INVESTIGATION OF FAMILIES' LEISURE ACTIVITIES AND USE OF GREEN SPACE DURING THE COVID-19 PANDEMIC RESTRICTIONS

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DECLARATION OF ORIGINALITY

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ABSTRACT

Investigation of Families' Leisure Activities and Use of Green Space During the COVID-19 Pandemic Restriction

This study aims to explore families' leisure activities, use of urban green space (UGS) during the COVID-19 pandemic restrictions, outdoor recreation constraints, and the relationship between their demographic characteristics and their leisure activity participation and use of UGS. A total of 406 parents with children aged 0-8 years participated in the study. The study used the survey to collect the data needed to answer the research questions. The data collecting tools were the Family Leisure Activity Profile Scale, Outdoor Recreation Constraints Scale, and Use of Urban Green Space During COVID-19 Pandemic Restrictions Scale. Analysis of the parents' reports showed that the COVID-19 pandemic negatively impacted the activities that take place outside the home environment. There was a weak positive correlation relationship between participation in leisure activities and education level and the other parent's education level but no significant relationship between participation in leisure activities and family income level. Concerning use of USG, the study found that most of the participants claimed that although they visited green areas during the restrictions, they generally had insufficient access to UGS. There was a significant positive relationship between frequency of UGS visits and education level, other parent's education level, and income level. Also, a significant negative correlation was found between frequency of visits and distance. The results of this study are important for identifying and providing support services in both family and cultural contexts as they provide a framework for families' leisure activities and green space access and use.

ÖZET

Covid-19 Kısıtlamaları Sürecinde Ailelerin Boş Zaman Aktiviteleri ve Yeşil Alan Kullanımlarının İncelenmesi

Bu çalışmanın amacı, ailelerin boş zaman aktivitelerini, COVID-19 pandemisi kısıtlamaları sırasında yeşil alan kullanımlarını ve yeşil alanlara erişimlerindeki kısıtlarını incelemek ve demografik özellikleri ile boş zaman aktivitelerine katılımları ve yeşil alan kullanımı arasındaki ilişkiyi araştırmaktır. Araştırmaya 0-8 yaş arası çocuğu olan toplam 406 ebeveyn katılmıştır. Mevcut çalışma için nicel veri toplama tekniklerinden anket yöntemi kullanılmıştır. Veri toplama araçları, Aile Boş Zaman Aktivite Profili Ölçeği, Açık Hava Rekreasyon Kısıtları Ölçeği ve COVID-19 Pandemi Kısıtlamalarında Kentsel Yeşil Alan Kullanımı Ölçeği'dir. Yapılan analizler sonucunda ebeveynlerin görüşlerine göre COVID-19 pandemisi özellikle ev ortamı dışında gerçekleşen faaliyetleri olumsuz etkilendiği saptanmıştır. Boş zaman aktivileri katılımı ile eğitim düzeyi, diğer ebeveyn eğitim düzeyi arasında pozitif yönde zayıf bir ilişki tespit edilmiştir, boş zaman katılımı ile ailenin gelir düzeyi arasında anlamlı bir ilişki bulunamamıştır. Katılımcıların büyük bir kısmı kısıtlamalar sürecinde yeşil alanları ziyaret etseler de erişimlerinin yeterli olmadığını ifade etmiştir. Yeşil alan ziyaretlerinin sıklığı ile eğitim düzeyi, diğer ebeveynin eğitim düzeyi ve gelir düzeyi arasında anlamlı ve pozitif bir ilişki vardır. Ayrıca, ziyaret sıklığı ile mesafe arasında anlamlı bir negatif ilişki bulgular arasındadır. Bu çalışmanın sonuçları, ailelerin boş zaman aktiviteleri ve yeşil alan erişim ve kullanımları hakkında bir çerçeve sunduğu için hem aile bağlamında hem de kültürel bağlamda destekleyici hizmetlerin belirlenmesi ve sunulabilmesi için önemlidir.

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CHAPTER 1

INTRODUCTION

Changes and developments in the world have directly or indirectly affected people, institutions, studies, and priorities in every age. Families are one of the units most affected by these changes and transformations (Smock & Schwartz, 2020). The family is considered to be one of the institutions created by society, one that many disciplines are interested in, trying to understand its dynamics, characteristics, needs, and behavior patterns. One of the goals of the studies conducted in recent years has been to find out the changing relationship between mankind and nature and its disconnection from nature since many authorities from different fields have pointed out that mankind's relationship with the environment and nature matters not only for human well-being but also for the protection of national resources (Beery & Lekies, 2021; Uhlmann, Lin, & Ross, 2018).

Many organizations and disciplines have worked to increase children's access to open and green spaces and give them the opportunity to play outdoors. However, due to industrialization, urbanization, increasing use of technology, and globalization, disconnection from nature is a fact that affects not only children but also many adults. Children and their parents have similar lifestyles and feel disconnected from nature (Louv, 2008; Warber, DeHudy, Bialko, Marselle & Irvine, 2015). Therefore, understanding the situation and producing solutions by just focusing on children may not be enough. For this reason, researchers need to examine how families spend their leisure time outside of their obligations such as work, school, or domestic chores. Inevitably, this means analyzing the positions and characteristics of the family, neighborhood, city, society, and policies in relation to

different issues to better understand the children's experiences (Bronfenbrenner, 1992; Stokols, 1996). Since children spend most of their time around home with their families, particularly in early childhood, issues such as how families access green spaces, what the barriers are to their access, and what they do in their leisure time need to be examined. The COVID-19 pandemic, which began in March 2020, has changed many areas of life as well as daily practices, leisure activities, indoor and outdoor areas, use of spaces, and many rules (Mazzucchelli, 2020; Pesenti, 2020). For this reason, the existing resources and the characteristics and practices of individuals or families under pandemic conditions need to be examined on a larger scale.

Leisure time is a concept that emerged with the increase in industrialization and urbanization and is defined as a period in which individuals can spend time outside of their obligations and responsibilities doing what they want (Rojek, Shaw, & Veal, 2006). Family leisure time is when parents and children participate in leisure or recreational activities together (Shaw, 1997). From the beginning, family leisure has been mostly related to the middle classes both historically and currently (Harrington, 2006). When the middle-class concept emerged in the mid-nineteenth century, the "cult of domesticity" and the concept of familism began shaping family life. The mother was assigned as a homemaker to create a "haven in a heartless world" in the domestic environment for her family (Lash, 1977). Since families had fewer children, families' child-raising practices adopted more playful and permissive attitudes (Cross, 1990) with the mother having more time and opportunity for her leisure activities and also her family (Harrington, 2006). With the "private constraint versus public excess" principle (Cross, 1990), families engaged in collective activities at home as a whole such as watching a movie, singing, playing piano, board

games, and yard games (Harrington, 2003). Meanwhile, the working and lower classes continued spending time in public spaces such as bars, pubs, or neighborhood salons (Harrington, 2006).

It is seen that participation in leisure activities contributes positively to bonding, functioning, satisfaction, and communication in the family (Poff, Zabriskie, & Townsend, 2010; Zabriskie & McCormick, 2003). Leisure activities may differ according to lifestyle, income and education level, thoughts, and attitudes (Akgül, 2011; Tribe, 1995) and they fall under two separate categories, namely, core and balance activities (Zabriskie & McCormick, 2001). Core family leisure activities are the more common, low-cost, relatively accessible, and home-based activities that most families frequently do. Balance family leisure activities, on the other hand, are considered less common, less frequent activities that usually take place outside the home environment and thus offer new experiences (Zabriskie & McCormick, 2001). The activities that take place around the home are predictable and meet families' needs for familiarity and stability as they provide the groundwork for communication and intimacy between family members. Balance activities usually take place in areas away from home and during these activities, families may grow and be challenged, which meets the families' needs for novelty and change (Zabriskie & McCormick, 2001).

For people living in cities, access to nature is mostly through urban green space (UGS) and these places serve as a base for leisure activities. UGS is the term given to places where people living in cities can benefit from exercising, observing nature, and relaxing. UGS areas have natural elements that improve people's quality of life both directly and indirectly (Lopes & Camanho, 2013; van den Bosch & Sang, 2017). All green and blue areas such as parks, community gardens, street trees,

cemeteries, lakes, or seafronts within the city are regarded as green spaces (Petersen, 2013). The importance of UGS is one of the issues that has attracted attention in recent years due to the effects of urbanization on the livability of cities and human health (Sanesi & Chiarello, 2006; Tzoulas et al., 2007). UGS benefits both residents and the city (Chiesura 2004; Giles-Corti et al., 2005; Barbosa et al. 2007; McConnachie & Shackleton, 2010), but there are variations, inequalities, and limitations in accessing these areas (Ahn et al., 2020; Dai, 2011; Wolch et al., 2014; Zepp et al., 2020).

The COVID-19 outbreak became a global pandemic in March 2020, and many aspects of individuals' lives had to be changed, revisited, and modified due to lockdowns, restrictions, and the pandemic itself. Tremendous changes took place in the routines, practices, and behaviors of families in their work and daily lives. Domestic workloads and leisure activities also changed (Sivan, 2020). Moreover, many countries imposed various restrictions such as curfews, activity limitations, or travel bans, which led to changes in activity types, leisure patterns, and preferences for activity places (Ugolini, Massetti, Calaza-Martínez, Cariñanos, Dobbs, Ostoić, & Sanesi, 2021; Venter, Barton, Gundersen, Figari, & Nowell, 2020). Variations in leisure activities were generally addressed under two main headings, the first one being how much time an individual spends on leisure and the second one being what kind of activities they engaged in (Bramante, 2020; Sivan, 2020; Venter et al. 2020; Young, 2020).

During the lockdown period, technology created a mutual space for leisure activities such as gaming, virtual conferencing, or social media for families, close friends, or people within both the same and different countries (Gammon & Ramshaw, 2020). However, Google mobility data indicates a 19% increase in visits

to parks, forests, and other green spaces, trips/hikes, and outdoor activities (Venter et al., 2020). Here, researchers also mention the distance barrier since people who live far from green areas use them less (Venter et al., 2020).

To conclude, while addressing the issues of leisure activities and access to green spaces, many topics such as family dynamics, the outbreak, and accessible activity areas in many systems need to be considered. Social-ecological theory suggests that for any intervention or regulation to be effective, it must work not only with the individual but also with society, institutions, and relevant policies and that patterned behaviors are the result of interest and behavior determined by intrapersonal factors, interpersonal processes, institutional factors, community factors, public policies, and national laws and policies (McLeroy, 1988, p.355). With the help of the comprehensive perspective provided by socio-ecological theory, this study will discuss what families do in their leisure time, the access and use of green spaces, and related constraints in the context of the COVID-19 pandemic.

CHAPTER 2

LITERATURE REVIEW

This chapter provides detailed definitions of family leisure time, use of UGS, constraints in the use of USG, and the findings of related studies. In addition, it will discuss family leisure and the use of UGS in the context of the COVID-19 pandemic. As stated in the introduction, since both leisure time and green space use are affected by personal, environmental, and institutional reasons, Social-Ecological Theory is used to provide a theoretical framework for this study.

2.1 Social-ecological theory

Social-ecological theory emerged in a model that emphasizes the need to focus on individual and social environmental factors to increase the effectiveness of intervention programs in health promotion. This model states that for interventions to be effective and sustainable, the person has to be considered together with interpersonal, organizational, community, and policy levels. The model argues that appropriate changes in the social environment will lead to changes in the individual and that similarly, the support of people in the population is necessary for environmental changes to be implemented (McLeroy, Bibeau, Steckler, & Glanz, 1988). Bronfenbrenner's ecological system theory (1979) constitutes the conceptual framework of this model. Two studies that discuss an ecological model to prevent child maltreatment conducted by Belsky (1980) and the social support provided by various institutions in the community contributed significantly to the development of

this model. According to this model, patterned behaviors are the result of interest and behavior determined by various factors as shown in Figure 1 and these are:

(1) intrapersonal factors- characteristics of the individual such as knowledge, attitudes, behavior, self-concept, skills, etc. This includes the developmental history of the individual.

(2) interpersonal processes and primary groups- formal and informal social network and social support systems, including the family, work group, and friendship networks.

(3) institutional factors- social institutions with organizational characteristics, and formal (and informal) rules and regulations for operation.

(4) community factors- relationships among organizations, institutions, and informal networks within defined boundaries.

(5) public policy- local, state, and national laws and policies (McLeroy, 1988, p.355).

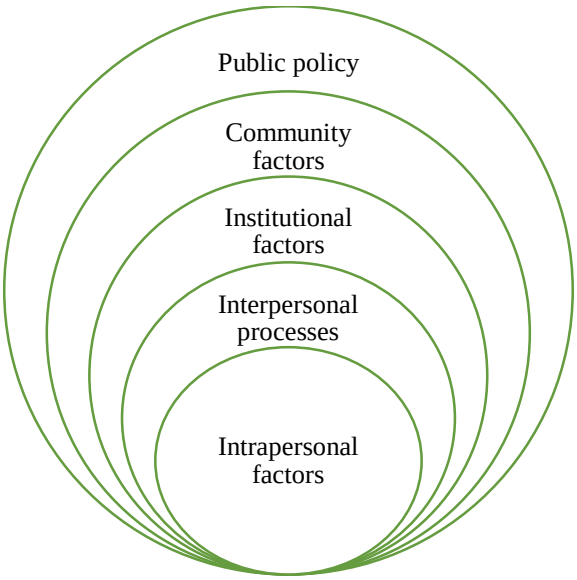

Figure 1. Social ecological model

Since this model allows the integration of various contexts to diagnose the factors influencing a subject (Oetzel, Ting-Toomey, & Rinderle, 2006), it is used not only in the field of health but also in areas such as leisure activities, access to nature, and green space use (Raymore, 2002; Sallis, Johnson, Calfas, Caparosa, & Nichols, 1997; Schipperijn, Stigsdotter, Randrup & Troelsen, 2010). For example, Schipperijn et al. (2010) claimed that the use of green spaces could be seen as a result of personal and environmental factors and the interaction of these two distinct areas with each other. Similarly, according to a study investigating factors affecting leisure time usage, the model can be effective in understanding leisure activities and identifying the determinants of participation. The study suggested that many factors such as age, education level, whether there is someone to spend time with or the presence of recreational areas in their regions will determine people's leisure activities, and therefore it may be useful to look at them from a broader and elaborative perspective (Li, Seo, Torabi, Kay, & Kolbe, 2012). This study, therefore, used the theory to understand the experiences of families in the context of leisure and use of green space.

2.2 Family leisure

Leisure is a concept that emerged as a result of industrialization and urbanization and has become a necessity for societies over the years. It is also mentioned frequently in discussions about the consumer society concept (Akgül, 2011). There are many alternative descriptions of the leisure concept that differ depending on time, activity, attitude, and quality (Torkildsen, 2012). It is defined as a period in which individuals

can spend time outside of their obligations and responsibilities doing what they want (Rojek, Shaw, & Veal, 2006) It is also the time that is left to the individual and can be used freely after fulfilling work, sleep, eating and other basic needs (e.g., chores, family responsibilities, and shopping) (Akgül, 2011). Relatedly, it is the result of people's free choices, which are governed by intrinsic motivation and enjoyable experiences (Mannell & Kleiber, 1997). When looking at the individuals' leisure preferences, it is seen that lifestyle, education, ideas, and attitudes are significant determinants of preference (Akgül, 2011).

Even though leisure studies generally focus on individuals, when researchers examine a group of people, they frequently look at the interaction between friends and individuals who do the same activity. While many people from different age groups from childhood to adulthood prefer the home and family environment as the location and context for their leisure time (Kelly, 1993; Shaw, 1997), it is also argued that all family members may not have enough private space in the home environment; thus, they may prefer various other leisure settings with different companions (Allan & Crow, 1989). Leisure studies indicate that most people usually spend leisure time in their home environment or nearby areas with family members or close friends (Bhatti & Church, 2000). An increase in home-based leisure time has been seen as a result of changes in work, family, leisure, and technology patterns (Allan & Crow, 1991; Tomlinson, 1990), but this is not a new concept. Throughout history, there have been times in which people were more eager to spend their leisure time with family members in the home environment. For example, between the thirteenth and the seventeenth centuries, families prioritized family and child-centered home life because of social and cultural changes (Aries et al., 1962). Also, with the advances in technology coupled with changes in the family and work

settings following World War II, people tended to engage in home-based leisure activities (Allan & Crow, 1991; Saunders, 1990).

Families sometimes engage in leisure activities of their own free choice and have fun but parents can also organize goal-oriented activities to serve the family's short- and long-term goals, such as contributing to family functioning, creating a strong sense of family, supporting children's various developmental areas, modeling positive values, improving the family's mental and physical health, or relieving the family's stress during hard times (Shaw & Dawson, 2001; Werner & Shannon, 2013). Even though for all or some members of the family this involves effort and work, family leisure contributes to both family and individual well-being (Csikszentmihaly, 1991; Orthner, Barnett-Morris, & Mancini, 1994). Studies suggest that involvement in family leisure activities and satisfaction with these activities leads to healthy family outcomes and that regular participation in these leisure activities helps family members to meet their personal and family needs in a healthy and more stable way (Hodge, Bocarro, Henderson, Zabriskie, Parcel, & Kanters, 2015; Melton, 2017). Conversely, other findings claim that even though family leisure provides pleasure and satisfaction for all members, for the parents there might be too much work, effort, and tension, and ultimately a lack of enjoyment (Shaw & Dawson, 2001).

2.2.1 The Core and Balance Model of Family Leisure

The Core and Balance Model argues that families fulfill the need for stability and change, and support family cohesion and adaptability through leisure. There are two categories of this leisure, namely, core and balanced family leisure activities (Zabriskie, 2000; Zabriskie & McCormick, 2001). Watching TV shows or videos

together, playing card or board games, spending time in the garden, or cooking are examples of basic activities. Balanced activities include family vacations, outdoor recreation (e.g., camping, fishing, boating), museum or theme park trips, and sporting events (Zabriskie & McCormick, 2001). According to this model, family members' need for familiarity and stability can be met via core activities since these predictable routine activities promote relatedness, closeness, and cohesion in the family. Conversely, since balance activities come with novel experiences, families need to negotiate, cooperate, and adapt to changes. In doing so, the family's need for novelty and change can be addressed. The model also suggests that participation in both types of leisure activities promotes family cohesion and adaptability (Zabriskie, 2000; Zabriskie & McCormick, 2001), which leads to healthy family functioning (Olson, 1993).

Some studies focus on how family leisure and leisure are experienced and perceived by families (Aslan, 2009; Aslan & Aslan, 2012; Gürbüz & Henderson, 2014; Erkip, 2009; te Kloeze, 2001; Zabriskie, Aslan & Williamson, 2018). In one study, researchers asked Turkish parents what leisure means for them, their leisure activity types, the importance of leisure activities, and with whom they want to spend their leisure time (Aslan & Aslan, 2012). First, some participants described leisure as spending time with family and loved ones, and engaging in something useful. Conversely, resting and engaging in amusing activities to have fun and release stress were the other descriptions made by the participants. The activity types were grouped into two categories, namely, home-based activities and traditional outdoor activities. The home-based activities generally involved both parents and included watching TV, visiting relatives, and taking a stroll around the neighborhood. A study was conducted in the Netherlands to understand what leisure means for Turkish families

and the forms it takes (Kloeze, 2001). It reported that even though these families had been living in these cities for many years, they still had strong ties to their culture. Correspondingly, in leisure time, they tended to participate in passive activities such as watching TV, reading newspapers, or caring about their cars' little problems and spending their time with family members and relatives, who could be in the same neighborhood, same city, another city, or back in Turkey. However, there were also differences in activity types depending on gender. While mothers frequently visited their neighbors and friends, fathers would often spend time in tea or coffee shops with friends. As for balance activities; even though they are uncommon, families stated that they would go on picnics and nature walks, eat at restaurants, and travel. Also, there was another type of activity that only fathers engaged in because they think it is a men-only activity, and that is going to soccer matches. The study also mentioned gender differences in leisure activities. A man had to be present during these activities and Turkish women were not eager to go out and spend time with their children when their husbands are absent. While mosques and cafes were popular places for men's leisure, it was hard to see women in these places. When women did take part in leisure activities, it usually involved going to each other's homes and going to parks with the other women. For children, playing outside, going to a soccer club, and spending time with their families were the most common activities (Kloeze, 2001). As for what leisure means, the mothers mostly stated that it allowed them to spend time with their families while the father said it allowed them to be with their friends. Also, both parents indicated that leisure time means spending time apart in same-gender groups, putting responsibilities aside, and having a place to relax. Lastly, when participants were asked about their choice of company, they

said they mostly prefer being with family members but also want to spend with their partner alone and with their friends (Aslan & Aslan, 2012).

Aslan (2009) studied Turkish families' leisure activity types and their satisfaction with these activities. Findings showed that core activities were more common than balance family leisure activities. Since core activities, which generally happen in the home environment, are not unfamiliar with the culture, this finding was not surprising but the researcher states that participants see these activities (cooking and eating meals together, watching TV, gardening, and knitting something) as the family's daily routine. Gender differences were also valid in leisure participation. While male youth indicated that they very rarely (a few times a year) attended core activities, female youth and parents participated in them "once or twice a month." Very little participation was reported in balance activities. The most common balance activities were visiting friends, going to the cinema and matches, and having a picnic outside. Other activities such as camping, hiking, tennis, or bowling were not very common (Aslan, 2009). Another study conducted with middle-class urban Turkish families indicated that the sample has many points in common with other samples from Western industrialized countries with respect to participation and leisure satisfaction (Zabriskie, Aslan, & Williamson, 2018). Also, the study claims that even though Turkish families do not have much leisure awareness compared to Western countries, spending time together is a part of the tradition, and being together has considerable value for family members. Accordingly, Aslan (2009) claims that family leisure begins with home-based activities. The study also revealed, however, that while Turkish families' scores for core activities were lower, scores for balance activities are comparable with other family samples (Zabriskie, Aslan & Williamson, 2018). Family leisure satisfaction was the other focus of the study and

findings suggested that participation in core leisure activities is more satisfying for families and they are less satisfied with balance activities. Despite being less satisfying, the significant attendance in balance activities is interpreted by researchers as families keeping up with social changes and taking advantage of new opportunities.

2.3 Urban green space (UGS)

Green space is defined thus: “It broadly encompasses publicly accessible areas with natural vegetation, such as grass, plants or trees [and may include] built environment features, such as urban parks, as well as less managed areas, including woodland and nature reserves.” (Lachowycz & Jones, 2013, p.62). All green and blue areas such as parks, community gardens, street trees, cemeteries, lakes, or seafronts are green spaces (Petersen, 2013). Even though they differ in size, vegetation cover, facilities, services, biodiversity, accessibility, and environmental quality, they play a crucial role for the cities and residents due to these reasons: they support daily life by serving recreation and health opportunities, preserving biodiversity, pave the way for nature experiences, contribute to cities’ environmental quality, ease technical problems such as sewage treatment or flood regulation with natural solutions, and promote cities’ cultural identity (Sandström, Angelstam, & Mikusiński, 2006).

Recently, the significance of UGS has drawn the attention of both public and private authorities as the effects of urbanization on the livability of cities and human mental and physical health have become better understood (Sanesi & Chiarello, 2006). In 2013, the European Union became the first organization to acknowledge the importance of green spaces and indicated that networks of green and blue areas

could play a key role in managing European policy objectives (EC, 2013). Later, other organizations emphasized creating more sustainable and resilient cities, protecting nature in cities, making green areas more available, and allowing citizens to use these places more (EC, 2019; UN, 2015). Urban planners emphasize the availability and access strategies of green spaces to foster regular interaction with others and nature in local environments (McConnachie & Shackleton, 2010). Moreover, it is known that the general population acknowledges the importance of green spaces and when people have more nature nearby in their living environment, they have stronger perceptions of these spaces (Kruize et. al, 2020).

Green spaces are generally discussed under different types according to their function, size, and management regimes (Rupprecht & Byrne, 2014). However, it can be said that there are two broad categories of green space, namely, formal and informal (Rupprecht & Byrne, 2014). The boundaries of formal green space are determined, and their maintenance and upkeep are provided by the institutions and organizations involved in the management of the city (Schipperijn, Stigsdotter, Randrup, & Troelsen, 2010). Parks, botanical gardens, urban forests, and cemeteries are included in this category. On the other hand, the maintenance and upkeep of informal green spaces are undertaken not by any owner or official institution but by ecological conditions. These areas are not generally used for any agriculture, forestry, gardening, or recreation purposes. Street verge, lot, gap, railway, brownfield, water-side, microsite, and power line are subtypes of the category (Rupprecht & Byrne, 2014). While urban ecology studies have generally tended to focus on formal green space, there is limited research on informal green space since the latter has drawn more attention due to being a part of public spaces (Rupprecht & Byrne, 2014).

While living in urban areas is unavoidable and has many advantages for people, dense urbanization may cause environmental problems such as greater air, water, and soil pollution, flash flooding, changes in climate, reduction in biodiversity due to physical barriers, and damage to habitats (Seto, Sánchez-Rodríguez, & Fragkias, 2010). Moreover, urban growth is also an influential factor in residents' vulnerability to environmental stress (Güneralp & Seto, 2008). Urban environments may create health challenges for residents. For example, physical activity is very restricted in urban environments due to a variety of factors such as insufficient safe public spaces, overcrowding, traffic, increased use of motorized transportation, or air pollution. Furthermore, urban environments promote unhealthy diets because of mass marketing and easily accessible unhealthy food (Urbanization and Health, 2010). Considering all of these, living in urban environments adversely affects the lifestyle of residents and directly impacts their health. By contrast, many studies claim that active and passive exposure to green spaces contributes to people's mental and physical well-being and social cohesion in society (Barbosa et al. 2007; Chiesura 2004; Giles-Corti et al., 2005; McConnachie & Shackleton, 2010).

Active and passive exposure to green space contributes to both the mental and physical well-being of individuals. Having a natural view or seeing natural elements from a window may be beneficial to people's satisfaction with their living area and their mental well-being (Kaplan, 2001). Studies suggest that green space may help to reduce stress, contribute to self-regulation, restore attention, and promote restorative experiences for stress and mental fatigue (Grahn & Stigsdotter, 2003; Kaplan & Kaplan, 1989; Ulrich, 1983; Van den Berg, Maas, Verheij, & Groenewegen, 2010). Studies involving individuals from different age groups show that the presence of green areas in the neighborhood and participating in nature-based activities play a

protective role in the health of people and reduce stress-related symptoms (Cimprich & Ronis, 2003; Gidlöf-Gunnarsson, & Öhrström, 2007; Wells & Evans, 2003). In the same vein, Kaplan and Kaplan (1989) claim that individuals with less access to natural spaces may be influenced by negative life events since they lack the opportunity to experience and implement nature-based coping strategies when compared with residents who live in areas with abundant green space.

UGS provides residents with many free or low-cost activities and the availability of UGS is frequently associated with increased levels of physical activity, especially recreational activity. Apart from availability, the amount of UGS near home, the distance to the nearest UGS, the size and features of UGS such as a paved and unpaved trail, wooded areas, and facilities like restrooms, bicycle racks, or attractive landscaping are positively linked with increased physical activities. (Giles-Corti et al., 2005; Kaczynski, Potwarka, & Saelens, 2008; Mytton, Townsend, Rutter, & Foster, 2012). With regard to physical health, proximity to parks has a positive effect on individuals' physical activity levels (Kaczynski & Henderson, 2007). Studies suggest that green spaces encourage inhabitants to do outdoor physical activities such as walking, jogging, or cycling, walking being the most prominent and common activity (Cohen-Cline et al., 2015; Lachowycz et al., 2012; Mytton et al., 2012). In addition, it has been found that limited access to green space leads to a more passive lifestyle and an increased risk of obesity and cardiovascular diseases (Storgaard, Hansen, Aadahl, & Glümer, 2013).

Urban parks can contribute to social cohesion by offering opportunities and spaces for social interactions and bonding (Kingsley & Townsend, 2006; L'Aoustet & Griffet, 2004; Maas, van Dillen, Verheij, & Groenewegen, 2009). It is known that one of the primary motivations people have for urban spaces and parks is social

interaction (Baur, Gomez, & Tynon, 2013). In the literature, there is a term known as third place. It means social settings/environments other than home and workplace settings and it paves the way for broader neighborhood social engagement and more social network-based resources (Oldenburg, 1989). Green spaces also play a role as a third place for people who have difficulty meeting elsewhere and provide opportunities for them to meet, have short and daily conversations, and spend time together (Eitler, McMahon, & Thoerig, 2013). In addition, it has been observed that since people see and meet each other in these areas, the feeling of familiarity with the area and the people there increases along with comfort, and as the number of visits increases, these feelings become stronger and contribute to social cohesion (Blokland, 2003). Similarly, De Haan (2005) argues that appropriation of open public spaces leads to stronger bonds with the spaces and more communication with others, thus contributing to social cohesion. Parks are also important because they serve as a place where people from different social and ethnic groups can come together (Fainstein, 2005). They provide more opportunities for interaction as they are easier to access than many other public spaces. In addition, these areas attract the attention of the residents since they provide the locals with many facilities to spend their leisure time. Collective activities such as football and cycling can be carried out in these areas and social cohesion is enhanced when people spend time together in an activity (Konijnendijk, Annerstedt, Nielsen, & Maruthaveeran, 2013).

2.3.1 Access to UGS

As discussed above, although green spaces make many positive contributions to both people and the city, researchers have observed differentiations and inequalities in the existence and use of these areas (Ahn et al., 2020; Dai, 2011; Wolch et al., 2014;

Zepp et al., 2020). Several reviews revealed diverse factors that influence the usage of green spaces. These factors include quality and quantity, the features of the spaces, the demographic characteristics of possible visitors such as age, gender, ethnicity, or socioeconomic status, psychological factors relating to preferences such as perceived constraints, perceived safety, access to facilities, how these spaces match the needs of users, park maintenance, aesthetic features of the parks such as the presence of trees, water and birdlife, and park size (Cutts et al., 2009; Hughey et al., 2016; Kamel et al., 2014; Reyes et al., 2014). Moreover, the usage type of parks differentiates the factors. For example, while walking paths or different equipment are needed for active activities, the availability of seating, picnic tables, barbecues, or toilets promote passive usage and facilitate social interaction (Gobster, 2002). The distance to green spaces determines both the frequency of visitation and type of usage. Research shows that areas that are close by and within walking distance increase the likelihood and frequency of use by residents (Dai, 2011; Liu, Kwan, & Kan, 2021) and make it more likely that people will visit a park alone or accompanied by another daily (Liu et al., 2021). When personal characteristics and geographical conditions are left aside, it is argued that three basic levels determine access to UGS. These are the availability, accessibility, and attractiveness of UGS, and they are defined as follows (Biernacka & Kronenberg, 2018):

1. Availability – a UGS is available when it exists (especially when considered within a suitable distance from where one lives).
2. Accessibility – a UGS is accessible when one feels that he or she is welcome there, and can freely reach and enter this UGS and safely use it for recreational purposes at any time, without any restrictions.

3. Attractiveness – a UGS is attractive when one willingly wants to use it and spend his or her time there, and when this UGS corresponds with one's individual needs, expectations and preferences (p.23).

In addition to these definitions, Biernacka and Kronenberg (2018) indicated that users of USG ask some questions to decide their use and these are "Does a green space exist?" for availability, "Can I freely enter this green space" and "Am I welcome there?" for accessibility, and "Does this green space correspond with my needs, expectations, and preferences" and "Do I want to spend time there?" for attractiveness (p.23). There is a hierarchical order between these levels. For example, for a person to evaluate a park in terms of attractiveness, that park must be accessible, and to be accessible, it has to exist in the first place.

Proximity to green areas is one of the essential determinants of visit frequency. It is found that the frequency of visits increases the more available and accessible they are (Cutts et al., 2009). Conversely, there was a decrease in both the frequency of visits and the time spent in these areas when the distance increased (Stahle, 2005). The issue of proximity becomes more vital, especially for children, the elderly, and less mobile individuals (Gidlow & Ellis, 2011). In the literature, the maximum distance is determined to be 300 meters and 5 minutes, the criteria being that a person can go this far willingly without any difficulty (Stahle, 2010; Sotoudehnia & Comber, 2010).

In 1999, regulations stated that the amount of green space per person in urban areas should be at least 10 m^2, and at least 14 m^2 per person outside the boundaries of the municipalities and adjacent areas (Official Gazette of the Republic of Turkey, 1999). However, even though many studies suggest that these values are not sufficient, it has been found that many cities in Turkey are unable to meet even these

values. For example, studies show that the value per person in Istanbul is 1.90 m^2 (Aksoy, 2001), 3.00 m^2 in Isparta (Gül & Küçük, 2001), 2.20 m^2 in Kırıkkale (Özcan, 2006), and 1.40 m^2 in Kahramanmaraş (Doygun & İlter, 2007). Also, the European Commission's Urban Audit for Benchmarking the Quality of Life in 58 European Cities reported that the ideal walking time for green spaces is acknowledged as 15 minutes. According to Altunkasa (2004), the accessibility distance is an average of 10 minutes walking time and 400 meters for children's playgrounds and an average of 20 minutes walking time and 800 meters for neighborhood parks. Similarly, other studies suggest that play and recreation areas should be within 400 meters at the neighborhood level and this distance should be 800 meters at the city level (Çetiner, 1991; Van Herzele & Wiedemann, 2003; Yenice, 2012).

Apart from attractiveness and usability, accessibility is influenced by many personal, cultural, and physical parameters. Due to these many, complex factors, Ritz (2021) adds the following sentence to the questions to determine accessibility: "Closely connected to the question of what determines green space accessibility is who can gain said access" (p.15). Access to green areas can be discussed under two major headings: actual accessibility and potential accessibility. The first category is about the actual use of areas, while the second represents the amount of accessible green spaces in a specific area (Gobster, 2002). In each category, there is an interaction between spatial accessibility such as location and distance and nonspatial accessibility such as income, age, sex, and social status. For example, this interaction, studies show that green areas are not equally distributed among segments from different socioeconomic levels, generally, wealthy people have more access to green areas, and while the ethnically dominant group has easy access, minorities are

in a disadvantaged position (Wolch, Byrne, & Newell, 2014). Equal access to green spaces is one of the most crucial constituents of environmental justice, and since imbalances in access may cause negative consequences for the well-being of both cities and individuals, it is necessary to identify which groups and individuals are disadvantaged and what barriers prevent use (Ekkel & de Vries, 2017).

To begin with, research suggests that lower socioeconomic groups and ethnic minorities have less access to green spaces (Gobster, 1998; Lara-Valencia & García-Pérez, 2015; Xiao, Wang, Li, & Tang, 2017). Other studies have reported findings that contradict this. For example, a study conducted in England found that people of lower socioeconomic status in Sheffield have better access to open space (Barbosa et al., 2007). However, the researchers also concluded that park provision is still low by national standards. Similarly, Nichols (2001) did not find any difference in the distribution of parks in white and non-white neighborhoods, while a study conducted in the United States found that mixed-race neighborhoods had the most parks, while low- and middle-income with mostly white people had the least number of parks (Abercrombie, Sallis, Conway, Frank, Saelens, & Chapman, 2008). Wang, Brown, and Liu's (2015) study in Australia showed that people with lower socioeconomic status believe that they have less accessibility. A study conducted in Singapore also found that socioeconomic level has an impact on green space access (Tan & Samsudin, 2017). While the number of green areas per capita is higher in residential estates with predominantly private households, it is less in low-SES areas. The researchers also stated that the reason for the lower provision of parks on a per capita basis was the higher population in these areas. In the same study, there was no difference in terms of ethnic groups, and it was suggested that the reason for this was the success of the Ethnic Integration Policy implemented to prevent ethnic groups

from clustering in a specific residential area (Tan & Samsudin, 2017). Studies conducted in the United States have found that ethnic and racial minorities are more disadvantaged in terms of access to green spaces and tree canopy in their neighborhoods. Minorities were found to live in areas with less tree cover and the largest racial/ethnic disparity was between blacks and whites (Jesdale, Morello-Frosch, & Cushing, 2013).

Moreover, some studies indicate that less-educated and working-class neighborhoods have less access to UGS, whereas those who reside in underdeveloped districts have more access (Li & Liu, 2016). Studies show that older people and children also have problems accessing green spaces due to their age and ability (Boone et al., 2009; Reyes et al., 2014. Safety, lack of facilities, and the need for adult supervision were factors reported as limiting access for children, while walking distance, connectivity, and safety plus access to public transport were reported as factors limiting access for elderly people (Gong, Zheng & Ng, 2016; Tan, Lau, Roberts, Chao, & Ng, 2019).

2.4 COVID-19 pandemic, family leisure, and green space use

2.4.1 COVID-19 pandemic and family leisure

With the outbreak of the COVID-19 pandemic, people's routines, practices, and behaviors in their daily and working life have changed, in part due to the pandemic itself and in part due to the strict lockdown regulations. Since all the activities in the daily lives of people moved into the home environment, the routines and lives of many people underwent enormous changes (Carrà, 2020). Home and work had to be combined and both the visible and invisible boundaries in family and personal lives

disappeared, which led to the revisitation of both the family and work dynamics (Donati, 2020).

This process has created negative consequences such as crisis in family space, deprivation of social and educational activities, domestic violence, and increases in working hours (Bramanti, 2020; Di Norcia, Cannoni, Szpunar, & Mascaro, 2020). The pandemic highlighted existing problems in some families (Eurofound, 2020) and gender role differences such as employment and domestic workload increased (Eurostat, 2020). Even though each family unit was affected at different levels and degrees, it is known that families with school-aged children were faced with a real challenge as a result of school closures, restrictions in playgrounds, decreases in regular supportive facilities such as day care or family support, and working from both office and home (Prime, Wade, & Browne, 2020).

Apart from the pandemic itself, trying to balance professional life, family life, and domestic work challenged parents and since preschool children's needs, in particular, require more commitment, these parents had more difficulty and were less productive in their professional life (Mazzucchelli, 2020; Pesenti, 2020). Studies suggested that parents ran the risk of being overwhelmed during the pandemic due to several stressors such as health concerns, isolation, uncertainty, financial stress, job loss, and novel duties as a parent and a disabled family member at home (Fontanesi et al., 2020; Spinelli, Lionetti, Pastore, & Fasolo, 2020) and the consequences of these stressors were worse for parents with several disadvantages such as low income, low education level, and poorer physical health (Lei et al., 2020; Zhang, Wang, et al., 2020). It was observed that the effects of the pandemic were experienced by families disproportionately, with low-SES families being hit particularly hard. Also, some parents were forced to go on paid or unpaid leave while

working mothers were forced to leave their jobs (Wamser-Nanney, Nguyen-Feng, Lotzin, & Zhou, 2021). Furthermore, there was the extra challenge of managing work requirements and the practical, emotional, and educational needs of their children simultaneously (Balenzano, Moro, & Girardi, 2020). Parents who continued to work outside the home as essential workers, on the other hand, struggled to combine their professional responsibilities with the practical, emotional, and educational needs of their isolated children (Balenzano et. al, 2020). Parents indicated that they experienced financial hardships or concerns, social isolation, criticisms, sadness, and loneliness and that this impacted their parenting (Prime, Wade & Browne, 2020). Furthermore, they had to be in charge of their children's supervision and education by themselves because schools, childcare, and after-school activities were shut down. In addition, personal and family stress impact not only the well-being of parents but also the quality of their relationships and their children's well-being and adjustment (Marazziti, Pozza, Di Giuseppe, & Conversano, 2020; Prime, Wade & Browne, 2020). Psychological, health, and educational problems were the most prominent challenges of family life for parents (Başaran & Aksoy, 2020).

Leisure patterns have undergone drastic changes during the pandemic due to concerns and regulations (Lashua, Johnson, & Parry, 2020; Lehman, 2021). When the curfews and quarantines began, nearly all organizations and activities were canceled to contain the spread of the virus and to maintain social distancing. When the rules and regulations were eased, new regulations such as reducing the number of participants, complying with social distance rules, and increasing hygiene measures were made for activities that could be carried out in open areas or collectively (Lashua et al., 2020). Mandatory changes such as the closure of some hotels and

restaurants, the imposition of curfew hours, and limits on the number of people taking part in activities and activity areas adversely affected leisure activities from an organizational and logistical standpoint, too. These changes meant it was no longer possible to engage in leisure activities like before (Gül Ünlü, 2021). In addition, events and activities in many fields such as sports, entertainment, religion, or education were postponed or canceled (Gümüşgül & Aydoğan, 2020). As a result of changes in nearly every field of daily life, people have also had to adjust their leisure activities (Lin & Falk, 2021).

People have been spending more time with family members at home, while social media, computer games, and Internet-based platforms are regarded as primary leisure time areas (Gül Ünlü, 2021). Moreover, the more traditional forms of leisure activities such as gardening, reading, household chores, or board games have also been transformed, reinterpreted in line with current conditions, and integrated into daily life practices (Gül Ünlü, 2021). Technology has created a mutual space for leisure activities such as gaming, virtual conferencing, or social media for families, close friends, or people within the same and different countries (Gammon & Ramshaw, 2020). E-leisure has become a part of home-based leisure activities and serves the function of creating a shared experience and socialization (Gammon & Ramshaw, 2020). Social media-related leisure, gaming, and watching television have become the most common activities (van Leeuwen, Klerks, Bargeman, Heslinga, & Bastiaansen, 2020). People also feel nostalgia for leisure and they watch old movies and TV programs, gather with friends and family, and reminisce online or outdoors (Gammon & Ramshaw, 2020). For example, in the “break free” periods permitted by the government during the lockdown, many families spent this day together, something that researchers said was less likely to occur before (Gammon &

Ramshaw, 2020; Öztürk, Yılmaz, Demir-Erbil, & Hazer, 2020). The COVID-19 pandemic has increased communication within the family (Başaran & Aksoy, 2020). Parents say they have increased the types of activities they carry out with their children and, as a result, the time they spend with their children, and they see this as an opportunity (Başaran & Aksoy, 2020). Parents also indicate that while children play considerably more with their parents and siblings, they play with their peers and grandparents less (Mart & Kesicioglu, 2020).

In addition, some activities have also started to be carried out at the individual level. For example, watching movies has transformed into a practice experienced individually by digital cinema audiences (Sunal & Bağdatlı-Kalkan, 2020). People are taking part in physical or outdoor activities on their own due to rules about one person at a time or rules for maintaining social distance (van Leeuwen et al., 2020). However, a study conducted with parents of children aged 3-18 reported that children's dependence on their parents increased during the COVID-19 pandemic, and they frequently experienced distraction, loss of appetite, sleep problems, and irritability (Jiao et al., 2020).

Parents in other studies talked about the restrictions in accessing outdoor environments and their effects (Mart & Kesicioglu, 2020; van Leeuwen et al., 2020; Young, 2020). Parents stated that the time spent by children playing virtual games increased after the pandemic and there was a decrease in outdoor games (Mart & Kesicioglu, 2020). A large proportion of the participants resided in apartments and on days when there was no curfew for children, they mostly preferred to spend their time outside in open spaces or on the seafront (Mart & Kesicioglu, 2020). Since there were not enough indoor environments suitable for children's play in disadvantaged and underdeveloped areas and informal settlements, they had to play in the streets or

parks without following the rules for social distancing and the use of masks (Young, 2020). Parents indicated that children played online games frequently and for long hours, and they also used these games to connect socially with their peers. The reduction in outdoor activities and social interaction with peers may have led to an increase in depressive symptoms in children (Xie et al., 2020).

2.4.3 COVID-19 and urban green space

During the pandemic, each country applied different restrictions and regulations to prevent the spread of the virus and protect public health. Common measures have included social distancing, lockdowns, stay-at-home orders, closures of schools, workplaces, and public spaces, and restrictions related to social events and transportation. As a result, individuals' movement at the national and international level was restricted and these adjustments also influenced the preferred places for leisure. While shopping malls, cafes, restaurants, and recreational places were commonly used for leisure before the pandemic, parks, and green spaces have since become more preferable, vital, and safer (Geng, Innes, Wu, & Wang, 2021; Grima et al., 2020; Kleinschroth & Kowarik, 2020). The restrictions imposed on public green spaces vary from country to country. Some countries allow public green spaces to be visited and used, but some do not.

Italy was one of the countries that implemented measures nationally (Ugolini et al., 2020). At the start of the outbreak, to prevent the spread of the virus, public gatherings were forbidden but people were allowed to exercise and walk outdoors. When the number of positive cases increased, the use of the outdoors for sports activities and walking farther than 200 m from home was banned and citizens were allowed to go outside for only their essential needs such as shopping for groceries

and medicine (Ugolini et al., 2020). Correspondingly, Israel announced some restrictions on the use of the outdoors, and people were forbidden to move more than 100 m away from their homes (Ugolini et al., 2020). Canada was another country that implemented strict precautions in the beginning. Access to national parks, historic places, and coasts with motor vehicles was forbidden and most of the provincial parks and recreational areas were closed to the public (Freeman & Eykelbosh, 2020). Measures were also taken in Belgium to decrease mobility. In March 2020, even though parks were open to the public, there were still some restrictions on activities. Citizens were not allowed to sit in parks or use playgrounds. However, regional walks and bicycle rides were some of the few activities that were not banned during the restrictions. When the number of cases declined, restrictions were eased and citizens were encouraged by policy to use outdoors while respecting social distancing and travel regulations (da Schio et al., 2021). While outdoor activities were not prohibited in Lithuania, Slovenia, and Croatia, citizens were warned about maintaining social distance and avoiding social gatherings (Ugolini et al., 2020).

Other research stated that the stringency of regulations determined the trends in the use of these spaces and that the rate of use increased when access to green areas was not forbidden (Geng et al., 2021; Ugolini et al., 2020). Furthermore, fears and perceptions related to contagion resulted in decreased use of open spaces due to crowding and insufficient social distancing in New York city. Participants stated that disregard for masks coupled with inadequate and uncertain policies on the usage of green spaces stopped them from going there (Lopez, Kennedy, Field, & McPhearson, 2021). Despite personal concerns and the restrictions, people were increasingly demanding to use UGS (Zhu & Xu, 2021). Google mobility data, which shows the

number of visitors to parks, green spaces, and outdoor areas for many countries all over the world, indicated that residents visited these places more during the pandemic (Geng et al., 2021; Venter et al., 2020). Conversely, many people's access has been very limited due to a lack of green spaces and not having green spaces within walking distance (Özcü & Atanur, 2020). When residents have visited permitted areas, overcrowding in those areas has led to them being closed or restricted such as forbidding the use of certain equipment or designating areas for groups of people because of concerns about social distancing and spreading the virus (Day, 2020). Studies show that when people have green spaces near home, they are more inclined to visit them regularly and people prefer nearby areas more than large sites (Berdejo-Espinola et al., 2021; Xie, Luo, Furuya, & Sun, 2020). However, since large sites enable many visitors to spend time simultaneously without crowding (Alves et al., 2008; Mell, 2019), these spaces are also important for maintaining social distance. People realized the importance of both different-sized sites and accessibility. While nearby spaces enable residents to go to green areas frequently and easily, larger sites let more people visit them while maintaining social distance (Mell & Whitten, 2021).

Researchers also observed differences in visitors' choices of green space and their motivations. Older adults and families with children used small parks for communication and these groups had been used to visiting green spaces before the pandemic. By contrast, it is found that greenways and places of worship with green areas were preferred by telecommuters, who appreciate the stress-reducing benefits of these places (Yamazaki et al., 2021). Another study in China revealed that while participants' primary motivations for using green spaces were being in nature and taking a walk, they did not often visit these spaces to use fitness equipment, cycling,

and jogging (Xie, Luo, Furuya, & Sun, 2020). A study in Australia reported that more than one-third of participants visited UGSs more during the restrictions period and that their primary reasons for the visits were psychological well-being, physical well-being, and personal well-being, respectively, all of which stemmed from being connected to nature. Also, nearly 80% of participants strongly agreed that spending time in UGSs and connecting with nature contributed to their psychological well-being (Berdejo-Espinola, et al., 2021).

Social isolation and distancing have become one of the most commonly applied precautions during the pandemic. Apart from its advantages in stopping the spread of the virus, it is known that isolation may lead to negative consequences such as feelings of loneliness, anxiety, and depression (Cacioppo, Hawkley, & Thisted, 2010; Hawkley & Cacioppo, 2010). A recent study indicated that isolation during the COVID-19 pandemic can promote increased risks of post-traumatic stress symptoms, confusion, and anger (Brooks et al., 2020). When there are too many risk factors for an individual's well-being, green spaces can act as a refuge to reduce stress and provide relaxation (Brooks et al., 2020). Moreover, green spaces can contribute to social well-being since they provide opportunities for social cohesion and identity and promote social interactions (Kaplan, 1983; Newton, 2007) and they are particularly needed when there are psychological hardships (Jennings & Bamkole, 2019). A sense of coherence can help people cope with stressors (Antonovsky, 1996).

2.4.4 COVID-19 measures and use of UGS in Turkey

2.4.4.1 Measures taken in Turkey

The first case was detected on 11 March 2020 (Ministry of Health, 2020) and the World Health Organization (2020) declared the novel coronavirus outbreak a pandemic on the same day. On 12 March, officials announced some measures (Ministry of Interior, 2020a). Education was suspended for one week in primary and secondary schools and three weeks at universities, travel by public officials abroad was subject to permission and sporting events took place without spectators. The government continued to add more and more new measures in the days that followed. All national and international meetings and activities were postponed as of 20 March (Ministry of Environment, Urbanization, and Climate Change, 2020). The next day, it was announced that restaurants, cafes, and similar businesses were allowed to work with only home delivery and take-away services and that all activities of barbershops, beauty salons/centers, and hairdressers were suspended (Ankara Governor's Office, 2020a). A total curfew was announced on 21 March for people over the age of 65 and persons whose immune systems were compromised due to certain diseases such as chronic pulmonary diseases, asthma, liver disease, chronic obstructive pulmonary disease, cardiovascular disease, kidney disease, and hypertension. A curfew was imposed on 3 April for those under the age of 20 (Ankara Governor's Office, 2020b). These age groups were not allowed to spend time in open spaces or parks, travel by public transport vehicles, or leave their homes. Turkey ceased all international flights on 27 March. At the national level, individuals had to obtain permission to travel (Ministry of Interior, 2020b). As of 28 March, city entrances and exits for Turkey's 30 metropolitan cities were restricted (Ministry of Interior, 2020c) and curfews and quarantine measures were applied on

weekends for these cities starting on 11 April 2020 (Ministry of Interior, 2020d). All activities apart from compulsory public services such as bakeries, pharmacies, and health institutions were banned during the curfews and people were only allowed to go outside to make use of these services. While access to UGSs was initially restricted by banning the use of parks and recreation areas for barbecues on 21 March, the use of beaches and green spaces on weekends was banned a week later since activities such as having a picnic, fishing, and doing sports in these areas threaten social distancing (Ministry of Interior, 2020e). The curfew regulations for those aged above 65 and below 20 years of age were eased on 6 May (Ministry of Interior, 2020f). Senior citizens were allowed to go out on Sundays and those under 20 were allowed to go out on Fridays for two hours.

The government announced that the "normalization" period would begin on 1 June and stated the transition to normal life would be implemented gradually with the restriction extended to May, June, and July (Presidency of the Republic of Turkey, 2020). Restaurants, cafes, parks, swimming pools, gyms, spas, and coffee shops were reopened on 1 June with time and rule restrictions. Seafronts and UGSs were reopened for use and travel restrictions were removed nationally (Presidency of the Republic of Turkey, 2020).

The second wave of the COVID-19 pandemic in Turkey began in November 2020. New regulations were announced on 17 November to prevent and control the spread of the virus (Ministry of Interior, 2020g). A partial curfew for individuals not affected by the age-specific curfews would be imposed on weekends except between 10.00 a.m. and 8.00 p.m. and during weekdays between 9.00 p.m. and 5:00 a.m. On the weekend, people not in the specific age groups were allowed to go to the bakeries

and markets within walking distance of their residence but driving was banned. Individuals aged 65 and above were only allowed outside from 10.00 a.m. to 1.00 p.m., and those aged 20 and below were allowed from 1.00 p.m. to 4.00 p.m. Restaurants would continue with only take-away and home delivery services, and shopping malls and markets would be open until 8.00 p.m. The activities of coffee and tea houses, city gardens, and Internet cafes/salons would be stopped until a new decision was made. Also, distance learning would be implemented by the end of the year. Activities with gatherings at home would not be allowed and people would not be able to accept guests in their homes (Ministry of Interior, 2020g). These measures were maintained until 1 March 2021 after which, new measures for the controlled normalization process were taken according to the risk level in each province (Ministry of Interior, 2021h).

2.4.4.2 Urban green space usage in Turkey during pandemic

Visiting parks, seafronts, and many UGS was banned during the first wave of the pandemic in March 2020 (Ministry of Interior, 2020e). Equipment and places to sit were removed. Notices were posted and regular announcements were made informing people about the ban and the police conducted regular patrols to enforce it. For example, park gates and UGS were closed and cordoned off, and police officers, watchmen, and security guards checked these areas frequently (See Figure 2) (Kahramanmaraş Municipality, 2020).

Figure 2. Gate of a park closed during first wave of COVID-19 pandemic

Playground equipment was covered with plastic sheets, and benches were collected by municipalities or turned upside down so that no one could sit on them (See Figure 3) (Korkusuz, 2020). The same kinds of measures were also applied to the seafronts. Seafronts in nearly all provinces were closed to public access, and citizens were not able even to walk there (See Figure 4) (Yeni Şafak newspaper, 2020). Municipalities made announcements and warned residents about forbidden zones locally. (Kahramanmaraş Municipality, 2020).

Figure 3. Child playground covered during first wave of COVID-19 pandemic

Figure 4. Coast that closed to visitors and polices making controls during first wave of COVID-19 pandemic

When the first normalization period started on 1 June 2020, UGSs were reopened with certain conditions. For example, social distance circles were drawn in UGS and people had to remain in their circles throughout their visits (See Figure 5) (Istanbul Metropolitan Municipality, 2020). However, this measure was not broadly successful because of the general lack of UGS in many provinces, the poor size and quality of existing UGS, and the diverse ways of using them (Erdönmez & Atmiş, 2021). Citizens' demands and observed user behaviors in public places led to changes in practices in both governmental and non-governmental organizations and the private sector. The health authorities were warning people about the risks of spreading the virus in closed spaces and suggesting that they spend time outdoors as much as possible and ventilate indoor environments frequently and adequately while banning activities in enclosed and crowded spaces. People began to engage in outdoor activities and chose open-air venues for gatherings or daily activities such as dinners, meetings, or social and cultural activities (Geng, Innes, Wu, & Wang, 2021; Gür, 2021). Institutions had to adapt as a result. For example, cafes or restaurants converted their closed areas to semi-closed or open service spaces. Social and cultural activities such as theatre or cinema took place in the open air. Studies on the use of USG reported crowding and frequent use, indicating an urgent need to increase the number, size, and accessibility of UGS to prevent crowding and the spread of the virus, and to let citizens benefit from the advantages of UGS by making cultural modifications to the use of UGS in terms of user habits and characteristics (Erdönmez & Atmiş, 2021). Since the regulations for and the qualities of UGS did not match users' expectations, needs, and habits, instances of illegal use and non-compliant behaviors occurred (Erdönmez & Atmiş, 2021). Correspondingly, when

the second wave of the pandemic hit in November 2020, no strict regulations about the usage of UGS and parks were implemented (Ministry of Interior, 2020g).

Figure 5. Park with social distancing circles in Istanbul during the normalization period in 2020

Studies showed a decrease in the frequency of visits to public spaces after the outbreak. Furthermore, preference rates and demand for open green areas increased after the outbreak (Paköz, Sözer, & Doğan, 2021). Before the outbreak, people preferred to go to shopping malls at the weekend followed by villages and urban green spaces (Onur, 2020). Similarly, Sarp and colleagues (2021) found that the majority of the participants stated that they visited parks during the pandemic. The use of parks increased during the pandemic for those aged 18-35 and aged 66 and over compared with those in other age groups (Sarp et. al., 2021)

Studies from Turkey exploring how much people missed green areas during the pandemic said many participants indicated that during the quarantine period, they increasingly missed green areas and admired the positive effects of these areas on human psychology (Güngör & Öner, 2020; Onur, 2020). Similarly, in the early

stages of the outbreak (until early July 2020), there was an increased longing for public spaces, particularly open and green spaces. Participants stated that they missed open green areas the most, and the second most missed public spaces were cafes/restaurants. (Paköz, Sözer, & Doğan, 2021).

Studies found that people had different motivations for visiting green spaces. While getting fresh air and getting to know and enjoying nature were the primary purposes for UGS visitors (Erdönmez & Atmiş, 2021), another study reported that the primary motivation was walking (Sarp, Yücedağ, & Kaya, 2021). Also, participants visited the parks to escape their home environment, do sports, or take their children out. The majority of the participants stated that started using parks more and that these places allowed users to spend time in nature/open green areas during the pandemic. In addition, participants indicated that due to emerging needs such as large-scale parks, distanced sitting areas, or walking tracks, there was an urgent need to improve the planning and design of park areas so they would continue being used (Sarp, Yücedağ, & Kaya, 2021).

One of the studies about UGS use during the pandemic was conducted in Bursa, which is a metropolitan city (Gür, 2021). Only 41.7% of participants stated that they made use of facilities such as walking paths, green spaces, open areas, and playgrounds. People who live in detached houses used green spaces and walking trails more than those in apartments and housing estates. Also, when residents have easy access to open and green areas, their use of these areas increased significantly, and it was reported that they prefer open spaces to recreational areas due to fear of contagion and overcrowding. In that study, participants with moderate and moderate-high incomes live in detached houses or on housing estates with easy access to parks and UGS by car or on foot. A similar pattern was also seen in neighborhoods

preferred by high-income people. By contrast, residents who have access to green areas in or around the home environment tended to use those spaces instead of crowded urban parks. The district with low SES neighborhoods had many structural problems relating to the use of green areas. Forty percent of the participants stated that they do not have green spaces or open areas in their home environment or neighborhood and claimed that the lack of these places negatively affects the health of the city and its residents. Parallel to this, it was revealed that people who live in apartments use recreational and green areas less than those living in detached houses and housing estates. The study found that districts differed significantly in their use of UGS before and after the outbreak (Paköz et. al, 2021). While residents of districts with more green areas per capita used public places more frequently, there was a decrease in the use of public spaces in these districts with a high number of shopping centers.

Erdönmez and Atmiş (2021) explored how Turkish people in Kadıköy, one of Istanbul's districts, used green space during the pandemic. They focused on what UGS users thought about the measures in general with a particular focus on closing the seafronts and UGS to use. Only 29.3 % of the participants considered closing UGS to be "an appropriate and necessary decision" while 30.5% saw this measure as "wrong and unnecessary." In particular, older age groups and participants who experienced physical and psychological problems during quarantine said that the measures for UGS were unsuccessful. More middle-aged participants regarded the measures as successful when compared with the younger and older groups. In addition, participants in the highest and lowest income groups considered the measures unsuccessful at much higher rates. The rest of the participants said they should be kept open with certain conditions. The researchers also concluded that the

ones who regard measures as “an appropriate and necessary decision” visited UGS less frequently. A significant portion of those who consider it to be a “wrong and unnecessary decision” visited UGS once a day or more. According to the results, participants who experienced physical and psychological problems during quarantine said that the measures for UGS were unsuccessful. The participants claimed that the underlying reason for the increase in the frequency of their visits was a better understanding of the value of UGS. By contrast, social distancing concerns played a crucial role in the decline.

Many studies conducted in Turkey before the pandemic claimed that the ratio of green space per person in cities was not sufficient and that regulations governing availability and accessibility should be made to meet the needs of citizens (Aksoy, 2001; Doygun & İlter, 2007; Gül & Küçük, 2001; Özcan, 2006). In light of the needs and trends that emerged with the pandemic, both accessibility and availability have become even more important.

This cross-sectional study was conducted to understand families’ leisure participation and green space use in the context of COVID-19 pandemic restrictions. The study offers insight into families’ leisure activities, their perception of how COVID-19 affects their activities, their use of green space, and their constraints for outdoor recreation. The study was conducted while there were still restrictions and curfews in place during the pandemic. The pandemic has affected and changed many things to do with people and the environment. It is thought that what people do outside of their responsibilities such as home and work is also affected by the regulations made in response to the virus and pandemic. Therefore, the study is significant since it will shed light on how this process is experienced in family leisure activities and how families use urban areas during the pandemic. In addition,

the study's findings will contribute to making arrangements that can create or improve leisure and UGS opportunities. The following research questions have been developed to fulfill the aims of the current study:

1. How do families participate in leisure activities and how do parents perceive the impact of COVID-19 pandemic on family leisure activities?
2. How do families access and use UGS during the COVID-19 pandemic restrictions?
3. Is there a relationship between frequency of visit, distance to UGS, and missing UGS?
4. Is there a relationship between the demographic characteristics of the families, their participation in family leisure activities, and their use of UGS?

CHAPTER 3

METHODOLOGY

The methodology section covers the details regarding the participants' characteristics, the research instruments, the design of the study, and the procedures for collecting and analyzing the data. The study used the survey method, a quantitative research approach. The survey method was chosen for this study because it is an effective method for understanding the attitudes, behaviors, and thoughts of larger populations (Creswell & Creswell, 2017). Since there are few studies on family leisure activities and green space use in Turkey, the survey method was preferred to investigate the general trend because it is the most appropriate method for obtaining answers to the research questions. Furthermore, due to the pandemic restrictions, it was not possible to collect data through observations and interviews, so the data were collected online. Due to the widespread use of social media, the invitation to the study was announced to potential participants through different social media channels to reach more people.

3.1 Sample

The study made use of convenience sampling to reach participants. A total of 406 parents, 384 mothers and 22 fathers, with children aged 0-8 years participated in the study. Sample were asked about their demographic information such as education level, partner's education (primary school, secondary school, high school, vocational school/ two-years school, university, master/phd), marital status (married, single, widow), ethnicity, settlement unit (metropolitian, city), living area types (city center,

coastline, ındustrial area, woodland/forest and other) and family income level (low, below middle, middle, upper middle, high). The majority of the participants had an undergraduate (54.2%) or postgraduate (29.1%) education. According to the responses, 47.5% of participants identified their socioeconomic level as middle, 42.6% as above middle, and 9.9% as below middle. More details about the participants are given in Table 1 in the Results section (p. 50).

3.2 Instruments

3.2.1 Participants' demographic information

The participants in the study first answered questions about their demographic characteristics and related topics (Appendix D). The parents' demographic characteristics cover gender, age, educational status, income levels, ethnicity, and marital status. Information about their children is limited to the children's gender and date of birth. The partner's age, gender, educational status, family's socioeconomic level, and number of children make up the additional demographic questions. They were also asked how many other people were staying in the household, whether there was a disabled family member, the parents' annual and monthly leave periods, whether the family has a vehicle, the type of residence, whether it had a balcony, a garden, and the number of rooms under the family's current status.

3.2.2 Family Leisure Activity Profile Scale (FLAP)

The FLAP is a scale that measures what kind of activities families take part in and includes 16 activity domains under two main categories -- core and balance family activities (Zabriskie, 2000) (See Appendix E). There are eight activity types for each

category. To begin with, core family leisure activities are generally regarded as common, low-cost, accessible, and occurring in the home or nearby. Having dinner, playing games, watching TV or films, and playing or working in the yard are examples of activities. Balance family leisure activities are considered less common, less frequent, and away-from-home events that generally offer new experiences for family members. Family vacations, sporting events, trips to different places or outdoor recreation (activities like hiking, camping, hunting, or fishing) may be regarded as representative of this category (Zabriskie & McCormick, 2001). Participants need to indicate their participation with family members across 16 activity domains by marking "yes" or "no." Individuals who answered "yes" also filled in Likert-type scales about the frequency and duration of each activity. The frequency scores ranged from 1 (every day) to 4 (less than a few times a year) and duration scores also range from 1 to 6 (for item 1), 12 (items 2-12), and 18 (items 12-16). The ordinal frequency and duration scores are multiplied to calculate an index score for each activity. Higher scores mean a lower level of involvement and lower scores indicate a higher level of involvement. The core and balance indices are combined to obtain the total family leisure involvement score.

This study used the Turkish version of the scale (Aslan, 2009). In Aslan's study (2009), unlike the original scale, the duration of the activities was not asked. Moreover, the participants were asked about their perceptions of COVID-19 for each question to understand to what extent the COVID-19 pandemic affects the frequency of participation in activities. For the Turkish version of the FLAP, due to methodological limitations, only internal consistency was calculated for each participant group separately (child, mother, and father samples). Internal consistency alphas ranged between $\alpha = .59$ and $\alpha = .89$ and alphas for core were $\alpha = .89$ (mother),

α = .86 (father) and α = .86 (child); alphas for balance were α = .78 (mother), α = .86 (father) and α = .59 (child). The results of the reliability analysis in the study yielded alpha scores of α = .55 for core activities and α = .65 for balance activities. For the perceived effect of COVID-19 on leisure activities, the results were α = .65 for core activities and α =.77 for balance activities. Since the alpha values of two subscales were not within the acceptable range, total reliability was calculated for each. Internal consistency alpha for FLAP scale was α = .71 and α = .74 for the perceived effect of COVID-19 on leisure participation.

3.2.3 Use of UGS During COVID-19 Pandemic Restrictions Scale

The purpose of the Use of UGS During COVID-19 Pandemic Restrictions Scale (See Appendix G) is to examine how much participants miss their green space use, how they access green spaces, and what kind of activities they do in these areas (Ugolini, Massetti, Pearlmutter, & Sanesi, 2021). The scale consists of 32 questions asked about general green area visits and visits during COVID-19 restrictions, the importance of green areas for participants, and their demographic information. This thesis used nine items in the sections for green area visits during the COVID-19 restrictions and the importance of green areas for participants. In these sections, the participants were asked questions about their motivations for visiting green areas, the types of areas visited, their distances, visit frequencies, transportation types, and the importance of green areas for them. In addition, at the very beginning of the scale, some questions were asked about the neighborhood and the structural features of the city (such as the type of settlement and the existence of green space or parks in their neighborhood).

3.2.4 Outdoor Recreation Constraints Scale (ORCS)

This measure (ORCS) is a part of a national survey that aims to understand the outdoor recreation patterns of individuals in American society (National Survey of Recreation and the Environment, 2004) (See Appendix F). The scale presents the participants with 17 items and asks them if each item would cause them not to participate in outdoor activities. The participants indicate whether the given constraint would affect their decision by saying "yes" or "no." The constraints are grouped under three different categories, namely, structural, intrapersonal, and interpersonal constraints as suggested in different studies (Crawford & Godbey, 1987; Crawford & Godbey, 1991). Structural constraints, which include a lack of adequate information about activity areas, inadequate family, or crowded activity areas, are regarded as intervening factors between individuals' leisure preferences and participation (Crawford & Godbey, 1987). Intrapersonal constraints such as language barriers, fears related to natural elements, or physical difficulties are relevant to individuals' psychological states and characteristics, which do not intervene between preferences and participation but interact with the leisure preferences of individuals (Crawford & Godbey, 1987). Lastly, interpersonal constraints are about social relationships, which restrict relations between an individual's characteristics and participation in activities, and a disabled member in a family or the absence of anyone with whom to participate in different activities can be seen as some example of this category (Crawford & Godbey, 1987). The researcher used translation and back translation to adapt the scale to Turkish culture and a group of post-graduate students reviewed the scale for any confusion or unclarity. Reliability analysis resulted in an internal consistency alpha of $\alpha = .49$ for intrapersonal constraints, $\alpha = .79$ for structural constraints, and $\alpha = .81$ for

interpersonal constraints. Since the alpha value of the intrapersonal constraints category was not in the acceptable range, total reliability was calculated and the internal consistency alpha for the scale was found to be α =.88.

3.3 Procedure

Parents with children aged 0-8 were invited to the study through different social media channels. Those who agreed to participate accessed the study via an Internet link that included the participant consent form (Appendix B), proof that the necessary ethics committee permissions had been obtained (Appendix A), and the scales. Data analysis began once the data had been collected. Descriptive statistics of the data and the findings of the statistical analyses are presented in the next section.

3.4 Data analysis

First, the data were screened to detect if there were any missing data. Since 11 participants did not complete the whole survey, data were missing, so they were removed from the study. Descriptive statistics involving skewness and kurtosis were tested to examine normality of assumptions of the distribution for each scale. The results of the analysis showed that the score of the scales was in the acceptable range for skewness (±2) and kurtosis (±7) (Curran, West, & Finch, 1996). Reverse coding for FLAP was made to increase the readability of the data. Factor analysis was conducted to test the internal reliability of FLAP. Since Cronbach's alpha values were less than the acceptable range, internal reliability for the total scale was calculated. Internal consistency alphas were α = .71 for FLAP and α = .74 for perceived effect of COVID-19 on FLAP. The total scores of these two scales were

used for further analysis. The construct validity of the ORCS was tested using Exploratory Factor Analysis (EFA). First, the suitability of the data for factor analysis was examined using the Kaiser Meyer-Olkin (KMO) coefficient and the Bartlett's Sphericity Test to check if the data were good enough for factor analysis. The results of the analysis showed the KMO value is .88, which meant the data were suitable for factor analysis. Principal Component Analysis was used in EFA. First the confirmatory analysis was made based on the suggestions of the scale developers (Crawford & Godbey, 1987). Three factors (structural, intrapersonal and interpersonal) as suggested by the scale developers did not load. Second, exploratory factor analysis was run for 2 factors to see if the interpersonal factor that has only 2 items would load into the other 2 factors. This analyses were made to see whether to these 2 items load into intrapersonal and structural factors. However, the items loaded scaterly into different constructs. Therefore, since the factors did not result in the best fit as expected based on the constructs proposed by the scale developers, only the descriptive for the ORCS were used in the results section, and the score of the scale was not included in the correlation analysis.

To obtain answers to the research questions, descriptive analyses (numbers, percentages, mean and standard deviation) were conducted first to examine the data. Then, the descriptive information for FLAP and ORCS was reported. Since there were some limited number or participants in some categories such as low income or primary school graduation, income and education level data grouped and the grouping were used in the descriptive reports and correlation analysis. Also, even though data about perceived effect of COVID-19 on leisure activities were collected under five groupings as affected very positively, affected positively, negatively affected, very negatively affected and neither affected nor unaffected, the data were

grouped into three categories as positive, neutral and negative in order to increase the clarity of the tables. Then, correlation analysis was used to investigate the relationship between the demographics and the variables, and the findings are reported in the Results chapter.

3.5 Ethics

The ethics committee application form developed by Boğaziçi University Social and Human Sciences Master's and Doctorate Thesis Ethics Review Committee was completed first and the committee granted permission. The application and consent forms explained the potential risks, precautions taken, resources that can be applied in case of a risk, and possible benefits. The data collection process began after the ethics committee gave its approval (see Appendix A). An informed consent form (see Appendix C) was given to each participant at the start of the study. This form told the participants about the protection of their anonymity and confidentiality and noted that they have the right to withdraw from the study whenever they want. They were also informed that their answers were only to be used for research purposes and that their data would be deleted at the end of the study. Finally, the research team avoided using deceptive practices, and the informed consent form detailed the aim and the content of the study.

CHAPTER 4

RESULTS

This chapter includes the findings of the data analyses. First, the descriptive statistics on demographics and measures are shared. Then, each research question is discussed under 5 subheadings: (a) family leisure participation and perceived effect of COVID-19, (b) urban green space, (c) outdoor recreation constraints, and (d) relationship between demographics and FLAP, UGS, and ORCS.

4.1 Demographics

Table 1 presents the participants' demographic information. A total of 406 parents, 384 mothers and 22 fathers, with children aged 0-8 years participated in the study. Most of the participants had an undergraduate (54.2%) or postgraduate education (29.1%). According to income levels, participants are distributed as middle (47.5%), above middle (42.6%), and below middle (9.9%). The participants' ages ranged from 17 to 51 years (M = 33.87, SD = 4.99). Most of the participants (96.8%) were married. More than half (66%) of the participants were Turkish and 24.9% did not specify their ethnicity. A high proportion of participants 76.6% lived in metropolitan cities (more than 750,000 inhabitants) and 65.8% resided in city centers.

Table 1. Number and Percentage Distribution for the Demographic Information of the Participants

Variable	Category	n	%
Education	High school	36	8.9
	Vocational school	32	7.9
	University	220	54.2
	Master / doctorate	118	29.1
Partner's education	High school	67	16.5
	Vocational school	28	6.9
	University	219	53.9
	Master / doctorate	92	22.7
Marital Status	Married	393	96.8
	Single	13	3.2
Ethnicity	Turkish	268	66.0
	Other	37	9.1
	Not answered	101	24.9
Settlement unit	Metropolitian	311	76.6
	City	95	23.4
Living area types	City center	267	65.8
	Coastline	37	9.1
	Industrial area	29	7.1
	Woodland/forest	22	5.4
	Other	51	12.6
Family income level	Below middle	40	9.9
	Middle	193	47.5
	Above middle	173	42,6

To further understand the families' circumstances, the participants were also asked to provide information on the physical features of their home and COVID-19 related issues (Table 2). Out of 406 participants, 365 of them (89.9%) reported that they reside in an apartment and 41 of them (10.1%) stated that they live in a detached house; 358 (88.2%) participants said they have a balcony, and more than half the participants reported having access to a garden (238 or 58.6%); 320 participants (78.8%) reported that they have a car; 76 participants (18.7%) said they have a pet and 38 (9.4%) take their pet outdoors regularly. As for the COVID-19-related

questions, 108 (26.6%) of them stated that they have a member who is in a risk group for COVID-19, and 78 (%19.2) said they had recovered from COVID-19.

Table 2. Number and Percentage Distribution for the Related Information of the Families

Variables	Category	n	%
Residence type	Apartment	365	89.9
	Detached house	41	10.1
Balcony presence	Yes	358	88.2
	No	48	11.8
Garden presence	Yes	238	58.6
	No	168	41.4
Garden sharing	Personal garden	44	10.8
	Shared garden	205	50.5
	Do not have a garden	157	38.7
Owning a vehicle	Yes	320	78.8
	No	86	21.2
Owning a pet	Yes	76	18.7
	No	330	81.3
Taking the pet outdoors	Yes	38	9.4
	No	368	90.6
COVID-19 positive history	Yes	78	19.2
	No	328	80.8
Family COVID positive history	Yes	92	22.7
	No	314	77.3
The presence of COVID-19 at risk individuals at home	Yes	108	26.6
	No	298	73.4

4.2 Descriptive Analyses for Measures

The participants' scores for the three different scales are summarized and described in Table 3, showing the means, standard deviations, minimum, and maximum scores of FLAP, perceived effect of COVID-19 on leisure participation, and ORCS. The table also shows the alpha, skewness, and kurtosis values for normality analysis. Since the scores were in the acceptable range (±2 for skewness and ±7 for kurtosis (Curran, West, & Finch, 1996), data analysis of the sample is normally distributed. According to the descriptive analyses of FLAP, the total scores ranged from 2 to 55 with a mean of 29.07 and SD=8.62. Participation scores ranged from 1 (less than a few times a year) to 4 (every day). Here, higher scores indicate a higher level of participation and lower scores mean a lower level of participation. The total participation scores for the scale were calculated by totaling the ordinal participation items. The scores for perceived effect of COVID-19 on leisure participation ranged from 1 (affected very negatively) to 5 (affected very positively) and were calculated by totaling the items. In summary, the types of activities with high scores indicate positively affected by the COVID-19 pandemic, while those with low scores mean negatively affected by the COVID-19 pandemic. On the Outdoor Recreation Constraints Scale, the total scores ranged from 24 to 85 with a mean of 60.18. This scale is used to measure the perceived effect of constraints: (5) major effect, (4) moderate effect, (3) neutral, (2) minor effect, and (1) no effect. The scores were calculated by totaling the responses. Here, low scores in total mean affected by fewer constraints, while high scores mean affected by more constraints.

Table 3. Descriptive Statistics of Measures

Measures	Min	Max	M	SD	α	Skewness	Kurtosis
FLAP	3	44	25.21	6.94	.71	.065	.234
Perceived effect of COVID-19 on FLAP	32	74	55.75	6.91	.74	.453	.613
ORCS	24	85	60.18	12.14		.-458	.141

4.3 Family Leisure Participation and Perceived Effect of COVID-19

FLAP was subjected to descriptive analysis to investigate what kind of activities families do in their leisure time and what their perceptions are about the effect of COVID-19 on these activities as stated by RQ 1. Table 4 shows the results for each activity type. Although the participants' answers to the perceived effect of COVID-19 were scored on a scale of 1-5 (affected very positively, affected positively, neither affected nor unaffected, negatively affected, very negatively affected), the percentages were grouped into three groups, namely, positive, neutral, and negative in Table 4 to increase the readability of the table. Furthermore, the participants indicated their leisure participation on a scale of 1-5 (daily, several times in a week, several times in a month, several times in a year, and none). The choices were abbreviated for the table.

Analysis showed that most of the families (91.1%) ate dinner together, and 57.1% of the participants stated that the COVID-19 pandemic did not change the regular family dinners. More than half the participants (54.9%) took part in home-based activities (watching TV, reading, listening to music) and 60.4% said the pandemic affected their participation positively. For games (playing cards, video games, board games), while 29.6% did not play games, 38.9% of families played games several times a week. Most of the participants (56.2%) indicated that COVID-

19 positively affected the frequency of playing games. For crafts and/or hobbies (scrapbooks, painting, sewing, drawing), 42.4% reported that practiced them several times a week but for the majority of participants, the pandemic negatively affected the frequency of such activities (43.8%). Home-based outdoor activities (gardening, pets, walks, stargazing) were activities in which most of the participants (42.4%) did not participate. Some 38.2% of parents reported that COVID-19 negatively affected those activities. Moreover, while 33.5% participated in home-based sports/games (playing catch, shooting baskets, bike rides) several times in a month, 36% did not participate at all. Most of the participants (44.1%) said COVID-19 negatively affected their participation frequency. For family members' events (sports, shows, or school events), more than half the participants (54.4%) did not attend these activities. The pandemic negatively affected participation for 49.8%. For religious activities (going to church or mosque, reading holy books, or celebrating religious holidays), 35.5% did not participate and 32.8% did participate several times a year. In the context of COVID-19, while 45.3% said they were not affected, 43.4% were negatively affected.

As for community-based social activities (restaurants, parties, visiting friends); nearly half the families (48.3%) participated several times a month. Most of the families (85.7%) were negatively affected by COVID-19 in this regard. Similarly, 38.9% participated in spectator activities (going to movies, concerts, plays, sporting events) several times a month. The pandemic had a negative effect on the majority of families (85.7%). Community-based sporting events (golf, bowling, swimming, skating) is another leisure category in which nearly half (49%) did not participate, and 56% were negatively affected by the pandemic. Most of the families (48.5%) participated in community-based special events/trips (visiting theme parks,

fairs, zoos, museums) several times a year. According to 84.3%, the pandemic negatively affected participation frequency. For outdoor activities (camping, hiking, fishing, hunting) 38.7% of participants did this several times a month. The majority (71.2%) were negatively affected by the pandemic. Water-based activities (boating, water skiing, sailing, canoeing) form another activity category in which most of the families (87.9%) did not participate at all. Participation in these activities was not affected by COVID-19 for 81.3% of families. Similarly, 88.4% did not participate in outdoor adventure activities (river rafting, rock climbing, off-road vehicles, scuba diving); 80% of the participants were neither affected nor unaffected by COVID-19. Lastly, 78.3% participated in tourism activities (family vacations, traveling, visiting state and national parks) several times a year. The pandemic negatively affected participation for 83.7% of families.

Table 4. Family Leisure Activity Participation and Perceived Effect of COVID-19 on Leisure Activities

Activity type						
Family dinners	Participation	Daily %	Weekly %	Monthly %	Yearly %	None %
		91.1	8.1	.2	0	.5
	Perceived effect	Positive %		Neutral %	Negative %	
		38.4		57.1	4.4	
Home-based activities	Participation	Daily %	Weekly %	Monthly %	Yearly %	None %
		54.9	37.4	4.7	0	3.0
	Perceived effect	Positive %		Neutral %	Negative %	
		60.4		30	9.6	
Games	Participation	Daily %	Weekly %	Monthly %	Yearly %	None %
		6.9	38.9	20.0	4.7	29.6
	Perceived effect	Positive %		Neutral %	Negative %	
		56.2		37.9	5.9	
Crafts and/or hobbies	Participation	Daily %	Weekly %	Monthly %	Yearly %	None %
		15.0	42.4	18.2	2.7	21.7
	Perceived effect	Positive %		Neutral %	Negative %	
		27.1		29.1	43.8	
Home-based outdoor activities	Participation	Daily %	Weekly %	Monthly %	Yearly %	None %
		8.1	30.0	15.5	3.9	42.4

	Perceived effect	Positive %		Neutral %	Negative %	
		34		27.8	38.2	
Home-based sport/games	Participation	Daily %	Weekly %	Monthly %	Yearly %	None %
		9.6	18.5	33.5	2.5	36.0
	Perceived effect	Positive %		Neutral %	Negative %	
		25.6		30.3	44.1	
Family member's events	Participation	Daily %	Weekly %	Monthly %	Yearly %	None %
		.7	5.7	10.3	28.8	54.4
	Perceived effect	Positive %		Neutral %	Negative %	
		8.3		42.1	49.8	
Religious events	Participation	Daily %	Weekly %	Monthly %	Yearly %	None %
		4.9	10.1	16.7	32.8	35.5
	Perceived effect	Positive %		Neutral %	Negative %	
		11.3		45.3	43.4	
Community-based social activities	Participation	Daily %	Weekly %	Monthly %	Yearly %	None %
		2.2	32.0	48.3	9.4	8.1
	Perceived effect	Positive %		Neutral %	Negative %	
		6.3		8.1	85.7	
Spectator activities	Participation	Daily %	Weekly %	Monthly %	Yearly %	None %
		.2	5.4	38.9	35.7	19.7
	Perceived effect	Positive %		Neutral %	Negative %	
		3.2		14.0	85.7	
Community-based sporting events	Participation	Daily %	Weekly %	Monthly %	Yearly %	None %
		1.0	8.9	16.0	25.1	49.0
	Perceived effect	Positive %		Neutral %	Negative %	
		2.2		41.6	56.1	
Community-based special events/trips	Participation	Daily %	Weekly %	Monthly %	Yearly %	None %
		.2	2.7	34.2	48.5	14.3
	Perceived effect	Positive %		Neutral %	Negative %	
		1.2		14.5	84.3	
Outdoor activities	Participation	Daily %	Weekly %	Monthly %	Yearly %	None %
		2.5	16.0	38.7	27.8	15.0
	Perceived effect	Positive %		Neutral %	Negative %	
		9.2		19.7	71.2	
Water-based activities	Participation	Daily %	Weekly %	Monthly %	Yearly %	None %
		.5	.5	1.7	9.4	87.9
	Perceived effect	Positive %		Neutral %	Negative %	
		.4		81.3	18.2	
Outdoor adventure activities	Participation	Daily %	Weekly %	Monthly %	Yearly %	None %
		.2	.5	1.0	9.9	88.4
	Perceived effect	Positive %		Neutral %	Negative %	
		.7		80.8	18.5	
Tourism activities	Participation	Daily %	Weekly %	Monthly %	Yearly %	None %

	0	.7	12.1	78.3	8.9
Perceived effect	Positive %		Neutral %	Negative %	
	1.2		15	83.7	

4.4 Urban Green Space

One of the aims of the study was to investigate how families access and use UGS during the COVID-19 pandemic restrictions. To this end, the participants answered questions related to their green space use during COVID-19 restrictions, and the data were analyzed to investigate visit and access patterns and to ascertain the determinants of their visits. Table 5 shows the frequencies and percentages of their responses. Out of 406 participants, 300 of them (73.9%) reported that they lived in a natural space in their childhoods; 319 (78.6%) participants said they have green spaces in their neighborhood. Most of the participants (91.4%) have a park in the neighborhood; 241 participants (59.4%) stated that they have enough access to green spaces. In total, 388 (95.6%) participants visited green spaces during the restrictions.

Most participants (74.4%) said the main purpose for visiting green spaces was to take the children out. This was followed by the goals of getting fresh air (61.3%) and relaxation (34.7%); 51 (12.6%) visited the green space once only; 117 (28.8%) participants visited once a week, 88 (21.7%) participants visited less than once a week, and 150 (36.9%) participants visited more than once a week. As for distance to green space, 11 (27.3%) participants said they live within 200 meters of green space, 78 (19.2%) participants between 200 and 500 meters away, 47 (11.6%) participants more than 500 meters away, 160 (39.4%) participants more than a kilometer away, while 10 (2.5%) participants said they did not go to any green space.

Most of the participants (53.7%) said they walk to reach green spaces. As for green space visits by participants, most of the participants 171 (42.1%) said they

visited parks. A significant proportion of participants (74.4%) said they missed green spaces very much. Among the green space activities, taking children outside (28.1%), spending time outside (27.8%), and taking in the fresh air (16.0%) are among the activities missed or longed for the most. According to the distribution related to green space seen from the house, 74 (18.2%) participants indicated they lived on streets with trees, and 86 participants (21.2%) indicated they do not see any green spaces from their house.

Table 5. Number and Percentage Distribution of the Participants for Green Space Use

Variables	Category	n	%
Presence of green space in the current neighborhood	Yes	319	78.6
	No	87	21.4
Park presence in the current neighborhood	Yes	371	91.4
	No	35	8.6
Sufficient access to green spaces	Yes	241	59.4
	No	165	40.6
Green space visit	Yes	388	95.6
	No	18	4.4
Missing green spaces	A lot	302	74.4
	Some	32	7.9
	Moderate	49	12.1
	None	23	5.7
Reasons for green space visitation	Walking with pets	6	1.5
	Easy accessibility	10	2.5
	Habit and personal attention	12	3.0
	Doing physical exercise	17	4.2
	Observing nature	29	7.1
	Being healthy	33	8.1
	No other place to go	37	9.1
	Seeing friends	59	14.5
	Fewer people in green spaces	84	20.7
	Getting closer to nature	107	26.4
	Being with the family	111	27.3
	Relaxing	141	34.7
	Getting fresh air	249	61.3
	Taking the kids out	302	74.4

Frequency of green space visitation	One time	51	12.6
	Once a week	88	21.7
	Less than once a week	117	28.8
	More than once a week	150	36.9
Green space distances	More than 1000 meters	160	39.4
	More than 500 meters	47	11.6
	Between 200 and 500 meters	78	19.2
	Less than 200 meters	111	27.3
	I did not go to the green space.	10	2.5
Transportation to the green spaces	Car	173	42.6
	Walking	218	53.7
	Others	15	3.7
Description of visited green spaces	Park	171	42.1
	Woodland	103	25.4
	Garden	46	11.3
	River bank	13	3.2
	A wooded alley	11	2.7
	Other	34	8.4
Missed activity in green spaces	Taking the kids out	114	28.1
	Spending time outside	113	27.8
	Getting fresh air	65	16.0
	Exercising outside	44	10.8
	Other	28	6.9
	Observing nature	25	6.2
	Meeting other people	15	3.7
Green space seen from the house	A private garden	110	27.1
	A wooded street	74	18.2
	A natural space	59	14.5
	A public park	42	10.3
	A public garden	21	5.2
	Other	14	3.4
	No, I cannot see any green space.	86	21.2

4.5 Outdoor Recreation Constraints

The second part of the investigation on families' access to and use of UGS during the COVID-19 pandemic restrictions was related to outdoor recreation constraints. Table 6 shows how much the participants are affected for each constraint. Descriptive analysis of the distribution showed four constraints had a "major effect" -- crowded activity areas (%51.5), inadequate facilities (%43.3), pollution problems (%55.2), and personal safety problems (%55.9). Eight types of barriers were indicated mostly

for “moderate effect” -- not enough time (%46.3), poorly maintained activity areas (%46.1), inadequate information about areas (35%), inadequate transportation (%36.5), feeling unwelcome or uncomfortable (%38.7), physically limiting conditions (%32.8), personal health reasons (%40.6), and disability in a household member (%27.1). Moreover, for outdoor pets, the same percentage of participants (%36.7) indicated major and moderate effect. Three constraints were indicated as having a “minor effect” by the majority of participants -- not enough money (%33.7), language barriers (%23.4), and no companion (%26.1). Finally, 27.1% indicated feeling afraid in the areas as having “no effect.”.

Table 6. Number and Percentage Percentage Distribution of Outdoor Recreation Constraints Scale

Constraints	Major		Moderate		Neutral		Minor		No Affect	
	N	%	N	%	N	%	N	%	N	%
Not enough time	136	33.5	188	46.3	20	4.9	47	11.6	15	3.7
Not enough money	60	14.8	100	24.6	39	9.6	137	33.7	70	17.2
Poorly maintained activity areas	152	37.4	187	46.1	30	7.4	26	6.4	11	2.7
Inadequate information	52	12.8	142	35.0	75	18.5	97	23.9	40	9.9
Inadequate transportation	93	22.9	148	36.5	25	6.2	90	22.2	50	12.3
Crowded activity areas	209	51.5	150	36.9	19	4.7	21	5.2	7	1.7
Inadequate facilities	176	43.3	150	36.9	22	5.4	37	9.1	21	5.2
Pollution problems	224	55.2	150	36.9	12	3.0	11	2.7	9	2.2
Personal safety problems	227	55.9	126	31.0	23	5.7	16	3.9	14	3.4
Outdoor pests	149	36.7	149	36.7	48	11.8	38	9.4	22	5.4
Feel unwelcome	122	30.0	157	38.7	58	14.3	38	9.4	31	7.6
Language barriers	55	13.5	87	21.4	77	19.0	95	23.4	92	22.7
Feel afraid in the areas	46	11.3	78	19.2	70	17.2	102	25.1	110	27.1
Physically limiting condition	100	24.6	133	32.8	54	13.3	45	11.1	74	18.2
Personal health reasons	94	23.2	165	40.6	42	10.3	48	11.8	57	14.0
No companion	41	10.1	98	24.1	65	16.0	106	26.1	96	23.6
Disability in household member	84	20.7	110	27.1	65	16.0	56	13.8	91	22.4

4.6 Relationships between Demographics and FLAP, UGS and ORCS

Spearmen's rho correlational analysis was conducted to investigate the relationship between the demographics of families and leisure participation, perceived effect of COVID-19 on leisure participation, frequency of visiting UGS, missing UGS, and outdoor recreation constraints as stated in research questions 3 and 4. A significant positive relationship was found between frequency of UGS visits and education level, ($r = .22$; $p<.01$), other parent's education level ($r=.20$; $p<.01$), and income level ($r = .27$; $p<.01$). Furthermore, a weak negative correlation was found between missing UGS and education level ($r = -.10$; $p<.05$) and partner's education level ($r=.14$; $p<.01$). However, no significant relationship was found between missing UGS and family income level ($r = .02$; $p>.05$). When it comes to leisure participation scores, a weak positive correlation relationship was found between leisure participation and education level ($r = .10$; $p<.05$) and parent's education level ($r = .10$; $p<.05$) but no significant relationship was found between leisure participation and family income level ($r = .08$; $p>.05$). Moreover, no significant correlation was found between education level ($r = .03$; $p>.05$), parent's education level ($r = .0$; $p>.05$) and income level ($r = .0$; $p>.04$) and perceived effects of COVID-19 on leisure participation.

Spearman's rho correlational analysis was conducted to assess the relationship between the scores for UGS distance, visit frequency, and missing UGS. The scores for these three variables were obtained from the "Use of UGS during COVID-19 Pandemic Restrictions Scale" ordinal items. This correlational analysis found a moderate negative correlation between distance to UGS and frequency of UGS visits ($r = .-482$; $p<.01$). Moreover, a significant relationship between distance to UGS and missing UGS, although it is a relatively weak positive relationship

(r=.231; p<.01); a moderate negative correlation was found between missing UGS and frequency of UGS visits (r=.-256; p<.01) (Table 7).

Table 7. Spearmen's rho Correlations for Demographics and Leisure Participation, Perceived Effect of COVID-19 on Leisure Participation, Visit Frequency of UGS, Missing UGS

Variable	1	2	3	4	5	6	7	8
1. Education level	1							
2. Partner's education level	.522**	1						
3. Family income level	.286**	.212**	1					
4. Frequency of UGS visits	.228**	.201**	.278**	1				
5. Missing UGS	-.102*	-.148**	-.022	-.256**	1			
6. Distance to UGS	.031	.025	-.185**	-.482**	.231**	1		
7. Leisure participation scores	.096	.087	.157**	.255**	.019	.141**	1	
8. Perceived effect of COVID-19	-.030	-.008	-.047	.196**	.173**	.-102*	.322**	1

Note: **. Correlation is significant at the 0.01 level (2-tailed).

CHAPTER 5

DISCUSSION

In the discussion chapter, firstly the research findings were discussed by considering the previous research. Here, the discussions were handled separately as family leisure activities, green space usage, and constraints for usage of green space. Implications for both research and practice were presented based on the current research findings. Finally, the limitations of the study were discussed.

5.1 Discussion

5.1.1 Family leisure

Within the scope of FLAP, families expressed how often they participated in different activity categories and whether or not this was affected by the COVID-19 pandemic, and if so, to what extent. When the results are examined, it can be said that some activity types differ considerably in terms of participation frequency compared with other categories. For example, most of the participants (91.1%) attend family meals daily. In addition, more than half of the participants (54.9%) take part in home-based activities. The study carried out by Aslan (2009) reported that Turkish families participate more in core activities, including family meals and home-based activities, and it is argued that this is because Turkish families consider them to be a part of daily life and that these activities are familiar in their culture. Another study (Zabriskie, Aslan, & Williamson, 2018) found that Turkish families participate more in balance activities including water sports and outdoor adventure activities and that urban-middle class families, in particular, can adapt to the expected social changes

and change their leisure perceptions. Most of the participants reported not doing water sports (87.95%) or outdoor adventure activities (88.4%). The pandemic may also contribute to the higher level of participation in home-based activities and the low level in outdoor activities. Other studies found that people spend their free time at home because they fear infection (Lopez et. al, 2021; Paköz et. al, 2020).

In this study, how the pandemic affected participation in these activities for each activity is also asked. The participants reported that activities done with others, especially outside, were adversely affected. The prohibitions, regulations, and obligations that accompanied the pandemic, forced most people all over the world to spend both their working and leisure time at home and with their families. Studies have reported that the COVID-19 pandemic changed people's leisure activities (Chin, Sung, Son, Yoo, Lee, & Chang, 2020; Lashua, Johnson, & Parry, 2020; Lehman, 2021). The fear of COVID-19 was seen as an obstacle to participating in leisure activities (Chin et. al, 2020; Lee, Chin, & Sung, 2020). Although participants in the study by Paköz and collegaues (2020) stated that they particularly longed for green and open spaces, there was a sharp decrease in their use of public spaces due to the fear of infection. The study found that meeting with friends, going shopping, and participating in outdoor activities decreased; instead, people did more activities such as watching TV, using social media, and playing online games (Chin et. al, 2020). Although their desire to socialize was high, their concerns resulted in decreased social activity (Mart & Kesicioglu, 2020). In the study by Başaran and Aksoy (2020), parents stated that they found more opportunities to spend time with their family during the pandemic and that while families did household chores such as cleaning, cooking, and tidying the house together, they also joined in novel and enjoyable activities such as reading books, playing games, watching movies, or educational

cartoon or drawing. These appear to be changes from the norm forced by the measures to combat COVID-19. Bans on visiting one's neighbors were imposed in Turkey at different times during the pandemic. Curfews were imposed during religious holidays to prevent people from visiting one another (Ministry of Interior, 2020g). At other times, permission was granted to spend time outside with only one family member or a small group of people. These can be considered to be cultural measures and they can shape families' leisure activities.

Correlation analysis found a weak positive correlation between income level and the total participation score. Other studies have approached the issues of leisure and income from different perspectives. Surdu (2018) argued that individual and family leisure activities are affected by social and economic factors such as financial situation, lifestyle, and available resources. He stated that people with low socioeconomic status and little free time may have problems participating in leisure activities, and they prefer to work to overcome financial difficulties rather than participate in such activities (Surdu, 2018). One study suggested that leisure is largely the same throughout society (Perdue, Immermans, & Uysal, 2004). People with low-income levels may have the same leisure interests as people with high-income levels but their respective levels of income will how often people participate in them. People with high incomes have a wider repertoire of leisure activities, meaning income level can be considered to be a constraining variable (Perdue et. al, 2004). Furthermore, studies have reported a positive correlation between a family's income level and the household's leisure behavior (Holman & Epperson, 1984). Bryant (1990) argued that leisure activity frequency increases as income increases. According to another study, differences in income levels can shape both barriers to leisure participation and different activity opportunities (Harrington, 2014). That

study reported that low-income families participate in cheap or free activities that usually take place in the home or nearby and that all family members will enjoy. They also said that the reason for participating in leisure activities is to have everyone in the family involved and enjoying themselves. Middle-income families stated that they define active activities, including activities such as sports, surfing, and walking as their general leisure activities. This is known as purposive leisure and is done for the good of their children's present and future lives (Harrington, 2014). However, another result indicated that demand for leisure decreased when income level increased. No significant relationship was found between participation in leisure activities and parents' education levels. This result is consistent with the results of a study that focused on the relationship between leisure participation and family functioning in the United States and reported finding no significant correlations (Fotu, 2007). Although Surdu (2018) could not find any correlation between the frequency of participation and education level, he says that the types of activities participated in may vary according to education level. While families with highly educated parents join in cultural and personal care activities such as walking, doing sports, or traveling, families with lower education levels prefer to relax or meet with friends (Surdu, 2018).

Studies have found a positive relationship between family leisure activities and family functioning (Zabriskie & Freeman, 2004; Zabriskie & McCormick, 2001), and between leisure satisfaction and family satisfaction (Agate, Zabriskie, Agate, & Poff, 2009). It is known that the family can be a protective mechanism for individuals in stressful times (Balenzano et. al, 2020). For this reason, families who spent more leisure time together during the COVID-19 pandemic may have contributed to their general well-being since their family satisfaction might have

been high. On the other hand, there is debate as to whether family leisure is experienced similarly and has similar meanings and contributions for all participants (Shaw, 1997). For example, it has been suggested that women feel obliged to participate in family leisure activities, particularly in patriarchal societies, and they consider this to be a chore rather than leisure time (Shaw, 1992). Due to the mother's expected role of caretaker, while men often think that they have a greater sense of entitlement to leisure, it has been found that women plan their leisure time not only for themselves but also for the whole family's benefit (Miller & Brown, 2005). Thus, it is claimed that women's personal leisure time is limited in time and quality (Brown, Brown, Miller, & Hansen, 2001). From this perspective, it may be beneficial to examine the personal well-being and satisfaction of family members as well as general family well-being when considering family leisure.

5.1.2 Use of UGS and Outdoor Constraints

The descriptive analysis results revealed four constraints with "major effect" in the distribution and these are crowded activity areas (51.5%), inadequate facilities (43.3%), pollution problems (55.2%), and personal safety problems (55.9%). When considering these constraints, crowded activity areas may also have a bearing on how this study was conducted during the COVID-19 pandemic. Other studies have reported that people could not visit very often due to their concerns about social distance and the transmission of the virus in cases where the areas they were visiting were small (Day, 2020). One study cited people not wearing masks and inadequate and uncertain policies on the use of areas as leading to fewer visits by residents (Lopez et. al, 2021).

On the subject of inadequate facilities, one of the things that determine people's UGS access is attractiveness, with people asking: "Does this green space correspond with my needs, expectations, and preferences" and "Do I want to spend time there?" (Biernacka & Kronenberg, 2018, p.23). Here, it can be said that the criteria for attractiveness cannot be met since there are not enough facilities for most of the participants. Nasar and Holloman (2013) investigated what parents and children think about the characteristics of playgrounds. They asked parents to sort 15 playground photographs concerning their children's play. According to the results, seats, fences, and playground type played an important role in both parents' and children's preferences. Parents mostly preferred play areas with soft ground and plenty of equipment, seats, areas in the shade, as well as natural and open areas. Similarly, Sallis and colleagues (1997) argued that safety and facilities such as water for drinking and washing, areas in the shade, and sufficient lighting determine parents' preferences for their children's leisure time. In a study conducted in three cities in Turkey's Marmara Region, participants were asked what they expected of green spaces and what their positive and negative thoughts about such spaces were (Korkut, 2015). The participants said that the first things they look for in green spaces are naturalness, clean air, water, and resting/sitting areas. Asked about the issues they complain about in the areas, the participants cited pollution, maintenance, lack of toilets, seating, and equipment. They also considered overcrowding, limited parking space, having no guide, and the lack of facilities (toilet, water) to be major problems. In addition, the participants stated that the types of activities that can be done are limited due to the lack of equipment in these areas (Kara & Demirci, 2010).

Similarly, pollution problems are related to attractiveness. According to Biernacka and Kronenberg (2018), an area is attractive when people willingly want

to use it and spend time there. In a study conducted in Istanbul found that dirtiness and visual pollution in existing activity areas are key problems (Kara & Demirci, 2010). Random littering and the lack of litter collection prevent users from choosing such green spaces for recreation (Mahmoudi Farahani & Maller, 2019). In addition, it is claimed that leaving garbage in informal green spaces not only prevents possible use of these spaces but also poses a health threat (Bonthoux et al., 2014).

Personal safety problems, on the other hand, are related to accessibility in that people want to feel safe and welcomed when accessing and using green spaces. Ghimire and colleagues (2014) stated that personal safety problems are an important constraint type and may differ depending on gender, income, age group, and ethnicity. Güney and Üstündağ (2020) explained the reasons for security problems in urban green spaces as follows: instances of urban vandalism in and around the park, the lack of policing in and around the park, and lighting, which is an important factor in creating a safe and quality environment, the absence of safe pedestrian footpaths and streets around urban open green spaces, and the inability to make urban open green spaces easily accessible by public transport. One study reported disrepair, crowd, foreigners, the presence of unwanted people, traffic, climate events, stray animals, danger, and the threat of crime as security-related problems in open-green spaces (Çelik, 2018). Physical and social safety issues were seen as significant indicators of parents' place choices for their children and family (Sallis et. al, 1997). A study conducted in Istanbul reported that while people from both gender groups did not find the park safe, this rate was higher for women. Another study conducted in Çanakkale revealed that a significant portion of the participants found green spaces unsafe regardless of individual variables such as gender, education level, and age (Ilgar, 2022).

Some studies claim that access, opportunities, and willingness to participate in outdoor recreation differ for each group in any society, reporting that certain marginalized groups such as people with low levels of education, people with low-income levels, women, rural residents, the elderly, and ethnic minorities were less likely to engage in outdoor recreation and that these groups thought they had more barriers and more constraints than others (Bialeschki, 1999; Green, Bowker, Wang, Cordell & Johnson, 2012; Sasidharan, 2001). Our study found no significant relationship between the education level of parents and their constraints. However, it did find a weak negative correlation between income level and the constraints score.

In the Use of UGS During the COVID-19 Pandemic Restrictions Scale, participants were asked questions to understand general usage patterns such as how often they went to green spaces during the pandemic, how they went there, and what their reasons were for going there. Fifty-one percent of the participants said they live within 500 meters of green spaces, and 39.4% said they live more than 1 kilometer away. Regarding the distance of UGS, there are two different but similar approaches for defining the ideal distance for UGS. While Stahle (2010) and Sotoudehnia and Comber (2010) stated the maximum distance for UGS is 300 meters and 5 minutes, other studies claimed that the ideal distance is 400 meters for children's playgrounds and an average of 20 minutes walking time and 800 meters for neighborhood parks (Çetiner, 1991; Van Herzele & Wiedemann, 2003; Yenice, 2012). Considering these results, it can be said that a significant proportion of the participants have limited access to green spaces. In addition, when the participants were asked how they traveled to green spaces, most of them (53.7%) said they walk and 42.6% go by car. Studies on the access and use of green spaces stated that being within walking distance increases their frequency of use.

Apart from the distance, when asked whether their access to green spaces is sufficient or not, 59.4% of the participants said they had inadequate access. Many studies show that proximity contributes significantly and positively to people's use of green spaces (Giles-Corti et al., 2005; Gür, 2021). It can be concluded that if the participants have more available UGS, they may visit and use these spaces more often. Only 36.9% of the group visited UGS more than once a week. When the participants were asked how they reached the green spaces, the top-scoring answers were by private car (42.6%) and by walking (53.7%). Those participants that drive to green spaces may have preferred to go by car since the green spaces are not within walking distance.

The study found that the participants' motivations for visiting UGS were to take their children out, to get fresh air, to be with family members, to be close to nature, and meet with their friends, in that order. Other studies have shown that people use UGS for walking, running, or outdoor sports, but such activities may depend on many variables such as safety, pedestrian footpaths, and build density (Sreetheran & Van Den Bosch, 2014). In addition, taking the children out and walking the dog are common motivations for using UGS (Christian et al., 2016). Taking children out is valid in this study, too. Other studies conducted during the pandemic have indicated that during the COVID-19 pandemic, people made a point of going to green spaces to benefit from their stress-reducing characteristics (Sarp et. Al, 2020; Xie, 2021; Yamazaki et al., 2021). One study observed a decrease in people going out for activities that could be seen as nonessential, such as watching nature or meeting with other people (Ugolini et al., 2020). A similar result was found in a study conducted in Turkey that reported taking children and grandchildren for walks as the type of activity with the highest increase while walking the dog had the

second-highest increase (Erdönmez & Atmiş, 2021). Researchers have suggested that the rates of taking children or grandchildren out may be due to cultural and regional differences (Erdönmez & Atmiş, 2021). A similar interpretation can be made in this study. The motivation to meet with family and friends may be culturally driven. It can be also thought that taking children and grandchildren out is due to cultural characteristics as well as the children's need to play and spend active time in line with their age groups' needs. In addition, short-distance outdoor activities were found to be more common (Kleinschroth & Kowarik, 2020).

This study asked the participants whether they missed UGS or not. Seventy-four percent of participants said that they missed green spaces a lot. Other studies conducted in Turkey found that people missed spending time in green spaces and admired their value (Güngör et al., 2020; Sarp, 2020). These results are also in line with Google COVID-19 Community Mobility Reports (Ritchie et al. 2020b), which indicated that park visits decreased considerably at the beginning of the pandemic, then increased to old rates over time with the number of visitors increasing gradually. Green spaces provide an important basis for recreation, people's health, and community cohesion (Chen et al. 2018; Chiesura 2004; Wolf et al. 2020), and it can be predicted that these areas will often be preferred where many other places cannot be used due to fear of infection and pandemic-related regulations.

The results of the current study show a significant positive relationship between the frequency of UGS visits and parents' education levels and family income levels. Searle and Jackson (1985) reported that the level of income influences participants' desire to attend novel outdoor recreation activities, noting that poor individuals were more influenced by constraints. To illustrate, the working conditions of poor individuals were more likely to affect their participation. Another

study stated that perception of constraints was significantly high for less-educated participants (Alexandris & Carroll, 1997).

To conclude, it was found that families participate in home-based activities more frequently, and the COVID-19 pandemic has particularly affected outdoor-based activities. However, some activities such as water sports were not found to be affected in any way by the pandemic. Here, it can be stated that participation in these activities was also rare before the pandemic. When considering outdoor constraints, the participants said that crowded activity areas, inadequate facilities, pollution problems, and personal safety problems prevent their use. Here, among these problems, especially the crowding and pollution problems may be related to the pandemic. Many of the participants also stated that they did not find their access to green areas sufficient and said that they mostly reached these areas by car. Access by car may actually indicate that these areas are far from their homes. In addition, the participants stated that they missed using green spaces during the closures during the COVID-19 process. When benefits of green spaces are considered, it can be indicated that many participants are deprived of these benefits in difficult processes.

5.2 Implications

The results of this research can serve as an assessment tool and a resource, particularly for urban and environmental planners and policymakers, as they provide information as to what families do outside of their work and other responsibilities, where they spend time, and how and why they use or cannot use the green spaces where they live. In line with the Social-Ecological Theory, the results of the study show that the use of urban green spaces is related to individual and structural

characteristics and circumstances in macro systems, e.g., the pandemic, rules, and regulations. Thus, the implications should be considered for different systems and levels.

More than half of the participants in the study stated that they and their families do not have enough access to green spaces. Furthermore, a significant number of participants stated that they could not see any green space from their windows, balcony, or terrace roofs. Based on these findings, it can be concluded that people are far away from nature, which would contribute positively to their mental and physical health, and that there is a violation of children's rights here. In the Convention on the Rights of the Child, children's rights to bond with nature and to a healthy environment are clearly addressed in the following two articles (UNICEF, 1989):

> Article 24 (2c)
>
> c) To combat disease and malnutrition, including within the framework of primary health care, through, inter alia, the application of readily available technology and through the provision of adequate nutritious foods and clean drinking water, taking into consideration the dangers and risks of environmental pollution;
>
> Article 29 (1e)
>
> States Parties agree that the education of the child shall be directed to:
>
> e) The development of respect for the natural environment.

Access to green spaces is directly related to physical and mental health; therefore, access to and use of green spaces must be increased so that families can continue living in healthy environments. As mentioned in the literature part of the

study, disadvantaged groups have limited access to green spaces due to such factors as their socioeconomic level, ethnicity, and educational status. Furthermore, the qualitative characteristics of accessible areas are not sufficient or not conducive to citizens' use. For this reason, one effective strategy might first be to increase the means of access in disadvantaged regions and to make improvements to existing areas. In terms of improvements, both attractiveness and frequency of visits can be increased by improving the quality of parks, playgrounds, informal green spaces, or streets in a neighborhood. Priority physical improvements in these areas include adding more natural materials and elements, resting areas, or areas in the shade. In terms of transportation, it may be more helpful to make these areas more accessible on foot by considering some logistic issues such as underpasses and pedestrian footpaths. Measures can also be taken to ensure that users feel safe traveling to and from the park and while using it.

Municipalities could carry out projects to increase access at the neighborhood and district levels. For example, if the neighborhood where people live is far away from city-level UGS, such as forests and coastlines, accessibility could be increased by informing people about existing UGS and how to get there, increasing the means of getting there, making these areas free to use, and providing amenities where people can meet their basic needs (e.g., water, sitting areas, and restrooms).

In addition to making improvements at the neighborhood and city level to increase children's access to green spaces, activities can also be carried out in schools. Schools where disadvantaged children are considered to have limited access during the time they spend with their families can offer children the environments they need. Here, it is worth suggesting making physical changes to schools and emphasizing nature in the curriculum as an educational approach. First of all,

according to the biophilia hypothesis put forward by Wilson (1984), people are born with a predisposition toward nature and living things. When looking at the lifespan of human beings, it is found that signs of development of biophilia can be distinguished in the very early years of children's lives. Children in the early years are intrinsically motivated to discover the natural environment around them and they start to explore and exploit the natural world as all primate species do (Verbeek & de Waal, 2002). While even children who are younger than two can show biophilic attitudes (Moore & Marcus, 2008), children under six years old are capable of differentiating natural and human-made stimuli (Wohlwill, 1983). Also, children tend to discover the natural environment around them since nature serves plenty of opportunities for investigation and engagement (Chawla, 2007). Even though biophilia is referred to as an innate tendency to bond with nature, in critical periods, children may recultivate tendencies or antipathies towards natural elements, environment, and processes (Wilson, 1984). With the help of learning and experiencing nature, children's biophilia can be increased (Kahn, 1999; Kellert, 2002). Some studies have investigated the underlying reasons for children's biophilia and argue that consistent, positive, and hands-on experiences in nature matter (Chawla, 2007; Wilson, 1996). Besides the frequency and type of experience, the length of time spent in nature also promotes biophilia (Moore & Marcus, 2008) and children who spend unstructured and sufficient time are more likely to develop an affinity toward nature (Louv, 2008). Considering these findings, it may be beneficial to include more natural elements and green spaces, especially in outdoor areas, and to provide opportunities for children to interact with nature regularly and sufficiently in the school environment. Also, emphasizing nature in the curriculum may be supportive of environmental education. In this way, not only can children gain

awareness of the flora and fauna elements in their local environment but they can also develop environmental awareness on issues such as sustainability and protection. Studies show that affinity with nature during the early years contributes to children's respect for and protection of nature (Nisbet et al., 2009; Schultz, 2000). This may mean that providing environments and experiences that support children's existing bonds with nature also contribute to the protection of the environment in the long run.

Furthermore, there is one essential point in environmental education that should not be overlooked, particularly for young children and nature. David Sobel, an environmental educator, states that before protecting and feeling concerned about nature, children need to experience, love, and enjoy nature. He says: "What matters is that children have an opportunity to bond with the natural world, to learn to love it, before being asked to heal its wounds." (1996, p.10). He also points out that adults usually start the process by teaching children how to deal with the ecological destruction that has already been created, but notes that this teaching excludes the positive aspects of the relationship between human and nature. Sobel (1996) states that the problems of the world are burdened on the shoulders of children before they have the chance to establish a physical and emotional bond with nature, and they are made to feel as if they have to solve these problems. He indicates that this approach causes ecophobia and defines ecophobia as follows: "a fear of ecological problems and the natural world. Fear of oil spills, rainforest destruction, whale hunting, acid rain, the ozone hole, and Lyme disease" (p. 5). Sobel (1996) also notes that environmental problems are integrated into the curriculum in the early years without considering the scale of the problems or how to solve them, or the developmental levels of children and their relations with the environment. He argues that children's

lives are usually spent in their homes, neighborhoods, and schools in early childhood years, so it is necessary to serve and enable experiences about children's immediate and recognizable environments prior to the more distant topics such as working on rainforests and endangered animals. According to Sobel (1996), it is necessary to provide experiences that arouse children's curiosity and empathy for nature and natural elements in early childhood, and to provide opportunities for children to discover themselves and nature in their immediate surroundings and explore the interaction between these two, themselves and nature. Sobel (1996) said that what matters is providing children with access to open and green spaces as much as possible, both at home and in the school environment, and providing experiences that will contribute to their learning to protect and respect nature and living things; for example, the birds in the school garden and the trees in the streets, starting with their immediate vicinity. At this point, both parents and educators may aim to help young children to love nature, enjoy nature, and learn about nature in their local environment.

In addition, the number of people who miss going to green spaces during the COVID-19 period is quite high. These findings highlight the need to make arrangements, improvements, and new plans regarding both accessibility and availability. Therefore, city and environmental planners have to determine the audience that a green space appeals to and make arrangements for groups with special characteristics such as the elderly, children, and disabled people. For example, it would be useful to create resting areas, meet people's needs such as water and restrooms, and take measures to ensure the safety of visitors in places frequently visited by families with children. According to the results of outdoor recreation constraints, participants stated that it was mostly structural constraints that

prevented them from using and visiting green spaces. In addition to availability and accessibility, structural constraints include items such as hygiene, crowding, security, and adequate facilities. Therefore, UGS have to be made more attractive if more people are to use them.

A decrease in the rates of participation in crowded and indoor activities has been observed since the COVID-19 outbreak. Since the epidemic continues, it can be said that this avoidance of people is likely to continue. Since these activities play a crucial role in family dynamics, functioning, and each family member's, especially children's well-being, the rules for using these activity areas, the opening and closing times, and how these activities are run should be planned by taking the pandemic conditions into account. If these rules are applicable and the reasoning behind them is explained, this will encourage people to stick to the rules and feel safe when joining in activities.

Finally, studies on the use of both leisure and green spaces can be increased, and the findings on how they contribute to individuals and society can be shared with the public as well as policymakers and authorities in the relevant fields of interest. Gaining a clearer and deeper understanding of the situations and their significance is essential for solving the problems in these two areas, improving resources, and creating new environments to promote.

5.3 Limitations and suggestions for further research

One of the limitations is that the data for this research were based on parents' reports. In addition, most of the participants were women and there was a shortage of male participants. It would also be useful to collect data from other family members, such

as children or partners, to gather more comprehensive information on family leisure practices. Another suggestion is to include COVID-19-related materials in the family research. This study examined families' responses to the restrictions imposed during the pandemic and shed light on this topic. Understanding how the pandemic is reflected in the functioning, relationships, and communication of families in different areas can also help us understand not only leisure activity patterns but also how green space is used and its constraints. For example, exploring issues such as a family member's stress level, negative communication within the family, a family member being made unemployed, and the distribution of household chores can provide a deeper and more comprehensive understanding.

The Outdoor Recreation Constraints Scale was translated into Turkish within the scope of this study. The factor analyses performed after the data were collected revealed that the items on the scale were not grouped in the same way as the groupings in the original language. For this reason, only descriptive results were included in the study and they were not included in any analysis based on the total score. Therefore, new validity and reliability studies are required for this scale to be used in future studies.

When conducting the study, people of low income and education levels could not be reached in sufficient numbers. It was difficult to reach these groups because the study was conducted online due to the pandemic. Increasing the diversity within the sample regarding participant demographics may contribute to generalization for further research. Also, there were limited number of fathers in the study. As all the data were related to family practices, it was not regarded as limitation but gaining different perspectives from different family members may be beneficial for further

researches. Since the data on the ages of the children were incomplete and inaccurate, separate analyses by age groups could not be made.

Another limitation is the inability to collect more in-depth data for both leisure activities and green space use. As the Social-Ecological Theory (McLeroy, 1988) emphasizes, the person herself/ himself, his/her environment, and the interaction between these two determine the behavior and attitudes of the person. It may be useful to understand both these phenomena by examining such variables as culture, structural features, geographical conditions, and relations in the participants' locales. Therefore, qualitative studies should be conducted to explore both leisure and the use of green spaces.

APPENDIX A

ETHICS COMMITTEE APPROVAL

Evrak Tarih ve Sayısı: 08.05.2021-14001

T.C.
BOĞAZİÇİ ÜNİVERSİTESİ
SOSYAL VE BEŞERİ BİLİMLER YÜKSEK LİSANS VE DOKTORA TEZLERİ ETİK İNCELEME KOMİSYONU
TOPLANTI TUTANAĞI

Toplantı Sayısı	:	16
Toplantı Tarihi	:	06.05.2021
Toplantı Saati	:	13:00
Toplantı Yeri	:	Zoom Sanal Toplantı
Bulunanlar	:	Dr. Öğr. Üyesi Yasemin Sohtorik İlkmen, Prof. Dr. Ebru Kaya, Prof. Dr. Fatma Nevra Seggie
Bulunmayanlar	:	

Beyhan Ataş

Temel Eğitim

Sayın Araştırmacı,

"Ailelerin Boş Zaman Aktiviteleri ve Yeşil Alan Kullanımlarının Covid-19 Kısıtlamaları Sürecinde İncelenmesi" başlıklı projeniz ile ilgili olarak yaptığınız SBB-EAK 2021/28 sayılı başvuru komisyonumuz tarafından 6 Mayıs 2021 tarihli toplantıda incelenmiş ve uygun bulunmuştur.

Bu karar tüm üyelerin toplantıya çevrimiçi olarak katılımı ve oybirliği ile alınmıştır. COVID-19 önlemleri kapsamında kurul üyelerinden ıslak imza alınamadığı için bu onam mektubu üye ve raportör olarak Ebru Kaya tarafından bütün üyeler adına e-imzalanmıştır.

Saygılarımızla, bilgilerinizi rica ederiz.

Prof. Dr. Ebru KAYA
ÜYE

e-imzalıdır
Prof. Dr.Ebru KAYA
Raportör

SOBETİK 16 06.05.2021

APPENDIX B

RESEARCH ANNOUNCEMENT AND INVITATION LETTER

Figure 6. Research invitation

Research invitation letter:

We invite you to our research titled "Investigation of Leisure Time Activities and Green Space Uses of Families During the COVID-19 Restrictions " conducted under the supervision of Mine Göl Güven. Within the scope of the research, we are trying to reach parents who have children between the ages of 0-8. If you have a child or children aged 0-8, you can join our study by clicking the link below. It is expected that it will take you approximately 15 minutes to answer the research questions. If you do not want to continue the study, you can log out directly. Only the answers of those who completed the study will be recorded and used for scientific purposes.

Research link:
https://docs.google.com/forms/d/e/1FAIpQLSdX4tN6sJvrHRLdmReTvJCC-rg_OxVz2KsyJT3-ZysKydmj4Q/viewform?usp=sf_link

APPENDIX C

INFORMED CONSENT FORM

Dear participant,
This study was conducted by Boğaziçi University Early Childhood Education program graduate student who is Beyhan Ataş, under the supervision of Assoc. Dr. Mine Göl Güven. We invite you to participate in our research, which examines the barriers to family leisure activities, access to green spaces and outdoor recreation. The participants of our research are families with children between the ages of 0-8.

You are expected to allocate approximately 20-25 minutes for this study. Participation in this study is completely voluntary. What is expected of you in order for the study to achieve its purpose is to answer all questions sincerely, without any pressure or suggestion, with the most appropriate answers for you. You have the right to withdraw from the study at any time if you do not participate in the study or if there are questions that you do not want to answer after participating. Our work consists of 4 parts. The first part asks for some information about you and your family. In the second part, there are questions about what kinds of activities you participate in in your spare time and how the pandemic process affects your participation in these activities. In the third part, you will be asked to provide some information about your access to green spaces during the pandemic process.
In the last section, considering the open spaces in your immediate surroundings, the factors that limit your access to these areas will be discussed. The information obtained from this study will be used for research purposes only and your information will be kept confidential. The information you have provided will be deleted when the study is completed. The study is expected to be completed in September 2021. If you do not complete the form, your answers will not be recorded. You can consult Boğaziçi University Social and Human Sciences Master's and Doctorate Thesis Ethics Review Committee (SOBETİK) about your rights regarding research via the e-mail address sbe-ethics@boun.edu.tr. In case of any risk, you can contact the researcher and project coordinator, apply to Boğaziçi University Psychology Research and Application Center (BUPAM) and get support on what can be done.

This research is not expected to pose any risk to you. However, it is expected that the data to be obtained as a result of this research will benefit families and experts. If you need more information about the purpose of the study now or later, please ask if you have any questions about the study before signing this form. For other questions, you can reach the project researcher at …… and the project manager at …… or the contact information below. If you want the general/specific results to be shared with you when the research is completed, please inform the researchers. Thank you for your contribution and cooperation.
I participate in this study completely voluntarily and I can quit at any time.
I know. I accept the use of the information I have provided in scientific publications.
Please tick if you agree to participate in this study. ☐
Participant Name-Surname:……..
Signature: ……
Date:……

APPENDIX D

DEMOGRAPHIC INFORMATION FORM

Below you are expected to answer some questions about you and your family. It is anticipated that it will take you approximately 5 minutes to answer all questions.

1. Your age? : _____ 2. Your gender?: _____ 3. Your marital status?: _____

4. Which city do you live in?: _____ 5. Ethnicity?: _____

5. Which is the last school you graduated from (by getting a diploma)?
a. Primary school ___ b. Secondary school ___ c. High school___
d. Vocational school/ Two-years school___ e. University__ f. Master/PhD ___

6. Are you working? a. Yes _____b. No _____ 7. What do you do? _____

8. How long have you been working?_____

9. The following questions are reserved for you to fill in information about your child's mother/father.

What is his/her age? _____

Which is the last school s/he graduated from (by obtaining a diploma)?
a. Primary school ___ b. Secondary school ___ c. High school___
d. Vocational school/ Two-year school___ e. University__ f. Master/PhD ___

Does s/he work? a. Yes _____b. No _____ What does s/he do? _____

10. Do you live with your spouse? a. Yes _____b. No _____

11. When you think about the city you live in how would you describe your income level?
a. Low____ b. Below middle____ c. Middle ____ d. Upper middle____ e. High____
12. Fill in the information below for all your children.

	Age (day/ month/ year)	Gender
First child		
Second child		
Third child		
Fourth child		
Fifth child		

13. Is there any family member in your family who has a physical disability?
Yes_____ No _____

14. Is there another adult (such as grandparents) living in your home?
Yes_____ No _____

15. How many days are you off per week? _____

16. How many days are you on annual leave? _____

17. Do you have a vehicle of your own? Yes _____No_____

18- Which of the following is the type of your house?
a. Apartment ____b. Detached house___

19- How many rooms are there in your house? _____

20- Does your house have a balcony? Yes_____ No_____

21- Does your house have a garden? Yes _____No_____

22- If yes, how is the usage of the garden of your house?
a. Personal garden b. Shared garden with other people

23- Have you ever been diagnosed with COVID-19 during the pandemic?
Yes_____ No_____

24- Have any of your family members been diagnosed with COVID-19 during the pandemic?
Yes_____ No_____

25- Do you have a high-risk group (such as immunosuppression, diabetes, cardiovascular diseases or asthma) from COVID 19 living in your home?
Yes_____ No_____

26- Do you have pet in your house? Yes_____ No_____

27- Do you go out regularly for your pet's needs during the quarantine period?
Yes_____ No_____

APPENDIX E

FAMILY LEISURE ACTIVITY PROFILE SCALE

Below is information about your family's participation and frequency in different leisure activities. You are expected to answer the questions and indicate how the pandemic has affected these activities. It is anticipated that it will take you approximately 8 minutes to answer all questions.

1) Do you have dinner at home with your family?
   Yes( ) No( )
   If yes, how often?
   ( ) At least daily
   ( ) At least several times in a week
   ( ) At least several times in a month
   ( ) At least several times in a year
   ( ) If other please specify ……..……
   When you consider the COVID-19 pandemic, to what extent was your frequency of eating dinner at home with your family members affected by the pandemic?
   ( ) Affected very positively
   ( ) Affected positively
   ( ) Negatively affected
   ( ) Very negatively affected
   ( ) Neither affected nor unaffected

2) Do you do household activities (such as watching TV/video, listening to music, reading a book) with your family members?
   Yes( ) No( )
   If yes how often?
   ( ) At least daily
   ( ) At least several times in a week
   ( ) At least several times in a month
   ( ) At least several times in a year
   ( ) If other please specify ……..……
   When you consider the COVID-19 pandemic, to what extent was your frequency of doing household activities with your family members affected by the pandemic?
   ( ) Affected very positively
   ( ) Affected positively
   ( ) Negatively affected
   ( ) Very negatively affected
   ( ) Neither affected nor unaffected

3) Do you play games (such as board games, card games, billiards, darts) with your family members at home?
   Yes( ) No( )
   If yes how often?
   ( ) At least daily
   ( ) At least several times in a week
   ( ) At least several times in a month
   ( ) At least several times in a year
   ( ) If other please specify ……..……
   When you consider the COVID-19 pandemic, to what extent was your frequency of playing games at home with your family members affected by the pandemic?
   ( ) Affected very positively
   ( ) Affected positively
   ( ) Negatively affected
   ( ) Very negatively affected
   ( ) Neither affected nor unaffected

4) Do you participate in collective hobbies (such as drawing, sewing, ceramics, cooking) with your family members
   Yes( ) No( )
   If yes how often?
   ( ) At least daily
   ( ) At least several times in a week
   ( ) At least several times in a month
   ( ) At least several times in a year
   ( ) If other please specify ……..……
   When you consider the COVID-19 pandemic, to what extent was the frequency of your participation in collective hobbies with your family members affected by the pandemic?
   ( ) Affected very positively
   ( ) Affected positively
   ( ) Negatively affected
   ( ) Very negatively affected
   ( ) Neither affected nor unaffected

5) Do you participate in outdoor activities such as (gardening, spending time with pets) near your home with your family members?
   Yes( ) No( )
   If yes how often?
   ( ) At least daily
   ( ) At least several times in a week
   ( ) At least several times in a month
   ( ) At least several times in a year
   ( ) If other please specify ……..……

When you consider the COVID-19 pandemic, to what extent was your frequency of participating in outdoor activities near your home with your family members affected by the pandemic?

( ) Affected very positively
( ) Affected positively
( ) Negatively affected
( ) Very negatively affected
( ) Neither affected nor unaffected

6) Do you do physical activities such as (cycling, playing sports, basketball or football) with your family members near your home?
Yes( ) No( )
If yes how often?
( ) At least daily
( ) At least several times in a week
( ) At least several times in a month
( ) At least several times in a year
( ) If other please specify ……..……
When you consider the COVID-19 pandemic, to what extent was your frequency of participating in physical activities near your home with your family members affected by the pandemic?

( ) Affected very positively
( ) Affected positively
( ) Negatively affected
( ) Very negatively affected
( ) Neither affected nor unaffected

7) Do you attend events (such as sporting events, school nights, shows) involving your family members another family member?
Yes( ) No( )
If yes how often?
( ) At least daily
( ) At least several times in a week
( ) At least several times in a month
( ) At least several times in a year
( ) If other please specify ……..……
When you consider the COVID-19 pandemic, to what extent was your frequency of participation in activities involving your family members and another family member affected by the pandemic?

( ) Affected very positively
( ) Affected positively
( ) Negatively affected
( ) Very negatively affected
( ) Neither affected nor unaffected

8) Do you attend religious activities (such as going to the mosque or church, reading the holy book, celebrating religious holidays and days) with your family members?
Yes( ) No( )
If yes how often?
( ) At least daily
( ) At least several times in a week
( ) At least several times in a month
( ) At least several times in a year
( ) If other please specify ……..……
When you consider the COVID-19 pandemic, to what extent was your frequency of attending religious events with your family members affected by the pandemic?
( ) Affected very positively
( ) Affected positively
( ) Negatively affected
( ) Very negatively affected
( ) Neither affected nor unaffected

9) Do you participate in activities in which you can come together with different people in the community (such as visiting neighbors and friends, going shopping, going on a picnic or celebrating special days) ?
Yes( ) No( )
If yes how often?
( ) At least daily
( ) At least several times in a week
( ) At least several times in a month
( ) At least several times in a year
( ) If other please specify ……..……
When you consider the COVID-19 pandemic, to what extent was your frequency of participating in activities where you and your family members could be together with different people affected by the pandemic?
( ) Affected very positively
( ) Affected positively
( ) Negatively affected
( ) Very negatively affected
( ) Neither affected nor unaffected

10) Do you attend events (such as cinema, theater, concerts and matches) in which you are an audience with your family?
Yes( ) No( )
If yes how often?
( ) At least daily
( ) At least several times in a week
( ) At least several times in a month
( ) At least several times in a year
( ) If other please specify ……..……

When you consider the COVID-19 pandemic, to what extent was the frequency of your participation in the events where you and your family members were audiences affected by the pandemic?

( ) Affected very positively
( ) Affected positively
( ) Negatively affected
( ) Very negatively affected
( ) Neither affected nor unaffected

11) Do you participate in community-based sports activities (such as bowling, golf, swimming, skating or skateboarding, etc.) with your family members?
Yes( ) No( )
If yes how often?
( ) At least daily
( ) At least several times in a week
( ) At least several times in a month
( ) At least several times in a year
( ) If other please specify ……..……
When you consider the COVID-19 pandemic, to what extent was your frequency of participating in community-based sports activities with your family members affected by this pandemic?
( ) Affected very positively
( ) Affected positively
( ) Negatively affected
( ) Very negatively affected
( ) Neither affected nor unaffected

12) Do you attend community-based special events (such as visiting museums, zoos, amusement parks, fairs, etc.) with your family members?
Yes( ) No( )
If yes how often?
( ) At least daily
( ) At least several times in a week
( ) At least several times in a month
( ) At least several times in a year
( ) If other please specify ……..……
When you consider the COVID-19 pandemic, to what extent was your frequency of attending community-based special events with your family members affected by the pandemic?
( ) Affected very positively
( ) Affected positively
( ) Negatively affected
( ) Very negatively affected
( ) Neither affected nor unaffected

13) Do you participate in outdoor activities (such as camping, hiking, fishing, kite flying, etc.) with your family members?
Yes( ) No( )
If yes how often?
( ) At least daily
( ) At least several times in a week
( ) At least several times in a month
( ) At least several times in a year
( ) If other please specify ……..……
When you consider the COVID-19 pandemic, to what extent was your frequency of participating in outdoor activities with your family members affected by the pandemic?
( ) Affected very positively
( ) Affected positively
( ) Negatively affected
( ) Very negatively affected
( ) Neither affected nor unaffected

14) Do you participate in water sports (such as water skiing, diving, jet skiing, sailing, etc.) with your family members?
Yes( ) No( )
If yes how often?
( ) At least daily
( ) At least several times in a week
( ) At least several times in a month
( ) At least several times in a year
( ) If other please specify ……..……
When you consider the COVID-19 pandemic, to what extent was your frequency of participating in water sports with your family members affected by the pandemic?
( ) Affected very positively
( ) Affected positively
( ) Negatively affected
( ) Very negatively affected
( ) Neither affected nor unaffected

15) Do you participate in outdoor adventure activities (such as climbing, scuba diving, rafting, etc.) with your family members?
Yes( ) No( )
If yes how often?
( ) At least daily
( ) At least several times in a week
( ) At least several times in a month
( ) At least several times in a year
( ) If other please specify ……..……

When you consider your COVID-19 pandemic, to what extent was your frequency of participating in outdoor adventure activities with your family members affected by the pandemic?

( ) Affected very positively
( ) Affected positively
( ) Negatively affected
( ) Very negatively affected
( ) Neither affected nor unaffected

16) Do you attend tourism activities (such as family holidays, travel, visit historical places or national parks, etc.) with your family members?

Yes( ) No( )

If yes how often?

( ) At least daily
( ) At least several times in a week
( ) At least several times in a month
( ) At least several times in a year
( ) If other please specify ……..……

When you consider the COVID-19 pandemic, to what extent was the frequency of your participation in tourism activities with your family members affected by the pandemic?

( ) Affected very positively
( ) Affected positively
( ) Negatively affected
( ) Very negatively affected
( ) Neither affected nor unaffected

APPENDIX F

OUTDOOR RECREATION CONSTRAINTS SCALE

	Major affect	Moderate affect	Neutral	Minor affect	No affect
1. Not enough time (because of my job and long hours of work; because of family, childcare, or other in-the-home obligation; or because of voluntary work or other outside obligations)	( )	( )	( )	( )	( )
2. Not enough money	( )	( )	( )	( )	( )
3. Poorly maintained activity areas	( )	( )	( )	( )	( )
4. Inadequate information on places to do the activities	( )	( )	( )	( )	( )
5. Inadequate transportation	( )	( )	( )	( )	( )
6. Crowded activity areas	( )	( )	( )	( )	( )
7. Inadequate facilities in activity areas	( )	( )	( )	( )	( )
8. Pollution problems in activity areas	( )	( )	( )	( )	( )
9. Personal safety problems in activity areas	( )	( )	( )	( )	( )
10. Outdoor pests	( )	( )	( )	( )	( )
11. Feel unwelcome or uncomfortable at many outdoor recreation areas	( )	( )	( )	( )	( )
12. Language barriers, can't understand the language	( )	( )	( )	( )	( )
13. Feel afraid in forest or other natural settings	( )	( )	( )	( )	( )
14. Physically limiting condition	( )	( )	( )	( )	( )
15. Personal health reasons	( )	( )	( )	( )	( )
16. No companion, no one to do activities with	( )	( )	( )	( )	( )
17. Disability household member	( )	( )	( )	( )	( )

APPENDIX G

USE OF USG DURING COVID-19 PANDEMIC RESTRICTIONS SCALE

Due to the pandemic, various restrictions and regulations have been made in our country at different time intervals since March 2020. Restrictions between November 2020 and April 2021 were implemented, such as weekend curfews, curfews only between certain hours on weekdays, curfews for individuals under the age of 18 and over 65 years of age, or interruption of education. Below are some questions about your access to green spaces during the COVID-19 restrictions. Please complete these questions considering the time frame between November 2020 and April 2021 with partial restrictions. It is anticipated that it will take you approximately 5 minutes to answer the questions.

A green area is a land or wetland within an urban area or adjacent to a city, covered with any vegetation, trees, grass or shrubs. Parks, gardens, ponds, rivers, marinas or rural areas are examples of green areas.

Answer the following questions with this definition in mind.

1) What kind of environment was your childhood in?

□ Natural

□ Unnatural

2) Where do you live now?

□ Big city (more than 750,000 population)

□ City (over 20,000 population)

□ Town (2,000 to 20,000 population)

□ Village (150 to 2,000 population)

3) Which of the following options do you think defines where you live now?

□ Industrial area

□ City center

□ Woodland/forest

□ Hilly, mountainous area

□ Agricultural area, pasture, rural area

□ Coastline

□ More…

4) Are there any green areas in your current neighborhood?

□ Yes

□ No

5) Is there a park in your current neighborhood?

□ Yes

□ No

6) Do you think you and your family have enough access to green areas?

□ Yes

□ No

7) Do you generally visit green areas?

□ Yes

□ No

8) If you went to a green area during the partial restrictions, what was your reason for going? Please tick the 3 options that are most suitable for you. (If you choose the other option, please indicate the reason.)

□ Seeing friends
□ Being with family
□ Get fresh air
□ Getting closer to nature
□ Being healthy
□ Fewer people in green spaces
□ Doing physical exercise
□ Taking the kids out
□ Reading something
□ Observing nature
□ Walking pets
□ Relaxing
□ Nowhere else to go
□ Habit and personal attention
□ Opportunities in green areas
□ Easily accessible
□ Other …..
□ I did not go to the green area

9) How many times have you been in the green area during partial restrictions?

□ More than once a week
□ Once a week
□ Less than once a week
□ Once

10) How far was the green area you go to your house?

□ Less than 200 meters
□ Between 200 and 500 meters
□ More than 500 meters
□ More than 1000 meters

11) How did you reach the green area from your home?

□ on foot
□ Bicycle
□ Car
□ Motorcycle

□ Public transport
□ Electric scooter
□ Other

12) Which of the following descriptions best describes the green area you went to? What kind of area was it? (If you select the other option, please indicate the reason.)

□ A tree-lined street
□ Park
□ Garden
□ riverside
□ A green area outside the city
□ woodland
□ Other

13) How much do you miss going to the green areas during the restriction period?

□ Not at all
□ a little
□ moderate
□ a lot

14) Which of the activities in the green areas below do you miss the most?

□ Exercising outside (running, walking)
□ Taking the kids out
□ Breathing fresh air
□ Observing nature
□ Meeting other people
□ Spending time outside
□ Other

15) Do you see a green area (eg trees, gardens) from the window of your house? If so, please tick the most appropriate option for you. (If you choose other, please specify)

□ A tree-lined street
□ A private garden
□ A public park
□ A public garden
□ A natural area (such as rural area, hill, mountain, river...)
□ Other
□ No

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