and tourism volume. Approximately 1500 workplaces located on the street and in the side streets nearby make the area an area with high touristic appeal (Karataş et al., 2022). In addition, the region hosted approximately 2 million local and foreign tourists in 2023 (Mardin İl Kültür ve Turizm Müdürlüğü, 2024).

The reason why 1st Street was chosen as the study area is that the region attracts great interest from local and foreign tourists due to its historical and cultural richness. Since the street reflects its historical and cultural structure, it is expected to contain the furniture elements that determine the urban identity. In this context, urban furniture elements located on the 1st Street were grouped and their ergonomic, aesthetic and functionality features were analyzed and evaluated in terms of urban identity.

2.2. History

With its rich history and cultural fabric, Mardin has hosted many civilizations from ancient times to the present day. Although it is not known exactly when and by whom the city of Mardin was founded, it carries many structures of the Subari, Hurrian, Sumerian, Akkadian, Mitani, Hittite, Assyrian, Scythian, Babylonian, Persian, Macedonian, Abgar, Roman, Byzantine, Sassanid, Arab, Hamdani, Marwani, Seljuk, Artuklu, Karakoyunlu, Akkoyunlu, Safavid, Ottoman Empire and Republic of Turkey periods in its DNA during excavations in the region. For this reason, Mardin is considered an important open-air museum (Noyan, 2008). Additionally, the city has been an important cultural and commercial center throughout history due to its strategic location.

Old Mardin is the residential area of Mardin city that developed throughout the historical process. It attracts attention with its unique limestone houses and neighborhoods where abbaras connect and

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dead-end streets take on the appearance of squares, its narrow streets and, in short, its unique architecture. Old Mardin was able to preserve its originality because it encountered fewer spatial and structural interventions during the Ottoman and Republican periods. The interventions made on 1st Street, which has a traditional street texture with missionary schools, hospitals and churches built in the second half of the 19th century, are seen as serious touches to traditional architecture (Alioğlu, 2003).

The Historical 1st Street, which has always maintained its central location in Mardin, constitutes the heart of Old Mardin and is one of the oldest residential areas of the city. In 1914-1915, to facilitate transportation for railway construction work, the Germans, the Ottoman Empire's ally in World War I, started to widen 1st Street, and the widening of the street continued in 1923 and 1927 during the Republican period. As a result, today's 1st Street, approximately 2.5 kilometers long and 15 meters wide, was formed (Alioğlu, 2003; Aydın et al., 2000).

Today, the Historical 1. The street creates a dynamic social space for both residents and visitors, as well as being a center of trade and social life. The shops, restaurants and cafes that line up around the street in contrast to the traditional structure transform the Historical 1st Street into a main axis carrying the city from one end to the other. Reflecting the rich cultural heritage of Mardin, the historical buildings decorated with stonework along the street stand out with their unique architecture.

2.3. Method

The relationship between urban facilities and urban identity is generally discussed in the national literature in terms of originality, integrity, aesthetic values (Bayazıt, 2018; Kısakürek & Bayazıt, 2018) and harmony with the cultural fabric (Cengiz, 2011; Tel, 2021). Additionally, there are studies that evaluate furniture elements based on functionality, ergonomics, aesthetics, durability, and maintenance criteria (Türker & Sakınmaz, 2021). In international literature, the ability of furniture to respond to user needs, harmony with the urban, and ergonomic design dimensions are emphasized (Zhang, 2023; Pereira et al., 2024). Within this framework, the evaluation criteria for the development of urban furniture elements in harmony with the urban identity were examined under three basic dimensions: ergonomics, aesthetics and functionality.

The study was conducted using field observations, photographic documentation, and literature comparisons, with findings evaluated under the categories of ergonomics, aesthetics, and functionality. Accordingly, a four-stage landscape research method was applied, comprising a literature review, field analysis, data collection, data analysis, and synthesis (Bayramoğlu & Özdemir, 2012; Bingöl, 2017; Bulut et al., 2008; Grabiec et al., 2022; Kuter & Kaya, 2019; Özgeriş, 2018; Sağlık et al., 2021; Yuca, 2022). In the first stage, a comprehensive literature review was conducted on the subject, methodology, and field. A detailed data scan was performed on urban furniture elements that contribute to the formation of urban identity. In the second stage, a field trip was made to Mardin Historical 1st Street, where urban furniture elements were identified and photographed. A total of 921 photographs were taken during field trips conducted at three different times. The urban furniture elements selected from these photos were classified according to their functions and types of use, based on previous research on the subject. To analyze their effects on urban identity, the materials used in constructing the urban furniture elements were examined, and their positive and negative aspects were determined on site. As a result of the field analysis and data collection carried out in the third stage, the urban furniture elements used on 1st Street were analyzed in terms of their materials, location in the city, and purpose of use. Their ergonomic, aesthetic (color, texture, harmony), and functional (accessibility, durability) features were evaluated for their harmony with urban identity. In the fourth stage, recommendations were made on how the urban furniture elements in the research area could be improved in terms of ergonomics, aesthetics, and functionality to better

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align with urban identity. Suggestions were also provided regarding the criteria to consider when selecting furniture elements for these areas.

3. RESULTS

Within the scope of the study, existing urban furniture elements located on the axis of Historical Mardin 1st Street were examined under the headings of floor coverings, facades and walls, seating elements, lighting elements, garbage bins, informative and guiding signs, restraint elements, water elements, shading elements, sales units, plant material, and infrastructure covers/box units. The ergonomic, aesthetic, and functional features of these urban furniture elements were evaluated for their compatibility with urban identity, and recommendations were developed.

3.1. Floor Coverings

Basalt stone was primarily preferred for floor coverings on historical Mardin 1st Street. Basalt cube stones are used on vehicle roads, while cut basalt stones are applied on pedestrian pathways. Additionally, basalt stones of various sizes are utilized in curbs and water gutters (Figure 2). The extensive use of basalt stone harmonizes with the historical texture of the area, contributing to the street's aesthetic cohesion. The similarity in color and texture to the historic houses, especially those constructed from yellow limestone, enhances the visual integrity of the place. Natural stone building materials such as marble, limestone, and granite were favored for the street-facing facades of shops, door thresholds, and structural elements that facilitate circulation, such as stairs. These natural stone materials offer advantages in terms of durability and functionality. While they ease user movement, they also serve as long-lasting structural components. The use of basalt and other natural stones reflects a construction approach that is compatible with Mardin's historical and cultural fabric.

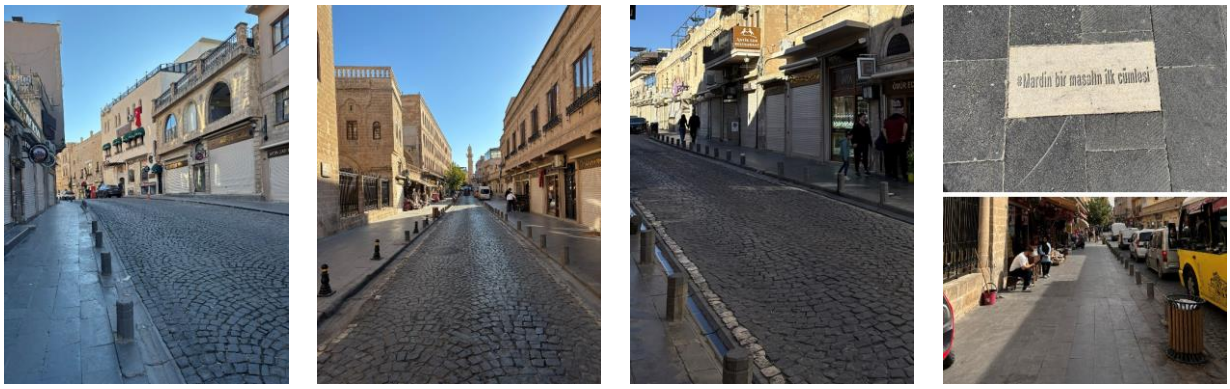


Figure 2. *Floor coverings used in historical Mardin 1st Street*

3.2. Facades and Walls

The facades and walls of the stone buildings that reflect the traditional Mardin architecture, located on both sides of the 1st Street axis, are original, aesthetic and functional building elements that form the identity of the city. These structures were built with local materials and natural stones such as yellow limestone were used (Figure 3). Traditional Mardin architecture displays a structure that is compatible with the historical and cultural urban identity. However, problems such as neglect, surface occupation by modern elements and damage to building materials are observed in some buildings on the street. These problems bear the traces of interventions and vandalism that are incompatible with the historical environment. In addition, elements such as air conditioners and signs carelessly placed on the facades create an image that contradicts the historical urban identity. In order to ensure an arrangement suitable for urban identity, the use of uniform signs compatible with the historical texture should be encouraged. To ensure an arrangement suitable for the urban identity, the use of uniform signs compatible with the historical texture should be encouraged. It is

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important that air conditioning outdoor units are located away from facades, away from alternative areas or integrated into a common air conditioning system. Such arrangements will contribute to the sustainability of historical and cultural values by preserving Mardin's unique urban identity.



Figure 3. *Examples of facades and walls on the 1st Street axis*

3.3. Seating Elements

The seating elements using stone, wood and metal materials on the street are incompatible and improperly designed in terms of stylistic unity, aesthetics and functionality (Figure 4). The existing seating elements are insufficient in number and are far from meeting the need for rest against the increasing visitor density, especially in spring and summer. In addition, there are no seating elements or measures to mitigate the effect of the sun, and this makes the use of the street difficult for those who need to rest. The materials used in seating elements must be aesthetic and durable, reflecting the historical and cultural identity of the region, suitable for the color tones and texture of local natural stones. In this way, harmony with the historical environment will be achieved and an environmental arrangement that strengthens Mardin's unique urban identity will be carried out. This type of design will increase the use of the street and improve the quality of urban life, meeting the recreational needs of local people and visitors.



Figure 4. *Seating elements on the street*

3.4. Lighting Elements

The lighting elements on the 1st Street are designed using metal materials (Figure 5). These lighting elements are positioned either suspended from the building facade walls or attached from above. Additionally, lighting poles are also available in a single-luminaire design. While these elements show a design that is compatible with the historical architecture, they also present a mixed image with modern lighting elements that are also found in Yenişehir. This situation creates a visual inconsistency resulting from the contrasting coexistence of historical texture and modern elements. The coexistence of lighting elements in different and modern styles creates incompatibility and

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perceptual confusion with this historical area that bears the traces of the past. This situation weakens Mardin's unique urban identity. Therefore, the use of uniform lighting elements compatible with traditional architecture will be an approach that will strengthen the historical and cultural urban identity. To protect and emphasize the historical texture, it is important to consider the lighting system in a more holistic manner and adopt a design approach compatible with local and traditional elements.



Figure 5. *Lighting elements on the 1st Street*

3.5. Garbage Bins

It is seen that the existing garbage bins on 1st Street are designed from wood-coated metal material (Figure 6). However, it is possible to come across garbage bins of the same material and design in the new residential areas of Mardin. This shows that a unique design for the historical street was not considered in terms of garbage bins. The garbage containers are made of green plastic material and look incompatible with the surrounding stone structures. The use of plastic materials cannot be integrated with the historical texture and does not reflect the cultural urban identity. This situation poses a problem in terms of aesthetics and durability. Garbage bins made of different materials create perceptual confusion. In this context, surrounding garbage bins with stone or wood-like coverings can contribute to harmony with the existing historical texture. It is important for the garbage bins to have Mardin's stone color or natural tones that will provide an antique look in terms of preserving their urban identity. Alternatively, developing specially designed garbage bins suitable for historical texture will provide an aesthetic and harmonious solution in these areas. Keeping containers in special storage areas or out of sight locations can also help preserve environmental aesthetics.



Figure 6. *Garbage bins on 1st Street*

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3.6. Informative and Guiding Signs

It has been observed that the informative and guiding signs on the historical Mardin 1st Street consist of different materials such as metal, wood and plastic (Figure 7). Although these signs are positioned in well-visible locations, they contain elements that need to be improved in terms of ergonomics and aesthetics. There are also inconsistencies between the colors and sizes of the sheets used. This situation cannot emphasize spatial belonging sufficiently and the lack of a common language in design also creates a negative effect in terms of aesthetics. Including foreign languages on the signs, especially for tourists, is an element that will increase accessibility. Additionally, adding braille for the visually impaired will increase functionality. At the same time, from a practical and functional perspective, the color selection of the signs should be determined in accordance with the historical texture and designed to create an aesthetic integrity with the environment, to enable users to quickly access the correct information. Designs that reference traditional Mardin architecture will offer visitors a richer experience in historical and cultural context.



Figure 7. *Informative and guiding signs on Historical Mardin 1st Street*

3.7. Restraint Elements

Limiting furniture on the street includes stone and metal bollards, plastic barriers and turnstiles used for the parking lot access system (Figure 8). Stone bollards are designed to be compatible with the stone building architecture of the region in which they are located. However, the presence of different color options in some regions and the excessive deformation and damage that occurred in the reinforcement damage the aesthetic integrity and do not ensure unity of style. Redesigning these limiting elements with the use of homogeneous materials and colors that reflect the historical and cultural texture of the city will strengthen the aesthetic and cultural identity of Mardin.



Figure 8. *Restraint elements on the street*

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3.8. Water Elements

There are 4 fountains as water elements on the main axis of 1st Street. One of these fountains is made of metal material and the other two are made of traditional stone material (Figure 9). These fountains provide a functional service to meet the water needs of visitors and surrounding citizens. While fountains made of stone play a complementary role to the traditional architectural texture, they also add aesthetic beauty to the area they are located in and are important as elements that reflect the historical and cultural identity of Mardin. However, these aesthetic values are weakened due to lack of adequate care. Although the metal fountain creates a different aesthetic in the area by offering a more modern appearance, it does not integrate with the spirit of traditional architecture. In addition, the lack of informative signs for the fountains and the lack of sufficient lighting elements around them reduce the visibility and functionality of these elements. Therefore, maintaining the fountains and adding informative signs and lighting elements will be important steps in preserving the historical and cultural texture of Mardin. These regulations will strengthen the aesthetic value of Mardin.



Figure 9. *Water elements on the main axis of 1st Street*

3.9. Shading Elements

The shading furniture elements on the street support the urban identity in some places with their color tones and materials used in harmony with the traditional Mardin architecture (Figure 10). These furniture contribute to the environment as an aesthetic element, but they prevent the formation of a holistic perception due to the lack of unity of style and form and the use of different solution styles. This situation also highlights the incompatibility between the reinforcements. Choosing uniform shade and protection elements suitable for the cultural and historical texture of Mardin will prevent perceptual confusion and create a more holistic aesthetic image along the street.

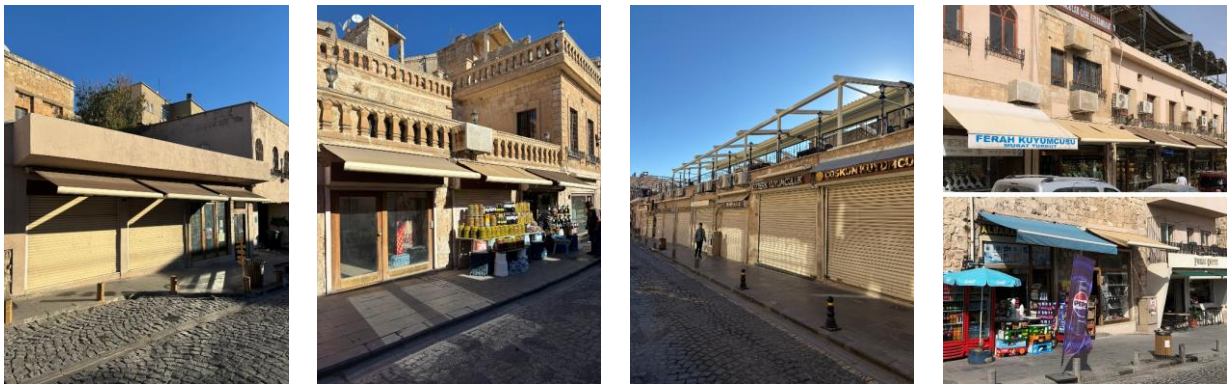


Figure 10. *Shading elements on the street*

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3.10. Sales Units

Kiosks and sales units on 1st Street are positioned for the purpose of offering products and services (Figure 11). Although these independent units are functional in terms of providing quick and easy access, they do not comply with the surrounding historical texture in terms of the modern materials and design features used, and this negatively affects the urban identity. Such furniture should be designed with more suitable materials to contribute to the aesthetics and architectural texture of the historical area. Producing them using stone, wood or other local materials in accordance with the traditional texture and colors integrated with historical buildings will contribute to emphasizing the urban identity of the street. The harmony of these units with the cultural and historical texture of the city, both aesthetically and functionally, will create holistic visual language and support the perceptual integrity on the street.



Figure 11. *Sales units on 1st Street*

3.11. Plant Material

The plant material is quite limited. While the wooden plant crates located along the street create integrity with the historical texture, aesthetic harmony and unity of style could not be achieved due to the use of different models and sizes (Figure 12). In addition, the limited space available for plant boxes due to heavy pedestrian and vehicle traffic and the irregular positioning of existing trees limit the aesthetic perception of the area and make it difficult to establish the integrity of the historical texture. The use of tiered and monochromatic colored plants on the street and the choice of plants suitable for natural vegetation will increase the liveliness of the area and provide visual integrity in terms of ergonomics and aesthetics. This approach will support environmental sustainability, provide a solution that does not hinder pedestrian movement in the environment, and will also contribute to the creation of a layout compatible with the historical texture. In addition, choosing under-tree grills made of traditional stone material with uniform plant boxes and motifs symbolizing old Mardin, which support the urban identity and are compatible with the historical texture, will contribute more to the urban identity by increasing the sense of spatial belonging on the street.



Figure 12. *Plant material on the axis of historical Mardin 1st Street*

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3.12. Infrastructure Covers/Box Units

Infrastructure covers with different materials and designs such as stone, casting and composite, located on the street axis, are positioned irregularly due to the influence of the topographic structure of the area (Figure 13). These urban furniture elements are far from reflecting the original design language of the street, and are used with different geometric forms and materials, as in the new residential area of Mardin. Electrical boxes are generally made of metal and pose ergonomic and aesthetic problems due to their various sizes and sometimes neglected conditions. These urban furniture elements, far from contributing to the aesthetic integrity of the historical street, do not support the unique identity of the street because they do not have a uniform material and design concept. Spatial belonging can be increased by using existing stone material infrastructure covers designed with motifs specific to Old Mardin. In the same way, electrical boxes can be integrated with the urban identity by covering them with materials and colors appropriate to the historical texture of the city. Creating a design integrity in such urban furniture elements will provide an aesthetic appearance and contribute to social memory.



Figure 13. *Infrastructure cover and box units located on the street axis*

The Evaluation of urban furniture elements on Mardin 1st Street in terms of compatibility with the urban identity within the dimensions of ergonomics, aesthetics, and functionality is presented in Table 1.

Table 1. *Evaluation of the compatibility of urban furniture elements on Mardin 1st Street with the urban identity in terms of ergonomics, aesthetics, and functionality*

Furniture Elements	Material	Location Within the Field	Purpose of Use	Compatibility with Urban Identity		
				Ergonomics	Aesthetics	Functionality
Floor Coverings	Stone (basalt, granite), Restricted concrete	Pedestrian axis and roadway	Guiding vehicle and pedestrian traffic	**Moderate** Partial surface irregularities, Limited accessibility	**High** Compatible texture and color, Integration with facades	**Moderate** Accessible, Durable and easy to maintain
Facades And Walls	Stone (Yellow Limestone)	Street frontage and parcel boundary	Demarcation, protection, privacy, aesthetics	**Moderate** Natural climatic compatibility; Maintenance challenges	**Moderate** Compatible with historic fabric; Negative impact of modern additions, Low integrity	**High** High durability and significant contribution to identity
Seating Elements	Stone, wood, metal	Pedestrian-oriented areas	Resting, seating, socializing	**Low** Insufficient in number, Inappropriate dimensions and materials	**Low** Lack of stylistic unity, Incompatible with historic fabric	**Low** Inaccessible, Neglected, Undurable
Lighting Elements	Metal	Pedestrian paths and facade connections	Lighting, guidance, security	**Low** Suitable and adequate for use; Low integrity, Occasional non-standard heights and dimensions	**Moderate** Partially compatible with historic fabric; Incompatible with modern additions	**Moderate** Moderate functionality, Durable; Low contribution to identity

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Furniture Elements	Material	Location Within the Field	Purpose of Use	Compatibility with Urban Identity		
				Ergonomics	Aesthetics	Functionality
Garbage Bins	Wood-covered metal, plastic	Along the street axis	Waste collection, environmental cleanliness	**Moderate** Compliant with ergonomic standards; Incorrect positioning, Insufficient capacity	**Low** Lack of maintenance and organization, Low compatibility and visual integrity	**Moderate** Accessible; Low durability
Informative And Guiding Signs	Metal, wood, plastic	Along the street axis and street connections	Directional guidance, information dissemination	**Moderate** Position is visible; Size and readability are insufficient	**Low** Color, form, and material are incompatible with the historic fabric; Visual integrity is low	**Moderate** Functional, Multilingualism is positive; Moderate durability, Accessibility is lacking
Restraint Elements	Stone, metal, plastic	Pedestrian and vehicle access points, parcel boundaries	Boundary setting, directional guidance, security	**Moderate** The usage is complex; Different dimensions and standards	**Low** Partially compatible with the historical texture; Use of different colors and materials, Deformation	**High** Functional, High durability
Water Elements	Stone, metal	Located at focal points along the street axis	Water supply, cooling	**Low** Ergonomic standards are low, User and maintenance comfort is low	**Moderate** Stone fountains are compatible with the identity; Metal additions disrupt the aesthetic integrity	**Moderate** Accessible and durable; Lack of visibility and lighting
Shading Elements	Wood, metal, fabric	Pedestrian axis, storefronts, and seating areas	Shading, protection	**Moderate** Occasional non-standard heights and dimensions, and safety risks	**High** Compatible colors and materials, High coherence with the historical texture	**Moderate** Functional; Low durability and continuity
Sales Units	Metal, modern cladding materials	Pedestrian-dense focal points	Product and service delivery	**Moderate** Easy access; User comfort is limited	**Low** Modern design and materials are incompatible with the historical texture, Aesthetic integrity and contribution to identity are low	**Moderate** Functional; Low durability, Low integrity, Lack of maintenance and organization
Plant Material	Wooden crates	Edges of pedestrian pathways	Shading, aesthetic contribution	**Low** Obstructs pedestrian flow, Incompatible with the scale of the historical street, Insufficient and improper planting	**Low** No integrity, Low compatibility, Lack of maintenance, Limited visual impact	**Low** Limited use, No continuity, Low durability and maintenance
Infrastructure Covers/Box Units	Stone, metal, composite	On pedestrian and vehicle axes	Infrastructure access, technical equipment	**Low** Irregular positioning, Elevation and level differences, Low safety	**Low** Use of different colors, forms, and materials, Low compatibility and integrity, Neglected and deformed surfaces	**Low** Functional; Irregular layout, Low durability, Insufficient maintenance

4. DISCUSSIONS

In this section, the urban furniture elements in the historical Mardin 1st Street were examined based on ergonomics, aesthetics and functionality dimensions; the findings were evaluated comparatively with the literature.

Ergonomics plays a critical role in ensuring comfort and efficiency in users' interaction with design. In a study conducted by Karataş et al. (2022) in our study area, Mardin 1st Street, it is stated that pedestrianization and rehabilitation practices contribute to the city physically and socio-economically, but there are some limitations in the user experience. These findings are also supported by our observations. Observations in the workplace reveal that seating elements, lighting, and other urban furniture do not fully meet user requirements in terms of ergonomics. It has been determined that the dimensions and material choices, particularly in seating elements, are not suitable for long-term use, and that there are accessibility issues for users with disabilities. Such ergonomic deficiencies have been supported by various studies (Bayazıt, 2018; Türker & Sakınmaz,

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2021) and have been identified as factors negatively affecting user satisfaction in urban identity adaptation processes. Furthermore, research conducted by Gao et al. (2024) emphasizes that dynamic sitting positions provide higher comfort and increase postural stability compared to static positions. These findings reveal the decisive impact of ergonomic design on user comfort.

From an aesthetic perspective, it has been observed that a significant portion of the urban furniture elements on Mardin 1st Street are incompatible with the urban identity. It has been determined that seating, lighting, and other urban furniture elements added at different periods lack uniformity in terms of color, material, and design, resulting in a fragmented appearance within the urban fabric. Similarly, Güner (2015) emphasized in his study on Sultanahmet Square that urban furniture struggles to harmonize with the historical fabric. Cengiz (2011), on the other hand, discussed recommendations regarding the necessity of material and texture harmony for urban furniture in the pedestrian zone of Bartın Hükümet Street, emphasizing the need to achieve visual unity with each other and the historical surroundings. On the other hand, Tel (2021) demonstrated in the case study of Şanlıurfa Divanyolu Street that the use of local materials enhances the aesthetic integrity of designs consistent with identity. In this context, the aesthetic issues observed in the study area, while context-specific, emerge as a common topic discussed in literature across different cities. Furthermore, a study conducted by Zhang (2023) emphasizes that the harmonious integration of aesthetics and functionality enhances the user experience and strengthens the urban image. This reinforces the impact of aesthetically designed elements that align with the urban identity on users, both visually and in terms of usability.

Functionality is another important design factor that ensures the efficient and appropriate use of urban furniture elements. When examining the functionality of urban furniture elements on Mardin 1st Street, it was determined that some furniture elements were inadequate in fulfilling their basic purposes. In particular, the insufficient capacity of garbage bins, the inoperability of lighting elements in some areas, and the poor legibility of guiding signs stand out among the functionality issues. Bekar et al. (2016) emphasize that functional deficiencies directly affect user satisfaction in user-centered urban furniture evaluation. Similarly, Türker and Sakınmaz (2021) also identify functional inadequacies as one of the most critical issues in the case of Uşak. In this context, the findings obtained in the study area align with other urban experiences reported in the literature. These results correspond to the outcomes observed along Mardin 1st Street and further highlight the importance of functionality in urban design. Moreover, Allahdadi (2017) demonstrates that properly designed urban furniture enhances social interaction and strengthens the community's attachment to public spaces, emphasizing the significance of functional design for public life.

4. CONCLUSION

Historic urban areas, which have historical and cultural richness and are nourished by their traditions in a continuous line, create the impression of a strong urban identity with their historical structure and surroundings. The urban identity has the energy to make sense of spatial belonging feel strongly by considering today's vital effects and standards with the accumulation of the past in the direction of past-present-future time without deviating from this continuity line. In this context, urban designs need to be presented with solutions that reflect the existing historical and cultural heritage while also meeting modern living requirements. Especially in areas where historical fabric is preserved, such as Mardin 1st Street, urban furniture elements can strengthen urban aesthetics and local identity by offering environmentally compatible, original and functional designs as elements that reflect the identity of the place. Thus, by increasing the quality of urban life, a richer experience can be offered to visitors. As an important tool in the formation of urban identity, urban furniture elements should be designed to reflect the aesthetic and cultural values of their surroundings. In cities with a rich cultural

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heritage such as Mardin, it is of great importance that the furniture elements provide an aesthetic that complements the historical fabric and integrates with the surrounding architecture.

In this study, based on field observations and a literature review aimed at developing urban furniture elements that harmonize with the urban identity, it was determined that the existing urban furniture on Mardin 1st Street does not adequately align with the historical fabric of the area in terms of ergonomics, aesthetics, and functionality.

From an ergonomic design perspective, it has been determined that user comfort needs to be improved. Issues such as the suitability of seating elements for long-term use and accessibility should be addressed more carefully. Spatial observations reveal that most of these furniture elements do not meet ergonomic requirements and that users encounter various problems in terms of comfort. On the other hand, from an aesthetic perspective, there are designs that are incompatible with the urban identity, which undermines visual integrity. However, it is anticipated that these aesthetic inconsistencies can be resolved through solutions such as the use of local materials. Numerous studies emphasize that the use of local materials contributes to the creation of aesthetic designs that are compatible with the urban identity. In terms of functionality, deficiencies have been observed in urban furniture elements regarding their basic purposes. In particular, the insufficient capacity and technical malfunctions of garbage bins, guiding signs, and lighting elements negatively impact the user experience. This indicates that this is an area that requires more careful consideration to strengthen the impact of functional design on urban life.

Spatial observations and literature comparisons have pointed to certain shortcomings in maintaining the balance between the protection and use of existing furniture elements. However, successful examples have also been identified in terms of spatial integrity and harmony with urban identity. These findings reveal that urban design must consider user-focused, aesthetically harmonious, and functional elements together. Consequently, the urban furniture elements on 1st Street should be redesigned with an approach that respects the historical fabric, meets contemporary user needs, and ensures aesthetic integrity. Furthermore, the results indicate that urban furniture elements should be evaluated not only in physical terms but also within a socio-cultural context.

In this regard, it has been concluded that to protect and strengthen the cultural heritage of Mardin, the urban furniture elements to be used on 1st Street should be redesigned to reflect the urban identity. Producing furniture such as garbage bins, seating elements, and lighting elements in natural tones and with local materials will allow it to blend in with the historical environment and meet the needs of daily life. In addition, considering the furniture elements as a part of a whole and creating aesthetic integrity with the surrounding architectural structures will contribute to the street's functioning as an identified and sustainable urban area.

In the process of protecting and developing urban identity, it is important for policy makers to develop strategies that support this design approach and for designers to create original and functional forms that reflect the urban identity. Finally, raising public awareness in this process and ensuring that they establish a stronger bond with space is necessary for the effective use of urban furniture. Such an approach will not only contribute to the sustainability of Mardin's cultural heritage; it will also serve to create an aesthetic and livable urban environment that encourages social interaction. This study provides an important reference for the design of urban furniture elements in culturally rich areas such as Mardin and develops suggestions for creating an identity urban vision by preserving the historical fabric of the city.

The assessments are based on field observations and literature studies. It provides concrete tips for local governments and decision-makers on reassessing fixtures based on aesthetic, functional, and ergonomic criteria. Future studies based on surveys and expert opinions focused on user

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perceptions and preferences will provide supportive perspectives for the creation and implementation of design guidelines.

Author Declarations and CRediT Roles

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