Evaluating Fear of Crime in the City from Ecological Perspective: A Study on Female University Students in Turkey

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Abstract

Today, fear in urban areas is rapidly expanding its domain. Disadvantaged sections of the city feel the fear of crime more prominently because of their vulnerability. Among these segments, female university students are the subject of this study. The insecure feelings of female students who frequently use urban public spaces, live in less isolated environments than other parts of society and have to ride on public transportation at late hours, reduce their quality of life and add to their existing problems. In particular, it can be expressed that environmental and design related factors affect female students' fear of crime. The ecological approach based on this subject constitutes the starting point of this study. In this context, the study aims to analyze female university students' fear of crime from the ecological perspective. Within the scope of the study, a quantitative standardized questionnaire technique was used as a data collection tool for the above-mentioned purposes. According to the findings; female students feel a distinct fear of various crimes in Turkey as they do in every country in the world. In particular, sexual assault is the leading crime. Female students who are continuing their education in Turkish cities are inadequate in the context of integration with the city where they live and establishing neighborly relations. This leads to an increase in their level of unease. However, students feel unsafe in their daily life practices due to urban planning problems, irregularities and physical disorganizations. The value of this research, which is carried out with the idea that there is a significant deficiency in the field especially in terms of urban studies, is to be a leading survey in Turkey. In addition, the study is one of rare studies dealing with female university students' fear of crime from an ecological perspective.

INTRODUCTION: FEAR OF CRIME AND SPACE

Fear of crime is, in its most general definition, 'the fear of being a victim of a crime'. Although it varies according to the personal characteristics of individuals such as age, gender, physical strength, education, a significant number of individuals living in society feel fear of crime at least for a certain period of their life and to a certain extent. Fear of crime can lead to anxiety, insecurity, discontent, dissatisfaction, alienation, physiological and physical problems (Miceli et al., 2004). However, the individuals carry fear of crime not only for themselves but also for their inner circles and families. For example, women, who experience the fear of crime the most, feel the fear more for their children. (Ünal Reşitoğlu, 2017: 145).

Another aspect of the fear of crime, which is essentially an individual and psychological concept, is the fear of crime from a social point of view. Fear of crime (Warr, 1995:296) is qualified as a 'social problem' and is claimed -through the most predominant public opinion about the fear of crime- that the existence of socialization, based on fear and insecurity, drives fear of crime away of being personal and shapes social thought and living (Kul, 2012: 27).

However, some conceptual differences regarding fear of crime should be briefly included here. Descriptions regarding the fear of crime identify and differentiates 3 factors of fear of crime; perceptual, emotional and behavioral and suggest that these factor forms fear of crime. The perceptual dimension of fear includes the logical thinking process in which perceptions of risk occur, while the emotional dimension emphasizes the emotions associated with fear, and the behavioral dimension emphasizes the physical responses given when faced with a criminal act (Franklin et al., 2008: 205). In other words, the perceptual dimension is called perceived risk, the emotional dimension is called fear of crime, and the behavioral dimension is called constrained behavior. The individual who perceived the risk may not necessarily always feels the fear even though gets anxious. However fear gives individuals physical reactions such as throbbing and supplies adrenaline that supports the individuals with courage in their war against fear. However, this difference is often overlooked in studies, and researchers claim that although they measure the perception of risk of individuals, they persistently measure fear of crime (Öztürk et al., 2016: 1491).

With all the differences considered, the concept of 'perceived risk' is substituted by 'fear of crime' in this study. This is because it is aimed at accessing statistical data that will be used to take a general picture of the current situation, rather than measuring the behavioral, psychological, or physical responses mentioned in quantitative research for measuring perception.

A significant part of the literature on fear of crime tends to explain the problem in the context of the physical environment in which people live their lives. The most well-known of these is the ecological approach,

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which treats the city as an organism that affects and gets affected by people. The ecological approach analyzes the impact of space on fear of crime by associating irregularities in the space with social problems.

Studies that interpret the fear of crime through gender variability often take the subject in the context of individual approaches such as vulnerability and victimization. There is a widespread belief that women in disadvantaged social sectors –with the influence of gender perception– feel the fear of crime more than men because of their physical and emotional vulnerability.

In this study, women's fears of crime are analyzed from an ecological perspective. For this purpose, data obtained from survey research carried out in the Turkish universe of female students studying in universities were based. The study focuses on how female students' perceptions of safety are affected in the context of spatial characteristics in the cities where they study.

ECOLOGICAL PERSPECTIVE /THE DISORDER PERSPECTIVE

When the literature on fear of crime is examined, it is seen that there are approaches that address the fear of crime in an individual and social context. Individual approaches evaluate the subject in a more psychological dimension and analyze it based on factors such as the person being subjected to crime, vulnerability or high risk of exposure to crime. However, approaches that address the fear of crime from a social perspective tend to explain the issue in the context of the physical and social environment in which people live their lives. From here; it is seen that fear of crime is addressed through approaches such as 'urban organizational disorder', 'social disorganization', 'broken windows theory' and 'the community concern perspective' (Sipahi, 2016: 37).

The ecological theory, which is the focus of the aforementioned approaches, focuses on the idea that environmental factors shape the behavior of the individual, based on the fact that the tendency towards crime is high in cities (Oktik, 2013: 17-19). Thus, the fear of crime and crime is shaped by the influence of environmental factors. In this context, the social disorganization perspective focuses on the heterogeneous structure of the city, urban slum areas and the effects of variables such as social mobility and industrialization on crime, directly or indirectly. According to this approach, places with social and/or physical disorders such as rapid or distorted urbanization, poverty, darkness, derelict buildings, graffities, vandalism create a more favorable environment for people prone to crime than other parts of the city. This has the potential to create a frightening or threatening atmosphere on people who are resident in or in and out of these places (Skogan & Maxfileld, 1981; Skogan, 1987; Ferraro & La Grange, 1992). Such places in the city are perceived as 'risky areas', especially for women. Examples include dark underpasses, secluded places, empty parking spaces, crowded places (Colquhoun, 2004).

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As you can see, spatial factors that influence or trigger crime also cause the emergence of fear of crime in cities or the increase in the severity of the fear. In light of the narratives, it is possible to list the spatial factors affecting the fear of crime in the urban area as follows and interpret them in the context of women (Ayhan & Çubukçu, 2007; Unsal, 2015: 34-38; Sipahi, 2016: 41-44):

• Population Density: Regional population densities can be the cause of psychological problems (stress, noise, etc.) caused by crowds, as well as problems such as lack of social spaces and wear of social control mechanisms. This can increase crime trends and fear of crime. Crowds are particularly unsettling for women. Since many women think that crowds provide a favorable environment for many crimes, especially sexual harassment, they can develop restrictive behaviors, such as avoiding being in crowded environments.

• Spatial size and positioning of the city: Factors such as the residential areas, area width, and dispersed settlements of the city can cause internal security weaknesses, which affect the degree of fear of crime. In cities with this type of settlement plan, population density decreases. It is possible to state that seclusion is one of the determinants of fear of crime, as opposed to the perception of risk caused by crowding. For women, especially at night, secluded places are unsettling places.

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• Problems with urban design: It is inevitable that there will be regions shaped by social and economic differences, especially in cities that are not planned properly and do not have a premeditated design against migration. These differences can lead to problems such as marginalization and exclusion for the people living in that area, and as a result, their tendency towards crime. For example, ghettos made up of migrants isolate these groups from the city and can make them feel like undesirable elements. These neighborhoods are becoming 'uncanny' places for the people living in different parts of the city, especially women who prefer to stay away from these places.

• The lack of lighting: The lack of lighting as a result of urban design can increase the likelihood that these areas will become environments suitable for crime at night, as well as triggering fear of crime. Due to the lack of lighting elements, women feel a distinct perception of risk not only in ghetto areas but also in some other urban areas (such as underpasses, public toilets, car parks, dark streets).

• Presence of unused and non-functional areas: These areas are areas where there is little or even no control in the city. In such areas, city dwellers feel unsafe because there are no security guards, cameras, or CCTV systems. This leads to increased fear of crime and crime.

• Presence of Vacant Housing Units: Vacant housing can harbor crimes ranging from drug use to kidnappings and hiding. Similarly, streets and neighborhoods with the majority of abandoned, derelict buildings, urban slum areas, eventually become crime scenes. As a

natural consequence of this, there is a serious perception of insecurity or even fear about these neighborhoods. For a significant number of individuals living in the city, especially women, these places are frightening.

• Presence of Parking Spaces: Parks and gardens that do not have adequate security personnel can be considered areas where crime is easy. Especially at night, in terms of being a place to stay for the homeless, street thugs, addicts etc., such places can become perceived as safe during the day and completely unsafe at night. In this case, the fear of crime will vary not spatially but temporally. Especially women's perception of "something might happen" in such areas drives them away from such areas at late times. Therefore, women tend not to go to these areas or to go accompanied by a man with the influence of gender perception.

• Traffic Jams: People who are stressed in everyday life are more prone to committing crimes in busy traffic environments. Traffic congestion can be cited as causing increased tension in people and the emergence of criminal incidents. This stress factor can also be articulated from time to time for fear of crime, especially women are more likely to be harassed by road hogs, which can lead to different forms of stress being added to stress levels caused by traffic jams.

• Crowded Public Transport: Excessive passenger numbers of public transport due to the insufficient number of vehicles in urban transportation can significantly increase stress. In addition, congestion in vehicles, pickpocketing, sexual harassment, etc.it increases the rate of crime, and as a result, anxiety about these crimes can develop in individuals (especially women).

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• Street Regulations: Streets and avenues that are not properly placed in urban planning can become crime places, especially at night, which can cause unease among the people of the city. Especially in uneven, nooks and crannies that are not sufficiently illuminated, women experience anxiety.

• Presence of Security Guards: Especially in large cities, the lack of adequate security guards for the protection of non-urban areas is seen as a reason to increase the crime rate. However, police patrolling gives some a sense of confidence, while others have an effect that increases their fear of crime.

• Barriers such as Wall/Fence/Iron Bars/Window Locks/Window Grids: Barriers such as walls, fences and iron bars used in urban spaces can be seen as preventive measures for crime, on the other hand, they also can be used for protection against people who attempts crime. Moreover, since such measures are taken as a result of people's fear of crime, they can reduce the level of fear of individuals, but also make these places more attractive to criminals.

• Alarm Systems and Cameras: Burglar alarm systems and cameras, which are used as a deterrent against theft, are considered tools that prevent crime from occurring. Therefore, these systems,

which are installed as a security measure, also have an effect that reduces the fear of crime due to the sense of safety it gives. However, since cameras also create a sense of surveillance, it can also negatively affect some people's sense of security.

• Seating Time/Stable Structure in One Place: The fact that the people of the city are long-term residents will also increase the number of people who know each other, it will prevent the formation of crime. Therefore, living in the city for a long time brings with it the strengthening of urbanization and a sense of urban belonging. Since the regularity of the neighborhood and the presence of neighborhood relations mean social control, crime rates in such places are thought to decrease in parallel with the fear of crime. Being especially recognizable, while recognizing its neighbors is a supportive element of security, on the other hand, it can cause some kind of neighborhood pressure, especially where gender perception is strong.

On the other hand, the physical appearance, nature, and cleanliness of a city adversely affect the fear of crime. Because the beautiful appearance of the environment increases the sense of trust in people – even if it is misleading (Kul, 2012: 39-40).

At this point, it is appropriate to include the famous Broken Windows Theory. Inspired by a social experiment by Zumbardo in 1969, this theory was put forward by Wilson and Kelling (1982); based on the idea that the slightest element of disorder that exists in a region will lead to the development of a perception that the area is criminally dangerous (Özaşçılar, 2015: 332). The theory suggests that broken window in one place leads to violence in those who are in that region. This theory states that continuous urban maintenance and control are required, and that disorder of neglect will feed the formation of crime and fear of crime (Ünsal, 2015: 47-48).

SURVEY

Purpose and Importance of Research

Today, fear in urban areas is rapidly expanding its domain. Disadvantaged sections of the city feel the fear of crime more prominently because they are vulnerable. Among these groups, female university students often experience a distinct fear of crime due to living away from their families, economic difficulties, limited life experiences, physical disadvantages, and teaching them fear from birth. The insecure feelings of female students who frequently use urban public spaces, live in less isolated environments than other parts of society and have to ride on public transportation at late hours, reduce their quality of life and add to their existing problems.

Efforts to identify the criminal fears of this group in Turkey are still in their infancy. Most of the studies are limited to students of a single city or university. The subject of this research, which is carried out with the idea that there is a significant deficiency in the field especially in terms of urban science studies, is the female students of the university.

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Data Collection Tool, Universe and Sampling of Research

In studies related to fear of crime, qualitative inquiry method based on in-depth interview technique or quantitative inquiry method based on survey is preferred. While these methods have limitations in determining fear of crime, the increased interest in the subject is a con. However, it should be noted that both conceptualization and measurement of fear of crime are problematic (Taylor & Hale, 1986: 166).

The scale often used in fear of crime studies is Kennet F.Ferraro's The Fear of Crime (1995: 35-38) is the scale of fear of crime. On this scale, various questions were designed to determine the socio-demographic characteristics of the participants, the risk of exposure to crime, the degree of fear, the state of victimization, the characteristics of the environment experienced, the perception of safety for the neighborhood, the near environment, and neighborly relations. It is seen that the Ferraro scale is used in standardized questionnaires used for survey studies in Turkey. In this study, the same scale was used, in addition, questions were added to determine the perceptions of the students from an ecological perspective, the place, security personnel, and situations that will help to address the issue. In addition, the questionnaire was shaped in line with the author's observations on the subject and the feedbacks in the pilot studies with the female students.

Within the scope of the study, a quantitative standardized questionnaire technique was used as a data collection tool for the above-mentioned purposes. SPSS statistical package program was used to prepare the questionnaire, determine the universe and sampling, implement the survey and analyze the data in order to achieve the research objective. The findings, the main starting point of the study, and the findings and interpretations obtained from the literature review on the subject were tested in the Turkish universe.

The universe of the survey is made up of female students studying at universities in Turkey. According to the Classification of Statistical Regional Units of Turkey (NUTS), the provinces in 26 different regions in Level 2 were categorized and the cities where the most female university students were studying were determined by scanning the statistics of Council of Higher Education.1 After this determination, the number of interviews to be held in the cities designated as examples of these university cities was determined by layer according to the number of students in the provinces. In line with the sample plan determined, the survey research was carried out between 1 December 2018 and 1 January 2019 by face-to-face interviews with 2002 participants aged 18 and over, determined by the random sampling method that is undergoing university education (associate degree, bachelor's, master's, doctorate) in the cities (78 districts in total) where sampling is included.

[1] The number of female students is obtained from https://istatistik.yok.gov.tr/.
[2] Cities (respectively by IBF Level 2 regions) and the number of participants interviewed: İstanbul (644), Edirne (36), Çanakkale (40), İzmir (140), Denizli (48), Kütahya (44), Bursa (60), Kocaeli (60), Ankara (268), Konya (106), Antalya (54), Adana (42), Kahraman Maraş (26), Kırıkkale (24), Kayseri (52), Karabük (34), Kastamonu (22), Samsun (46), Trabzon (52), Erzurum (58), Kars (20), Malatya (34), Van (20), Gaziantep (46), Şanlı Urfa (16) and Mardin (8).

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Results
Demographics
The majority of the sample group consists of undergraduate students (85%), and the proportion of associate students is 13% and the proportion of graduate students is 1%. The age range of the participants is 18-24 years. 98% of the students are single and 88% do not work in any job. Only 2% of students stated that they were working full-time jobs, and about 1% of respondents said they worked part-time.

Urban Life Experience and Relations with City-dwellers
The ecological approach suggests that the environment is an important factor in the direction of crime. Environmental and social disorganization is also an important factor in shaping crime and fear. For this reason, where the sample group lives, why they prefer the city where they study and their relationship with their neighborhoods or surroundings has been questioned.

A significant number of the sample group stated that they lived in the dormitory (46%) and with their family (32%), and the number of people staying at home was about 10%. The proportion of those who stay in an apartment or alone (around 4%) is low. As you can see, a large proportion of students study away from their parents.

A significant number of students stated that they preferred the city where they studied at for reasons such as 'good university education' (37%) or 'exam score is enough to win that department' (31%). A large proportion of the sample group (63%) stated that they had lived in the city where they had been studying for 1-5 years. These ratios show us that education characteristics are preferred over the social or spatial characteristics of the city. Again, these rates show that a significant number of students are in the process of adapting to the cities where the universities are located.

In fact, being integrated with the city, being recognized in the neighborhood, provides a significant advantage in terms of security and security perception in places where social control is strong. However, social control also brings a certain degree of neighborhood pressure. Therefore, recognition, which is perceived as positive in terms of safety, can be perceived negatively for students. Therefore, it is possible for many students to perceive the city where they are studying as a freedom area and prefer to spend time with 'people like themselves rather than integrate with the residents. For example, this preference is evident in the choice of location. Students are reluctant to settle in areas where there are no students, and the presence of other students is also an important factor in choosing places for students (Rugg et al. 2002). On the other hand, students' stay in the place is decisive when it comes to the inability of students and other residents to establish relationships that will ensure social integrity. Students are often "temporary settlers" who leave the neighborhood when their academic life ends (Hubbard, 2008). This temporariness of students prevents the establishment of

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long-lasting relationships with both families and the neighborhood (Kenyon, 1997, Duke & Williams, 2009; Tuncer & Islam, 2017). This sometimes negatively affects the safety of the students and causes them to be subjected to crime or to be afraid.

In other words, apart from the places where the students live, (for example; house, dormitory, etc.) the locations, town, neighborhood, and neighborhood relations in which these living spaces are located also have positive/negative effects on security perceptions. Physical and behavioral situations such as the clean and orderly appearance of the neighborhood, the residents staying away from fights, noise and taunts, good neighborly relations, people knowing each other a little, helping a person who needs help, causes positive effects on the sense of safety.

Two excerpts from a quantitative survey carried out by Tuncer and Islam (2017: 309) in the case of Konya in 2016 (one from a resident and the other from a student) are included here to summarize the subject:

"Students live here in isolation. Naturally, social values, cultural values are not prevalent, relatively, there is not even a bit of neighborhood pressure that's supposed to be. There's no audit, there's no suppressor, there's no uncle in the neighborhood who says, look, if you do wrong here, it's like this..." (Student)

"Drugs don't use to be sold in our neighborhood, but now they're being sold very easily. In the past, when something like this happened, there were brothers waiting around the corner, they wouldn't allow it." (Resident)

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However, psychological situations such as trusting people while living a life apart from home, being able to find a helping hand to be held when they are in trouble, being in an environment that will protect and save them, knowing that they are not "stray", the social structure with strong social control and solidarity networks not only increases the sense of security but also significantly prevents the fear of crime. Therefore, participants were asked questions about the neighborhood and neighborhood relations in which they sat in the focus of the perception of trust.

First of all, the status of the sample group knowing their neighbors where they live has been questioned. It was found that it was more common for students not to know their neighbors and not to relate to them. Again, the extent to which the students trusted the people they lived in was questioned and there was a significant distrust of the people around them. A high proportion of respondents (49%) answered "neither trust nor trust". On the other hand, the high likelihood of exploitation of these people with high vulnerability rates is also decisive in the perception of insecurity feeling. However, a significant proportion of the sample group (about 60%) thinks that surrounding people will intervene when an incident that disrupts public order happens. This finding is positive because, although female students do not know the neighborhood, it reveals that they have a strong perception that people will take action when it comes to safety.

Spatial Factors Affecting Fear of Crime in Urban Areas

It was stated in the previous parts of the study that the ecological perspective focuses on spatial factors affecting the fear of crime in the urban area. In this part of the study, data obtained from the options presented in the questions or questions asked to measure the perceptions of insecurity of students through an ecological approach are analyzed.

1.　Impact of dense and sparse population on fear of crime

As noted earlier in the study, many women feel a risk of being verbally and physically abused or subjected to other crimes in crowded places (Colquhoun, 2004). On the other hand, in the process of planning and decomposing the city, security gaps arise due to the fact that some places are open to very few settlers, especially at some hours, or urban fringe, which creates a distinct unease for the women.

In the interviews, it was found that secluded places were one of the factors that most affected the fear of crime. Students were most agitated in 'secluded places' (65%). However, it has not been observed that the crowd makes students nervous to a certain extent, if not too much. 17% of female students said they experienced anxiety in 'crowded' places. In this case, however, it was found that the secluded places made the female university students more nervous. Again, among the answers to a question about 'What measures do you take against the crimes that you are afraid of being exposed to in this city?', 8% said 'I don't go to very crowded places, compared to 41% who said 'I don't go to secluded places'.

2.　Impact of urban design problems on fear of crime
i.　Ghettos, crime neighborhoods and fear of crime

One of the most mentioned subjects of the ecological approach is the migration problem. Issues such as migrant choice of location and adaptation issues are discussed within the framework of this approach. Ethnic factors were also added to socio-spatial segregation in Turkish cities, which were on the agenda with planning problems, and migrant ghettos were formed. The aforementioned neighborhoods also turn into crime places from time to time due to exclusion and economic limitations. These places, which are perceived as 'spook' places for many women, are places where they prefer to stay away.

On the other hand, regarding whether there is any link between ethnicity and fear of crime, Wiltz stated in his 1982 article, that ethnic groups have high levels of fear of crime, but when gender and age variables come into play, this fear becomes even more pronounced.

In the case of Turkey, places where different ethnic groups such as Syrians, Romans and Alawites live intensively (ghettos) which are perceived as 'unsafe' for urbanites. Especially in the planning, design and urban transformation issues of the city administrations, the

inability of these groups to produce permanent solutions to the problems of settlement and adaptation leads to the perception of these places as 'crime neighborhoods' from the outside. As a matter of fact, these are the findings of the survey researches. In Sipahi's 2016 fear of crime survey in Turkish cities, 10% of women living in Turkish cities stated that they experienced anxiety in places where ethnically diverse people lived. It was observed that female university students gave the same answer at a higher rate. About a fifth (18%) of students expressed unease in these places. On the other hand, there is a distinct (39%) dissatisfaction among students regarding the services for rehabilitating and re-cooperation of crime neighborhoods into the city.

A similar question is: "Is there any place or neighborhood in your city that you don't want to go to?". In addition, they were asked to specify the place/neighborhood in question. 42% of the sample group stated that there were places that they are afraid to go to in their city. Although separate locations are specified for each province due to the scope of the study, the most frequently mentioned places are; Gazi Neighborhood and Sultanbeyli in İstanbul, Sincan and Çin Çin in Ankara, Levent and Tepecik districts in İzmir. Participants, who stated that they did not want to go to certain neighborhoods in question, were asked why.
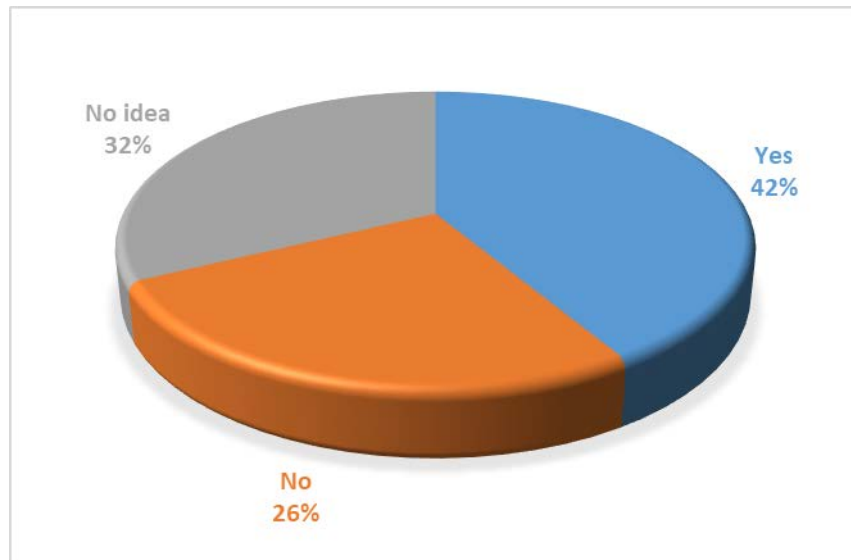
Chart 1. Avoiding going to certain neighborhoods of the city

Table 1. Why the sample group avoids going to certain neighbourhoods of the city

Reason to Avoid Going	Number	%
I'm afraid of being physically assaulted	391	20,4
I'm afraid of being sexually assaulted	380	19,9
I'm afraid of being mugged	371	19,4
I don't know why, but they always freak me out	306	16,0
I'm afraid of theft	282	14,7
I'm afraid of being conned	151	7,9
Other	33	1,7
Total	1914	100,0

As shown in Table 1, 1914 people answered the question, about a fifth of whom said they avoided going to that neighborhood because they were afraid of being physically (20%) or sexually assaulted (19%) or subjected to extortion (19%). In this case, where the sample group avoids going – in the criminal areas of the city – there is a sense of fear of crimes against both property and individuals.

Crime is likely everywhere, not just in so-called crime neighborhoods or urban depression areas. However, as expressed in the approaches of physical disorder or the theory of broken windows, some situations (such as the presence of broken windows) can be inciting crime.

ii. Lighting and safety-oriented designs and fear of crime

Another dimension of urban design that affects safety comes from lighting and safety-oriented designs. Lighting, especially in the evening, is a factor that prevents crime from being committed. Among the most important problems that hinder women's freedom to go out late and cause them to be afraid is the lack of safety and lighting systems. Apart from the neighborhoods associated with crime, women also experience a distinct sense of insecurity or even fear due to planning and design problems in urban public spaces such as underpasses, public toilets, car parks and streets.

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A significant part of the sample group feels unsafe (37%) at the point of going out at night. The proportion of people who say 'neither safe nor unsafe' (40%) is also quite high. Female students who use public transportation at night, walking the streets, using other urban public spaces such as underpasses and overpasses experience various difficulties due to the fear they feel. Various questions have been asked to measure students' perceptions of safety in the aforementioned urban public spaces.

The first of these questions is the question to measure the degree of satisfaction of some spatial regulations related to urban security. Four elements related to the design have been identified and they have been asked to evaluate their adequacy. The answers given are formulated with a five-way Likert scale.
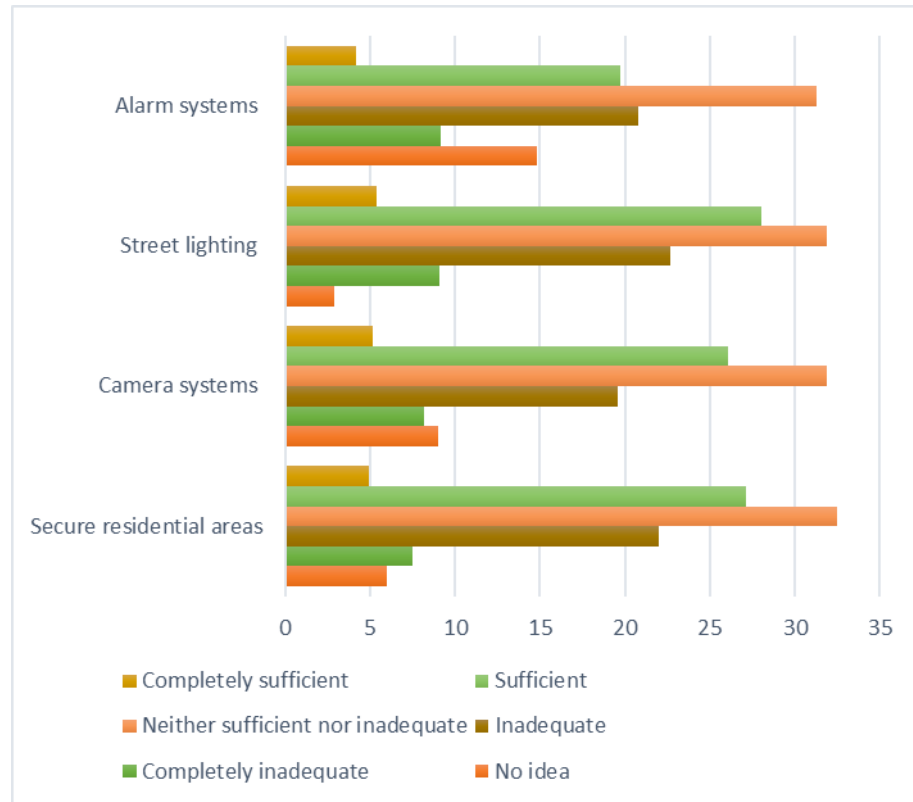
Chart 2. Adequacy/inadequacy of security-related design elements

Although it varies according to the city in which they live, it is seen that 33% of the students think that street lighting is sufficient. The proportion of those who find camera systems adequate (31%) is close to this. Again, when the chart is examined, it is seen that the most obvious answer in the context of different applications is "neither sufficient nor inadequate". Approximately one in three participants in the sample group gave this answer.

When Chart 2 is evaluated in general, it is seen that the students are significantly differentiated, those who find the spatial arrangements for security 'sufficient', those who consider them 'inadequate', and those who answer 'neither adequate nor inadequate'. In this context, it can be stated that there is an ambiguity about the adequacy of the services and that students tend to think that not enough measures have been taken against crime.

The perception of risk of exposure to crime undoubtedly varies according to urban spaces. In an attempt to determine which places the participants generally consider risky, the question was asked, "Where do you think your risk of being exposed to a crime is high?"

Eighteen different urban locations were specified and the participants were given the opportunity to answer multiple questions for the question. According to Table 2, which was created in line with the answers given, the urban areas deemed to be the riskiest by the students were stated as public transport with 705 people, and the neighborhoods where Romans live intensively with 685 people. Again, streets and streets (628 people) and neighborhoods where migrants live intensively (609 people) have been mentioned as urban spaces where

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students feel uneasy from time to time. Traffic lights with cameras and alarm systems and stores are indicated as the places with the least anxiety.

Table 2. Urban areas with high risk of exposure to crime

Urban Area	Number	%
Public transportation	705	35,2
Roman-intensive neighborhoods	685	34,2
Street-Avenue	618	30,9
Immigrant-intensive neighborhoods	609	30,4
Overpasses/Underpasses	461	23,0
Parks	441	22,0
Passenger terminals	390	19,5
Stops	307	15,3
Public toilets	257	12,8
Bank fronts	249	12,4
City center	207	10,3
Parking lots	204	10,2
Stations	203	10,1
Neighborhood markets	198	9,9
Place of living	136	6,8
Shopping malls	107	5,3
Store or shop	71	3,5
Traffic lights	60	3,0

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Streets are one of the most used public spaces in cities. Therefore, the negative perception of the safety of the streets is mainly meaningful in terms of showing the dimensions reached by the perception of risk regarding Turkish cities. In particular, it is possible to perceive the streets, avenues, and public transportation that female students often use, as 'unsafe'.

iii. Fear of crime in urban transportation

One of the situations that significantly affect students' perceptions of insecurity in urban transportation. Although they generally choose a place close to the school, it becomes difficult to find a place close to the school as the cities grow. Similarly, situations such as those who study with their families or the limitation of housing facilities for students in the city provide the basis for students to have difficulties with transportation. In everyday life practices, students are often involved in the transportation process for their various activities. At this point, the question "is urban transportation perceived as safe by students?" comes to mind. This basic question has been answered through various sub-questions.
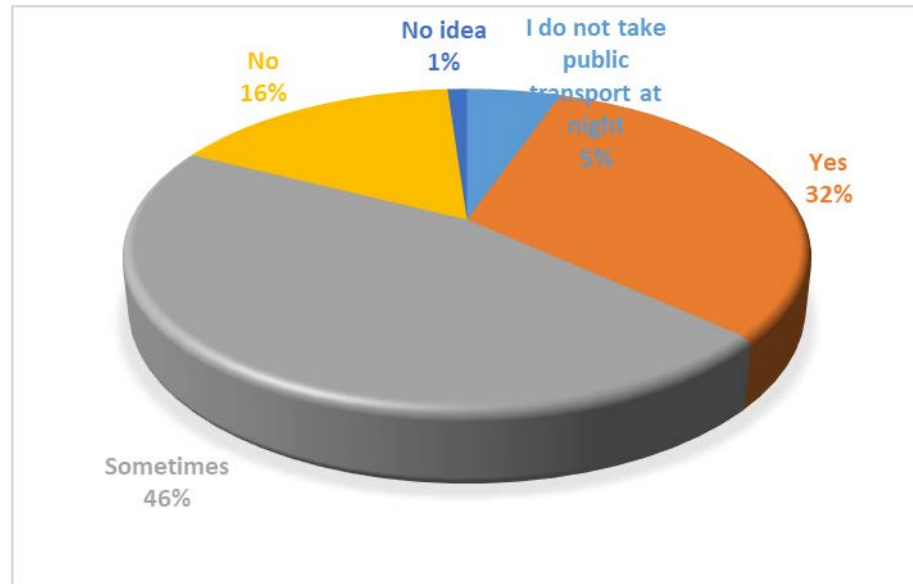
Chart 3. State of unease when boarding public transportation during night/evening hours

As seen in the Chart 3, 45% of the participants answered "sometimes" and 31% answered "yes". These rates show that three out of four female students do not find it safe to take public transport at night/evening. 5% of the participants stated that they never used public transportation during the night/evening hours.

As it is known, the most commonly used means of transportation used by students are public transport such as buses, trams, subways, buses, and ferries. Female university students experience various difficulties during the use of these vehicles and are harassed from time to time. In particular, the sexual assault and murder of Özgecan Arslan by the driver of the public transport in 2015 have significantly affected the perceptions of insecurity of all students in this regard.
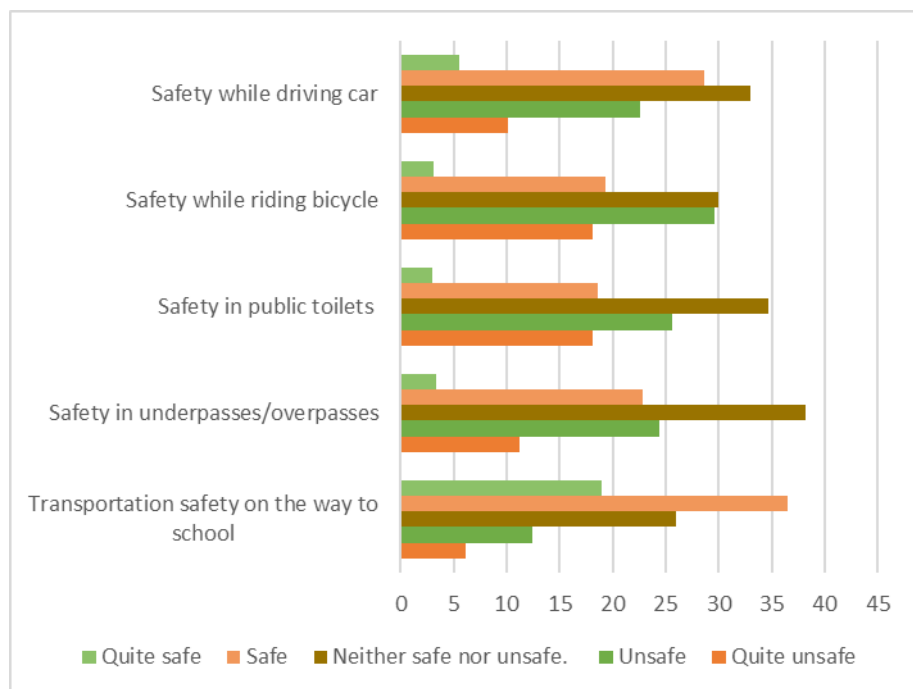
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Chart 4. Urban transportation safety perception

A low percentage of participants (16%) in the sample group stated that they were driving a car. As shown in Chart 4, a significant number of them (34%) stated that they felt safe while driving, while approximately one percent (33%) responded neither safe nor unsafe. However, 32% of respondents said it was unsafe.

There are aspects of driving that negatively/positively affect safety during access and parking in addition to driving in traffic. Especially in the context of the perspective of physical disorder, closed car parks can become unsettling places for women when they do not appear clean and tidy or are dark. Therefore, participants who were driving were asked if they heard anxiety when they parked their car in a closed parking lot.

Of the 376 participants who drove, 37% said they did not feel uneasy in closed car parks and 46% said they felt uneasy at times. There is also a significant number of participants (17%) who do not express opinions. These rates show that closed car parks are not perceived as safe enough by students driving cars. The especially dark, secluded, and neglected appearance of the car parks increases this state of unease.

To measure the safety perceptions of the participants in the context of transportation by bicycle, which is one of the urban transportation vehicles; to the participants who stated to be using a total of 1268 bicycles; "Do you feel safe enough in traffic (when cycling) if you are cycling?" A significant proportion of participants (47%) stated that they found cycling unsafe in urban transportation and 30% of students answered neither safe nor unsafe. It seems that although cycling is a common means of transportation among students, students feel distinctly unsafe about cycling due to the lack of adequate bike paths in cities and the danger of cycling in traffic. In addition to these physical inadequacies, it is often expressed that they have a fear of being harassed and blocked while cycling.

It is seen that a significant number of respondents (35%) do not find the underpasses and overpasses safe, compared to 38% who say they are neither safe nor unsafe. Only 26% of respondents consider these locations safe. Simple security measures can ensure the security of these areas.

Another important point about transportation is the question of whether students feel safe on the way to school in the city where they are studying. Transportation safety of students who have to travel the same way five days a week is an issue that university administrations, municipalities, and the state are responsible for. A significant number of students (55%) stated that it is safe to reach the school. Although this may seem gratifying, the fact that half of the students do not feel safe enough on the way they travel during their access to the school highlights an important need for the relevant administrations to reconsider their responsibilities.

2. Fear of crime and the impact of ecological factors

With the scale created to determine the levels of criminal fear of female university students seventeen different types of crimes that they are likely to encounter in everyday life were identified, and their anxiety levels related to these crimes or how afraid they were of these crimes were determined. With the help of this scale, an index of fear of crime has been determined. When determining the index, the average values of the responses of female university students regarding the types of crimes specified on the scale were included in the calculation.

Table 3. Sample group's fear of crime index

Crimes	Average	Participation Level
Being sexually assaulted	4,47	89,4
Being physically assaulted	4,27	85,4
Being attacked by a terrorist	4,21	84,2
Being attacked with a gun	4,18	83,6
Being mugged/snatched	4,14	82,9
To be kidnapped	4,12	82,4
Burglars entering the house/where they live	4,09	81,8
To be murdered	3,95	79,0
Damage to the house/place where it lives	3,81	76,2
Being verbally assaulted/verbally abused	3,78	75,6
Being scammed by fraudsters	3,74	74,8
Car theft	3,73	74,6
Being threatened/insulted	3,67	73,4
Getting caught in the middle of an incident at school	3,31	66,2
Theft of any belongings at school	3,30	66,0
Being pressured by some group/students at school	3,12	62,5
Fear of Crime Index	3,86	77,3

Note: The crimes in Table 3 are listed according to the level of overall participation. Average values were calculated by giving 1 point for 'I'm not afraid at all' on the scale, 2 for 'I'm not afraid', 3 for 'I'm a bit afraid', 4 for "I'm afraid", and 5 points for 'I'm so afraid.

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In line with the answers given, the students' fear of crime index was determined as an average score of 3.86. When the index is taken into account, it is seen that the level of fear is close to the answer 'I am afraid' (when considered 4). This tells us that there is a widespread fear of crime among female university students.

The crime that the sample group fears most exposure to is sexual assault. This crime is followed by physical assault and fear of terrorism. This ranking was determined in the same order in the study of Sipahi and Şengün (2017: 16) in the Bayburt sample. The fear of crime index was 3.84 in the study. Fear of being sexually assaulted being the lead fear is a finding that is expected because it is the crime that women fear the most to be exposed. This fear overshadows their grievances against other crimes (shadow of sexual assault) but also increases their reaction to other types of crimes (Warr, 1984; Ferraro, 1995; 1996). In fact, the fears of female university students about other crimes such as physical assault and abduction are an extension of the fear of being sexually assaulted, and another act of crime brings with it the risk of sexual harassment.

A wide range of individual, social and cultural factors influence the criminal fears of female students. However, since this study deals with the issue from the perspective of social disorder, only findings related to ecological factors are included. Participants were asked to evaluate the

effects of 7 different ecological factors on fear of crime and the question was formulated on the five-way Likert scale.
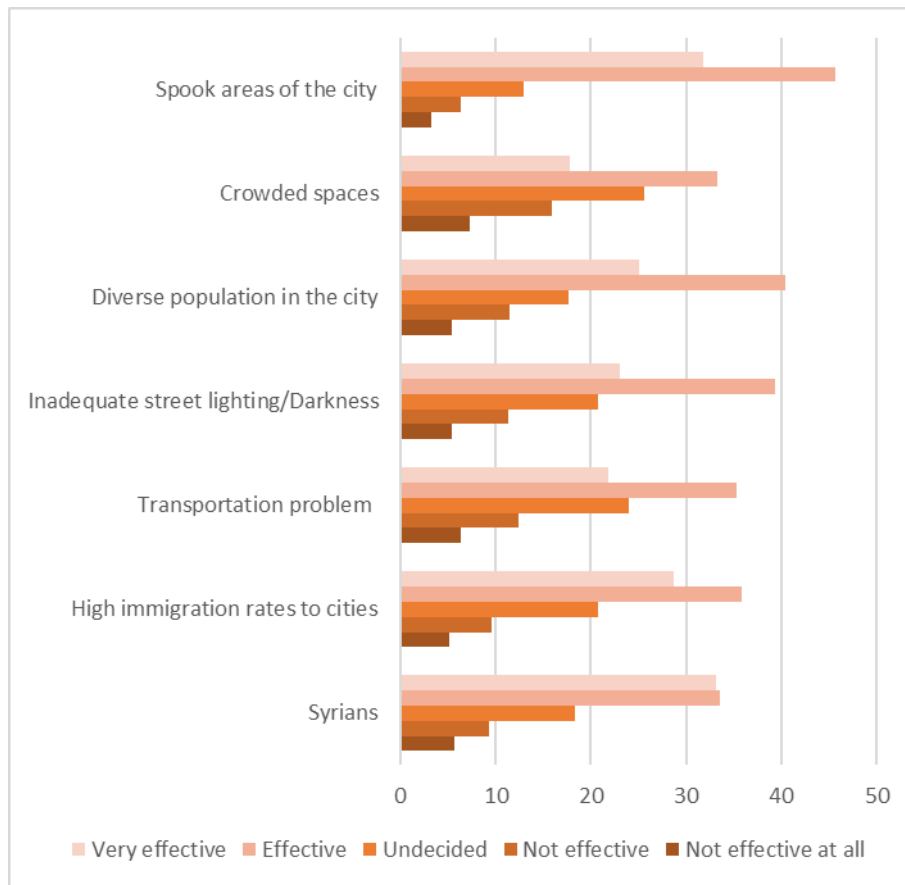

Chart 5. Ecological factors influencing fear of crime

As seen in Chart 5, the answers are rated from the "Not effective at all" option to the "very effective" option (from 1 to 5). Accordingly, scores ranging from 3.12 to 4.01 were obtained. This shows how effective the factors expressed in the question are for the sample group. Accordingly, the most influential ecological factor on the fear of crime is "spook areas of the city" with a value of 3.96. Intensifying the urban safety debate, similarities are observed in the findings of the survey research carried out by Çelik and Mirza (2021:13) at Selçuk University Campus, a current study on the fears of university students. The study highlights that a significant proportion of female students feel a distinct fear of crime within the campus area and, regardless of gender variability, students are uneasy in the crowd (19%) and in neglected/rundown places (17%).

EVALUATION AND CONCLUSION

According to ecological theory, which emphasizes the relationship of the physical and social environment with crime, social and spatial disorders also shape the fear of crime. Indeed, the safety of the place is associated with the perception of whether it is safe or not. Therefore, design and measures to make spaces safe in reducing the fear of crime, which is a social phenomenon, are becoming more and more important

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every day. In order to take these steps towards fear of crime and to make cities safer areas, factors that affect the fear of crime in society should be determined.

In this study, the effects of the disorder factor on fear of crime and risk perception based on ecological perspective were analyzed on female students at the university, who constituted one of the most vulnerable parts of the city. The findings of the study coincided with studies on female students studying in different cities such as Istanbul, Konya and Bayburt in Turkey.

It can be stated that female students, a large proportion of whom are studying away from their parents, perceive the city they are studying as an area of freedom and do not strive to integrate with the city because they live in that city for a (temporary) period. The situation is similar in terms of the neighborhood in which they live. However, the integration with the city or the neighborhood relations established with the neighborhood has positive/negative effects on the security perceptions of the students as well as the clean and tidy appearance of the neighborhood.

In the study, spatial factors affecting the fear of crime in the urban area were discussed in the context of demographics and design. It was found that the places that most unsettled the students were secluded places and those female students were noticeably agitated in places where different ethnic groups lived intensively.

It has been observed that female students experience a distinct unease about some subjects related to spatial design. Students feel insecure in urban public spaces such as underpasses and streets, and in urban transportation vehicles, especially at night. However, it has been observed that there is no firm opinion on the adequacy/inadequacy of spatial regulations regarding security.

Female students feel a distinct fear of various crimes in Turkey as they do in every country in the world. In particular, sexual assault is the leading crime. This type of crime, which is much more feared than other crimes, is considered an extension of other crimes, so it is the nightmare of the students.

In summary, female students who are continuing their education in Turkish cities are inadequate in the context of integration with the city where they live and establishing neighborly relations. This leads to an increase in their level of unease. However, students feel unsafe in their daily life practices due to urban planning problems and disorganizations and have to resort but the restrictive measures such as not going out at night and not wandering in secluded places.

Their fear makes it difficult for students to focus on their quality of life, work efficiency, and learning. Therefore, it is important that psychological, social, economic and physical studies are carried out in a coordinated manner to reduce their fear of crime. Diversifying and increasing design-related activities such as security lighting, cameras, well-maintained and clean public spaces are among the steps to be

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taken to overcome the fear of crime. Afterward, it should be studied to find solutions to problems such as migrant neighborhoods, crime nests, and students' adaptation to the city in the context of socio-psychological approaches. There is no doubt that this second phase requires the implementation of long-term, multi-actor, visionary and strong urban policies. On the other hand, increasing female visibility through the safening of urban public spaces is one of the most effective issues in reducing fear of crime and will make the most positive contribution to the sense of security of female university students.

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Resume

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