THE PHYSICAL ENVIRONMENT AND ITS INFLUENCE ON CRIME AND FEAR OF CRIME IN THE HETEROGENEOUS CONTEXT OF 'ASTIR' NEIGHBORHOOD

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Approval sheet of the Thesis

This is to certify that we have read this thesis entitled **"The physical environment and its influence on crime and fear of crime in the heterogeneous context of 'Astir' neighborhood"** and that in our opinion it is fully adequate, in scope and quality, as a thesis forthe degree of Master of Science.

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I hereby declare that all information in this document has been obtained and presented in accordance with academic rules and ethical conduct. I also declare that, as required by these rules and conduct, I have fully cited and referenced allmaterial and results that are not original to this work.

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ABSTRACT

THE PHYSICAL ENVIRONMENT AND ITS INFLUENCE ON CRIME AND FEAR OF CRIME IN THE HETEROGENEOUS CONTEXT OF 'ASTIR' NEIGHBORHOOD

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Environmental criminology is a field that finds more room in big cities such as Tirana where crime rates are higher. Not all parts of the city, have the same crime rates, depending on different factors such as the physical factors and social aspects. Parts of the city where the crime is higher are considered '*hot spots'*. The focus of the study is one of Tirana's neighborhoods, the 'Astir' zone. As a new neighborhood, 'Astir' had a rapid and mostly informal growth during the last decade, but being part of the 'Big Ring' project, a lot of transformations are changing the neighborhood. The study evaluates the reasons for considering 'Astir' a '*hot spot*' in terms of crime from the resident's perspective and environmental analysis.

The study employs mixed methods, developing questionnaires of 'Astir' residents and visitors, observations, mappings, and photo shooting. The questionnaires include the 'Astir' residents and visitors who chose to pass time there, to understand what attracts the outsiders to approach the neighborhood. The results identify factors affecting the crime rates to be high, and how environmental design can be used as a tool to prevent crime. In a heterogeneous context the elements that affect crime rates are overpopulation, high commercial and residential density, presence of a high number of bars and night clubs, low maintenance and lighting problems, not enough open public spaces, unbalanced community stabilizers.

Keywords: *environmental criminology, defensible space, neighborhood, environmental design*

ABSTRAKT

MJEDISI FIZIK DHE NDIKIMI I TIJ NË KRIMINALISTIKË DHE FRIKA NDAJ KRIMIT NË KONTEKSTIN HETEROGJEN TË LAGJES 'ASTIR'

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Kriminologjia mjedisore është një fushë që gjen më shumë vend në qytetet e mëdha si Tirana ku nivelet e krimit janë më të larta. Jo të gjitha pjesët e qytetit kanë të njëjtat shkallë krimi, në varësi të faktorëve të ndryshëm si faktorët fizikë dhe aspektet sociale. Pjesët e qytetit ku krimi është më i lartë konsiderohen si 'pika të nxehta'. Fokusi i studimit është një nga lagjet e Tiranës, zona 'Astir'. Si lagje e re, 'Astir' pati një rritje të shpejtë dhe kryesisht informale gjatë dekadës së fundit, por duke qenë pjesë e projektit të 'Unazës së Madhe', shumë transformime po ndryshojnë lagjen. Studimi vlerëson arsyet e konsiderimit të 'Astir'-it si një 'pikë e nxehtë' përsa i përket krimit nga këndvështrimi i banorëve dhe analizave mjedisore.

Studimi përdor metoda të përziera, duke zhvilluar pyetësorë të banorëve dhe vizitorëve të 'Astir'-it, vëzhgime, harta dhe fotografi. Në pyetësorë përfshihen banorët dhe vizitorët e 'Astirit' që zgjodhën të kalonin kohën aty, për të kuptuar se çfarë i tërheq të huajt për t'iu afruar lagjes. Rezultatet identifikojnë faktorët që ndikojnë në rritjen e shkallës së krimit dhe se si dizajni mjedisor mund të përdoret si një mjet për të parandaluar krimin. Në një kontekst heterogjen, elementët që ndikojnë në shkallën e krimit janë mbipopullimi, dendësia e lartë komerciale dhe rezidenciale, prania e një numri të madh baresh dhe klubesh nate, mirëmbajtja e dobet dhe problemet e ndriçimit, mungesa e hapësirave publike të hapura, stabilizuesit e pabalancuar të komunitetit, ndotja e lartë akustike, mungesa e kohezionit social etj.

Fjalët kyçe: *kriminologjia mjedisore, hapësirë e mbrojtur, lagje, dizajni mjedisor*

To my first English teacher

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CHAPTER 1

INTRODUCTION

1.1 Problem Statement

While designing cities, there are some priorities that every planner tends to fulfill. Safety is one of them. Keeping the crime as low as possible is a challenge not easily reached. Therefore, it is impossible to find a place free of crime. The purpose of a city is all interaction. It can be pleasant or in contrary unpleasant and antisocial such as being a crime victim (Ceccato, 2012). To control crime, it is necessary to keep the fear of crime low, ensuring the residents a feeling of safety and security. The feeling of security brings also the feeling of attachment and responsibility to a place. As Newman explains in his Defensible Space theory, the higher the feeling of responsibility the more defensible space is created. (Newman, 1996) When talking about the defensible space, the study brings into focus different approaches and elements of it. Being the pioneer of this theory, Newman (1996) suggested that protecting the neighborhood from outsiders would prevent crime, meanwhile, Jacobs presents a different approach creating a safer place by adding the presence of outsiders and daily activities. With the passage of years, the theory is enriched by a lot of researchers' approaches until nowadays. An important improvement in Defensible Space theory is the fact of taking into consideration of the social factors. Until that time the focus of the researchers in crime prevention through environmental deisgn was focused on the physical design and factors such as territoriality, natural surveillance, image milieu, target hardening, access control, etc. (Lynch, 1960; Jacobs, 1961; Angel, 1968; Jeffery, 1971; Newman, 1973; Gardiner, 1978; Clarke and Mayhew, 1980; Poyner, 1983; Coleman, 1985)

Social factors such as community participation, demographic profiling, socio-economic conditions, and others, came to surface with the after 90' generation of researchers. (Saville, 1996; Plaster Carter, 2002; Wilson and Kelling, 1982; Poyner, 1986; Crowe, 2000; Zelinka and Brennan, 2001)

Results have revealed the elements that make the neighborhood a '*hot spot*', referring to crime or whether there are some design strategies to improve the neighborhood security and safety from fear of crime and crime itself in the residential environment.

1.2 Thesis Objectives

Thus, the objective of this study is to explore both physical and social aspects on crime prevention. Resident's actual or perceived safety and fear of crime depending on the environmental characteristics of the neighborhood such as street network, building types, landscape features, etc. What affects the crime rates to be higher? How can environmental design prevent crime in 'Astir'?

1.3 Methodology

1.3.1 Data collection methods and materials

The research applies mixed methods aiming to collect more data and analysis. Both qualitative and quantitative methods were used to study and provide opinions, perceptions, behaviors and inputs of the focus group which will be randomly chosen residents of one of Tirana's neighborhoods. I chose to study 'Astir' zone as a '*hot spot*' regarding to crime. It is a new neighborhood created on Tirana's edges and it is built without a regulatory plan where a part from the unplanned settlements were demolished and new residential areas are being build. The study includes also people that choose to pass some time in different activities there but that are not residents. Observations, mappings, open-ended questions, questionnaires and photo shootings were also developed.

The questionnaire was developed between different target groups chosen according to: their age, socio-economic status and ownership status (renters or owners). 120 people were questioned in March and April 2022 in order to have a more general and credible result from their responses. From the questioned people there will be both female and male responders as well as elderly people. Questions also aim to understand how physical factors affects the residents physically and their perception of crime. They are classified in 4 groups related to physical factors, environmental features, crime experience and perception and social character of the neighborhood based on the literature. Site surveys were done to collect quantitative data through observations, mapping and taking pictures. The collected quantitative data was compared to qualitative information to better understand people perception of safety in the neighborhood, people experience of crime and how crime can be prevented through environmental design.

1.3.2 Data analysis

All data collected were analyzed referring to the theoretical background of the topic depicting both similarities but also contrasts. The analysis started tracking the theoretical background but classified as:

- Physical factors which are: *territoriality, natural surveillance, image, target hardening, access control and activity support,*
- Social Character of the neighborhood including results of: *social cohesion, connectivity, threshold capacity, etc.*
- Environmental Features: *road pattern, lighting, maintenance, building height, etc.*
- Crime experience & Perception

Different diagrams, charts and maps were produced to visualize data distribution to find correlations between different factors such as the period of living in the neighborhood with sense of belonging or the ownership status with the level of responsibility which were translated in indicators of crime rates.

1.4 Organization of thesis

This thesis is divided in 5 chapters. The organization is done as follows: In Chapter 1, the problem statement, methodology and thesis objective are presented. Chapter 2 consists of the literature review. Chapter 3, the results are reported by firstly introducing the neighborhood studied. Chapter 4 includes discussions where the results are evaluated. Chapter 5, presents the conclusions, limitations faced during the study and recommendations for further researches.

CHAPTER 2

URBAN ENVIRONMENT & CRIME

2.1 Crime Prevention through Environmental Design (CPTED)

Crime Prevention through Environmental Design (CPTED) is a theory aiming to prevent crime on design principles of the built environment. One of the reasons why the environmental design is attracting more and more attention in criminology is the nonrandom distribution of offences and offenders, Cozens, Saville, & Hillier, (2005) mention that according to Crowe, (2000), the effective and proper design of the built environment leads to the reduction of fear and incidence of crime, also improvement in the quality of life.

Having an historical background of the implication of Crime Prevention through Environmental Design (CPTED), people have always protected their properties and themselves by modifying their environment with the usage of thorn hedges, drawbridges or ditches (Armitage & Ekblom, Rebuilding crime prevention through environmental design, 2019). When the research about this topic started in the mid-twentieth century the first researchers (Lynch, 1960; Jacobs, 1961; Angel, 1968; Jeffery, 1971; Newman, 1973; Gardiner, 1978; Clarke and Mayhew, 1980; Poyner, 1983; Coleman, 1985) were more focused on the physical layouts of the environment, meanwhile after the 90' researchers (Saville, 1996; Plaster Carter, 2002; Wilson and Kelling, 1982; Poyner, 1986; Crowe, 2000; Zelinka and Brennan, 2001) started to extend their researches beyond the physical design taking in consideration social factors such as: socio-economic conditions, demographic profiling, active community participation, etc. (Cozens, Saville, & Hillier, 2005). That is the reason why the CPTED theory makes a separation of researchers in first & second generation based on their focus principles of CPTED.

Table 1. Separation of researchers' generation according to their focus on CPTED

		1st Gen	2nd Gen
Physical Design	Territoriality	✓	✓
	Surveillance	✓	✓
	Access Control	✓	✓
	Target Hardening	✓	✓
	Image	✓	✓
	Activity Support	✓	✓
Social Factors	Risk Assessment	✗	✓
	Socio-Economic Profiling	✗	✓
	Demographic Profiling	✗	✓
	Active Community Participation	✗	✓

All these elements can be differently translated in more broad principles originated by Oscar Newman (1972), Jane Jacobs (1961), C. Ray Jeffery, and make the pillars of CPTED which are: *Defensible Space*, *Movement Control* covered by *Territoriality*, *Surveillance*, *Management*, *Maintenance* and *Image*, *Activity Support* and *Physical Security*. (Armitage & Ekblom, Rebuilding crime prevention through environmental design, 2019)

2.1.1 Urban Fabric as a medium to prevent Crime

The term urban fabric may have a lot of interpretations, going beyond its first meaning about the materiality of a city, it can represent also the social aspects of a city which may be networks, interconnectivity, people and other subjective meanings related to the environment. It has a relation to crime and fear signifying a multidisciplinary approach. (Ceccato, 2012) Urban fabric is considered to have tangible and intangible dimensions which creates a mental map of city's qualities creating a guide for differentiating a pleasant or non-pleasant place. (Wilhelmsson & Ceccato, 2016) It is important on shaping fear of crime giving reason to the non-randomness of the crime distribution making a layout of physical and social boundaries.

2.1.2 Physical Factors

Six main characteristics are considered as the physical factors on preventing crime by improving the ability of the policy and justice system to detect and reduce committed crime according to (Newman, 1973).Territoriality, Natural Surveillance, Image/Milieu (*key concepts*

of Defensible Space Theory), Access Control, Target Hardening and Activity Support are the elements that comprise the so-called *Mechanical Prevention of Crime.* It is considered the most immediate result giving program, easily explained as a program creating obstacles in the criminal's path.

2.1.2.1 Definition of Defensible Space (Theoretical Background)

‘‘Defensible space ‘‘concept was firstly created by Oscar Newman, an architect, theorist and planner in 1972. It was presented in his book ‘’Defensible Space’’ where Newman starts explaining his theory about defensible space. It relies on the restructure of the physical layouts of communities including streets, grounds outside buildings, corridors, lobbies, etc. Its purpose is to help people preserve the areas which they feel to have an impact in their common lifestyle and security. (Newman, 1996)

It started to take attention due to the increasing crime rates, which Newman strongly believed to prevent crime due to the principles in design and urban planning of defensible space. Rather than on governmental regulations, the theory of defensible space consists on self-help. (Newman, 1996) Residential involvement is considered as a key factor to reduce crime and provide safety, that’s why Newman with his technology of defensible space wants to help residents to take control of their own neighborhood. (Newman, 1996)

In his book, *‘Creating Defensible Space’* Newman studies different types of housing units to come to the conclusion that the building type has a great influence on behavior. His studies showed that common areas shared by two or three families were well-maintained, while common areas such as corridors, elevators, stairs shared by 20 families were a disaster since the feeling of responsibility and control is lower (Newman, 1996).

Newman (1996) has made a clear study of dwelling units to create his framework about the defensible space. He states that there are three key concepts which initiate Defensible Space: Territoriality, Natural surveillance, and Image/Milieu. These three components remain strongly in the efforts against crime, but since the time this concept came into the surface reaching nowadays a lot of academics have criticized and studied it. The concept has developed since that time relating more to the present urban layouts, creating a clearer picture than the one that Newman brought.

As mentioned, Newman focused only on the build environment but there is a void found in his theory leaving aside the sociological and psychological aspects and their influence in crime prevention. Mayhew (1979) brought to attention that by neglecting these aspects

Newman's key concepts do not always bring results by giving examples for each of the concepts where social aspects make them lose value (Reynald & Elffers, 2009). Not only her but academics such as Taylor et al, Perkins et al (1981), Booth started creating more and more room for different interpretations in conflict with Newman's theory framework. Despite the sociological context missing, the unit level of analysis aspect is also missing taking in observation only one level of unit creating not a very credible study since the defensible space concept covers more than only one unit level.

A lot of studies suggest that Newman's theory is very unclear. Newman aims to prevent crime but he refers to crime in broad terms resulting in non-functioning of design principles in most types of crime. (Donnelly, 2010). There is an interplay between his three main concepts of defensible space, but there are also a lot of contradictions between them studied in time. Touching them one by one will help a lot in this study to understand this broad concept.

Territoriality

Territoriality is the tendency to stake out an area and a willingness to defend that area from intruders. Both humans and non-human animals practice territorial behavior. The purpose of territorial boundaries is to make life more predictable, orderly, and stable. (Brown, 1987)

According to Newman, as Donnelly cites (2010), territoriality is considered as 'the capacity of the physical environment to create perceived zones of territorial influences' and it can be created due to different elements such as physical and symbolic barriers which try to keep out the unknowns. A problem found in his concept of territoriality is that of focusing only in one unit. Altman suggests that if a larger scale of unit (such as neighborhood) is safe, the subunits are automatically safe and far from the burglar's target. (Brown & Altman, 1983) This re-conceptualization of territoriality is a further study of what Newman started mainly by Brown and Altman (1981). The first movement was to put in the side of territoriality the social aspect making the function of territoriality better. The results of their model studies showed that both social and physical aspects had a direct effect on crime prevention having a great influence in attitudes and behavior of residents. (Brown & Altman, 1983) Miller claims that some people are more territorial than others. Culture is one of the factors that affect territorial behavior. (Miller, 2013) Proving once again the strong relation of social aspects in territoriality that varies in different populations.

Natural Surveillance

In order to increase the observability of the area from inhabitants Newman came across with the concept of natural surveillance which is exactly the ability of residents to surveille their own space with the possibilities that the physical design offers. (Newman, 1996) This concept is similar to that of Jane Jacobs that buildings should be oriented in such a way to provide natural surveillance by the streets. (Donnelly, 2010) In contrast with Jane Jacobs, Newman wants to keep the unit isolated from strangers. Instead, Jacobs (1961) suggests the adding of routine activities and a higher accessibility because natural surveillance is not only made from the habitants. According to her this brings a positive effect for that unit space being observed most of the time. To increase this observance Jacobs suggests the adding of the functions making a diverse land usage with commercial purposes, residential, institutional, etc. She thinks about strangers not as potential risk for the unit but as a critical source of surveillance and also as a natural 'police' mechanism. Related with the diverse land use is also the routine of activities created in that place as a great potential that determines the risk of crime. It also helps in creating the milieu of that particular place directly affecting defensibility. (Reynald & Elffers, 2009)

Except from the Jane Jacobs point of view, Newman's theory of natural surveillance is in contradiction with its own concept of territoriality. Territorial behaviors of protecting what is called their own space results in less natural surveillance, which is one of the main reasons why Newman's theory is unclear. (Donnelly, 2010)

Image/Milieu

Newman claims that the appearance of the building creates an image that affects in the perception of people about that building either negative when the image is not very pleasant or positive when it is pleasant for the eye. (Newman, 1996) His focus is still in public housing projects considering them as separate parts. The missing part of putting his theory in a broad system and still neglecting the social part in human behavior is revised and gradually completed even by Newman himself. On The concept of Image/milieu Jane Jacobs contribution is present. She strongly suggests the adding of routine activities that not only increase natural surveillance but also helps in creating the milieu of that particular place directly affecting defensibility. So, it is of great importance to have routine activities which create the image of a place and also affect the behaviors (Reynald & Elffers, 2009).

2.1.2.2 Access Control

Another factor that focuses on crime prevention is access control, which involves creating barriers by access denying for offenders in order to increase their risk perception for potential targets. Access control can be reached by informal/natural strategies, formal/organized and mechanical strategies which can also be considered in target hardening and natural surveillance. (Cozens, Saville, & Hillier, 2005)Researchers such as (Poyner & Webb, 1992; Newman 1996) have found through different case studies that the access control in residential buildings such are lobbies with metal detectors, has resulted in reduced crime recordings, suggesting a positive effect of pedestrian movement reduction in public housing complexes. From the other hand, (Eck, et al., 1997) suggest that areas with an unregulated access have higher crime rates that areas with a regular street layout and limited access. There are many implemented examples of access control elements that have proven the decline of crime rates in the neighborhood showing the importance and the impact that it may have in crime prevention.

2.1.2.3 Target Hardening

Target hardening aims to increase the offenders' efforts in committing a crime which is also considered as the most traditional method in crime prevention. (Cozens, Saville, & Hillier, 2005) As above mentioned, it consists on denying and restricting access through usage of different physical barriers. Researchers have studied a lot of case studies showing that the upgrade of physical barriers such are door lock, window locks have resulted in reduced burglaries. According to (Budd, 1999) the effectiveness of security measures has a direct relation with the number of burglaries. By having measures on all the above-mentioned physical factors of crime prevention through urban and environmental design the results will be reduced crime and fear of crime, having each one of them their individual contributes.

2.1.2.4 Activity Support & Land Use

Evidences has shown that crime is not concentrated in a homogenous way. There are parts of the city with more crime rates than the others. According to some researchers, places with mixed land use and transportation nodes such as the city centers have the tendency to be riskier than the residential areas. (Sherman, Gartin, & Buerger, 1989) Even selected areas of high crime rates do not have the same distribution of crime. It differs from place to place

according to the land use. Places selling alcohol and bars tend to have more crime that other places especially during night and weekends. Different types of land use affect differently the crime distribution due to the change of location, human activity that takes place and the build environment. Public transportation stations and places are considered to be strategic points for crime events due to the fact that they develop more fear of crime than other places concerning traveler's safety. (Ceccato, 2012) According to (Brantingham & Brantingham, 1981) the crime occurs when the offenders feel safe and familiar to act while the victims are unaware of the risks which has a high probability to happen while travelling. However, it also defers in different types of crime. Activity support may increase 'eyes on the street' (Jacobs, 1961) where crime opportunities may be reduced, but with the increase of activity level there is also an increase in 'permeability' which ensures more escape routes for crime.

2.1.2.5 Environmental features

To reflect the physical factors of Crime Prevention through Environmental Design (territoriality, natural surveillance, access control, image/milieu, target hardening and activity support) there are some features of the built environment which provide different variables on a neighborhood level. Below there are discussed some of them such as: road pattern, lighting, maintenance, greenery, building height and land use diversity.

Road Pattern (Nodes, Paths and Edges)

In order to increase natural surveillance a good street network is important (Jacobs, 1961) but opposingly the street network and density affects access control making the neighborhood more permeable. (Brantingham & Brantingham, 1993; Newman, 1972). Intersection density is also a determinant variable that may bring both positive and negative effects in crime rates. A high street intersection density means a more permeable neighborhood increasing the escape routes but on the other hand it also increases activity support improving the natural surveillance. The edges are another neighborhood element created even from major roads giving the perception of a physical barrier with noticeable distinctiveness (Lynch, 1960). According to Brantingham & Brantingham, 1993, edges create areas where the strangers are easily accepted due to their normal presence differently from the interiors of the neighborhood where territoriality is higher. This may lead higher crime rates.

Greenery

Several studies have shown the benefits of greenery and natural environments in health. Greenness of a neighborhood in an important factor for physical activity, diseases, air and noise pollution, mental health, etc. (Kim Y-J & Kim E-J, 2020).There also exists a belief that greenery and vegetation facilitates crime because it gives the offenders the opportunity to hide from view, but there may be different conditions in which it may be true or not. A dense vegetation in dense wooded areas or urban parks increases fear of crime and consequently crime itself. On the other side a well-maintained outdoor area with grass and high-canopy trees increases the number of residents using it by also increasing surveillance. As a result, vegetation does not necessarily increase the opportunity for crime if it offers visibility. (Kuo & Sullivan, 2001)

Lighting & Maintenance

Street lighting and maintenance are important features of the environment. A lot of researchers have reviewed different projects undertaken in light improving along the streets and how it affects crime. Most of results show that street lighting has no effect on crime prevention but later studies has shown reductions in nighttime crime index (Chaflin, Hensen, Lerner, & Parker, 2021). In their article, 'Improved Street lighting and crime prevention.' Farrington & Welsh, (2006) try to have a more productive approach of how improved street lighting and neighborhood maintenance may affect crime by finding evidences, different strategies and techniques. There are a lot of perspectives of how these features can prevent crime directly or not. Street lighting improves visibility especially during night, and increases natural surveillance which is considered a key factor in crime prevention. (Jacobs, 1961) Another perspective has to do with environmental psychology, due to improvements in environmental conditions there is an increase in community confidence. By improving street lighting and neighborhood maintenance residents get signals that the neighborhood is improving, affecting the levels of fear of crime. Image/Milieu is another factor that is affected by lighting and maintenance from which is also originated the *'Broken Window Theory'* which stresses the importance of maintaining the environment as a physical indicator of social consistency and informal community control (Wilson & Kelling, 1982).

Building Height

Building height is one of the elements determining residential and commercial density. The impact of residential and commercial density in crime prevention is studied a lot since the time Jacobs (1961) came with the idea of adding daily routine activities in the neighborhood in order to increase natural surveillance. Later studies have come will a conclusion that high commercial and residential density may bring higher crime rates from the deterioration of territoriality, low responsibility level and low social organized community (Browning, et al., 2010) . Number of stores in neighborhood buildings is a good determinant of neighborhood's development density, High buildings means a denser neighborhood with more crime risk (Sohn, 2016).

2.1.3 Social Factors affecting Crime in a Neighborhood

The ingredients for a safe neighborhood are not only physical factors. From the literature safe and healthy neighborhoods have similar characteristics in terms of social aspect. High range of citizen participation (Checkoway & Finn, 1992), community discourses and partnerships, positive interactions between diverse populations and local culture and capacity to work together to reduce crime motives are some of the characteristics of a safe neighborhood (Saville & Cleveland, 2006).Late studies have shown that the re-orienting of CPTED focus to incorporate 'designing in' social attachments to a place brings reduction effect on crimes such as burglary (Armitage & Tompson, 2022). Second generation CPTED learning from First Generation CPTED focuses mostly on social and cultural dynamics of the neighborhood instead of large-scale and long-term strategies on physical factors. There are four strategies developed from Second Generation CPTED known as the 4 Cs in order to reach a safe neighborhood: *social cohesion, connectivity, community culture and threshold capacity*. (Saville & Cleveland, 2006)

2.1.3.1 Social Cohesion

For the Second Generation CPTED social cohesion is considered as the core same as territoriality for First Generation CPTED. There are some characteristics that define social cohesion summarized by Saville & Cleveland, (2006).

- Participation in different organizations and local events.

- Presence of self-directed community problem solving
- The ability to positively solve the conflicts in community
- Anti-violence education and awareness to support victims
- Positive relations between each other and extended friendship.

2.1.3.2 Connectivity

Connectivity is mostly related to the positive relations and influences with agencies such as government funding sources. The aim is to increase participatory planning for better decisions regarding neighborhood. (Saville & Cleveland, 2006).A neighborhood cannot function in isolation (Barton & Silverman, 1994), meaning that every neighborhood or organization needs to have connectivity outside itself. Adequate transport facilities have a positive impact in connectivity linking the neighborhood to outside areas. (Saville & Cleveland, 2006)

2.1.3.3 Community Culture

'Eyes on the street' of Jacobs (1961) does not mean only to have watchers on the neighborhood but to have people who care about the community. Community culture can be considered as a medium where people share common purposes developing the sense of place (Adams & Goldbard, 2001). In order to define culture within community there must be developed a gender-based programs such as violence against women or other vulnerable groups. Gender and minority equality is another important characteristic together with the popularity of special places, monuments that create landmarks. To conclude, traditions and cultural activities may also have a great impact in defining community culture (Saville & Cleveland, CPTED and the social city: The future of capacity building, 2006).

2.1.3.4 Threshold capacity

A balanced land use and community stabilizers may have a great impact in crime prevention. The aim of threshold capacity is to provide areas for different type of activities such as places for young people but in the same time minimizing activities that develop crime areas. Abandoned houses or too many bars in a small neighborhood generate criminal activities like assaults, disorder incidents, drunk driving, etc. (Saville & Wong, 1994). Capacity includes:

- Land use diversity and density (human-scale development)
- Balance between community stabilizers (open gardens, street activities, street food, markets)
- Decreased number of crime generators threshold. (number of bars, abandoned houses)

2.2 Environmental Psychology in Crime Perception

Environments as many other things are categorized according to different principles and criteria. Two of the main groups that can be mentioned are the *natural environments* and *urban environments*. This distinction can be considered as a point of departure in understanding the environmental psychology and perception. According to (Parsons, 1991) there is a potential influence on health and well-being of environmental perception. From the researches it is shown that different aspects such as ethnicity, cultures, or race do not have a different visual preference for natural environments over urban environments. This is one of the reasons why planners and urban designers tend to bring the nature in the urban environments, trying to affect the environmental psychology and way of perception.

Evidences from different studies show that human influence on natural environments has a negative impact in environmental perception. Their psychology about the environment works in such way that they consider the untouched nature a sanctuary place far from urban environmental problems. From the other hand according to (Nasar, 2008) the perception of pleasantness also depends on the context. An adult and a children may differ in the aspect of the environment and what they consider pleasant. As a conclusion, gender, age, economic status, race or ethnicity can be aspects on environmental assessment that provide clues for designing environments actively-friendly for each group. (Zajonc 1984) claims that humans show a rapid response to places that surround them and aesthetics is one of the most important aspects of people's experience of the place.

Despite from sociological aspects that affect the environment psychology and perception there are also some physical attributes which (Nasar, 2008) has listed. *Naturalness* refers to the natural elements. *Upkeep* refers to the perceived maintenance of the area which in contrary attributes to the incivilities causing social disorder. *Openness* refers to the perceived vista which there is perceived a similarity with Natural surveillance and in the case of lack of it, insecurities and fears can be perceived in that environment. *Complexity* refers to the amount of information in an environment which bring the aspect of *Order*, showing the degree to which people

perceive the environment as coherent, clear and unified. *Historic Significance* mostly depends on the observer's perception of an environment being historic authentically or just giving the perception of an historic place.

2.2.1 Fear of Crime

Fear of Crime, in the first sight very easy to understand, has grown a lot in terms of the interest that researchers have started to show. Not only from criminology, but fear of crime is being studied from social experts, urban designers and psychologists. It can be considered as a catalyst for further consequences which affects other elements such as territoriality, people habits and perception of safety, approach of the criminals, etc. Different studies and surveys have shown that people who are afraid of being victims of crime tend to change their habits by staying at home more. In terms of territoriality people increase the number of elements above mentioned such as: locks, alarms and different signs as an attempt for 'target hardening' (Hale, 1996) .

Obviously fear of crime increases its rates by the night where most of the people choose not to go out. In contrary in they go out people avoid particular activities that could be dangerous. Walking down some streets that they don't perceive safe, avoiding to get close to particular 'types of people' or using public transport are some of the measures that people undertake due to fear of crime. (Solymosi, Buil-Gil, Vozmediano, & Guedes, 2020) From a survey made in a group of residents by (Warr, 2000) was found that 9% of men avoid to go out at night and 40% of women did so. These evidences show that women are more likely to change their habits and behaviors due to fear of crime. Another group of people affected from fear of crime choose to be virtual prisoners in their own homes are the elderly people. However, there is always a limitation on measuring fear of crime. It is hard to find directly the source of fear caused because it is not always related to crime but it can bring crime as a consequence breaking down the sense of attachment and responsibility to an area. (Schweitzer, Woo, & Mackin, 2010)

2.2.1.1 Environmental features

Criminology is being studied from experts of different fields. For example, psychology and sociology covers social factors and citizens characteristics. In the same way architecture covers the build environment and the environmental features that affect crime. There are studies which show a direct relation of community size and fear. People who live in large cities are

more afraid of crime than those who live in small towns or suburb areas. (Hale, 1996) This could be related to the (Newman, 1996) theory of creating a defensible space by isolating the neighborhood from the strangers. In communities where encounters are with the strangers' anti-social behaviors are created in order to feel protected. Anti-social behaviors are created due to this density and heterogeneity of urban life. One of the factors that causes high levels of fear is the rapid growth of the settlements increasing the social uncertainty. (Muller & Fischer, 2015)

Broken Window Theory

Broken window theory by Wilson and Kelling was firstly created in 1982 as a theory that discovers how the build environment can affect the crime levels and people's perceptions of the environment according to its disorders. The disorders are considered as clues of how much under control is the neighborhood and the attachment of the community to that neighborhood. Despite of giving clues about the environment, disorders also affect people's perception about the safety increasing the fear of crime. (Wilson & Kelling, 1982) The way they affect people perception's is by sending messages that nobody is responsible for that place and nobody cares, which makes people feel less safe and easily attackable from potential crime. Some of these disorders except from the broken windows from with the theory took its name are also the objective signs such as graffiti, poor lighting, blind facades, vandalism, poorly maintained landscape features, etc. (Jiang, Mak, Zhong, Larsen, & Webster, 2018) It can be interpreted as a chain which starts from the disorders and finishes to a dangerous environment.

2.2.1.2 Citizen's Characteristics

As it is generally mentioned before, the level of crime is not only related to the urban layout but also to the members of the community. Education, ownership, income, age, racial makeup and length of residency are some of the characteristics that affect it. (Donnelly, 1989) It is found that crime is more present in areas where uncivilities are in higher rates. Which means that in the neighborhoods where the education level and incomes are lower and the members are young and part of minority groups the risk of crime is higher. (Skogan & Maxfield, 1982) have found that fear of crime is lower among young and middle-aged persons who own their homes and that are not renters and have lived in the neighborhood for a long time.

Vulnerability

Vulnerability is strongly related to fear. People that cannot run fast, that are unable to protect themselves or that cannot afford to protect their houses or it takes longer to recover from damages in materials and physical injuries are more expected to fear crime. In this aspect the most vulnerable groups that can be mentioned are *women*, *the poor* and *the elderly*. (Hale, 1996)

Gender

To start with specific factors of vulnerability, gender could be the first one since it has always been discussed as a predictor of fear of crime. From different surveys mentioned above, there is a clear distinction between man and women in experiencing fear of crime, but there also exists a paradox between fear and victimization. Women have a low rate of victimization and higher rates of fear. This could be explained due to the fact that in most of cases women choose not to confess threats and abuses which provides people from the real situation. Women are reported to have more fear than man due to the fact that they feel more vulnerable which means inferior in physical strength or lack of effective defense. From the other hand there are women who feel more able to resist to different attacks that are considered as fearless. (Riger, Gordon, & LeBailly, 1982) As a conclusion, differences in vulnerability are not only a matter of gender but it depends from people's personality, character, psychology as well as physical factors. (Hale, 1996)

Age

Age is considered to be the second factor which determines vulnerability in a group of people. A lot of studies are being made upon the most vulnerable group ages of the society such as kids and the elderly. When referring to fear of crime a lot of researchers such as (Skogan & Maxfield, 1982) have come to a conclusion that as people get older, they become more fearful. However, there are always some factors which make it dependable such as incomes, health conditions, living alone or not, etc.

Another aspect studied could be the fact that fear of crime in the elderly people is a bigger problem than crime itself. Similar to the women, the indicators of fear of crime in the elderly are in disproportion with the victimization rate. (Hale, 1996) This brings as a conclusion that fear of crime and age is not always related to the risk of crime but the sensitivity to that risk. (Warr, 2000)

Social class and socio-economic factors

Based on different studies especially in countries such as America factors such as work, incomes, education and race are determinants of fear of crime. People who are less educated, with lower incomes and are part of ethnic minorities tend to be more fearful than those with a better education, good incomes and affluent. (Hale, 1996) (Donnelly P. G., 1989)

All the above-mentioned social factors create the incivilities. The presence of all these factors makes people to live in the poorest neighborhoods. Due to the fact that this group of the society in less able to protect their houses and to recover from the damages makes them vulnerable. Being not able to protect from crime in an individual level brings also lack of control over the neighborhood due to the missing sense of community and responsibility. (Hale, 1996) (Skogan & Maxfield, 1982) Finally, the result is that social class and socio-economic factors can cause changes in crime rates.

2.2.2 Environmental Criminology

According to (Bottoms & Wiles, 2007) environmental criminology is defined as the study of criminality, crime and victimization related to particular places and then to the way individuals shape their activities by place and spatial factors. Many and many researches and studies are undertaken during time about crime and fear of crime. Most of them show that crime is not randomly distributed in urban areas. The places which experience more crime amount in proportion with other environments are considered as 'hot spots'. (Cozens, 2011) In this 'hot spots' is where the attention goes and studies not only the effect of physical layout in crime (Newman, 1996) of the place, but also how this physical layout shapes human behaviors including offenders' behavior. A lot of factors can be mentioned and analyzed in order to build strategies of preventing crime but there are mentioned three key concepts which are: permeable street configurations, mixed-use developments and high densities. (Cozens, 2011) All of these key concepts increase the effect of 'eyes on the street' by Jane Jacobs. It is accepted the positive impact that this concept brings in lowering the crime rates but there is always room for interpretations especially in high densities. 'Eyes on the streets' increases also the probability to have intruders and offenders around.

2.2.3 Territoriality in Crime Perception

By the literature territoriality is considered to be an important concept in environmental

crime prevention. A lot of environmental analysis have brought different elements and classifications of territoriality. As described by Altman (1997) territories are separated in three types defined by duration of occupancy and psychological centrality. First one is *public territories* such as city parks, sidewalks which are less central and enduring by burglars distinguish. *Primary territories* such as homes and bedrooms are the most central and enduring. Between these categories are the *secondary territories* such as commercial areas, shops, bars, certain parts of neighborhoods, etc. (Brown & Altman, 1983)

Based from the category of the territories violated, is also the amount of reaction provoked. Strong reactions and measures are perceived in primary territories violation, meanwhile in public territories the reaction is weaker. (Brown & Altman, 1983) This is directly related with the sense of responsibility and the feeling of ownership explained by Newman's theory of defensible space. (Newman, 1996)

In order to create boundaries and also surveillance of their own territories Newman suggests physical barriers as well as symbolic barriers. (Newman, 1996) Physical barriers may be part of symbolic barriers. Going further, symbolic barriers communicate territorial identity and concerns not only by physical barriers which Newman refers as *actual barriers* such as fences, locks, alarms, etc. (Newman, 1996) *Traces* are another type of symbolic barriers which have as a strategy to inform burglars of the presence or absence of residents. (Brown & Altman, 1983) They may be physical objects such as lights inside the house not having the purpose of creating territoriality but giving messages to keep the burglars away from their territory. *Detectability* is also an important factor (Brown & Altman, 1983) where we find a contradiction of *natural surveillance* and *territoriality*. (Newman, 1996). The presence of trees for example, may create a physical barrier for intruders, but in the other side lowers the natural surveillance. Studies has shown that the visual access lowers the crime rates (Brown & Altman, 1983) resulting that natural surveillance and openness suggested by Jane Jacobs is more effective than creating physical barriers and closeness suggested by Newman. The last factor affecting environmental crime rate is the *social climate.* It refers to the resident's behavior and concerns about not only private territories but also shared ones. (Brown & Altman, 1983) Studies has shown that a good social climate with a higher feeling of responsibility and concern about the neighborhood keeps the burglars far from that environment.

2.3 Operationalization of the environment and crime theme

As the study is concentrated in neighborhood scale it is important to start from the purpose of the city which is the social interaction. It can be pleasant or unpleasant social reaction that brings crime and crime victims. Both crime and crime victims are studied from environmental criminology which also refers to crime against environment not emphasized in this study. An important element of environmental criminology is the physical environment influencing crime through natural, physical and social factors. Environmental psychology has a great impact on crime prevention affecting fear of crime levels which depend from environmental features and citizen's characteristics. Below is shown a mapping diagram of key concepts where the study is focused (*Figure 1*).

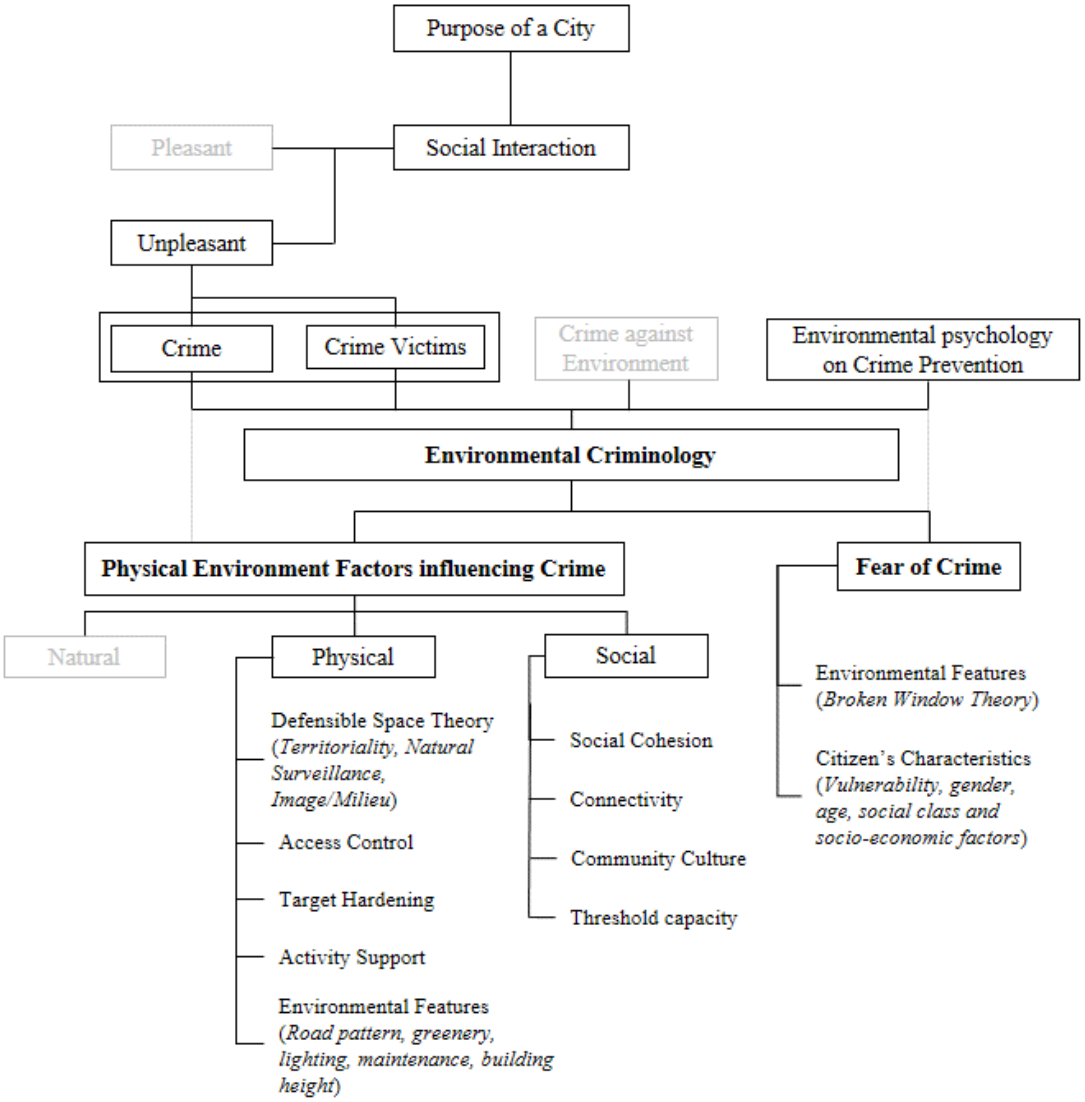

Figure 1.Theoretical diagram of Environmental Criminology

CHAPTER 3

ANALYSIS OF URBAN ENVIRONMENT & CRIME: CASE OF 'ASTIR'

The urban expansion after the post-socialist period has made Tirana experience an informal growth especially in its outskirts. Astir neighborhood is considered one of the new urban development neighborhoods of Tirana. As an area in the western outskirts of Tirana, Astir has been part of Kashar administrative unit until 2015. After this time Astir became part of Tirana Municipality named as 'Lagjia Nr.14' with a declared population number of 25,278 residents in 2019.

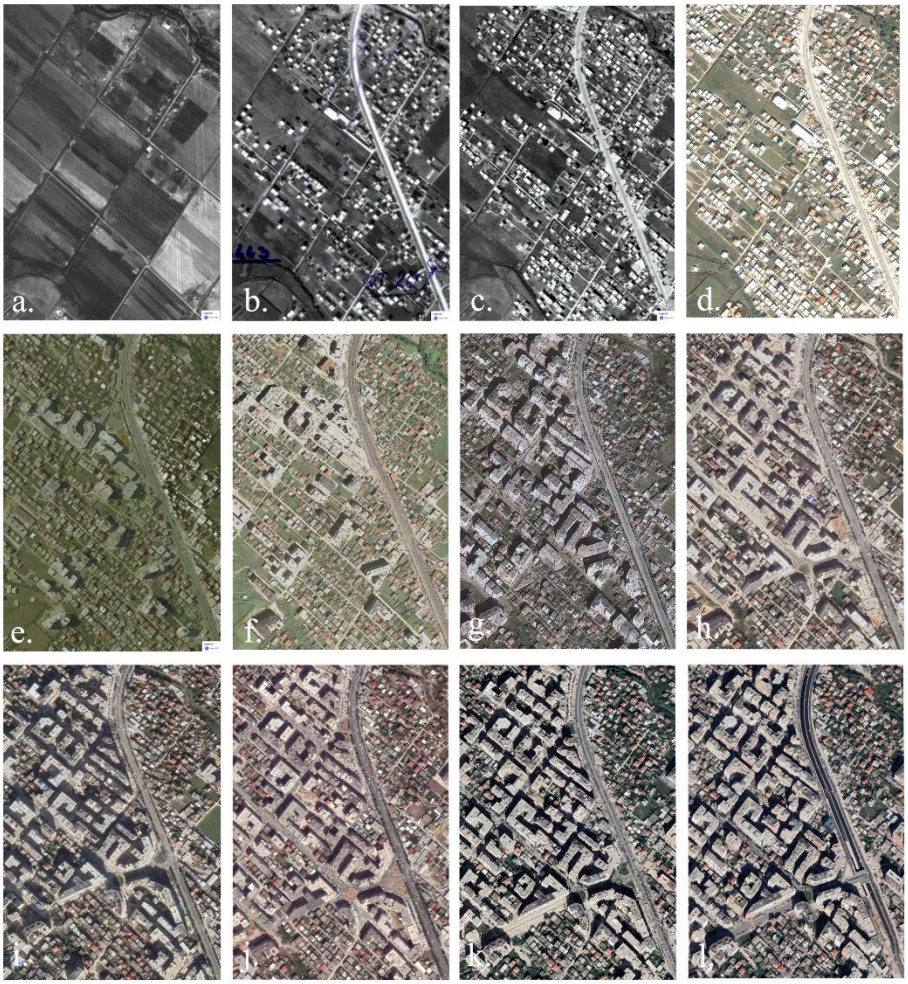

Figure 2. 'Astir' map over the years; a. (1994), b. (1999), c. (2001), d. (2004), e. (2005), f. (2007), g. (2009), h. (2012), i. (2015), j. (2017), k. (2019), l. (2022)

Going back almost 2 decades before in 1994 the today neighborhood was only covered by agricultural parcels counting a very small number of houses (*Figure 2*). After this year when the post-socialist period just had started people started to migrate and build their houses in this area close to the capital. There was a rapid growth from 1994 till 2005 where almost the entire area was covered with individual houses.

Being so close to the city center, builders and land owners saw it as a strategic area to build apartment blocks. From 2005 till nowadays the transformation of this area has been immense. From a low-income neighborhood 'Astir' is turning affordable only from middle income families. The neighborhood continues to expand being more and more dense demolishing all the individual houses remained.

3.1 Questionnaire & Observation Results

3.1.1 General information on users' profile

The questionnaires conducted were divided in two categories, residents and visitors. The total number of responders was 120 of which 70% were residents and 30% visitors. From residents' responders 57% were female and 43% male. They were mostly of an age range between 18-27 (44%) followed by 25-40 (24%), 14% were of age 40-65, while 11% were of age 5-18 and the least with 7% were the elderly people more than 65 years old. Generally, the residents' responders had higher education level with 55% of them, while 39% of them had middle education level and with low education level were only 6% of the responders. Regarding to their incomes, most of the responders had middle incomes with 77%, while the others were equally divided between high and low incomes each of them 11.5%. Residents were mostly owners of their living apartments or houses, 63% and 37% were renters.

Being a new neighborhood in Tirana 56% of the responders have lived in Astir from 0-5 years, 16% of them from 5-10 years and a considerable percentage of 28% have lived in Astir for more than 10 years.

3.1.2 Physical Factors

Based from the theoretical background, physical factors are an important element in CPTED. Through a section of questions in the questionnaire it was provided a picture of how residents intervene in some way in the physical factors to prevent crime and how they percept

these factors.

To see how residents create their own territoriality, they were questioned about the elements that they use to keep crime away from their homes. 38% of the residents used symbolic elements such as: shoes at the door, turned on lights or TV, to show their presence at home in order to prevent the intruders (*Figure 3*). This is the most frequent element used with the highest percentage because it may be the easiest one.

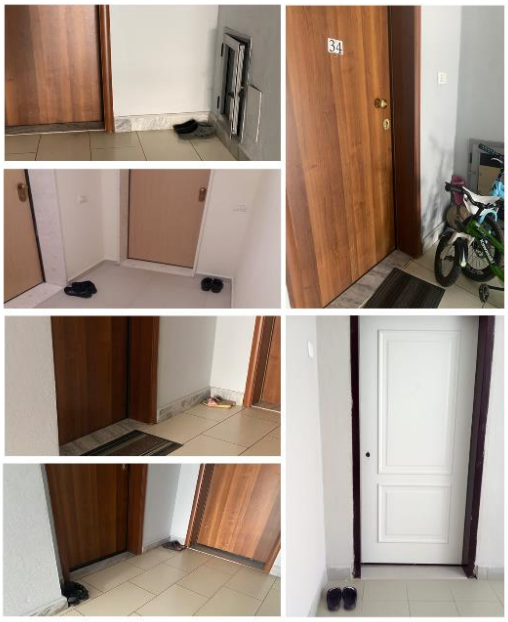

Figure 3. Shoes at the door

The second most used element to define territoriality is the alarm system with 30% while the other elements are less frequently used, fences around the house (12%) and planting trees (2%). There is also a considerable percentage of residents which do not use such elements to keep crime away with 17% of the responders (*Figure 4*).

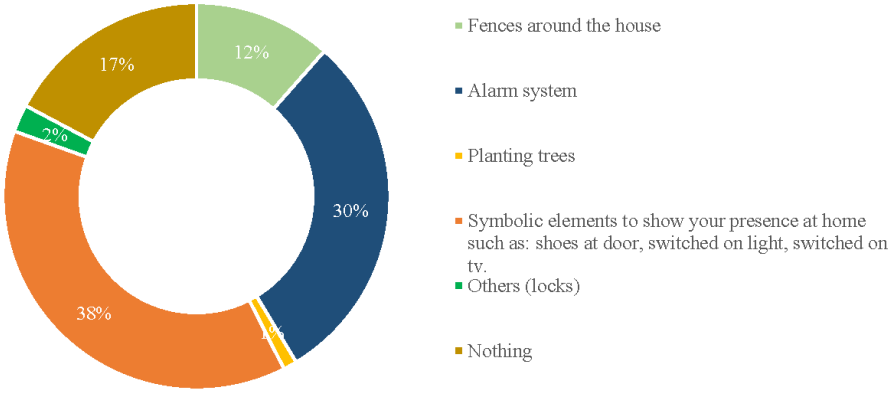

Figure 4. Elements that residents use to keep crime away

Residents were asked if they were afraid to leave their kids to go to school alone or entertain with other neighborhood kids. It resulted that only 26% of the responders were not afraid of leaving their kids alone and most of them said so, from the fact that they don't have kids. 74% who were afraid gave their reasons from which 29% chose the long distance of activities followed by the presence of strangers and suspicious people in the neighborhood (22%). An 18% of them declared that they cannot have kids under control due to lack of visual access (*Figure 5*).

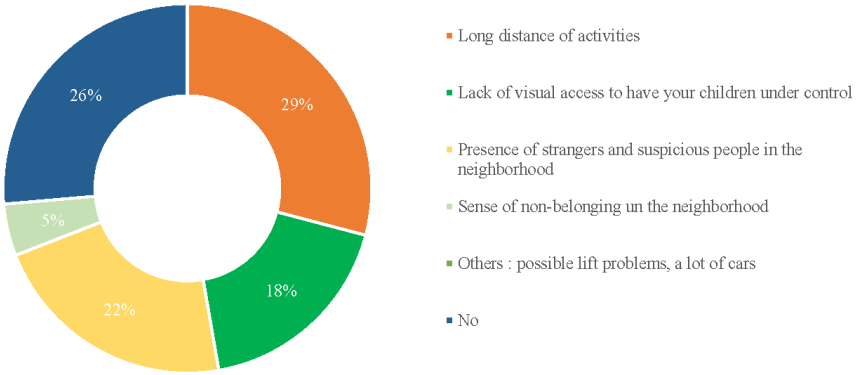

Figure 5. Chart showing the reasons why residents are afraid of leaving kids alone

Questioned if the increased number of activities improves security, 89% agree, while only a small percentage disagree with it (11%).

In the question about the elements that make the residents feel safer, through the given alternatives 46% of responders admitted that lighting makes them feel safer in the neighborhood, 26% chose street pavement, 18% chose the façade quality, while only 9% admitted that tree presence makes them feel safer (*Figure 6*).

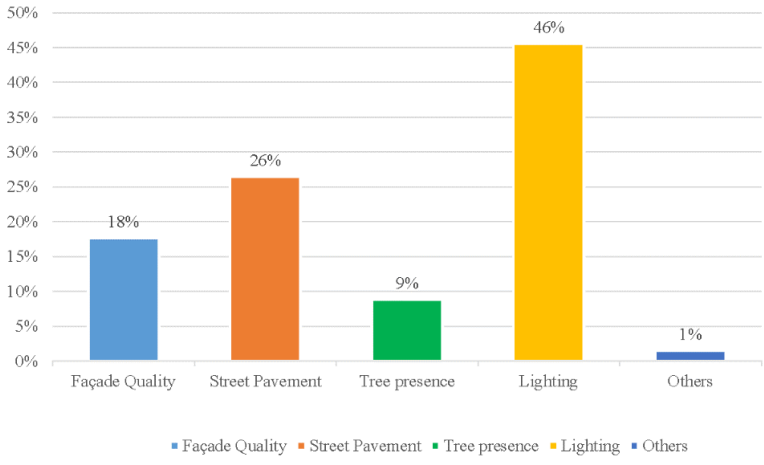

Figure 6. Chart showing the elements that make the residents feel safer

Public transportation safety is asked to be evaluated in a scale from 0 (none) to 5 (a lot) during day and during night (*Figure 7*). During day 32% of responders consider it safe to use choosing 5 (a lot) while only 7% responded by 0 (none). On contrary, during night only 12% consider it safe to use by choosing 5 (a lot) and 24% consider it as not safe at all choosing 0 (none).

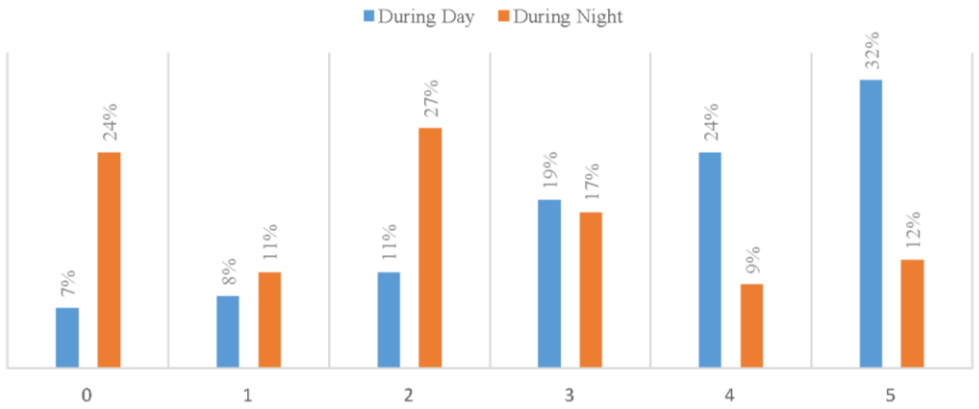

Figure 7. Chart showing public transportation safety in scale from 0 (none) to 5 (a lot)

3.1.3 Social Character of the Neighborhood

Concerning social character of the neighborhood, residents were asked to evaluate in a scale from 0 (none) to 5 (a lot), the relation with their neighbors, to understand their sense of belonging, social cohesion, and connectivity (*Figure 8*). Asked how much they know each other, 23.5% responded by 5 (a lot), 19.8% by 1, 18.5% by 2, 12,3% by 3, 11,1% by 4 and 14,8% by 0 (none). About how much they interact with each other, responses were same for 0 and 1 with 23.5% continuing with 2 and 3 respectively 17.3% and 18,5% while the lowest percentages are at 4 and 5 with 7.4% and 9,9%.

The need to protect from each other was another question where the highest percentage was at 0 (none) with 34,6% and the lowest at 5 (a lot) 8,6%. Another aspect asked to understand the connectivity was if they talk with each other about community problems. Most of them responded between 0 (none) and 3 with 25.9% and 24.7% while only 11.1% chose 5 (a lot).

Feeling part of the community was evaluated with a distributed percentage from 0 (none) with 17.3% to 5 (a lot) with 23.5% and the lowest percentage was at 2 (9,9%).

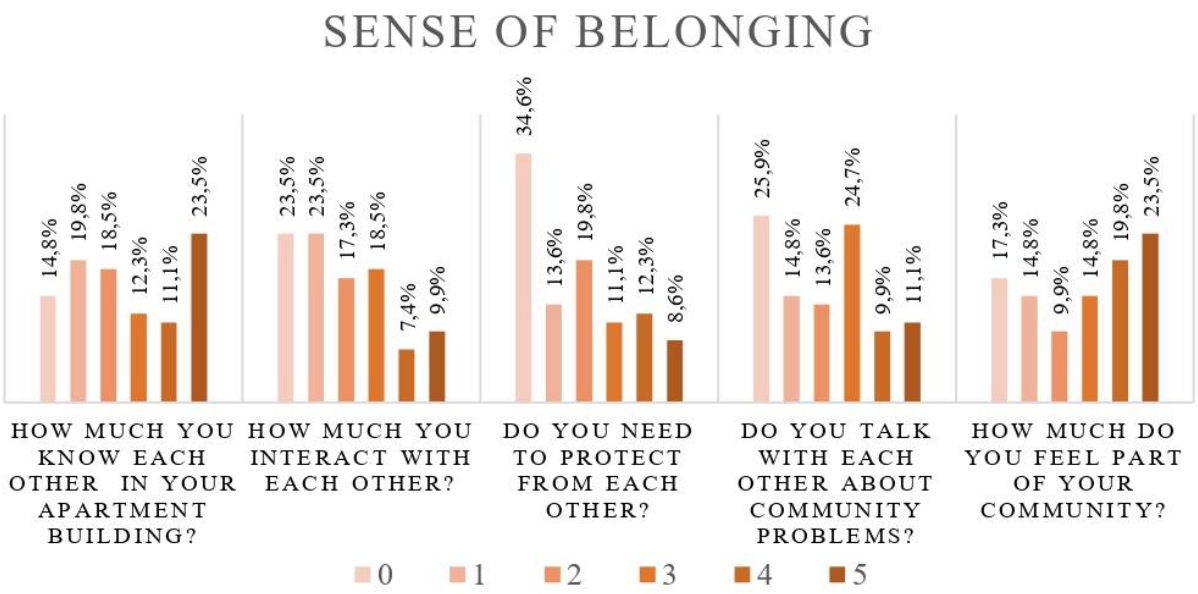

Figure 8. Resident's responsibility and sense of belonging in the neighborhood

When asked about helping another resident of their neighborhood, 64% claimed to have helped another resident at least once. On the other hand, when asked about taking care of a neighbor's house or apartment, 72% responded negatively.

To see their sense of attachment to the neighborhood, residents were asked if they would move out of the neighborhood when given the opportunity.60 % would move out of the neighborhood and 40% would choose to stay.

3.1.4 Crime Experience & Perception

Crime perception differs from one person to the other, that is why residents are asked if they consider the neighborhood safe during day and night (*Figure 9*). 88% consider it safe during day and only 12% consider it not-safe arguing it with reasons such as: apartment burglaries, presence of the unknowns and a lot of cars, no rules and safety measures into the building units, etc.

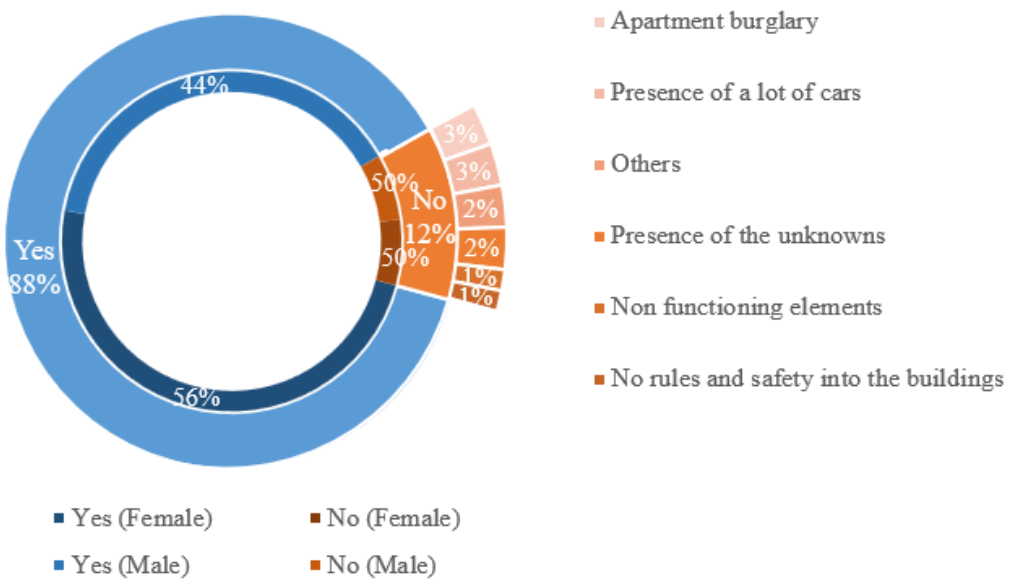

Figure 9. Chart showing neighborhood safety during day according to resident's perception

During night 52% consider it not-safe for different reasons starting from poor lighting, presence of bars and night clubs, presence of suspicious people who sell and consume drugs, gun fights, overpopulation, accidents, robberies, murders and fights, while 48% consider it safe (*Figure 10*).

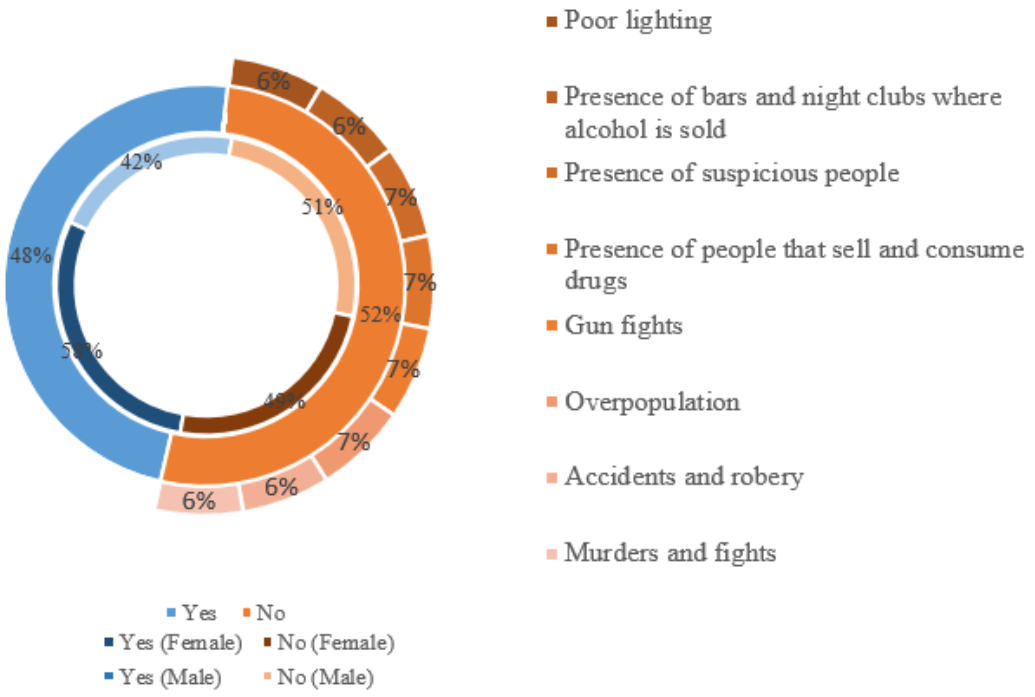

Figure 10. Chart showing neighborhood safety during night according to resident's perception

Considering it not-safe residents were asked if they were scared to walk during the night also specifying the elements that they consider dangerous (*Figure 13*). 67% of them were scared to walk at night. Poor lighting was the most common element chosen from the residents as dangerous by 22%. Followed by presence of suspicious people and low maintenance, each of them with same percentage of 14%, while blind facades (9%), abandoned buildings (4%) and dead-end street (3%) are less chosen (*Figure 11*)

Figure 11. Blind Facades and dead-end streets

From the residents, it was added an interesting element considered risky in the neighborhood which is the high number of expensive cars. This is proven also from the observations. The neighborhood has a high presence of super-expensive cars not in accordance with the income level of the neighborhood.

Figure 12. Super-expensive cars in 'Astir'

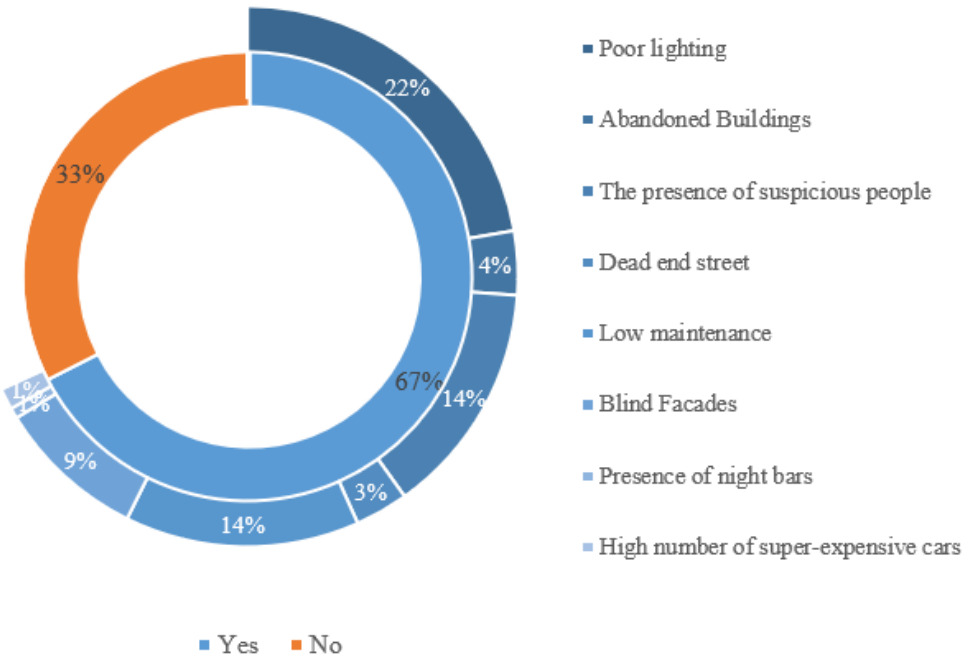

Figure 13. Chart showing if residents were scared to walk at night and the elements they consider dangerous

As per crime experience or crime witness, a high percentage of approximately half of responders resulted to have been crime witnesses or have experienced crime (45.7%). Listed from the most seen or experienced types of crimes, robbery has a higher percentage with 17,6%, usage or distribution of narcotics 11.4%, physical assault or home rape 10,4% and organized crime 6.2% (*Figure 14*).

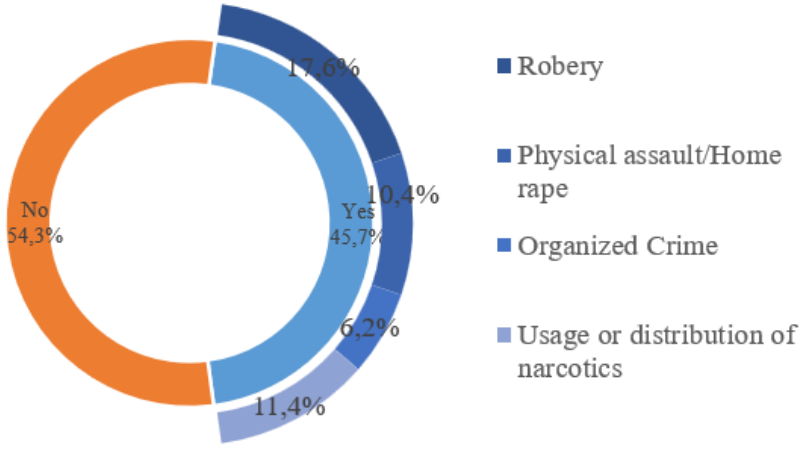

Figure 14. Chart showing crime experiences of residents

3.1.5 Visitor's Perception & Experience of Crime in 'Astir'

Visitors were firstly asked about how often they visit 'Astir'. Most of them (60%) claimed to visit 'Astir' at least once a week, while 33% responded to visit it more than once a week. Only a small percentage (7%) responded to visit 'Astir' less than once a week (*Figure 15*).

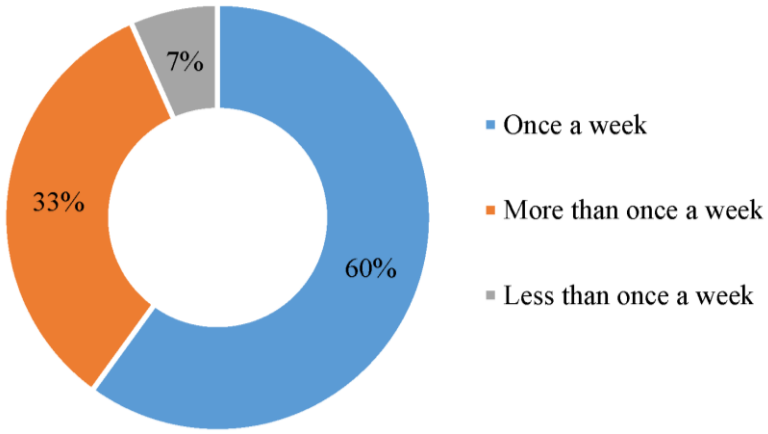

Figure 15. Frequency of visit in 'Astir'

The main reason of this high frequency of visitors in 'Astir' seems to be entertainment (50%), after it visiting familiars and friends is claimed to be the reason of visit from 44% of responders and only 6% declare to visit 'Astir' for work.

When asked if the neighborhood is safe during the day, 73% percept it as safe, while only 27% consider it as not safe. When asked about neighborhood safety during the night the results are contrary. Almost all of them answered that the neighborhood is not safe during the night (93%) and 7% claimed that it is safe.

As per their crime experiences, 87% of the visitors approved to have been crime victims or witnesses, while only 13% haven't experience or seen any of the listed crime forms. The ones that were crime victims or witnesses specified the form of crime experienced. 38% of them declared to have seen usage and distribution of narcotics, 31% have experienced robbery and the others are divided between physical assault or home rape (12%) and organized crime (6%) (*Figure 16*).

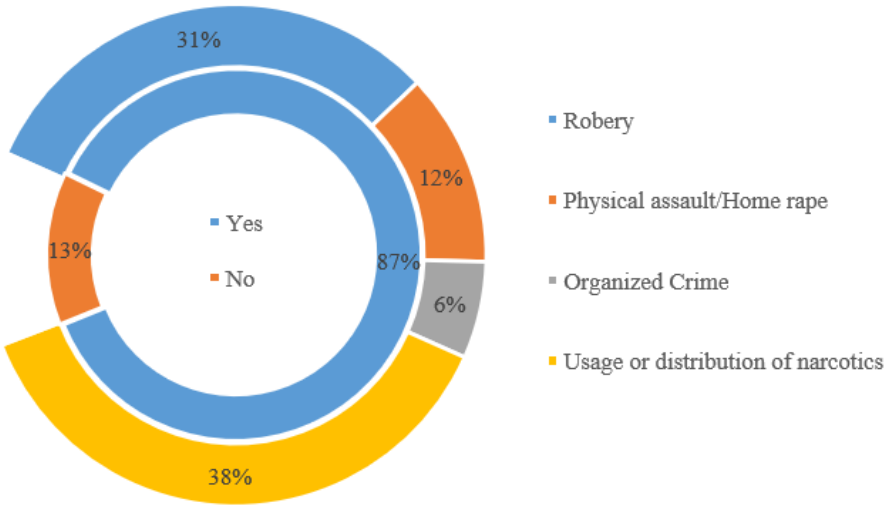

Figure 16. Visitor's crime experiences in 'Astir'

3.1.6 Neighborhood Image

To understand the neighborhood identity, Kevin Lynch (1960) analysis assess some important elements of the neighborhood such as nodes, districts, edges, paths and landmarks. Through mapping and observations author has identified these elements starting from districts which are classified in four different types according to their density (*Figure 17*).

Figure 17. 4 types of districts (Source: Google Earth)

The denser district is at the area called '2 rings of Astir' where there are situated most of the activities, the street paving is in good conditions and façades are treated better (*Figure 18*). About the nodes, there is a classification of major nodes and minor nodes. Major nodes are

‘Sheshi Shqiponja’, ‘Pallati me Shigjeta’ and ‘Kthesa e Kamzes’, important nodes also for the whole city of Tirana. There are also a considerable number of major nodes indicating high permeability to the neighborhood.

Figure 18. '2 rings' of Astir (Source: GOGLA.AL)

In addition, there are also some landmarks of the area mostly created from the most frequented places such are bars, building names or restaurants (*Figure 20*). This may come from the fact that ‘Astir’ is a new neighborhood where there are no historic places or important buildings.

Edges are easily distinguishable, especially from the part of the big ring where there is a bold border with the other part of the city (*Figure 19*). As for the paths, the neighborhood is very rich making the neighborhood accessible from each side.

Figure 19. 'Big Ring' Astir (Source: GOGLA.AL)

Figure 20. Diagram of Kevin Lynch (1960) analysis

Facilities analysis is made to study how the land use and activity support affect crime through mapping and resident's responses comparing it with the literature. As it is seen from the map and pictures below (*Figure 21*), the neighborhood has mostly facilities such as: bars, coffee shops, grocery stores, restaurants and markets. While institutional facilities are less in number, mentioning only one municipality and two post offices (*Figure 22*).

Figure 21. Facilities around the neighborhood

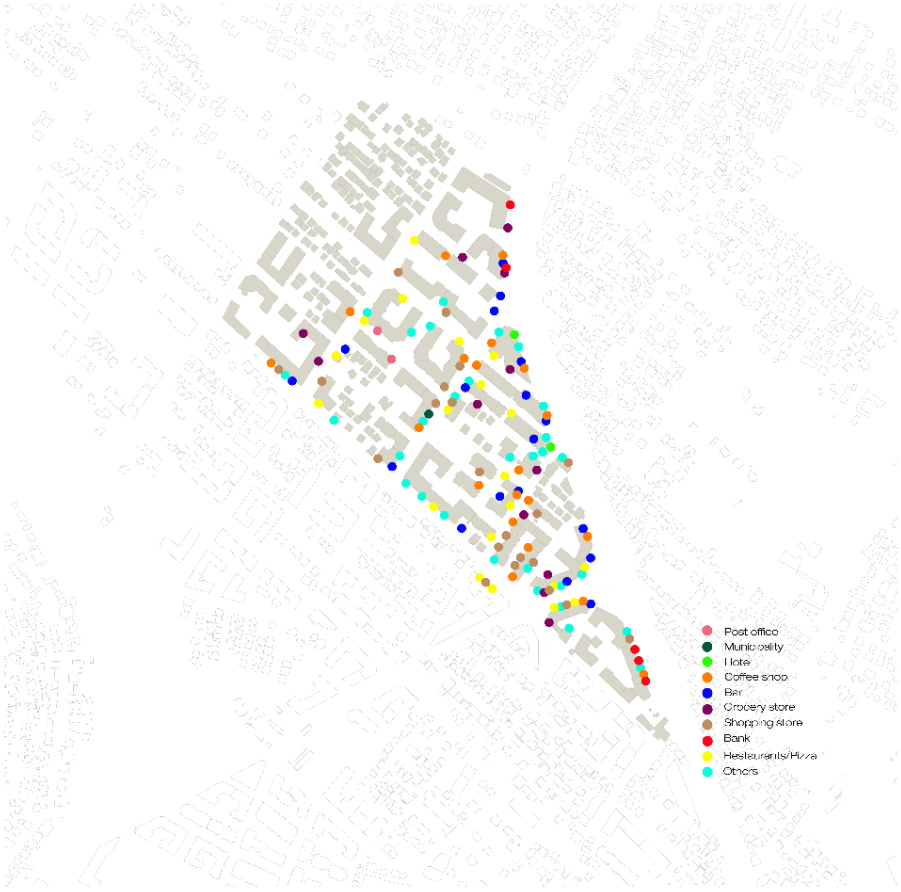

Figure 22. Diagram of facilities in the neighborhood

Mobility observations are made to understand and explore movement patterns of the community (*Figure 24*) & (*Figure 26*). As seen from the map below, public transportation is concentrated only at the main axis of the big ring. Bicycle lanes are existent, but they are added recently with the reconstruction of big ring only in the main axis and connecting to the 'New Boulevard'. Same as vehicular mobility, pedestrian mobility is rich in terms of movement having areas with different density of pedestrians identified also in the map.

Figure 23. Public transportation & bicycle lane

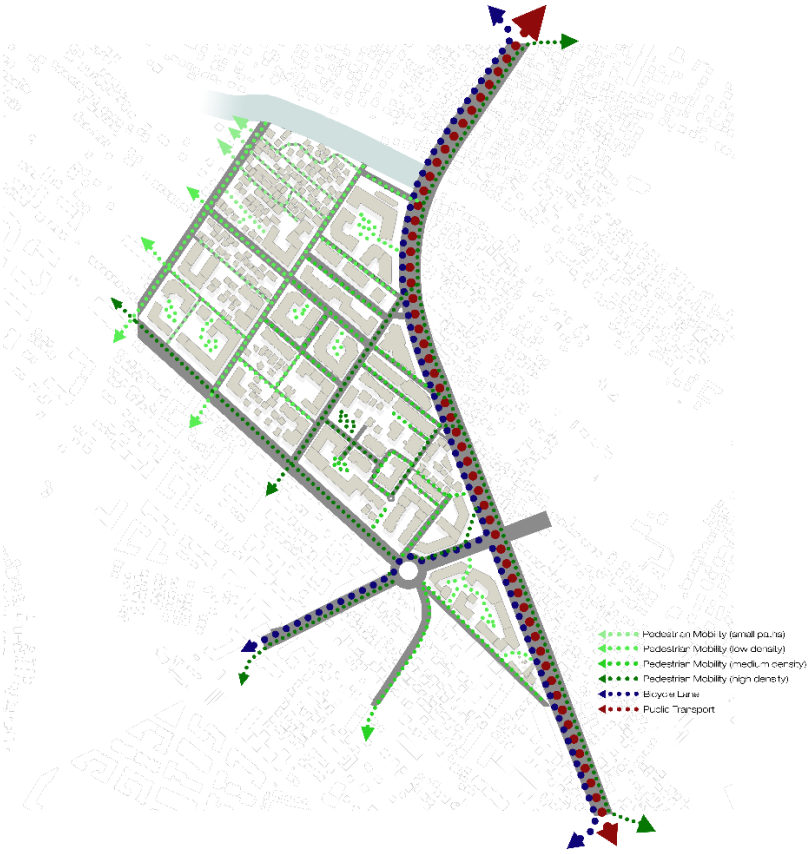

Figure 24. Diagram of mobility; public transport, bicycle lanes, pedestrian mobility

Vehicular mobility is more enriched through primary roads, secondary roads and tertiary roads or paths, all of them with a high traffic flow of cars (*Figure 25*). Primary road is the 'Big Ring', very important for the transitory traffic of Tirana. Secondary roads make mostly the division of districts while tertiary roads and paths are part of the inner neighborhood (*Figure 26*).

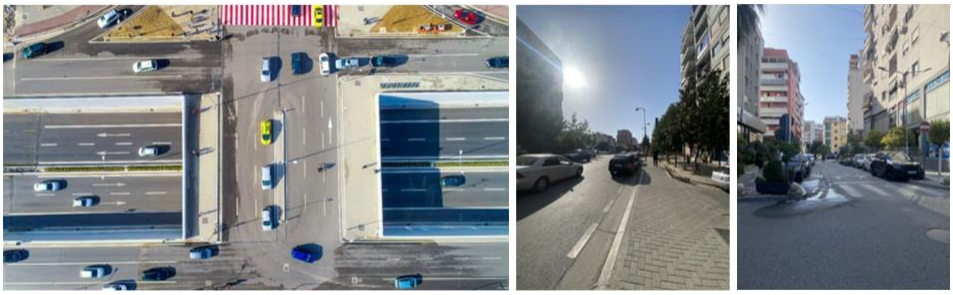

Figure 25. Primary road, secondary road and tertiary road in 'Astir'

Figure 26. Diagram of vehicular mobility

Noise pollution may be an indicator of a neighborhood with high density. It can cause different types of disorders in the neighborhood and people's life. 'Astir' neighborhood has a high noise pollution where the main sources are **traffic noise pollution** and **nightlife noise pollution**. Mappings are generated for their distribution throughout the neighborhood and as seen, nodes and roads intersections have a higher traffic noise pollution (*Figure 28*).

Figure 27. Heavy traffic in 'Astir'

Figure 28. Diagram of traffic & nightlife noise pollution

Nightlife noise pollution same as traffic noise pollution has high rates and a distribution that affects almost the entire neighborhood in difference with traffic noise pollution that disturbs mostly buildings near to the roads. It comes as a result of the high number of bars and night clubs where music is in higher volumes and people mostly consume alcohol causing disorders.

CHAPTER 4

DISCUSSIONS

Environmental criminology has a great impact in the neighborhood affecting image of that area, density, movement and also people's life physically and psychologically. Gathered data from different resources were compared to each other, also referring to the literature research. To highlight the principal factors of environmental criminology in a real context, there are considered results from residents and visitors questionnaire adding author's observations and mappings of the actual conditions of 'Astir' neighborhood. In addition, data from resident's questionnaire are compared to the results of visitor's questionnaire to see how the perception of an outsider about the neighborhood changes from a resident. Comparisons and contrasting have followed by continuously referring to the literature research.

4.1 Physical Factors on Crime Prevention & Perception

Physical factors are part of the build environment and as Crowe (2000) claims, an effective and proper design of the build environment leads to fear reduction and crime incidence. Data gathered from residents and visitor's questionnaire helped to understand the conditions of the build environment and interventions that residents make to keep crime away. Territoriality is considered as the core of physical factors on CPTED. According to Newman (1973) territoriality can be created by physical and symbolic barriers, but further studies (Brown & Altman, 1983) have added more elements to the concept of Territoriality such as **traces**. A type of symbolic barrier which consists of a strategy that informs burglars about the presence or absence of residents. When residents were asked on how they create territoriality most of them were using symbolic barriers as seen on *Figure 4*, specifically traces such as: shoes at the door, turned on lights inside the house or TV. This may come due to the fact that it may be the easiest way and because most of the residents live in building blocks where there is no possibility of actual barriers such as fences.

Based on the literature, Brown & Altman (1983) consider **detectability** as a contradiction between natural surveillance and territoriality concepts of Newman (1996). To support this theory, Nasar (2008) has listed some physical attributes that affect environment perception. Openness is one of them similar to natural surveillance which refers to perceived

vistas. This is also proved from the resident's questionnaire results. Residents choose to use less the planting of trees as an element to keep crime away (*Figure 4*) because it may lead to the lack of openness and a decrease of natural surveillance causing insecurities and fear.

As mentioned above, natural surveillance has a great importance in fear of crime and crime prevention. Newman (1996) was the first who brought it as a concept and then Jacobs (2011) supported it partially. In difference to Newman (1996) who believed that by keeping the neighborhood isolated would prevent crime, Jacobs (2011) proposed adding different functions to the neighborhood creating diverse land use increasing also the observance from outsiders. Asking the residents if the adding of activities gives them more security, almost all of them approve Jacob's (2011) concept of natural surveillance by answering 'yes'.

The presence of the kids around the neighborhood may be an indicator of a safe environment. From observations and the results of the resident's questionnaire most of the responders were afraid to let their kids go alone in the market or play with other kids in the neighborhood (*Figure 5*) & (*Figure 29*). Only a small number of responders were not worried and most of them because they still don't have kids. From the listed reasons a considerable number of responders reported that the lack of visual access to have their kids under surveillance was important for their kid's safety. This shows lack of natural surveillance in 'Astir' neighborhood.

Figure 29. Parents and grandparents accompanying kids at the park

Going in deep analysis, all the reasons reported from the responders are closely related to each other. The presence of strangers and suspicious people in the neighborhood and long-distance activities had the highest percentage of responders. The presence of strangers and suspicious people explain the necessity of the residents to have natural surveillance over their kids but in the same time creates a contradiction with Jacobs (2011) concept of natural surveillance from the outsiders. In order to find a balance between them, what causes the high presence of strangers and suspicious people gives also the way to the solution.

Overpopulation is one reasons of the presence of strangers and suspicious people in 'Astir', also reported by residents as an element that the neighborhood is not considered safe. Being characteristic of a dense neighborhood, overpopulation can be controlled by residential and commercial density. Browning, et al. (2010) claims that high commercial and residential density may bring higher crime rates from the deterioration of territoriality, low responsibility level and low social community and Sohn (2016) claims that number of stores in neighborhood buildings is a good determinant of neighborhood's density. High buildings result in denser neighborhood with more crime risk. From author's observations 'Astir' neighborhood is dominated from high buildings of 8 to 10 floors which explains a lot of reasons why residents are afraid to leave kids alone or to perceive the neighborhood as not safe (*Figure 30*).

Figure 30. 3D view of 'Astir'

Presence of strangers and suspicious people is also affected from other factors such as access control. Eck, et al. (1997) suggests that areas with regular street layout and limited access have lower crime rates. There is a relation to access control and permeability, unlimited acces means a more permeable neighborhood decreasing also target hardening factor. Brantingham & Brantingham (1993) and Newman (1972) claim that neighborhood permeability is determines by nodes or intersections density.They also suggest that edges create areas where strangers are more easily accepted. From author's analysis of Kevin Lynch elements (*Figure 20*), 'Astir' can be considered as a neighborhood with high permeability due to the high number of major and minor nodes which can be translated as street intersections. The presence of distinct edges such as the part of 'Big Ring' makes the presence of strangers as a normal phenomenon that leads to higher crime rates.

Concerning the long distance of activities, it is proved from observations and mapping of facilities and land use (*Figure 22*) a disbalance between community stabilizers proposed by Saville & Wong (1994) having a great impact in crime prevention. It aims to provide different types of activities, in the same time minimizing activities that develop crime areas. Even if it is considered as a social factor that affects crime, the 'Threshold Capacity' (Saville & Wong, 1994) includes physical factors such as the land use. 'Astir' neighborhood has mostly service facilities such as: grocery stores, markets, banks, restaurants, clothing stores, bars, night clubs and coffee shops. As per institutional services, there was only an administrative office of municipality and two post offices. It is clearly seen the absence of educational institutions such as: kindergartens, primary schools and high schools causing the long distances from which the parents are afraid of leaving their kids alone.

As mentioned before, the adding of activities gives more security to the residents but according to Ceccato (2012) crime rates differ from place to place according to the land use. He explains that places selling alcohol and bars tend to have more crime then other places. This is also confirmed by resident's responds which as main reasons why the neighborhood is not safe during the night, is the presence of bars and night clubs where alcohol and drugs are sold. Leading than to disorders such are gun fights, accidents, fights, etc. Through author's observation and mappings of night life noise pollutions it is clear that the number of bars and night clubs covers almost the whole neighborhood. In these parts was also seen the presence of the police very often due to the disorders, proving once more what makes the neighborhood unsafe and with high crime rates.

Figure 31. Police presence at bars and night clubs in 'Astir'

(Source: Reported news/ News24)

Regaring other themes such as lighting, greenery and maintenance, their importance is explained by Wilson & Kelling (1982) with 'Broken Window Theory'. They discovered that disorders such as: poor lighting, vandalism, blind facades, poorly maintained landscape and other disorders affect people's perception by sending messages that nobody is responsible or takes care about this place affecting also the sense of attachment to that place. This is also approved by resident's responses which claim that poor lighting is the main reason why they are afraid to walk at night and almost half of the responders consider lighting as an important element that make them feel safe in the neighborhood (*Figure 13*). The second element considered important from resident's perceived safety is the street pavement supporting the above-mentioned theory of how disorders affect people's perception and fear of crime.

Interestingly tree presence is the last element chosen to make residents feel safe in their neighborhood with a very small percentage. Having a look at the literature, researchers such as Kuo & Sullivan (2001) do not find it very strange because they state that exists a belief that greenery and vegetation facilitates crime giving the offenders the opportunity to hide from the view. On the other hand, they suggest that high canopy trees and well maintained greenery areas bring the residents together increasing the so-called social cohesion and sense of attachment to the neighborhood.

4.2 Social Factors on Crime Prevention & Perception

As it is mentioned in the literature (Checkoway & Finn, 1992), the ingredients for a safe neighborhood are not only physical factors. Different studies have shown that safer and healthy neighborhoods have same characteristics of social factors. Social factors where another aspect brought up by the questionnaire. Through a section a questions resident were asked firstly about their relation with their neighbors of the same building unit and then passing to the neighborhood scale. The answers were evaluated based on the 4 C's: *social cohesion, connectivity, community culture and threshold capacity*.

Saville & Cleveland, (2006) claim that social cohesion is the core of social factors same as territoriality on physical factors that prevent crime. They have concluded some characteristics for a neighborhood that define social cohesion such as participation in different organizations and community problem solving. Asked firstly about how much they know each other (*Figure 8*), there was a balance between knowing or not knowing them divided almost equally between 0 to 2 (53.1%) and 3 to 5 (46.9%). Having a look at the general characteristics of the responders, the results are in accordance with the years that residents have lived in 'Astir' where 56% have lived from 0 to 5 years and 44% have lived there for more than 5 years. Despite from the fact that half of responders know each other, when residents were asked to evaluate from 0 (none) to 5 (a lot) if they talk with each other about the community problems, most of the responders evaluated it 0, while the lowest numbers of responders were between 4 (9.9%) and 5 (11.1%). The interaction between each other was also low with 47% of responses between 0 and 1 and only 9.9% of responses to 5. This shows that knowing each other in a neighborhood does not necessarily mean that there is social cohesion.

This may happen due to the low sense of responsibility and attachment to the neighborhood which in case of 'Astir' is proved from the fact that 60% of residents would have moved from the neighborhood if they had the possibility. According to Newman (1996), low sense of responsibility and attachment comes as a consequence of sharing the space with a high number of people in high buildings that resulted very common in 'Astir' from previous analysis and also from the low presence of open public areas. Despite of knowing each other, the residents should have places to interact and become familiar with each other, improving the balance between community stabilizers (Saville & Wong, 1994).

Another aspect that lowers the resident's attachment to the neighborhood are various changes that happen. During studies of 'Astir' neighborhood, it was learned that in 2015 the

neighborhood became part of Tirana Municipality, until that time it has been part of Kashar administrative unit. From the observations, it has resulted that after 2015 there are made a lot of improvements in the neighborhood fixing some street pavements, improving sidewalks, opening outdoor areas, adding facilities such as the administrative unit added in service of the residents, big projects are undertaken such as 'Big Ring' and 'The New Boulevard' (*Figure 32*).

Figure 32. Changes of 'Astir' on pavements, streets, open areas, etc.; a. (2016), b. (2022) (a Photos Source: Google Street View)

On the other hand, this relation with the government funding source is considered by Saville & Cleveland, (2006) as *connectivity* which aims to increase participatory planning for better decisions regarding neighborhood. It was reinforced also by Barton & Silverman, (1994) which in contrary to Newman (1996), claims that a neighborhood cannot function in isolation.

As Donnelly (1989) has stated, citizen's characteristics such as: education, ownership, incomes, length of residency, etc. affect the levels of crime. Higher crime rates are found in neighborhoods where uncivilities are higher. Which means that in a neighborhood where the education level and incomes are lower and the members are young the risk of crime is higher. Having a general information of resident's profile from the questionnaire, in the neighborhood

there is a high number of young members of age 18 to 25 with 44% of responders and 24% of age 25 to 40. The presence of young members increases the risk of having uncivilities (Donnelly, 1989) but contrary to that, Skogan & Maxfield (1982) have found that fear of crime is lower among young and middle-aged members who own their homes and have been living there for a long time. Interestingly from the results it was found that 63% of responders own their homes while only 37% are renters but still the fear of crime and crime rates are higher.

Other factors such as education and incomes do not support the fact why crime rates are high in the neighborhood. Despite from having mostly young members, 'Astir' residents declared mainly middle incomes (77%) and high level of education with only 6% of responders having low education. It can be said that neither uncivilities cause high crime rates nor the high number of owners decreases crime rates in 'Astir'.

4.3 Visitor's crime perception in 'Astir' neighborhood

Visitors' perception of crime is an interesting factor to be studied because in difference with the residents their sense of attachment and responsibility is lower. Visitors are less familiar with the neighborhood which affects fear of crime levels expecting it to be higher. But as seen from the results, the neighborhood is highly frequented by the visitors and the main reason is entertainment, followed by visiting familiars or friends. This high frequency is an indicator that they consider "Astir "safe. From the visitors' responses, 73% of them consider it safe, while only 27% consider it not safe.

According to Warr (2000), fear of crime increases its rates by night. Almost all the visitors consider "Astir" not safe during night, while almost half of the residents consider it not safe (52%). This shows a greater fear of crime and uncertainty between the visitors than between the residents.

When asked if they have been crime victims or witnesses, 87% of them approved to have been crime victims or witnesses. Interestingly, 38% of crime forms experienced was usage and distribution of narcotics. This comes as a result of the presence of visitors for entertainment purposes and the main forms of entertainment in "Astir" are bars, night clubs and coffee shops, common places for usage and distribution of narcotics.

CHAPTER 5

CONCLUSIONS

5.1 Conclusion

Environmental criminology is an important element affecting safety. It is defined as the study of criminality, crime and victimization (Bottoms & Wiles, 2007). In order to have a place with pleasant social interaction is important to assess the factors that could prevent unpleasant social interactions which are synonym of crime. The role of architecture in crime prevention has started with Newman's Theory of Defensible Space followed by a lot of researchers, but having in focus only the build environment. Through the years, the role of architects on crime prevention was expended taking in consideration also the social factors. There have been a lot of different approaches starting from keeping the neighborhood isolated then adding different activities inside the neighborhood until reaching in nowadays mindset of a neighborhood planning.

Through this study it was aimed to explore which are the factors affecting crime rates in a specific context, in one of Tirana's neighborhoods with high crime rates such as 'Astir'. A relatively new neighborhood in Tirana which over the last 20 years has had a gigantic development passing from empty soil to a very dense neighborhood. Without a regulatory plan where only building blocks were constructed, the result is a very crowded and still in development neighborhood.

Qualitative and quantitative research methods were employed in order to collect data through different sources using questionnaire surveys, observations, mappings and photo shooting. Data is then analyzed based on the literature considering as a main actor the residents and then the visitors. The resident's perception was grasped on neighborhood safety, physical factors affecting crime and their sense of attachment and responsibility on the neighborhood. The information gathered from residents was compared to the visitor's perception to come to conclusion about what can change in the environmental design to prevent crime in 'Astir'.

Table 2. Physical Factors analyzed from resident's perception, observations and mapping.

Physical Factors	Resident's Perception	Observations	Mapping
Territoriality			
Traces	Shoes at the door Turned on light or TV	Shoes at the door	
Physical Barriers		Fences Surrounding walls	Fences Surrounding walls
Natural Surveillance			
Positive		High presence of outsiders	
Negative	Not leaving kids alone High density		
Image/Milieu			
Positive	Paved streets Cleaner areas Big Projects (Big Ring)	Paved Streets Maintenance Better Facades Big Projects (Big Ring, New Boulevard)	
Negative	Still unpaved streets Unpaved sidewalks	Not ordered garbage spots Still unpaved streets Not unified facades	
Access Control			
Positive		Building blocks with a controlled entrance and cameras	
Negative	High number of strangers		High permeability Presence of edges
Target Hardening			
Physical Barriers and Symbols	Fences Walls Window & door locks	Fences Walls Window & door locks Presence of a dog sign	
Land Use			
Positive	Lot of facilities	Residential land use, 2 floors of diverse activities	Lot of facilities
Negative	Lack of schools, kindergartens,police station, health care facilities High presence of bars and night clubs	Lack of schools, kindergartens,police station, health care facilities High presence of bars and night clubs	Lack of schools, kindergartens,police station, health care facilities High presence of bars and night clubs

Table 3. Environmental features analyzed from resident's perception, observations and mapping

Environmental Features	**Resident's Perception**	**Observations**	**Mapping**
Road Pattern (Nodes,Paths,Edges) High number of nodes (street intersection), paths and important edges			
Positive		More transparency	
Negative		Increase permeability Uncontrolled access Presence of strangers normal	Increase permeability
Greenery			
Positive			Trees across the streets and in some private gardens
Negative	Low usage of greenery as physical barrier Need for more open green spaces	Low usage of greenery as physical barrier Very few green open areas	Very few green areas
Lighting & Maintenance			
Negative	Lighting problems in the streets and low maintenance in cleaning streets, sidewalks, etc.	Still unpaved streets, not ordered garbage spots, bad sidewalks interrupted by parking ramps and with unreasonable level differences	
Building Height			
Positive			A few numbers of private houses
Negative		High density of high-rise buildings	High density of high-rise buildings 8 to 10 floors

Table 4. Social Factors analyzed from resident's perception, observations and mapping

Social Factors	Resident's Perception	Observations	Mapping
Social Cohesion			
Negative	Low social interaction even that they mostly know each other	Low social interaction, very few people greet each other on the street	
Connectivity			
Positive		Improvements in street pavements, sidewalks, open areas, water supplies, etc. after becoming part of Tirana Municipality	
Community Culture			
Threshold capacity		Need to lower the number of bars and night clubs Add schools, kindergartens, police stations, etc.	
Fear of Crime	High fear of crime especially during night		

There were a lot of theoretical gaps identified related to this topic. Firstly, existing researches were far from the context of Albania, especially a heterogeneous context such as 'Astir'. Due to a lot of contradictions between researchers during years, there is not an actual framework of how crime could be prevented studying environmental factors. Based on this, as a contribution to this research topic, *Table 2*, *Table 3* and *Table 4* bring together all the elements related to crime prevention, found through resident's perception, observations and mapping. They are classified according to physical factors, environmental features and social factors, all of them are separated into positive aspects and negative aspects of the neighborhood.

After studying and discussing the results, the problems that cause high crime rates in 'Astir' neighborhood are:

- Overpopulation
- High commercial and residential density
- Presence of a high number of bars and night clubs that sell alcohol leading to disorders

- Lack of important services such as: educational facilities (elementary schools, high schools, kindergartens) health care facilities and police stations creating long distances
- Not enough open public spaces to increase social interaction
- High noise pollution
- Presence of important edges of Tirana making the presence of strangers and suspicious people normal and easily accepted
- Low maintenance and lighting problems
- Threshold capacity (Unbalanced community stabilizers)
- Lack of Social Cohesion and Interaction

In conclusion, interventions in both physical and social aspects are needed in order to prevent crime in 'Astir'. Firstly, to not overpopulate it more, is important to lower the rate of constructing new residential blocks. Instead of it, there is an urgent need to balance the community stabilizers by providing other facilities such are schools, kindergartens, police stations, health care facilities and decreasing the number of crime generators such as bars and night clubs. Adding open public spaces or open gardens not only improves the Image/Milieu of the neighborhood but also brings residents together ameliorating social cohesion.

Regarding the environmental features, investments in lighting, street pavements and maintained landscape should be made in order to lower fear of crime and crime itself. Greenery can be a useful tool to reduce the noise pollution from the inevitable traffic and nightlife noise that causes loss of self- control and patience leading to dangerous behaviors. It also creates more attractive open areas for residents.

5.2 Limitations

Although the study conducted deep surveys from the residents and observations on the neighborhood, there were certain limitations regarding the data sources about crime. There were no crime records and statistics disponible about the crime rates in 'Astir' neighborhood to have an accurate number that could have helped this study.

On the other hand, outsiders' perception about 'Astir' could have brought interesting results which would have been compared with the real situation of the neighborhood, if the neighborhood is as risky as from outsiders' perception or not. Since the outsiders that were part

of the survey were very few, the data gathered from them was not enough to understand their perception and the factors that create that perception.

In some parts of the neighborhood territorial behaviors were more evident, and the residents did not easily accept strangers, especially the part near to Lana River with only private houses. This limited the access to shoot photos and study further that part of the neighborhood but there were still residents who were part of the survey.

5.3 Future research

Based on the results of this study, and the limitations faced, there are some aspects which can be studied further. The research may continue by making a deeper analysis about the outsiders' perception which can lead in other factors that affect crime rates.

Further researches could be on two-different parts of the neighborhood having different character. One is the part with high rise buildings and the other part is with the remaining private houses since the time that the neighborhood started to get populated 20 years ago near to Lana River. Their territorial behaviors indicates that there are a lot of differences in terms of territoriality, fear of crime and social factors.

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APPENDIX A

Questionnaire of 'Astir' neighborhood.

Note: This questionnaire aims to study the security of 'Astir' neighborhood and will be used in a master thesis in architecture.

Your age?

5-18 ☐ 18-25 ☐ 25-40 ☐ 40-65 ☐ +65 ☐

Your gender?

Female ☐ Male ☐

Your level of Education:

Elementary ☐ Middle ☐ High ☐

How do you consider your monthly income of your family?

Low ☐ Average ☐ High ☐

The reason of your presence in this neighborhood?

Resident (If yes, since when do you live there?)

Your status in relation with the living unit:

Renter ☐

Owner ☐

Visitor (If yes, what is the reason and how often do you visit it?)

- ○ Entertainment
- ○ Work/ Business
- ○ Familiar visit/ Friendly
- ○ Other: _____

- ○ Once a week
- ○ More than once a week
- ○ Less than once a week
- ○ Other: _____

Following questions are connected with your neighborhood. Please give your opinion with a grade from 0 (nothing) to 5 (a lot)

	0	1	2	3	4	5
How much do you know each other in the living block?	☐	☐	☐	☐	☐	☐

How much do you interact with each other? ☐ ☐ ☐ ☐ ☐ ☐

How much do you feel the need to be protected from each other? ☐ ☐ ☐ ☐ ☐ ☐

Do you communicate with each other for community problems? ☐ ☐ ☐ ☐ ☐ ☐

How much do you feel part of the community in this neighborhood? ☐ ☐ ☐ ☐ ☐ ☐

Did you happen to help a neighborhood resident?

Yes ☐ No ☐

Did you happen to take care about your neighbor's house/apartment?

Yes ☐ No ☐

According to you, is this neighborhood safe during the day?

Yes ☐ No ☐

If no, why? _____

Have you ever been crime victim or crime witness of the crimes listed below? If yes, please describe.

☐ Robbery

☐ Physical assault/Home rape

☐ Organized crime/ Usage or distribution of narcotics

☐ Other: _____

According to you, is this neighborhood safe during night?

Yes ☐ No ☐

If no, why? _____

Do you feel scared to walk at night in your neighborhood? If yes, please specify one or more elements that you consider dangerous.

- ☐ Poor lighting
- ☐ Abandoned buildings (broken windows, presence of graffiti on the walls, etc.) Presence of suspicious people.
- ☐ Dead end Street
- ☐ Low maintained environment
- ☐ Blind facades
- ☐ Other: _____

How safe do you feel to use public transportation in your neighborhood?
(0-nothing, 5-a lot)

	0	1	2	3	4	5
During day:	☐	☐	☐	☐	☐	☐
During night:	☐	☐	☐	☐	☐	☐

What elements do you use to keep crime away from your home?

- ☐ Fences around the house
- ☐ Alarm systems
- ☐ Planting greenery
- ☐ Symbolic elements to show your presence at home such as: shoes at the door, switched on light, switched on TV, etc.

Other: _____

Are you afraid to let your kids go alone in market or other activities such as: dumping garbage, having fun with other kids in the neighborhood, going and coming back from school, etc.? If so, what is the reason?

- ☐ Long distance of activities: school, market, waste collectors, park, etc.
- ☐ Lack of visual access to have children under control
- ☐ Presence of strangers and suspicious people in the neighborhood
- ☐ Other: _____

Does the increase of activities along the way give you security?

Activities: coffee shops, markets, drugstore, etc.

Yes ☐ No ☐

Which are the elements that make you feel safe in the neighborhood? (You can choose more than one alternative)

- ☐ Façade quality
- ☐ Street pavement
- ☐ Tree presence
- ☐ Lighting
- Other: _____

Has the reconstruction of the big ring affected the neighborhood security? If so, why?

_____

_____

_____

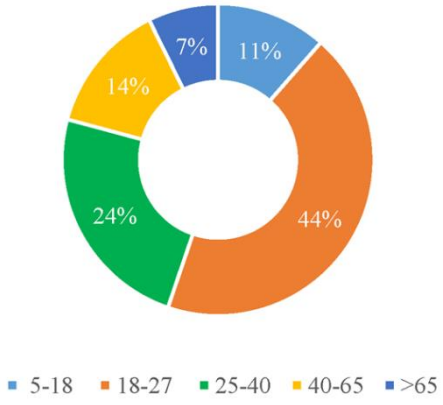
If you were given the opportunity, would you move out of the neighborhood?

Yes ☐ No ☐

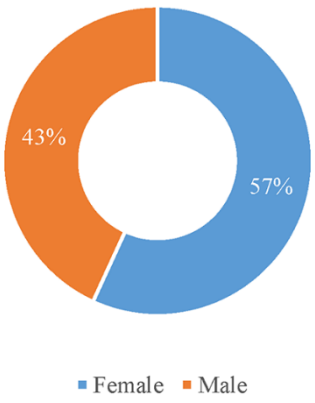
APPENDIX B

Questionnaire answers translated in charts.

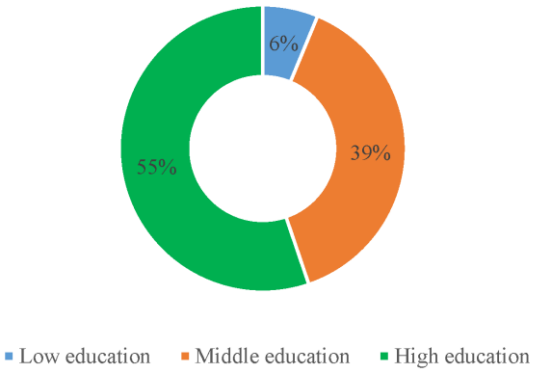
Q1. Your age?



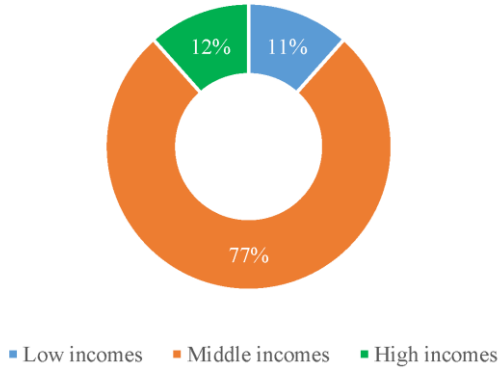
Q2. Your gender?



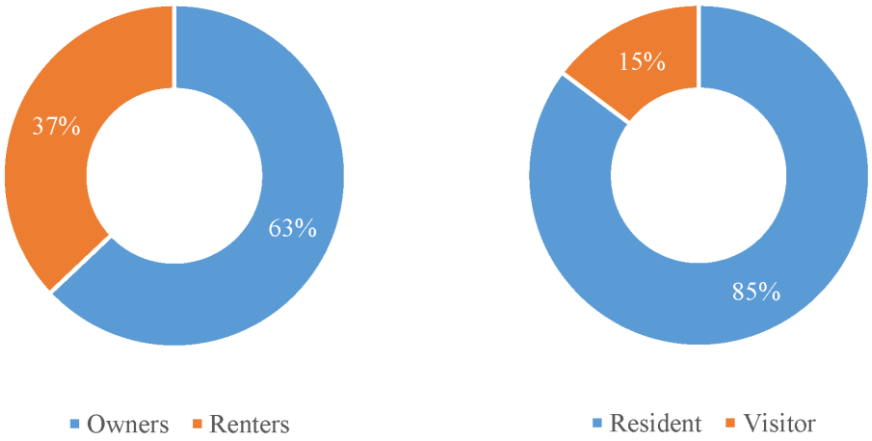
Q3. Your level of Education?



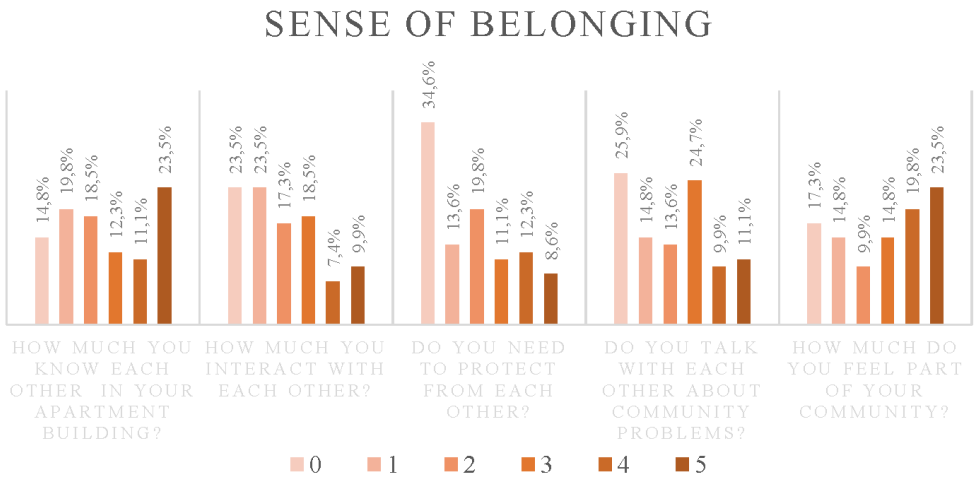
Q4. How do you consider your monthly income of your family?



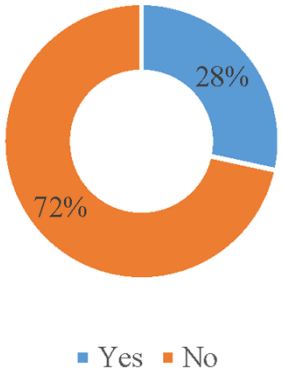
Q5. The reason of your presence in this neighborhood?



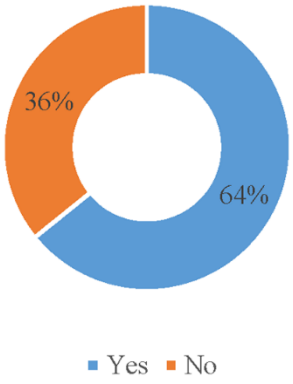
Q6. Sense of belonging



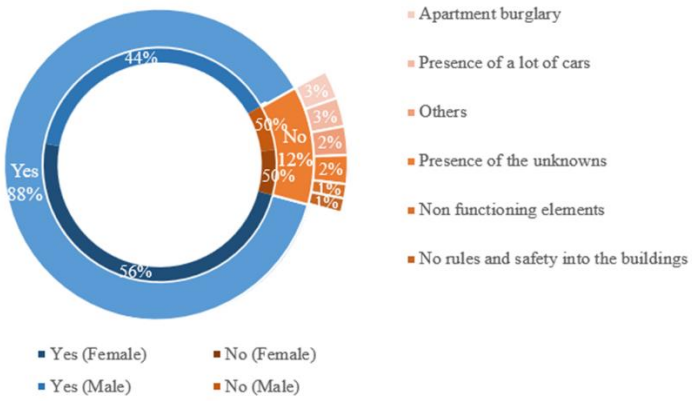
Did you happen to take care about your neighbor's house/apartment?



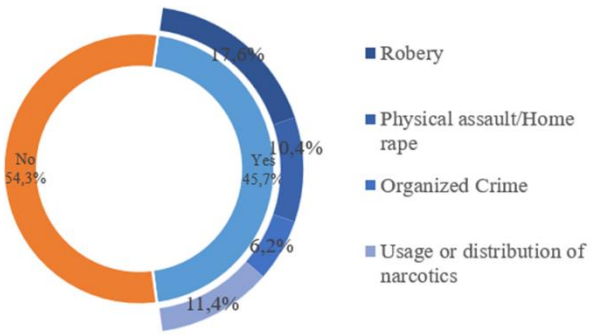
Did you happen to help a neighborhood resident?



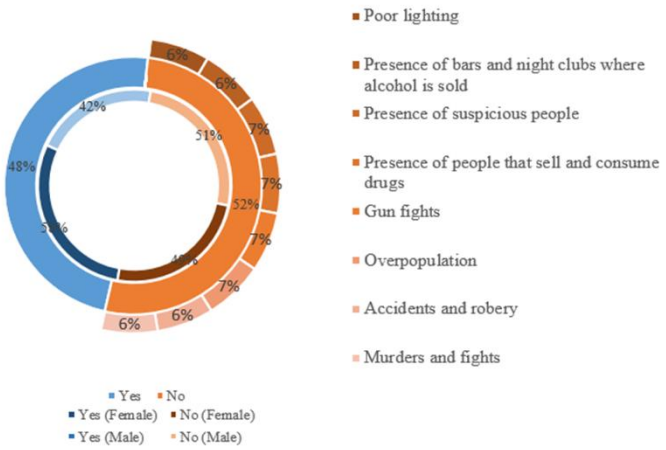
Q7. According to you, is this neighborhood safe during the day?



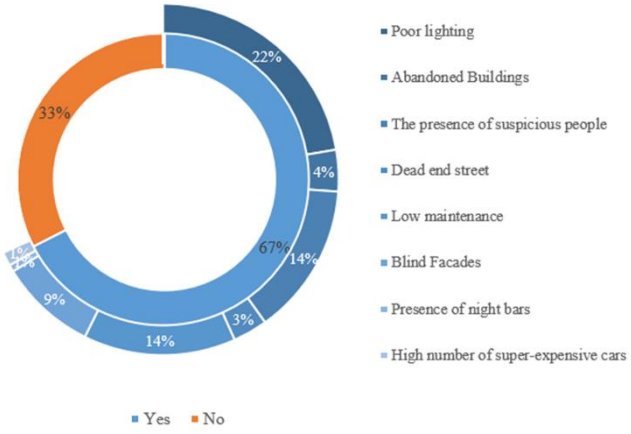
Q8. Have you ever been crime victim or crime witness of the crimes listed below?



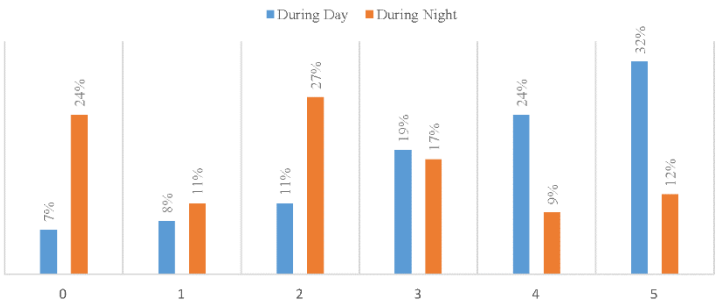
Q9. According to you, is this neighborhood safe during night?



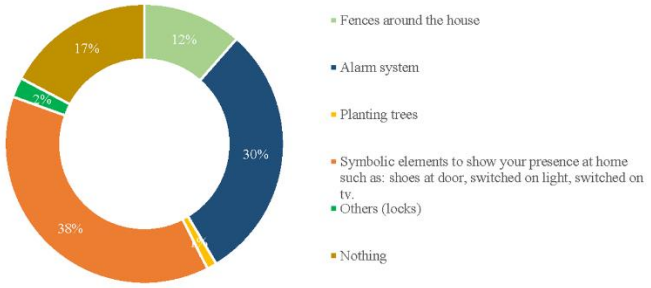
Q10. Do you feel scared to walk at night in your neighborhood? If yes, please specify one or more elements that you consider dangerous.



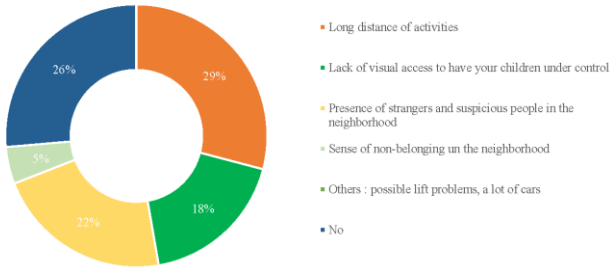
Q11. How safe do you feel to use public transportation in your neighborhood?



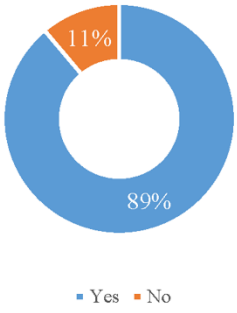
Q12. What elements do you use to keep crime away from your home?



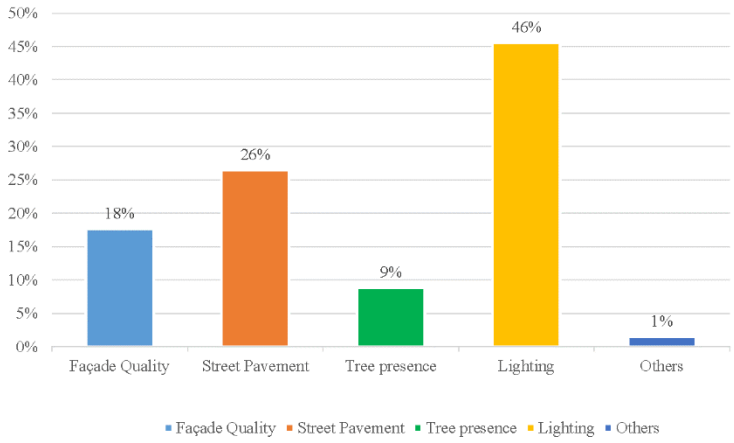
Q13. Are you afraid to let your kids go alone in market or other activities such as: dumping garbage, having fun with other kids in the neighborhood, going and coming back from school, etc.? If so, what is the reason?



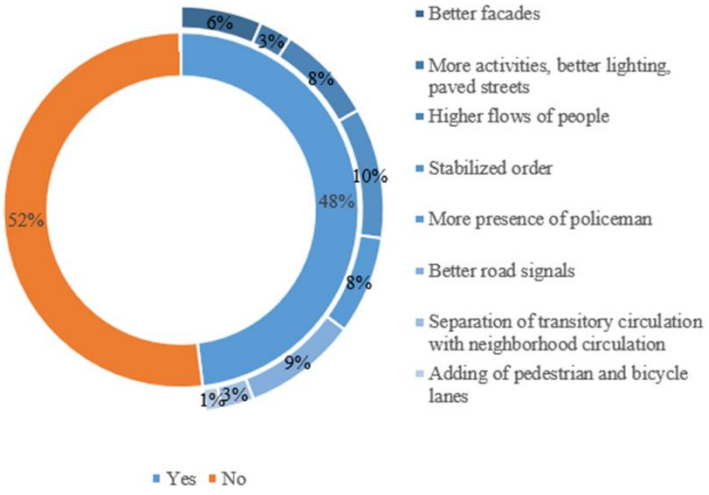
Q14. Does the increase of activities along the way give you security?



Q15. Which are the elements that make you feel safe in the neighborhood?



Q16. Has the reconstruction of the big ring affected the neighborhood security? If so, why?



Q17. If you were given the opportunity, would you move out of the neighborhood?