

The phenomenon of visual pollution in Al-Kazimiya district and its surroundings and geographical distribution

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Abstract

This research deals with measuring the levels of visual pollution in Al-Kazimiya district and its surroundings, which differ from other regions in terms of intensity and impact. Then the research addresses several solutions that will address the problem of visual pollution and reduce its environmental effects on the urban environment and the residents of the research area. The researchers note that there is a discrepancy in the manifestations of visual pollution between the areas of Al-Kazimiya district and its surroundings, and it also varies in terms of intensity and impact between regions, as they see that one of the manifestations of visual pollution intensifies in one region and weakens in another region, and because one of the ways to measure the intensity of visual pollution in a particular area (is the standard of public taste), the researchers formulated (10) questions that show the amount of visual pollution in each area of Al-Kazimiya and its surroundings, Through it, it is possible to draw a clear mental image of any manifestation of visual pollution.

Keywords: visual pollution, billboards, random housing, intense lighting, Al-Kazimiya city.

Introduction

Pollutants in cities have become common with the lack of awareness of the environmental and urban culture in Arab societies. Among the known forms of pollution such as water, land, and air pollution are the causes of visual pollution. The ecosystem consists of living and non-living components that exist within any area of nature (it was called the environment) and interact with each other continuously within an integrated system of balance in which a set of mutual relationships and interactions prevail between the components of the ecosystem and that these mutual processes are subject to an extreme system of Accuracy and balance, hence if the environment is considered today as the stock of natural and human resources

available somewhere at any time to meet human needs, pollution of all kinds, material and non-material, food crisis, overpopulation problems and traffic problems are only images of human abuse that indicate unintentional ignorance at times and excessive selfishness at other times, and with reference to the scientific definition of the pollution phenomenon, it represents every quantitative and qualitative change in the components of the living and non-living environment that makes environmental systems unable to absorb its effects without disturbing their balance(1).

Research objectives:

The study aims to:

1. Determining the causes of visual pollution, its causes, and methods of treatment in Al-Kazimiya city.
2. The effect of visual pollution on all living organisms and the aesthetic view of the city.
3. Trying to give suggestions for the city's return to its aesthetic and religious sanctity from the urban point of view.

Research problem:

Is it possible to reduce the phenomenon of visual pollution in Al-Kazimiya district?

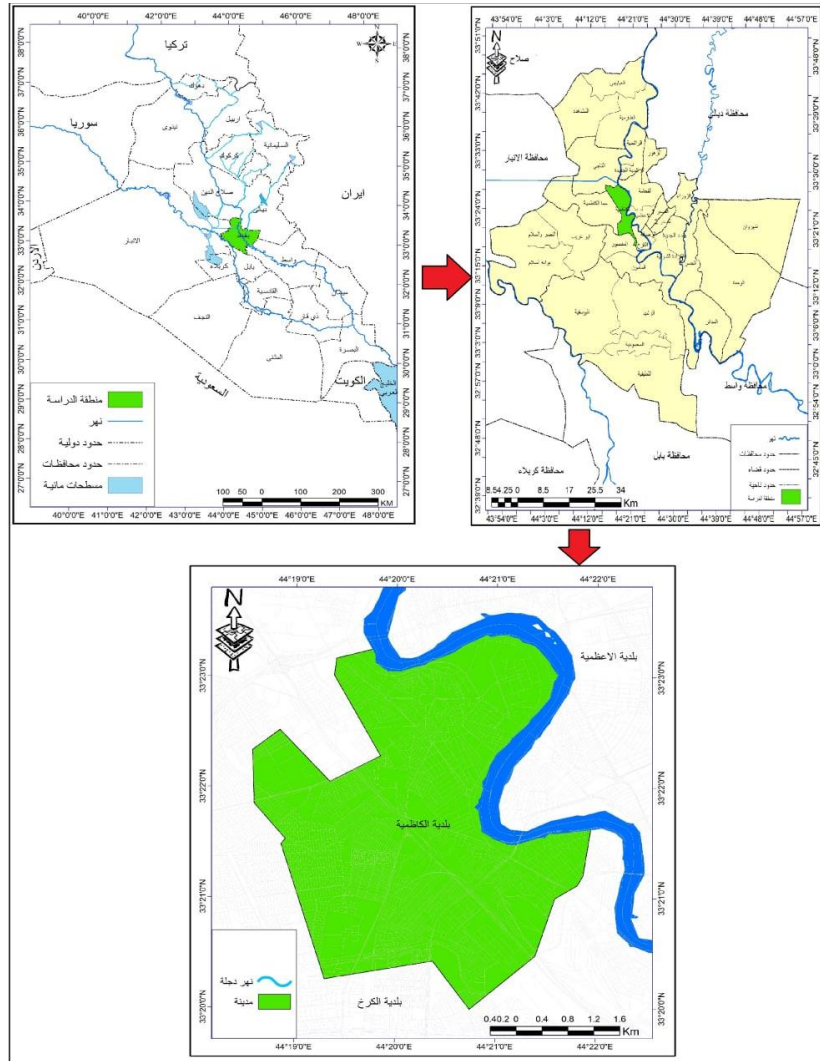
Research Importance:

The research's importance lies in explaining the forms and causes of visual pollution in AL-Kazimiya district, as it is one of the main cities in the capital, Baghdad, is one of the administrative and economic centers, in addition to being a sacred area for the presence of the shrine of the two Kazim Imams (peace be upon them), which gives it religious and economic importance due to a large number of visitors to the shrines, especially on special occasions. In addition to that, commercial work is active, which made it an important commercial shopping center, and with the spread of this type of pollution throughout the cities of Iraq, hardly any city is devoid of it, and no region of the regions, especially the capital regions, of this pollution.

Research location:

Al-Kazimiya is located north of the capital, Baghdad, longitude (0'22'44 - 0'19'44°) east, and latitude (0'20'33 - 0'23'33°) north. Map (1).

Map (1) the location of the research area in Iraq



Source: Al-Kazimiya Municipality

Visual pollution: It is a term given to what is produced by unattractive visual elements, unorganized architecture, or random advertisements. This type of pollution is related to the psychological aspect and seems less harmful than other pollutants, but it is constantly increasing because of its harmful effect on the human lifestyle. visual pollution is defined procedurally as the feeling of aversion from a visually uncomfortable appearance that causes discomfort and confusion in perception, and the person loses a sense of aesthetic and formal values.

The first topic: - Types of pollutants

The presence of pollutants makes us able to distinguish two types of them according to their origin:

Natural pollutants: These are the pollutants that come from the components of the environment themselves and have nothing to do with humans, such as dust and gases emitted by volcanoes and storms in the first place, the spread of pollen and germs from diseased organisms, and the spread of nitrogen oxides in the air liberated as a result of electrical discharges.

Novelties pollutants: These are the pollutants that humans cause to occur as a result of innovations, industrial technologies, means of communication, and the waste that man throws out for his overall activities from his places of residence and work. The most dangerous of all these are nuclear explosions and weapons of mass destruction. The pollutants were divided in terms of their nature into three types, which are:

Physical pollutants: These include radiation of all kinds, thermal pollution (which occurs when large amounts of hot water are discharged in power plants, and noise pollution (audio or noise pollution).

Chemical pollutants: These are represented by the types of gases emanating from factories and car exhausts emitted from volcanoes, in addition to the pollutants of pesticides and chemical fertilizers.

Biological pollutants: These are represented by organisms that cause diseases to humans, animals, and even plants.

The second topic: the limits of pollution:

There are three degrees or limits of pollution:

Acceptable pollution: It is a limited degree of pollution that is not often accompanied by any clear dangers to the manifestations of life on the surface of the earth. It is a reasonable degree that does not go beyond being an environmental phenomenon and not a problem.

Dangerous pollution: It is the degree to which pollution crosses the safe line to become a problem rather than a phenomenon.

Deadly pollution: It is the most dangerous degree of pollution in which pollutants exceed the dangerous limit to reach the limit that is fatal or destructive to human life and other aspects of life on the surface of the earth.

The third topic: - types of environmental pollution:

Perhaps the features of human irrational dealing with the environment have appeared through the emergence of

environmental problems in the forefront of which pollution stands in all its methods, forms, and images, which can be made into two types or two:

Physical pollution is divided into:

A- Water pollution. B- Soil pollution. c- Water pollution. D - radioactive contamination.

Non-material (physical) pollution, which includes:

A- light pollution. B - sound pollution (noise). C - electromagnetic pollution.

Intellectual and moral pollution: This pollution, according to the researcher, is more dangerous to the environment because it affects man only without the rest of the inanimate objects and surroundings, as the Lord of the Worlds indicated in His revealed book the Noble Qur'an to our Messenger Mohamed (PUH) (the bad women are for the bad and the good women are for the good) and the Almighty says (Tell the believing women to lower their gaze and guard their chastity, that is purer for them, for God is acquainted with what they do, and tell the believing women to lower their gaze to the end of the noble verse. On morals in actions and words in human life, and it is what God revealed to our Messenger Mohamed (PUH) when he said (You are true of great character) and our Messenger said, I was only sent to complete the noble morals, and this is the greatest thing for humanity because it is accountable on the Day of Resurrection for its moral actions and words, as it is the balance that Human beings enter heaven or hell (2).

The recent research deals with the second type (the physical immaterial) and focuses mainly on point (a), which is light pollution. As for the other types, the researchers refer to them in general, which are:

Sound pollution: It is the pollution that causes noise in the surroundings in which a person is located from noise sources, and in turn affects the person from two sides, health and psychological.

Electromagnetic pollution: It is the pollution caused by electromagnetic waves which are within the electromagnetic spectrum. It causes health and psychological effects on humans.

Fourth topic: Light pollution (its types, causes, and effects):

Light pollution means excessive artificial lighting, as there are natural sources and industrial sources, which cause this phenomenon, as a result of incorrect and undesirable use of artificial lighting. Here, light pollution is meant as a form of wasted, useless energy that can cause many health effects. harmful to the environment (3).

Dimensions of light pollution: -

The first dimension: - types of light pollution:

Sky glow: Misuse of artificial external lighting results in the phenomenon of visual pollution, which is called sky glow, as dust particles are scattered in the atmosphere such as fog, clouds, and some particles or small volatile particles such as lighting pollutants resulting from artificial light sources.

Which is directed towards the top of the atmosphere, and these scattered parts are a diffuse glow that can be seen from far away, and the glow of the sky is often clearer in rural and desert areas than in cities, and the reason for that is the secondary reflection of light in these places, which is mostly in cities 10% and in rural areas 50%.

Light encroachment: Encroachment is defined as unwanted lighting at night that enters homes and buildings through windows. This is a phenomenon of common visual pollution that is the cause of many human health problems, including sleep disorders as a result of intense exposure to light.

Glare: Exaggerated lighting and the resulting halo of high-glow lighting at night causes a state of contrast and blurred vision, which causes disturbance to humans, and in some cases may lead to human blindness and they are the elderly with eye problems (5).

The second dimension: - the effects of light pollution.

Light pollution has negative effects, including that it is one of the sources of wasted energy and causes disruption in the ecosystem. The following points show the impact of light pollution on humans, animals, and plants.

Effects of light pollution on humans:

Light pollution leads to many negative effects on living organisms and the environment, the most important of which are:

The disappearance of darkness from the sky, because the lights emanating from homes and companies ascend to the sky, and thus it becomes difficult to see the stars.

Wasting electricity and the energy sources that you need to establish electric power stations.

The occurrence of sleep disturbances, as each organism has a biological clock in which it sleeps, and the presence of light will keep the organism awake, which affects its life activities, and causes insomnia and fatigue for humans.

As we explained above, sleep disorders occur.

Disturbing the vision of drivers at night due to the light emanating from billboards and lamps in the streets, and as a result, traffic accidents occur.

Negatively and significantly affecting the work of astronomers, due to disturbances in seeing stars and galaxies at night (6).

Effects of light pollution on animals:

Light pollution has a lot of harmful effects on the animal, as it disrupts the animal's ability to visually guide. It means perceiving the location of objects relative to each other and hindering their ability to move. It stimulates some unusual behaviors at a certain time of the day or during the year. It was noted that the previous effects occurred on insects, salamanders, frogs, turtles, and birds.

Light pollution also poses a threat to many birds. There are hundreds of birds or hundreds of species of migratory birds at night, such as songbirds, or coastal birds that depend on stellar asteroids during their seasonal migration. The phenomenon of light glare reduces the clarity of these stellar asteroids. The phenomenon of bright lighting in urban areas also hinders their sense of orientation, and the lights of buildings, towers, and houses usually attract birds to deviate from their natural paths, as they attract birds to the source of lighting as a reference for them because they believe that it is one of the stars or the moon. The birds are attracted to the lighting or the source of lighting and they approach it as a result of confusion and lose their ability to steer properly and collide with walls and floors. The fixed artificial light sources constitute another problem. The birds are attracted to it, gather around it, and hover around the light. When the birds realize their mistake, they try to return to their path, which may lead to the birds colliding with the ground as a result of their exhaustion.

There are some drawbacks of artificial lights on female turtles looking for places to build their nests and their way to the sea. Where young turtles are affected by the light glow and direct continuous lighting, the way turtles follow to reach the sea is based on the idea that the night horizon above the sea appears brighter than it is over land, while the ratio of artificial lighting and its effect on fish varies from one type to another, but the impact of artificial light sources on the natural behavior of fish remains.

There is a study based on the effect of light on fish farms and in the depths of the water that the fish move away from the white light, however, many of them are attracted to the sources of light, so fishermen benefit from them to catch them.

Effects of light pollution on plants:

As we know, plants make their food based on sunlight through metabolism (photosynthesis). But the period of night and darkness affects the metabolic processes. The plant does this by providing the natural source of the sun, and in particular, the short-day plants, which need a long, night to grow, and if these were exposed to artificial lighting for one night, then this means that two short nights have passed. Instead of one night, with some disturbances affecting it, and this matter affects the patterns of flowering and development of the plant, short-day plants usually start flowering in the fall when the day is short, and with an increase in the night period in the dormant phase in preparation to bear the harshness of winter.

Several studies indicate that light pollution around lakes prevents some zooplankton, such as *Daphnia*, from eating surface algae, and the growth of these algae kills other plants that grow in lakes and reduces the quality of their water. Entomologists and Lepidoptera scientists have noticed that these organisms are affected by light pollution which affected the growth of plants that depend on night pollination that occurs by moths, which may lead in the long term to a decrease in the numbers of these plants due to their inability to reproduce naturally, and thus the entire ecosystem in that region will change, and trees will also be affected by light pollution that it hinders their response to seasonal changes and adaptation to them, as artificial light prevents trees from getting rid of their leaves when needed, and this matter is harmful to animals that feed on fallen leaves. It also prevents, as a result of being affected by this pollution, birds from building their nests on trees (6).

The third dimension (the ability of the eye to see objects): -

The ability of the eye to see objects of different distances is called adaptation. If the distance of the object is less than a certain distance from the eye, the lens of the eye can't collect light on the retina. The minimum distance of clear vision (d) is about 25 cm for young adults. The power of the lens is defined as the reciprocal of its focal length, i.e. $(1/f)$, and its units are the dioptr. This is when measuring the focal length in meters. The radiation represents that part of the spectrum that can cause damage to biological organisms, and also this part is absorbed by the Ozone layer above the earth. And the energy of photons (wavelengths shorter than 290 nanometers) is absorbed by the Ozone layer and a few of them reach the surface of the earth. The protection of the living earth and systems from radiation by the Ozone layer. The sun's rays affect the structure and color of the eyes, so the eyes of people who live in areas close to the sun's rays are distinguished. The eyes are black and wide, and those far from the sun's rays are characterized by colored eyes, or very blue. The human eye is sensitive to light waves that are not less than

350 nanometers and not more than 750 nanometers. The human eye can also distinguish the solar spectrum through the receptors located in the retina which contains about 125-130 million receptors whose task is to receive light waves and send them to the brain which can distinguish colors. The receptors do not communicate directly with the brain, but rather give electrical signals to two types of cells bipolar cells and cells with ganglia, and they are called cone and photoreceptors. Conical receptors can look in good lighting, to see small and large objects in detail, and they can clearly distinguish colors. The cone receptors are divided into three types, we can distinguish the solar spectrum, it seems that some of them are sensitive to the blue color, and what is sensitive to the green color or sensitive to red color. As for organic receptors, they are responsible for looking at dark areas, but they cannot distinguish between colors. The researchers will also include below a table of the sources of visual pollution that were observed in the city and a definition for each source (7).

Table (1) shows the sources of visual pollution

Source of visual pollution	Define the source
Brightness of light	It is the light that is produced to illuminate it at night or in dark places. This light is emitted from electric lamps, searchlights, car lights, and light flyers and advertisements.
Secondary artificial light	It is the light emitted from the display screens of televisions, electronic game consoles, and computers, and it is considered one of the most dangerous pollutants
Artificial light for photography	It is the light emitted by a type of copier, camera, and its flash.
Color inconsistency	It is the source of the resulting misuse of colors and their inconsistency in homes, streets, and markets.
The spread of sewage and swamps in the city	It is the source resulting from the meeting of water in the form of streams and swamps.
Generator wiring lines	It is the source resulting from the lines of the generators suspended on the electric poles
Asymmetry of buildings in the streets	It is the source resulting from urban poorness in its inconsistency and suitability with buildings and streets in terms of geometric dimensions and the type of materials used in it.
Advertisements, banners and writing on the walls of the city	Those advertisements, and banners displayed incorrectly in markets and streets do not take into account scientific and urban matters

Commodities are offered on the sidewalks and on the streets	It is the source resulting from the progress of goods sold to shops on the sidewalks and the streets.
Garbage and dirt scattered in homes, streets, and markets	It is the resulting source of scavenging and dirt.
commercial banner	It is any notice placed in the external environment to display commercial materials related to businesses, projects, goods, activities, services, or people who are often present in the property in which these commercial signs are displayed and advertised.

practical side

The first topic: levels of visual pollution and the most important ways to reduce it:

Public cities witness widespread various manifestations and forms of visual pollution, and it is divided in terms of causes into two types: physical, which is caused by buildings and planning, while the second type is related to the behavior of individuals, and the manifestations of visual pollution (physical) include the following :

- 1- Poor urban planning which includes construction in terms of the shape of the buildings.
- 2- The excessive height of the lighting poles in the street.
- 3- The large number of demolished buildings or excavations in the areas.
- 4- Misuse of spaces or voids surrounding areas.
- 5- Barriers that block the view of the natural landscape.

As for the manifestations of visual (behavioral) pollution, they include the following:

- 1- Building facades in terms of color and texture and the role of material cost in that.
- 2- The air conditioners used in the facades.
- 3- The inconsistent appearance of the cars loaded with goods.
- 4- Advertisement boards and banners hung on shops and cars in various colors and sizes.
- 6- The random spread of waste dumps, and the accumulation of garbage outside the landfill.

This topic deals with measuring the levels of visual pollution in Al-Kazimiya district and its surroundings, which differ from one region

to another in terms of severity and impact, and then addressing several solutions that will address the problem of visual pollution and reduce its environmental impacts on the urban environment and the population of the research area.

First: Measuring visual pollution levels:

The researchers note that there is a discrepancy in the manifestations of visual pollution between the regions of Al-Kazimiya district and its surroundings, and it also differs in terms of severity and impact from one region to another, as they see that one of the manifestations of visual pollution increases in one region and weakens in another region, and because one of the methods for measuring the intensity of visual pollution in a specific region (It is the criterion of public taste. (10) questions were formulated that would show us the amount of visual pollution in each region of Al-Kazimiya and its surroundings, and through which it becomes possible to draw a clear mental picture of any manifestation of visual pollution. Pollution levels are divided into:

1- Artificial lighting: It means the light emitted from artificial light sources, such as the light emitted from electric lamps, or the light of car headlights, light flyers, light advertisements, or display screens for televisions, as well as computers, which are considered the most dangerous types of pollutants.

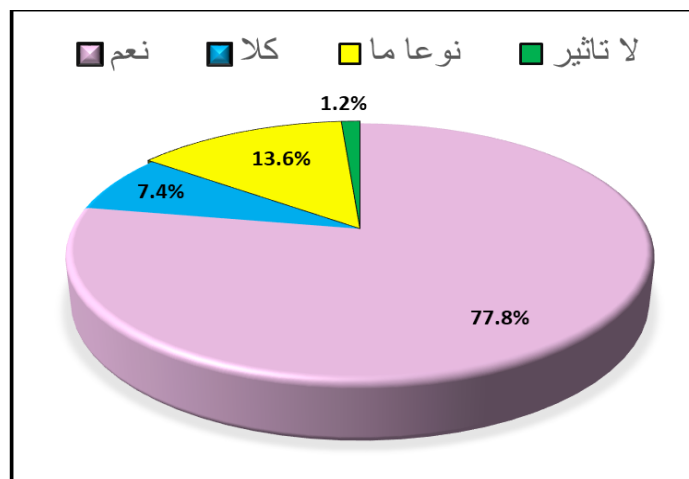
It is clear from tables (2, 3) the high level of visual pollution due to the high light on motorists at night, compared to the level of the effect that occurs during the daytime hours. The rate of answering yes by car drivers at night was (77.8%). This indicates the extent of the impact of intense artificial lighting. At night on motorists, the rate of answering yes by drivers during the day was (8.6%). This percentage shows a decrease in the effect of high beams on motorists during daylight hours.

Table (2) The effect of artificial intense lighting on driving a car at night

Answer	Ratio%
Yes	77.8
No	7.4
somewhat	13.6
No effect	1.2
Total	100

Source: The researchers based on the questionnaire.

Figure (1) The effect of artificial intense lighting on driving a car at night



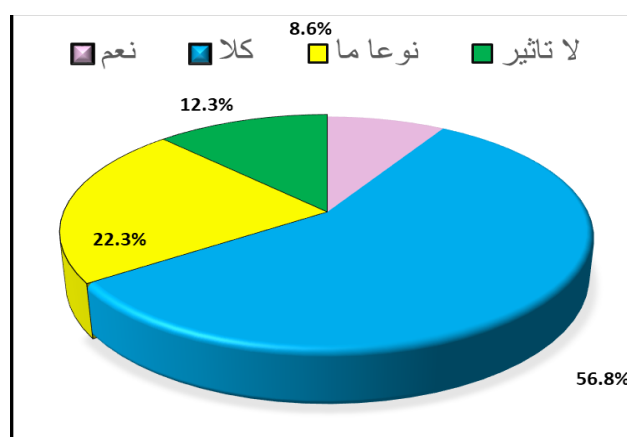
Source: Table (2)

Table (3) The effect of artificial intense lighting on driving a car during the day

Answer	Ratio%
Yes	8.6
No	56.8
Somewhat	22.3
No effect	12.3
Total	100

Source: The researchers based on the questionnaire.

Figure (2) The effect of artificial intense lighting on driving a car during the day



Source: Table (3)

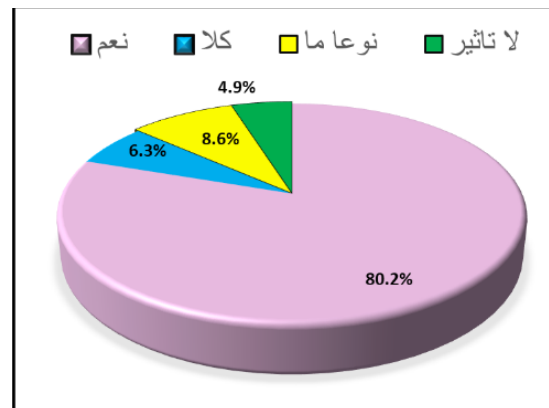
It was noted in Table (4) and Figure (3) that headlights have a significant impact on vehicle drivers at night, as the percentage of those who support “yes” reached (80.2%). The research area and its surroundings, while the rest of the answers ranged from “no” with a rate of (6.3%), and the answer “somewhat” with a percentage of (8.6%), all the way to the answer without effect, with a percentage of (4.9%) and this indicates a low level of visual pollution with this effect among residents those areas.

Table (4) The effect of car headlights on night driving

Answer	Ratio%
Yes	80.2
No	6.3
Somewhat	8.6
No effect	4.9
Total	100

Source: The researchers based on the questionnaire.

Figure (3) The effect of car headlights on night driving



Source: Table (4)

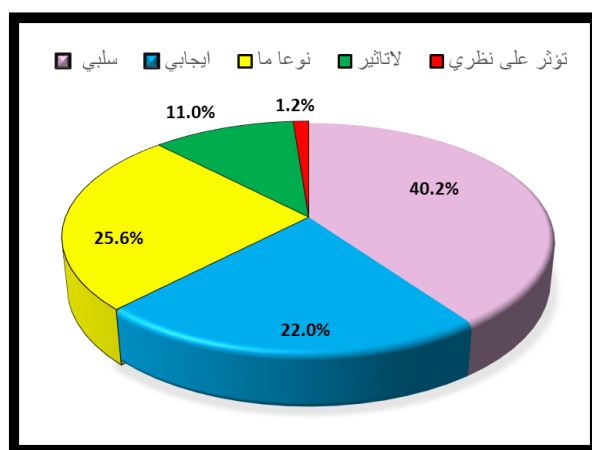
It is clear from the comparison of Table (5) and Figure (4) with Table (6) and Figure (5) that there is a negative impact on night shoppers through the questionnaire, as the percentage of respondents with a negative impact reached (40.2%), and this indicates a high level of pollution due to the impact of this type of Lighting, and it reflected the opinions of shoppers that they are against the use of intense lighting in markets and shops. As for the effect of billboards on shoppers during the day, the percentage of supporters, through an answer of some kind, amounted to (40.2%), and this indicates that there is an effect of this type of lighting on shoppers during the day.

Table (5) The effect of intense artificial lighting on billboards on the night shopping process

Answer	Ratio%
Negative	40.2
Positive	22
Somewhat	25.6
No effect	11
Total	100

Source: The researchers based on the questionnaire.

Figure (4) The effect of intense artificial lighting on billboards on the night shopping process



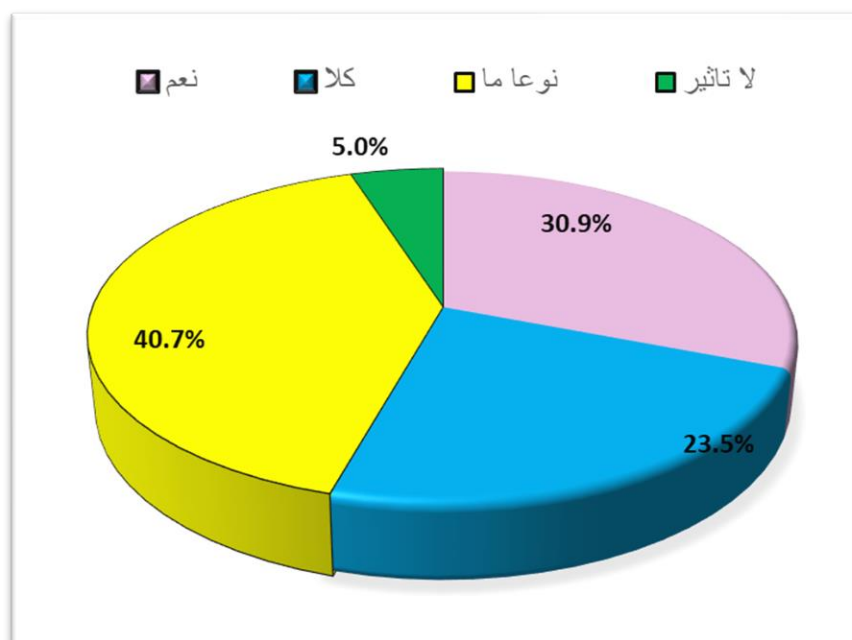
Source: Table (5)

Table (6) The effect of intense artificial lighting in billboards on the daytime shopping process

Answer	Ratio%
Yes	30.5
No	23.2
Somewhat	40.2
No effect	4.9
Total	100

Source: The researchers based on the questionnaire.

Figure (5) The effect of intense artificial lighting in billboards on the daytime shopping process



Source: Table (5)

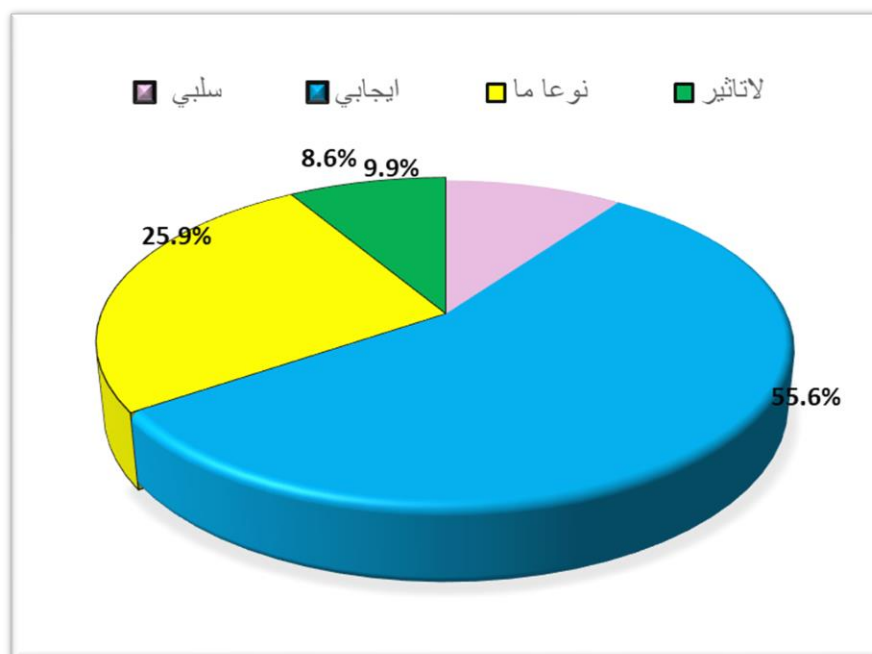
Table (7) and Figure (6) show the percentage of those who support the effectiveness of the effect of intense artificial lighting in the billboards on the process of attracting night shoppers, as the response reached a positive effect (55.6%), while the percentage of the response was somewhat (25.9%), which indicates a lack of influence in attracting shoppers to shop, and the percentages of other answers ranged between the answer that it has a negative effect, which amounted to (9.9%), and the answer of shoppers who explained that artificial lighting has no effect in attracting shoppers, which amounted to (8.6%).

Table (7): The effect of intense artificial lighting in billboards in attracting shoppers to them

Answer	Ratio%
Yes	9.9
No	55.6
Somewhat	25.9
No effect	8.6
Total	100

Source: The researchers based on the questionnaire.

Figure (6) The effect of intense artificial lighting on billboards in attracting shoppers to them



Source: Table (7)

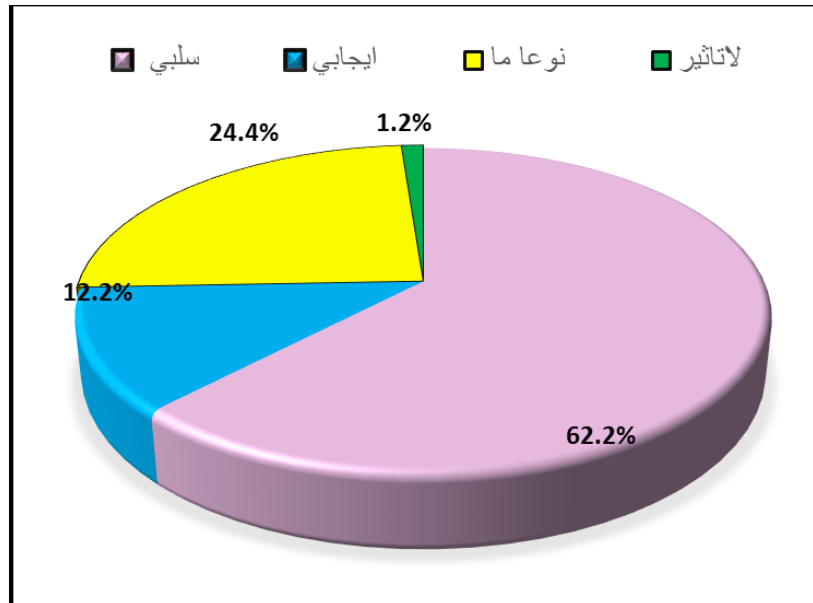
Artificial lighting, as it was previously defined, has a negative impact on readers when it is used incorrectly, that is when we do not take into account the distance between the lamp and the reader, or the amount of lighting when reading, and this is indicated by Table (8) and Figure (7), the percentage of negative impact It has reached (62.2%), which is more than half, so it is necessary to direct, especially the class of students (students), to notice the position of the lighting and reduce its intensity so that it does not cause any harm to the reader.

Table (8): The effect of intense artificial lighting on vision while reading

Answer	Ratio%
Negative	62.2
Positive	12.2
Somewhat	24.4
No effect	1.2
Total	100

Source: The researchers based on the questionnaire.

Figure (6) The effect of intense artificial lighting on vision



Source: Table (8)

8- Random housing areas:

The definition of slums differs from one society to another, as it is defined as the establishment of housing units or shelters in unauthorized lands, without the knowledge of their owners or government agencies, or it is intended as spontaneous construction that takes place without developing a plan or prior planning or what accompanies land uses in cities .

Indiscriminate housing has effects on the general appearance of the environment of the research area, as its effect appears on the morphology of the city through the excess in construction at the expense of land uses, which leads to a distortion in the cultural appearance of it, and in a way that negatively affects the possibility of services in it, (for example: the encroachment of some slums on the allocated lands (for service use and green spaces) .

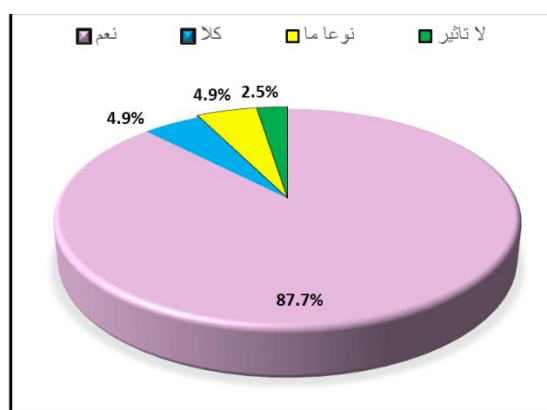
The results of Table (9) and Figure (8) show that random housing is one of the important reasons for increasing the levels of visual pollution in Al-Kazimiya district and its surroundings, as the percentage of the answer "yes" reached more than (87.7%), and this indicates their proximity to those areas, while the answer has no effect They obtained the lowest percentages (2.5%), and this indicates a decrease in the levels of visual pollution in those areas, while the answers (no, and somewhat) were very close, as their percentage reached (4.9%), and this indicates their distance from those areas.

Table (9): The impact of the presence of random housing areas in the city

Answer	Ratio%
Yes	87.7
No	4.9
Somewhat	4.9
No effect	2.5
Total	100

Source: The researchers based on the questionnaire.

Figure (8) The impact of the presence of random housing areas in the city



Source: Table (9)

9- Solid waste:

It means everything that results from the activities carried out by humans or animals of waste, which is mostly neglected or left without treatment or care. And waste concept is wide to include domestic and industrial waste, as well as agricultural waste . Waste and junk are all concepts of one term (solid waste), which are materials and components that do not benefit people, and solutions must be found to get rid of them .

The results of Table (10) and figure (9) show that the percentage of the answer yes was the highest among the percentages of answers by about (87.8%).

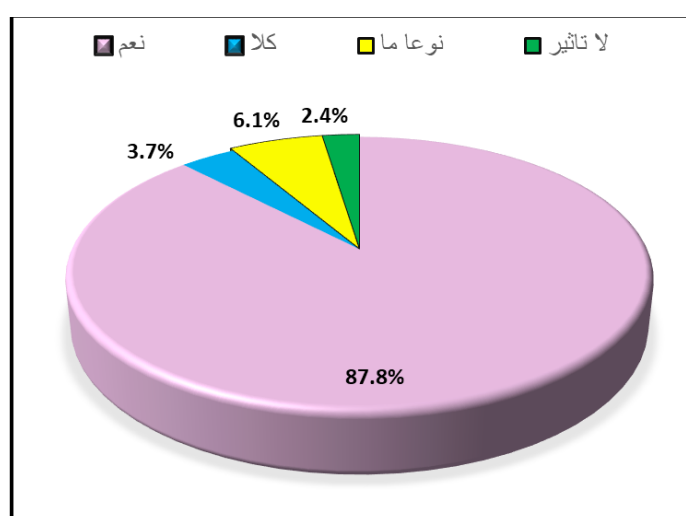
This indicates a high level of visual pollution (solid waste) near them, and the lowest percentage was recorded by the answer with no effect, reaching (2.4%), and this indicates their distance from such pollution. %), and the answer is no (3.7%).

Table (9) The impact of the landscape of waste dumps in Al-Kazimiya district and its surroundings

Answer	Ratio%
Yes	87.8
No	3.7
Somewhat	6.1
No effect	2.4
Total	100

Source: The researcher based on the questionnaire.

Figure (9) Landfill impact levels



Source: Table (10)

10- Vendors on the sidewalks (the jumper):

This phenomenon is considered a form of the unorganized economy, which represents a large part of the Iraqi society from the gross income product, and it has spread widely in light of the inability of the national economy, especially the local economy, to create sufficient job opportunities, and this has led to the resort of a wide range of researchers from work to the practice of this unregulated type of trade print itinerants in the cities.

This phenomenon is defined as follows (retailers who display their goods on street sidewalks, either directly on the ground or use tables and wheelbarrows to display them, and these are usually stationed on the sidewalks and main and secondary corridors of crowded commercial markets) .

It is clear from Table (11) and Figure (10) that the answer “yes” got a high rate of (63.4%). It was found that the respondents were not

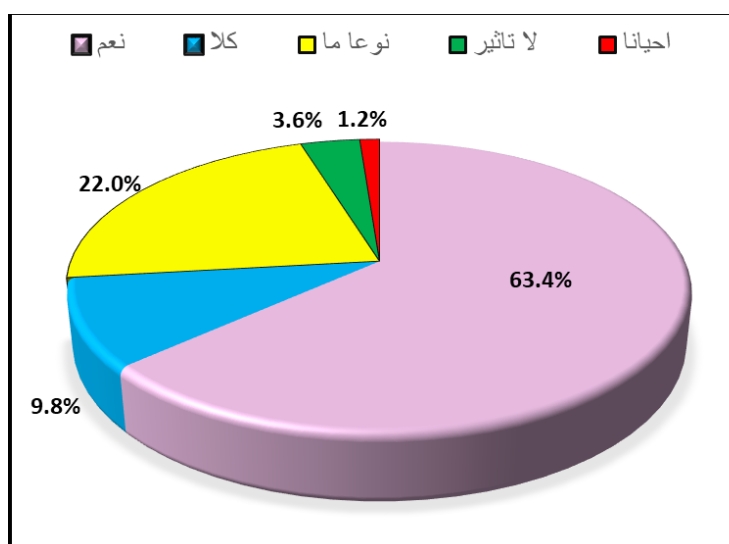
affected by the sellers (the owners of the sidewalks) within their areas of residence, while the answer was “No”, which recorded a rate of (9.8%), and the answer had no effect, which amounted to (3.6%), and this indicates their distance from the places where the sellers are the owners of the sidewalks.

Table (11): The impact of the presence of sellers on the sidewalks (the jumper)

Answer	Ratio%
Yes	63.4
No	9.8
Somewhat	22
No effect	3.6
Sometimes	1.2
Total	100

Source: The researcher based on the questionnaire.

Figure (9) Visual pollution levels of street vendors (the jumper)



Source: Table (11)

Conclusions and recommendations:

Following the methods of prevention from excessive, intense lighting that is harmful to the eye, as well as unbeautiful or not good-looking scenes that harm the viewer, as well as the rest of the eye pollutants, which are:

1. The level of illumination shall be as required, i.e. the nature of the required illumination.

2. Contrast and brightness of work surfaces.
3. Using sunglasses or prescription glasses.
4. Staying away from the TV screen four times the screen diameter.
5. Refer to specialists in this field to apply the best color consistency
6. Transforming stagnant water into water that extends in special streams instead of spreading on the floor surfaces.
7. Improving the national line to reduce generator lines.
8. The research emphasizes the importance of maintaining visual harmony in the urban environment by referring specialists to apply the best urban fit between buildings and streets.
9. Regulating the display of commercial billboards which require state intervention to regulate them to ward off harm and bring benefit by setting serious controls by the state to limit this type of pollution.
10. Establishing regulations and laws that do not force people to throw dirt in the places designated for it, with the availability of places designated for throwing rubbish.
11. There is differences in concepts and theories about the interpretation of aesthetic visions, but there is agreement that they are related to cultural and social backgrounds.
12. The research emphasized that the response to beauty in the urban environment is linked to the diversity of its elements and the compatibility and harmony among them.
13. The research recommends developing the organization of commercial billboards and taking into account the harmony and aesthetic aspects of the urban environment.
14. It is possible to benefit from the experiences of developed countries in this field, as these countries began enacting billboard legislation at the beginning of the last century.
15. The return to municipalities from the fees they charge from commercial billboards in the short term may have a negative impact on their returns in the long term as a result of the volume of investors.
16. There should be a role for the media in educating the community on the issue of visual pollution and the extent of its impact on the aesthetics of the city.

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