GEOGRAPHY | RESEARCH ARTICLE

Assessment of Green areas criteria regarding women-friendly city concept: case study of Çiğli

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Abstract: Turkish women use cities as service areas where they practice their social gender roles. Parks are one of these service areas. This study aims to propose ways to analyze and assess green areas as public places regarding the women-friendly city concept as a way of promoting gender equality. The study claims that planning and constructing a green area is insufficient to create a public place, and the existence of a green area does not mean that it can be used. Furthermore, green areas should be approached in a context where their existence is not merely limited to their square meter ratios per person. Thus, green areas should be planned with a women-friendly perspective which meets the needs and demands of all users and with an approach that overcomes the intersectionality-blindness of planning. This study analyzes green areas based on the following three categories: accessibility, safety, and usability. The findings revealed that no parks met these criteria, especially in the densely used areas. Furthermore, problems related to all the three criteria were observed in the central area, and as people moved away from this area, issues related to accessibility and security came to the fore.

Subjects: Women's Studies; Women; Women’s Studies

Keywords: women-friendly city; city planning; green area; gender equality; parks; public places; İzmir

ABOUT THE AUTHOR

In Bornova, a district of the province of İzmir, a Project titled “Women Friendly Urban Planning Approach: The Case of Bornova” was completed and the report was published as a book with the same name, in 2019. This study was tried to be developed with another Project, social responsibility and scientific Project, in Çiğli district. In both Bornova and Çiğli studies, the aim of the Project coordinator is to develop proposals for planning legislation in Turkey. This paper includes the green areas survey, which is a part of Çiğli Project, Women Friendly City Approach in Combating Violence Against Women: The Case of Çiğli, The Çiğli Project consists of five sections: Green areas, accessibility, security, social reinforcement areas and urban deprivation. Project coordinator plans to develop and implement Women Friendly Cities Project, which has been completed in two district of İzmir so far, in cooperation with municipalities.

PUBLIC INTEREST STATEMENT

This paper was written from the studies of both the social responsibility Project and a scientific project “Women Friendly City Approach in Combating Violence Against Women: The Case of Çiğli”. İzmir Chamber of Commerce and Çiğli Municipality signed a protocol for this project. The project aimed to plan Çiğli district with women-friendly city criteria. The project became one of the projects that won the Raci Bademli Good Practices Award (Raci Bademli İyi Uygulamalar Ödülü) one of the important awards of the urban planning profession in Turkey, in 2021. In addition to the success of the award, the project provided the employment of five female city planners as per the protocol. The Project report is in the process of being published as a scientific book with the same name as the Project. All studies aim to create a guide for women friendly cities.
1. Introduction: need for women-friendly city planning

Majority of the world's population lives in urban areas, which are centers of attraction. The city is a social area where natural and artificial (cultural) environments are built together in the physical living space. As the city is a social environment, its inhabitants have different needs due to their diverse features such as gender, age, ethnicity, and sexual preferences. Meeting urban people’s needs depends on the citizenship rights of the countries where they live, and these needs must also be met via urban rights. Urban rights are the rights to freedom, housing rights, rights of individualization, and rights for participation (Lefebvre 1996/1968). In other words, urban rights are the rights to access all services and facilities in the city, and the rights to redesign, rebuild, and govern the city by participating in all decision-making processes (Fenster, 2005; Harvey, 2013).

As in several other disciplines, the science of city planning has focused on examining disadvantaged groups that have been exposed to discrimination or inequality since the 1960s (Castells, 1972/1977; Harvey, 1973; Lefebvre, 1991/1973/1991). Influenced by post-structuralism, the studies in the 1980s focused on the relationship between space and certain categories such as social class, race, gender, and sexuality. Post-structuralist geographers argued that casual spaces are formed through social practices, so it is important to analyze the relationship between communities and spaces along with their experiences within those spaces (Browne, 2007). In the 1990s, however, a few scientists started to search for the spatialization of gender, sexual orientation, and sexuality (Valentine, 2002).

Having found that individuals of different ages, genders, religions, races, and marginalized groups all experience space distinctly, some studies suggest that a friendly city approach should be adopted to plan the city in a fair and egalitarian way (Hsu & Bai, 2021; Kaypak, 2016; Köse & Erkan, 2014). Correspondingly, as a result of organized feminist movements in the 1980s, multiple international organizations such as the World Bank, the OECD, the UN, and the EU have institutionalized the attempts to transform the city in accordance with the gender equality principle and to mainstream the social gender. These had been aimed at women who constituted a disadvantaged group that has fallen behind in terms of fundamental rights and city experience, although they comprise half of the world's population (United Nations, 2005). Moreover, studies on equality, which underline the fact that it is impossible to think about urban life and experience divorced from patriarchal gender norms, indicate that administrative bodies are male-dominated and that the urban space not only reflects gender inequality but also reproduces such inequalities (Efe Güney et al., 2020; Fenster, 1999a; Kaypak, 2014; Koskela, 1999; Mackenzie, 1989/2002; McDowell, 1999). Currently, as a problem-solving tool, women-friendly cities support the participation of local governments in planning and decision-making processes. Additionally, they provide women with access to health, education, and social services as well as employment opportunities (Kaypak, 2014, 2016; Tekinbaş, 2015). Furthermore, they support equal participation of women in all aspects of urban life (Sewell, 2011; Spain, 2014; Tekinbaş, 2015; Yon & Nadimpalli, 2017).

Men and women experience the urban life in different ways because of their distinctive social gender roles. This distinction has reflected upon planning practices because men are assumed as “responsible for out-of-home activities”—in other words, “free”—whereas women are supposed to be “responsible for housework,” “entrapped at home or confined to home” (Bourdieu, 2014; United Nations, 2012; UN-Habitat 2013; Buckingham, 2010; Fenster, 1999b). Unfortunately, the profession of city planning propagates this erroneous attitude by forming gender and intersectionality blind, insecure areas that do not provide the feeling of belongingness (Efe Güney et al., 2020).

Women-friendly city approach is a stance against this form of planning, enacted as a result of the Women Friendly Cities Program by the UN. This approach is sustained in several countries based on the basic practices given below (edited by the Economic Commission for Latin America and the Caribbean (ECLAC), 2019 and Şenol, 2015):
- Increasing the number of women in national and international decision-making mechanisms (Belgium, Finland, France, Sweden, Italy, Greece)

- Establishing equality units in local administrations (Germany, Austria, France, Luxembourg, Sweden)

- Forming and collecting statistical data on a gender basis (Finland, Norway)

- Making budget plans sensitive to social gender (Sweden, the Netherlands, Italy)

- Developing equality plans (Austria, Belize, Brazil, British Virgin Islands, Bolivia, Dominican Republic, Ecuador, El Salvador, Finland, Guatemala, Spain, Sweden, Jamaica, Colombia, Costa Rica, Cuba, Mexico, Nicaragua, Panama, Paraguay, Peru, Suriname, Chile, Trinidad and Tobago, Uruguay, Venezuela)

- Developing continuous communication with civil society (England, Spain, Belgium)

- Empowering transportation connections (Germany, Finland, England)

- Providing property acquisition opportunities (Austria, England)

- Providing security and struggling with all types of violence (Germany, Austria, England)

In addition to these practices in several countries, several studies in the existing literature can be grouped under the following six main headings: (1) Evaluation and proposal on equality plans, (2) on women’s participation and visibility in politics, (3) on land use evaluation, (4) on the mobility and accessibility of women and men in urban spaces, (5) on safety within the scope of a woman-friendly city, and (6) on a building scale within the scope of a women-friendly city. Although the practices of the countries mentioned above and the studies in the literature seem to be named differently, it shows similarities in content. The table showing the relationship between the practices of the countries and the main headings in the literature is given below.

The six main headings in the literature are given in the tables below with their contents, data sets and related references.

These studies which focus on social and cultural structure rather than city planning and the design of the place have shown that women have fallen behind men in education and employment which would have been essential in bringing prosperity to both the society and themselves, and that they do not participate in decision-making mechanisms. In other words, the studies claim that cities have become places where women only perform their gender roles. Therefore, a planning process and language should be formed to build cities where women can benefit all urban rights. The same is true in the case of Turkey.

Aimed at contributing to set up the planning language for a women-friendly city, this study hopes to bring forward a model proposal related to green areas where the natural physical properties of the city are reflected, and where relaxing and self-realization processes of the social structure are fulfilled.

In countries like Turkey, which has difficulty in achieving gender equality, women’s use of public space is limited due to patriarchal norms (Pritchard, 2002). To fulfill their gender roles (housework, caring for dependents; Akkan, 1999; Tannöver & Eyüboğlu, 2000) and reenergize themselves (rest-socialization-physical activity), women have to reduce the duration or increase the quality of mobility. As a result of this structure, which continues to renew itself (Demirbaş, 2012; Kaypok, 2014), women cannot use public spaces and green spaces. Due to this, it is essential that the city
and its every component should be welcoming to women. Several studies have demonstrated that women’s happiness is a criterion for society’s level of well-being and happiness (Kirk, 2010 as cited in Efe Güney & Üstündoğ, 2020). If public spaces and parks are not safe for any segment of the society, then they are not safe for anyone in that city (Doan, 2007). Women-friendly cities also ensure that public spaces are safe.

Moreover, the target of this study is to be a model open for improvement regarding issues such as what data should be collected in the chosen pilot area, how to analyze and assess the data, and how to develop appropriate proposals and contribute to the literature. Moreover, the significance of green areas for cities and women has been discussed in the following section.

2. Open green areas and women
The urban space consists of two basic sections. These are private places that serve certain communities or individuals on the basis of ownership, and public places that let the socializing process come true and provide unity among individuals (Çubuk, 1991; Hénaff & Strong, 2001). The public place is a democratic space where several political and cultural activities take place (Habermas, 1991), where all individuals can freely express their demands and access (Varna & Tiesdell, 2010). In other words, it is an area of freedom that provides opportunities to both individuals and communities so that they can get wealthier and fulfill their dreams, that forms the spirit of the city and allows individuals to participate in society (Arendt, 1994; Gökgür, 2008; Habermas, 1991; Thomas, 1991).

Interaction in public spaces is a basic requirement for everyone. Nevertheless, public spaces cannot serve equally and fairly to women who are one of the disadvantaged groups (Fox & Schuhmann, 2001; Yon & Nadimpalli, 2017) of the city as opposed to the men who have been positioned differently in society based on biological features and expectations built upon social gender. Women are disadvantaged when it comes to using open green spaces: they have more responsibilities due to gendered roles assigned to them (Bialeschi & Michener, 1994; Deem, 1986; Firestone & Shelton, 1988; Hutchison, 2009; Kaczynski & Henderson, 2008; Silver, 2000; Wearing & Wearing, 1988). In addition, the view that other public spaces are dangerous for women (Bowman, 1993; Gardner, 1995; Valentine, 1990) is applicable for green spaces, which limits them. In other words, it reiterates the effect of gender inequality on women (Letherby, 2003; McDowell, 1999). Hence, one of the urban rights—the right for each person to make use of the city—cannot be served to everyone. Thus, a planning language and process should be generated in accordance with the meaning and content of public spaces and based on a women-friendly city.

The green areas as a public space are significant as they reduce the urban heat island effect by influencing the micro climate and preserve the biological diversity (Burgess et al., 1988; Byrne & Wolch, 2009; Ceylan, 2007; Emür & Onsekiiz, 2007). They provide opportunities for multiple activities such as jogging, walking, cycling, doing exercising, going on a picnic, and playing child games or playing with children (Byrne & Wolch, 2009). Further, they form passageways of the city (Burgess et al., 1988). In their present condition, green areas boost democratic development through socialization, since they are open to all citizens and offer places for relaxation and recreation without discriminating on the basis of age, gender, social class, and economic status (Ceylan, 2007; Glass & Balfour, 2003; Glendinning et al., 2003; Kelly & Ross, 1989; Larson & Verma, 1999; Tinsley et al., 2002; Yuen, 1996).

As seen above, green spaces are important places for both individual and social health. In other words, they are important for the physical and mental renewal of individuals and society (Burgess et al., 1988; Orsenga-Smith et al., 2004 as cited in Byrne & Wolch, 2009; Giles-Corti et al., 2005 as cited in Ceylan, 2007; Ulrich, 1979; Kaplan et al., 2004 as cited in Byrne & Wolch, 2009; Maas et al., 2006; Mitchell & Popham, 2007; Sugiyama et al., 2008). Consequently, green spaces have a direct effect on the sustainability and inhabitability of the city and the society.
Men and women experience open green areas in different ways (Jørgensen et al., 2002; Kaczynski & Henderson, 2008; Kong et al., 2007; Schipperijn et al., 2010; Tyrväinen et al., 2007). The quality of green areas is much more important for women than for men. Numerous studies have demonstrated this. For example, an empirical study in 2005 (Mowen et al.) found that women were afraid to go to parks for fear of becoming victims of a crime. As men are independent in urban areas in their daily lives, their expectations of green areas mostly depend on individual properties. However, women prefer green areas with playgrounds for their children (Conedera et al., 2015); which can be used for social activities (Molinari et al., 1998), and whose spatial integrity has been designed in line with the neighborhood (Jim & Shan; Jim & Shan; Molinari et al., 1998; Jim & Shan).

Nonetheless, women cannot spare time to sufficiently use green areas because of the strong impact of their social gender roles and because their expectations are not compared with men, the sense of safety and comfort in green areas are much more important for women. The illumination elements of these areas or their maintenance are the main factors that need to be considered when assessing women’s security (Jørgensen et al., 2002; Lindgren & Nilsen, 2011). The perceived sense of lack of safety, sexual abuse threat, and dereliction or desolateness leads to women giving up using green spaces (Kong et al., 2007; Madge, 1997; O’Brien, 2005; Richardson & Mitchell, 2010; Virden & Walker, 2010). In women-friendly cities, a few criteria, which are based on spatial rights that create positive feelings and that can be perceived as multi-functional, have been produced, especially those related to safety, accessibility, and the right to equal use. These criteria are (Conedera et al., 2015; Efe Güney & Üstündag, 2020) as follows:

- secure places where women feel safe
- accessible places that have been designed with strategies to provide easy access to women
- places of good quality and comfort where afforestation, landscaping quality, and the aesthetic and effective use of urban furniture have been taken into consideration
- multi-functional places that provide diversity by consisting of several functions instead of focusing on monotype functions
- places that are easily visible, readable, and perceivable
- places where the demands and needs of users of all profiles are taken care of

The green areas in Turkey are significant elements of the planning legislation. However, the location of the green area is determined by considering its distance to housing areas (500 m) and the density of the population, whereas its content and design are neglected. The legislation dictates the size of a green area as 10 square meters per person, and does not pay regard to their needs. In fact, green areas should be designed with an approach that considers not only the size but also the needs and demands of the users. Hence, parents’ needs such as nursing rooms, restrooms, and safety should be met.

This study assesses the green areas in a pilot region within the context of women-friendly cities, and attempts to generate the data set for this assessment, whose absence is felt in Turkey.

3. Materials and methods
First, traditional planning analysis methods were used in the chosen pilot region to develop a model for the women-friendly city planning approach. The study was organized in four stages. The first stage aimed to assess land use patterns and the current situation. Within this scope, the current base maps of 2019, acquired from the Çiğli Municipality between 24 September 2021 and 1 October 2021, were updated after reconnoiter on site using USGS LANDSAT satellite images with BANDS 10 and 11. Having studied the updated base maps, the actual green areas were spotted. In the second stage, the areas reserved as green in the city development plan and those shown on the actual maps were assessed within the scope of the zoning legislation according to their service sufficiency and service radius (network analysis). Subsequently, they were analyzed under the subtitles of the valid zoning plan, which were service and accessibility sufficiency, sufficiency depending on the area size, and sufficiency depending on the service
radius. In the first step of the second stage, the estimated population in the plan was calculated at 4,612 people. The current population calculated by considering the equivalent values in the Zoning Law No. 3194 and the methods used by the Izmir Metropolitan Municipality was 4,084 people. In the calculation of the current population, the results of the survey conducted by Çiğli Municipality in 2021 and the data collected by the Turkish Statistical Institute (TURKSTAT) were used.

The second step of the second stage was the examination of the service radius. In this analysis, the data obtained from the field survey and from the maps by OpenStreetMap, an open-source data provider, were uploaded to a computer using ArcMap 10.3 and ArcMap 10.5 desktop applications of the ArcGIS geographical information system. Numerical data in vector format were used in this study. It was tested as to how easily a pedestrian or a vehicle could enter the green areas from the peripheral zones or vice versa. The service radius assessment can be performed in two ways as per the extant literature: in the buffer zone method, Euclidean equal distances from a starting point placed in the geometrical centers of the green areas are analyzed; and in the service area method, the pedestrian or vehicle mobility is assessed through roads that enable this mobility. To obtain more realistic results while assessing the accessibility of the green areas within the given time and distances in the legislation, the service area method was used in this study because it was noticed that a pedestrian could not follow a Euclidian route toward the green areas due to buildings and closed areas. At this point, pedestrian lane and vehicle roads in the field were placed on the right topography, and in the context of valid time and distances in the legislation, the network analysis tool “Service Area,” a tool of the ArcMap 10.3 app, was used. In the third stage, the field of study and its circumstances were assessed from the viewpoint of pedestrians according to the quality of use (seating units, tent cover, direction signs, emergency button, info boards, buffet, toilets, and garbage bins/containers), accessibility (sidewalk width and height, pedestrian lanes, ramps, and taxi rank or bus stops), and safety (illumination elements, dead-end street, vandalism, blind walls, empty parcels, ruins/construction structures, security cameras, and roadways). In the fourth and final stage, solutions to the problems detected in terms of women-friendly cities were offered.

4. Introduction of study area and its green areas
Regarding the women-friendly city approach, a 52-acre area of the Köyici district of Çiğli county of Izmir province—which is one of the 26 districts of the county—has been studied (Figure 1). The field of study was chosen because of its central location. The study area covers a significant part of

Figure 1. Izmir within Turkey and Çiğli within Izmir.
Anadolu Street, where governing units (Çiğli Municipality and the Office of the District Governor) and many businesses are located. There is also an IZBAN station (suburban train system of Izmir) which causes heavy vehicle and pedestrian traffic in the area.

Çiğli county hosts 4.7% of the population of Izmir. The study area (Figure 2) of the Köyiçi district similarly hosts approximately 4% of the population of Çiğli. In both, Izmir and Çiğli, women comprise nearly 50% of the total population. As shown in Table 1, the proportion of women in Turkey, the Aegean Region where Izmir is located, Izmir, and Çiğli is about 50%.

Table 1. Relationship between practices and main headings in literature

| Main Headings                                                                 | Practices                                                                 |
|-------------------------------------------------------------------------------|----------------------------------------------------------------------------|
| (1) Evaluation and proposal on equality plans                                  | - Developing equality plans                                                |
| (2) on women’s participation and visibility in politics                        | - Increasing the number of women in national and international decision-making mechanisms |
|                                                                               | - Establishing equality units in local administrations                     |
|                                                                               | - Making budget plans sensitive to social gender                          |
|                                                                               | - Developing continuous communication with civil society                    |
| (3) on land use evaluation                                                    | - Establishing equality units in local administrations                     |
|                                                                               | - Developing equality plans                                                |
| (4) on the mobility and accessibility of women and men in urban spaces        | - Developing continuous communication with civil society                    |
|                                                                               | - Empowering transportation connections                                     |
| (5) on safety within the scope of a woman-friendly city                       | - Forming and collecting statistical data on a gender basis                 |
|                                                                               | - Providing security and struggling with all types of violence              |
| (6) on a building scale within the scope of a women-friendly city             | - Providing property acquisition opportunities                              |
In addition, the age pyramids for Turkey, Aegean Region, Izmir, and Çiğli are given below. Figure 3

The existing green areas in the area are orchards and passive green areas as well as parks and playgrounds, which are defined as active green areas. According to the National Legislation in Turkey, a legally important stage of the implementation phase is the 1/1000 scale implementary zoning plan. The green areas marked in the implementary zoning plan—which used a 1/1000 scale model of Izmir and dates to 1984—are parks, playgrounds, and recreation areas. To assess the current green areas (Figure 4 and Table 2) and the areas in the plan (Figure 5), they have been coded with letters and shown with the transportation network.

Twenty-nine of the 137 active green areas proposed by the implementary zoning plan were in the existing study area and 107 were in its vicinity. The sizes and types of green areas that were coded are presented in Table 3. Among 131 active green areas, one was a park and five were recreation areas. The green areas are shown with the existing study area surroundings because they are used in network analysis. The existing D, F, and I-coded green areas are not in the implementation zoning plan; it has been determined that the quality of the A, B, C, and G-coded parks have not changed in the implementation zoning plan, and the E and H-coded playgrounds have been transformed into parks in the implementation zoning plan.

Table 4. Comparison of Current Status of Green Areas and their Status in the Implementary Zoning Plan
5. Results

Green areas have been evaluated according to the National Legislation and a data set proposal has been submitted for the evaluation of the green areas within the scope of the women-friendly city. In other words, the data set specifically developed for the area examined for evaluation of green areas aimed to form a base for the women-friendly city.

5.1. Sufficiency of green areas according to the national legislation and standards

Legislation in Turkey aims to create green areas 500 meters away from housing areas and in a size of 10 square meters per person. So far, none of the cities in Turkey have been able to meet these
requirements. Moreover, in this distance criterion and the measurement criterion per capita, the age and gender criteria were not taken into account by the zoning legislation. In contrast, the institution known as the Turkish Standards Institute develops standards for specific issues and stipulates them. In other words, while the Ministry of Environment and Urbanization and the relevant local governments have tried to develop and implement the legislation on green areas, the Turkish Standards Institute develops standards as an institution affiliated to the Ministry of Industry and Technology of Turkey. This study examined the adequacy of green areas within the

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**Figure 5. Green Areas in the Implementary Zoning Plan.**

**Table 3. Studies of women’s participation and visibility in politics (2)**

| Content of the Studies | Applied Data Sets |
|------------------------|-------------------|
| Studies that examine women’s participation in politics, including local governments, and which socio-economic and socio-cultural factors are effective in this participation, contains the urban right | These studies are generally evaluative studies and/or strengthen their evaluations with survey studies (no datasets) |

**Related References**

Alkan, 2012; Birickoğułu, 2020; Bourdieu, 2014; Dumlupınar & Göksu, 2020; Kaypak, 2016; Kul Uçtu & Karahan, 2016; Tekinbaş, 2015; Yon & Nadimpalli, 2017; Yücel & Kutlar, 2020.
Table 4. Studies of land use evaluation (3)

| Content of the Studies | Applied Data Sets |
|------------------------|-------------------|
| Studies examining variations in how men and women use the city (Land-Use) | Land Use Types (housing, trade, health, etc.), transportation connections (road hierarchy; transportation types like pedestrian transportation and public transportation use, etc.), urban furniture (location of garbage cans, directional signs, toilets, etc.), lighting element, deafblind facades, etc. are the data sets used in these studies |

Related References
- Abdullahi & Pradhan, 2017; Akkerman, 2017; Efe Güney & Ustundağ, 2020; Garcia-Ramon et al., 2004; McDowell, 1983; Minaglu, 2020; Molavi & Hoseini, 2021; Mumcu & Yilmaz, 2016

scope of the Zoning Legislation and calculated the adequacy of green areas by considering category eight in the Turkish Standards Institution (TSI) named “The Designing Rules of Urban Roads-Pedestrian Zones and Pedestrian Lane no. 12,174” as data.

To evaluate the green area resolutions in the study area, the estimated population of the plan and the current population were calculated.

Based on the analysis of the total size of the green areas in the study area and the population (Table 5), it is seen that the implementable zoning plan proposes green areas large enough for the population living in the study area (over 10 m²), but the existing green areas are insufficient (less than 10 m²).

The size of open green areas is not the only indicator here because the green areas should be in a walking distance. In this context, the service radii of the green areas have been assessed in accordance with the standard of the Turkish Standards Institution (TSI) named “The Designing Rules of Urban Roads-Pedestrian Zones and Pedestrian Lane no. 12,174.”

Whether they are existing or proposed in the implementable zoning plan, the network analysis of the service effect radius of the green areas was made in accordance with the criterion, which is given as 500 meters in the legislation and under eight different categories specified in the Turkish Standards Regulation no. 12,174: women with children, children between 6 and 10, women over 50, women up to 50, men over 50, men between 40 and 55, men up to 40, and young people. The walking time of the groups examined under each was the seven-minute walking distance (m/sec) given in the standard (Table 6).

As a result of the 500-meter service radius effect analysis of the existing and proposed green areas, it is seen that the northern part of the study area does not receive service from the green areas, but those areas will be able to get service when the proposals in the implementable zoning plan are put into practice (Figure 6).

Table 5. Studies of the mobility and accessibility of women and men in urban spaces (4)

| Content of the Studies | Applied Data Sets |
|------------------------|-------------------|
| Studies that examine the relationship of residents with urban space and their surroundings in the city on the basis of gender and gender roles, and make recommendations for equitable urban mobility | Location decisions for various land use types (housing, trade, health, etc.) and their relations with each other, the evaluation of mobility distribution (using various models to measure), demographic information, economic indicators, etc. |

Related References
- Bittencourt, 2019; Efe Güney et al., 2020; Gauvin et al., 2020; Jensen et al., 2017; Kaplan, 1998; Kim, 2007; Kwan, 1999; Miralles-Guasch et al., 2015; Özer et al., 2016; Whitzman et al., 2014.
Table 6. Studies of safety within the scope of a woman-friendly city (5)

| Content of the Studies | Applied Data Sets |
|------------------------|-------------------|
| Studies that investigate phenomena like crime, fear, and danger by determining their link with urban space, gender and provide recommendations based on the aspect of safety | Gathering areas, land-marks (squares, etc.) etc. presence, user behavior analysis, lighting elements, visibility and closure of the streets within the scope of continuity or deadlock, demographic data, etc. |

Related References
Affleck et al., 2019; Ataç, 2007; Whitzman et al., 2014; Kadioğlu & Toy, 2021; Kaypak, 2016; Koskela, 1999; Rišová & Madajová, 2020.

The service effect radii of both existing and proposed green areas were analyzed according to seven-minute walking distances for both men and women of all categories defined by the TSI (Figure 7).

When the current situation is examined, women with children, women over 50 years old, women up to 50 years old, men over 55 years old, men between 40 and 55 years old, and men up to 40 years old in the north of the study area; and women with children in the east do not receive services from open green spaces. Since the seven-minute walking paces of women over 50, women up to 50, and men of all categories are similar, the areas they can access are similar, while the areas that women with children can reach are limited. The areas that do not currently receive service can receive service across all men and women categories in green area proposals of the implementary zoning plan (Table 7).

Currently, children between the ages of 6 and 10 north of the study area receive less service from green areas compared to youths. Children between the ages of 6 and 10 therefore have limited access. The problem of these regions is solved in the implementary zoning plan (Figure 8).

5.2. Sufficiency of green areas with regard to women-friendly city
Many elements are defined to ensure security; the priority among these elements is to provide “the eye on the street” (Jacobs, 1961) and “natural surveillance” (Newman, 1996) in that area. Thanks to them, a person feels safe thinking that there is always someone there. Other elements are related to the characteristics of that place. For example, it has been observed that perpetrators sexually harass women when if traffic regulation does not exist or only seems to exist; there are no streetlights; the pavement is broken; there are billboards in the middle of the sidewalks, then (Baxi,
Such a scenario does not lend a general sense of security to women. Therefore, city planning should consider adequate lighting, public telephone systems, internal public transport, safe walkways, and toilets. Rape crisis centers and counseling centers (Moser, 2012, pp. 445–447) should be established and security cameras installed (Raoul Wallenberg Institute, 2021). For the safety of the users, green areas should incorporate these necessary elements.

The green areas have been assessed in women-friendly cities via the basic criteria of accessibility, safety, and usability and their subtitles given below (Figure 9).

This study considered the classification for the ramp according to article A of the 1st Section of the Barrier-Free Public Buildings Design Guide prepared by the Izmir Metropolitan Municipality. The article states the following: “... If the use of stairs, elevators, escalators, moving walks, or ramps with a slope of more than 6% is unavoidable, concrete warning surfaces and visual markings should be made." According to this statement, the appropriate ramp slope was accepted as 6% in the study and the ramps had slopes lower than 6% and higher than 6%. The standard for sidewalk width has been determined to be 150 cm, according to TSI’s standard numbered TS 12576. As a result of the field study, the current situation was evaluated in four categories as 0–50 cm, 51–149 cm, 150 cm (standard), and >150 cm. The sidewalks’ heights, on the other hand, are accepted...
as between 3–15 cm according to the standard numbered TS 12576 of the TSI, and the current situation is given in three categories as 0–2 cm, 3–15 cm (standard), and >15 cm.

Within the scope of this analysis (Figure 10), green area assessment criteria and nine coded green areas were considered and examined together. Figure 11

These problems that have been identified in the nine active green areas of the field have been assessed in detail and are shown in the table below (Figure 12). As can be seen in the figure, the most common problems are the lack of toilets (problem no. 17), the lack of security cameras

Figure 8. Network Analysis of Open Green Areas for Children and Youths.

Figure 9. Assessment Criteria of Open Green Areas.

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Regarding primary problems, there is problems of usability in five of the green areas (A, C, D, E, and F), of safety in two of them (G and I), of accessibility in one of them (B), and of both accessibility and usability in one of them (H).

A total of 18 identified problems were analyzed in three categories: highly problematic (13+), problematic (7–12), and less problematic (1–6; Figure 13). In terms of this classification, one out of nine green areas is highly problematic (H), one is less problematic (F), and seven (A, B, C, D, E, G, and I) are problematic.

Active green areas in all categories were analyzed in detail by their association with land use conditions.

5.3. Assessment of highly problematic green areas
When the playground coded with H is analyzed, it is seen that there are 13 problems (Figure 14). Due to these problems, this green area is limitedly accessible and disincentivized for those who use wheelchairs or baby carriages. This also causes a sense of insecurity. The absence of a tent cover
prevents its users from being protected from adverse conditions, such as sun and rain. Users cannot meet their basic needs because there are no markets, buffets, or grocers.

There are houses, shops, an office block, an ironwork workshop, a barber, a transformer building and an outhouse around this highly problematic green area. Additionally, women prefer using this place less than others because there are many places that are used or run by men. This playground is mostly used by inhabitants of nearby housing areas.

5.4. Assessment of problematic green areas
Three out of seven parks in the problematic category have been visualized to be able to form a model (Figure 15, 16, and 17). The common problems in the green areas coded A, B, C, D, E, G, and I are as follows:

- Accessibility is limited and disincentivized for those who use wheelchairs or baby carriages.
- They cause feelings of insecurity.
Figure 13. Green Areas According to the Number of Problems.

Figure 14. Assessment of the H-Coded Green Area.

| Code | Green Area | Green Area Analysis | Illumination Analysis | Problems | Land Use Status |
|------|------------|---------------------|-----------------------|----------|-----------------|
| H    | 8062 Street Green Area Status Playground | ![Green Area Analysis Image] | ![Illumination Analysis Image] | ![Problems Image] | ![Land Use Status Image] |

Figure 15. Assessment of the A-Coded Green Area.

| Code | Green Area | Green Area Analysis | Illumination Analysis | Problems | Land Use Status |
|------|------------|---------------------|-----------------------|----------|-----------------|
| A    | Atye-i Bahmi Yağlı Park Green Area Status Park | ![Green Area Analysis Image] | ![Illumination Analysis Image] | ![Problems Image] | ![Land Use Status Image] |
The roadway can be dangerous for children because the parks are not surrounded by a protective element.

- The equipment (urban furniture, toilet, etc.) is insufficient.

- The users cannot meet their basic needs because there are no markets, buffets, or grocers.

Furthermore, in the ones coded as C, D, E, G, and I:

- Users cannot be protected against sunbeams and rain because there are no tent covers.

Habibe and Fatma Kardeşler Park (G) have 10 problems and is mostly used by the inhabitants of the nearby housing area, where there are shops, houses, an outhouse, and the office of an association (Figure 17).

5.5. Assessment of less problematic green areas

The park coded F has six problems (Figure 18); accessibility is limited. This causes feelings of insecurity. Because it is not surrounded by a protective element, the roadways can be dangerous for children (problem no. 12). Because tent covers do not exist, users cannot be protected against sunbeams and rain. It is not usable due to a lack of equipment such as urban furniture and toilets.

There are shops, restaurants, cafés, a buffet, a local grocer, a market, the office of the governor, a primary school, and a public education center around the park. The park has a diverse user profile, as it is located on a busy street and a crossroad, and there are several educational facilities and businesses.

6. Discussion

The green areas and playgrounds in Turkey have been neglected for their quality. Gender equality cannot be achieved overnight or in a short time. For this reason, the current study not only emphasizes the fact that women cannot benefit from open green areas due to
gender roles but also tries to show how open green areas can be evaluated within the scope of women-friendly cities. This evaluation is made according to the data sets developed in the criteria of accessibility (five problems), safety (seven problems), and usability (six problems). The primary problems of the active green areas have been determined according to these categories. Meanwhile, the situation of land use has been territorialized according to the density of use on a zoning basis. Therefore, the active green areas, whose problems have been detected, have been assessed along with their land use zones (Figure 19).

Having assessed their relationship with land use and their problems, some suggestions have been proposed for green areas regarding three primary problem categories. These suggestions have been developed within the scope of the specific field of study contained in this paper. First, the characteristics of the area were determined based on on-site examinations. Their possessions and deficiencies were identified in the concept of a women-friendly city. Considering the presentations of the women-friendly urban literature (Table 8), (Table 9), the data set was produced according to the problems and potential concerns of the field. Table 10 The study aimed to develop a dataset proposal for Table 11 a women-friendly city model. Table 12
### Table 8. The female-male population ratios

| Area                  | Female  | Male   |
|-----------------------|---------|--------|
| Turkey                | 49.90%  | 50.10% |
| Aegean Region-TR3     | 50.14%  | 49.86% |
| İzmir-TR31            | 50.31%  | 49.69% |
| Çiğli                 | 50.17%  | 49.83% |

### Table 9. Information on the Existing Green Areas

| Code | Name                                         | Acreage (m²) | Green Area Status |
|------|----------------------------------------------|--------------|-------------------|
| A    | Atiye-i Rahmi Yağcı Park                     | 7604         | Park              |
| B    | Egekent Park                                 | 8977         | Park              |
| C    | Eski Havaalanı Avenue                        | 322          | Park              |
| D    | 8001 Street                                  | 2919         | Park              |
| E    | Anadolu Avenue—8001/3 Street                 | 900          | Playground        |
| F    | 8055 Street                                  | 1280         | Park              |
| G    | Habibe and Fatma Kardeşler Park              | 1464         | Park              |
| H    | 8062 Street                                  | 221          | Playground        |
| I    | Anadolu Avenue—8055 Street                   | 1690         | Park              |
|      | **Total**                                    | **25,377**   |                   |

### Table 10. Comparison of Current Status of Green Areas and their Status in the Implementary Zoning Plan

| Code | Name                                         | Current Status | Implementary Zoning Plan Status | Existent (E)/ Non-existent (N) | Code | Status |
|------|----------------------------------------------|----------------|-------------------------------|---------------------------------|------|--------|
| A    | Atiye-i Rahmi Yağcı Park                     | Park           | E                             | 121                             |      | Park   |
| B    | Egekent Park                                 | Park           | E                             | 122                             |      | Park   |
| C    | Eski Havaalanı Avenue                        | Park           | E                             | 123                             |      | Park   |
| D    | 8001 Street                                  | Park           | N                             | -                               |      | -      |
| E    | Anadolu Avenue—8001/3 Street                 | Playground     | E                             | 76                              |      | Park   |
| F    | 8055 Street                                  | Park           | N                             | -                               |      | -      |
| G    | Habibe and Fatma Kardeşler Park              | Park           | E                             | 131                             |      | Park   |
| H    | 8062 Street                                  | Playground     | E                             | 129                             |      | Park   |
| I    | Anadolu Avenue—8055 Street                   | Park           | N                             | -                               |      | -      |
Table 11. Open Green Areas per Person

|                          | Total area (m²) | Population (inhabitants) | Green areas per person (m²/inhabitant) |
|--------------------------|----------------|--------------------------|----------------------------------------|
| **Current**              | 25,377         | 4084                     | 6.21                                   |
| **Proposed in the**      | **125,696**    | **4612**                 | **27.25**                              |
| **implementary zoning**  | **plan**       |                          |                                        |

Table 12. Eight different categories specified in the Turkish Standards Regulation no. 12,174

| Groups                      | Walking Speed |
|------------------------------|---------------|
| Women With Children          | 0.7 m/s       |
| Children Between 6 And 10    | 1.1 m/s       |
| Women Over 50                | 1.3 m/s       |
| Women Up To 50               | 1.4 m/s       |
| Men Over 50                  | 1.4 m/s       |
| Men Between 40 And 55        | 1.6 m/s       |
| Men Up To 40                 | 1.7 m/s       |
| Young People                 | 1.8 m/s       |

Figure 20. Proposals of Criteria and Proposals Definition.
These 20 proposals for the green areas in the study area have been analyzed in detail and are shown in the Figure 20 below with their existing problems (Figure 21).

**Acknowledgements**
The authors thanks to the President of the Izmir Chamber of Commerce and its staff and thanks to Mayor of City Municipality and its staff, and thanks to the Department of City and Regional Planning, Faculty of Architecture, Dokuz Eylul University and thanks to editor and reviewers.

**Funding**
The authors received no direct funding for this research.

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**Disclosure statement**
No potential conflict of interest was reported by the authors(s).

**Citation information**
Cite this article as: Assessment of Green areas criteria regarding women-friendly city concept: case study of city, Mercan Efe Güney, Filiz Ay, Beste Tuncay, Sidal Tannverdi, Nurseli Şanlı & Hacer Akbudak, Cogent Social Sciences (2022), 8: 2148418.

**References**
Abdullahi, S., & Pradhan, B. (2017). Urban compactness assessment. In Spatial modeling and assessment of urban form. Springer.
Affleck, R. T., Gardner, K., Aytur, S., Carlson, C., Grimm, C., & Deeb, E. (2019). Sustainable Infrastructure In Conflict Zones: Police Facilities’ Impact On Perceptions Of Safety In Afghan Communities. Sustainability, 11, 2113.
Akkirman, D. K. (2017). Toplumsal Cinsiyet Ve Mekan: Kent Mekânına Eşitlik ve Cinsiyete Dayalı İlkelerin (Master’s Thesis, Adnan Menderes University, Soyal Bilimler Enstitüsü).
Alkan, A. (1999). Toplumsal cinsiyet ve kentsel mekânın düzenlenmesi çerçevesinde kent planlama disiplini. 24 March 2019, http://politics.ankara.edu.tr/dergi/tartisma/1999/toplumsal-cinsiyet-pol.pdf
Alkan, A. (2012). Şehircilik Çalışmalarının Zayıf Halkası: Cinsiyet. Nermim Abadan Unut’a Armağan- Birkaç Arpa Boyu: 21.Yı. ‘A Gireken Türkiye’de Feminist Çalışmalar. (D. S. Sancar). Koç Üniversitesi Yayınları.
Antonacci, C. M. (2000). Architecture and Behavior: Building Gender Into Greek Houses. The Classical World, 93(5), 517–533. https://doi.org/10.2307/4352443
Arendt, H. (1994). Insanlık Durumu B. S. Şener. İletişim Yayınları, İstanbul.
Aslı, E. (2007). Suçun Kentsel Mekân TODsinden Algısı: Güvenlilik Hissisi. Doxya, 6(55), 16–23. http://www.mimlarolarodasiantkara.org/dosya/dosya6.pdf
Baxi, P. (2003). Rape and Delhi’s urban environment [Article]. India Together. http://www.indiatogether.org/2003/nov/wom-delhienv.htm
Bideschki, M. D., & Michener, S. (1994). Re-entering leisure: Transition from the role of motherhood. Journal of Leisure Research, 26(1), 57–74. https://doi.org/10.1080/00222216.1994.11969944
Biricikolu, H. (2020). Toplumsal Cinsiyet Eğitilmesi Ve Belediyeler: Avrupa Yerel Yönetim ve Kadin Eşitliği Sımı’nın İzlemesi Belediyeleri Üzerinden Nitele bir İnceleme. https://hdl.handle.net/20.500.12619/76211
Bittencourt, L. (2019). Women And Urban Mobility: The Importance Of Recognizing Gender Differences In Urban Planning. https://hdl.handle.net/10016/29981
Bourdieu, P. (2014). Enİ Tahakküm [Masculine Domination]. (B. Yılmaz. Bağlam Kitabevi.
Bowman, C. G. (1983). Street harassment and the informal ghettoization of women. Harvard Law Review, 106(3), 517–580. https://doi.org/10.2307/1341656
Brown, K. (2007). Drag Queens and Dand Dykes: Deploying and Deforming Femininities. In K. Browne, J. Lim, & G. Brown (Eds.), Geographies of Sexualities: Theory, Practices and Politics (pp. 113–124). Ashgate.
Buckingham, S. (2010). Examining The Right To The City From Gender Perspective. Cities for All. (A. Sugramay & C. Mathivet). Ed). Habitat International Coalition.
Burgess, J., Harrison, C. M., & Limb, M. (1988). People, parks and the urban green: A study of popular meanings and values for open spaces in the city. Urban Studies, 25(6), 5–473. https://doi.org/10.1080/00420988820080631
Byrne, J., & Wolch, J. (2009). Nature, race, and parks: Past research and future directions for geographic research. Progress in Human Geography, 33(6), 743–765. https://doi.org/10.1177/0309132509103156
Castells, M. (19771972). The Urban Question: A Marxist Approach. Edward Arnold.
Cepel, N. (2019). Gender Equality Plans in Latin America And The. Road Maps For Development.

Ceylan, A. (2007). Yaşam Kalitesinin Arttırılmasında Kentsel Yaşam Alanının Önerimi ve Kentsel Dönüşüm ile İlişkileri (Unpublished masters thesis). İstanbul Technical University.

Chestnutt, R., Ganssauge, K., Willecke, B., Baranek, E., Bock, S., Huning, S., & Schröder, A. (2011). Gender Mainstreaming In Urban Development. Christiane Droste.

Cohen-Cline, H., Turkheimer, E., & Duncan, G. E. (20072015). Access to green space, physical activity and mental health: A twin study. Journal of Epidemiology and Community Health, 69(6), 523–529. https://doi.org/10.1136/jech-2014-204667

Conedera, M., Del Bigio, A., Seeland, K., Moretti, M., & Horne, R. (2015). Residents’ preferences and use of urban and peri-urban green spaces in a Swiss mountainous region of the Southern Alps. Urban Forestry & Urban Greening, 14(1), 139–147. https://doi.org/10.1016/j.ufug.2015.01.003

Çübük, M. (1991). Kentsel Tasarım ve Kamu Alanları. Kahramanmaraş Sempozyumu (pp. 15–16, & 139–147) Mimarlik ve Akademik Yaklaşımı. Examinations. Latin Akademik Sempozyumu (March 2020).

Doan, P. L. (2007). Queers in the American City: Transgendered Perceptions of Urban Space. Gender, Place and Culture, 14(1), 57–74. https://doi.org/10.1080/09663690601122309

Donnelly, S. (2020). Design Guide for Refuge Accommodation for Women and Children. Uts Shopfront Community Research Fellowship Report, (March 2020). https://commonwealthsigrantsmore.org/wp-content/uploads/2020/09/UTS-Refuge-Design-Guide-Samantha-Donnelly_0.pdf

Dumulpinar, S., & Göksu, G. G. (2020). Toplumsal Cinsiyet Eşitliği Yönetimi Faaliyetleri, Cinsiyete Duyarlı Bütçelerde Uygulanmayan Ve Kodimanın İlişkisinde Analizi: Sakarya İl Örneği. Akademik İnceleme Dergisi, 15(2), 713–764. https://doi.org/10.17550/akademikinceleme.696022

Economic Commission for Latin America and the Caribbean (ECLAC). (2019). Gender equality plans in Latin America and the Caribbean: An analysis and case studies. ECLAC. National and Regional reports 2019.

Efe, N. (2016). Gender Equality Observatory for Latin America and the Caribbean Studies, No. 1

Efe Güney, M., Tezcan, S., & Ağın, C. (2020). Being Able To Exist In The City In Defence Of Planning: An Examination On A Woman-Friendly City In İzmir–Konya Konularında Röntgen Kentte Vardır Olabilimek: İzmir Konak’ta Bir Kadın Dostu Kent İncelmesi. https://doi.org/10.14744/planorama.2020.08379

Efe Güney, M., & Üstündag, B. (2020). Kadın Dostu Kent Yaklasim Kapsaminda Kentsel Aciç Yeşil Alanlarnın Değerlendirmesi: Bornova Örneği. Süleyman Demirel Üniversitesi Sosyal Bilimler Enstitüsü Dergisi, 36, 38-65. 1305-7774. https://web.s.besc host.com/ehost/pdfviewer/pdfviewer?id=2&cde=e55deb7-c808-4c39-b209-fc14bobb220b%40edris

Emur, S. H., & Onsekiz, D. (2007). Kentsel Yaşam Kalitesi Bileşenleri Arasında Açıklar Ve Yeşil Alanların Önerimi - Kayseri/Kocasinan İlçesi Park Alanları Analizi. Sosyal Bilimler Enstitüsü Dergisi, 22, 367–396. https://www.academia.edu/67846449/Kentsel_Ya%C5%9Fam_Kalitesi_Bile%C5%9Enleri_Aras%C4%B1nda_A%C3%A7%C4%B1k_ve_Ye%C5%9Fil_Alanlar%C4%B1n_%C3%9Enemi_Kayseri_Kocasinan_%C4%B0r%C3%A7esi_Park_Alanlar%C4%B1_Analizi

Fenster, T. (1999a). Gender, Human Rights And Planning. Routledge.

Fenster, T. (1999b). Space For Gender: Cultural Roles Of The Forbidden And The Permitted. Environment And Planning: D Society And Space, 17(2), 227–246. https://doi.org/10.1080/09637755.2005.11770227

Fenster, T. (2005). The Right To The Gendered City: Different Formations Of Belonging In Everyday Life. Journal Of Gender Studies, 14(3), 217–231. https://doi.org/10.1080/09598920500264109

Firestone, J., & Shelton, B. A. (1988). An estimation of the effects of women’s work on available leisure time. Journal of Family Issues, 9(4), 478–495. https://doi.org/10.1177/0192513x8809004004

Fox, R. L. &, & Schrøder, A. (2001). Mentoring experiences of women city managers: Are women disadvantaged? The American Review of Public Administration, 31(4), 381–392. https://doi.org/10.1177/07303830012065009

Gondhi, N. (1998). Gender And Housing. Economic And Political Weekly. https://www.jstor.org/stable/4377755

Garcia-Ramón, M. D., Ortiz, A., & Prats, M. (2004). Urban Planning, Gender And The Use Of Public Space In A Peripheral Neighbourhood Of Barcelona. Cities, 21(3), 215–223. https://doi.org/10.1016/j.cities.2004.03.006

Gardner, C. B. (1995). Passing By: Gender and Public Harassment in Public Space. University of California Press.

Gauvin, L., Tizzoni, M., Piaggi, S., Young, A., Adler, N., Verhulst, S., & Cattuto, C. (2020). Gender Gaps in Urban Mobility. Humanities And Social Sciences Communications, 7(1), 1–13. https://doi.org/10.1057/s41599-020-0500-x

Geniş, Ş. (2020). Eşitsizlik Miktarları Ortaokul Mahalleleri Ve Kadınlarnın Kent Hakki. Amme Idaresi Dergisi, 53(1). https://ammeideseri.hacibayram.edu.tr/Dergiler

Giles-Corti, B., Broomhall, M. H., Knuiman, M., Catherine, C., Douglas, K., Kevin, K., Lange, A., & Donovan, R. J. (2008). Increasing walking: How important is distance to attractiveness and size of public open space. American Journal of Preventive Medicine, 28(29), 169–176. https://doi.org/10.1016/j.amepre.2004.10.018

Glass, T. A., & Balfour, J. (2003). Neighborhoods and Health. Oxford University Press.

Glindinning, A., Nuttall, M., Hendry, L., Kloepp, M., & Wood, S. (2003). Rural communities and well-being: A good place to grow up? Sociological Review, 51(1), 129–156. https://doi.org/10.1111/1467-954X.00411

Gökşür, P. (2000). Kentsel mekanda kamusal alanlar.涡. Bogazici Üniversitesi.

González-Piñuñ,J. (2016). UnF: Un Fuego de Olvidado; Desigualdad de género y pobreza energética. L’Associació Catalana d’Enginyeria Sense Fronteres. https://esf.cat/wp-content/uploads/2017/09/ESFeret17-PobrezaEnergeticaDesigualdadGenero.pdf

Hobermans, J. (1991). The structural transformation of the public sphere: An inquiry into a category of bourgeois society. 9780745692333. MIT press.
Hami, A., & Faham, E. (2018). Physical development of ladies park based on women’s motivation (case study: sahand ladies park. Physical Social Planning, 4(4), 56–65. https://journals.pnu.ac.ir/article_4627_ 596ebc4a3df9fae6b317bc46b0a11.pdf

Harvey, D. (1973). Social Justice And The City. Edward Arnold.

Harvey, D. (2013). The Right To The City. Divided Cities. (R. Scholar, Ed.). Oxford University Press.

Hénaff, M., & Strong, T. B. (Eds.) (2001). Public space and democracy. In U of Minnesota Press.

Hsu, H. C., & Boi, C. H. (2021). Social And Built Environments Related To Cognitive Function Of Older Adults: A Multi-Level Analysis Study In Taiwan. International Journal Of Environmental Research And Public Health, 18(6), 2820. https://doi.org/10.3390/ ijerph18062820

Hutchison, R. (1994). Women and the elderly in Chicago’s public parks. Leisure Sciences, 16(4), 229–247. https://doi.org/10.1080/016920409513234

Hutchison, R. (2009). Constructions of urban space. Emerald Group Publishers.

Jacobs, J. (1961). The Death and Life of Great American Cities. Vintage Books.

Jensen, W. A., Stump, T. K., Brown, B. B., Werner, C. M., & Smith, K. R. (2017). Walkability, Complete Streets, And Gender: Who Benefits Most? Health & Place, 48, 80–89. https://doi.org/10.1016/j.healthplace.2017.09.007

Jim, C., & Shan, X. (2013). “Socioeconomic Effect on Perception of Urban Green Spaces in Guangzhou, China” Cities 31: 123-131. https://doi.org/10.1016/j. cities.2012.06.017

Jordan, S. (2012). Woman and Home: An Investigation Into Equitable Forms of Housing. Planning News, 38(4), 17–18. https://search.informit.org/doi/abs/10. 3316/informit.273616792160419

Jorgensen, A., Hitchmough, J., & Colvert, T. (2002). Woodland spaces and edges: Their impact on perception of safety and preference. Landscape and Urban Planning, 60(3), 135–150. https://doi.org/10. 1016/S0169-2046(02)00052-X

Kaczynski, A. T., & Henderson, K. A. (2008). Parks and recreation settings and active living: A review of associations with physical activity and intensity. Journal of Physical Activity & Health, 5(4), 619–632. https://doi.org/10.1123/jpah.5.4.619

Kadoğlu, B., & Toy, S. (2021). Kentsel Mekânlarda Kadın Dostu Mekânların Güvenlik Kapsamında Değerlendirilmesi: Erzurum Kenti Muratpaşa Mahallesi Örnekleri. Kent Akademisi, 14(3), 789–810. https://dergipark.org.tr/en/pub/kent/issue/64920/935611

Kaplan, H. (1998). Redefining accessibility and space use in city centres as it regards responsive Urban Design. Doktora Tezi, Ortodtoji Teknik Üniversitesi Fen Bilimleri Enstitüsü.

Kaplan, R., Austin, M. E., & Kaplan, S. (2000). Open space communities: Resident perceptions, nature benefits and problems with terminology. Journal of the American Planning Association, 70(3), 300–312. https://doi.org/10.1080/01943306008976380

Kavanagh, A. M., Bentley, R., Turrell, G., Broom, D. H., & Subramanian, S. V. (2006). Does Gender Modify Associations Between Self Rated Health and the Social and Economic Characteristics of Local Environments? Journal of Epidemiology and Community Health, 60(6), 490–495. https://doi.org/10.1136/jech.2005.043562

Kapyaş, Ş. (2014). Toplumsal Cinsiyet Bakış Açısından Kente Bakmak. Niğde Üniversitesi İdb Dergisi, 7(1), 344–357. https://dergipark.org.tr/en/pub/nigulibfd/ issue/19754/211474

Kapyaş, Ş. (2015). Toplumsal Cinsiyet Açısından Kadın Ve Kentli Haklan. Türkiye’de Ve Dünyada Kadın Haklarının Açıklanması. Çukurova Üniversitesi Basmevi.

Kapyaş, Ş. (2016). İnsanlar İçin Kente Bakış: Dost Kentler. 2. Uluslararası Çin’den Adıyatlık’e Sosyal Bilimler Kongresi (5-7 Mayıs 2016) Kongre Kitabı: Uluslararası İlişkiler – Kamu Yönetimi- Hukuk Özel Sayısı. Ragg Pehlivanlı.

Kelly, J. R., & Ross, J. (1989). Later-life leisure: Beginning a new agenda. Leisure Sciences, 11(1), 47–57. https://doi.org/10.1080/016920409512204

Kim, H. M. (2007). Gender Roles, Accessibility, And Gendered Spatiality. Journal Of The Korean Geographical Society, 42(5), 808–834. https://koresciencearticle.ac/article/UJKG200706717316899.page

Kiper, T., Korkut, A., & Topal, T. U. (2016). Mekansal Planlamada Kadın Dostu Kent yaklaşıması. Kırk, D. (2010). Women friendly Seoul Project. Retrieved on 7.10.2021 from https://www.biztechreport.com/story/ 423-women-friendly-seoul

Kneeshaw, S., & Norman, J. (2019). Gender Equal Cities. Urbact Knowledge Hub. https://urbact.eu/sites/ default/files/urbact-genderequalcities-edition-poges- web.pdf

Kong, F., Yin, H., & Nakagoshi, N. (2007). Using GIS and landscape metrics in the hedonic price modeling of the amenity value of urban green space: A case study in Jinan City, China. Landscape and Urban Planning, 79(3–4), 240–252. https://doi.org/10.1016/j. landurbplan.2006.02.013

Köse, N., & Erkan, N. G. (2014). Kentsel Mekân Örgütlenmesinin Yapraklarının Kentsel Etkinliklere Üzerindeki Etkisi, İstanbul Ve Viyana Orneği (1. Metu Jfo, 31(1), 39–66. https://doi.org/10.4305/Metu.Jfo. 2014.1.3

Koskelo, H. (1999). Gendered Exclusions: Women’s Fear Of Violence And Changing Relations To Space. Geografiska annaler. Series B, Human geography, 81 (2), 111–124. https://doi.org/10.1111/j.1468-0467. 00067

Kul Üçüncü, A., & Karahan, N. (2016). Sağlıklı Yaşam Kuralları Öğrencilerinin Cinsiyet rolleri, Toplumsal Cinsiyet Algısı ve Şiddet Eğilimleri Arasındaki İlişkinin İncelenmesi. İtibod. Journal of the Human & Social Science Researches, 5(8). https://doi.org/10.15869/ito b.267086

Kwan, M. P. (1999). Gender And Individual Access To Urban Opportunities: A Study Using Space–Time Measures. The Professional Geographer, 51(2), 210–227. https://doi.org/10.1111/0033-0124.00158

Larson, R., & Verma, S. (1999). How children and adolescents spend time across cultural settings of the world: Work, play and develop mental opportunities. Psychological Bulletin, 125(6), 701–736. https://doi.org/10.1037/0033-2909.125.6.701

Lefebvre, H. (1991/1973). The Production Of Space. (C. D. N. Smith, Blackwell Publishing.

Lefebvre, H. (1996/1968). Writing On Cities. Blackwell Publishers.

Letherby, G. (2003). Feminist Research in Theory and in Practice. Open University Press.

Lindgren, T., & Nilsen, M. R. (2011). Safety in Residential Areas. Tijdschrift Voor Economische En Sociale Geografie, 103(2), 196–208. https://doi.org/10.1111/j. 1467-9664.2011.00679.x

Moas, J., Verheij, R. A., Groenewegen, P. P., De Vries, S., & Spreeuwenberg, P. (2006). Green space, urbanity, and health: How strong is the relation? Journal of
Efe Güney et al., Cogent Social Sciences (2022), 8: 2148418
https://doi.org/10.1080/23311886.2022.2148418

Tekinbaş, E. (2015). 978-605-65874-2-9. United Nations. https://kader.org.tr/wp-content/uploads/2018/11/kdk-uygulama-rehberi.pdf

Thomas, S. (1993). The impact of women on state legislative policies. The Journal of Politics, 53(4), 958–976. https://doi.org/10.1207/s15327728jop5304_1

Tinsley, H., Tinsley, D., & Croskeys, C. (2002). Park Usage, Social Milieu, and Psychosocial Benefits of Park Use Reported by Older Urban Park Users from Four Ethnic Groups. Leisure Sciences, 24(2), 199–218. https://doi.org/10.1080/0140020400025901158

Turkish Standards Institution. (2012). TS 12576 Şehir İç Yolları - Kaldırmın ve Yaya Geçitlerinde Ulaşılabilirlik İçin Yapısal Önlemler ve İşaretlemelerin Tasanım Kuralları. https://intweb.tse.org.tr/Standard/Standard/Standard.aspx?0811180511151080511041191101040550471051021200881104313110407309811267083103084057088117086054

Tyrøvien, L., Mänkinen, K., & Schipperijn, J. (2007). Tools for mapping social values of urban woodlands and other green areas. Landscape and Urban Planning, 79(1), 5–19. https://doi.org/10.1016/j.landurbplan.2006.03.003

Ulrich, R. (1989). Visual landscapes and psychological well-being. Landscape Research, 4(1), 17–23. https://doi.org/10.1080/01426397908705892

United Nations. (2005). World Charter For The Right To The City. http://www.urbanreinventors.net/3/wsf.pdf

United Nations. (2012). Gender Issue Guide- Urban Planning And Design. Un Habitat.

United Nations-Habitat. (2013). State Of Women In Cities 2012-2013: Gender and The Prosperity of Cities. UN.

Valentine, G. (1990). Women’s fear and the design of public space. Built Environment, 16(4), 288–303. https://www.jstor.org/stable/23286230#metadata_info_tab_contents

Valentine, G. (2002). Queer Bodies and the Production of Space. In D. Richardson & S. Seidman (Eds.), Handbook of Lesbian and Gay Studies (pp. 145–160). Sage Press.

Varna, G., & Tiesdell, S. (2010). Assessing the publicness of public space: The star model of publicness. Journal of Urban Design, 15(4), 575–598. https://doi.org/10.1080/13574809.2010.502350

Virden, R. J., & Walker, G. J. (2010). LeisureSciences Ethnic/Racial and Gender Variations Among Meanings Given to, and Preferences for, the Natural Environment. 21(3), 219–239.

Wearing, B., & Wearing, S. (1988). “All in a day’s leisure”: Gender and the concept of leisure. Leisure Studies, 7(2), 111–123. https://doi.org/10.1080/02614368800390111

Whitzman, C., Andrew, C., & Viswanath, K. (2014). Partnerships For Women’s Safety In The City:“Four Legs For A Good Table”. Environment and Urbanization, 26(2), 443–456. https://doi.org/10.1177/0956247814537580

Wigley, M. (1992). Untitled: The Housing of Gender. Sexuality and Space, 336.

Yon, A., & Namdimpolli, S. (2017). Cities For Whom? Re-Examining Identity, To Reclaim The Right To The City For Women. Australian Planner, 54(1), 33–40. https://doi.org/10.1080/07293682.2017.1297317

Yücel, I., & Kutlar, I. (2020). Türkiye’de Yerel Yonetimlerin Kadınlara Yönelik Hizmetlerinin Toplumsal Cinsiyet Açısından İncelemesi An Evaluation Of Local Government Services For Women In Turkey On The Basis Of Gender. Akdeniz Kadın Çalışmaları Ve Toplumsal Cinsiyet Dergisi, 3(1), 151–169. https://doi.org/10.33708/ktc.733045

Yuen, B. (1996). Creating the garden city: The Singapore experience. Urban Studies, 33(6), 955–970. https://doi.org/10.1080/00420989650011681
