

A RESEARCH ON RESILIENCE OF URBAN PUBLIC SPACES: THE CASE OF
GÜVENPARK, ANKARA

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ABSTRACT

A RESEARCH ON RESILIENCE OF URBAN PUBLIC SPACES: THE CASE OF GÜVENPARK, ANKARA

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Cities are constantly changing and developing within the framework of social, economic, technological and political contexts. Therefore, it is increasingly common to accept cities as dynamic and complex systems instead of predictable systems.

The strong relationship between urban planning and resilience has found itself in many different areas in the literature, for example, flexible planning strategies have been proposed in the urban planning literature to combat chaotic processes and sudden changes.

Although there are many studies about the importance and production of public spaces in the spatial planning literature, it has been observed that the number of studies on the evaluation of public spaces within the scope of resilience is quite low. Public spaces, which are one of the most important components of cities, are dynamic in nature and are in contact with many other systems connected to them.

Within the scope of the presented thesis, a research has been built on the resilience of Güvenpark, one of the most important, original and symbolic public spaces of Ankara. The terrorist attack that took place in Güvenpark on March 13, 2016 and left many dead and wounded behind was considered as a shock. With the questionnaires, it was tried to determine how the perception on the components used in defining a quality public space changed. In the conclusion part of the study, the design and policy principles that can be followed in order to make Güvenpark a more resilient public space were shared with the readers.

Keywords: Resilience, spatial resilience, urban planning, public space, Güvenpark

ÖZ

KENTSEL KAMUSAL ALANLARIN DAYANIKLILIĞI ÜZERİNE BİR ARAŞTIRMA: GÜVENPARK ÇALIŞMASI, ANKARA

Tümer Ergün, Ece

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Kentler toplumsal, ekonomik, teknolojik ve politik bağlamlar çerçevesinde sürekli değişim ve gelişim içindedir. Bu nedenle kentlerin öngörülebilir sistemler yerine dinamik ve karmaşık sistemler olarak kabul edilmesi giderek yaygınlaşmaktadır. Böyle bir belirsizlik ortamında kentlerin karşılaştığı sorunlar ve beklenmedik gelişmeler kentleri farklı şekillerde etkilemektedir.

Kent planlama ile dayanıklılık arasındaki güçlü ilişki yazında kendine pek çok farklı alanda yer bulmuş, örneğin kaotik süreçler ve ani değişikliklerle mücadele etmek için kentsel planlama yazınında esnek planlama stratejileri önerilmiştir. Kentsel dayanıklılığı oluşturanın ani ve öngörülemeyen etkileri azaltabileceği ya da ortadan kaldıracabileceği tartışmalarda sıklıkla vurgulanmıştır.

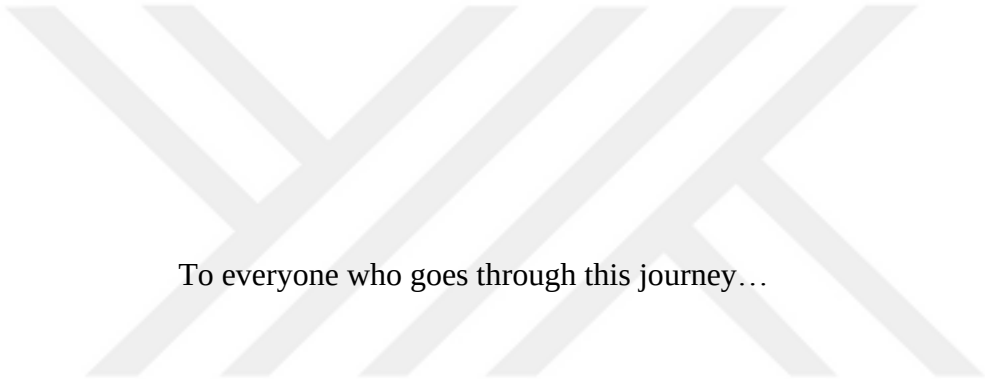
Kentlerin en önemli bileşenlerinden biri olan kamusal alanlar yapıları gereği dinamiktir ve kendilerine bağlı pek çok başka sistemle de ilişki içindedir. Kamusal alanların sağlıklı işleyişi ve gelişmesi kentlerin var olan durumuna ve geleceğine ilişkin önemli veriler barındırmaktadır. Çalışma kapsamında, şehirlerde kamusal alanlar üzerinden dayanıklılığı esas alan stratejiler üretmenin, tüm şehrin dayanıklılığını artırmada önemli bir rolü olduğu vurgulanmaktadır.

Sunulan tez çalışması kapsamında, Ankara'nın en önemli, özgün ve sembolik kamusal mekanlarından biri olan Güvenpark'ın dayanıklılığı üzerinde bir araştırma kurgulanmıştır. Güvenpark'ta 13 Mart 2016'da gerçekleşen, ardında pek çok ölü ve yaralı bırakan bombalı terör saldırısı mekanın karşılamak zorunda olduğu bir şok

olarak ele alınmış, bu olayın parkın kamusalılığı üzerindeki etkisi dayanıklılık bakış açısından incelenmiştir. Önceki ile şimdiki durumu karşılaştıran sorulardan elde edilen bilgiler ışığında Güvenpark'ın ne oranda dayanıklı bir kamusal alan olduğu üzerine düşünceler üretilmiştir. Çalışmanın sonuç bölümünde ise Güvenpark'ın daha dayanıklı bir kamusal alan olması yolunda izlenebilecek tasarım ve politika ilkeleri okuyucularla paylaşılmıştır.

Anahtar Kelimeler: Dayanıklılık, mekansal dayanıklılık, kent planlama, kamusal alan, Güvenpark





To everyone who goes through this journey...

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CHAPTER 1

INTRODUCTION

1.1. Context and Problem Definition

Cities are known as dynamic and complex systems and their size, social structures, and political and technological systems evolve continuously (Sharifi & Yamagata, 2014; Alberti, 2008 cited in Chelleri & Olazabal, 2012; (Liu et al., 2007); Holling, 1985). Each city has its own urban form, culture, history and identity, but they face with different and various problems in today's world. Rapid urbanization, population growth and climate change are the main three forces that global cities confront. In 2018, the urban population has grown 4.22 billion people accounting to 55% of the total population of the world. Projections for 2050 indicate that the total population will reach to 9.77 billion people and 6.68 billion people of this population consist of urban population (Naciones Unidas, 2019)s. As cities have urbanized rapidly, it will be needed to provide water, food, energy, transportation system, social infrastructure and job opportunities for future and current situation (Roaf, 2010 cited in Soofi, 2016). Cities should consider the ways to manage, mitigate and adapt disruptions in order to continue from a better condition after stressors and disruptions.

In the early planning literature, urban resilience seemed as one of the components of sustainability concept (Ahren, 2012). Resilience and sustainability understood as similar concepts and mostly part of sustainability agenda (Carpenter, Walker, Anderies, & Abel, 2001; Fiksel & Croxton, 2015). While there are some perspectives that resilience and sustainability are very similar in terms of their common dimensions; social, economic, ecological and spatial, there are also different perspectives that they are significantly distinct from each other (Zhang & Li, 2018). Social resilience refers to the ability of individuals and social groups to cope with

stresses and disturbances which are result of social, political and environmental changes (Adger, 2000). Economic resilience refers to the ability to overcome changes and economic shocks due to internal or external factors without losing the capacity to allocate resources in an efficient way and in the long run (Siavash, 2016). Ecological resilience embraces an ecosystem's ability to transform inactivated ecosystems into fundamentally new and more desirable equilibriums (Folke et al., 2004). Spatial resilience, as a relatively new approach compared to previous dimensions, refers to an interplay between spatial attributes of the system and the different system constituents that are included in definitions of resilience (Cumming, 2011). When all these definitions are reviewing, it is understood that resilience and cities have important links that socio-economic elements of urban are related to build and natural environment. Hence, it is crucial to deepen the resilience perspective of planners in order to support the terms and concept of resilience, and to integrate resilience concept into urban planning through planning (resilient) public spaces.

1.2. Aim of the Study and Thesis Question

This research specifically evaluates that how resilience is discussed, how this approach is evaluated over the years, how resilience approach has been integrating into the urban planning literature and how urban resilience concept can be successful for cities to survive after any disturbances by (re)planning urban public spaces. Urban resilience started to be discussed in the planning literature with the study of Holling (1973) and it has been gaining importance and awareness in urban planning literature with the term of Tactical Urban Resilience, initiatives and agendas like United Nations Sustainable Development Goals and Rockefeller's 100 Resilient Cities and movements like New Urbanists and Smart Growth.

There are many studies about resilience and urban resilience in the city planning literature. Resilience concept is discussed in the literature over three main dimensions of it; economic (Siavash, 2016), environmental (Folke et al., 2004) and social (Adger, 2000). In this research, spatial dimension of resilience is deeply discussed with other

dimensions. It is stated that spatial dimension of resilience is as effective as other dimensions of resilience to survive cities after any disturbances by planning more resilient public spaces in cities. Therefore, this research will contribute to the development of the literature on public space and resilience by combining two perspective.

1.3. Methodology of the Thesis

The driving force of this thesis is the thought of cities in Turkey cannot manage and adapt disruptions- acute and chronic shocks and stresses- to continue from a better condition after stressors and disruptions. Therefore, the questions of how has been resilience approach integrating into urban planning literature to make cities more resilient and how can urban resilience concept be a successful tool for cities to survive after any disturbances by (re)planning urban public spaces are essential in order to seek an answer. Hence, a questionnaire is conducted with 50 people in Güvenpark on the date of 19/08/2020 so as to find answers for these questions. In the scope of the case study and the questionnaire, the publicness and resilience of the area are measured by asking questions combining public space and resilience. In the public space section, the questions are asked to evaluate the situation of before after the explosion. In the resilience part, the questions are asked to evaluate the current situation. The questionnaire was processed statistically. The case study area was chosen as Güvenpark because it is located in a very important area due to its location in the center of Ankara and Güvenpark has confronted the results of the terrorist attack on March 13, 2016 until today. This terrorist attack is important because it caused an unforgettable effect on the public. It left many dead and wounded behind was considered as a shock. Hence, Güvenpark is the best case area in order to evaluate how resilient public space Güvenpark is, and to understand whether people consider Güvenpark as a resilient public space in Ankara. Therefore, before and after evaluations were conducted by using descriptive statistics and spider diagrams to evaluate the results of the questionnaire.

1.4. Structure of the Thesis

The research is structured to give a systematic way of understanding urban resilience perspective and its impact on public spaces. **Chapter 1** introduces the problem definition and the research questions of the study. It is indicated why this research is done and how it will contribute to the city planning literature. **Chapter 2** is composed of what resilience concept is, how it has evolved throughout history, how resilience infiltrated into city planning literature and how urban resilience has been interpreted in city planning in real life. A literature review is utilized in order to analyze dimensions of resilience and principles urban resilience. Hence, this informs a basic theoretical and conceptual framework of resilience and urban resilience. In **Chapter 3**, conventional and recent planning approaches discussed in order to provide a systematic way for understanding how planning has been evolving, why some approaches cannot find solutions to problems of planning and how they can be integrated with (urban) resilience approach. **Chapter 4** incorporates how public space concept is approached in city planning literature, what resilient public space is and what the impacts of resilient public spaces on resilient urban development. In **Chapter 5**, a case study is conducted in order to understand whether the integration of resilience approach into urban planning makes cities and public space more resilient after any disturbances. In conclusion, **Chapter 6** includes a roof perspective of resilience approach, evaluation of the case study, and implications for the urban planning.

STRUCTURAL AND CONCEPTUAL FLOW OF THE RESEARCH

CHAPTER 1

PROBLEM DEFINITION: Cities in Turkey cannot manage and adapt disruptions- acute and chronic shocks and stresses- to continue from a better condition after stressors and disruptions.

RQ 1: How has been resilience approach integrating into urban planning literature to make cities more resilient?

RQ 2: How can urban resilience concept be successful for cities to survive after any disturbances by (re)planning urban public spaces?

CHAPTER 2



CHAPTER 3



CHAPTER 4



CHAPTER 5

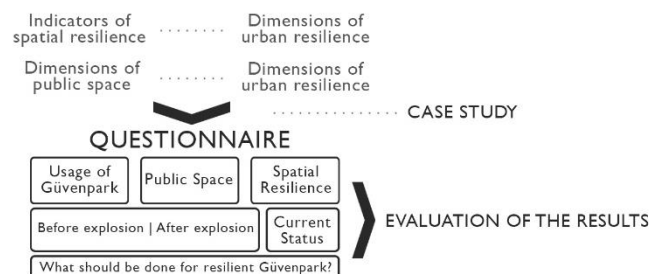


Figure 1.1 Structural and Conceptual Flow of the Research

CHAPTER 2

LITERATURE REVIEW – RESILIENCE CONCEPTUAL FRAMEWORK

In this chapter, the main objective is to provide a conceptual framework in the sense of resilience approach. Firstly, what the resilience mean is explained and then the dimensions of resilience are discussed to understand the resilience from the perspectives of each dimension. After the all dimensions of the resilience are provided, the differences and similarities of sustainability and resilience is discussed because it is accepted that resilience is part of sustainability and it is a subset of the concept of sustainability. Secondly, what urban resilience is will be discussed by providing a conceptual framework and including different resilience approaches to understand the importance of resilience concept in urban planning. Finally, components of a resilient city and differences between sustainable city and resilient city will be provided after all conceptual frameworks of resilience and urban resilience.

2.1. Resilience Concept

Resilience appears to become a buzz word since the ecological, psychological, social and economic sciences began to use it to refer to the capacity of ecosystems, people, societies, the economy, and even urban systems to cope with disturbances. In fact, it is unclear exactly what the word “resilient city” means. There are lots of definitions about what resilient exactly means, what it refers to how it changes in accordance with the current trends and developments. Hence, it can be achieved to be aware of the term of resilience is not only about environmental management but also in relation to urban planning as the contribution to the field. After analyzing many different resilience definitions and understand what exactly it is and in which conditions it can be used, how this buzz word was transformed from an engineering term to social term. Therefore, the relationship between resilience and urban can be realized the intersection of them since resilience is a social, an engineering and an institutional framework.

2.1.1. Resilience: What does it mean?

2.1.2. Dimensions of Resilience

In resilience literature, it was stated that there are three main dimensions of resilience as society, economic and the environment. Social resilience is discussed in the sense of social organizations, existing and robustness of governance system and diversity in societies. Economic resilience appears as coping with economic shocks and stresses by protecting economic resources. Ecological resilience discussed in the context of absorbing shocks, minimizing damages and protecting or healing equilibrium state of systems. Besides these three dimensions of resilience, relatively a new dimension of resilience, which is spatial resilience, is discussed in the resilience literature. Spatial resilience shows itself in the sense of spatial properties, variables and spatial variation of cities. In Table 2, the qualities of these four dimensions is stated in a detailed manner.

2.1.2.1. Social Resilience

Social resilience is a crucial component of resilience in the sense of adapting of individuals and social groups to changes. As Siavash (2016) cites that social resilience relates to institutions for social re-organization or collective action and the existence of social security. It depends on robust governance systems and it is influenced by the availability to high-quality and diverse lifestyles (Taşan-Kok et al., 2013).

From Neil Adger's (2000) definition of social resilience, as the "ability of groups or communities to cope with external stresses and disturbances as a result of social, political and environmental changes". Besides the definition of social resilience, he (Adger, 2000) also states that social and ecological resilience is related to each other because communities are dependent on ecosystem and the activities of this ecosystem. In this context, the question of "if societies are dependent on ecosystems and resources, is it possible to be less resilient because of this dependency?" arises. Therefore, being socially resilient allows societies to realize changes and how they can be less vulnerable when there are changes in societies.

2.1.2.2. Economic Resilience

Economic resilience, as the second dimension of resilience, is discussed mostly as the ability to recover from or adjust to the negative effects of economic shocks and stresses such as high rates of unemployment and discretionary expenditures or tax cuts. Siavash (2016) expresses economic resilience as it refers to the ability to cope with changes and economic shocks due to internal or external factors without losing the capacity to allocate resources in an efficient way. Briguglio et. al., (2006) indicates that the term has been utilized in three contexts in economic literature. The first sense is the ability to recover quickly from a shock which is associated with the flexibility of economic structure. *“It is enabling it to bounce back after being affected by a shock”* (Briguglio et al., 2006).

The second sense is the ability to withstand the impact of a shock which is related to absorb or reduce the negative effects of a shock. Briguglio and Cordina (2006) exemplifies this sense as *“the existence of a flexible, multi-skilled labor force could act as an instrument of shock absorption, as negative external demand shocks affecting a particular sector of economic activity can be relatively easily met by shifting resources to another sector enjoying stronger demand”*.

The third sense is the ability to avoid the shock which is considered as observing economic vulnerability. Briguglio et. al., (2006) states that it is more inherent when compared with the other senses.

2.1.2.3. Ecological Resilience

As third dimension, ecological resilience refers to a more dynamic and flexible perspective to build urban resilience (Sharifi & Yamagata, 2018). It supports “building safety margins into the design of the system in order to absorb initial shocks, retain functionality, and minimize overall losses” according to the statements of Sharifi and Yamagata (2018). Ecological resilience entails an ecosystem’s ability to sustain its desired state, its capacity to generate its services or to transform inactivated ecosystems into fundamentally new and more desirable equilibriums (Folke et al., 2004).

Moreover, ecological resilience is generally associated with social ecological systems (SES) in resilience literature. It is defined as the capacity of a system to undergo disturbance and reorganize to maintain its essential and same functions (Zurlini, Petrosillo, Jones, & Zaccarelli, 2013). From the perspective of SES, resilience is essentially to measure the amount of change that the system can absorb, to evaluate the degree of which system has a capability to be self-organized and to evaluate the system ability to build and rise the capacity to learn and adapt (Zurlini et al., 2013).

Ecologically resilient systems can also experience transition to new equilibrium states during the recovery process; however, the basic characteristics and functions of the system remains unchanged (Sharifi & Yamagata, 2018).

2.1.2.4. Spatial Resilience

Besides the three dimensions of resilience, there is relatively a new dimension as spatial systems according to Desouza and Flanery (2013). Spatial resilience is defined by Cumming (2011) as “an interplay, at different scales, between spatial attributes of the system and the different system constituents (such as elements, interactions, adaptive capacity, memory, and history) that are typically included in definitions of resilience”. Cumming (2011) also points to the importance of these variables as system size, spatial properties like connectivity and structure, and spatial variation as examples of potential resilience enhancing characteristics of great importance to spatial resilience for place based systems like cities (Desouza & Flanery, 2013).

Gharai (2018) mostly considers spatial resilience as local-spatial resilience and he states that this dimension of resilience has been recently realized by scholars. Urban local-spatial resilience indicators are associated with physical and environmental dimensions of the urban system and these indicators are also main components of the spatial organization of the city (Ziari, Asadi, Rabbani, & Molaei, 2013). The spatial organization is a network which includes elements of urban centers such as commercial and cultural centers, important transportation routes, important functional axes and major land uses. Hence, structural and functional patterns of the city constitute the spatial organization of the city (Fariba Gharai et al., 2018). These patterns create kind of a base and a background so as to apply the indicators of local-spatial resilience.

Table 2.2 Associated Qualities and Stressors of Resilience (Adapted from Siavash, 2016)

Dimensions	Qualities	Stressors
Social Resilience	Equity Empowerment Accessibility Participation Sharing Cultural Identity	Political Turmoil Public Unrest Poverty Unaffordability
Economic Resilience	Growth Development Innovation Productivity	Financial Crisis Economic Shocks
Environmental Resilience	Eco-System Integrity Carrying Capacity	Climate Change Loss of Biodiversity/Extinction
Spatial Resilience	Interactions Adaptive Capacity Memory/ History System Size	Planning a complex system Unknowability Complexity of variables

2.1.3. Differences and Similarities between Sustainability & Resilience

2.2. Urban Resilience Conceptual Framework

2.2.1. What is Urban Resilience?

The notion of resilience appeared in urban planning in the 1990s (Mileti, 1999 cited in Lu & Stead, 2013). Scholars considered resilience as the ability of a social system to withstand disturbances and to re-organize itself following disturbance-driven changes (Walker & Salt, 2012). As defined, from an engineering perspective, resilience is defined as the property of a specific material to absorb energy when it is deformed elastically and the recovery of this energy when returning to its original situation (Avallone, 2007 cited in Chelleri & Olazabal, 2012). This definition fits well with the stability properties of systems recovering after a disturbance. As resilience has been used in physics, it has also considered in psychology literature. This same principle can be used in psychology and psychiatry as referring to individual resilience (Chelleri & Olazabal, 2012) which is defined in this case as the capacity to deal with changes and events during life course transitions (Kaplan, 1999; Rutter, 1987). From the biggest scale to the smallest scale, there are interactions, intersection points and networks that can spread changes in cities (Adger, 2000). These networks do not have

to be physical or tangible. With ideas of networks, resilience comes up now considering long term consumption and continuity of performance (Stumpp, 2013). European planning has the great opportunity to widen the scope of resilience in planning from disaster risk to adaptive management and from climate change to other global challenges (Stumpp, 2013). Cities have started to face with many challenges and adversities in the 21st century such as climate change, migration, inadequate infrastructure, growing population, terror and cyber-attacks and so on (100ResilientCities website, 2019). According to 100ResilientCities, resilience helps cities to adapt and transform in accordance with expected and unexpected challenges. 100RC (website, 2019) defines urban resilience as “the capacity of individuals, communities, institutions, businesses, and systems within a city to survive, adapt, and grow no matter what kinds of chronic stresses and acute shocks they experience.” In order to build urban resilience, it is required to look at city holistically and to understand the systems that constitute the city itself, the interdependencies and risk that cities may face with. The challenges cities may face are not single shocks and stresses. Many cities confront a sort of a combination of these challenges (shocks and stresses) (100ResilientCities website, 2019).

The Rockefeller Foundation partnered with the global design firm Arup to answer some questions such as “What are the characteristics and capacities of a city that can adapt and grow in the face of these challenges? What distinguishes a resilient city from one that collapses in the face of disruption and adversity?” Extensive research and evaluation of experiences of cities around the world revealed a common set of factors and systems which can enhance ability of cities to survive, adapt, and grow in the face of adversities and challenges (100ResilientCities website, 2019). The City Resilience Framework (CRF) is created to help understand the complexity of cities, and it identifies a series of drivers necessary for a city’s resilience. The CRF describes the essential systems of a city with four dimensions: Health & Wellbeing states that “everyone living and working in the city has access to what they need to survive and thrive”. Economy & Society indicates that “the social & financial systems that enable urban populations to live peacefully, and act collectively”. Infrastructure & Environment states that “the man-made and natural systems that provide critical

services, protect, and connect urban assets enabling the flow of goods, services, and knowledge”. Finally, Leadership & Strategy states that “the processes that promote effective leadership, inclusive decision-making, empowered stakeholders, and integrated planning” according to 100RC (website, 2019).

The literature on resilience in planning has often put the emphasis on preparation and mitigation actions, especially at the local scale (Godschalk, 2003). Resilience in planning had widened to examine mitigation strategies such as reducing greenhouse gas emissions and addressing climate change. Necessarily be the same as the state before a disturbance occurred. Ecosystem resilience (Holling, 1973, 1985) moved afterwards to include social-ecological systems (Berkes, Colding, & Folke, 2008; Berkes, Folke, & Colding, 2000) emphasizing the management dimension (Folke, Hahn, Olsson, & Norberg, 2005). The key point in this evolution is the shift from the recovery to the transformation principle in adapting to disturbance. In fact, Holling (1973) defines ecosystem resilience as adapting to disturbance without losing identity, existing structure and functions.

New approaches as non-linearity, uncertainty or self-recovery or self-organization create another shift in urban resilience concept (Levin, 1999 cited in Chelleri & Olazabal, 2012). Ecological recovery was shifting into a more complex paradigm as a result of interactions with human system as Lorenzo Chelleri and Olazabal (2012) indicates. Natural and social systems maintain a kind of synergetic and co-evolutionary relationship (Berkes and Folke, 1998 cited in Chelleri & Olazabal, 2012) and thus, the resilience of ecological systems depends on the dynamics of social systems (Chelleri & Olazabal, 2012). According to Jabareen (2013), studies of urban resilience overlook the multidisciplinary and complex nature of the notion of resilience and use the term with limited understanding. Focusing on a single or small number of contributing factors to urban resilience can easily lead to the exclusion of important characteristics which affect the performance of a city from the resilience perspective since resilience has a variety of social, economic, cultural, environmental and spatial dimensions (Jabareen, 2013). The most promising and challenging advance of the resilience approach applied to cities is the notion that not everything can be planned (Churchill,

2003) because of the dynamic and highly complex nature of urban areas (Alberti, 2008 cited in Chelleri & Olazabal, 2012).

In here, the important point is believing mistakenly that planning and resilience are completely different from each other in the sense of uncertainty. They do not match very well as Stumpp (2013) specifies, but they try to predict future challenges and try to take precautions against possible struggles, disasters and challenges which can come to exist in the possible and projected future. In this dynamic and uncertain system, complexity of resilience comes from its components and their relationship among them. As Siavash (2016) indicated that resilience can help to integrate and bridge social, economic and environmental issues in planning processes that can shape and monitor changes or disturbances. In that sense, Siavash (2016) cites that redundancy and efficiency, diversity and interdependence, strength and flexibility, autonomy and collaboration, planning, and adaptability are attributes of urban resilience (Godschalk, 2003).

Table 2.3 Attributes of Urban Resilience (Adapted from Godshalk, 2003 and Tasan-Kok et al., 2013 in Siavash, 2016)

Attribute	Definition
Adaptability	To have the capacity to learn from experiences and the flexibility to change.
Autonomy	To have the capacity to operate independently of outside control.
Collaboration	To create multiple opportunities and incentives for broad stakeholder participation.
Connectivity	The degree to which nodes of a network are directly linked; nodes can be either physical or social.
Flexibility	The ability or capacity for a system or organization to change or react to a disturbance or stress.
Recovery	The ability of a system to recover from a disturbance and respond in response to it.
Redundancy	To have a number of functionally similar components or spreading capacity among different systems, so that the entire system(s) does not fail when (if) one component or system fails.
Robustness	The ability to withstand a given level of stress without suffering degradation or loss of function.

2.2.2. Relationship between Urban Resilience and Approaches in Resilience

Resilient ecological perspective (recovery, functions, structure and identity) is shifting into a more complex paradigm. Demonstration that the interactions with human systems were the primary reasons for expected changes after a disturbance (Scheffer, Carpenter, Foley, Folke and Walker, 2001 cited in Chelleri, 2011). In order to sustain and protect the balance of system equilibrium, Chelleri (2011) states that natural and social systems can maintain a kind of synergistic relationship and that the resilience of systems strictly depends on the dynamics of social systems.

Moreover, the literature does not just focus on mitigation but also on adaptation, with the realization that mitigation is often not sufficient to prevent some disturbances from occurring. It is stated that resilience as a system's ability of short-term coping and long-term adaptation (Engle, de Bremond, Malone, & Moss, 2014). Hence, resilience has started to be considered in terms of adaptive cycle (Folke, 2006; Gunderson & Holling, 2002; Walker, Holling, Carpenter, & Kinzig, 2004) while focusing on the dynamics of systems (ecosystems, societies, and economies). While adaptation and mitigation are both important for dealing with the impacts of climate change, they are not necessarily integrated because they do not always work in the same direction (Chelleri, 2011). Using the concept of the adaptive cycle, the notion of resilience can be expressed in terms of a system's robustness and rapidity (Lu & Stead, 2013). Robustness of a system can be determined according to its strength to carry and absorb uncertain disturbances while its rapidity refers to the flexibility to rearrange itself into a new stable state after a collapse occurs (Lu & Stead, 2013). In this context, it is asserted by Lu and Stead (2013) that the performance of city's resilience is represented in terms of preparations (robustness) before the occurrence and its reaction to and management of the disturbances. The new condition of a city may not necessarily be the same as the state before a disturbance occurred as Lu and Stead (2013) indicates. In addition to robustness that can be expressed as mitigation and rapidity which can be called flexibility or adaptation, scholars have also discussed the notion of resilience in terms of characteristics such as redundancy, diversity, efficiency, autonomy, strength, interdependence, adaptability and collaboration (Godschalk, 2003). According to

Folke et al., (2010), change is an important dynamic for resilience and social change is also essential for social-ecological systems (SES) resilience as social-ecological system refers to integrated systems of ecosystem and human society within a reciprocal process and it emphasizes the humans-in-nature perspective (Folke et al., 2010).

Adaptability and transformability are the two main properties of SES (Folke et al., 2010). Adaptability captures the capacity of SES to learn, combine experience and knowledge, adjust its responses to change external factors and internal processes and continue developing within the current stability (Berkes et al., 2008). Adaptability is also defined as “the capacity of actors in a system to influence resilience” (Walker et al., 2004). It is argued before resilience is a dynamic and complex system and evolution and development of dynamic systems is symbolized by the concept of adaptive renewal cycle (Holling, 1985). According to this model, systems evolution can be expressed as a dynamic cycle of growth, conservation, collapse and reorganization phase.

Contrary to engineering approach of resilience, system or equilibrium can collapse in social-ecological systems because adaptations and transformations occur during processes (Chelleri, 2011). By contrast to adaptability, transformability is defined as “the capacity to create a fundamentally new system when ecological, economic, or social structures make the existing system untenable” (Walker et al., 2004). It is also expressed as “the capacity to transform the stability landscape itself in order to become a different kind of system, to create a fundamentally new system when ecological, economic, or social structures make the existing system untenable” (Folke et al., 2010).

2.2.2.1. Adaptive Cycle Approach

Resilience is a concept discussed in various fields like psychology (Kaplan, 1999; Rutter, 1987), ecology (Folke et al., 2004; Sharifi & Yamagata, 2018; Zurlini et al., 2013), economics (Briguglio et al., 2006; Siavash, 2016), social sciences (Adger, 2000; Siavash, 2016; Taşan-Kok et al., 2013), engineering (Holling, 1973), planning (Cumming, 2011; Desouza & Flanery, 2013; Fariba Gharai et al., 2018; Ziari et al., 2013) and disaster management as mentioned in previous parts of the study. Holling (1973) states that resilience shows the ability of the system to absorb changes and cope

with these changes. How the system is going to work after ant disturbances is the base of Holling's thought of resilience.

In addition to the Holling's perspective of resilience (1973), Berkes and Folke defines resilience as a measure of robustness and protecting the system against changing situation (Folke et al., 2004). Hence, the system is considered as absorbing shocks, getting unstable and reaching a new equilibrium.

After these two resilience perspectives, adaptive resilience approach is established in the light of complex adaptive theory which states 'self-organizing behavior and adaptive capacity', responding to shocks in order to decrease the impacts of these shocks and stresses (Aytac, Arslan, & Durak, 2016). He visualizes the cycle as infinity symbol in order to show different phases of the system (Figure 2). In the study of Folke et. al. (2010), adaptive cycle (Figure 2) is defined as;

"The common trajectory is from a phase of rapid growth where resources are freely available and there is high resilience (r phase), through capital accumulation into a gradually rigidifying phase where most resources are locked up and there is little flexibility or novelty, and low resilience (K phase), thence via a sudden collapse into a release phase of chaotic dynamics in which relationships and structures are undone (Ω), into a phase of re-organization where novelty can prevail (α). The r-K dynamics reflect a more or-less predictable, relatively slow "fore loop" and the Ω - α dynamics represent a chaotic, fast "back loop" that strongly influences the nature of the next fore loop. External or higher-scale influences can cause a move from any phase to any other phase".



Figure 2.2 Adaptive cycle diagram (Holling and Gunderson, 2002)

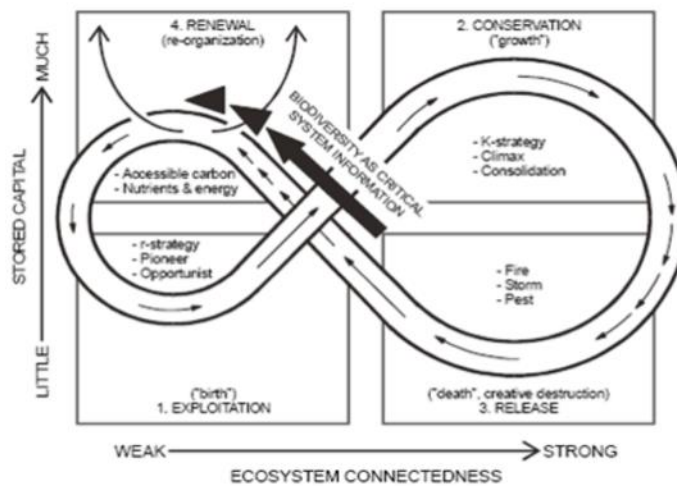


Figure 2.3 Phases of adaptive cycle (Holling and Gunderson, 2002)

This system creates an interaction between actors in the system. Therefore, the system can absorb shocks and reorganize its own structure (Dolega & Celińska-janowicz, 2015). In that sense, adaptive resilience is associated with Holling's adaptive cycle study. He identifies four different changes in the system as growth, conservation, release and renewal (Figure 3). He also argues that cities can reflect adaptive cycle of resilience because cities change continuously depending on social, economic, political and planning perspectives and they do not return to the previous condition (Salgueiro & Erkip, 2014).

2.2.2.2. Learning from Experience/Past Approach

Studies of resilience also highlight the importance of learning from experiences both positive and negative (successes and failures), and identifying how to improve planning and prepare for future disturbances (Gerard, 2011; Gerard, Christian, Thomas and Carsten, 2011; Hutter, 2010; Bernhard, 2010 cited in Lu & Stead, 2013). Foster's study (2007) of regional resilience indicates resilience performance in terms of two properties: Preparation resilience and performance resilience. They can be divided by before and after disturbances.

In this study (Foster, 2007), the "before" indicates the ability to assess and be ready for possible disturbances and the "after" refers to resilience actions after a system failure. In the preparation stage, it can be explained as decisions are made regarding issues of assessment and ensure a system is ready in terms of risk management for instance, monitoring current conditions, producing future simulations and investigating possible solutions for future risks (Lu & Stead, 2013).

At the performance stage, Lu and Stead (2013) asserts that policy-making focuses on issues of response and recovery. In this stage, it can be understood which abilities addresses to react and retain the basic functions of a city and to propose redevelopment strategies for recovery process. These two different stages can be interlinked, which is not always the case according to Lu and Stead (2013). They may not necessarily develop in a parallel way.

In preparation stage, policy-making process can be focused while in another, it may emphasize on the performance stage or both (Lu & Stead, 2013). Cases can focus on one of them or both at the same time during being resilient cities in that sense responding the concepts of maintaining, recovering and looking for equilibrium as Chelleri (2011) indicates. With multi equilibrium states, what resilience could mean can be approached with complex systems (Holling, 1987).

2.2.3. Components of a Resilient City

When we think about all components of a city, it can be argued that they are not equal. People, as components, play the most critical role as they determine the creation, governance and maintenance of all other components (Desouza & Flanery, 2013).

People, activities, and institutions as social sphere and physical resources and processes as physical sphere of the components of a city interact with each other and they can bring a city to life and enable for the creation of value for its permanent and temporal residents.

In order to build a city's resilience, systems must be designed and functioning in a way that they can withstand, respond to and adapt more readily to shocks and stresses. The CRF builds on decades of research on resilient systems, and identifies 7 characteristics that various city systems need (100ResilientCity website, 2019). Table 2.4 shows these characteristics of resilient systems in a detailed way and what they mean in accordance with 100RC (website, 2019).

Table 2.4 Characteristics of Resilient Cities (Systems)

Characteristics	Icon	Definition	Intersections
Reflective		Using past experience to inform future decisions - Individuals and institutions that are reflective use past experience to inform future decisions, and will modify standards and behaviors accordingly.	Reflectiveness and resourcefulness are about the ability to learn from the <u>past</u> and act in times of crisis.
Resourceful		Recognizing alternative ways to use resources - Resourceful people and institutions are able to recognize alternative ways to use resources during crisis in order to meet their needs or achieve their aims.	
Inclusive		Prioritize broad consultation to create a sense of shared ownership in decision making - Inclusive processes emphasize the need for broad consultation to create a sense of shared ownership or a joint vision to build city resilience.	Inclusive and integrated relate to the processes of good governance and effective leadership that ensure investments and actions are appropriate, address the needs of the most vulnerable and collectively create a resilient city – for everyone.
Integrated		Bring together a range of distinct systems and institutions - Integrated processes bring together systems and institutions and can also catalyze additional benefits as resources are shared and actors are enabled to work together to achieve greater ends.	
Robust		Well-conceived, constructed, and managed systems - Robust design is well-conceived, constructed and managed and includes making provision to ensure failure is predictable, safe, and not disproportionate to the cause.	Robustness, redundancy, and flexibility are qualities that help to conceive systems and assets that can withstand shocks and stresses as well as the willingness to use
Redundant		Spare capacity purposefully created to accommodate disruption - Redundancy refers to spare capacity	

Table 2.5 Characteristics of Resilient Cities (Continoued)

		purposefully created to accommodate disruption due to extreme pressures, surges in demand or an external event. It includes diversity where there are multiple ways to achieve a given need.	alternative strategies to facilitate rapid recovery.
Flexible		Willingness, ability to adopt alternative strategies in response to changing circumstances - Flexibility refers to the willingness and ability to adopt alternative strategies in response to changing circumstances or sudden crises. Systems can be made more flexible through introducing new technologies or knowledge, including recognizing traditional practices.	

Activities may involve people and institutions considering physical resources. The physical and social spheres can overlap and the existence of people and activities within a city occur when coming together of the physical and social spheres (Desouza & Flanery, 2013). As Desouza and Flanery (2013) exemplified, when we think of parks or other public spaces in a city, the interactions among the physical and social realms can be seen. It can be seen interactions across people (the visitors), activities (walking, sitting), institutions (park services), processes (securing a vehicle permit) and resources (artifacts within a park). Each of these components interacts in multiple intended and unintended ways, giving rise to the overall essence and spirit of the environment (Desouza & Flanery, 2013). In the sense of resilience at the component level requires to pay attention to several significant issues.

2.2.4. The Difference between Sustainable City and Resilient City

The concept of sustainability is discussed within the context of cities and urban development in 1987 with the publication of the report of World Commission on Environment and Development, the Brundtland Commission. It is argues that sustainable development intends *“meeting the needs of the present without compromising the ability of future generations to meet their own needs”* (UN. Secretary-General, 2000). It is emphasized that protection of the environment, economic growth and social justice are main features of sustainable development and

it specifies there is a balance among these features. Strategies to provide the best practices for transportation, green structures and dense housing development brought sustainability perspective with it.

While sustainability concept has been developing, some authors have analyzed the concept of resilience and they argue that resilience reflects a system quality to be stable against a disruption (Anderson, 2011). Newman (2009) interprets resilience as a city that has an ability to reduce dependency of oil or that has an ability to propose ways to shift renewable fuel resources. Anderson (2011) states that although their focus of resilience is on one dimension as energy, social and economic resilience of cities is also crucial to be considered so as to continue the functions of a city after any disruption.

The term resilient cities has been discussed in the literature within the last five years. It emphasizes on cities that can “absorb disturbance and still retain its basic function and structure” (Walker & Salt, 2012). The criticism of sustainability is that the concept of sustainability optimizes for current conditions. It is not enough to recognize conditions changed while resilience thinking can consider the inevitability of change and the ability of urban system to recover from disturbances (Anderson, 2011).

In resilient cities, it is considered that social system can also respond as well rather than just considering how ecological systems respond to disruption according to Walker and Salt (2012). It is stated that resilience thinking can prepare for the next crises (Newman, 2009). This is the main difference that resilient cities can realize the possible disruptions that cause crises in cities and they can be aware of how they can adopt their strategies and cope with these problems.

2.3. Conclusion

The overall aim of this chapter is to provide a conceptual framework in the sense of resilience approach. Resilience appears to become a buzz word since the ecological, psychological, social and economic sciences in the literature. The term of resilience shows itself as an engineering and ecological term in the beginning; resilience is about adapting and reducing vulnerability (Chelleri, 2011). It is basically the capacity of any

system to deal with external changes whilst maintaining its structure, functions and identity as (Holling, 1973) indicates. There are 4 dimensions of resilience and the fourth dimension (spatial resilience) is discussed in the literature newly. The important part in this chapter is the difference and similarities of resilience and sustainability because resilience and sustainability are terms that have both common points, differences and terms that they can be used in an interchangeably. Some researchers also believed that urban resilience is to be different named sustainability in the literature. In order to understand the aim of the thesis, it is very important to understand the differences of sustainability and resilience. Basically, sustainability tries to achieve to increase quality of life as focusing on environmental, social and economic approaches while resilience is more dynamic, non-linear and cross-linked that can be said as more complex and it embraces uncertainty compared to similar terms and concepts. The notion of resilience appeared in urban planning. Scholars considered resilience as the ability of a social system to withstand disturbances and to re-organize itself following disturbance-driven changes. Hence, resilience become a more dependent and systematical concept in the literature. In order to understand the importance and story of resilience in the urban literature, the approaches in urban resilience was discussed. Hence, how resilience starts to be part of urban resilience can be understood and analyzed to provide a systematic overview. Lastly, after realizing the difference of resilience and existence in urban literature, their combination as resilience city is emerged and a descriptive structure was provided to see the reflections of resilience in cities. Hence, components of resilient city and the differences between sustainable cities and resilient cities were discussed to show that durability is a concept in its own right in this chapter.

CHAPTER 3

URBAN RESILIENCE AND URBAN PLANNING

In this chapter, an historical framework of urban planning is provided in order to understand when and how resilience concept is integrated into urban planning by discussing conventional and recent planning approaches. After this historical framework, integration of resilience approach into urban planning is discussed in order to understand the impacts and importance of resilience approach into urban planning.

3.1. Conventional Planning Approaches

Planning is a process of preparing systematic action programs in order to achieve the desired goals for the future and plan can be defined as a method developed to achieve a goal or a formulation of action programs (Ersoy, 2017). When the term of planning is discussed with its broad definition, it is stated that planning involves three essential characteristics. The first one is that planning is a design referred to the future. The second states that planning is implemented to reach specific goals/aims and the third feature is relating to creating a systematic action string (Ersoy, 2017).

As Ersoy (2017) states that the need for planning in modern eras has increased greatly. Levy (1997) emphasizes two important points that answer the question of why we need planning; the dependence of relationships and the complex structure of them. It is important to indicate that planning is a multi-dimensional concept (Ersoy, 2017). Different concepts come together and define different planning approaches. In that sense, rational comprehensive planning, incremental planning, and advocacy planning will be defined and it is also discussed their deficiencies in order to argue in the next parts why the term of resilience was infiltrated into urban planning and why this term is crucial to urban planning.

3.1.1. Rational Comprehensive Planning

Rational comprehensive planning (RCP) is the most written and discussed one in the whole urban planning approaches. It can be also argued that rational comprehensive planning has been still remaining on the agenda. This approach, whose roots date back to the beginning of the 20th century, has being developed and it has become the most widely used planning approach as Ersoy (2017) indicates. According to him, RCP is a kind of a policy guide prepared by a local government unit and used to make decisions on the physical development of the settlement. It is indicated that the comprehensive plan is seen as a document showing how city managers want their settlements to develop in the next 20-30 years. It is approached to RCP as a multi-dimensional guideline prepared on the basis of the future aims and desires of the society and it demonstrates how the settlement will take place if they are fulfilled (Gerckens, 2001 cited in Ersoy, 2017). In this context, RCP is a single program that integrates not only physical but also social, economic and political functions in their mutual relations according to Ersoy (2017).

It is also believed that the spatial development of a settlement in the future in terms of the comprehensive plan concept can be predicted in advance and that it can be formulated in a comprehensive manner based on generally accepted values in society (Ersoy, 2017). All alternatives and their implications are considered with comprehensive planning and it is assumed that those most compatibles with the predetermined objectives selected before will be chosen (Camhis, 1979).

It can be also argued that the feature of being general or comprehensive of RCP can be emphasized as it is necessary to develop the whole settlement rather than detailed descriptions of certain parts of the city (Ersoy, 2017). He also states that RCP involves long term plans and these plans try to predict the changes/transformations that the city may face in a period of 15-20 years. It includes the perspectives to be developed regarding the solution of the problems that may occur during this period.

As critiques of RCP, public participation is neglected during decision making process. The rest was controlled by planners without any public participation. At the end of the

process, it is thought that the result was good and efficient (Stramrud, 2017). In other words, RCP is excessively centralistic (McLoughlin, 1969). Moreover, since the planner was sure what the public interest was during the process of analyzing scientific data, the planner is the only expert in rational comprehensive planning. Davidoff (1965) indicates that it is impossible stay neutral during decision making process since planning process was based on desired future or objectives. It is thought that the planner was well-suited to solve problems of planning without any participation and interference from the public (Stramrud, 2017).

3.1.2. Incremental Planning

Incremental planning is born as a criticism against rational comprehensive planning and it was developed by Lindblom in the second half of 1950s. Linblom (1959) specifies that the way which rational comprehensive planning defends is not simple to be implemented in the real life and it is not open to reconciliation. Discussing unnecessary targets, collecting unnecessary data, being impossible to identify all alternatives make rational comprehensive planning difficult to implement and cause a loss of time and resources according to Ersoy (2017). Therefore, Lindblom (1959) states that it will be a successful way to get rid of hypothetical obsessions and specify the path in accordance to the reaction of each step.

According to Ersoy (2017), it is not possible to predict what is encountered, and RCP is not meaningful, necessary and available to the present day thus, radical and punctuated change predictions are not realistic enough. What needs to be done is to suggest policies which will gradually revise the system's deficiencies in small steps instead of suggesting radical changes in the existing system. Hence, applicability can be increasing because there is no need to specify new and different values and aims. In incremental planning approach, it is important to focus on the existing situation and the progress is continuing step by step because it is believed by Ersoy (2017) that mass projects can cause to stumble. Thus, planning action should be sustained step by step and in a consistent way as incremental planning approach proposes.

As concluded, there are some critiques about incremental planning approach. Firstly, incremental planning approach has criticized in terms of wasting time and money and uneven policy process (Atkinson, 2017). Since the progress of each step is continuing step by step, the process is slow and thus, budgeting becomes a problem due to its long-term process. Additionally, it is stated that each phase of the process in incremental planning is rigid and there is a possibility not to overlap each other (Atkinson, 2017). The process may be reviewed continuously, solutions may not be optimized and thus, the budget problems may be emerged in this context.

3.1.3. Advocacy Planning

Advocacy planning is stated as the defense of interests excluded in urban planning process (Kaplan, 1973 cited in Ersoy, 2017). Davidoff (1965) defines advocacy planning that urban planners participate in the planning process as representatives of groups that are not negotiable in the community. Planners are defined as the defenders and the negotiators on their behalf. In other words, Ersoy (2017) indicates that advocacy planning approach, especially in a pluralistic society, emphasizes the need to ensure the defense of the interests of the neglected and vulnerable parts of the city and the participation of the planners in the planning process.

Moreover, Davidoff (1965) indicates that the monopolistic position of the rational comprehensive planning approach prevailed in the 1960s made it difficult to participate in the planning process. It was believed that a single official planning unit as the only decision-maker cannot represent the common interests of a city consisting of different and conflicting social groups. In this context, the function of the planning should be to support egalitarian pluralism by defending the interests of those who are powerless (Ersoy, 2017).

In Davidoff's article (1965), he argues that instead of a single comprehensive plan to be prepared by the official planning unit, multiple plans should be made and presented to the public for consideration of the interests of different segments of the city in accordance with the pluralistic social structure (Ersoy, 2017). Furthermore, Davidoff (1965) states that advocacy planning approach ensures the neglected and excluded

groups of cities will be included in the planning process while they will relieve them of the alternative plans at the same time. Advocacy planning aims a bottom-up movement in terms of influencing the planning process (Ersoy, 2017).

As critiques of advocacy planning, it is criticized that the process of making different alternative plans may be ineffective and time consuming in advocacy planning approach (Stramrud, 2017). Additionally, preparing alternative plans in accordance with minority groups and the disadvantaged may directly involve these groups in political fights. This can take the energy. Furthermore, decision making process in advocacy planning was carried on personal values of different people in different groups. Plural values can make impossible for planners to combine groups' values and their own values and beliefs because there are many views. It is also argued as a critique of advocacy planning that advocating for small and disadvantaged groups is expensive and it can be understood as the process is served mostly to the poor (Stramrud, 2017).

Table 3.1 A summary of the main features of conventional approaches to planning
(Sharifi & Yamagata, 2018)

Planning Theme	Conventional Approaches
Disaster risk management	- Focus on short- and medium-term emergency planning and mitigation efforts - Target fast variables, and chaotic and abrupt changes - Static vulnerability assessment
Planning vision and strategy	- Blueprint planning (linear and static) - Engineering approaches that emphasize eliminating risk - Equilibrium approach to disaster recovery - Predict and prevent approach
Public participation	- Environmental determinism - Limited public participation
Learning from traditional local knowledge	- Overreliance on modern planning and design strategies - Spread of standardized building techniques
Resilience-oriented land use planning	- Limited success in protecting ecologically-sensitive areas - Functional zoning
Resilient urban infrastructure	- Overreliance on robustness - Large, centralized infrastructure

3.2. Recent Planning Approaches

The change in economic and social life and insufficient planning approaches have led introduce new models and needs with the differentiation of human quality. This change can also be explained with the process of change from the industrial society to the information society (Armatlı K ro lu & Yılmaz, 2004). They (2004) asserts that the system was based on a community composed of individuals who are trying to maximize their own interests according to 1980s' liberalism. Low (1999) argues that human rights problems and responsibilities have also differentiated with these changes in the view of human quality. It means individuals have responsibilities as much as rights in society. Participation in political, legal and cultural institutions is important in ensuring the order and balance of private and public activities in society (Low, 1999). Thus, a new social power emerged in the community except public administration and capital.

Problems, potentials and solutions have become more diverse and creative in a communicative environment with the participation of different actors (Armatlı K ro lu & Yılmaz, 2004). Therefore, when everyone affected by the planning is included in planning process, local knowledge will be involved in the process and different groups will be directly represented during planning. In this context, planning is being considered as a learning and communication process. Since the ideas of everyone who will be affected by the decision are involved in the process, new and common interests and projects can be defined in the process, and the decision-making process can become a communication and partnership process according to Armatlı K ro lu and Yildiz (2004). In that sense, new power relations can be emerged and while Crosby and Bryson (2005) define these new power relations as the division of power, Friedmann (1992) defines power to make strong the weak.

In this part, strategic spatial planning approach and collaborative planning approach of Healey with the concept communicative perspective of Habermas will be discussed in order to discuss the effects of recent planning approaches, their deficiencies, and whether they find a place in resilient planning perspective or not.

3.2.1. Collaborative Planning Approach

Modern planning thought is seen as a progressive force for social and economic development in a world where democracy and capitalism are in an agreement (Friedmann, 1987; Healey, 1997). “The contemporary idea of planning is rooted in the enlightenment of modernity” according to Healey (1992). It is stated by Ersoy (2017) that the stance against systematized mind and planning process affected modernity and it is called “postmodernity”. In modernist perspective, rationality is interpreted as a tool to get information. Contrary to the modernist approach, according to Habermas (1984), rationality reflects a relation between subject and object and it provides a reasoning method for subjects to communicate between each other (Ersoy, 2017). Habermas (1984) proposed that reality is existing, but it is hidden in society and we can realize the reality in society with the help of language and action. In that sense, it is also stated that planners were not neutral beings (Forester, 1982 cited in Machler, 2016). They may have a tendency to translate problems in a harmless way. Hence, information is distorted because of the word choices and communication ways of planners even if they were not aware of it.

In this context, Habermas (1984) offers a way to reduce or avoid this communication problem. He suggested that we should know where knowledge comes from or how they affect society. Well-managed dialogue about a problem can solve this communication issue while people confront with each other, try to understand one another (Innes and Boher, 2010 cited in Nohrstedt, 2015), and acting together (Healey, 1992). Healey (2003) also asserts that democratic pluralism should take place in diverse urban life. Therefore, a process route, which is exploring the communicative dimensions of collectively debating and deciding on matters of collective concern, offers a different way as a dominance of a position according to Healey (1992). In that sense, the post-modern idea of planning is managing collective concerns in communicative forms of planning.

In the thought of Healey (1992), planning is reformulated to provide a framework of rules to ensure collectively experienced impacts. Because there are different values,

thoughts and perspectives in societies, planning should include different moral or aesthetic principles that is why planning can be directed to realizing these principles (Healey, 1992). Also, planning has a role to regulate the principles of individuals in order to prevent individuality in planning route. A holistic approach is adopted in this post-modern idea of planning to decrease the effects of cleavage in society like gender and race (Healey, 1992). Hence, planning allows more space for cultural issues – moral and aesthetic. In that sense, post-modernist approach in planning helps to make sense together while living differently.

In the aesthetic manner, (Healey, 1992, 1997) also specifies that differences are again important because there are different people and perceptions. Healey (1997) states that if cultural communities with different priorities and perspectives share the same space, they discuss how common problems and opportunities, caused by their co-existence, are evaluated. Enjoyment of differences, individuals and their thoughts and living together are backbone of this new planning approach. In her study (1997), Healey proposes an inclusionary approach that develops cooperative, multicultural communication and learning capacity that enhances mutual understanding and trust relationships. The role of planning here is specifying and protecting the boundaries and improving the awareness of these differences.

As Habermas (1984) argues, communicative rationality defends pluralist conceptions- “living together but differently” in shared space and time by finding an agreement on how to act in the world to address our collective concerns. Hence, as a communicative action, planning gives a chance to choose during the debate. In this collective and interactive environment, Healey (1992) indicates that environmental planning had been understood as a process for addressing how to act in respect for shared concerns about how to manage environmental change. We share common environment and so that we should realize how we can line in shared space while respecting to each other. These environmental issues create contemporary common sense according to Healey (1992) so, the contemporary rediscovery of environmental planning is filled with a widespread concerns like managing economic development, avoiding polarizing,

positive attitude to the natural environment and respecting and sustaining of long-term ecological balances.

3.2.2. Strategic Spatial Planning Approach

Spatial planning has started to include new planning approaches and methods since 1980s. Traditional planning approaches has starting to be criticized about being insufficient to new facts and problems especially in big cities (Akyol, 2018). According to the perspective of master plan, there is a desired future and master plan is fixed in order to reach this desired future. In rational comprehensive planning, a master plan defining the place of the city, trying to understand the physical, social and economic structure, and based on research and analysis is produced (Ersoy, 2017). Hence, implementation plans of the whole city are prepared on the basis of this master plan (Ersoy, 2017).

As a result of globalization, while the competition among cities seeking to attract global capital has increased rapidly, new networks can appear because of interactions (Akyol, 2018; Ersoy, 2017). This kind of an improvement affected planning and it necessitated planning to evolve towards a flexible and dynamic model where stakeholders such as capital and non-governmental organizations are more involved (Ersoy, 2017). It is identified that there are multiple and major stakeholders as public and private in strategic spatial planning process (Bryson, 1988). Therefore, this allows a broad and diverse involvement during the planning process as Albrechts (2006) indicates.

It is asserted by Ersoy (2017) that the competitive environment for locals can be reached only by providing all segments of society for participation to the process. With a broadly participatory approach, it is recommended that they establish a forward vision in relation to their settlements. Then, they develop appropriate strategies to implement this vision and formulate the city's high-scale decisions within this framework (Ersoy, 2017). In strategic spatial planning process, a long-term and more realistic vision and strategies can be developed at different levels (Albrechts, 2006).

In strategic spatial planning, it is stated that strategic action refers to a set of responses to the decisions taken by other actors in the market (Albrechts, 2006; Bryson, 1988; Ersoy, 2017). It can be also argued that road to the desired future includes uncertainties and surprises (Akyol, 2018; Ersoy, 2017). However, it can be possible to reach success if we have a plan which includes strategies that can adjust these uncertainties during the process. The desired future is called vision in strategic planning and some decisions are more crucial on the road to vision or “strategic decision” (Ersoy, 2017). In this context, he states that proposed strategic plan describes a way to the desired future, helps to build new ideas (Mintzberg, Ahlstrand, & Lampel, 2005) and carries people and cities forward (Mintzberg, 1994, 2002). Albrechts (2006) indicates that the terms “spatial” refers “where of things” in the consideration of whether static or dynamic. Hence, it is important to realize significant intersections and nodes in an area (Albrechts, 2006).

As Bryson and Roering (1987) states that strategic spatial planning has some distinctive characteristics as; being action-oriented, supporting participation of wide and various actors, considering both opportunities and threats in the external environment and strong and weak features in the internal environment, and lastly paying attention to existing and potential competitors in the environment. In that sense, a process design is carried out for the specific city which conducts each strategic planning activity (Ersoy, 2017). This process design is unique and it should be flexible against new conditions.

It can be indicated that strategic spatial planning is not a pocket program. There can be different strategic planning approaches and each plan may not give the same result in the same case (Akyol, 2018). Moreover, Akyol (2018) makes comparisons between long-term planning approach and strategic planning approach. In long-term planning approaches, planners have a tendency to accept that the current situation will be going on. However, in strategic planning, planners expect new tendencies and surprised changes. In that sense, goals and actions can be changed during the process. On the contrary, long-term approaches require an agreement that includes a work program

related with the predetermined purpose, aim, budget and tools (Çamur, 2005 cited in Akyol, 2018).

As a result, what is important here is not only the social structure of the country but also its economic and cultural structure. It can be argued that planning policy will increase the chances of success. In this case, Akyol (2018) states that it is necessary to bring the results of the actions in accordance with the structure for the success of strategic spatial planning. Albrechts (2006) cites that strategic spatial planning focuses on decisions, actions, results and implementation. Finally, it contains monitoring, feedback and revision (Albrechts, 2006).

3.2.3. Tactical Urbanism

Cities have been a familiar issue for urban planners as well as it is a challenging over the years (Silva, 2016). Planners have been starting to have some difficulties in providing adequate solutions to cities. As such, new planning paradigms is on the agenda in urban planning. Subsequently, urbanists started to question existing approaches of urban and spatial planning. According to the study of Christopher Alexander, it is believed that a city's life and citizens' behavior are not organized in "a rigid, hierarchical and mono-functional way" (Silva, 2016). Therefore, alternative searches for city's approach established a new paradigm in terms of planning theory and practice.

Tactical urbanism and DIY Urbanism arose in that moment. The initiatives of tactical urbanism are a good example to reflect bottom-up processes which is not discussed in conventional planning. As Allmendinger and Tewrdwr-Jones (2000) indicates that uncertainties are one of the most challenging tasks in urban planning due to the complex structure of cities. Tactical urbanism does not have a specific description because it has different interventions in cities (Silva, 2016) because of complexity. It reflects different qualities because it can occur at different scales in cities (Marshall et al., 2016) by including "temporary" interventions. The scope of tactical urbanism also

extends to a specific field of urbanism, such as traffic engineering (Birdsall, 2015 cited in Silva, 2016).

As Silva (2016) indicates that tactical urbanism includes actions of citizens in a specific context where public institutions are less responsive to people's aims. It focuses on more change and process. The process plays an important role because planning is related to people and they organize themselves by using other structures created for different reasons (Silva, 2016). Therefore, "civics" and "actions" play important role in tactical urbanism. For example, the re-use of pre-existing objects is one of the concepts of tactical actions. The use of scarce sources is one of the key issues of tactical urbanism and tactical actions can remain as independent, unsanctioned and adaptive in this context (Lydon et al., 2011, 2012 cited in Silva, 2016).

As considering tactical urbanism in urban planning literature, the term of "Tactical Urban Resilience" has been started to be discussed in the scope of urban resilience concept. 100 RC (website, 2019) describes that *"It is an approach to neighborhood building for cities looking to collaborate with citizen, community, and/or stakeholders in the testing and delivery of resilience solutions which have short-term, low-cost, and scalable interventions that respond to transportation, public space, and public engagement challenges in order to catalyze long term change."* Therefore, tactical resilience interventions help communities come up with creative, low-cost, and scalable approaches to move resilience initiatives from paper to pavement (100ResilientCity website, 2019). Outputs from the workshops include an approach for small-scale projects. In this context, it is indicated that tactical urban resilience can make cities more resilient by using bottom-up approach which considers all layers of communities and their perspectives. People have a chance to develop their own strategies and solutions against their own problems with the help of legal institutions such as stakeholders, and (governmental) institutions.

Moreover, tactical resilience encourages people to work together in new ways, strengthening relationships between residents, local organizations, and government agencies (100ResilientCity website, 2019). It also allows people to re-imagine how streets and public spaces could be used in accordance with their needs. Through this, cities are able to widen public engagement and gather data from the real-world users of streets and other public spaces.

Finally, tactical urban resilience creates an opportunity for stakeholders to learn about, and deliver short-term change in neighborhoods (100ResilientCity website, 2019). The “learn by doing” approach (Holling, 1978) embeds resilience-building concepts and opportunities at the lot, block, and neighborhood scale, ultimately positioning city and citizens to deliver long-term transformation together.

3.2.4. Smart Planning

In urban planning, it is aimed to develop policies for “sustainable” land uses and development in a specific place for a limited time period (Campbell, 2007; Fistola, Anna, & Rocca, 2014). While developing policies, planning considers various parameters for instance, population, environmental capacity, financial situation, transportation and other public networks.

In this variety of parameters, planners started to face with challenges in cities/towns because of complex and dynamic structure of cities (Anthopoulos & Vakali, 2012; Fistola et al., 2014; Sharifi & Yamagata, 2018). In late 80s, smart cities arise in order to visualize urban context (Fistola et al., 2014) and handle with these dynamic and complex structure. They enhance digital contents and services to urban areas by benefitting from Information and Communication Technologies (ICT) (Fistola et al., 2014; Min, Yoon, & Furuya, 2019) in order to improve the life in the city. Hence, ICT, as a technical platform, helps cities reach a comparative manner, develop Intelligent Transport System (ITS) with mobility information and the Internet of Things (IoT) as well as to achieve and improve urban policy making (Min et al., 2019).

Through these development and attempts, the concept of smart planning or smart city appeared and this concept is considered a kind of a related term to the concepts of information city, digital city, intelligent city and sustainable city. The concept of smart city/planning has no exact description or meaning (Min et al., 2019). There are various attempts to clarify the concept of smart city; however, most are duplicated. It is stated that the term smart city cannot be used as a holistic approach which describes a city (Fistola et al., 2014) but, it can be considered as an umbrella term because it has various sub-concepts (Min et al., 2019). It is used for diverse concepts in cities such as education, transportation, and environment and so on. In this context, smart city has different dimensions which are “*smart people*”, “*smart environment*”, “*smart economy*”, “*smart governance*”, “*smart mobility*”, and at a total “*smart living*” (Fistola et al., 2014), “*smart transportation*”, “*smart energy*”, “*smart mobility*”, “*sustainable smart environments*”, and “*smart government*” (Min et al., 2019).

While smart city/planning concept has been developing, there is a mutual relationship between ICT and planning process. They feed themselves in accordance with social participation. Therefore, the accessibility to public information and services has increased while smart city provides an urban space for business opportunities (Fistola et al., 2014). ICT helps collect and process massive amount of data, *called big data*, enhances digital services and devices, provide Internet services. Hence, urban planning has an opportunity to create innovative, and intelligent spaces. The gathered information during this process is accelerated and it is aimed to achieve intelligence and efficiency in managing urban resources (Min et al., 2019). Technology expands throughout cities and it is integrated into everyday life, activities and objects. Thus, citizens and (local) administrations can interact without any or less time and location restraint through telecommunication network.

The smart city concept is understood as a model for urban planning and urban resilience in terms of adaption to environmental issues such as climate change, global warming, efficiently using energy and resources and managing energy (Min et al., 2019) and other unexpected situation such as the risk of natural disasters, terrorism,

and urbanization. When a smart city planned to be smart, it is stated that it is prepared to be resilient at all times (Arafah & Winarso, 2017). The concept of smart city emerged around the idea of ways *“to improve the functioning, efficiency, competitiveness of cities and solve environmental problems”* as Min, Yoon and Furuya (2019) indicates. Cities try to utilize their infrastructure and technologies in order to achieve optimal equilibrium and stabilize this equilibrium state especially in urban resilience concept as (Arafah & Winarso, 2017). In this context, citizens are important decision makers since they can consider their priorities relating to the needs, challenges and goals in their own city. Therefore, it is inferred that smart cities and smart planning approaches and dimensions have potentials to provide better urban services (Min et al., 2019).

INTEGRATION OF RESILIENCE APPROACH IN CITY PLANNING TIMELINE

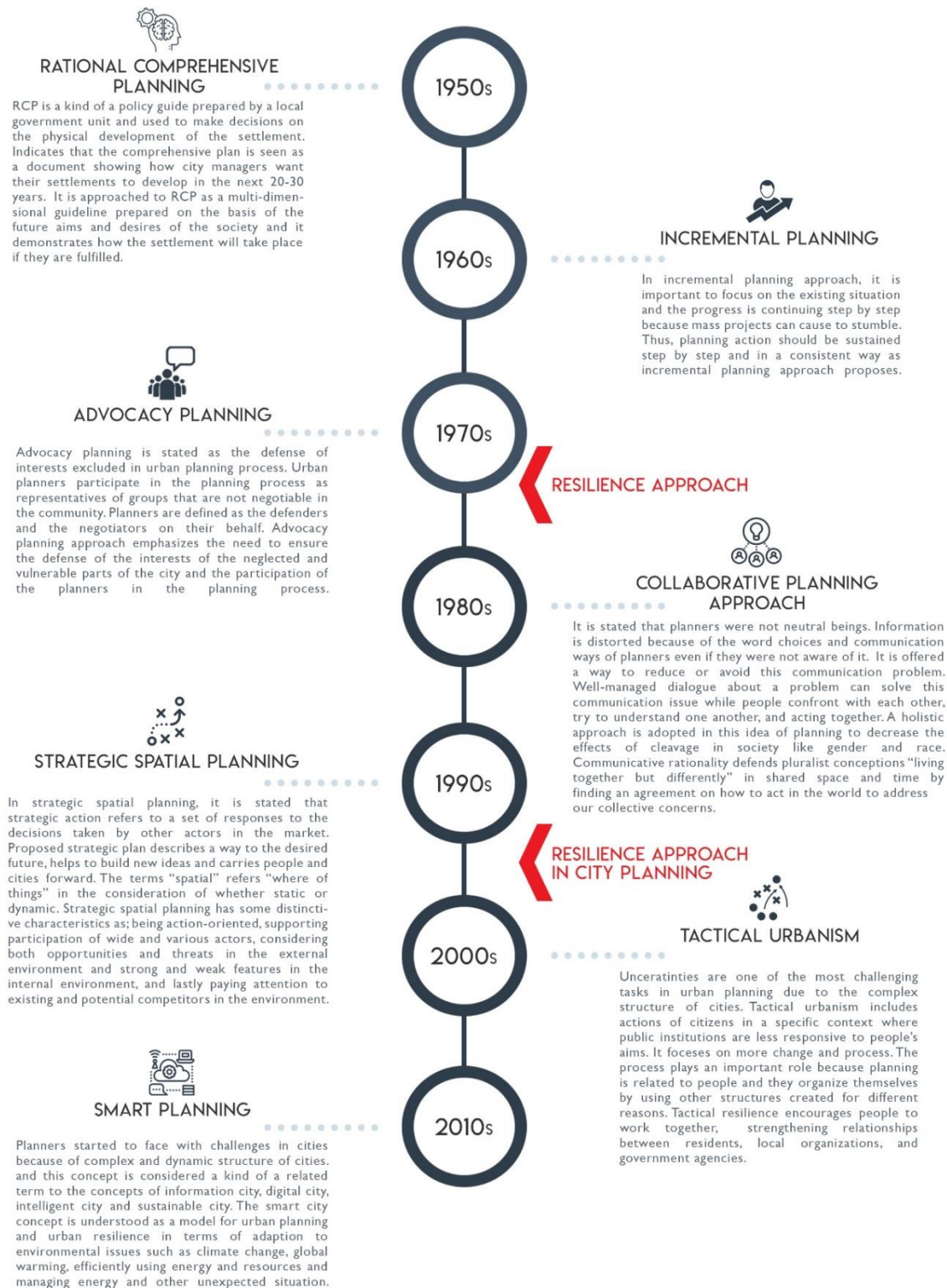


Table 3.2 Integration of Resilience Approach in City Planning Timeline

3.3. Integration of Resilience Approach into Urban Planning

The concept of resilience is increasingly called an organizing principle and political discourse in cities as Sharifi and Yamagata (2018) indicates. In New Urban Agenda, building urban resilience is discoursed and committed by a wide range of stakeholders. The importance of improving urban resilience is also referred in UN Sustainable Development Goals (UN SDG website). SDG 11 focuses on that cities should adopt plans to build their resilience. SDG 9 also asserts that developing resilient infrastructure promotes sustainable industrialization and fosters innovation in cities. Integrating resilience perspective into urban planning is essential for building and improving urban resilience in cities. The importance of achieving this kind of an integration takes place in many documents and adopted by many different organizations. Resilience has been a popular concept in different fields such as physics, ecology and psychology. It is emphasized newly in urban planning since cities around the world have started to face with the impacts of a wide range of hazards (Sharifi & Yamagata, 2014, 2018).

Although there is an effort to integrate resilience approach into urban planning, it is stated that there is still no consensus on how concept of resilience can be implemented in urban planning theory and practice (Sharifi et al., 2017; Sharifi & Yamagata, 2018). There is also no single, universal and well accepted definition for resilience. Resilience is a normative concept and it is not easy to be presented by using quantitative terms likewise sustainability (Sharifi & Yamagata, 2014).

As mentioned before, cities are dynamic and socio-ecological systems, and they are undergoing a constant process of change and adaptation (Sharifi & Yamagata, 2014). They can face with chaotic and sudden changes with high certainties. Building urban resilience can decrease or eliminate the impacts of sudden and unpredictable changes (Gunderson & Holling, 2002). Hence, urban systems can absorb initial shocks, minimize overall losses and experience a new equilibrium states during recovery period while integrating resilience approach into urban planning (Sharifi & Yamagata, 2018).

Furthermore, it is the another reason to infiltrate resilience approach into urban planning is that future changes are not predictable and disasters are not always preventable as Sharifi and Yamagata (2018) states in his study. He argues that urban systems should learn how to survive in risky situation. As cities are dynamic and complex systems, adaptive cycle and adaptive resilience concepts allow systems to strengthen themselves (Sharifi & Yamagata, 2018). It also provides urban systems with building safe-to-fail concept (Ahern, 2011; Gunderson & Holling, 2002; Sharifi et al., 2017).

There are several practices to integrate resilience approach into urban planning. Disaster risk management is one of the essential issue in urban planning. Sharifi and Yamagata (2018) states that the integration of resilience thinking into urban planning has progressed by dealing with urban disaster risk management. Disaster risk management in urban planning focuses on short and medium term planning and efforts. Since the combination of resilience concept and urban disaster risk management can be achieved, medium and long term approaches such as climate change can be considered (Sellberg, Wilkinson, & Peterson, 2015 cited in Sharifi & Yamagata, 2018). Therefore, the importance of dynamics and complexities of cities or systems can be realized while explaining how these dynamics and feedbacks evolve in spatial scales (Sharifi & Yamagata, 2018). In this case, resilience is considered as a dynamic concept which can be change constantly and it indicates transformations of vulnerabilities of systems in time (Irwin, Schardong, Simonovic, & Nirupama, 2016 cited in Sharifi & Yamagata, 2018).

Besides, resilience thinking can deal with abrupt shocks. Since there is a possibility that cities may confront with sudden problems and challenges, it is important to enhance resistance, robustness and the capacity of absorption of systems (Sharifi & Yamagata, 2018). Thus, cities can develop their plans rapidly in case damage is happened. When damage is occurred which may change the system completely, the system may change itself in order to adapt the current situation and tackle with the problem. In this case, Sharifi and Yamagata (2018) expresses that resilience-based

planning and disaster risk management need continuous and systematic efforts in order to sustain the ongoing processes.

Traditionally, urban planning approaches aims to establish a desirable future and development. Hence, visioning and strategy making is one of the crucial concerns of planning efforts. As Sharifi and Yamagata (2018) asserts that resilience concept questions the stability of blueprint planning because development processes need to be updated regularly to deal with constant changes and uncertainties. Traditional urban planning approaches fail because they do not aim to capture complex structure and dynamics of cities. Hence, it can be argued that integration of resilience approach into urban planning stays away from “predict and prevent” approach (Orleans Reed et al., 2013 cited in Sharifi & Yamagata, 2018). With the integration of resilience thinking into urban planning, experimental approaches like “learning by doing” can be adopted and adaptive planning approach can be achieved in this context (Ahern, Cilliers, & Niemelä, 2014; Sharifi & Yamagata, 2018).

Additionally, it is mentioned before traditional urban planning approaches focus on specific sectors in cities. Sharifi and Yamagata (2018) asserts that they are not appropriate to understand different sectors are interconnected in cities. Since resilience thinking has a point based on the approach of the importance of interconnections in cities (Sellberg et al., 2015), resilience concept can be useful to strengthen urban planning. Therefore, providing opportunities to capture the interactions among different sectors can create an advantage to understand the nature and complexity of interconnections in cities, and dynamics and potentials of urban systems (Peyroux, 2015). It can be also stated that there are connections between multiple and different stakeholders in urban systems and they influence each other. It is indicated that multi-level adaptive networks stemmed from resilience approach are essential to pay regard to interactions across temporal and geographic scales (Boyd & Juhola, 2015).

Consequently, resilience concept is increasingly used in urban planning and this implies that cities have started to build their own resilience. It is stated in another study that some principles of resilience concept have already been integrated into plans of

many cities (Albers & Deppisch, 2013). Sharifi and Yamagata (2018) asserts that urban systems are dynamic formations and they are characterized by non-equilibrium states. It is argued that resilience concept gains urban planning new point of views which enable it to refer complexities and uncertainties of urban systems (Sharifi & Yamagata, 2018). Resilience-based planning acknowledges the dynamics of urban systems, stays away from blueprint planning and emphasizes a paradigm shift that reaches up adaptive planning process.

Table 3.3 A summary of the main features of conventional and resilience-oriented approaches to planning (Sharifi & Yamagata, 2018)

Planning Theme	Conventional Approaches	Resilience-oriented Approach
Disaster risk management	- Focus on short- and medium-term emergency planning and mitigation efforts - Target fast variables, and chaotic and abrupt changes - Static vulnerability assessment	- Medium- to long-term approach - Suitable to address both abrupt and slow and steady changes - Recognize the importance of dynamics and complexities and evaluating transformations across temporal and spatial scales - Capacity to respond to constantly changing risks and to expand the response margins and capacities of the system
Planning vision and strategy	- Blueprint planning (linear and static) - Engineering approaches that emphasize eliminating risk - Equilibrium approach to disaster recovery - Predict and prevent approach	- Adaptive planning (regular and iterative processes of monitoring and scenario making) - Acknowledge the unpredictability of future conditions and difficulties in completely preventing risks - Non-equilibrium perspectives to system functionality
Public participation	- Environmental determinism - Limited public participation	- People-oriented design (putting people at the center of planning efforts) - Co-design, co-production, and co-implementation
Learning from traditional local knowledge	- Overreliance on modern planning and design strategies - Spread of standardized building techniques	- Due attention to traditional coping capacities - Awareness of vernacular architecture and local building technologies
Resilience-oriented land use planning	- Limited success in protecting ecologically-sensitive areas - Functional zoning	- Ecosystem protection - Mixed use development - Due attention to other attributes such as density, connectivity, accessibility, permeability, and multi-functionality
Resilient urban infrastructure	- Overreliance on robustness - Large, centralized infrastructure	- Recognition of other attributes such as diversity, redundancy, flexibility, efficiency, modularity, and innovation - Small-scale, decentralized infrastructure

3.4. Conclusion

The overall aim of this chapter is to discuss and define conventional and recent planning approaches in order to understand how planning has been evolving, why some approaches cannot find solutions to problems of planning and how they can be integrated with resilience approach. These approaches have both deficiencies and contributions into urban planning.

Urban planning approaches has being embraced from past to present in accordance with the needs and developments of periods, people and cities. Rational comprehensive planning approach cannot meet the needs because it considers the whole city rather than detailed parts, it has long term plans and these plans predict the changes that the city may face within long periods. Incremental planning approach is not sufficient because it has recognized toward the direction of desires of the power in the society and this approach legitimates this situation. Advocacy planning was criticized in the context of personal values. It was argued that every decision making process includes personal values. During the process, it may not be possible for planners to match the values and beliefs because there are not singular views.

Since resilience thinking adopts a process of which methodologies are forged and shaped in accordance with contexts and problems related to each sort of urban system (Partidário, 2011). In that sense, it may be argued that strategic spatial planning approach may fit well with resilience thinking because the process and each strategic planning activity of strategic spatial planning are constructed according to the specific city. Moreover, strategic spatial planning considers surprised changes and uncertainties likewise in resilience approach. So that, there may be a tendency to prepare to turn goals and actions to more adaptive statements during the process. In strategic spatial planning, the social, economic and cultural structure of cities are considered likewise in resilience approach.

Resilience thinking fosters collaboration at multiple scales (*URBAN RESILIENCE: A concept for co-creating cities of the future 1*, n.d.). In the study of Resilient Europe Baseline (*URBAN RESILIENCE: A concept for co-creating cities of the future 1*, n.d.),

it is stated that urban resilience is an entitling approach and an accumulation of collective concerns for community engagement and programs which provides deeper understanding of assets and barriers to cope with social vulnerabilities and problems likewise in collaborative planning approach. According to Healey (1992), collectively debating and deciding on matters of collective concern offer a different way to reach an agreement. Since there are different values, thoughts and perspectives in cities, planning should contain diverse moral or aesthetic principles.

As a conclusion, urban resilience provides searching of new ways to constitute sense of place and sense of communities. Hence, new collaborative relations between the city and its citizens can be established. Cities which adopt urban resilience perspective have a chance to bring together social, ecological and infrastructural aspirations via an integrative mode of planning (*URBAN RESILIENCE: A concept for co-creating cities of the future 1*, n.d.). It can be asserted that resilience thinking in urban planning adapts cooperative and multicultural communication process as the reflection of the quote of “living together but differently” and thus, common problems and opportunities can be discussed in a common sense.

CHAPTER 4

PLANNING (WITH) RESILIENCE: PUBLIC SPACES

The main objective of this chapter is that providing a conceptual framework for public space concept. Firstly, a literature review is done in order to understand what public space is, what makes public space public, and the impacts of public spaces on cities. Hence, the component and importance of public spaces in cities will be figured out. Secondly, public space and urban resilience concepts is discussed in order to provide a base to understand what resilient public space is and what kinds of components it has. Therefore, information about how designing resilient public spaces can have an impact on the resilience of cities will be provided.

4.1. What is Public Space?

“What defines a character of a city is its public space, not its private space. What define the value of the private assets of the space are not the assets by themselves but the common assets. The value of the public good affects the value of the private good. We need to show every day that public spaces are an asset to a city.”

This is how Joan Clos, who is the UN-HABITAT executive director, states the strong relation between cities and public spaces. As (Özel & Mecca, 2014) indicates that the public spaces of the world’s cities constitute a fundamental part of an inclusive, healthy, functional and productive urban planning. Effective and resilient planning of public spaces has a potential to change the aspect of the human habitats.

The term public space has multiple meanings depending on different disciplines. Its meanings are diverse. Different authors from different disciplines explain the term differently. Some employs the term as the social realm and some conceives the term as a physical, public place such as an urban plaza or a town square.

Public space can be conceived as the sphere of public action essential to democratic citizenship according to Hannah Arendt. She states that it is the realm where citizens can engage in collective processes (Goodsell, 2003; Hansen, 2013). In that sense, Arendt argues the term public space has two dimensions. One is called the space of appearances which means acts and attempts of individual affect public matters. Citizens establish relations and reveal their identities. The second dimension of public space is the common world which means people are separated from the nature by artifacts, institutions and settings of public action and thus, these can provide a context for public life (Passerin d'Entreves, 1994 cited in Goodsell, 2003; Hansen, 2013)

The philosopher Habermas is also associated with the ideas of public space and he refers the term public space as public sphere. In an encyclopedia article on the topic (J Habermas, 1974), he identifies the public sphere as the realm of conversation and discussion by individuals on concept of public interest. According to him, the key feature of the public sphere is being accessible and interactive universally. Anyone can be able to enter public space and communication within it should be ideally free from any limitation (J Habermas, 1974).

In this context, it is asserted that Arendt's concept of public space is primarily related with an "arena" for political "actions", whereas Habermas's public sphere is a "medium" of public "communication" according to Sayla Benhabib. She indicates that public space has two functions as a "holistic" and as an "epidemic" function. As a holistic function, public space brings cohesive perspective about what should be done while an epidemic one that turns multiple personal interests into common interests (Benhabib, 2003).

As a result, it can be seen that public space or public sphere is a social realm, an arena of action and communication. A place can be public in the sense that it is accessible for all and it is concerned with common interests. Hence, public space can be regarded as a realm where individuals and groups of the society are active for some democratic theorists while other commentators indicates that state actors should be included.

In addition to political philosophy and democratic theory, Goodsell (2003) asserts the second principal source of literature on public space is urban planning. Under the roof

of urban planning, open physical places in cities can function as sites of public use and citizen interaction. Streets, pedestrian ways, parks, plazas, malls, and squares are considered as essential to build and support sense of community identity and urban well-being (Goodsell, 2003). Such places can also be seen as a social tie for the current and a connector for the past in order to accumulate memories and to recollect historical remembrances (Carr, Francis, Rivlin, & Stone, 1992 cited in Goodsell, 2003).

Moreover, it is thought that there is a deterioration of public space in the literature of urban planning. Michael Brill defines public space as a literature of loss infected with nostalgia and mourning. He actually contends that much of this public life was never lost because it never happened (Brill, 1989 cited in Goodsell, 2003).

Manuel Castells also states that urban physical space is now fast becoming irrelevant irrespective of its past role. While technology has developed, industrial city and its physical places are supplanted by the informational city which depend on flows of electronic change among network nodes and hubs. Elites still govern, rule and control by these networks not territory (Castells, 2000 cited in Goodsell, 2003).

As a result, public space is discussed as a physical term in the urban planning literature. It is asserted that public space is an open site such as street, sidewalk, plaza, park or square. These exterior spaces mean public use, allow for relaxation or recreation, are constituted with social ties, establish connections to the past and create community identity.

Besides the perspectives of political philosophy and democratic theory, and urban planning, Goodsell approaches the term public space from a different perspective. According to Goodsell (2003), public space is kind of a political discourse as a *space-time continuum*. It means that it is a communicative experience which is a capacity for both connected and interactive human process. In public spaces, all citizens can participate and they can see and hear each other. It is important to consider that there is a mutual presence between these space ties (interaction and communication between participants) because all can be together for a purpose. In this context, the continuum is interactive which means participants have a capacity to hear and react their comments or actions immediately without any significant delay. Hence, this space-

time continuum creates public space which is a common physical place such as town square or meeting hall. In this *place-bound public space* (Goodsell, 2003), all person can face-to-face mutual contact as considering a reasonable distance and thus, it can be achieved true connection and interactivity.

In a broader sense, it is stated that public space is a space where people can choose to be at without considering their ethnicity, age, ideologies and gender (Rupa, 2015). It is a space of a coexistence of various categories of people. It can directly be a city square, a park, a boulevard and spaces of everyday use such as streets, sidewalks etc. However, Rupa (2015) also specifies as a problem that there is a thought of public space is a gathering space. It is stated that the term public space is stereotyped as it is a fixed and physical space. A public space can be utilized by different groups at different times. The meaning and the users of public space are exposed to ongoing changes. In this context, citizens can create meaningful public spaces by reflecting their attitudes, asserting their claims and using these spaces for their own purposes (Rupa, 2015).

Moreover, public space can be also discussed from the perspective of roles as the actor and the spectator as Rupa (2015) argues. Gehl (2011) states that the individual is present by mostly participating. It means that there are both actors and spectators in public spaces where one can “*see*” and “*be seen*” (Rupa, 2015).

It is also vital to perceive that public space can be defined as consumable good. People have a demand to move away from their private realm and they can use or consume public spaces in that sense. Hence, it can be observed that it is related to the experience of the “*other*” in public spaces or realm. Many scholars, philosophers and urban planners have thoughts of encountering the “*other*” in public spaces. Rupa (2015) states that public space is a sphere in which people can confront with the “*other*”, be exposed to “*other*” behavior, ideas and preferences. It is a platform where people can experience something new or something ‘unfamiliar’. During the exposure of the unfamiliar, people have a tendency to protect their privacy. In a similar way, public space is defined as “*a way of trusting strangers while sustaining private entity*” (Zukin, 1995 cited in Rupa, 2015). According to Gehl (2011), the existence of other

people and activities is the most crucial qualities of public spaces because it can asserted that “*public space is a space where society is created*” as a result (Rupa, 2015).

4.1.1. What makes public space public?

There have been attempts to identify the concept of “public” for a long time. The concept of public space has evaluated in the lights of different ideas of “*authentic public space*” (Hummel, 2002; Stivers, 2002; Zukin, 2010 cited in X Zhang & He, 2019), “*democratic issues*” (Goodsell, 2003; Madden, 2010 cited in X Zhang & He, 2019) and “*the norms within public space*” (Harvey, 1992 cited in X Zhang & He, 2019). Upon these diverse ideas, it can be seen simple to explain what makes public space public, however; the answer of this question is usually seem elusive. In this context, the component (features) of public space will be discussed under this topic in order to give a clarified answer to the question of what makes public space public.

Spaces can have some features that we generally qualify public and hence, spaces can be considered as public spaces (Parkinson, 2013). Today, public spaces are diverse and more complex than traditional parks and squares. There are several studies to clarify the concept of public space. Zhang & He (2019) states that few studies realize kind of a paradox: People indicate that there are some universal or fundamental features of public spaces. On the other hand, public spaces encompass different spaces. In the sense of this paradox, there are attempts to develop a unified framework in order to eliminate some logical problems of identifying public space.

Public space can be assumed as an umbrella term. There are different approaches and cases that fulfill some items of the definition of public space. The important point is that public space is still considered as public space despite different perspectives. In that sense, identifying public space create a structure of rights and power. Firstly, public space is one of the important public goods and governments offer economic incentives to encourage the production of public space (Zhang & He, 2019). Secondly, it is elusive when and where public laws and norms should be applied. Private properties may be considered as public spaces. When private owners have some

problems with the norms of public spaces, public spaces can endorse different legal rights and powers (Zhang & He, 2019). Thirdly, it is difficult to understand spatial administrations of public spaces without identifying of what makes public space public.

There are multiple groups in public spaces and competition among them often happens in public spaces in order to focus on who has the rights to use which space (Zhang & He, 2019). As Mitchell (1995) assumes that “*public space is kind of a product of competing ideas about what constitutes the space and who constitutes the public*”. It is also stated that the public nature of a space is stemmed from when “*some groups take space and through its action makes it public*” (Mitchell, 2003). It can mean the identity of public space is not permanent. It is continually changing because of people’s dynamic activities in particular spaces.

Current approaches to public space also confront with a paradox in terms of identifying what makes public space public. On one hand, they usually state that there are some characteristics of public spaces such as inclusivity, accessibility, and public ownership. It is assumed that these are essential for public spaces and they make a specific space public (Zhang & He, 2019). On the other hand, it is stated that there are no identified features to clarify a public space because it is still considered that different spaces without any significant universal features are evaluated under the concept of public space.

The first approach about what makes public space public has a tendency to define public space metaphorically. Public space does not refer to only a physical space but rather to “*a space of initiative*” (Iveson, 2011). It means individuals can discuss collectively about common interests and issues. This is one of the essential features that makes public space public according to the metaphorical perspective. In the same point of view, Habermas (1991) states that private coffee houses and salons as “*public sphere*” where people can form public opinion despite the restricted access (only available for educated bourgeoisie). In a similar approach, Arendt (1958) identifies public space as “*a place of appearance*” in which “*men act together in concert*” (Zhang & He, 2019). According to this perspective, any space can be a public space

as long as people who have different thoughts meet in the same space. In this sense, a private dining room can actually become a public space (Benhabib, 1993 cited in Zhang & He, 2019).

The second perspective to clarify the concept of public space is based on its essential characteristics (Zhang & He, 2019). It is stated that if a physical space meets the essential features, then it is a public space. These common fundamental features are ownership, openness, free access, and so on. The crucial point in this approach is that there should be some essential feature to make public space public, especially a “good” public space. For example, Harvey (1992) emphasizes that accessibility is the most significant feature of public space because it has a potential to promote social integration. Similarly, it is defined that if a place becomes accessible and permeable, then it will be directly public (Madanipour, 2013). Based on accessibility issue, it should be also considered that no place can be open to all people as Merrifield (1996) indicates. Open to all means that the space is open to “hard drug dealers, crackheads, robbers and rapists”. Therefore, this space is not actually accessible to everyone. People scared of these groups would not prefer to be in this space and the excluded group will directly become themselves. In that sense, social integration among different groups (one of the most important feature that makes public space public) would not exist if the public space does not become desirable to “intended” users (Merrifield, 1996).

Thirdly, listing all types of public spaces is another approach to identify the reasons of how a place can be public. It is stated that public space is sort of a cluster system (Kohn, 2004 cited in Zhang & He, 2019). It means that public space can be defined by its design, socio-cultural and political economic dimensions as Carmona (2010) assumes. Public spaces have dimensions, such as designed facilities, places for everyday interaction and social gathering (Dines & Cattell, 2006), and sites of representation (Kilian, 1998 cited in Zhang & He, 2019), and different degrees of spatial control (Flusty, 1997 cited in Zhang & He, 2019) and each dimension is based on different public spaces. The important point here is that no single way of clarification or definition to represent the concept of public space because the range

of public space is wide (Zhang & He, 2019). Therefore, creating and using lists can be a logical way to present the key points within the concept.

However, making a list can cause a problem that the list of public spaces cannot fit to each public space because there are various meanings from different perspectives what public space actually is. One public space might be different from other public spaces obviously. In this context, using a list of public spaces cannot be appropriate and sufficient for all possible public spaces (Zhang & He, 2019).

The fourth approach to unify the concept of public space is using an evaluation system. As public space has various meanings, there is no single dimension of publicness according to this approach. The nature of public space cannot be identified by using lists but rather by using an evaluation framework (Zhang & He, 2019). Németh and Schmidt (2011) proposed an evaluation framework of publicness of public spaces which includes three dimensions as *“diverse/collective,” “public/government,” and “inclusive/open”*. According to this approach, a space cannot be divided into two groups as public and private. A space can be more public or more private in accordance with the result of the evaluation or score of three dimensions.

Moreover, there are other evaluation framework of publicness of public spaces. Varna and Tiesdell (2010) developed the 6-dimensions concept, in order to illustrate the publicness of public space in the sense of multidimensional evaluation, which involves *“ownership, control, civility, animation, and physical configuration”*. Besides, Neal (2010) considers the publicness of public space in terms of *“legal-economic,” “socio-spatial” and “political”* dimensions. On the other side, this sort of an evaluation system can be also problematic because this approach indicates that all different dimensions of public spaces are evaluated at the same level (Zhang & He, 2019). However, public spaces cannot be evaluated as all of a piece although these different dimensions of publicness are related to each other.

In order to define what public space is and what makes public space public, some criteria and dimensions are tried to be clarified. In this sense, there are questions emerged to identify the success of public space. Rupa (2015) states that the success of public space is stemmed from *“its contextual design and its manageability”*. It is

stated that public space is a space where people experience the place, not just use as a transitional area to pass by. It is argued that this depends on the design of public space as “accessibility, comfort, safety, diversity” and so on (Rupa, 2015). Hence, one of the most important public function of spaces can be supported by considering these features as enriching the lives of the people using there.

In accordance with this approach, user-experience is crucial to make the space desirable and public. Mehta (2014) argues that good public spaces are accessible and open by supporting its design and activities. Therefore, “a sense of safety, physical and environmental comfort and convenience, a sense of control and pleasure” can be supported. In this context, Mehta (2014) proposes five aspects of public spaces that make them public (Figure 4.1).

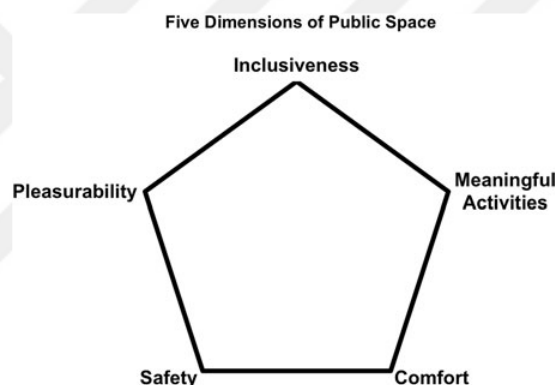


Figure 4.1. The five dimensions/aspects of public spaces

The first aspect of public space is inclusiveness. Public space is an arena where not only collective voice and shared interests are included but also the differences and conflicts of different groups are involved (Mehta, 2014). According to (Mitchell, 2003 cited in Mehta, 2014) the publicness of public spaces is directly related to the use of space by groups. One of the most essential aspects is that the needs of people make the space public. Hence, inclusiveness is important because it is revealed when activities take place in public space. Additionally, the range of activities and the actors can be able to support its inclusiveness. The inclusive and accessible public space is concerned as the ideal one in the literature. According to Mehta (2014), there are two

aspects to access to public space as “*the ability to reach the space and to enter and use it*”. The inclusiveness of public space can be rated “how accessible the space is and how well activities and behavior are supported or not”.

The second aspect of public space, called meaningful activities, is related to how spaces support the activity and sociability as Mehta (2014) specifies. This aspect is interested in place meaning related to become meaningful while it is using and supporting activities that are symbolically and culturally meaningful to people and which support sociability. The space should satisfy the basic needs in public spaces such as shopping, eating, entertainment and so on. Therefore, space design and land-use diversity make the space meaningful to people and support to create a sense of place and place-attachment (Seamon, 1980 cited in Mehta, 2014). Rating the measure of meaningful activities of public spaces helps to understand the degree of publicness of public space by considering how public spaces support community gathering and suitability of the space to provide activities and behavior (Mehta, 2014).

It can be cited that safety will be the most important concern in public spaces. Although there are some thoughts that over-securitization may make the space relatively unsafe, safety can be achieved by the presence of people. Some studies indicate that people perceive public space safer as long as the presence of commercial activities and non-residential properties (Perkins et. al., 1993 cited in Mehta, 2014). Moreover, the physical condition of public spaces such as existence of street lights, signs, designs, planting types, the types of land uses and the alterations and modifications can make public spaces safer. Hence, the presence of people can increase due to the source and increase of attention and interests of people as well as the perception of safety (Newman, 1972 cited in Mehta, 2014). In that sense, safety from traffic is another concern for safety of public spaces. By considering the physical features of public spaces, the perception of safety is also directly related to street activities of people and traffic activities which means social and physical factors or can be assumed as crime and traffic. Therefore, rating the safety of public spaces can show how people feel safe in the space during different times of the day (Mehta, 2014).

The feeling of comfort is another essential characteristic of public spaces. The design of public space should be ergonomically sensitive (Lang, 1987 cited in Mehta, 2014). For example, protection from the sun, wind, and rain provides a physically and socially suitable environment by providing various activities and behavior. Aspect of comfort is also composed of sitting space, street furniture, sidewalk width, trees, shade areas and landscape elements (Mehta, 2007). As rating physical comfort, measurement of a physiological level of comfort of public spaces can be able to provide a high sense of publicness of public spaces.

Lastly, pleasurability is another important dimension of the publicness of public spaces. Mehta (2014) states that “*spaces become pleasurable when they are imageable* (Lynch, 1960 cited in Mehta, 2014), *and have a high level of spatial quality and complexity*”. Lynch (1960 cited in Mehta, 2014) defines that spaces with high imageability provide comfort and pleasurability. He also finds that various factors come together and create a coherent impression. A certain level of complexity comes from variety, complexity and as well as order and coherence in public spaces (Mehta, 2014). According to some studies, people prefer public spaces which enable people to a high level of cultural acceptance resulting in complexity. In sum, pleasurability is one of the important components of publicness of public spaces because by considering pleasurability, imageability, the spatial quality of public spaces, complexity, and attractiveness can be evaluated.

4.1.2. The Impacts of Public Spaces on Cities

As Aristotle states that ‘Man is by nature a social animal’ (Rupa, 2015). Human is not capable of being in isolation. The need for social interaction requires a place which refers to the basic need for public spaces. Public spaces provide platform or space for communities to come in contact with the social world and to experience the outside. Rupa (2015) argues that public spaces are spaces where people have a chance “*to see something new, to feel differently, to learn and to be inspired*”.

In the report of Public Spaces for All (UN-Habitat website, 2020), it is indicated that the character of a city can be described by its streets and public spaces. When great cities are considered, their iconic public spaces are directly thought such as Times Square in New York, Piccadilly Circus in London and so on (Public Spaces for All, UN-Habitat website, 2020). It can be argued that public space constitutes a city image from squares to boulevards to gardens and playgrounds. The connective form of street and public spaces creates the skeleton of cities. Similarly, in the study of Rupa (2015), it is stated that although public spaces are considered as they are gaps between buildings, they serve as meeting place, market place and traffic space (Gehl, 2001 cited in Rupa, 2015). Hence, public spaces are vital components and key assets of cities and they have a quite positive effect on cities' *"economy, environment, safety, health, integration, and connectivity"*. It can be therefore indicated that the quality of life for citizens is directly related to the presence of public spaces (Public Spaces for All, UN-Habitat website, 2020).

One of the most important functions of public spaces is that public spaces not only have ability to foster integration between different socio-economic groups but also are sort of a living room for marginalized groups in societies (Public Spaces for All, UN-Habitat website, 2020). In this sense, multi-functional and shared public spaces are important because public spaces can improve urban productivity, livelihoods and allow better access to markets, and public services. Hence, public spaces can be considered as sort of a room or *"a window into the city's soul"* (Zukin, 1995 cited in Rupa, 2015) because social and cultural cohesion, and sense of belonging can be built in public spaces. When a public space is open to all, public spaces can bring people together, provide meeting places, strengthen social ties and allow culture to thrive. In these spaces, cultural identity of the area can be shaped, and sense of place for local communities can be provided (Public Spaces for All, UN-Habitat website, 2020).

While social and cultural interaction can be provided in public spaces, economic development of cities can also be developed. There are both people who use these spaces during daily lives and tourists and commuters who can experience the life of

the city (Rupa, 2015). Public spaces have a huge impact on economic productivity because they support supply chain, reduce production cost and promote the mobility of goods and people (c). As long as cities have competed with one another in order to attract people, and investments, public spaces become a vital tool. Public spaces can improve land values and thus, entrepreneurs can be attracted to well-designed, and well-maintained public spaces according to the report of Public Spaces for All (UN-Habitat website, 2020).

Finally, public spaces enhance safety if they are well-designed, well-managed, mixed and diverse. These kinds of public spaces automatically reduce insecurity and fears while contributing mutual trust and safety (Public Spaces for All, UN-Habitat website, 2020). As supporting safety, good-quality, well-maintained public spaces can help to improve physical and mental health of communities by providing various physical activities, a calming environment and reducing stress (Public Spaces for All, UN-Habitat website, 2020).

4.2. Public Spaces and Concept of Urban Resilience

4.2.1. What is Resilient Public Space?

Public spaces are an integral part of urban space and its transformation (Degros, Knierbein, & Madanipour, 2014). With continuing structural transformations, many cities need to deal with open urban spaces according to the study of Degros, Knierbein & Madanipour (2014). Elsewhere, affected by crises such as climate change or simply rapid demographic change, public spaces come under a pressure if the city faces a slow decline or a fast-paced phases of shock (Degros et al., 2014).

Public open spaces is one aspect of a complex structure as urban environment (Jayakody, Amarathung, & Haigh, 2016). They have a vital role in complex urban structures as urban open spaces provide significant benefits for the quality of life of citizens. They provide environmental importance, psychological well-being, social and cultural interaction and cohesion and economic growth according to Jayakody, Amarathunga & Haigh (2016). Thus, it is confirmable that public open spaces can help

to create resilient cities in accordance with resilience dimensions; economic, social, environmental and spatial.

Further, based on the study of Ruchinskaya (2018), resilient public spaces are important tools for strengthening the resilience of existing community and solving new social cohesion issues during and after crisis. Therefore, resilient public spaces are part of everyday city life in both emergency and non-emergency times (Allan and Bryant 2010 cited in Ruchinskaya, 2018) and they are a combination of the characteristics of urban resilience (Table 2.4) and the features of public space (Figure 4.1).

4.2.2. Components of a Resilient Public Space

Resilience is combination of adapting reducing vulnerability (Chelleri, 2011), absorbing disturbances (Holling, 1973, 1987, 2001; Taşan-Kok et al., 2013; White, 2010) and increasing the capacity while remaining functional for learning and adaptability (Alberti et al., 2003; Newman, 2009) as indicated in the previous chapters. Adapting resilience concept into city planning is crucial because a system which have ability to adapt to current and future changes can absorb and adapt disturbances (Meerow, Newell and Stults, 2016 cited in Fariba Gharai et al., 2018) and maintain its characteristics and structures of the system (Fariba Gharai et al., 2018).

It is also stated that urban resilience has four dimensions which are social resilience, economic resilience, ecological resilience and spatial resilience. In this study, urban spatial resilience covers natural and built urban environment with emphasis on activity and space. In this sense, the indicators of urban spatial resilience are also directly related to spatial organization of the urban system (Fariba Gharai et al., 2018). The spatial organization is a network among land uses (mixed-use, cultural, commercial, etc.), districts, regions, important transportation routes, and main functional axes. Hence, it is stated that the spatial organization of the city constitutes the main elements and backbone of cities (Fariba Gharai et al., 2018; Godschalk, 2003).

According to literature review, there are several attempts to classify indicators of urban spatial resilience. Ahren (2012) classified the indicators of urban spatial

resilience as five; redundancy, diversity, multi-functionality, networks and transportation and adaptability. Another attempt to classify the indicators was constituted by Walter and Salt (2006 cited in Fariba Gharai et al., 2018) including redundancy, diversity, efficiency, autonomy, connectivity, adaptability or adaptation capacity, robustness and flexibility. Subsequently, four indicators are chosen to specify the dimensions of a resilient public space as diversity, connectivity, redundancy and robustness because these four indicators are the most oft-cited in urban resilience studies (Eraydın, 2012; Sharifi and Yamagata, 2016 cited in Fariba Gharai et al., 2018; Lu & Stead, 2013; Meerow et al., 2016) and have highest compatibility with the components of urban spatial organization (Fariba Gharai et al., 2018).

Based on the urban spatial organization, four indicators, as diversity, connectivity, redundancy and robustness, were proposed as components of resilient public space in accordance with their measurability and oft-cited feature. Gharai et. al. (2018) states that “**diversity**” is a key feature in urban planning literature because the diversity of an area leads economic and social vitality, and healthier life styles. Different and various functions are included by major functional axes and spaces (Dovey & Wood, 2015) and thus, multifunctional urban spaces promote the diversity which is crucial to absorb disturbances and recover (Sharifi and Yamagata, 2016 cited in Fariba Gharai et al., 2018). In this context, diversity is associated with both spatial diversity and functional diversity. As Gharai et. al. (2018) define that spatial diversity is related to urban structural elements, equal public access to basic services and reduction of the risk which impacts the whole system.

The other indicator is “**connectivity**” which refers to the ease of circulation within and around the system as Gharai et. al. (2018) describe. On the one hand connectivity defines the connection between the location and the intensity of activities (Felicciotti, Romice, & Porta, 2016), on the other hand this increases the level of accessibility (Marcus & Colding, 2014). Connectivity is also considered as “urban permeability”. Increased connections enhance the connectivity between urban elements and people (Bentley et al, 2017 cited in Fariba Gharai et al., 2018). Some researchers believe that

both high and low connectivity can be effective in the sense of urban resilience since high connectivity has an impact to disseminate information while low connectivity decreases the spread and the impact of disturbances (Fariba Gharai et al., 2018).

“**Redundancy**”, as third indicator, constitutes an “insurance” against disturbances by considering similar functions and working as backup (Ahren, 2012). In this context, diversity and redundancy have similarity. The indicator of diversity involves “*a variety of urban elements*” while the indicator of redundancy includes to the “*multiplicity of a specific type of urban elements*” (Fariba Gharai et al., 2018). Some researchers state that multiple backup and urban functions can be easily used in an interchangeable way when necessary. Hence, functional redundancy is increasing the urban resilience (Marcus & Colding, 2014; Meerow et al., 2016).

The final indicator of resilient public space, as “**robustness**”, is related to the physical elements or urban and their conditions. This means the more the strength of physical elements or urban, the more the ability of a system to resist changes and disturbances without failure or loss of performances (Fariba Gharai et al., 2018). Some researchers state that robustness is a combination of different dimensions of resilience. On the one hand, the indicator of robustness reflects the engineering feature of resilience with the concept of “bouncing back” and maintaining “status quo”. On the other hand, robustness refers to “bouncing forward” derived from the dimension of ecological resilience (Meerow et al., 2016).

Table 4.1 Components of a Resilient Public Space

Dimensions	Icon	Definition
Diversity		Different and various functions are included. - Diversity is associated with both spatial diversity and functional diversity. It is crucial to absorb disturbances and recover.
Connectivity		The ease of circulation within and around the system. - Connectivity defines the connection between the location and the intensity of activities. It also increases urban permeability related to the connections between urban elements and people.
Redundancy		An insurance against disturbances by considering similar functions and working as backup - Redundancy is related to the multiplicity of a specific type of urban elements.
Robustness		Physical elements or urban and their conditions – Robustness means the more the strength of physical elements or urban, the more the ability of a system to resist changes and disturbances without failure or loss of performances.

4.3. Integration of Urban Resilience Approach through Planning Resilient Public Spaces

Resilience thinking has emerged in different manners in urban planning theory and practice, especially in social equilibrium approaches as discussed in the first chapter. According to planners, an ideal city should be maintain its status quo to be regarded as a resilient city (Mehmood, 2016). More recently, contemporary urban approaches in planning theory and practice concentrate on urban ecosystems in the sense of human-nature relations as indicated in previous chapter. In this case, resilience thinking can help to face with challenges of planning (Wilkinson, 2011). While looking at cities as complex adaptive systems, this planning approach tries to combine “social, environmental, and economic aspects of resilience in spatial planning” (Mehmood, 2016).

In the concept of public spaces, they are seen as spatial catalysts for social change (Degros et al., 2014). They are seeking to foster an understanding of the robustness of places by revisiting the resilience debate as discussed in the first chapter. It is remembered from the first chapter that resilience designates the capacity of cities to recover and adapt to stresses and shocks. According to Degros et. al. (2014), resilience means to bounce back. Hence, it can be indicated that public spaces serve as flexible

backbones to provide a city with the robustness to adapt to situations of drastic transformations and radical changes (Davoudi et al., 2012). In the context of integration of urban resilience approach through public spaces, resilience describes a kind of positive capacity to recover from a traumatic situation or gradual decline by reshaping “meaningful” public spaces as Davoudi et al. (2012) state.

It is also stated that the attributes of urban resilience- indicated in the first chapter as reflective, resourceful, inclusive, integrated, robust, redundant, and flexible- provide public spaces with adaptation capacities according to (Arup Group, 2014). These adaptation capacities offer social, economic, environmental and spatial benefits according to different studies (McPhearson, Haase, Kabisch, & Gren, 2016; Özel & Mecca, 2014).

It is also notable that public spaces contribute to all levels of urban resilience through “inclusive practices and collective creativity” (Ruchinskaya, 2018). According to Ruchinskaya (2018), collective creativity provides people an equal opportunity to be part of the decision making process as everyone can be creative and contribute to the place making. Integration of people during place making increases the “adaptability and flexibility” of the community (Ruchinskaya, 2018). Hence, communities can strength and this encourages them to response together to disturbances they faced (Jacobs, 2015 cited in Ruchinskaya, 2018).

Moreover, public spaces compensate for each other when challenged by different risks and shocks. As Dionísio, Ota and De Souza (2012) exemplified, small and medium public spaces in high density areas provide a secondary support for evacuation and recovery assistance. Hence, these spaces have a high level of community sense of belonging and the capability of social preparedness can improve. These different functions of public spaces and their integrated network provide “diversity to the city fabric” (Jayakody et al., 2016; Rogers & Sukolratanamete, 2009). Subsequently, this diversity creates the resilience in a city (Ruchinskaya, 2018).

Considering the emergency time, public spaces can provide an actual space for evacuation and are mainly used as places for gathering and distribution of goods and services (Ruchinskaya, 2018). They accommodate basic emergency services and utilities, such as first aids, fresh water, electricity and communication. Different public spaces have different capabilities in emergency response and thus, they can provide different functions (Ruchinskaya, 2018). Hence, different policies and planning approaches are needed to be considered for different public spaces in terms of providing urban resilience.

4.4. Conclusion

The main aim of this chapter is to set out to look at how resilience thinking can help plan and shape resilient public spaces. Therefore, what public space is, what makes public space public and the impacts of public spaces in cities were explained in the first part of the chapter. This chapter is also important because it gives a structural framework about the role of public spaces and how they affect cities. As mentioned in the chapter, public spaces are backbones of cities and it is possible to spread visions or concepts through public spaces because they provide common spaces and togetherness for citizens. After explaining the importance of public spaces, the integration of resilience concept into public space, as resilient public space were provided because resilience in public spaces provide a base to spread resilience to the whole city. In that sense, spatial resilience and its dimensions were analysed and amore detailed perspective and structure can be provided in the thesis study. This is one of the most important contribution of the thesis in the literature because there are few and limited resources and studies about spatial resilience in the literature. Therefore, an advisory and structural framework about spatial resilience and resilient public spaces were provided with the integration part. It is crucial to understand that there are different and various public spaces. These different public spaces have different capabilities in emergency response so, they can provide different functions. Hence, different policies and planning approaches need to be considered for different public spaces in terms of providing and spreading urban resilience.

CHAPTER 5

THE CASE STUDY: EVALUATION OF RESILIENCE IN GÜVENPARK

Urban public spaces are undoubtedly a sine qua non for urban and urban residents. In addition to contributing to the city in both social and economic areas, public spaces are also important in terms of providing recreational opportunities for the citizens. One of the most crucial element of urban public spaces is urban parks (Yerli & Kaya, 2015). Due to these impacts, the location of urban parks, their size, the social structure of the mass they address, and the opportunities they have play a vital role in shaping the features of urban parks. Güvenpark is located in a very important area due to its location in the center of Ankara and its historical value. In this chapter, a questionnaire within the scope of the case study was conducted in order to evaluate how resilient public space Güvenpark is, to understand whether people consider Güvenpark as a resilient public space in Ankara and to understand how Güvenpark has confronted the results of the terrorist attack on March 13, 2016 until today. The structure of this chapter is divided into three parts; the first part of this chapter investigates the history and importance of Güvenpark in Ankara and Jansen Plan, the second part discusses the current context of Güvenpark and the last of this chapter gives the methodology and structure of the questionnaire and analyses the results of the questionnaire.

5.1. Güvenpark in The History of Ankara

Squares, parks, boulevards, streets and streets can be counted as indispensable elements of urban public spaces. Along with these, public buildings belonging to the city are among the concepts integrated with that city. Squares, avenues and boulevards that contain the most basic dynamics of a city have important duties such as connecting public spaces and buildings, providing transportation and communication

for the citizens (Yerli, Özdede, & Kaya, 2015). Hence, it is nonsense to say that public spaces are the areas that are used extensively by every segment of the society.

Open public spaces contain openings other than architectural structures (block masses, buildings and hard surfaces), massive and fragmented green areas within the urban texture, and control the development of the city. They also undertake unifying and separating functions, and provide the integrity of the city in general. Besides all these assets, they also gain ecological, aesthetic, recreational and economic features to the whole system (Yerli & Kesim, 2009). Open public spaces are emphasizing both the demonstration of cultural and personal diversity and democratic and open view. Urban parks help to establish communication between the individual and the society because they are places and symbols that bring people together. In this sense, the more people spend time in urban open spaces, the more they are likely to be there to meet other people. These encounters can take place through celebrations, actions, concerts, shows and movements called “passive communication” (Özdemir, 2009). Accordingly, Olmsted did not only define urban parks as green spaces, but suggested that urban parks contain recreational activities that encourage the citizens to participate in democratic urban life (Yerli et al., 2015). From this point of view, it is stated that urban open parks and open spaces enable social life to be strengthened and face to face communication.

Kızılay Square, which is one of the best known and most important points in Ankara, is one of the places that reflects the history of the capital process (Yerli et al., 2015). According to Özdemir (2009), city squares can be defined as the heart of the city and it is focused on meeting the social needs of the city, integrating urban life and exhibiting historical and contemporary features together. Different social groups meet in the square and produce their own fictional spaces (Batuman, 2009). It is also defined that the squares as a mirror of the city and states that the problems and deficiencies that may occur here can cause a collapse in the entire city (Özdemir, 2009). Güvenpark, which is integrated to Atatürk Boulevard, is the most important open area that strengthens the public space feature of the boulevard (Bilsel, Atak,

Gökçe, Sezgin, Şan ve Şişman, 1997 cited in Bayraktar, 2013). Güvenpark integrated with the history of Ankara became a whole with Kızılay Square. It is a very important focal point in terms of usage intensity, ecological values and services it offers to the city. Besides all these important features, it has witnessed the history of the city of Ankara and remains important as it is one of the essential elements of the urban memory. Güvenpark has been a place for citizens of Ankara to meet their needs such as meeting, gathering, resting, and breathing in the city's intense and suffocating texture since its existence (Yerli & Kesim, 2009).

At the very beginning of the process of transforming Ankara, which was declared the capital on October 13, 1923, into the exemplary capital of the republic regime, it was decided to develop the city on Sıhhiye-Yenişehir-Kızılay axis (Yerli & Kesim, 2009). In 1925, before Herman Jansen undertook the master plan of Ankara, an area of 4 million square meters was occupied between Ulus Square and Yenişehir (Figure 5.1) with the law drafted by Mayor Ali Haydar Bey (Ertuna, 2005).

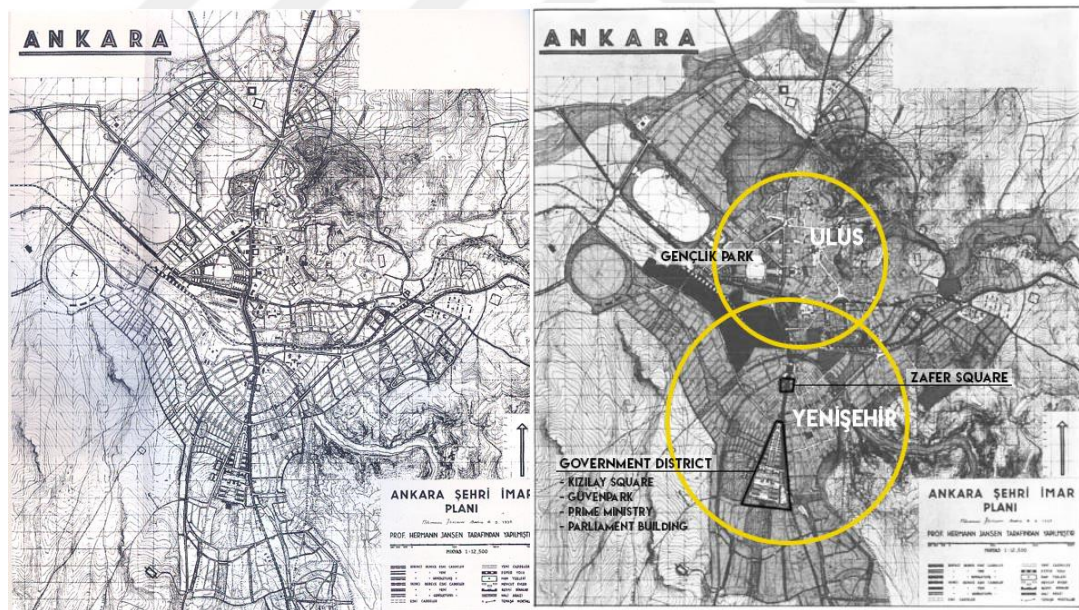


Figure 5.1 Master Plan of Ankara (Jansen, 1937) (left) and New City Center Fiction (Jansen Plan, 1932) (right)

A residential area consisting of houses in a low-rise garden was designed next to the ministerial buildings to be placed in this area by Jansen. It was planned that the leading bureaucrats and elites will live here. Therefore, social life has also been increasingly diversified within the city, and the citizens of Ankara have begun to gather in Kızılay Park just in front of the Kızılay building (Ertuna, 2005). Kızılay Park, which was the most striking public area at this increasingly important point of the city, has been replaced by Güvenpark, which was built directly opposite of the Kızılay Park. It was envisaged that there will be a park at the narrow end of the region, which is located in the shape of a triangle in the Jansen Plan (Ertuna, 2005).

The construction of Güvenpark started in 1930s with the construction of the Ministries (Vardar, 1989 cited in Bayraktar, 2013). Güvenpark is one of the main components of the spatial system that was designed in order to create a new city center in the south of Ulus in the city plan that Jansen dated 1932 approved for the city of Ankara. Güvenpark has been designed with the idea of providing a transition between the residential structure and the state buildings on the one hand, as well as creating a specialized green area together with the Kızılay Park (Figure 5.2). Güvenpark became a prestigious public space where served as a service for the social class that was residing in Yenışehir and was promoted with the bourgeois identity (Saner, 2007 cited in Bayraktar, 2013). Yenışehir has become the closed and coherent discursive / spatial home of modern bourgeois identity (Batuman, 2012). The system of structures and open spaces, starting with Güvenpark and ending with the parliament building, was given the name of Government District (Devlet Mahallesi) by Jansen. The plan's prediction for this area is to combine the publicity of the state and public use of the space of the newly established republic (TMMOB ŞPO, 2015).



Figure 5.2 Kızılay Park and Güvenpark (Bayraktar, 2013)

Atatürk Boulevard, Zafer Square, Kızılay Building and its garden (Kızılay Square), Güvenpark, Saraçoğlu District and Government District are the main actors of this project, which are planned in the south of Ulus. The meaning of the life envisioned in Yenışehir and the spatial fiction of this new life is as important as the value they create when they come together, as well as the value they carry apart (TMMOB ŞPO, 2015). In the thirty-year period after the approval of the Jansen plan, the city center, surrounded by low-density residences and workplaces, has entered a transformation process after the population growth in Ankara and the need for a new housing-workspace shown in the Figure 5.3 (TMMOB ŞPO, 2015). Güvenpark and Kızılay Square was one of the main space that people spent their time and for meeting, resting and gathering during that period.



Figure 5.3 Building Density in Güvenpark between 1925-1955, in 1980s and today (redrawn from TMMOB ŞPO, 2015)

Clemens Holzmeister, who signed many buildings in the Ministries Region, was responsible for the project of Güvenpark. Güvenpark was intended to be both a relaxing place for the officers working in the governmental district and their families and in a sense a showcase of the republic. Hence, it asserted that Güvenpark was designed as a symbolic space that will show the new capital of new Turkey (TMMOB ŞPO, 2015). In addition to being a new center of Ankara, this is the place where people, who were coming from Ulus or outside the city, and enter the center of the republic (Ertuna, 2005).

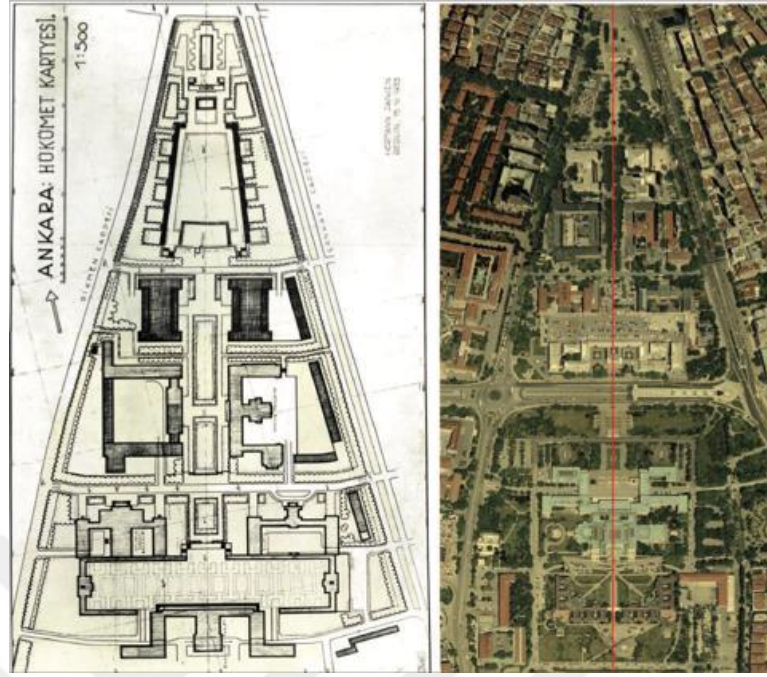


Figure 5.4 Governmental District and Güvenpark in Jansen Plan

The entire triangle-shaped Government District in the Jansen Plan (Figure 5.4), was planned by Holzmeister and built most of the buildings that Holzmeister envisaged. The axis starting from the Güven Monument was surrounded by the buildings of the Ministry symmetrically located at the end of the park and eventually it was designed as a continuous pedestrian artery with the Assembly building (Ayoğlu, 2010).

With all these features mentioned, Güvenpark has acquired a significant value that gives the city an identity. While defining a new city park with new buildings in a newly developing city, Güvenpark played a great role in the formation of the urban identity and urban memory of Ankara with its philosophy and sculptures. Sarikulak (2013) states that Güvenpark, as a newly established modern Republic of Turkey, was designed as a part of the public space strategy determined within the framework of creating the western and secular capital. Hence, when it comes to Ankara, the concept of ‘national identity’ comes to the forefront with Güvenpark as well as ‘place identity’.

In the Jansen Plan, Güvenpark covers an area of approximately 25000 m². After the construction of the Güven monument, Güvenpark has become a magnificent focal

point of the new Ankara as a social space (Yerli & Kesim, no data). Parallel to the changing face of Kızılay with the declaration of a business center in 1952, the structure density and floor heights around Güvenpark began to increase even more as a result of the decisions of 1957 Yücel-Uybadin master plan (Ertuna, 2005). In particular, Kızılay was chosen as the last stop of minibuses routes as a solution to the public transportation, which is also an informal sector (Figure 5.2). After deconstruction of the Kızılay Park, the focal point started to change mainly through Güvenpark, the south part of the square.

In the light of these developments, Ertuna (2005) asserts that Güvenpark has met with a more heterogeneous mass since the end of the 1950s and became the center of the revolt movements together with Kızılay. In the mid-70s, a significant part of Güvenpark was turned into a bus stop, and then the minibus stop area in the southern part was added. Güvenpark was one of the most used open public space considering Gençlik Park and Çankaya Park according to İlkay (2007). How bus and minibus stops are divided the park today is indicated in the Figure 5.5.



Figure 5.5 Bus and minibus stops in Güvenpark

After the 1980s, the publicities of Kızılay and Güvenpark have been affected both socially and physically. Before 1980, the projects of pedestrian zones developed by Ankara Metropolitan Municipality, which envisaged this center of the city to be a public space rather than a traffic intersection, have been shelved according to Atabaş (1994). As a result of this scene, Güvenpark, which had scale and function problems before, has lost its importance due to traffic and lost its chance to regain importance as the focus of these pedestrian areas and the area continued to be seen as a rent zone (Ertuna, 2005).

In 1985, the Metropolitan Municipality took a step under the name of “Güvenpark Renewal Project” that would radically change the physical and social structure of this area. According to the project completed in 1986, a clock tower would be replaced by changing the location of the monument, and a shopping center and parking lot would be built. However, this project was stopped as a result of a campaign that collected 60,000 signatures (Ertuna, 2005).

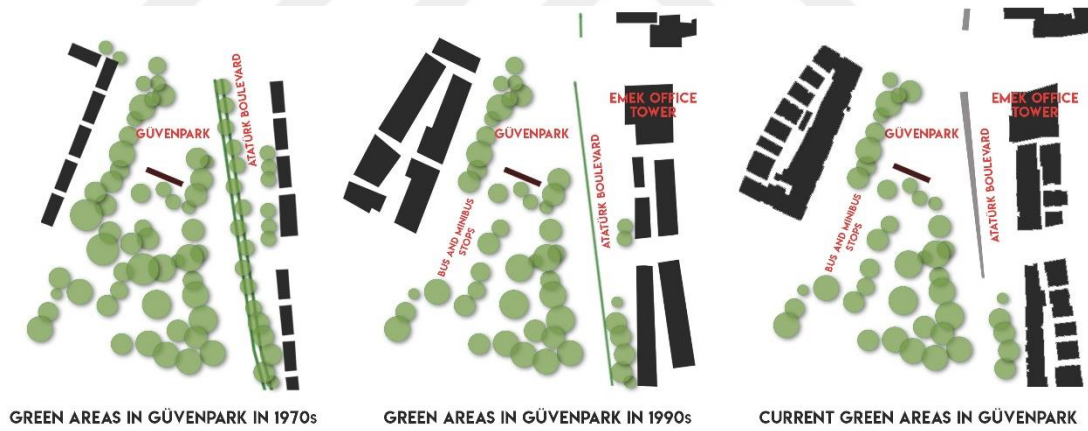


Figure 5.6 The Density Change of Green Areas in Güvenpark from 1970s to today
(redrawn from ŞPO, 2015)

According to Keskinok (1998), municipal administrations on duty allowed to turn Güvenpark, which was saved by the will of the people, into a construction site. Ayoğlu (2010) is also stated that the area was exposed to functional erosions. Green areas in Güvenpark started to decrease over time because of all these constructions and

occupation of minibus and bus stops (Figure 5.6). The use of some part of Güvenpark as bus stops and junctions around the crossroads created due to underground passages opened for subway entrances has caused the park to become a transition zone rather than a place where people spend time.

After summer 2013 Gezi events, a large part of the park was closed to public use. The upper side of Güvenpark was occupied by police forces and even turned into a car park area for private vehicles of the police forces. The minibus stops here have been taken out and the chaos caused by traffic has been deepened in an area that is expected to be pedestrianized in the center of the city. A large part of Güvenpark is occupied by police and minibuses and contact with the park is restricted. The daily life of Ankara citizens who want to reach the square or the dolmus area has been more difficult (ŞPO, 2015). After terrorist attack on March 13, 2016 which 36 people killed and 344 injured according to the news of the Anadolu Agency dated March 12, 2019, police forces made their presence felt in Güvenpark more than ever. Dolmus stations were taken out from Güvenpark and it has become more difficult to reach.

5.2. Current Context of Güvenpark

Today, Güvenpark is the only open and green area in the city center of Kızılay, which is one of the important spatial reflections of the republic. Güvenpark has been declared as 1st Degree Natural Protected Area with the decision numbered 3591 and dated 13.07.1994 by “Ankara Cultural and Natural Heritage Conservation Board” (ŞPO, 2015). It is one of the important spaces in Ankara where citizens can spend time and breathe freely. In addition to these features, it is more of a square park with its central location. Apart from the Government District, there are many governmental buildings and commands close to Güvenpark (Figure 5.7). The fact that these uses are close to Güvenpark is a potential for the area to become more used and active. Since it is located in the center of Ankara and is one of the centers of public transportation, there are many pedestrian and vehicle circulation throughout the day.



Figure 5.7. Current Borders around Güvenpark (left) and Current Building and Green Density (right)

Another feature of Güvenpark is that it is a frequent destination used or passed through all parts of the society. Since it is generally used by pedestrians, the transportation of pedestrians to the center and its circulation is vital for Kızılay and Güvenpark. Güvenpark has been destroyed by projects aimed to solve transportation problems by giving priority to vehicles such as the removal of the Kızılay Garden opposite of Güvenpark, and dolmus, bus stops and metro projects (ŞPO, 2015). Bus and minibuses occupy and divide the huge part of Güvenpark and they prevent the public usage of Güvenpark.

The green areas that have decreased and the building density that has increased in time make people forget the main reason why Güvenpark is designed and what it means for Ankara and the republic (Figure 5.8). The open and green areas envisaged in the plans made for the Capital Ankara are places of social interaction in this city (Kayasü, 2005). The first urban planning experience in Ankara in the 1930s is thought to set an example for other cities of the young Republic. As Kayasü (2005) stated that a certain

importance has been given to open and green areas in all the plans prepared for Ankara, such as Jansen Plan and Uybadin-Yucel Plan, however; the current institutional and legal deficiencies and negative approach to planning also manifest itself in open and green spaces in Ankara.

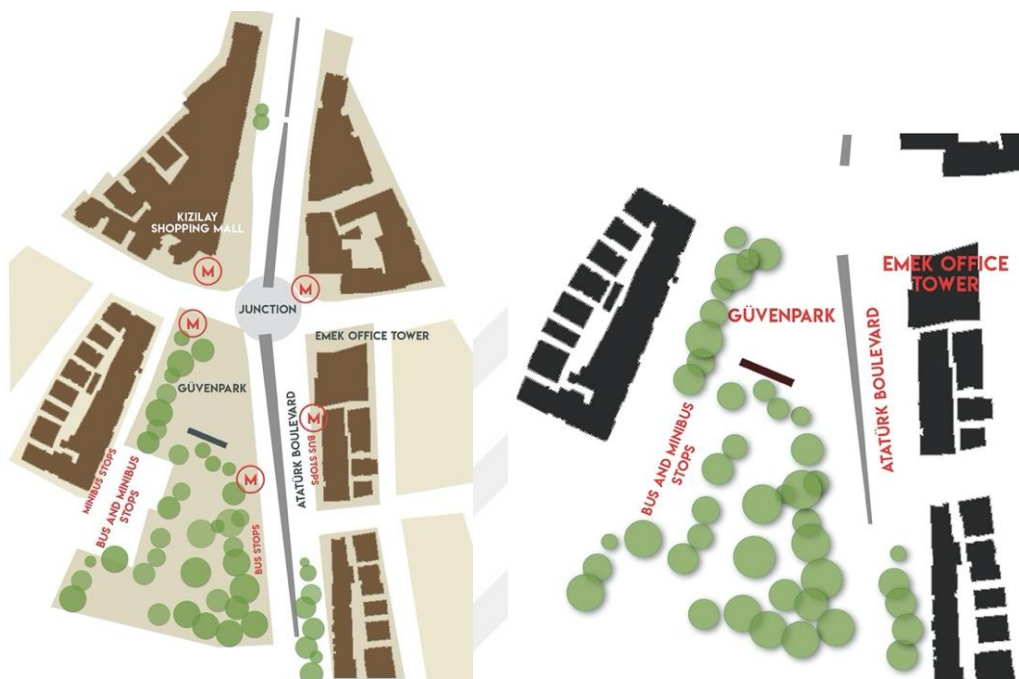


Figure 5.8 Current Building Density in Güvenpark (left) and Current Green Density in Güvenpark (right)

Similarly, all the historical, cultural and social values and meanings of the city of Ankara, and especially the city center, are becoming a place that is disappearing and worn out every day as a result of automobile-oriented policies. This decay manifests itself both physically and qualitatively in Güvenpark. The city center, especially Güvenpark, has been transformed into an imperceptible, and unnoticeable area for both pedestrians and people in the vehicle (ŞPO Makalesi, 2015). In Güvenpark as an area in the midst of heavy traffic fiction, all pedestrian connections are cut off in dense traffic flow. The square has turned into a traffic intersection that is now under control and Güvenpark, where historical meanings have accumulated, has become an area where security forces are positioned during the day, which has become uncanny at

night as a result of deliberate negligence (Batuman, 2012). Now, Güvenpark has become kind of a carpark due to dysfunctional projects.

Moreover, Güvenpark was used as a parking lot for police vehicles as a result of Gezi events and terrorist attack especially. After the terrorist attack on March 13, 2016, Güvenpark has damaged in the memories of citizens as well as physically. People do not want to use Güvenpark for as meeting, gathering, resting, and passing through because of the fear of possible dangers. There are many news about the terrorist attack in Güvenpark and they indicate that all commercial activities were closed, people had a nervous breakdown and all roads were closed to traffic (Figure 5.9). Therefore, Güvenpark becomes a “public space” that has not been used as a quality public space which includes the dimensions which should include safety, comfort, inclusiveness, multi-functionality and accessibility dimensions (Mehta, 2014; Rupa, 2015) and has not been considered as a resilient public space (diversity, connectivity, redundancy and robustness) in Ankara.



Figure 5.9 News about the Terrorist Attack in Güvenpark on the Date of March 13, 2016

In today, Güvenpark has a fragmented structure (Figure 5.10) because of chronic shocks (negative planning strategies and projects), and acute stresses (Gezi events and terrorist attack). Güvenpark has not been got over after all these happenings. Until 1980s, Güvenpark was an open public space in the city center where people could

spend time, gather, and relax and where open green areas were used extensively. People do not prefer to spend time in Güvenpark because this area is extensively used for passing through and they have fear of another terrorist attack. They do not want to stay there for a long time since they do not trust the space and the precautions taken. They do not know what it should be done if there is another explosion or any disturbances.

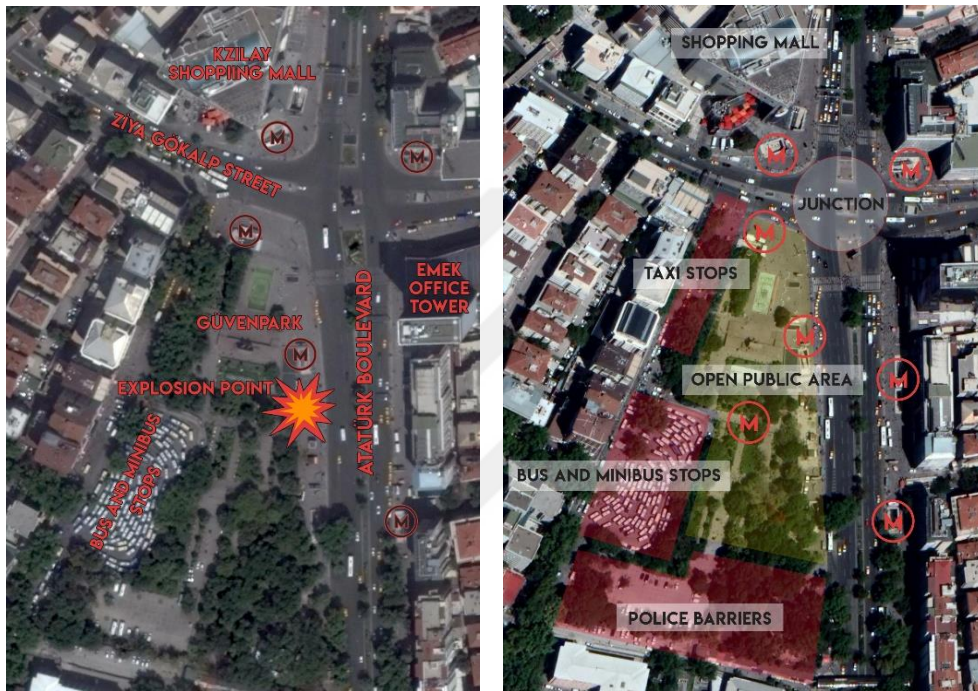


Figure 5.10 The Explosion Point (left) and Spatial and Functional Fragmentation of Güvenpark (right)

Güvenpark is a very crucial and symbolic meaning for Ankara and the citizens because of both its central location and historical value. The fact that it is chosen space for the terrorist attack in March 2016 and this proves its importance and value in the city. After the explosion, Güvenpark has become a pretty quiet and an unused (public) space. It has become a center where people are afraid to go and spend time. Güvenpark, as one of the most important areas of Ankara, has become a deserted place for a while and it is an unexpected situation that the old mobility of the area cannot be given for a long time.

Terrorist attacks, as a sufficiently annoying shock at the national and international level, can take place anywhere at any time. The important thing is to encourage communities to take adequate and effective precautions against these attacks and to continue from where they left off or from a better condition. Unfortunately, this has not been the case in Ankara. People were afraid to go to Güvenpark and could not use Güvenpark as a public area for a long time due to the security measures. Business and commercial places were closed, shops and stores became unable to do business. In addition to its spiritual effect of the shock (explosion), Güvenpark was also negatively affected physically. Although 4 years have passed, it is still seen these negative effects of the explosion in Güvenpark. It has still not got rid of the effects of the terrorist attack as a quality and resilient public space.

5.3. The Resilient Public Space Questionnaire in Güvenpark

As mentioned before, Güvenpark as one of the most important and symbolic public spaces in Ankara has damaged due to the terrorist attack in March 2016. People could not use the area for a while until necessary security precautions have been taken. Almost 1/3 of Güvenpark is occupied by police barriers and forces, and thus the public usage is restricted in order to control the area totally. The number and diversity of commercial and recreational activities have decreased because people were afraid of going to Güvenpark and spending time there. Despite the fact that 4 years have passed since the explosion, Güvenpark is still known as the "place of terrorist attack" by citizens in Ankara. Some strategies need to be identified in order to ensure that public spaces are removed from such negative effects and continue from a better position/situation in the city. Therefore, a questionnaire was conducted in Güvenpark so as to analyze the impacts of the terrorist attack (explosion) on Güvenpark's publicity and the resilience of Güvenpark against disturbances that occurred and may occur. In the next sections of the research, the analysis of the questionnaire was made with a resilient public space approach.

5.3.1. General Information about the Questionnaire Structure

The conducted questionnaire comprises of 4 parts as the usage of Güvenpark (A), the evaluation of publicity of Güvenpark (B), the evaluation of resilient public space of Güvenpark (C) and suggestions of the participants about how Güvenpark can be a resilient public space (D). The questionnaire consists of 10 questions. 5-point Likert scale is used for these 9 questions which include both public space and spatial resilience parts and 1 question located at the end of the survey is open-ended. People evaluated their frequency of use of Güvenpark from 1 (never) to 5 (everyday).

After age, gender and occupation information were asked to the participants, it is tried to understand how the usage frequency of Güvenpark by people has changed since the terrorist attack in Güvenpark by dividing the timeline before and after the explosion in the first part of the questionnaire.

In the second part of the questionnaire, there are 5 questions which include 5 dimensions of a quality public space. People evaluated the quality and publicity of Güvenpark by answering 5-point Likert scale questions from 1 (very low) to 5 (very high). In this part, it is tried to realize how people perceive the publicity and quality of Güvenpark and how their perception has changed by dividing the timeline before and after the explosion. In the Chapter 4, it is discussed what makes public space public and what components of a quality public space include. In the literature, there are different and various approaches of what makes public space public and dimensions of a quality public space. There are some features of public spaces like inclusivity, accessibility, and public ownership (Zhang & He, 2019). Harvey (1992) and Madanipour (2013) emphasize that accessibility is the most significant feature of public space. Németh and Schmidt (2011) proposed an evaluation framework of publicness of public spaces which includes three dimensions as “*diverse/collective*,” “*public/government*,” and “*inclusive/open*”. Rupa (2015) argues that one of the most important public function of spaces can be supported by considering “accessibility, comfort, safety, diversity” features, and thus it is enriched the lives of people using

there. Additionally, Mehta (2014) indicates that a good public space should be accessible and open. “A sense of safety, physical and environmental comfort and convenience, a sense of control and pleasure” should be supported, and thus Mehta (2014) proposes five aspects of public spaces that make them public as “safety, comfort, diversity, and inclusiveness”. As a result, there are no identified features to clarify a public space because it is still considered that different spaces without any significant universal features are evaluated under the concept of public space. Therefore, all definitions and explanations are evaluated and the common perspective and dimensions as “**safety, comfort, comprehensive, multi-functionality and accessibility**” are constituted in order to specify the features of a good public space to evaluate and understand the publicity of Güvenpark in the questionnaire.

In the third part of the survey, there are 5 questions which consist of 4 dimensions of spatial resilience as diversity, connectivity, redundancy, and robustness. People evaluated the spatial resilience of Güvenpark by answering 5-point Likert scale questions from 1 (very low) to 5 (very high). In this part, it is tried to understand to what extent and how people perceive the resilience of Güvenpark following the dimensions of spatial resilience by considering the terrorist attack on March 16. In the Chapter 4, it is discussed what it is needed to perceive a public space as resilient. In the study of Ahren (2012), he states five indicators of urban spatial resilience as redundancy, diversity, multi-functionality, networks and transportation, and adaptability. Walker and Salt (2012) indicates that redundancy, diversity, efficiency, autonomy, connectivity, adaptability or adaptation capacity, robustness and flexibility are the indicators of urban spatial resilience. Subsequently, four indicators are chosen so as to specify the dimensions of spatial resilience as diversity, connectivity, redundancy and robustness since these four indicators are the most oft-cited in urban resilience studies (Chelleri & Olazabal, 2012; Lu & Stead, 2013; Meerow et al., 2016; Sharifi & Yamagata, 2018) and have the highest compatibility with the components of an urban spatial organization (Gharai & Masnavi, 2018).

In the last part of the questionnaire, there is an open-ended question that tries to understand the resilience approach of people and what kinds of proposals and strategies they will suggest in order to consider Güvenpark as a resilient public space.

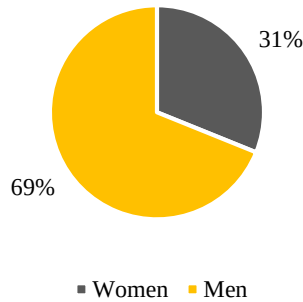
5.3.2. The Results of the Questionnaire

The resilient public space questionnaire was conducted to 50 people located in Güvenpark. All questions of the survey were asked to each participant. In the questionnaire, 34% of the participants (17 women) are women and 66% of the participants (33 men) are men.

During the analysis of the questionnaire, it is realized that 10% of the participants (5 people) answer that they were never using Güvenpark before the explosion since they marked as 1 (never) in the first part (frequency of usage of Güvenpark). Therefore, this part of the participants was not evaluated in the results of the questionnaire. As a result, the number of the total participants to be evaluated becomes 45 people. 31% of these participants (14 women) are women and 69% of the all participants (31 men) are men (left side of the Figure 5.11).

The age average of the survey participants is 36,6. The age average of the women participants is 33,21 and the age average of the men participants is 38,16 in the questionnaire. There are no participants who are under the age of 18. There are 8 people who constitute 18% of the participants and they are between the ages of 18-25. In this age group, 50% of them (4 people) are women and the rest 50% (4 people) is men. There are also 19 people who comprise 42% of the participants and they are between the ages of 26-40. 31,58% of this age group (6 people) are women and 68,42% of them (13 people) are men. Finally, there are 18 people who compose 40% of all the participants and they are between the ages of 41-65. 22,22% of this age group (4 people) comprises of women and 77,78% of them (14 people) comprise of men. There are no participants above the age of 65 in the questionnaire. The age average and the percentage distribution of them in the questionnaire are seen on the right side of the Figure 5.11.

Gender Distribution in the Survey



Age Distribution of the Participants

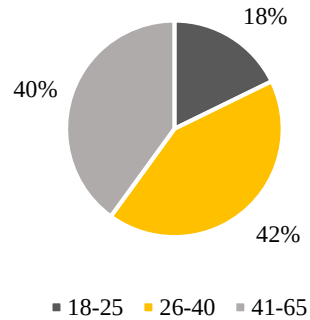


Figure 5.11 Gender Distribution in the Survey (left) and Age Distribution of the Participants (right)

The questionnaire was also conducted with people from different occupations. Crafts and minibus drivers are important participants in the survey because they have used Güvenpark all the time, and thus they can compare before and after the situation of Güvenpark more effectively. 20% of the participants (9 people) are in the occupation group of craft, 33% of the participants (15 people) are in the occupation group of minibus drivers and 47% of the all participants (21 people), as the rest, are in the occupation groups of others (Figure 5.12).

Occupation Distribution in the Survey

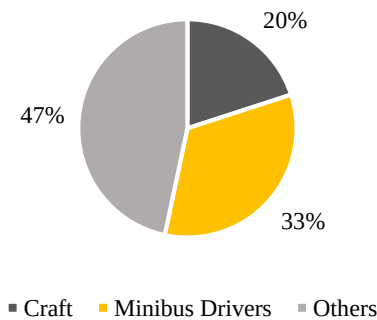


Figure 5.12 Occupation Distribution in the Survey

5.3.2.1. The First Part of the Questionnaire: Usage Frequency of Güvenpark (A)

The averages of the evaluation of the usage frequency of Güvenpark according to gender, occupation and age group evaluations are shown in the Table 5.1. According to this table, the overall before an average of all groups in the questionnaire is 4,04 and the overall after average of all groups is 3,22.

When comparing the gender groups, it is seen that the average of the before the explosion of the women participants is 3,64 and the average of the after the explosion of the women participants is 2,02 with the lowest value in both the gender group and the overall values (Figure 5.13). The average of the before the explosion of the men participants is 4,22 with the highest value in the gender group while the average of the after the explosion of the men participants is 3,74.

In the age groups, the average value of the participants between the age of 18-25 in before the explosion is 3,87 and the average of the after the explosion of this age range is 2,5 with the lowest value in the age ranges. The average of the before the explosion of the age range of 26-40 is 4,15 with the highest value in the age group and the average of the after explosion of this age range is 3,21. Lastly, the average the average of the before explosion evaluation of the participants in between the age of 41-65 of the after explosion evaluation of the participants in this age range is 3,55 with the highest value in the age group (Table 5.1).

While analyzing the averages of the occupations in the survey, it is argued that the average of the before the explosion of the crafts is 3,66 and the average of the after the explosion of the crafts is 2,66. Minibus drivers have the highest average values of both before the explosion evaluation with 4,93 and after the explosion evaluation with 4,6 in both occupation group and the overall values (Figure 5.13). Other occupations have the lowest average values of both before the explosion evaluation with 3,57 and after the explosion evaluation with 2,47 in the occupation group.

Table 5.1 Usage Frequency of Güvenpark in accordance with the Averages of the Survey Groups

Gender, Age and Occupation Groups / Usage Frequency of Güvenpark	Before	After
Overall	4,04	3,22
Women	3,64	2,07
Men	4,22	3,74
18-25	3,87	2,5
26-40	4,15	3,21
41-65	4	3,55
Craft	3,66	2,66
Minibus Drivers	4,93	4,6
Others	3,57	2,47

The Averages of the Usage Frequency of Güvenpark

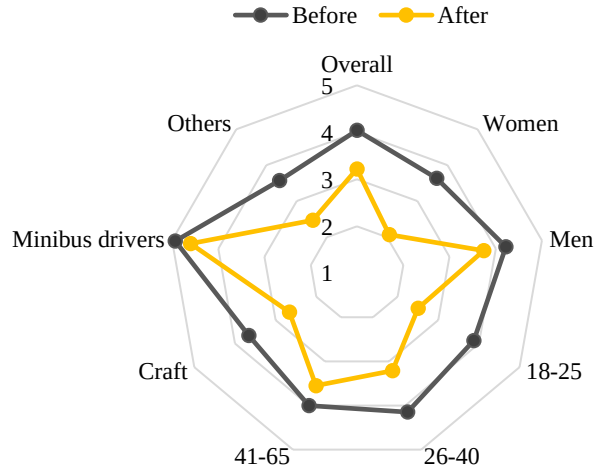


Figure 5.13 Before and After the Explosion Evaluation of the Usage Frequency of Güvenpark

5.3.2.2. The Second Part of the Questionnaire: Public Space Dimensions (B)

The overall average values of before and after the explosion of each public space dimensions are shown in Table 5.2. The differences between before and after the explosion evaluation among each public space dimension is seen in the Figure 5.14. The relationship between each average value of the public space dimensions is indicated below. The total before the explosion average of the public space dimensions is 3,71 out of 5 and the total after the explosion average of the public space dimensions is 2,95 out of 5. The highest average value before the explosion belongs to the dimension of accessibility and the lowest value before the explosion belongs to multi-functionality. The highest average value after the explosion belongs to accessibility and the lowest value of after the explosion belongs to the dimension of multi-functionality.

Table 5.2 The Overall Average Values of Before and After the Explosion of the Public Space Dimensions

Overall	Safety	Comfort	Comprehensiveness	Multi-functionality	Accessibility	Total average
Before	3,68	3,06	4,31	2,75	4,75	3,71
After	2,6	2,24	3,64	1,84	4,44	2,95

Before and After Changes of Public Space Dimensions

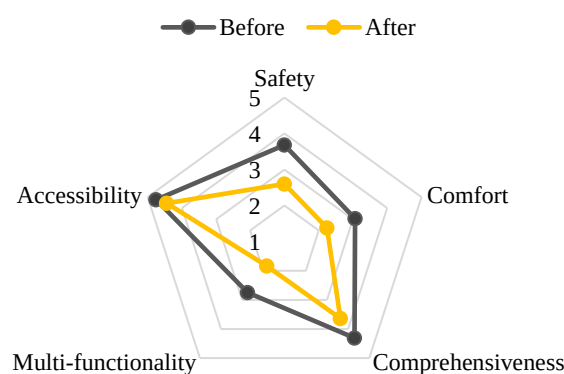


Figure 5.14 The Before and After the Explosion Relationship between the Public Space Dimensions

Safety

The first dimension of the public space part of the questionnaire is **safety**. Its overall average of before the explosion is 3,68 and the average of after the explosion is 2,6 (Table 5.2). The average of before the explosion of women is 3,21 and the average of after the explosion is 1,78. The average of before the explosion of men is 3,9 and the average of after the explosion is 2,96. When analyzing the age groups, it is seen that the average of before the explosion of 18-25 age group is 3,37 and the average of after the explosion of this age group is 1,87 with the lowest value. The average of before the explosion of 26-41 age group is 3,52 and the average of after the explosion of this age group is 2,73. The final values of this age group belong to 41-65 age range which has the highest values in both before and after the explosion evaluation of the safety dimension. The average of before the explosion of 41-65 age group is 4 while the average of after the explosion of this age group is 2,77. The final values of the safety dimension belong to the occupation groups. The average of before the explosion of the crafts is 3,88 while the average of after the explosion of this group is 2,55. Minibus drivers have the highest values in both before and after the explosion evaluation. The average value of before the explosion of the minibus drivers is 4,2 and the average of after the explosion of this group is 3,26. Lastly, other occupations group has the lowest values in both before and after the explosion evaluation. The average value of before the explosion of the other occupations is 3,23 and the average of after the explosion of this group is 2,14. The average values of before and after explosion of the safety dimension are shown in the Table 5.3 and the change of the groups between before and after values of the safety dimension is seen in the Figure 5.15.

Table 5.3 The Average Values of the Safety

Safety	Before	After
Overall	3,68	2,6
Women	3,21	1,78
Men	3,9	2,96
18-25	3,37	1,87
26-40	3,52	2,73
41-65	4	2,77
Craft	3,88	2,55
Minibus Drivers	4,2	3,26
Others	3,23	2,14

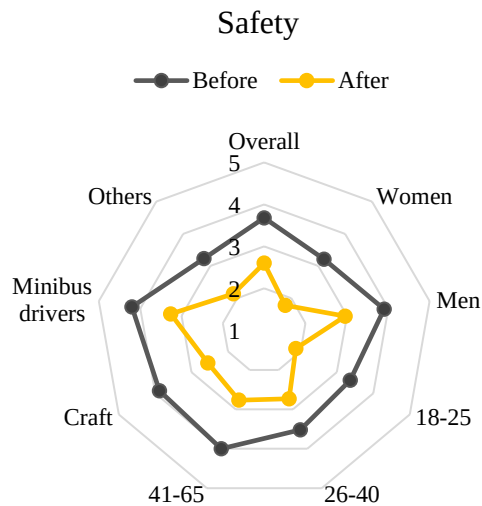


Figure 5.15 The Relations between Participant Groups of the Safety Dimension

Comfort

The second dimension of the public space evaluation part is **comfort**. Its overall average value before the explosion is 3,06 while the average of after the explosion is 2,24 (Table 5.2). The average of before the explosion of women is 3 and the average of after the explosion is 1,85. The average of before the explosion of men is 3,09 and

the average after the explosion is 2,42. When considering the age groups, it is seen that the averages of the 18-25 age range are the lowest value after the explosion in the age groups. The average of before the explosion of the 18-25 age range is 2,75 and the average of after the explosion of this age range is 2. The average of before the explosion of the 26-40 age range is 2,68 with the lowest value of before the explosion in the age groups and the average of after the explosion of this age group is 2,21. 41-65 age range has the highest values in both before and after the explosion evaluation of the comfort dimension in the age groups. The average of before the explosion of 41-65 age range is 3,61 and the average of after the explosion of this age group is 2,38. The final values of the comfort dimension belong to the occupation groups. The average of before the explosion of the crafts is 3,22 with the highest value of before the explosion in the occupation groups while the average of after the explosion of this group is 2 with the lowest value of after the explosion in the occupation groups. The average of before the explosion of the minibuses drivers is 3,12 and the average of after the explosion of this group is 2,66 with the highest value of after explosion in the occupation groups. The last values of the comfort dimension belong to other occupation group. 2,95 is the lowest value of before the explosion of the other occupation groups and the average of after the explosion of this group is 2,04. The average values of before and after the explosion of the comfort dimension are shown in the Table 5.4 and the change of the groups between before and after values of the comfort dimension is seen in the Figure 5.16.

Table 5.4 The Average Values of the Comfort

Comfort	Before	After
Overall	3,06	2,24
Women	3	1,85
Men	3,09	2,42
18-25	2,75	2
26-40	2,68	2,21
41-65	3,61	2,38
Craft	3,22	2
Minibus Drivers	3,12	2,66
Others	2,95	2,04

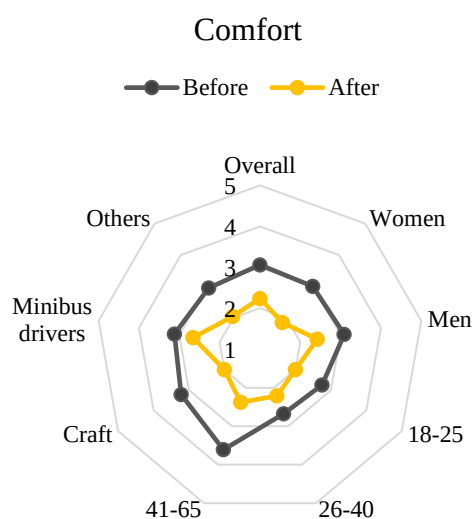


Figure 5.16 The Relations between Participant Groups of the Comfort Dimension

Comprehensiveness

The third evaluated dimension in **comprehensiveness**. The average of before the explosion is 4,31 as its average value of after explosion is 3,64 (Table 5.2). In the gender groups, the average of the comprehensiveness dimension of before the

explosion of women is 4,5 and the average of after the explosion of women is 3,57. The average of the comprehensiveness dimension of before the explosion of men is 4,22 and the average of after the explosion of men is 3,67. In the age groups, the averages of before and after the explosion of the 18-25 age range are the lowest values with 4 and 3,37. The average of before the explosion of 26-40 age range is 4,26 and the average of after the explosion of this age group is 3,68. The last age range of this group is 41-65 and this age range has the highest values both before and after the explosion evaluation with 4,55 and 4,72 in the age groups. The last is the occupations group in the analysis of the values of the comprehensiveness dimension. The averages of before and after the explosion of the craft group are the highest values with 4,55 and 3,77 in the occupations group. The average of before the explosion of the minibus drivers is 4,13 with the lowest value in the group and the average of after the explosion of the minibus drivers is 3,73. Finally, the average of before the explosion of the other occupations is 4,33 and this group has the lowest average of after the explosion evaluation with the value of 3,52 in the occupations group. The average values of before and after explosion of the comprehensiveness dimension are shown in the Table 5.5 and the change of the groups between before and after values of the comprehensiveness dimension is seen in the Figure 5.17.

Table 5.5 The Average Values of the Comprehensiveness

Comprehensiveness	Before	After
Overall	4,31	3,64
Women	4,5	3,57
Men	4,22	3,67
18-25	4	3,37
26-40	4,26	3,68
41-65	4,5	3,72
Craft	4,55	3,77
Minibus Drivers	4,13	3,73
Others	4,33	3,52

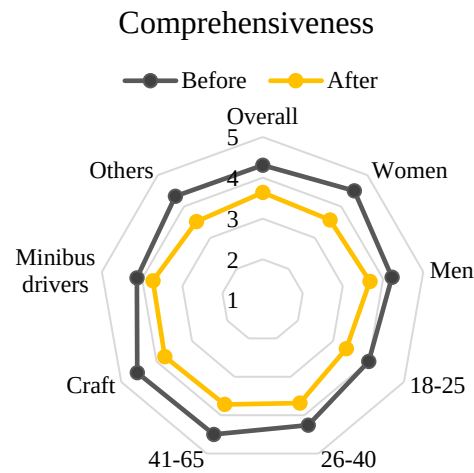


Figure 5.17 The Relations between Participant Groups of the Comprehensiveness Dimension

Multi-functionality

The fourth indicator of the public space evaluation part is **multi-functionality**. Its average values of before and after the explosion are 2,75 and 1,84 (Table 5.2) as the lowest average values among the public space dimensions (Figure 5.14). In the gender groups, the average of the multi-functionality dimension before the explosion of women is 2,35 and the average of after the explosion of women is 1,42. The average of before the explosion of men is 2,93 and the average of after the explosion of men is 2,03 in the multi-functionality dimension. When analyzing the age groups, it is seen that the averages of the 18-25 age range are the lowest values of both before and after the explosion with 1,87 and 1 in the age groups. The average of before the explosion of 26-40 age range is 2,42 and the average of after the explosion of this age range is 1,94 in the multi-functionality dimension. The averages of the 41-65 age range are the highest values of both before and after the explosion with 3,5 and 2,11 in the age groups. In the last group which is the occupations, the craft occupation group has both highest average value of before the explosion and the lowest average value of after the explosion with 3,22 and 1,11. The average of before the explosion of minibuses drivers is 2,93 and this group has the highest after the explosion average with the value of 2,6

in the occupations group. Lastly, the other occupations group has the lowest before the explosion average with the value of 2,42 and the average value of after the explosion is 1,61 in the multi-functionality dimension. The average values of before and after explosion of the multi-functionality dimension are shown in the Table 5.6 and the change of the groups between before and after values of the multi-functionality dimension is seen in the Figure 5.18.

Table 5.6 The Average Values of the Multi-functionality

Multi-functionality	Before	After
Overall	2,75	1,84
Women	2,35	1,42
Men	2,93	2,03
18-25	1,87	1
26-40	2,42	1,94
41-65	3,5	2,11
Craft	3,22	1,11
Minibus Drivers	2,93	2,6
Others	2,42	1,61

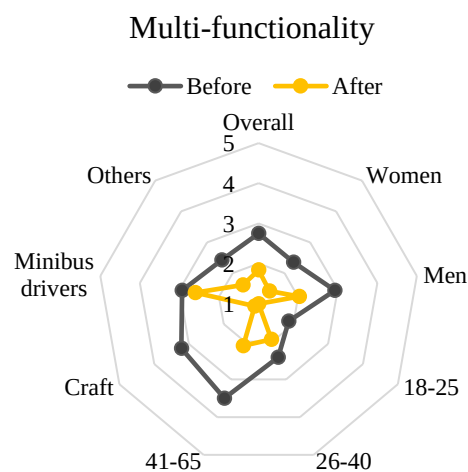


Figure 5.18 The Relations between Participant Groups of the Multi-functionality Dimension

Accessibility

The final dimension of the public space part in the questionnaire is **accessibility**. It has the highest averages of both before the explosion value as 4,75 and after the explosion value as 4,44 (Table 5.2) among the others (Figure 5.14). The average of the accessibility dimension of before the explosion of women is 4,85 and the average of after the explosion of women is 4,21. The average of the accessibility dimension of before the explosion of men is 4,7 and the average of after the explosion of men is 4,54. In the age groups, the average of the accessibility dimension of before the explosion of 18-25 age range is 4,87 and the average of after the explosion of this age range is 4,62 with the highest value. The average of the accessibility dimension of before the explosion of 26-40 age range is 4,57 with the highest value in the age groups and the average of after the explosion of this age range is 4,42. The last age range in the age groups is 41-65 and it has both the highest average of before the explosion value as 4,88 and the lowest average of after the explosion value as 4,38. The final groups in the accessibility dimension are occupations group. The craft group has the highest average value of before the explosion as 4,88 and the average of after the explosion of this occupation group is 4 with the lowest value in the group. The average of before the explosion of minibuses drivers is 4,6 with the lowest value and the average of after the explosion of this group is 4,46. Other occupations group has 4,8 average value of before the explosion and 4,61 is the highest average value in after the explosion of the accessibility dimension. The average values of before and after explosion of the multi-functionality dimension specified above are shown in the Table 5.7 and the change of the groups between before and after values of the multi-functionality dimension is seen in the Figure 5.19.

Table 5.7 The Average Values of the Accessibility

Accessibility	Before	After
Overall	4,75	4,44
Women	4,85	4,21
Men	4,7	4,54
18-25	4,87	4,62
26-40	4,57	4,42
41-65	4,88	4,38
Craft	4,88	4
Minibus Drivers	4,6	4,46
Others	4,8	4,61

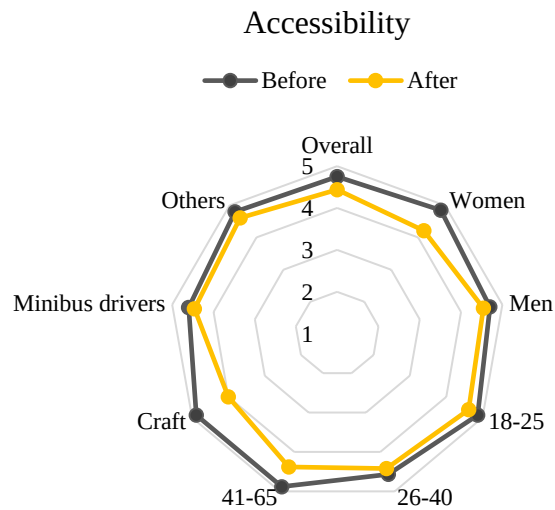


Figure 5.19 The Relations between Participant Groups of the Accessibility Dimension

5.3.2.3. The Third Part of the Questionnaire: Spatial Resilience Dimensions (C)

Participants evaluated the spatial resilience dimensions according to the current (after the explosion) situation of Güvenpark. The overall current average values of the

spatial resilience dimensions are shown in Table 5.8. The total average of the spatial resilience dimensions is 3,17. The differences among each spatial resilience dimension are seen in the Figure 5.20. The relationship between each average value of the spatial resilience dimensions is indicated below. The highest average value belongs to the dimension of connectivity and the lowest average value belongs to the dimension of diversity.

Table 5.8 The Overall Current Average Values of the Spatial Resilience Dimensions

Overall	Diversity	Connectivity	Redundancy	Robustness	Total
Current	2,97	3,68	3,02	3,02	3,17

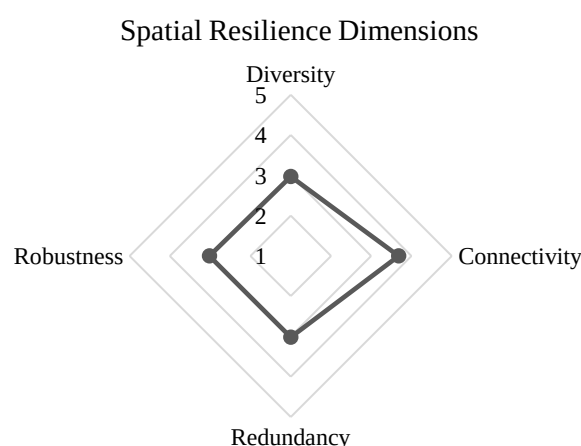


Figure 5.20 The Relationship between the Spatial Resilience Dimensions

Diversity

The first indicator of the spatial resilience evaluation part is **diversity**. Its overall average value of the diversity dimension is 2,97 (Table 5.18). The average value of the women participants is 2,14 while the men's is 3,35 in the gender group. In the age groups, the average of the 18-25 age range is 2,87 with the lowest value in the group, the average of the 26-40 age range is 3,1 which is the highest value in the group and the average of the 41-65 age range is 2,88. In the last group as occupations, it is seen that the average value of the craft group is 1,77 which is the lowest value in the diversity dimension. The average of minibus drivers is 3,8 which is the highest value and lastly, the average value of the other occupation group is 2,9. The current average

values of the diversity dimension are shown in the Table 5.9 and the change of the groups' evaluation is seen in the Figure 5.21.

Table 5.9 The Average Values of the Diversity Dimension

Diversity	Current
Overall	2,97
Women	2,14
Men	3,35
18-25	2,87
26-40	3,1
41-65	2,88
Craft	1,77
Minibus Drivers	3,8
Others	2,9

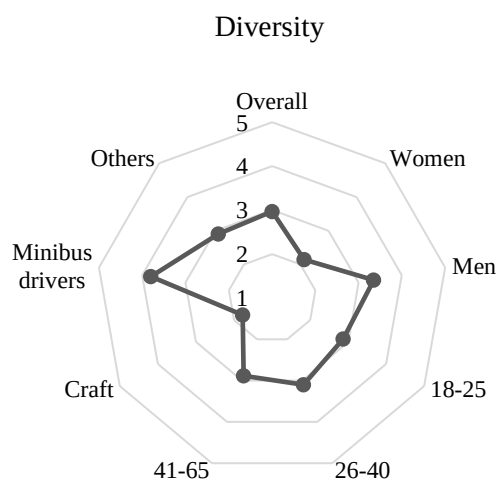


Figure 5.21 The Relations between Participant Groups of the Diversity Dimension

Connectivity

The second indicator of the spatial resilience evaluation part is **connectivity**. Its overall average value of the connectivity dimension is 2,97 (Table 5.18). In the gender group, the average value of the women participants is 2,14 while the average value of

the men participants is 3,35. When analyzing the age groups, it is seen that the average value of the age range of 18-25 is 4,37 which is the highest value in the connectivity dimension. The average value of the 26-40 age range is 3,73 and the average of the age range of 41-65 is 3,33 with the lowest value in the group. In the occupations group, the average of the crafts is 3,11 which is the lowest value in the connectivity dimension. The average value of the minibus drivers is 4 with the highest value in the group and the average of the other occupations is 3,71. The current average values of the connectivity dimension are shown in the Table 5.10 and the change of the groups' evaluation is seen in the Figure 5.22.

Table 5.10 The Average Values of the Connectivity Dimension

Connectivity	Current
Overall	3,68
Women	3,21
Men	3,9
18-25	4,37
26-40	3,73
41-65	3,33
Craft	3,11
Minibus Drivers	4
Others	3,71

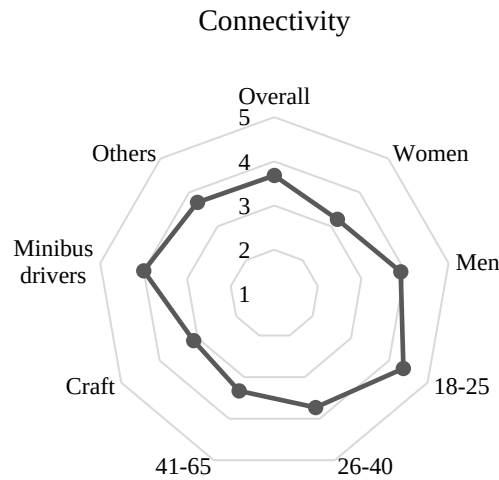


Figure 5.22 The Relations between Participant Groups of the Connectivity Dimension

Redundancy

The third indicator of the spatial resilience evaluation part is **redundancy**. Its overall average value of the redundancy dimension is 3,02 (Table 5.18). The average value of the women participants is 2,85 while the average value of the men participants is 3,09 in the gender group. The average of the age range of 18-25 is 3 and the average of the 26-40 age range is 2,63 which is the lowest value in the redundancy dimension. 41-65 age range as the last one has the highest value in the age group which is 3,44. When analysing the last group as occupations group, it is seen that other occupations group has the lowest value in the specific group which is 2,71 and minibuses drivers has the highest value in the occupations groups which is 3,4. Lastly, the average of the craft participants is 3,11 in the dimension of redundancy of the spatial resilience. The current average values of the redundancy dimension are shown in the Table 5.11 and the change of the groups' evaluation is seen in the Figure 5.23.

Table 5.11 The Average Values of the Redundancy Dimension

Redundancy	Current
Overall	3,02
Women	2,85
Men	3,09
18-25	3
26-40	2,63
41-65	3,44
Craft	3,11
Minibus Drivers	3,4
Others	2,71

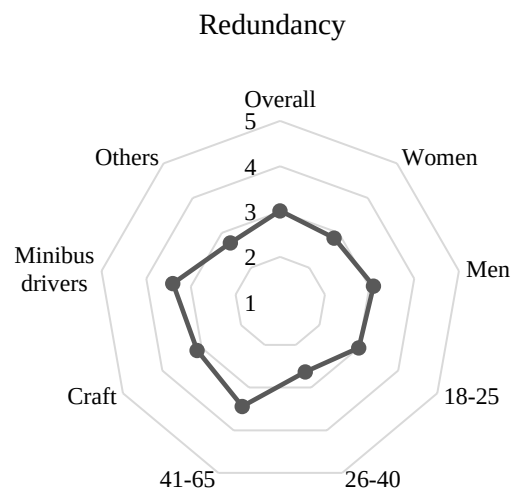


Figure 5.23 The Relations between Participant Groups of the Redundancy Dimension

Robustness

The fourth and the last indicator of the spatial resilience evaluation part is **robustness**. Its overall average value of the robustness dimension is 3,02 (Table 5.18). There are two separate questions in the robustness dimension and the final averages of the

robustness dimension were calculated the total average values of these two questions. In the gender group, the average value of the women participants is 2,67 and the average value of the men participants is 3,17 in the robustness dimension. In the age groups, the age range of 18-25 has the lowest value in the robustness dimension which is 2,43 while the age range of 41-65 has the lowest value in the robustness dimension as 3,69. The average value of the age range of 26-40 is 2,63 in the robustness dimension of the spatial resilience. The final group is occupations and the average value of the craft participants is 2,94. While the average of the minibus drivers is 3,18 as the highest value in the occupations group, the average of the other occupations is 2,59 as the lowest value in the occupations group. The current average values of the robustness dimension are shown in the Table 5.12 and the change of the groups' evaluation is seen in the Figure 5.24.

Table 5.12 The Average Values of the Robustness Dimension

Robustness	Current
Overall	3,02
Women	2,67
Men	3,17
18-25	2,43
26-40	2,63
41-65	3,69
Craft	2,94
Minibus Drivers	3,18
Others	2,59

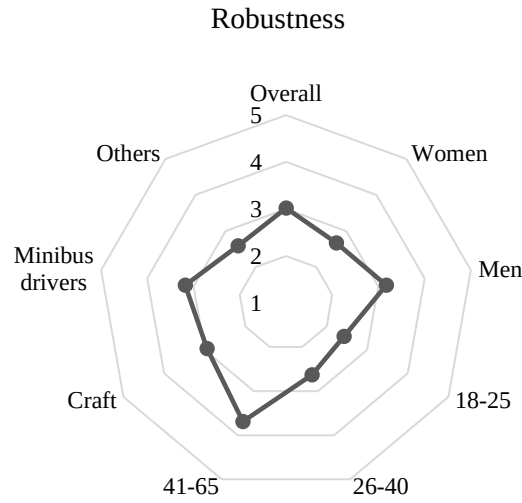


Figure 5.24 The Relations between Participant Groups of the Robustness Dimension

5.4. Evaluation of The Questionnaire Results

Güvenpark, which is one of the most symbolic and important public space in Ankara, has very valuable structures and meaning derived from its history. Throughout history, different usages and policies have been seen on behalf of Güvenpark as mentioned before. Cities are defined as complex and dynamic systems (Liu et al., 2007) (economic, physical and social systems) and public spaces are at a very important point in these systems since they are spaces where people come together and produce together. Hence, it is crucial and valuable to evaluate and discuss whether Güvenpark is a resilient public space in order to strengthen the adaptability and the ability to cope with the changes without losing the characteristics.

5.4.1. Evaluation of The Usage Frequency of Güvenpark

When analyzing the averages of the participants' answers, it is indicated that the usage frequency of Güvenpark decreased after the terrorist attack in March 16 according to the Figure 5.13. People do not want to use there after the explosion since the average value decreases from 4,04 to 3,22 according to the Table 5.1. Although Güvenpark is one of the most important and symbolic public spaces in Ankara, the average value of

the usage frequency is low. There is a great difference between the usages of the genders in the survey. It is seen in the Figure 5.25 that before the explosion, women do not prefer using Güvenpark when compared to the men. The lowest average after the explosion belongs to women and they do not prefer using Güvenpark after the explosion according to their evaluations when comparing to the men's average. Therefore, it is inferred from their evaluations that the explosion has a very effective impact on the presence of women in Güvenpark. There is also a decrease in usage frequency of men and they do not want to use there after the explosion when compared to before the explosion values. However, the difference between before and after averages of men is not as high as the averages of women. The reason behind this difference would stem from the dominance of men in occupations. All minibuses drivers in the questionnaire are men and they have had to work in Güvenpark before and after the explosion. That is the reason why there is not such a deep difference, as women have, between before and after the explosion averages of men.

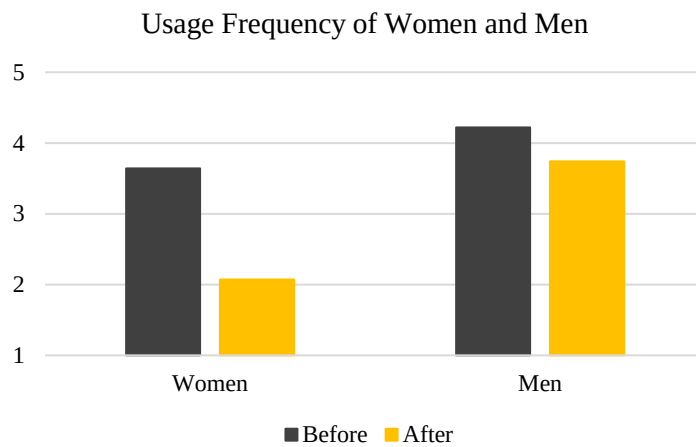


Figure 5.25 Usage Frequency of Güvenpark of Gender Group

It is mentioned that the questionnaire was conducted to 15 minibuses drivers. When evaluating the results of the occupation groups, it is inferred from both the results and the Figure 5.26 that there is not a high difference between before and after the explosion averages of minibuses drivers when compared to the crafts and the other

occupations. As mentioned in the age groups, the reason for this low difference stems from the presence of minibus drivers before and after the terrorist attack. After the explosion, they did not stop working and they had to be in Güvenpark in spite of the explosion. They are continuous workers in Güvenpark. They are still the group that has used Güvenpark the most. Moreover, the difference between craft and other occupations is not so different from each other. Thereby before and after averages are so close to each other. It is inferred that crafts and people from other occupations like engineer, architect, and manager and so on, do not prefer using Güvenpark after the explosion as often as before. Some craft people have preferred to close or move their own businesses and people from other occupation groups have not preferred to come to Güvenpark in order to do business, spend time or just pass through.

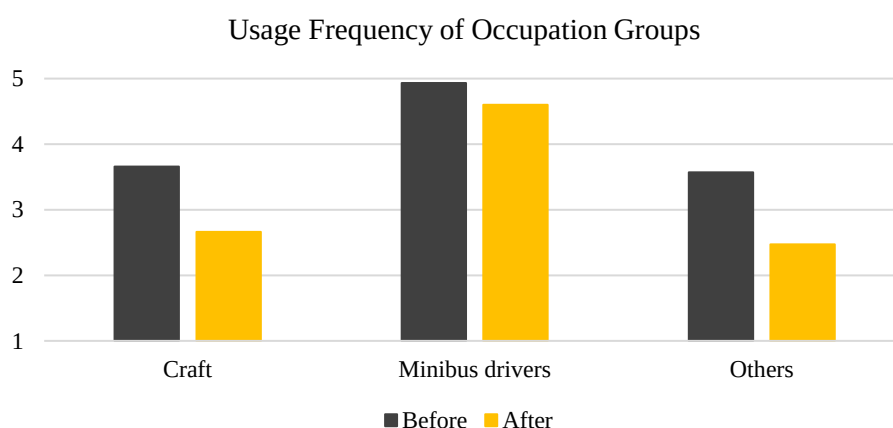


Figure 5.26 Usage Frequency of Güvenpark of Occupation Group

It is also realized that people in the age group of 18-25 do not prefer to use Güvenpark among the other age ranges after the explosion. Each age group has close average values before the explosion evaluation, however; the same statement cannot be considered for after the explosion average values. It is seen in Figure 5.27, there is not a great difference between the age ranges of 26-45 and 46-65 while comparing to the age range of 18-25. In the Table 5.1, it is seen that these people have the lowest average value in the group. Nevertheless, when looking at the values of the people who are in the age range of 41-65, it is realized that there is no such a deep difference between

before and after the explosion values of this age range. While the explosion has a great impact on people who are in the age range of 18-25, it cannot be said the same statement for the people who are in the age range of 41-65. Therefore, it is inferred that they do not perceive Güvenpark as a space that can be used and spent time.

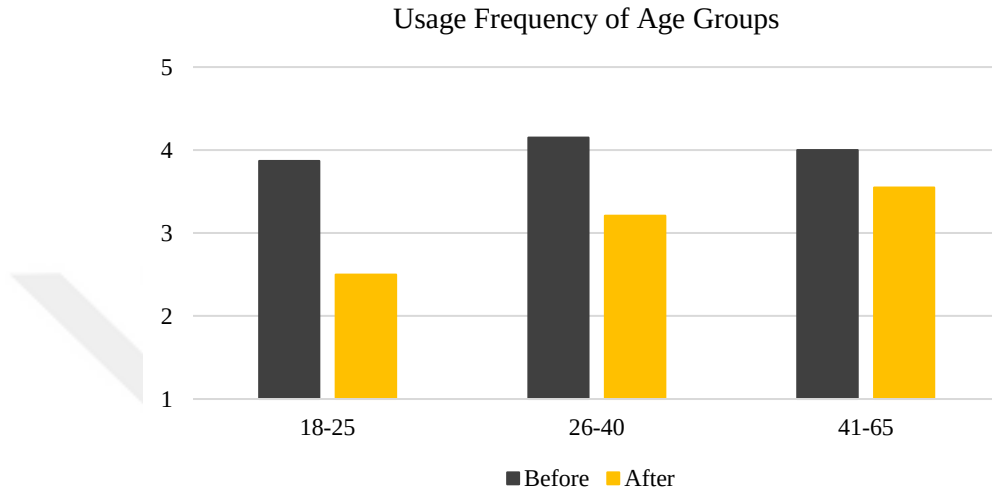


Figure 5.27 Usage Frequency of Güvenpark of Age Group

As a result, when considering all these evaluations, it is realized that the average values of all participant groups before the explosion evaluation are very close to each other and the average values of all participant groups are over the value of 3 for before the explosion evaluation. There is no great difference between them. It means that Güvenpark was a public space used by people more before the explosion. It is also realized that the average value of women, crafts, people from other occupations and people in the age range of 18-25 participants are under the value of 3 and the difference between before and after explosion values are higher than the others. Therefore, it is stated that these participants do not prefer to use Güvenpark after the explosion as often as before. The reasons behind this situation are discussed in the next parts of the chapter by evaluating the results of the parts of public space dimensions and spatial dimensions because all these dimensions have an impact on the usage preference of people.

5.4.2. Evaluation of The Public Space Dimensions

In the second part of the questionnaire, it is asked to participants to evaluate the publicness of Güvenpark by giving points from 1 to 5. When evaluating the result of the public space dimensions, it is indicated in the previous part that the accessibility dimension has both the highest values in the evaluation of before and after the explosion and there is no significant difference between evaluations of before and after the explosion. It means participants consider Güvenpark as an accessible public space and it does not change significantly before and after the explosion. Therefore, it is inferred that Güvenpark is still an accessible public space after the explosion like before the explosion according to the evaluations of the participants. They stated that there is no such significant change after the explosion. They still can access Güvenpark via different transportation modes.

Safety, as one of the public space dimensions, is also important for this research because after the explosion, one of the most essential concerns in Güvenpark is providing safety for people. In the questionnaire, it is seen in the Figure 5.28 that the average value of the safety of before the explosion evaluation is over 3 points and the average value of the safety after the explosion evaluation is under 3 points. It is inferred that before the explosion, participants perceive Güvenpark safer than after the explosion. Hence, this is one of the reasons why people do not prefer using Güvenpark after the explosion as often as before the explosion. They identify Güvenpark with the explosion and they do not trust the precautions taken in Güvenpark.

Before and After Changes of Public Space Dimensions

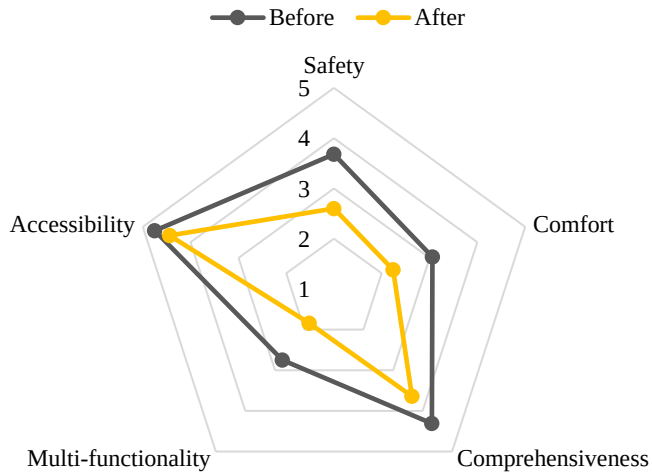


Figure 5.28 Before and After Changes of Public Space Dimensions

The dimension of comfort, as one of the public space dimensions, it is seen in the Figure 5.28 that participants do not evaluate Güvenpark as a comfortable public space after the explosion compared to before the explosion evaluation. The average value of before the explosion evaluation is barely over 3 point and the average value of after the explosion evaluation is close to 2 point. The difference between before and after the explosion is not very significant like the dimensions of safety and multi-functionality. However, the decrease also shows why people do not prefer using Güvenpark after the explosion. Even though Güvenpark is not physically and ergonomically comfortable before the explosion, people preferred to spend time in Güvenpark.

In the dimension of comprehensiveness, it is seen from the Figure 5.28 that both the average values of before the explosion and after the explosion are over 3 point. It is inferred that Güvenpark is perceived as an inclusive public space before and after the explosion. Although the usage frequency and the average value of the comprehensiveness dimension decrease after the explosion, people still evaluate Güvenpark as comprehensive. There is no significant difference between the

evaluations of before and after the explosion. Different people from different neighborhoods, regions, and races continue to go to Güvenpark for different purposes after the explosion.

The last dimension of multi-functionality has the lowest values in the evaluation of before and after the explosion. It indicates that participants do not evaluate Güvenpark as a multi-functional public space especially after the explosion. Participants specified that there is almost no different and diverse activities in Güvenpark and after the explosion, they cannot see any different activities except sitting, reading a book, and listening to music in the park. They also stated that if there has been different activities in the park they do not know before the explosion, they would not see any different activities after the explosion. The dimension of multi-functionality shows the decrease in usage in Güvenpark and also, it is one of the reasons why people do not use Güvenpark after the explosion as often as before the explosion. It is significantly related to safety concerns. People do not perceive Güvenpark as safe after the explosion and thus, they do not prefer to use it. Therefore, the frequency and the diversity of the activities and functions have dramatically decreased in Güvenpark.

After evaluating the public space dimensions in the questionnaire, they are also evaluated in a detailed way in accordance with the evaluations of each participant group as gender, age and occupations. After the general overview of the results of public space dimensions, the analysis of the dimensions is divided into three groups as gender, age and occupation in order to analyze the evaluation of the questionnaire better while investigating deeply. The results of all groups are evaluated one by one in accordance with the dimensions of public space.

5.4.2.1. Safety

When comparing the results of women and men in accordance with the safety dimension, it is stated that there is no significant difference between the evaluations of women and men. While the average value of after the explosion evaluation of women in safety dimension is pretty lower than the men's, there is no significant

difference between the averages of before the explosion (Table 5.3). Men considered Güvenpark relatively safe before the explosion because the average value of after the explosion of men is under the point 3, but it is still close to the value 3 (Figure 5.29). Hence, it is inferred that women are affected more by the explosion compared to men and it affects the safety perception of women about Güvenpark. It is directly stated that women did not evaluate Güvenpark as safe after the explosion. Although the average of before the explosion value of women is above the value 3, it is still quite close to point 3. Hence, this is one of the reason of why women do not prefer using Güvenpark after the explosion as mentioned before. They do not trust the precautions taken after the explosion and they do not know what they should do if something similar happens in Güvenpark.

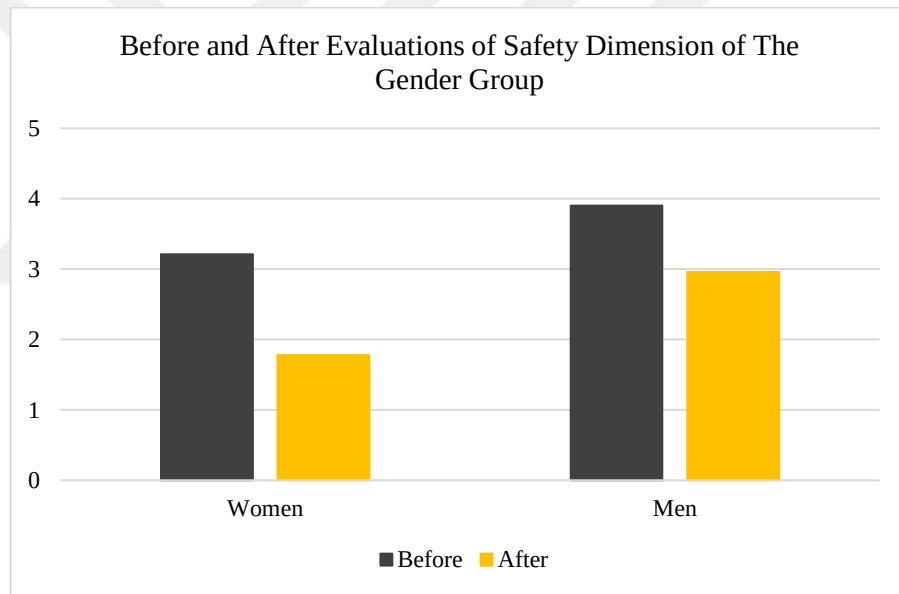


Figure 5.29 Before and After Evaluations of Safety Dimension of the Gender Group

When the dimension of safety is examined in accordance with the evaluations of the age group, it is seen that the average values of after the explosion of the all age ranges are lower than the average values of before the explosion (Figure 5.30). In the 18-25 age group, the difference between before and after the explosion values are higher than the others. Hence, it is indicated that the explosion has an unignorable impact on

the age range of 18-25 in terms of safety concerns. The difference between before and after the explosion values of 26-40 age range is not as much as the 18-25 age groups, but it is not ignorable that people in the age range of 26-40 considered Güvenpark as an unsafe public space according to the results. The same is indicated for the evaluation of 41-65 age range. The difference between before and after the explosion values of 41-65 age range is lower than the 18-25 age group, but higher than the 26-40 age range. As indicated before, all these results shows that Güvenpark is not a safe public space in terms of age groups as before the explosion. They stated that they do not want to go to Güvenpark as before. They do not prefer spending time in Güvenpark. If they had to go to Güvenpark or pass through, they do not feel safe because of insufficient security measures and dark memories. While conducting the survey, especially people in the age range of 18-25 specified that they cannot spend time in Güvenpark as before the explosion. They met their friends, used Güvenpark as a skateboarding area. People from the 41-65 age range also argued the same statement. They saw young people in Güvenpark frequently, but now they did not see them as often as before.

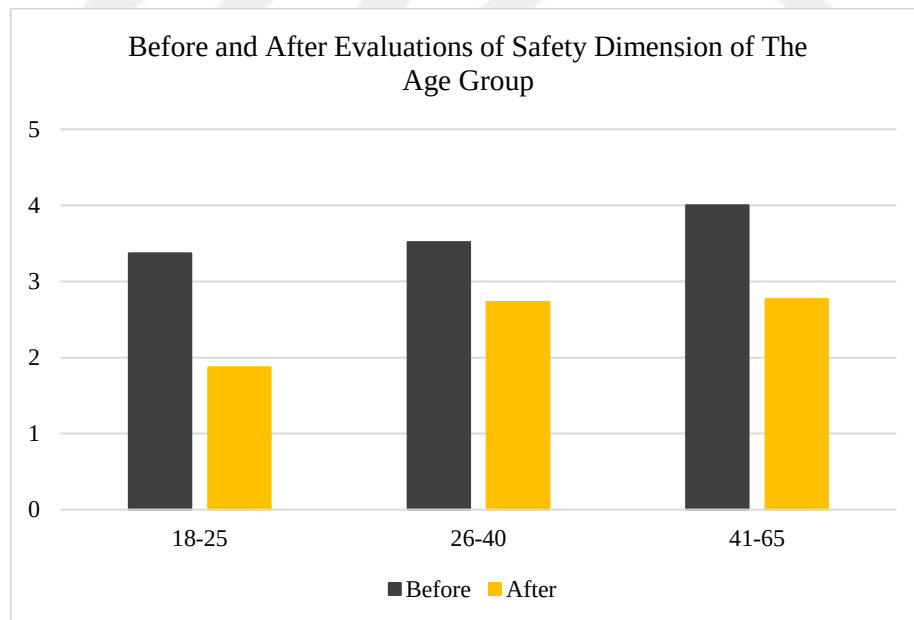


Figure 5.30 Before and After Evaluations of Safety Dimension of the Age Group

When safety dimension is evaluated in according to the averages of the occupation groups, it is stated that people from other occupations, such as engineer, architect, officer and so on, have the lowest values of both before and after the explosion (Figure 5.31). It is stated that minibus drivers and crafts evaluated Güvenpark as a safe public space before the explosion. In this analysis, the evaluations of crafts and minibus drivers are very crucial because they worked in and around Güvenpark and some continued to work in Güvenpark after the explosion. As indigenes of Güvenpark, they have a chance to evaluate Güvenpark comparatively (before and after the explosion). People from all occupation groups did not consider Güvenpark as a safe public space as before. They specified that the security measures are not enough to make Güvenpark a safe public space. They stated that they went to Güvenpark fearing every time and they said they felt anxious while working in Güvenpark.

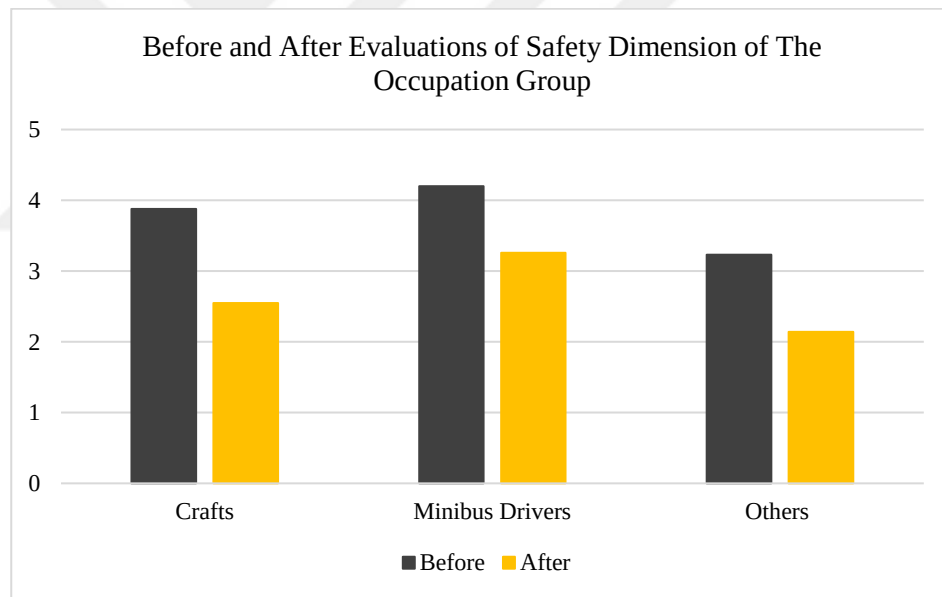


Figure 5.31 Before and After Evaluations of Safety Dimension of the Occupation Group

There are many reasons why people do not want to come to Güvenpark as often as before, but it is argued that safety concerns are the main reason for this adverse preference. As mentioned in the previous chapters, safety can be achieved by the

presence of people. People perceive public space safer as long as the presence of commercial activities and non-residential properties (Perkins et. al., 1993 cited in Mehta, 2014). Moreover, the physical condition of public spaces such as the existence of street lights, signs, and designs, planting types, the types of land uses and the alterations and modifications can make public spaces safer according to Mehta (2014). In this sense, it is stated that the dimension of safety and comfort are related to each other. People do not want to spend time in Güvenpark, even they do not prefer passing through. Young people do not prefer meeting with their friends, elderly people do not want to relax, people who worked in Güvenpark closed their businesses in Güvenpark. Therefore, the presence of people decreased in Güvenpark substantially after the explosion.

The aspect of comfort (evaluated under the next heading) is composed of sitting space, street furniture, sidewalk width, trees, shade areas and landscape elements (Mehta, 2007). Hence, this is another reason why people do not consider Güvenpark as a safe public space especially after the explosion. There are not enough lighting elements, trees and sitting spaces in Güvenpark and it is inferred that Güvenpark has not a safe design especially for women in that condition.

5.4.2.2. Comfort

In the evaluation of the dimension of comfort, as the second dimension, it is stated that women consider Güvenpark as relatively a comfortable public space before the explosion and the same is argued for the men's evaluations. Both gender groups' evaluations of before the explosion are almost the same with the value of 3 (average of women) and 3,09 (average of men). However, the same statement cannot be valid for the evaluations of after the explosion. The difference between the values of before and after the explosion evaluations of women in the dimension of comfort is more than the men's evaluations (Figure 5.32). Women considered that Güvenpark is not a comfortable public space after the explosion obviously. Although their average value of after the explosion is under the value 3, there is no so much difference between the

evaluations of before and after the explosion of men. Hence, it is stated that men do not perceive Güvenpark uncomfortable as much as women after the explosion. Women perceive Güvenpark less comfortable than men both before and especially after the explosion. After the explosion, it has not got rid of the adverse impacts of the explosion as mentioned before. The area was physically damaged as well as mentally. People, especially women, did not prefer going to Güvenpark even for spending time. They specified that they do not want to be in Güvenpark especially in the evenings because they do not feel safe and comfortable in Güvenpark due to fewer lighting elements. They also specified that there is not enough urban furniture to spend time like sitting elements, playgrounds, and green areas. Therefore, they evaluated Güvenpark as an uncomfortable public space especially after the explosion.

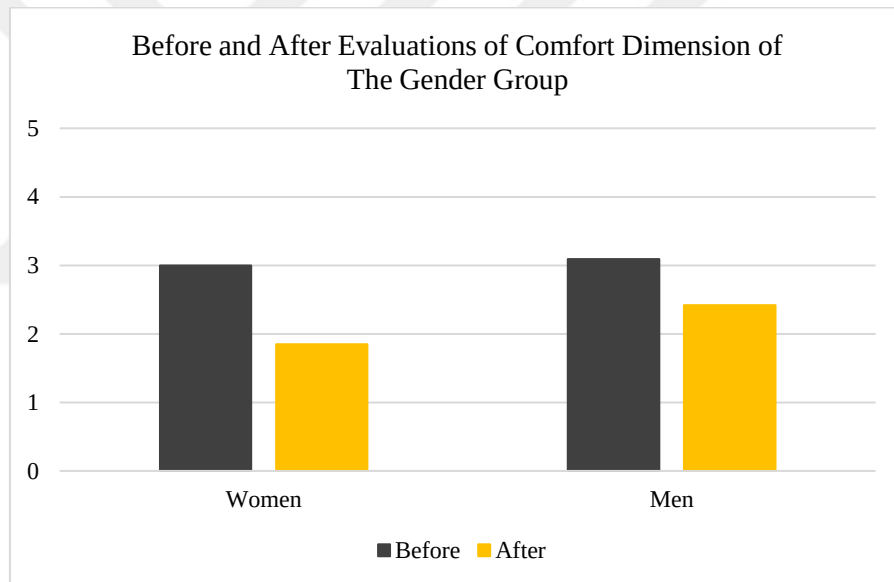


Figure 5.32 Before and After Evaluations of Comfort Dimension of the Gender Group

When the dimension of comfort is evaluated in accordance with the age ranges, it is seen from the Figure 5.33 that the evaluations of after the explosion of all age groups are lower than the evaluations of before the explosion. In this dimension, it is also indicated like the safety dimension that the explosion has an effective impact on the comfortability of Güvenpark. The evaluations of after the explosion of all age ranges

are very close to each other. There is no significant difference in that sense when compared to the safety dimension's age evaluations. The highest difference between before and after the explosion is seen in the age range of 41-65. This difference shows that Güvenpark addresses people in between the age range of 41-65 in accordance with comfortability before the explosion. They could feel more comfortable thanks to sitting space, street furniture, sidewalk width, trees, shade areas and landscape elements in Güvenpark, but after the explosion, they cannot find suitable and ergonomically sensitive places in Güvenpark. Especially for this age group, it is important to spend time in Güvenpark by sitting and relaxing. After the explosion, they cannot use Güvenpark to sit and relax with others and they do not prefer to spend more time in Güvenpark because of safety concerns. It should not be forgotten that all these dimensions are related to and affect each other. The difference between before and after explosion values of the age range of 18-25 and 26-40 are very close to each other. It is also stated that Güvenpark was not a physically comfortable public space according to the people in between the age range of 18-25 and 26-40. After the explosion, it did not change much. There is no significant difference between before and after the explosion rates of these age ranges. They still evaluated Güvenpark as an uncomfortable public space.

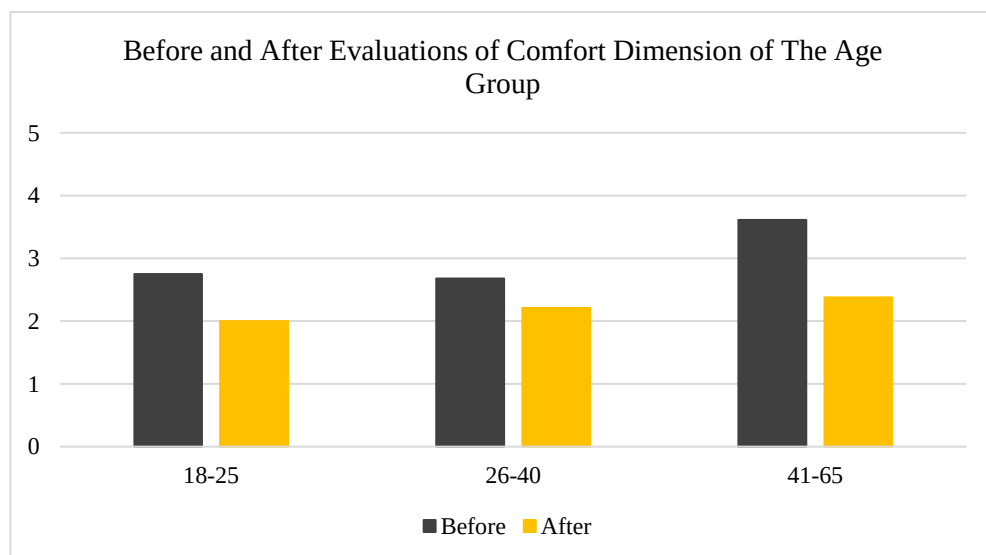


Figure 5.33 Before and After Evaluations of Comfort Dimension of the Age Group

When comfort dimension is evaluated in accordance with the averages of the occupation groups, it is argued that the averages of crafts and other occupation groups are very close to each other in terms of both before and after the explosion evaluations (Figure 5.34). The local engine in Güvenpark as crafts did not evaluate Güvenpark as comfortable after the explosion. They stated that people do not prefer spending time in Güvenpark especially after the explosion as much as before. People are just passing through and crafts cannot continue their work. There is no physically and socially suitable environment in Güvenpark after the explosion. However, when the values of minibus drivers are examined, there is no such a significant difference between before and after the explosion rates. Minibus drivers are the group that evaluates Güvenpark as more comfortable than the crafts and other occupation groups.

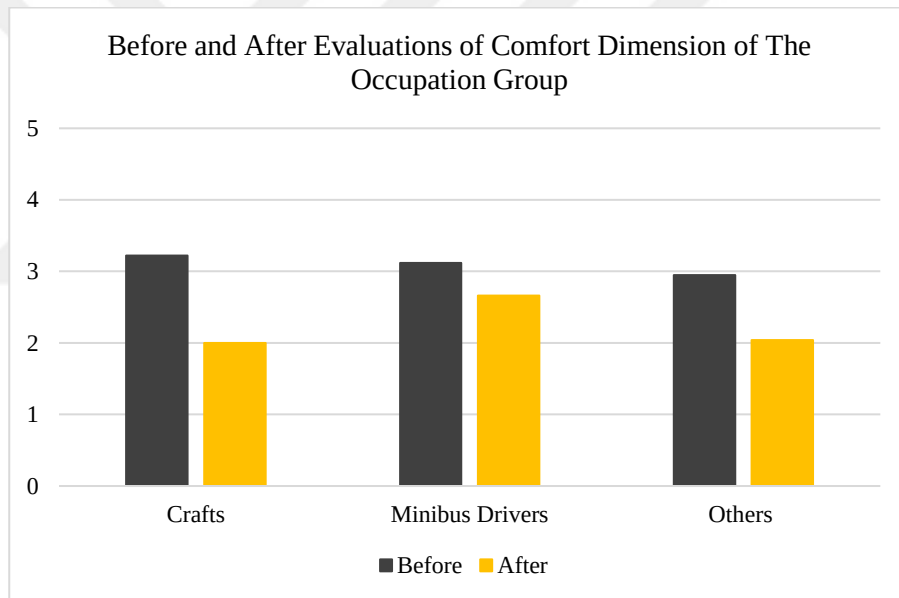


Figure 5.34 Before and After Evaluations of Comfort Dimension of the Occupation Group

As Mehta (2007) stated that the dimension of comfort is directly related to sitting space, street furniture, sidewalk width, trees, shade areas and landscape elements. The design of public space should be ergonomically sensitive (Lang, 1987 cited in Mehta, 2014). For example, protection from the sun, wind, and rain provides a physically and

socially suitable environment by providing various activities and behavior. As rating physical comfort, measurement of a physiological level of comfort of public spaces can be able to provide a high sense of publicness of public spaces. In the evaluations of survey participants, they considered both physical and social comfort in Güvenpark. They thought that there is no enough and quality physical elements and they do not feel safe in Güvenpark after the explosion.

5.4.2.3. Comprehensiveness

In the evaluation of the third dimension of public space as comprehensiveness, women consider Güvenpark as more comprehensive than men, but there is no significant difference between the two genders' evaluations. Both men's and women's comprehensiveness evaluations reflect that Güvenpark is a comprehensive public space based on gender. The result is important because there is no significant difference between before and after evaluations. It is argued that there is a decrease after the explosion, but it shows that Güvenpark is still a comprehensive public space as the values above 3. The decrease in women's evaluation is more than men's. It indicates that the explosion in Güvenpark has a nonignorable effect on women's evaluations. While Güvenpark was a highly comprehensive public space before the explosion, after the explosion, it is still inclusive, but not as much as before. The reason of that decrease is related to the number and diversity of people in Güvenpark. As mentioned before, Güvenpark is no longer a preferred public space after the explosion (Table 5.1 and Figure 5.13). Women argue that there is not a significant usage of different groups in Güvenpark as much as before. Hence, the presence of women is decreasing in Güvenpark after the explosion according to the Figure 5.35 and they evaluate the comprehensiveness of Güvenpark lower than before the explosion. In this evaluation, it is again stated that the reason of these decreases is related to all dimensions because they are much related to each other. People do not prefer to go to Güvenpark after the explosion because Güvenpark is not safe. Because Güvenpark is not safe, people do not feel comfortable in Güvenpark and there is no diversity in people groups and activities.

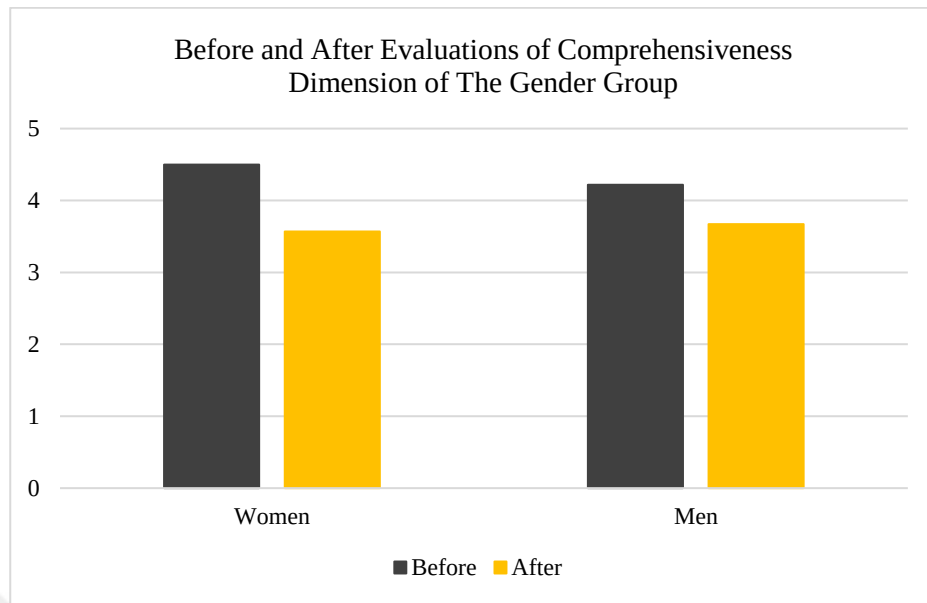


Figure 5.35 Before and After Evaluations of Comrehensiveness Dimension of the Gender Groups

When the dimension of comprehensiveness is evaluated according to the different age groups, it is indicated that people in between the age range of 41-65 evaluate Güvenpark as an inclusive public space when compared to the others. It is important to state that there is no significant difference between the evaluations of each age group's before and after the explosion values. Therefore, it is argued that Güvenpark is still an inclusive public space after the explosion in accordance with differences/diversity despite the declines in the values of each age group (Figure 5.36).

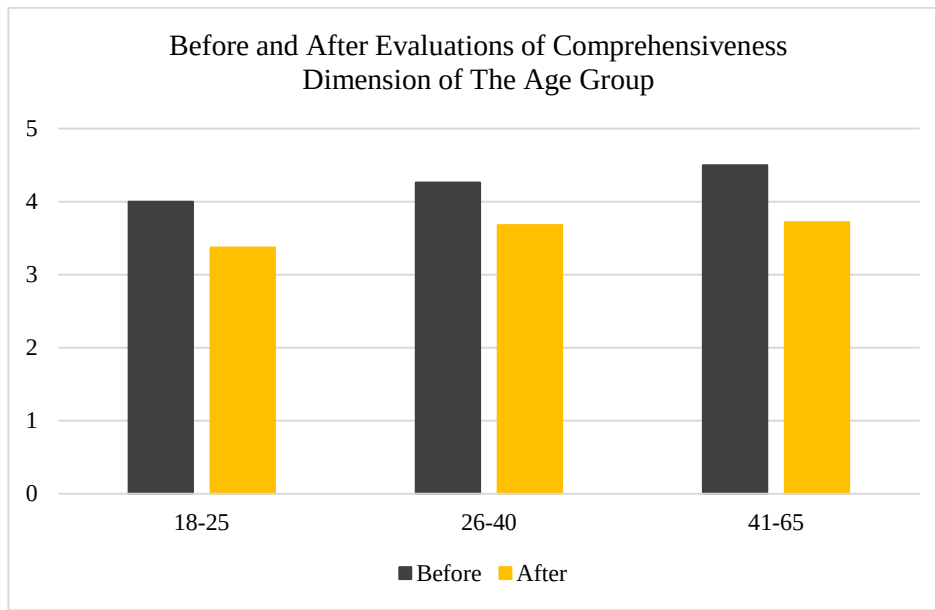


Figure 5.36 Before and After Evaluations of Comrehensiveness Dimension of the Age Groups

When the dimension of comprehensiveness is evaluated according to the average values of the occupation groups, it is stated that there is no significant difference among them. The important result is that their all after the explosion evaluations are under 4 and very close to each other. Before the explosion evaluations are above 4 and it means that all occupation groups evaluated Güvenpark as a comprehensive public space before and after the evaluation in spite of the after the explosion evaluations which are under 4, but higher than 3,50 (Figure 5.37). It is also argued that there is a significant change in comprehensiveness of people after the terrorist attack in Güvenpark according to the occupation groups. Especially, crafts stated that they need to go to their works after the explosion because people continued to come to Güvenpark after a short period from the explosion. Minibus drivers also argued the same as they kept going to Güvenpark after the explosion because there were some people needed to go to their works. After a period of time, there were some people used Güvenpark as a transitional area and leisure space. So, the life is getting normal

and stable day by day according to crafts, minibus drivers and people from other occupation groups.

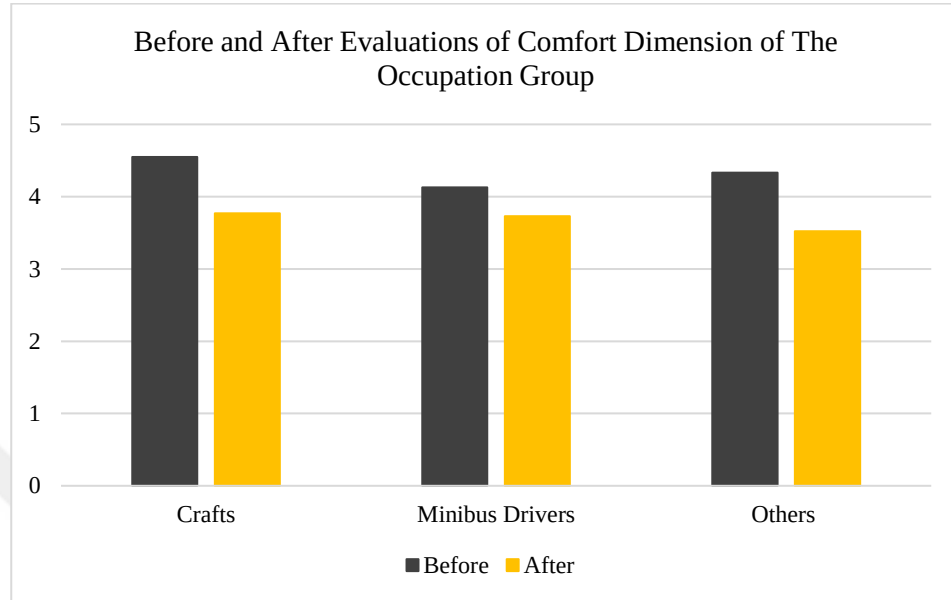


Figure 5.37 Before and After Evaluations of Comrehensiveness Dimension of the Occupation Groups

According to Mehta (2014), public space is an arena where both collective voice and shared interests are contained and the differences and conflicts of different groups are involved. Moreover, the publicness of public spaces is directly related to the use of space by groups according to Mitchell (2003). One of the most essential aspects is that the needs of people make the space public. Hence, comprehensiveness is important because it is revealed when activities take place in public space. Additionally, the range of activities and the actors can be able to support its inclusiveness. In Güvenpark, participants specified that the number and types of activities are restricted but, there are different types of people who come for different purposes. Because Güvenpark has a central location in Ankara, many people need to come to Güvenpark to go to another locations or to get their things done. Hence, it is inferred that people are going to Güvenpark in order to transfer, pass through, work or get their daily works done.

5.4.2.4. Multi-functionality

In multi-functionality dimension, it is said that this dimension has one of the lowest values among the other public dimensions in the gender group. According to the evaluations of the women participants in the survey, it is seen that Güvenpark is not a multi-functional public space according to the values of before and after the explosion of women especially after the explosion with the values of 1,42 (Table 5.16). When the average values of men are analyzed, it seems that men also do not evaluate Güvenpark as a multi-functional public space as women although the men's values are higher than women's. The difference between them is women do not evaluate Güvenpark as multi-functional before the explosion unlike men. The average value of before the explosion of men is almost close to the point 3 and thus, it is stated that Güvenpark is multi-functional with a value of 2,93 (Table 5.16). However, when the value of after the explosion of men is considered, it is argued that the same statement cannot be asserted due to the value of 2,03 (Table 5.16). As a result of the evaluations of the gender group, it is stated that women do not evaluate Güvenpark both before and after the explosion. They specified that there are no many and different activities in Güvenpark. Some indicated that they use Güvenpark just as a space to pass through or transfer. They do not prefer spending time in Güvenpark because of safety concerns. They think that there are no enough security precautions after the explosion except police barriers and these barriers also prevent spending time in Güvenpark. They do not feel safe in Güvenpark especially after the explosion as they stated in the survey. Men also specified that there are so many different people in Güvenpark, however; they do not spend time in Güvenpark. They just come and pass through or use another public transport vehicle to leave.

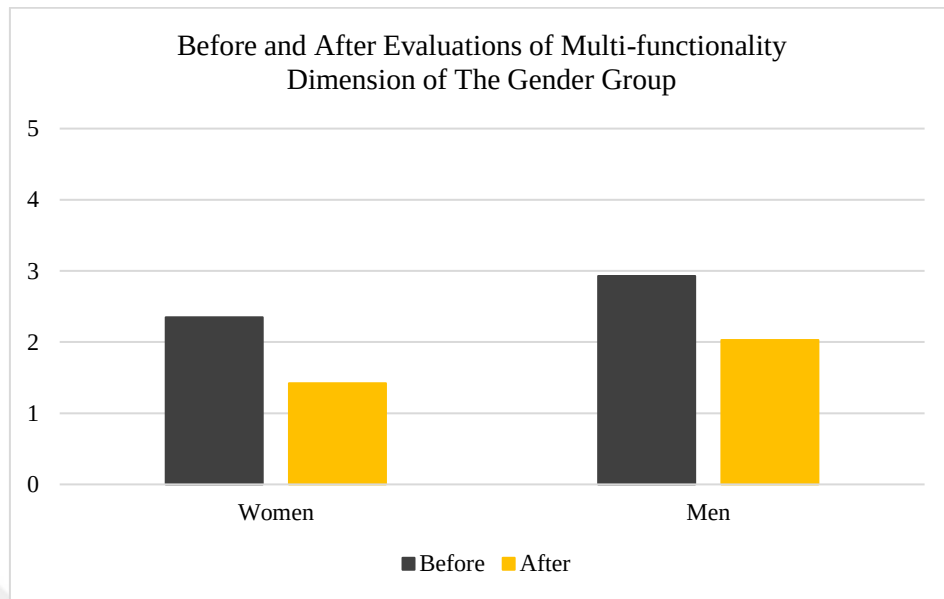


Figure 5.38 Before and After Evaluations of Multi-functionality Dimension of the Gender Groups

According to the evaluations of the age groups, it is seen that the lowest values (before and after the explosion) are belong to the age range of 18-25. According to the answers of the age range of 18-25, it is inferred that they do not consider Güvenpark as a multi-functional public space both before and especially after the explosion. They stated that there are no different activities that refer to their interests and needs in Güvenpark especially after the explosion. So, they gave lower points to the multi-functionality of Güvenpark during the survey. According to the evaluations of the age range of 26-40, it is stated that they did not evaluate Güvenpark as a multi-functional public space in accordance with before and after the explosion. There is no significant difference between before and after the explosion values of the age range of 26-40 (Figure 5.39). They stated that there are no many and different activities in Güvenpark and there the existing activities are not very referred to their needs and interests as well as the views of other age groups. When analyzing the values of the age range of 41-65, it is inferred that they evaluated Güvenpark as a multi-functional public space before the explosion as having the highest value of before the explosion evaluation (Figure 5.39). However, their evaluations are not as similar as before the explosions'. Hence, it is argued that

they did not evaluate Güvenpark as a multi-functional public space after the explosion. It is said that the explosion in Güvenpark has an unignorable impact on their views. They stated that they do not prefer spending time in Güvenaprk after the explosion because of their safety concerns like other people. They also stated that there were not as many people and activities in Güvenpark as before and now, Güvenpark was far away from the ‘soul’ of before the explosion.

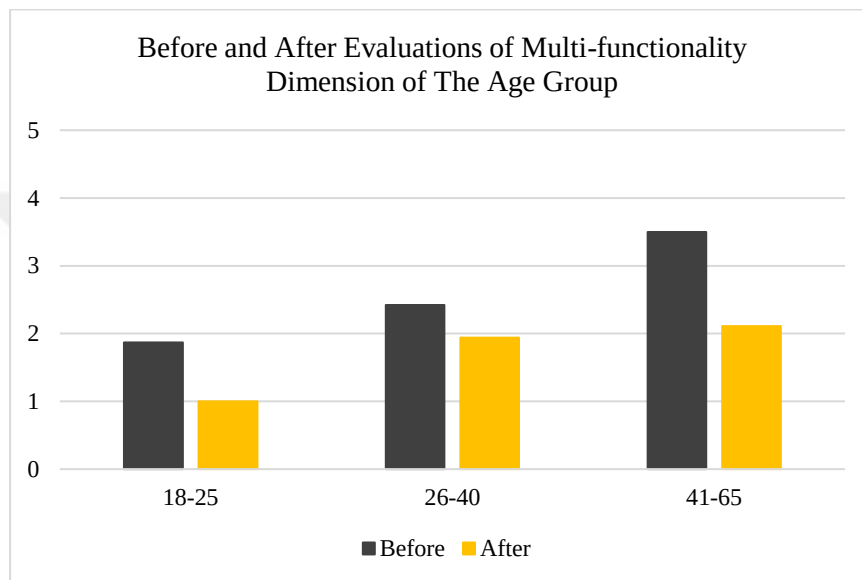


Figure 5.39 Before and After Evaluations of Multi-functionality Dimension of the Age Groups

When the survey data of multi-functionality of Güvenpark are analysing in accordance with the occupation groups’ evaluations, it is seen that there is a significant difference between before and after the explosion values of crafts. According to their answers, it is stated the explosion in Güvenpark has not an underestimated impact on crafts in Güvenpark. While they evaluated Güvenpark as a multi-functional public space, after the explosion evaluation, their average value is 1,11 (Figure 5.16) which means Güvenpark is not a multi-functional public space after the explosion. They stated that they needed to come to Güvenpark after the explosion because their jobs are in Güvenpark and they have could see the difference between before and after the explosion in Güvenpark day by day. In the views of minibas drivers, it is not possible

to say a significant difference between before and after the explosion in Güvenpark as crafts'. It is argued that minibuses drivers considered Güvenpark as a multi-functional public space before the explosion. In the evaluations of after the explosion, Güvenpark is not very close to a multifunctional public space perception in that sense. They stated that people continued to use minibuses after the explosion. So, they could evaluate Güvenpark as a multi-functional public space. Lastly, when the values of people from other occupation groups, it is inferred that they did not evaluate Güvenpark as a multifunctional public space before and after the explosion. There is a significant change between before and after the explosion evaluation of that group. They generally stated that they did not prefer using public transport and so Güvenpark. They need to go to Güvepark in order to go to their jobs by public transport. They said that if they do not go to Güvenpark after the explosion, other people are not too likely to go to Güvenpark due to similar reasons like safety issues. Therefore, while the number of people using Güvenpark decreased after the explosion, they said that there was also a decrease in the number and type of activities there.

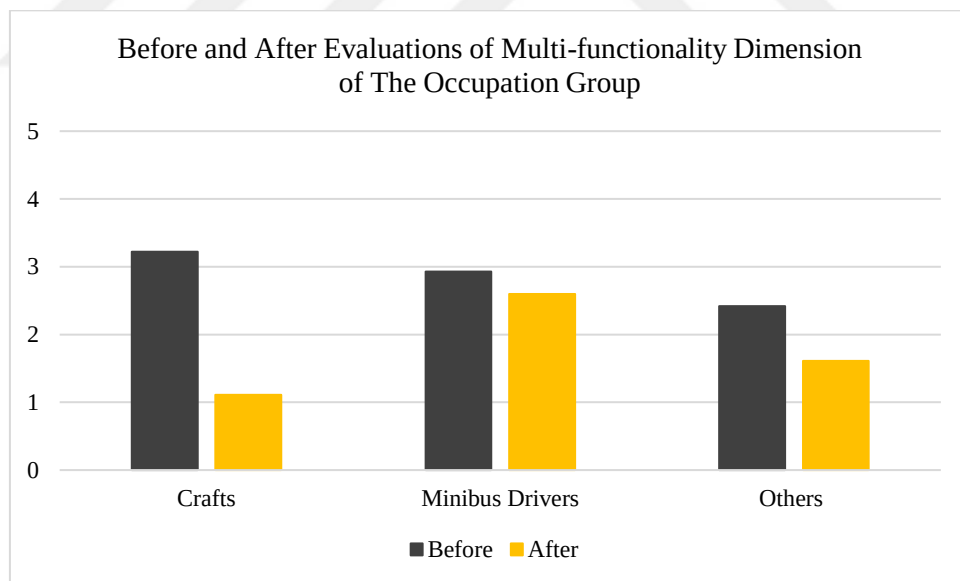


Figure 5.40 Before and After Evaluations of Multi-functionality Dimension of the Occupation Groups

According to the report of Public Spaces for All (UN-Habitat website, 2020), one of the most important functions of public spaces is that public spaces not only have an ability to foster integration between different groups but also are sort of a living room for marginalized groups in societies. In that sense, multi-functional public spaces are very important since public spaces can improve urban productivity, livelihoods and allow better access to public services. Hence, public spaces can be considered as sort of a room or “*a window into the city’s soul*” as Zukin stated (1995 cited in Rupa, 2015). As considering this statement, in Güvenpark it is needed to be seen the soul and way of people in Ankara. In Güvenpark, people can come together, and Güvenpark provides meeting areas, strengthens social ties and allows culture to thrive before the explosion. However, when the average values of the dimension of multi-functionality of Güvenpark, it is argued that Güvenpark is very close to losing its existing multi-functionality feature which is very low after the explosion. People do not prefer to spend time in Güvenpark and thus, there is not diversity. In the previous dimension which is comprehensiveness, the results show that Güvenpark is a comprehensive public space. In such an inclusive public space, it is expected that this space has also a multi-functional structure. There needs to be many various activities in Güvenpark, but it is not like that. There are many and different people in Güvenpark because they need to be there in order to go to their jobs or schools, go their homes or get the daily or procedural things done. However, they do not need to use Güvenpark as a public space in Ankara. It is just a transportation hub for people, not a physical and social space.

5.4.2.5. Accessibility

In the last public dimension which is accessibility, it is stated that accessibility has the highest average values in terms of all participant groups among the other dimensions (Table 5.2). The same statement is valid for gender groups (Figure 5.16). When the answers of the participants related to the accessibility dimension are analysed, it is argued that Güvenpark is an accessible public space. Although there are decreases in the evaluations of after the explosion of both women and men, there is no significant

difference between their answers of before and after the explosion. It is still inferred that the explosion has an impact on women and men in Güvenpark, but it is not a barrier to evaluate Güvenpark as an accessible public space in that sense. As it is known that Güvenpark is located in a central position in Ankara and it is utilized as a transportation hub (Figure 5.19 -right). Hence, accessibility is pretty crucial to Güvenpark and people using there. In the Figure 5.41, it is shown that women is evaluated Güvenpark as a highly accessible public space before the explosion. After the explosion, there is no significant change in the evaluation of women participants of the questionnaire. The same statement is also valid for men participants. They consider Güvenpark as a highly accessible public space before the explosion and after the explosion, there is no significant change. The reason behind such consistency is related to the existence of different public transportation modes and its central location. Hence, people needed to use public transport so as to basically go to their works and homes after the explosion. Unfortunately, the terrorist attack in Güvenpark was not a barrier for people to travel in the city center. Both women and men specified that they did not have any problem to reach Güvenpark and use public transport due to its location after the explosion.

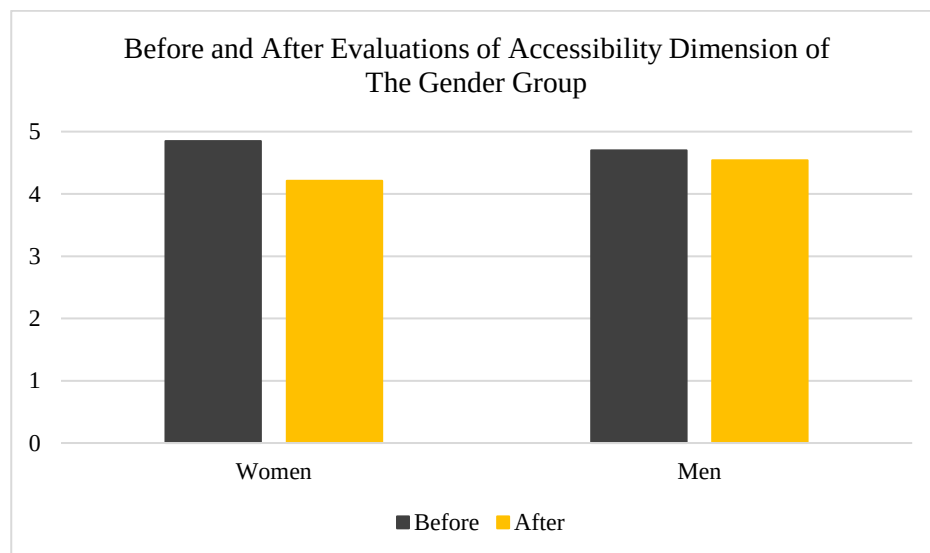


Figure 5.41 Before and After Evaluations of Accessibility Dimension of the Gender Group

When the dimension of accessibility is analysed according to the evaluations of the age groups, it is stated that people from all age groups evaluate Güvenpark as a highly accessible public space as seen in the Figure 5.42. There are not significant changes between before and after the explosion values of 3 age groups but, it is still argued that the explosion has a negative effect on the after the explosion evaluations of people in the survey. It is argued that the significant result is the evaluations of the age range of 41-65. Especially in this age group, there are elderly people and they generally have some physiological obstacles to travel. Nevertheless, they stated that they do not have a big problem to reach Güvenpark after the explosion. Like other people, they stated that they have some safety concerns in Güvenpark after the explosion, but this does not make Güvenpark an inaccessible public space.

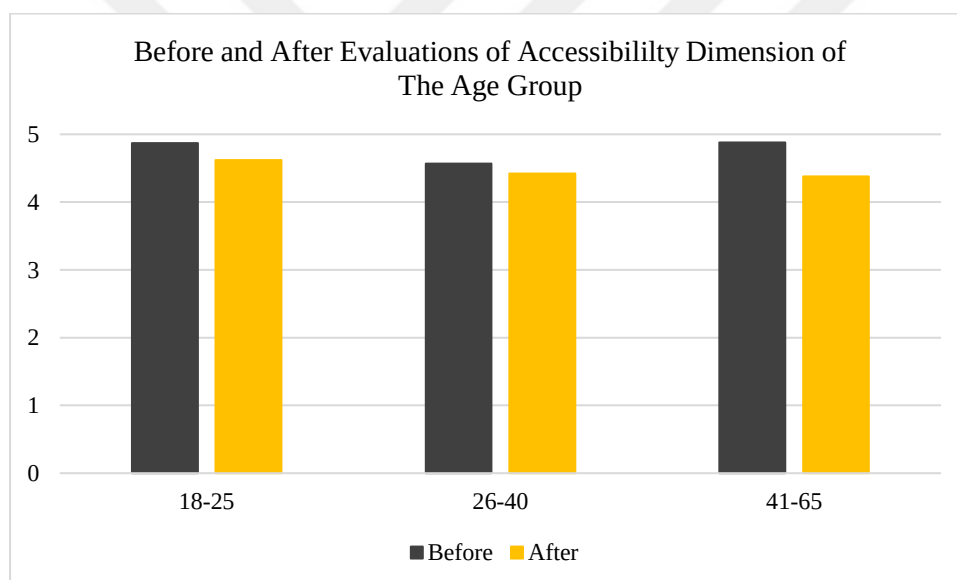


Figure 5.42 Before and After Evaluations of Accessibility Dimension of the Age Group

In the last evaluation of accessibility in the public space dimensions, it is argued that Güvenpark is an accessible public space according to the people from different occupations in the survey. In Güvenpark, there are many people whose jobs in Güvenpark and people who need to go to Güvenpark in order to go to their jobs. Crafts are evaluated Güvenpark as a highly accessible public space before the explosion.

Although there is a decrease in their evaluations in accordance with the explosion in Güvenpark, it is still accessible with the point of 4 (Figure 5.43). There is no such a significant change in the evaluations of minibus drivers and people from other occupations. The evaluations of minibus drivers are also important because they use Güvenpark highly before and after the explosion (Figure 5.1) and they have a chance to examine the difference after the explosion in Güvenpark. They stated that they continued to use their mini buses to transport people both from Güvenpark to different places and from different places to Güvenpark. They said that there was not a significant problem related to the transport issue. Moreover, people from different occupations said that they needed to go to Güvenpark in order to go to their works by public transport (bus, metro, etc.) and they did not face any big obstacle to access Güvenpark and their jobs. However, it is needed to be specified that all people in the occupation group stated that although they could reach Güvenpark, it did not mean that they feel safe in Güvenpark. They could access Güvenpark with insecure and uncomfortable feelings after the explosion.

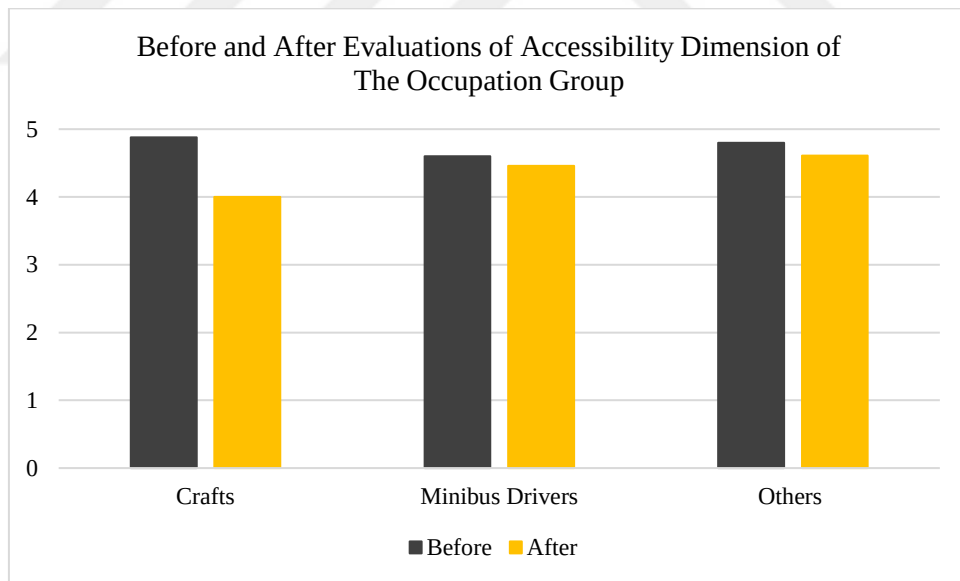


Figure 5.43 Before and After Evaluations of Accessibility Dimension of the Occupation Group

As a result, accessibility is the most significant feature of public space because it has a potential to promote social integration according to Harvey (1992)(1992). A quality public space needs to be open for all (Madanipour, 2013)(Madanipour, 2013). In Güvenpark, there is no any accessibility concerns, however; it needs to be remembered that accessibility brings social integration (Merrifield, 1996). In Güvenpark, people pass through public transport, just as they go to Güvenpark so as to go to their works or use another PT vehicle. They do not prefer spending time in Güvenpark as examined in the evaluations of safety, comfort and multi-functionality dimensions and the usage frequency of people. Although Güvenpark is both comprehensive and accessible, it is not 'desirable' (Merrifield, 1996) to the users.

5.4.3. Evaluation of The Spatial Resilience Dimensions

In the third part of the questionnaire, it is asked to participants to evaluate the spatial resilience of Güvenpark by giving points from 1 to 5 and they completed this part by considering the current situation of Güvenpark. Because the resilience of Güvenpark can be evaluated after a shock like a terrorist attack. When evaluating the results of the spatial resilience dimensions, it is indicated that there are no a significant differences between the average values of the dimensions. Connectivity is the highest rated dimension with the point of 3,68 (Table 5.18, Figure 5.44). It means participants have a thought that Güvenpark is a permeable public space and it connects urban elements and people.

Redundancy and robustness dimensions have equal values. Although they have the values above 3, their values (3,02) are very close to point 3 (Table 5.18). These two dimensions are very essential to evaluate resilience because they are one of the main dimensions of urban resilience in the literature (100 RC; Table 2.3 & 2.4). Therefore, it is inferred that participants consider Güvenpark has insurance against disturbances somehow and it has an average ability to resist changes and disturbances.

In the last spatial resilience dimension as diversity, it is argued that it is the lowest rated dimension among the others with the point of 2,97 (Table 5.18, Figure 5.44). As

mentioned before, there are no significant differences between the other dimensions. Participants of the questionnaire evaluated that Güvenpark is not a public space with a high diversity rate, but it does not have a very low rate in the diversity dimension.

Lastly, participants' answers are evaluated in a detailed way in accordance with the evaluations of each participant groups as gender, age and occupations as similar to the previous public space dimensions evaluation. After the general overview of the results of spatial resilience dimensions, the analysis period of the dimensions is divided into three groups as gender, age and occupation in order to analyze the evaluation of the questionnaire deeply. The results of all groups are evaluated one by one in accordance with the dimensions of spatial resilience.

Current Evaluation of Spatial Resilience Dimensions

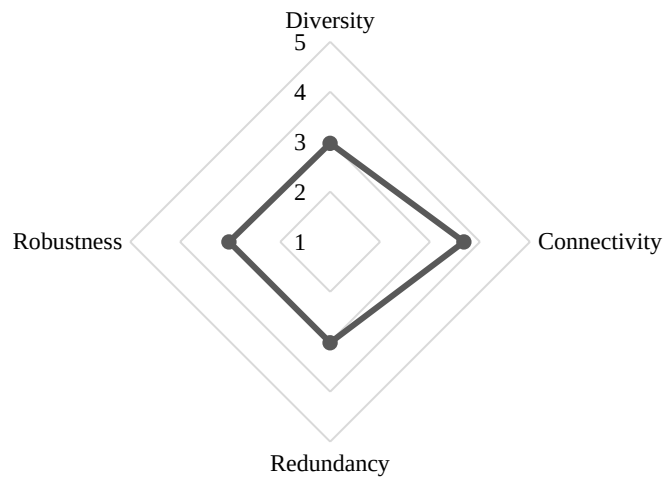


Figure 5.44 Current Evaluation of Spatial Resilience Dimensions

5.4.3.1. Connectivity

As mentioned before, the connectivity dimension has the highest average value among the other spatial resilience dimensions. In a detailed analysis, the average value of men is higher than the women' (Figure 5.45). When analyzing the results of the connectivity dimension in accordance with the gender, it is stated that men evaluate that Güvenpark has a circulation within and around the area. Although the average

value of women is lower than men, it is also argued that women evaluate Güvenpark as a connected public space. Participants of the survey indicated that Güvenpark is a highly connected public space thanks to its location and usages within and around Güvenpark. There are many different and diverse usages in and around the area and people need to go to Güvenpark in order to transfer to another place. Hence, these usages and location of Güvenpark affect the participants' evaluations in the context of connectivity. It is argued that Güvenpark is a connected public space according to the point of view of women and men in the current situation.

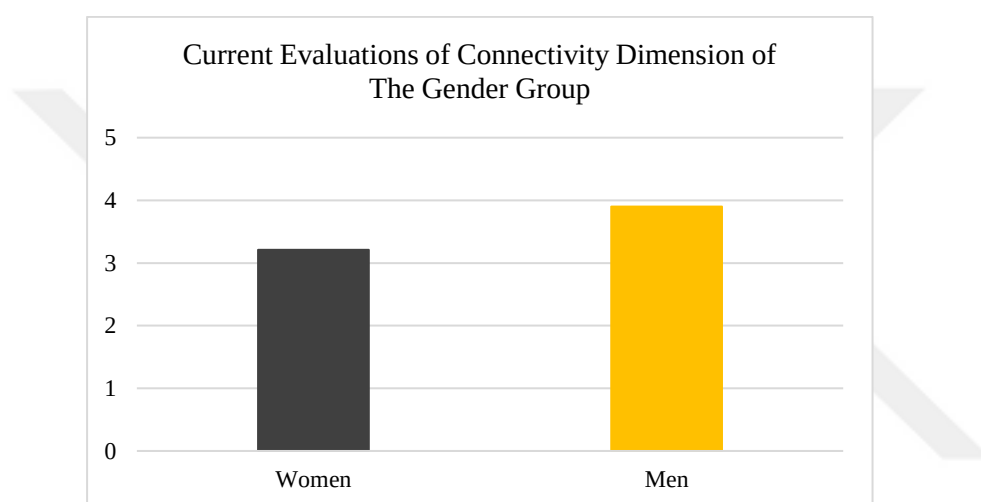


Figure 5.45 Current Evaluations of Connectivity Dimension of the Gender Group

When the dimension of connectivity is analyzed according to the filter of age group, it is stated that people in the age range of 18-25 has the highest value. All age groups have values that are above the mid-score (3 point) as seen in the Figure 5.46, and this reflects that when the questionnaire is evaluated according to the age distribution, it is inferred that Güvenpark is a connected public space. The lowest value is belongs to the age range of 41-65 as they gave lower points to the connectivity dimension. This difference between the highest (18-25 age group) and the lowest (41-65 age group) values originate in accessibility issues in Güvenpark. As older people have some problems to access due to physical conditions, they do not feel as connected with the other places within and around Güvenpark although there are different usages. Hence,

they cannot access other activities or uses in Güvenpark and they evaluated that they have made low evaluation for the situation they could not access.

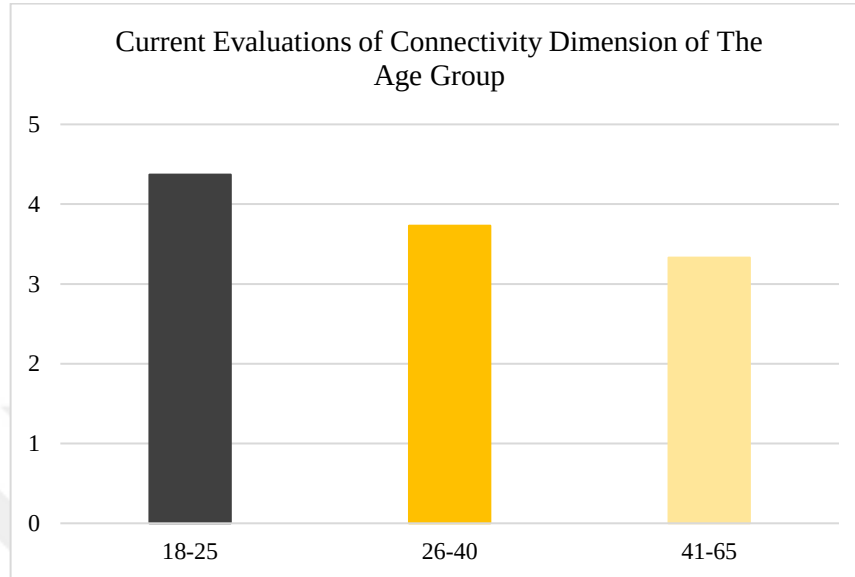


Figure 5.46 Current Evaluations of Connectivity Dimension of the Age Group

In the last evaluation of connectivity as occupation groups, it is seen from the Figure 5.46 that the highest score is belong to minibus drivers. They stated that Güvenpark is in a central location and it is very connected with the around. It is well accessible and people do not have obstacles so as to go to Güvenpark and leave Güvenpark. Moreover, although the average of the crafts in Güvenpark is the lowest one, it is still more than the point 3. Their evaluations are also crucial because they are one of the people who are working in Güvenpark. After the explosion, they needed to go to Güvenpark in order to work and they indicated that there are some transportation related problems due to the explosion. They could not reach Güvenpark and they were temporarily out of work. While analyzing the evaluations of the connectivity dimension of the occupation group, the group of people from other occupations also stated that Güvenpark is a connected and accessible public space in the current situation. They actively use Güvenpark for passing through. In a general overview, it is stated that Güvenpark is a connected public space in accordance with the evaluations of the occupation groups.

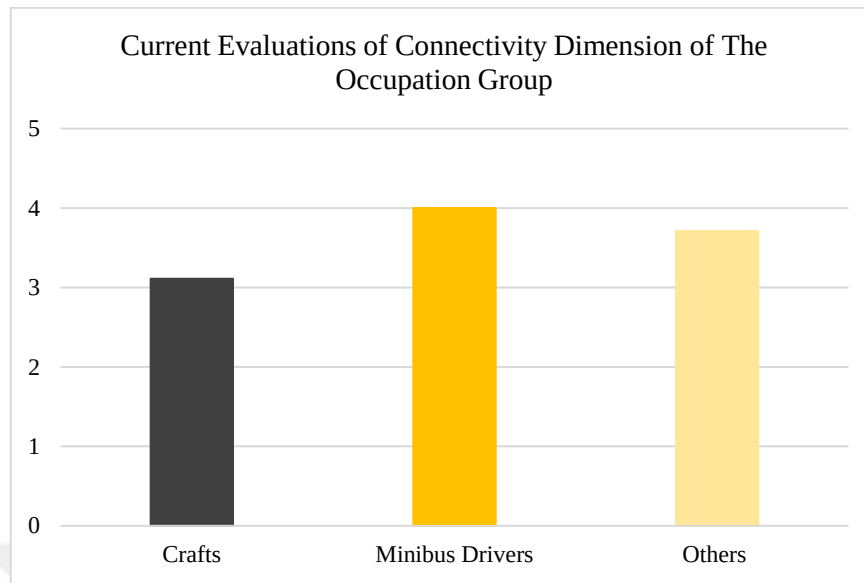


Figure 5.47 Current Evaluations of Connectivity Dimension of the Occupation Group

As a result, the spatial resilience dimension of connectivity refers to the ease of circulation within and around the area (Gharai & Masnavi, 2018). Hence, it is stated the connection between the location and the intensity of activities (Feliciotti et al., 2016) increase the level of accessibility (Marcus & Colding, 2014) in Güvenpark. However, it is inferred from the results of the public space dimension of multifunctionality that there is no quite diversity in activities and in spite of this situation, Güvenpark is evaluated as connected. The reason of it is the central location of Güvenpark, and thus Güvenpark is considered as a permeable public space in that sense. There is high connectivity in Güvenpark and it is important in the sense of urban resilience since high connectivity has an impact to disseminate (Gharai & Masnavi, 2018).

5.4.3.2. Redundancy

In the redundancy dimension, the average value of men is higher than the women' (Figure 5.48), but there is no significant difference between them. The results of the redundancy dimension is higher than the expected, but it has still lower results when considering the central location and importance of Güvenpark. Men participants of the

survey indicated that Güvenpark can overcome possible disruptions while using alternative strategies to facilitate rapid recovery. They also stated that there are multiple ways to achieve the equilibrium point or a better condition. However, women were not on the same point as men although there is not a significant difference. It is finally argued that Güvenpark is not quite redundant according to the point of view of women and men in the current situation.

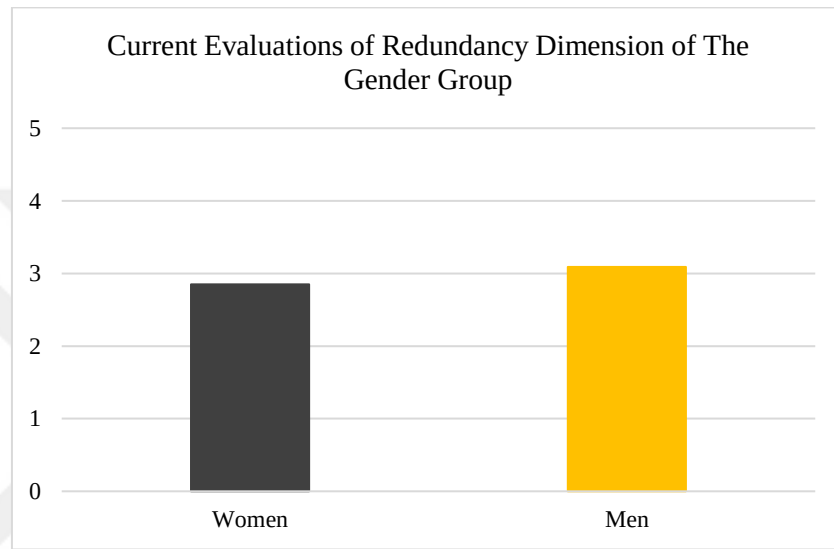


Figure 5.48 Current Evaluations of Redundancy Dimension of the Gender Group

When the dimension of redundancy is analyzed according to the filter of the age groups, the significant result belongs to the age range of 26-40 since its average value is lower than the point 3. The average result of the age range of 18-25 is 3 and the average result of the age range of 41-65 is higher than the point 3. It means that the redundancy evaluation is diversified according to the age ranges in that sense. There are different approaches to the evaluation of redundancy of Güvenpark. The people in the age range of 26-45 evaluated that Güvenpark is not a redundant public space because they thought that there is no multiplicity and Güvenpark could not cope with the adverse impacts of the explosion. There are not any backup strategies and formulas to reach an equilibrium or a better condition. The same statement could be also relevant to the evaluations of the age range of 18-25 even though the result of this age

range is 3. The people in the age range of 41-65 believed more than the others that Güvenpark has redundancy features and it can handle with disruptions.

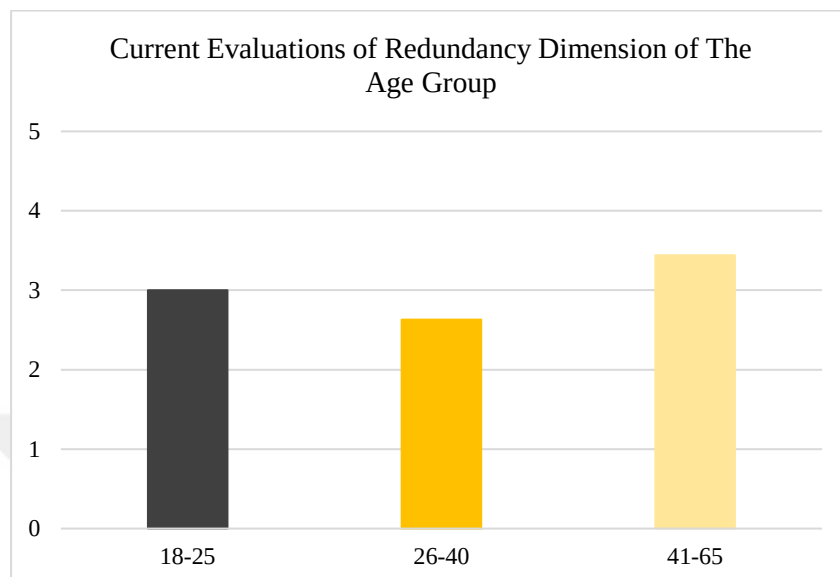


Figure 5.49 Current Evaluations of Redundancy Dimension of the Age Group

When the dimension of redundancy is analyzed according to the filter of occupation groups, it is stated that the other occupation group has the lowest value among all (Figure 5.50). Although the average results of the all occupation groups are higher than the point 3, the average result of the crafts is very close to the point 3. The evaluation of the other occupation groups is more significant than the crafts and minibus drivers because the difference between them and the score of the other occupation group is significant in that sense. Especially after the explosion, these people did not believe that Güvenpark will overcome with significant disruptions like terrorist attack, natural disasters, etc. because there are no any strategies in accordance with being redundant. Moreover, people from occupation groups (crafts and minibus drivers) stated the same statement as Güvenpark will not overcome with disruptions, but their averages are higher than the point 3 as specified before.

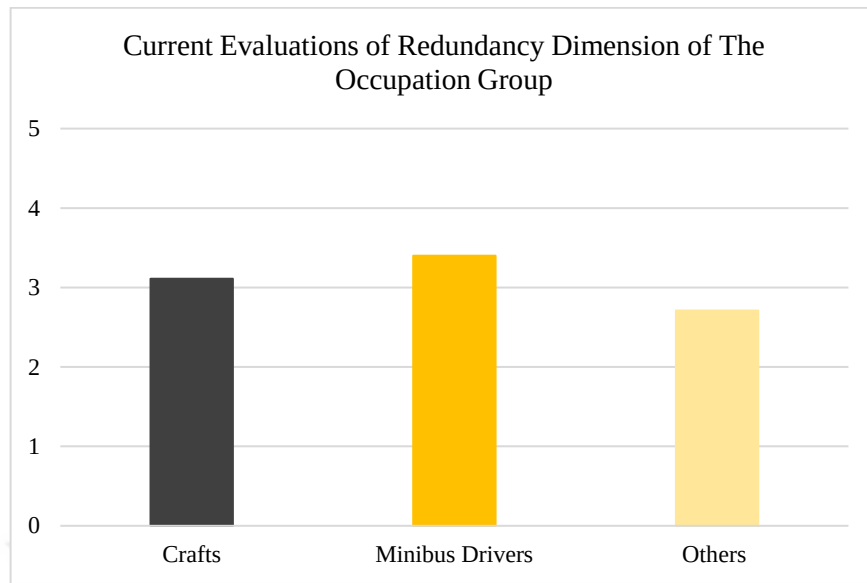


Figure 5.50 Current Evaluations of Redundancy Dimension of the Occupation Group

As a result, redundancy which is the third indicator of the spatial resilience includes an “insurance” against disturbances and it relates to working as backup as Ahren (2012) indicates. In this context, people who use Güvenpark do not believe that Güvenpark has some multiple backup strategies and functions in itself as a general overview. As mentioned before, functional redundancy is rising the urban resilience (Marcus & Colding, 2014; Meerow et al., 2016) because to have a number of functionally similar components or spreading capacity among different systems mean that the entire system does not fail when/if one component or system fails (Siavash, 2016). The worst case scenario is that if there a disruption like terrorist attack, people have a tendency not to use Güvenpark. In this kind of a situation, they stated that they will prefer to move to another district to work, pass through and spend time. This area will not continue to be Güvenpark anymore in that sense.

5.4.3.3. Robustness

In the robustness dimension, it is not nonsense to say that robustness and redundancy have similar values according to the answers of the survey participants. According to the gender evaluation, there is not a significant difference in average values, but the results show that women evaluated Güvenpark as not a robust public space while men

evaluated as a robust public space (Figure 5.51). The women participants specified that the physical elements of Güvenpark is not robust so that it cannot resist changes, disturbances or stresses without any failure or loss of performance. There is such as robust design in Güvenpark and thus they do not feel safe when they spend time in Güvenpark. When the answers and values of men participants evaluated, it is seen that they do not fully evaluate Güvenpark as a robust public space. However, when the answers of the men is compared to the women', it is stated that men evaluated Güvenpark as more robust. They also agreed that there is no roust design in Güvenpark and urban elements in and around Güvenpark is not resistant and safe. Therefore, it is not nonsense to say that there is no robust management and physically strong urban elements in Güvenpark in accordance with the answers or the gender groups.

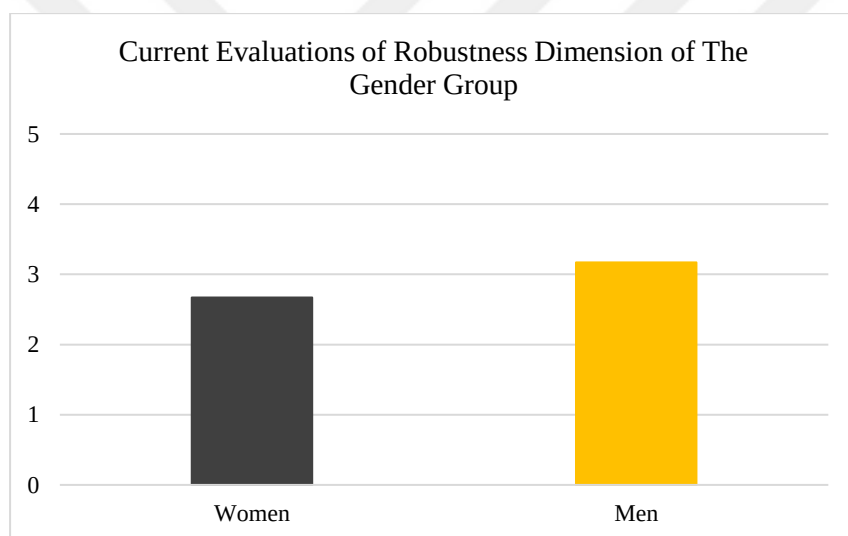


Figure 5.51 Current Evaluations of Robustness Dimension of the Gender Group

When the answers is evaluated in accordance with the age groups, it is stated that the group that evaluates Güvenpark as the most robust is the 41-65 age group which uses Güvenpark the most after the explosion according to the Table 5.1 and Figure 2.4. It is almost close to the point 4 as seen in the Figure 5.52. The results of the other age groups (18-25 and 26-40) are very close to each other and their values are lower than the point 3. This shows that people in the age range of 41-65 consider Güvenpark as a physically robust public space and they stated that if there is any disturbance in

Güvenpark, this problem will be solved and managed well because the urban elements and their conditions in and around Güvenpark are durable and well-conceived. However, the same statement cannot be agreed with the other groups. They indicated that they absolutely do not believe that Güvenpark will not handle with and resist any possible terrorist attack or disaster because the physical elements of Güvenpark is not well-designed, constructed, managed and safe. They do not feel safe in Güvenpark, but they have to use in order to go to their jobs, schools, etc.

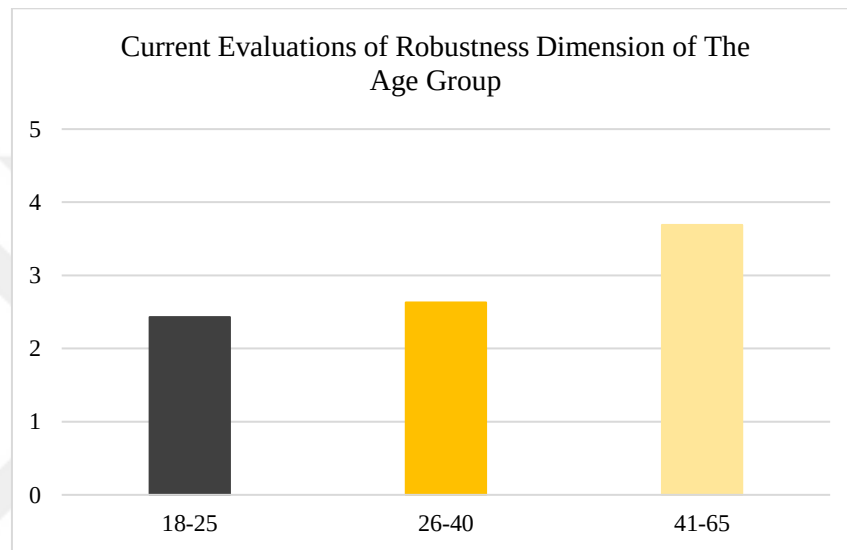


Figure 5.52 Current Evaluations of Robustness Dimension of the Age Group

In the last evaluation of the indicator of robustness, it is shown in the Figure 5.53 that there is not a significant difference among the occupation groups' values. They are close the point 3 as the average value. The lowest value belongs to the people in the other occupation group. Crafts and people from other occupations are the groups that use Güvenpark least (Table 5.1 and Figure 2.4) and this low values in robustness will be one of the reasons for the minimum usage of Güvenpark by these groups. On the other hand, minibus drivers have the highest value in robustness, but it is very close to the value 3. The important statement here is that although minibus drivers are the groups that use Güvenpark most among the other groups, they evaluated that Güvenpark is not very robust in the current situation. Hence, it is inferred that they use Güvenpark because they have to. It is not stated that they use Güvenpark because

the robustness value is higher than the value 3 and they thought that the design of Güvenpark is robust and well managed.

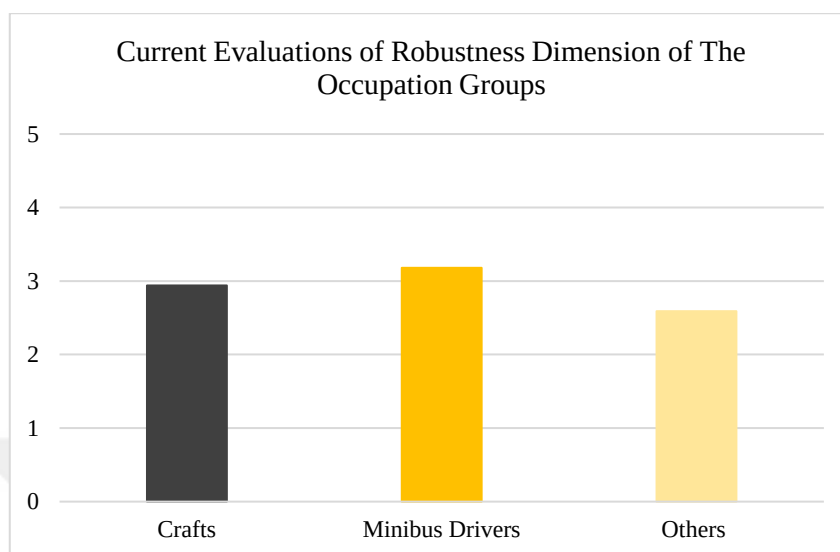


Figure 5.53 Current Evaluations of Robustness Dimension of the Occupation Groups

Consequently, the physical elements or their conditions means the more the strength of physical elements or urban, the more the ability of a system to resist disturbances without failure or loss of performances (Gharai & Masnavi, 2018). In a robust designed public space, well-conceived, constructed, and managed system need to be included. In Güvenpark, the level of stress is very high due to the explosion occurred and there is loss of function according to the evaluations of participants of the questionnaire. People do not trust the physical condition of Güvenpark when another stress or shock occurs. There is no predictability and making provision so as to make failure safe. Hence, people evaluate Güvenpark as a non-robust public space.

5.4.3.4. Diversity

In the last dimension of spatial resilience, diversity reflects economic and social vitality, and healthier life styles in the area (Gharai & Masnavi, 2018). Different and various functions are included by major functional axes and spaces (Dovey & Wood, 2015) and thus, multifunctional urban spaces promote diversity which is crucial to

absorb disturbances and recover (Sharifi and Yamagata, 2016 cited in Gharai & Masnavi, 2018).

The evaluations according to the gender group are seen and it is shown that women have the lowest value when compared to men. It is also argued that women have the lowest average value among other spatial resilience dimensions. Women stated that there is no diversity in urban structural elements and diverse services. Especially after the explosion, they cannot spend time in Güvenpark because some local businesses are closed their shops, people started to leave Güvenpark and they do not use Güvenpark to spend time. Therefore, they thought that there is no reduction of risk in Güvenpark. When the evaluations of men are analysed, it is seen that their value is higher than women, but not much higher than the value 3 (Figure 5.54). They also thought that there is no healthy lifestyle in Güvenpark, however; the location of Güvenpark makes itself crucial, comprehensive and multi-functional according to the men's evaluations.

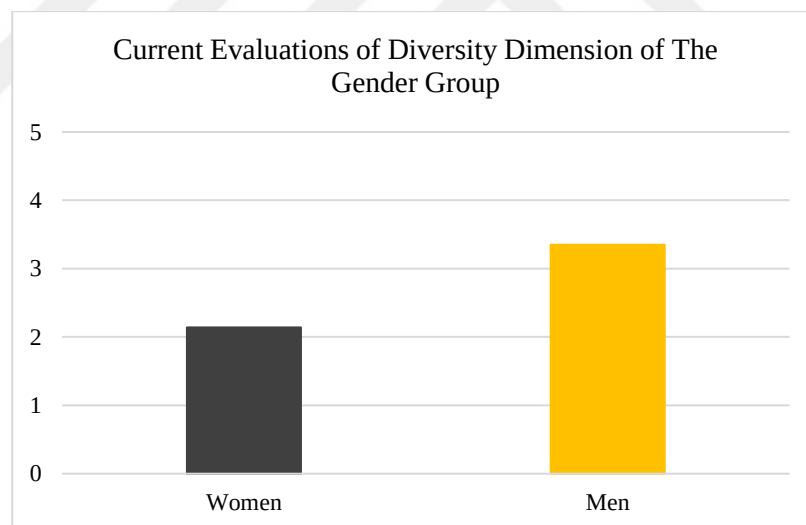


Figure 5.54 Current Evaluations of Diversity Dimension of the Gender Group

In the evaluation of the age groups, the average values of the age ranges of 18-25 and 26-45 are very close to each other and the average value of the age range of 41-65 has the highest value among the others (Figure 5.55). The people in the age range of 18-25 and 26-45 stated that Güvenpark is not a spatially diverse public space in the current

situation. The commercial areas around Güvenpark are very diverse, but the inside of Güvenpark is not so diverse because they thought that there are no different activities, urban elements and social vitality in Güvenpark. There are not different and healthy lifestyles and thus people started to lose their faith in Güvenpark. However, when the evaluations of the age range of 41-65 is considered, it is indicated that the current situation not as bad as it seems. They stated that they can meet with their friends and spend time in Güvenpark. While they stated like that, they also argued that after the explosion, they can still use Güvenpark, but they don't feel as safe as they used to be and Güvenpark is now a different space than it used to be. They do not feel that the space where they spend time is not like Güvenpark. The people in Güvenpark, urban elements, activities, in short, the life in Güvenpark is very different before the explosion. They said that they are sitting and waiting for the old Güvenpark.

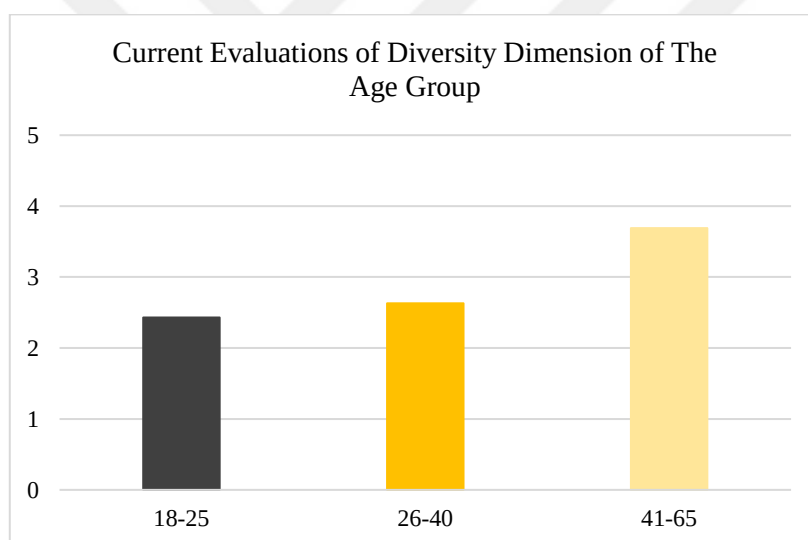


Figure 5.55 Current Evaluations of Diversity Dimension of the Age Group

In the final evaluation (occupation group) of the final dimension, the highest value is belongs to the occupation group of minibus drivers as seen from the Figure 5.56 and the value of the crafts is very close to minibus drivers'. Although minibus drivers have the highest value, they stated that Güvenpark lost its function that it used to have. The major axes and spaces of Güvenpark is not functional and diverse after the explosion. Crafts also have a similar point of view with minibus drivers. Because Güvenpark is

in a central location in Ankara, it will not be an unused public space, but the locational advantage is not enough to keep social and economic vitality and spatial diversity. Moreover, people in the other occupation group indicated that there is still risk to confront an unavoidable disturbance in Güvenpark. Therefore, people are worried about whether they will face a shock in Güvenpark and it will not overcome possible disturbances for the next time. Because diversity is important to absorb disturbances and recover (Sharifi and Yamagata, 2016 cited in Gharai & Masnavi, 2018), people in other occupation groups believe that Güvenpark has not both spatial and functional diversity after the explosion and current.

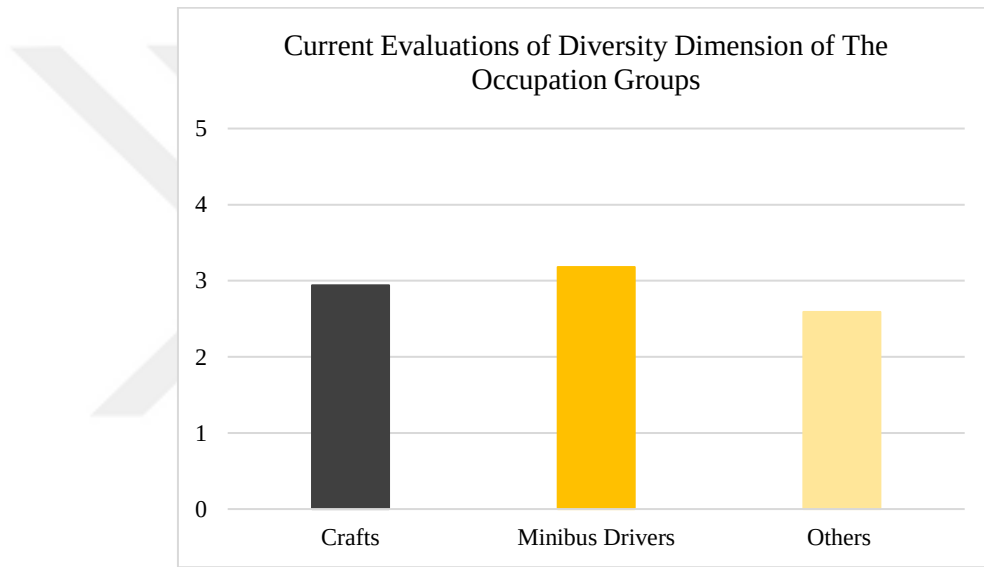


Figure 5.56 Current Evaluations of Diversity Dimension of the Occupation Group

In conclusion, as Gharai (2018) states that diversity is a key element in urban planning and urban resilience because the diversity of an area leads economic and social vitality, and healthier life styles. In Güvenpark, the general overview is Güvenpark is not a diverse public space although it is multi-functional and comprehensive. Different and various functions are included in Güvenpark, but the current situation in Güvenpark is not enough 'to absorb disturbances and recover' (Sharifi and Yamagata, 2016 cited in Gharai & Masnavi, 2018). In this context, participants stated that Güvenpark is not an economically, a socially and a culturally diverse public space

after the explosion. Urban structural elements of Güvenpark is not diverse and quality and there is still risk in Güvenpark according to the participants.



CHAPTER 6

CONCLUSION

6.1. Evaluation of the Case Study

As described in the previous chapter, the conducted questionnaire includes 4 parts as the usage of Güvenpark (A), the evaluation of publicity of Güvenpark (B), the evaluation of spatial resilience of Güvenpark (C) and suggestions of the participants about how Güvenpark can be a resilient public space (D). The questionnaire consists of 10 questions. 5-point likert scale is used for these 9 questions which include both public space and spatial resilience parts and 1 question located at the end of the survey is open-ended.

The survey participants evaluated Güvenpark according to the scope of quality of public space and spatial resilience. Both parts has 5-point likert scale questions from 1 (very low) to 5 (very high).

In the first part of the survey, as usage frequency of Güvenpark, it is sensible to say that there is a significant decrease in overall in usage frequency of Güvenpark as seen in the Table 5.1. When all participant groups are analyzed, it is also said that there are decreases in each participant groups. One of the most significant decrease is seen in women' evaluation. They mostly stated that they do not want to use Güvenpark as frequently as before after the explosion mostly due to safety problems. Not only women but also people from other groups argued the same statement with women. They believed that Güvenpark is not the place because the impacts of the explosion are still seen in Güvenpark. Therefore, it is argued that people do not prefer Güvenpark after the explosion mainly because of safety concerns and loss of activities.

In the second part of the questionnaire, there are 5 questions which include 5 dimensions of a quality public space. People evaluated the quality and publicity of

Güvenpark by answering 5-point likert scale questions from 1 (very low) to 5 (very high). In this part, it is endeavored to realize how people perceive the publicity and quality of Güvenpark and how their perception has changed by dividing the timeline before and after the explosion. It is analyzed that there are decreases in each public space dimensions as well like usage frequency part of the survey. The most significant decrease is seen in safety dimension as seen in the Table 5.2. As mentioned before, the reason of the decrease in usage frequency of Güvenpark is mostly related to safety problems after the explosion, the significant decrease in the safety dimension is the proof of this change. Moreover, the decrease in multi-functionality has a significant value in that sense. After the explosion, people stated that Güvenpark is not a multi-functional public space. Participants indicated that they use Güvenpark just as a space to pass through or transfer except minibuses drivers. They do not prefer spending time in Güvenpark because of safety concerns and lack of activities, which is the outcome of safety problems. They think that there is inadequate security precautions after the explosion for police barriers and these barriers also prevent spending time in Güvenpark. They do not feel themselves safe in Güvenpark especially after the explosion as they stated in the survey. Another important remark is that there is a decrease in accessibility dimension, but it is not as significant as the others. Hence, it is inferred that there is a reciprocal relationship between safety dimension and multi-functionality because as the multi-functionality diminishes, the space becomes incapable to provide varieties of opportunities to the public. As a result, since the use of space decreases, this decrease causes diminish in safety issues, and thus functionality and activities decrease in Güvenpark. As mentioned before, Güvenpark has a central location in Ankara and it works as a transportation hub. Hence, citizens need to mainly go to Güvenpark in order to go to their jobs or any other location in Ankara. The explosion has not affected in the dimension of accessibility as much as the other dimensions. Another reciprocal relationship is observed between accessibility and comprehensiveness dimensions. Because there are various transport modes to go to Güvenpark, people from different parts of the city can reach Güvenpark easily. Hence, participants evaluated Güvenpark as accessible and comprehensive.

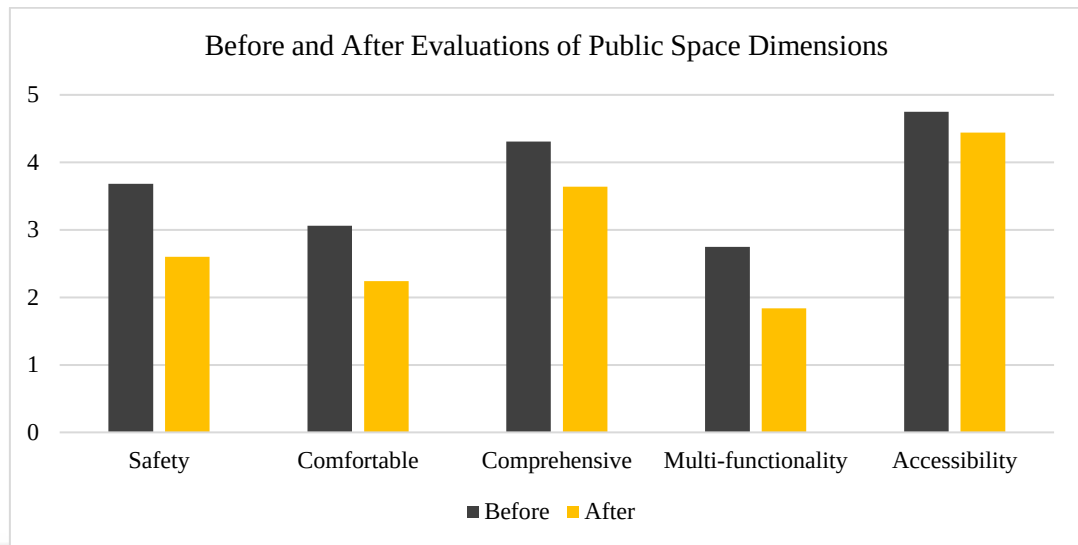


Figure 6.1 Changes in Before and After Evaluations of Public Space Dimensions

According to the Table 6.1, the relationship between dimensions of public space and dimensions of urban resilience is seen. It is seen in the table that safety dimension is related to flexibility, redundancy and robustness. Comprehensiveness is related to inclusivity and integrated dimensions of urban resilience. Multi-functionality dimension is related to resourcefulness while accessibility is related to both reflectiveness and inclusiveness. Finally, comfortability is related to redundancy dimension in accordance with their definitions in the literature. This table is composed in order to create a coherent relationship between dimensions and to understand this relationship. It is inferred from the table that if a place is safe, this place is also flexible, redundant and robust. According to the evaluations of Güvenpark, it is very difficult to evaluate Güvenpark as flexible, redundant and robust in that sense. People stated that there is no alternative strategies to facilitate rapid recovery in Güvenpark. Comprehensiveness dimension is also related to inclusive and integrated dimensions and it is said that although the value of after the explosion of the comprehensiveness dimension is not very high, it is possible to evaluate Güvenpark as comprehensive. Related to this, it is stated that Güvenpark can be evaluated as an inclusive and integrated public space because there is both a sense of shared ownership and a common vision and togetherness in the system. Multi-functionality dimension is also

related to the dimension of resourcefulness. As Güvenpark is evaluated as multi-functional public space, it is said that Güvenpark is resourceful. This reflects people and institutions are able to recognize alternative ways to use resources during a crisis in order to meet their needs or achieve their aims. Moreover, Güvenpark is evaluated as an accessible public space, it is also reflective which means individuals and institutions use past experiences to (in)form future decisions, and will modify standards and behaviors accordingly. Güvenpark is an inclusive public space which means this inclusive structure emphasizes the need for broad consultation to create a sense of shared ownership or a joint vision to build city resilience. Lastly, the comfortable dimension is related to redundancy. As Güvenpark is evaluated as an uncomfortable public space according to the analysis part, it is difficult to say that Güvenpark is a redundant public space because people argued that there is no diversity or multiple alternatives to achieve needs in Güvenpark.

Table 6.1 Relationship between Public Space Dimensions and Urban Resilience Dimensions

DIMENSIONS OF PUBLIC SPACE	DIMENSIONS OF URBAN RESILIENCE
SAFETY	FLEXIBLE
COMPREHENSIVE	REDUNDANT
MULTI-FUNCTIONAL	ROBUST
ACCESSIBILITY	RESOURCEFUL
COMFORTABLE	REFLECTIVE
	INCLUSIVE
	INTEGRATED

In the third part of the survey, people evaluated the spatial resilience of Güvenpark by answering 5-point Likert scale questions from 1 (very low) to 5 (very high) considering the current situation in the area. In this part, it is tried to understand to what extent and how people perceive the resilience of Güvenpark in accordance with the dimensions of spatial resilience by considering the terrorist attack. People evaluated that Güvenpark is a connected public space and there are many different and

diverse usages in and around the area. Hence, these usages and central location of Güvenpark affect the participants' evaluations in the context of connectivity. As a connected public space, Güvenpark is both reflective and integrated. Because connectivity refers to the ease of circulation within and around the area, investments and actions are appropriate and address the needs of the most vulnerable. Hence, this dimension is very important to refer the exact needs and to create a resilient public space.

The other dimensions' values are very similar to each other as diversity, redundancy and robustness. They have average values and show that it cannot be stated that not only Güvenpark is not a resilient public space but also Güvenpark is a resilient public space. In Güvenpark, different and various functions are included according to the second part of the questionnaire. Physical elements and their conditions in Güvenpark are evaluated as well and people stated that after the explosion, their conditions are not so bright, but they have been started to be more resistant in time. The current condition of Güvenpark can be partially evaluated as robust, redundant, flexible, reflective and integrated while just considering the spatial resilience dimensions.

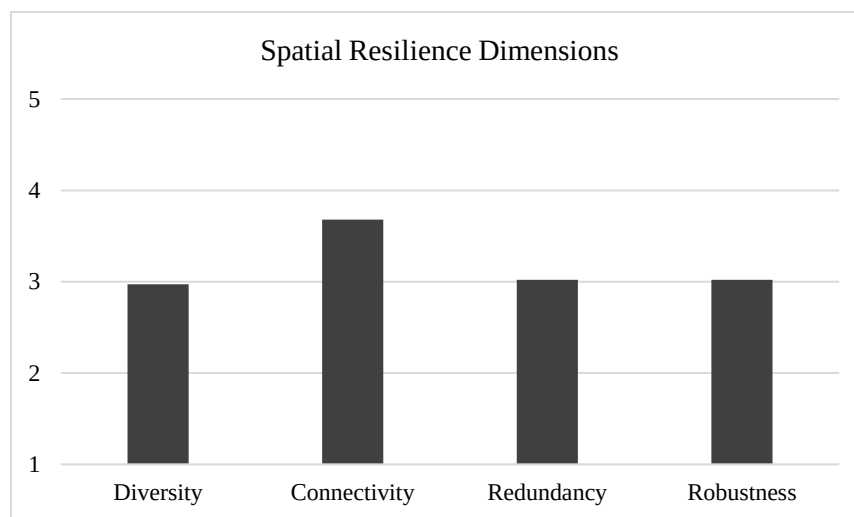


Figure 6.2 The Evaluations of Spatial Resilience Dimensions

According to the Table 21, the relationship between indicators of spatial resilience and dimensions of urban resilience is seen. It is seen in the table that diversity dimension is related to both resourcefulness and inclusivity. Connectivity is related to reflectiveness and integrated dimensions. Robustness is related to robustness while redundancy is related to both redundancy and flexibility dimensions of urban resilience. As the value of the dimension of diversity is very close to the average value (value 3), it is difficult to evaluate Güvenpark as resourceful and inclusive. This is because people believe that it is difficult to recognize alternative ways to use resources during crisis in order to meet their needs in Güvenpark. Moreover, participants evaluated Güvenpark as a connected public space and they also believe that Güvenpark is both a reflective and an integrated public space. They believe that future decisions can be informed in order to use past experiences such as explosion in Güvenpark. Individuals and institutions can be reflective in that sense and they can modify standards and behavior accordingly and together. The value of the dimension of robustness is nearly above the average value and it is said that neither Güvenpark is a robust public space nor Güvenpark is not a robust public space. Especially after the explosion, people believe that it is ensured that failure is predictable, but the space is not well-conceived, constructed and managed. Lastly and similarly, the value of the dimension of redundancy is nearly above the average value and it is both said that not only Güvenpark is not a redundant and flexible public space but also it is a redundant and flexible public space. Participants indicated that it could not be successful to create a spare capacity to accommodate disruption due to an unexpected demand or external event and they believe that Güvenpark will not be very successful to adopt alternative strategies in response to changing circumstances or sudden crises. However, after the explosion, people stated that the efforts to tackle with the explosion, to enhance Güvenpark and introduce new policies and solutions.

Table 6.2 Relationship between Dimensions of Public Space and Indicators of Spatial Resilience

DIMENSIONS OF PUBLIC SPACE	INDICATORS OF SPATIAL RESILIENCE
SAFETY	DIVERSITY
COMPREHENSIVE	CONNECTIVITY
MULTI-FUNCTIONAL	ROBUSTNESS
ACCESSIBLE	REDUNDANCY
COMFORTABLE	

6.2. Re-designing Güvenpark

After analysis and commentaries, Güvenpark needs to be redesigned in accordance with the spatial resilience indicators in order to create more resilient public space and make the city center resilient. In this sense, it will be not enough to redesign Güvenpark to make the whole city center resilient.

The explosion in Güvenpark create a negative perception throughout the city and Güvenpark is the first public space to re-design in order to destruct this adverse perception. The existing security precautions as police barriers are not enough to create a secure public space because people stated that they do not feel safe in Güvenpark. On the contrary, these police barriers make them nervous in Güvenpark because people think that there is possibility to confront a disruption when they see and are close to police barriers. Hence, firstly, this explosion perception needs to be wiped out in accordance with new policies. Institutions should work together and Güvenpark needs to be reintroduced to citizens so as to live the explosion down. So, public bazaars can be set up and number of activities and diversity of these activities for students and young people need to be increased because the usage of the people in the age range of 18-25 is decreasing and they are the people who create a dynamic environment and soul in Güvenpark. Therefore, Güvenpark should be redesigned according to the people whose usage is decreased and thus, they can be regained by prioritizing their needs. In this sense, one of the most significant problem in Güvenpark is that people generally go to Güvenpark to transfer, not to spend time in

there, so this needs to be changed in order to create a resilient public space. While increasing the social and cultural interaction in Güvenpark, economic productivity will arise, and thus supply chain will be supported and the mobility of goods and people will be promoted in the report of Public Spaces for All (UN-Habitat website, 2020). It is necessary to organize social activities in order to organize cultural activities that may attract the attention of the public and all population groups and to organize their relations with the environment in Güvenpark. It is capable of attracting people, investors and entrepreneurs. Therefore, Güvenpark can provide significant benefits for the quality of life of citizens such as psychological well-being, social and cultural interaction and cohesion, and economic growth which refers to help to create resilient cities in accordance with resilience dimensions; economic, social, environmental and spatial.

Moreover, in order to enhance resilience in Güvenpark, strengthening the resilience of the existing community and solving new social cohesion issues during and after crisis is very important. Citizens need to be raised their awareness about disruptions. Resilient public spaces include a collaboration of uses, empowerment of community, co-creation, interactivity, connectivity, equality, accessibility, efficiency, convenience and flexibility (Design Council, 2017). In that sense, police barriers are not enough to provide safety in Güvenpark. People should definitely be aware of possible problems, shocks, stresses and activities should be organized for such studies. People need to 'readopt' Güvenpark and it should be ensured that people spend more time in Güvenpark. Because people hesitate to go to Güvenpark due to safety problems and loss of activities, they have difficulties to readopt Güvenpark as their one of the most important and historical public space. Hence, after any disturbances, people can know what needs to be done during and after the specific disturbance and this makes Güvenpark a resilient public space.

Another important redesign issue is green areas in Güvenpark. It can be stated that different parts of Ankara reflect the planning approaches of the period they developed in terms of open and green spaces. In this sense, it can be stated that the open and

green space system in the city that were created in the early planning periods was created by considering the needs and use of the citizens. However, it was observed that the green continuity in these areas could not be maintained in later periods, especially in Güvenpark. The current green corridor potential needs to be further highlighted. Limited green areas need to be more clearly connected to each other. Green areas in public spaces are areas where people mostly spend time and relax. Therefore, policies and design strategies should be constituted to increase pedestrian circulation in order to make the green area a more effective area. This green area is kind of a blind area and it needs to be designed and arranged by making it more visible by feeding with social, cultural and economic activities.

Last but not least, it is very important to have participatory and alternative solutions in the planning, design, implementation and management stages. In this context, we need a strategic planning approach because strategic planning approach has an effective role to adapt different situations and handle with crisis management by engaging citizens participants into planning, design, implementation and management stages. Therefore, it is possible to consider how a public space should be and how public spaces can be planned, designed and managed during and after crisis. These crisis or shocks do not have to be an explosion. They could be earthquakes, natural disasters and even a pandemic. As a result, strategic spatial planning creates kind of a road to the desired future includes uncertainties and surprises. It is possible to reach success if we have a plan which includes strategies that can adjust these uncertainties.

6.3. Implications for Urban Planning

Public spaces are very important to create a resilient city structure. First of all, public spaces need to be resilient in order to make cities resilient because public spaces are not just gaps between buildings. They create the skeleton of cities and they serve as meeting place, market place and traffic space (Gehl, 2011). Public spaces include different socio-economic groups and thus, multi-functional and shared public spaces. Hence, they can be considered as '*a window into the city's soul*' (Zukin, 2010 cited in

Zhang & He, 2019). They are sort of a room that includes social and cultural cohesion and a sense of belonging. Public spaces bring people together, provide meeting areas, strengthen social ties and allow a culture to thrive. Therefore, public spaces are very important to spread a vision throughout the city.

In this sense, it is stated that Güvenpark is a spatial catalyst for social change for the city. They are seeking to foster an understanding of the robustness of places by revisiting the resilience debate. As specified in the previous chapters, resilience designates the capacity of cities to recover and adapt to stresses and shocks. Hence, public spaces can serve as flexible ‘backbones’ to provide a city with the robustness to adapt the drastic situations and changes. Redesigning Güvenpark creates a kind of positive impact to recover from a traumatic situation or gradual decline. Hence, it provides adaptation capacity to the whole city. This adaption capacity offers social, economic, environmental and spatial benefits (McPhearson et al., 2016; Özel & Mecca, 2014)

Moreover, creating resilience in the city by redesigning Güvenpark helps to create inclusive practices and collective creativity. That’s why, people can have an equal opportunity to be part of the decision making process. Integration of people during place making increases the “adaptability and flexibility” of the community. Therefore, communities can strength and this encourages them to response together to any disturbances they confronted.

Also, public spaces can compensate for each other when faced with different risks and shocks. Public spaces in high density areas, such as Güvenpark, provide evacuation areas and recovery assistance. Hence, these spaces have a high level of community sense of belonging and the capability of social preparedness can improve. They have a kind of an integrated network, and thus this contributes to create and shape resilience in the city.

6.4. Limitations and Suggestions for Further Studies

Since 4 years have passed over the explosion, the impacts of the explosion on the place and people have decreased. Some participants completed the questionnaire easily as they did not forget the impact of the explosion on them. However, some got rid of and forgot the effects of the explosion as much as possible and they filled out the questionnaire like that. So, it was difficult to remember the effects and what happened during the questionnaire. In this study, it should be taken into account that if the effect of the explosion had been carried out too much, different results would have been obtained.

Another limitation in the study is that the number of woman participants is lower than the man participants. Because women do not feel safe in Güvenpark, the gender of the crafts and minibuses drivers are generally men, the number of woman participants remained low.

Dimensions taken from the literature seemed unfamiliar to the survey participants in meaning and made it difficult for them to answer the questionnaire. For this reason, the dimensions were explained to the survey participants one by one and this extended the duration of the survey.

As a suggestion for further studies, this research can be diversified through different public spaces. Taksim Gezi Park can be the subject of another research with a similar method because it has similar characteristics with Güvenpark in terms of history and location.

As another suggestion, a design guide can be created by discussing the resilience of public spaces through publicity. It should be evaluated from an instantaneous point of view from a time perspective and developed strategically.

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