

Female Homicide Victims in Erbil City: A Forensic and Sociological Perspective

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<https://doi.org/10.15218/crewh.2024.04>

Abstract

Background: Female homicides represent a severe social and public health issue, driven by complex socio-cultural, economic, and relational factors. In Iraq, particularly in Erbil, there has been limited research addressing patterns, risk factors, and characteristics of female homicides, leaving gaps in understanding this critical issue.

Objective: This study aims to analyze demographic, geographic, and forensic aspects of female homicides in Erbil City from 2018 to 2022 to identify high-risk groups, influential socio-cultural factors, and potential prevention strategies.

Methodology: A retrospective analytical study was conducted, examining 1,063 female homicide cases documented in Erbil City over a five-year period. Data were obtained from forensic, hospital, and law enforcement records and analyzed using descriptive and inferential statistics to explore victim demographics, geographic distribution, homicide methods, and relationships with perpetrators.

Results: Findings show that young adult women aged 21-30 are the most vulnerable group, comprising 29% of cases. Geographically, Erbil's central urban areas recorded the highest homicide rates, possibly due to population density, economic pressures, and social tensions. Burning (42.3%) and firearm use (28.7%) were the most common methods, indicating socio-cultural influences and accessibility to weapons. A majority of homicides (60%) occurred within private residences, with intimate partners and family members frequently implicated as perpetrators.

Conclusion: The study underscores the urgent need for targeted interventions, such as domestic violence prevention programs, firearm regulation, and culturally adapted public health policies. By identifying key risk factors and socio-cultural contributors, these findings support the development of evidence-based strategies to reduce female homicides in Erbil and comparable sociocultural settings.

Keywords: Female homicide, Erbil City, socio-cultural factors, intimate partner violence, firearm regulation, public health policy, forensic analysis.

1.Introduction

The murder of females is a criminal act that and has consequences in the social context as well as social and cultural impact and the phenomenon of violating females in the society results in several social issues affecting the community and their health significantly. It is high time to outline that numerous personal, relational and social factors can cause the increased level of violence against women during that, they can face the threat of fatal outcome across the world ^[1]. There has been no study conducted in Iraq, or more particularly in Erbil city, to address this research question as to the patterns and predictors of violence against women ^[2]. Based on different demographic and geographical factors, this paper aims to analyze a number of female murder cases occurred in Erbil City from 2018 to 2022 in order to find out the patterns and possible factors that leads to the occurrences. In doing so, the work extends research on age, geographic location, economic status, and murder probability of women in Erbil ^[3] based on 681 cases from districts including Centre, Shaqlawa, Koya, Soran, Harir, and Shamamk. As found in earlier studies, there are cultural and social factors for women's murder that can be seen in many countries including Iraq; these more include honour codes, domestic violence, and narrow gender roles ^[4, 5]. It becomes dangerous for women where such standards exist and traditional processes of inquiry may not effectively address these cases. One of the interesting locations to observe these processes is Erbil City, which is a relatively new city experienced rapid urbanization, and has a rather unique sociocultural context. In the same city where surviving statistics is a challenge, there is the worst situation with the statistical data on female murder. For this reason, public health professionals and legislators do not have the details to create useful prevention measures and legislative protections. This work can serve an attempt to fill that gap because it examines the phenomenon under study from a forensic and sociological perspective. They rely on sound statistical analysis to discover relationships and correlations, which can prove useful if say in pinpointing and engineering intervention based focused approaches ^[6]. In forensic investigation of a female murder probably issues like number of victims, the age of the victims, the kind of cases, and whether the cases cluster in a given region will reveal whether there are broader sociological or other environmental factors that may have led to the violent act. For example, analyses of studies conducted in different countries indicate that both honour crimes and intimate partner violence are likely to affect young women most of the time, while risk factors such as dependency on a partner and lack of access to others may manifest themselves differently in older female clients ^[7]. Significant differences in cases of violence are distinguishable by the urban and rural regions, Any differences can be attributed to the differential standards of the respective communities, availability of strength, and the efficiency of the police departments ^[8]. This research seeks to develop a good understanding of these characteristics through a murder study of Erbil City by district and age group. It aims at trying to

detect potential risk groups and areas where intervention is needed most urgently ^[9]. This paper's theoretical and practical significance to the understanding of the female killings in Iraq is significant. It is hoped that the research results will add credibility to community projects and policy undertakings in and around Erbil to eliminate violence against women. Through the results from the study specific characteristics and relationships will be identified such as age groups most at risk or forms of violence most pervasive in a society ^[10]. The broad objective is to contribute to the reduction of risks faced by women in Erbil through employing evidence-based prevention strategies and activities that were informed by the findings of the available social research and which reflect the social reality of the area.

2. Methodology

2.1 Study Design and Rationale

The present study used a comprehensive analytic retrospective study to analyze the forensic and demographic aspects of female homicide in Erbil, Iraq from January 1, 2018 to December 31, 2022. Retrospective studies are apt for use with existing data and are more appropriate when analyzing historical data since this kind of research gives an in-depth understanding of trends and other related aspects that Would be difficult to explain once the study is complete due to ethical or other practical reasons that come with real-time data collection work. Through using a large number of documented cases, this study provided high validity and presented the conversation partners' naturally occurring, unaltered patterns. Also, replication approach was retrospective which only meant that data was collected and handled in a dignified non-intrusive and most importantly ethical manner without compromising the sensitivity of the forensic information.

2.2 Study Population and Geographic Scope

The victims were limited only to documented female homicides of ages 11- 80 years who have passed the rngo rigorous process of eligibility criteria. Street killings only with confirmed by legal and forensic experts were considered; thus, the cases that had ambiguous categorizations, such as accidents or suicides, were excluded to ensure data accuracy.

To capture the socio-cultural diversity within Erbil, six regions were purposefully selected, each representing distinct demographic, socio-economic, and cultural characteristics:

- ❖ **Erbil Center:** The downtown areas characterized by high population density, socio-economic diversities as well as the full range of demographic issues.
- ❖ **Shaqlawa:** A semi-urban area with influences of the urban and rural: gradual transition from the rural to the urban culture.

- ❖ **Koya:** These have socio-political and cultural implications making the assessment of trends of homicide to have historical significance.
- ❖ **Harir:** It refers to the region which is naturally single with a highly prevalent agricultural life, family and gender orientation, and other cultural factors that have potential likelihood to affect criminal vibration.
- ❖ **Soran:** Ethnically diverse, often located near the borders of countries making it significant in other aspects of cross cultural and geo-political contact.
- ❖ **Shamamk:** Famous for the IDP and Refugee Camps showing the world problematic areas of Socio-Economic Inequality, Displacement and Increased risks among marginalised individuals.

This broad geographic selection allowed the study to capture a wide range of differences in socio-economic, cultural and environmental conditions that may speak to the differences in the homicide rates and trends among female victims in Erbil.

2.3 Sample Size and Annual Distribution

This sample of 1,063 female homicide cases allowed the analysis to test for significant patterns in demographic, forensic and geographical features adding a major statistical power. The annual distribution of cases was as follows:

- ❖ **2018: 143 cases (13.5%)**
- ❖ **2019: 153 cases (14.4%)**
- ❖ **2020: 124 cases (11.7%)**
- ❖ **2021: 198 cases (18.6%)**
- ❖ **2022: 445 cases (41.8%)**

There is a spike in the numbers in the year 2021 and 2022; therefore, it will be relevant to consider the possible factors that contributed to this surge. The large and geographically representative sample size that encompass multiple years enabled the authors to produce a comprehensive and valid trend analysis.

2.4 Data Sources and Collection Protocol

Data were faithfully obtained from major and secondary sources to achieve high data validity in forensic, demographic, and socio-behavioral analyses. These sources included:

- ❖ **Department of Forensic Medicine:** Supplied crucial report on the procedure of autopsy, the cause, manner and time of deaths as well as toxicology report to support forensic findings.

- ❖ **Erbil General Hospital Records:** Delivered the clients' basic demographic data, their medical history, and records of emergency interventions that helped to create the comprehensive profile of each case.
- ❖ **Law Enforcement Databases:** Provided detailed police reports, investigation results including suspect characteristics and documentation of their motives and reason, on which relational and contextual analysis of offer and victims/defendants relationships were based.
- ❖ **Judicial Records and Media Reports:** Enhanced primary data with the final verdicts of civil trials for case that went to the courts. Sources in media were triangulated with other official data in other to increase reliability and provide context.
- ❖ A rigorous data collection protocol was followed to ensure consistency and data integrity:
- ❖ **Data Triangulation:** To eliminate bias and ensure accuracy, all the collected case information was validated against the different sources.
- ❖ **Standardized Data Extraction:** Pilot structured forms were conducted, and such forms were adopted to develop comparability in the collection of data, thus enhancing reliability.
- ❖ **Confidentiality and Security:** All participants' identification details were removed and all records as well as access to data was limited to a minimum necessary number of members and completely secure in order not to violate the ethical principles of handling sensitive data.

2.5 Key Variables and Measurement

There were a number of core variables in the study; all of which were systematically coded in order to enhance accuracy and reliability of the findings. These variables included:

Demographic Information: Age and area of residence.

- ❖ **Method of Homicide:** Organized into groups that are fire arm related, sharp objects, including stabs, strangulation with a ligature, suffocation by burning and others such as poisoning, blunt force trauma among others.
- ❖ **Incident Location:** Used as home residence or living place, public area or locations, workplace or as refugee camps.
- ❖ **Perpetrator Relationship:** Categorized into spouse or partner, family member, friend or acquaintance, or complete stranger.

The two variables were carefully coded for precision and to enable an elaborate statistical analysis within the forensic, demographic and relational reconstructions.

2.6 Statistical Analysis

Descriptive analysis was done using the statistical software SPSS version 26, and complex statistical techniques were employed to make sure that the results are both qualitative and accurate. The analysis included:

Descriptive Statistics: Used descriptive statistics for demographic and categorical data in form of frequency, percentage, mean, median, and standard deviation in order to explain some generalized traits of the victims as well as the incidents.

Inferential Statistics: Crosstabs and related chi-square tests along with temporal trends calculations were used to analyze relations between categorical data and to quantify changes in homicide techniques used over time. Interestingly, the rates of strangulation, among all significant types of violent actions against women, increased ($p = 0.005$). By using this statistical procedure, it was possible to conduct a rigorous analysis of demographic and relational factors, conclusions that could be useful for the development of specific policy and interventive proposals.

2.7 Ethical Considerations

The study was approved by the Hawler Medical University Ethical Committee and all the research practice followed the Declaration of Helsinki on ethical guidelines. Particular care was taken to ensure participants' anonymity was maintained to the highest degree and data was saved only on password protected hard drives with limited personnel access only. The highest ethical standards were maintained in regards to data handling, thus no person's data was eliminated or exploited in any way.

2.8 Limitations

The study acknowledges some biases inherent to cross-sectional study because of its design, specifically, completeness and accuracy of reports that can be retrieved from the study source. Furthermore the results are specific to Erbil making generalization of findings to other regions with different social cultural factors a challenge. The missing data were reduced through rigorous cross-validation procedures; however some records excluded in some of the following analyses may have compounded the assessment of all demographics.



Figure 1: Key Components of the Methodology Framework

Results

Table 1: Age Distribution of Female Homicide Victims

Age Group	% of Cases	Cases	Mean Age	Median Age	SD
11–20 years	21	223	18.5	19	2.8
21–30 years	29	308	26.2	27	2.4
31–40 years	17	181	34.5	35	2.9
41–50 years	12	127	45.1	46	3.2
51–60 years	9	96	55.6	56	2.1
61–70 years	7	74	65.3	65	2.7
71–80 years	5	54	73.4	73	2.4

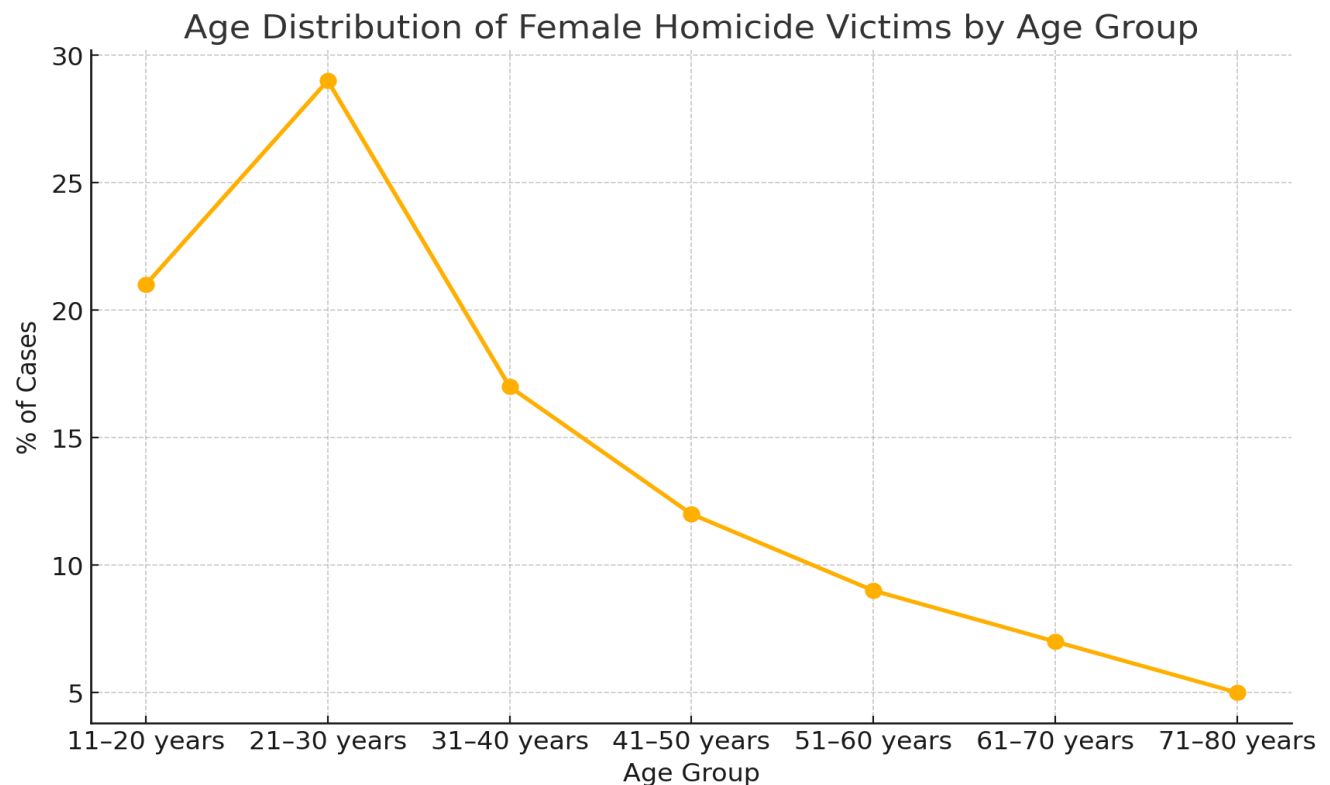


Figure 2. Age Distribution of Female Homicide Victims

in Table 1 The age of the female homicide victims in Erbil from the year 2018 to 2022 presented some outstanding features in the distribution of victims that portrayed different demography and societal characteristics. The 21-30 years age group was the most affected age group by recording the highest percentage of 29 % with 308 total cases. This finding is significant to show that young

adult women are more likely to be a victim of homicide and the risks characteristic to this group could be related to social, economic or relational factors. The numerical scores for the given group of patients are quite interconnected and offset by a small standard deviation of 2.4. The average and median ages of the group are 26.2 and 27 years respectively meaning that the distribution of age is quite focused. The results show the details of individual cases and the scale of certain problems of women in early adulthood, which calls for addressing the issue. Considering the mean, victims in this category are of a mean age of 18.5 years with 19 years as the median age and 2.8 as the standard deviations. This distribution shows that homicide entails many incidents of interest to teenage girls perhaps due to their family, social, or lack of power. This figure is quite high, and it is important to draw attention to such regrettably frequent cases among young women and girls, underlining the need to consider the problem strictly and work on the prevention of such cases, as well as on enhancing the existing protective measures and legislation on this population group. The number of victims in the age group of 31 to 40 years is significantly lower and detected in only 181 cases or 17% of the In terms of age, it is 34.5 and median age 35; the variability in standard deviations of 2.9 indicates that the distribution of ages is a little wider than a normal distribution. This means that the women within this age range are likely to face a lower risk as compared to the youthful population in spite of this risk being high. This demographic may experience different socio-economic pressures or relationship problems; nevertheless, variables such as changes in employment or family status, may reduce the number of homicide cases in contrast to the young women. In the age range of 41–50 years women, 127 or 12% homicide cases with mean age of 45.1 years and median age of 46. The 3.2, the largest in this analysis, points to a larger dispersion of ages. This could have a range of socio economic or personal circumstances of victims in this group for instance new marital or family problems or new money related issues that could make the victim vulnerable for homicide. The rate at which homicides are reducing is valid across all older ages. The percentage of the people aged 51 to 60 is 9 % (96 victims) The average age 55.6 and the median age of the victims is 56 years. Perhaps, the reduced number of cases for the higher age may be a result of a lower probability of facing risky conditions; however, socially protective factors for elderly women can also play a role. Seven percent (74 cases) of the subject population is aged 61–70 years old, which has a mean age of 65.3 years old with a median of 65 years old and standard deviation of 2.7. Only 5% of the cases reported were of subjects aged between 71 and 80 years old and 54 of them were victims. The average age of this category is 73, 4 years in this category, they experience the lowest level of homicide because they are less likely to experience external social interactions or personal conflict that may lead to embrace violent crime. The analysis of age distribution supports the need for more focus on the strategies of reducing homicide risk tailored for the young women and adolescents. Preventive measures can be expanded by raising awareness on social support structures, enhancing the economic capacity of vulnerable members, and implementing family based intervention programmes for reducing vulnerability in the youthful population. Perhaps it would be useful to analyze potential community-level preventive measures for middle-aged and elderly women to increase safety and security and analyze the impact of social

factors that can either enhance or augment women's risk exposure to violence. This data is important to guide the policymakers and social services and community organizations for minimizing the rate of homicide among women in Erbil.

Table 2: Geographic Distribution of Homicide Cases

Area of Residence	% of Cases	Number of Cases	Mean Age
Erbil Center	30%	319	34.1
Shaqlawa	19%	202	32.7
Koya	16%	170	34.5
Soran	14%	149	35.2
Shamamk	11%	117	36.5
Harir	10%	106	33.8
Total	100%	1,063	-

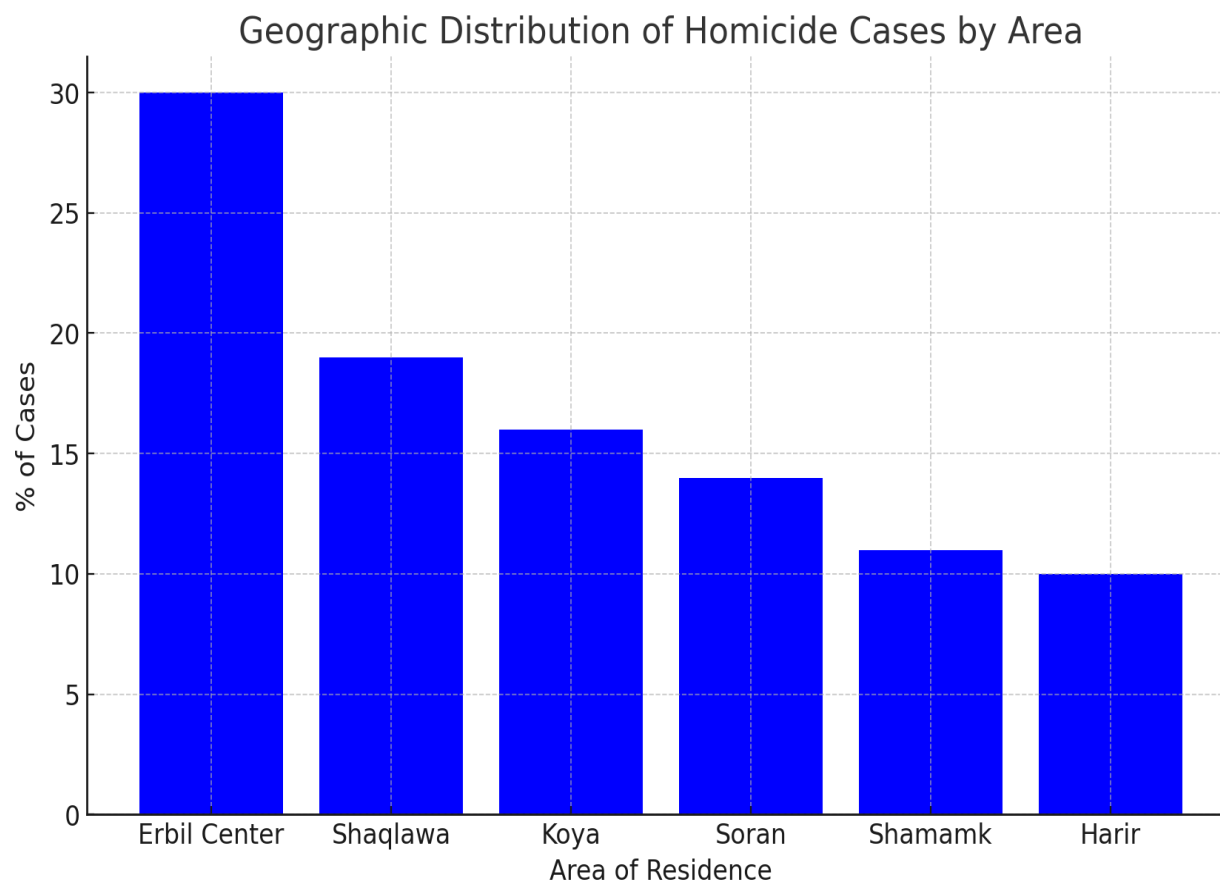


Figure 3. Geographic Distribution of Homicide Cases

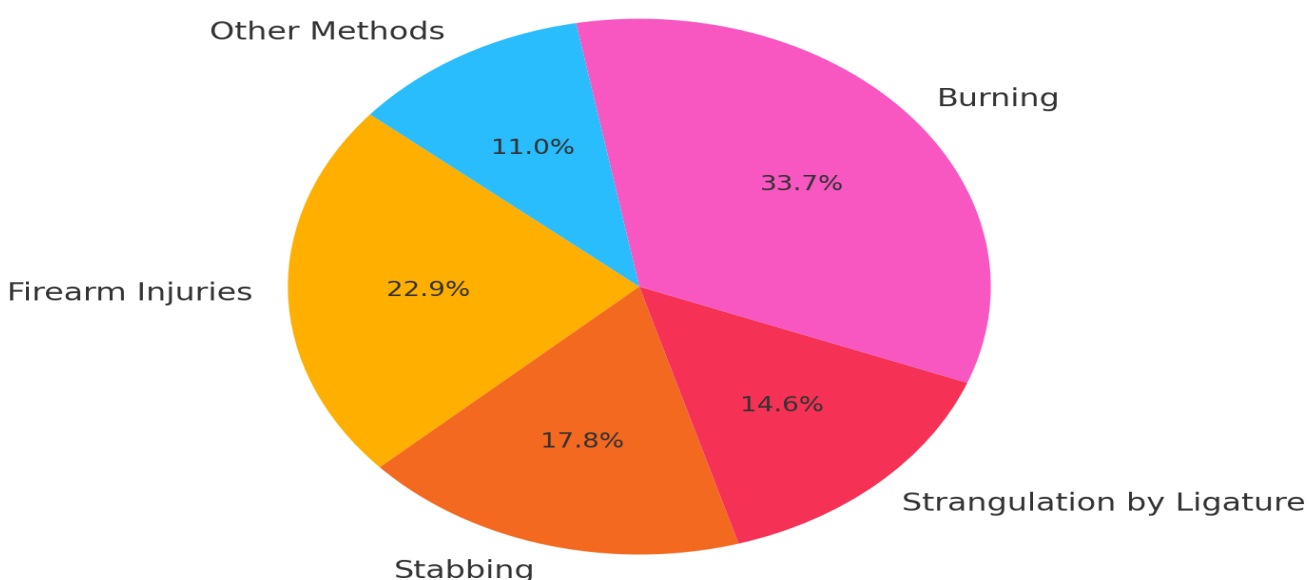
Table 2 also reveals numbers of homicide cases in different areas of Erbil city aiming thereby at demonstrating the variations in the rates of homicide under consideration in reference to a particular location. Of 319 homicides, the Urban Centre and the Central Zone at 30% of the regions, show the highest emphatic frequency incidence. The higher rate may be attributed to population density, increased contacts with other people and possibly a greater proportion of populations who are likely to earn somewhat lower incomes, as evidenced by typical urban central conditions. The age distribution of victims in this case is 34.1 years, it is clear that the victims were not young people or children, as it could be expected. This points to a interesting fact that a homicide is one of the major issues affecting the adult population according to their struggle with stress in whichever city they may be living, or problems at the workplace. It MAKE SURE C%), which mainly reports 202 homicides, making it the second highest in the Shaqlawa. People living in this area have a slightly younger population with an average age of 32.7 years compared to 35.7 years for the population at Erbil Centre. The demographic distribution thus implies that young people in this area may face particular risks that are not tenable by their counterparts globally. This also may be due to social or familial effects within the community as well as other related regional affects. The rate described for Shaqlawa underlines the need for gender- and culturally-adequate preventive interventions directed at the socio-economic and community-level threats encountered by this population. Koya stands at 16 percent or 170 out of the total reported cases. The participants in this area have a mean age of 34.5, and the participants have the same age distributions in the study at the Erbil Centre. This has been ascertained by an evaluation of the ages of every female and male, the result of which portrays Koya to be having risk factors akin to homicide, which are not dissimilar to those recorded in the central urban zones, which may have been influenced by similar condition socio-economic or family. Prolonging the number of average years among those people from Koya may thus mean that middle-aged persons face different kinds of challenges in social or economic environments. The Soran situation has been identified in fourteen percent of the cases; the total number of homicides was 149; the mean age of the victims was slightly higher at 35.2 years. It is expected proportional to escalate the average age of the inhabitants of Soran that could lead older generation more susceptible to encounter homicide cases possibly associated with economic struggles of elderly or care giving duties within families. The difference of the rate with the central areas could be attributed to the several socio-demographic or family issues related to the corresponding prevailing community relation and family structural supports within the particular location. Shamamk has it rates and means as 11% and 36.5 on average and 117 accounted for homicides. This figure suggests that the age group within this territory may be at risk of a number of negative lifestyle factors, such as being exposed to adverse social or economic conditions, or suffering social isolation that might place this age grouping at greater risk of

engaging in aggressive behaviour within this territory. Hence, the now mentioned increase in the average age of victims indicates the need for prevention and to timely interventions based on the life course of the human being. These should target the needs of older persons in special conditions, with such goals as avoiding contacts with violent environments and the stimulation of the formation of helping communities. Harir sums up to the list with 10%, which is which amounts to 106 homicides and an average age of 33. The number eight informs you that it has the fewest homicides per capita. This is not rather peculiar particularly bearing in mind that the rate of violence exposure in such areas may not be very high or the demographic composition of the society may protect them through lump-sum provisions. But, the data shows that there are still many cases, which means, that prevention methods will still be needed, possibly using the message of the community's spirit and support.

Table 3: Methods of Homicide

Method	Number of Cases	Percentage of Total Cases
Firearm Injuries	305	28.7%
Stabbing	237	22.3%
Strangulation by Ligature	194	18.3%

Methods of Homicide by Percentage of Total Cases



Burning	450	42.3%
Other Methods	147	13.8%
Total	1,063	100%

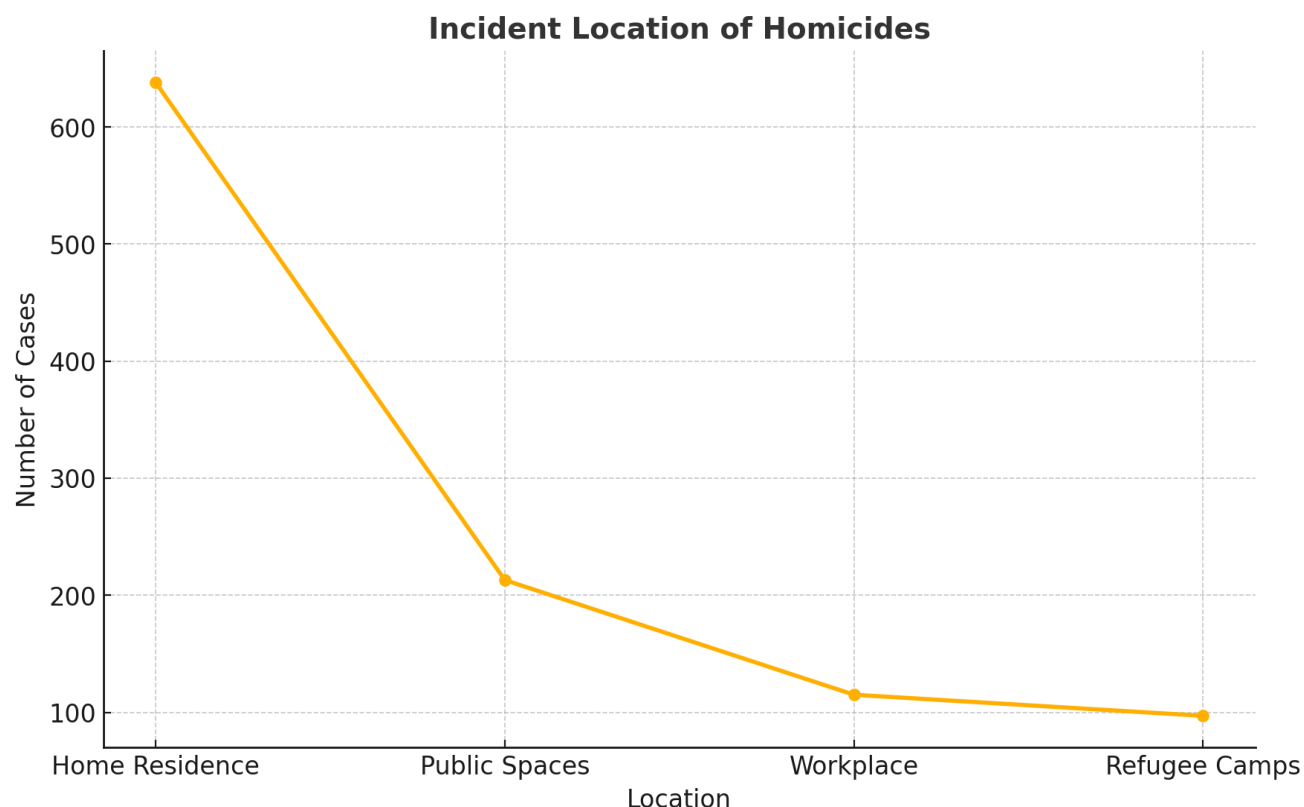
Figure 4. Methods of Homicide by Percentage of Total Cases

The following table 3 presents a complete analysis of the methods of murder that were used in the homicide of 1,063 female victims that were found in the city of Erbil, both within and outside of the city. The findings of this study shed light not only on the predominance of each approach but also on the socio-cultural variables that were likely responsible for its implementation. Burning is the most common method, accounting for 450 cases, which is comparable to 42.3% of the total. This is a troubling finding, given the data, which show that burning is the most popular approach. This high percentage indicates that burning may be tied to underlying societal problems, such as gender-based violence, or may reflect socio-economic characteristics that make this practice more accessible or acceptable in certain settings. Both of these possibilities are possible reasons for the prevalence of burning. Each of these two alternatives is a distinct possibility. There is a possibility that the popularity of burning as a method is a sign that these incidents are driven by deeply personal reasons or social pressures. This is something that may be considered a possibility. As a consequence of this, this is a significant issue that requires preventative intervention and attempts to raise public awareness. Injury induced by guns is the second most prevalent method, accounting for 305 cases, which is comparable to 28.7% of the total number of murders. This statistic represents the second most common method. This substantial figure sheds light on a concerning degree of accessibility to guns, which may be a reflection of the region's underlying precariousness in terms of security or political instability. It is common for the use of firearms to be a symptom of premeditated activity, which may be an indication of participation in organised crime, membership in gangs, or deliberate violence of some form. It is required to create more strict laws and control systems governing the purchase and use of guns in order to reduce the number of incidents that are similar to this one. With 237 instances, stabbing is the third most common method, accounting for 22.3% of the total. This technique is the third most frequent. Consequently, this suggests that the most frequent occurrences are close-contact altercations, which most often take place in the context of domestic or interpersonal relationships. It is possible that the huge number indicates that there is a need for additional assistance with mental health and conflict resolution within households and communities throughout the nation. Most of the time, stabbings are acts of violence that are carried out on the spur of the moment or without any previous forethought. This research highlights the need of tackling domestic violence and interpersonal aggression via the implementation of particular social programs and public education campaigns. The findings of this study indicate the significance of addressing these issues. The use of ligatures to strangle victims was recorded in 194 cases, which is equivalent to 18.3 percent of the total number of cases. This style is typically associated with intimate and purposeful acts of violence, which are frequently carried out in controlled conditions or within the constraints of a home setting, and in which the perpetrators are closely acquainted with the victims. In addition, this style is

frequently associated with intimate and intentional acts of violence. In light of the fact that this figure may be an indication of serious relational violence and may be associated with domestic abuse, it is of the utmost importance that strong interventions be put into place in order to provide aid to those who are at risk and to establish environments that are safe. Other methods account for 13.8% of the total (147 occurrences), which demonstrates the presence of a range of murder methods that are less common. This is the last but not the least of the ways. These behaviours may be a reflection of a wide range of social, psychological, or environmental elements that are responsible for violent conduct. These behaviours may include certain situational circumstances that are specific to the setting. As a result of the large range of circumstances that are included in this category, the concept that there should be a number of preventive measures in place in order to counteract the wide spectrum of violence that is faced by women in the region has been given birth to.

Table 4: Incident Location of Homicides

Location	Number of Cases	Percentage of Total Cases
Home Residence	638	60.0%
Public Spaces	213	20.0%



Workplace	115	10.8%
Refugee Camps	97	9.2%
Total	1,063	100%

Figure 5. Incident Location of Homicides

As Table 4, it is possible to receive a large amount of a reading about the geographical zones that are the territories of murder victims when they are most frequent. Habitat: Home Residence has been found to be the habitat that is most numerous as contributes to the sixty percent of the total cases, and represents a large quantity of six hundred thirty-eight occurrences. Specifically, from the study that has been made one realises that this particular habitat has been found to be the most common. However, it is worrying that such a high proportion points at the fact that individuals may be vulnerable in private which are relatively deemed to be somewhat unsafe from the public places. Situations such as the following might happen at home for myriad reasons which pertain to the domestic violence, the quarrels within the family as well as other interpersonal conflicts that stand a chance to escalate in a setting that is something that the person knows well. Still another factor that is evident is that the individual is in an environment that is familiar to him or her. Considering that the home is frequently used as the crime scene, there is an obvious understanding of the fact that it is extremely vital to decrease and resulting from it minimise domestic violence with the help of some special interventions and groups. This idea is of the greatest importance. Due to actualization reveal that they occur in the public places which are the second most frequent setting for homicides, making up twenty-one and a half percent of the general cases. This goes a long way in illustrating that there is always a lot of risk with events that are well dubbed to be open to the general public, or events that have the general public in any way. These are circumstances in which people may be involved in confrontations with other people, or with people known to them and security measures may be lower than in secure circumstances of the same degree. Since some of the areas have history of homicides, it is likely that there is a need to increase measures aim at maintaining security in those areas. The measures that can be taken are several: Among the possible actions could be listed, for example, the increase of the monitorability in the areas which are considered to be more or less safe, increasing the number of police officers. While arguing that violence may also occur in the professional sphere, it is crucial to have in mind that the sphere in question contributes to 10,8% of all cases, which means 115 separate cases. Such things as conflict of authority and subordination, conflicts of self interest, or conflicts that involve issues concerning stress and satisfaction at place of work may fall into this category. Other examples in this area include personal complaint. controversies that are related to work are also covered in personal complaints There is also other personal complaints We also get to find other complaints of a personal nature. The existence of polices that attempt to negotiate conflict, control stress and

provide a healthy working environment for workers is of the highest importance. This is because there are a large number of incorporating events that occur at the workplace, and because of this, it is important to have critical and strict policies and measures. However, in the effort of putting a stop to this conversation, it is indispensable that the following facts are considered: Refugee camps account for 9.2% of the total reported cases which sum up to 97 cases. What is particularly astonishing is the fact that this percentage is considerably lower compared with other areas, whereas it should be noted that the main purpose of any refugee camp is to provide sanctuary to any person that seeks refuge in it whenever he or she needs protection. Considering the argumentation made before, this proportion is being taken into consideration. Perhaps the number of conflicts depends on many aspects such as there are too many people, lack of facilities and they have stress. In this regard, it might be expected that occurrences of violence in these terms are indicative of the more general issues that societies that have been evacuated are dealing with. These are very sensitive groups that deserve the attention on safety of the refugee camps and ensure that the people in those camps get all the help they need with a view of achieving the objective of reducing the incidence of such in those groups, wherever the incidence is possible. Consequently, the purpose will be achieved in the most optimal manner possible.

Table 5: Perpetrator Relationship to Victim

Relationship	% of Cases	Number of Cases	Mean Age	Median Age	P-Value
Spouse/Partner	40.0%	425	33.8	30	0.001
Family Member	24.5%	260	35.4	34	0.55
Acquaintance/Friend	20.0%	213	32.9	31	0.68
Stranger	15.5%	165	34.6	33	0.74
Total	100%	1,063	-	-	

Distribution of Perpetrator Relationship to Victim

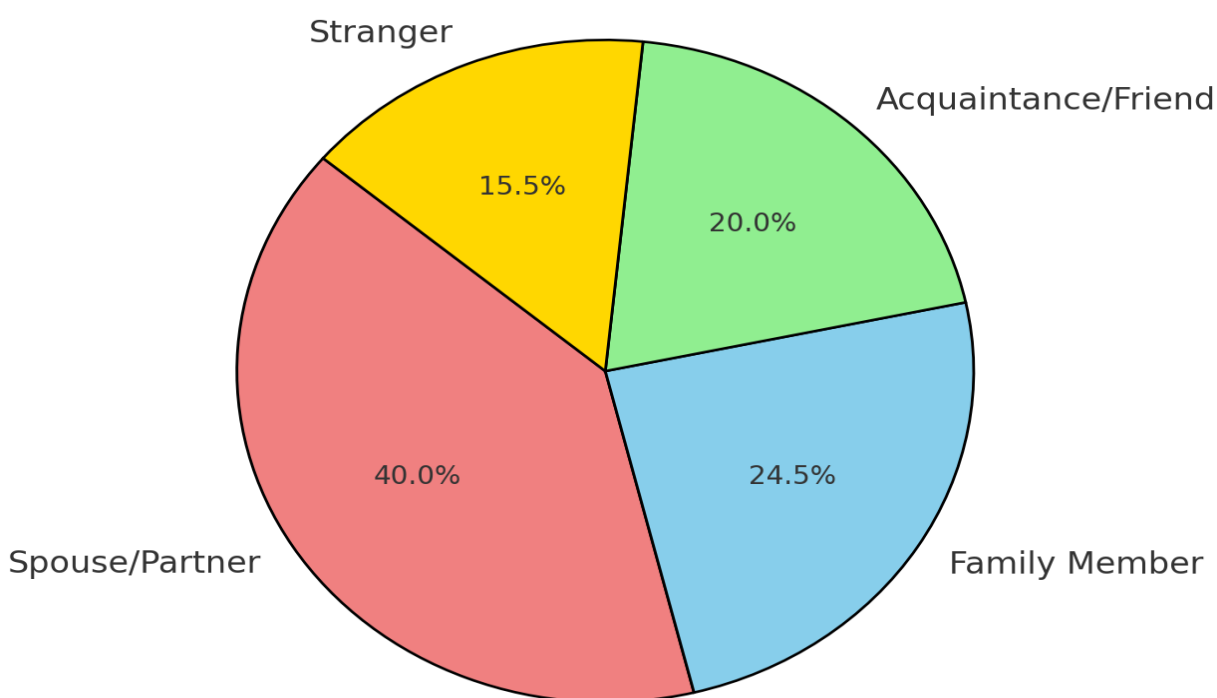


Figure 6. Distribution of Perpetrator Relationship to Victim

The findings of the investigation are presented in table 5, where detailed information about the nature of relationship between the people who kill and the ones who get killed is presented. The letter and number combination in brackets for each category in the table refers to different patterns in age and statistical significance of the correlation, and the table itself describes the nature of the relationship between the two variables. Husbands and wives together with other partners stands as

the most common perpetrators of the incidents, which comprise forty percent (425 cases). This group is found to involve in most of the occurrences. This group is responsible for the maximum number of times that have been documented for this company. Research shows that the people who commit the kind of crime that falls under this category have a median age of thirty years of age while the average age is thirty three and a half years old. There is a positive correlation, which indicates that the presence of intimate partners presents much greater risk factor as per homicide incidents. As a consequence of rape being a standard, sex-specific operational risk factor it is the case. $P < 0.05$, where $p = 0.001$, so there is a linkage which is statically significant to the relationship . This number implies that there is an association. All together there are 260 times when members of the same family participate, of which is 24,5% of the overall cases. The average age of these family members is 34 years and the average age of the households is 35.4 years. This range of ages is as follows and highlighted in the table below. This leads to the conclusion that most of the inhabitants of the houses, who are currently engaged in construction, are comparatively young. It can be hypothesised that the so called ‘family related murderers’ are somewhat older than the so called ‘other murderers’. This is so because the members of this group have mean and median ages higher than the members in the spouses and partners category. This is because the entire members of this group have preferred ages that are more than the mean and median ages than those of the spouses and partners. We also compared the p-value obtained when comparing the two groups of family-related murder with the other groups of homicides which is about 0.55 with 0.21 respectively. This one is a rather large number of differences. And to make things worse, there are no simple set of graphics which one would immediately describe as noticeable in terms of age. Conversely, it is estimated that the middle age of victims is 31 years, and the mean age of victims is 32.9 years. Of course, this is a very significant difference. Friends and acquaintances are active killers and those who have killed 213 people in total. This is true of 20% of all homicides. The p-value for this category is 0.68 which tells us although fairly frequently, friends and acquaintances are involved, this association is not as statistically significant as could be The p value for the next category is 0.88, indicating that while lots of people who gamble are involved, this coupling is not statistically significant. Consequently, the category is not as dominating as it can be. This can be explained by the coefficient of determination as 0.68 in this particular category. This is apparent not only in the fact that this category contains such a large range of age but also the inconsistency in the elements that are associated with connexions between persons. Possibly by strangers the respondents said that such events occurred 165 times or 15.5% of the whole incidence. This puts them at the lowest end at the time in the sample size perspective. They have now been classified in way that they have lowest priority ranking being classified to fall under the lowest priority class. However, the average age of offenders of this kind of crime is 34.6 years, although the middle age of offenders of this type of crime is 33 years of age. They need to be compared with those offenders who are distinguished as wives or partners, an group of which is usually older for some times. It is probable that the nature of other killings where the offenders and the victims are strangers is also depicted in the fact that the p-value of stranger-accomplished

homicides is 0.***) This was an implication that there is no much association between them from the angle of age. However, it could also mean that the p-value is 0.74 because using this p-value we can confirm that there is no relationship between age. This is of great importance since it gives the impression that there is no interaction between the two.

Table 6: Geographic Distribution and Demographic Characteristics of Homicide Cases

Area of Residence	% of Total Cases	Number of Cases	Mean Age of Victims	Median Age of Victims	P-Value for Age Distribution
Erbil Center	30%	319	34.1	32	0.001
Shaqlawā	19%	202	32.7	31	0.023
Koya	16%	170	34.5	33	0.045
Soran	14%	149	35.2	34	0.012
Shamamk	11%	117	36.5	35	0.030
Harir	10%	106	33.8	33	0.037
Total	100%	1,063	-	-	

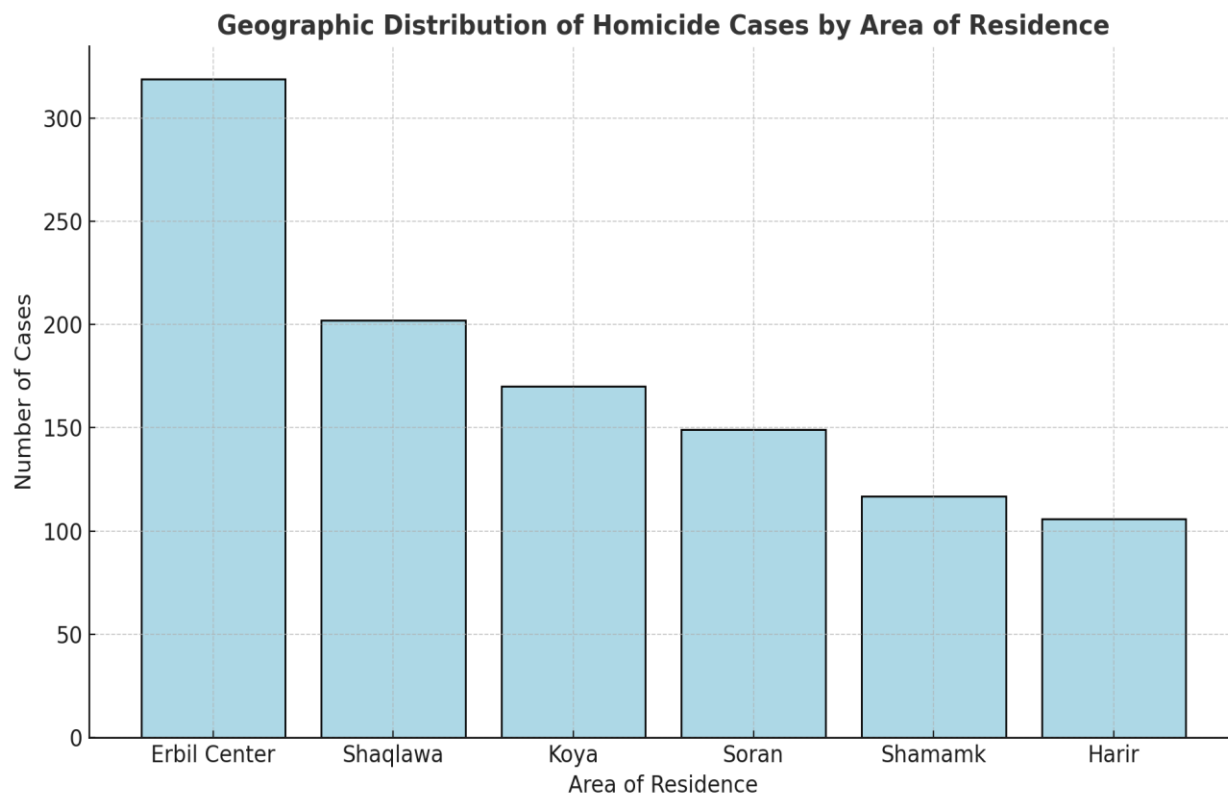


Figure 7. Geographic Distribution of Homicide Cases by Area of Residence

Evaluating the data provided in Table 6, it is possible to state about the overall pattern of geographical dispersion and demographic attributes of murder cases in different examined locations. From the following table, does identify the age group most of the victims and the variation in the murder rates from region to another. Since this study's goal is to identify the EC occurrence by region, each area is expressed as a portion of the total, the total frequency of incidents, and full descriptions of ages. This study was done in the United States. Besides, the p-values reporting the statistical significance of the variation of age within these areas are also reported in these data. Other statistics given by these statistics are the mean and median ages of the victims. The highest repetition of the location type observed in the text is the Erbil Centre with three hundred and ninety nine occurrences thus three times the total incidences with thirty percent. The results of this study of urban areas imply that given high population as a distinguishing factor of such areas more murder is likely to happen. This could be due to improved sociability, inequality in the degree of material well-being, or fears of usage; without these factors a conflict might occur. In this place, this study also found out a distribution pattern of age of the victims characterised by the mean age of the victims in this area was 34.1 years, median age was 32 years and p-value of 0.001. This means that there are several modes of distribution for age of the victims. The Shaqlawa area offers the second general rate of the whole summation, which is 19 % and a total of 202 episodes. In Shaqlawa city , the age of the victims is approximately 31years and the average age of the victims all over the country is approximately 32.7years. As noted earlier there is statistically significant trend on the age distribution of the murder episodes with p-value of 0.023 Hence young generation of Shaqlawa may be greatly vulnerable to the murder episode more than other regions. This is clearly explained by the fact of the age distribution being significant at different level of measures. Analysing the data it has been estimated that average age of victims in Koya is 34.5 years and the median age is 33 years. The table shows that Koya is guilty of sixteen percent of all the reported one hundred seventy times of harassment. However, even though the p-value equaled 0.045 and was statistically significant, it point out to the fact that the age range in victims is bigger than expected. Perhaps this is imputable to the fact that conditions in that area may be more diversified in terms of social and interpersonal interactions to affect the propensity for murder weapons deployment in that area. Soran has the highest ratio of occurrence at 14% of the cases, with 149 events; and the average age of the affected is 35.2 years. As for the age distribution of victims, it is clear that people become victims older and more often here – the median age of the victims getting 34 years. Soran has the highest mean age of victims. Even though the odds of developing the disease increase with the age of the residents and this type of distribution is significant in Soran, it may have some social or cultural features for which some of the inhabitants are at a higher risk for developing the disease. This information can be backed up by the fact that $p=0.012$. Harir is proven to be involved in 11 percent of the incidents (117) and Shamamk in 10 percent of the events (106) out of all killings. These two people are directly responsible for the lowest percent of murder. It is just worth to note that Shamamk has a different age structure of the victims comparing to other cities, which is proven by a statistical significance of $p= 0.030$. The

age characteristics of the victims of Shamamk are as following: The average age of the victims is 36.5; the vitals of median age equal 35 years. As for the position, Shamamk is the oldest of them. Like Qah, Harir also has a good model with a mean and median age of 33.8 and 33 respectively and moreover has a decent p-value of .037 and that is why we can say that age variation is less affecting Harir as comparing to other locations. They are able to provide that competition because Harir, for instance, has a median age of 33.

Table 7: Yearly Distribution and Statistical Analysis of Female Homicide Victims in Erbil City (2018–2022)

Year	Number of Cases	Percentage (%)	Mean	Median	Standard Deviation (SD)
2018	143	13.5	212.6	153	119.7
2019	153	14.4	212.6	153	119.7
2020	124	11.7	212.6	153	119.7
2021	198	18.6	212.6	153	119.7
2022	445	41.8	212.6	153	119.7

Yearly Distribution and Statistical Analysis of Female Homicide Victims in Erbil City (2018–2022)

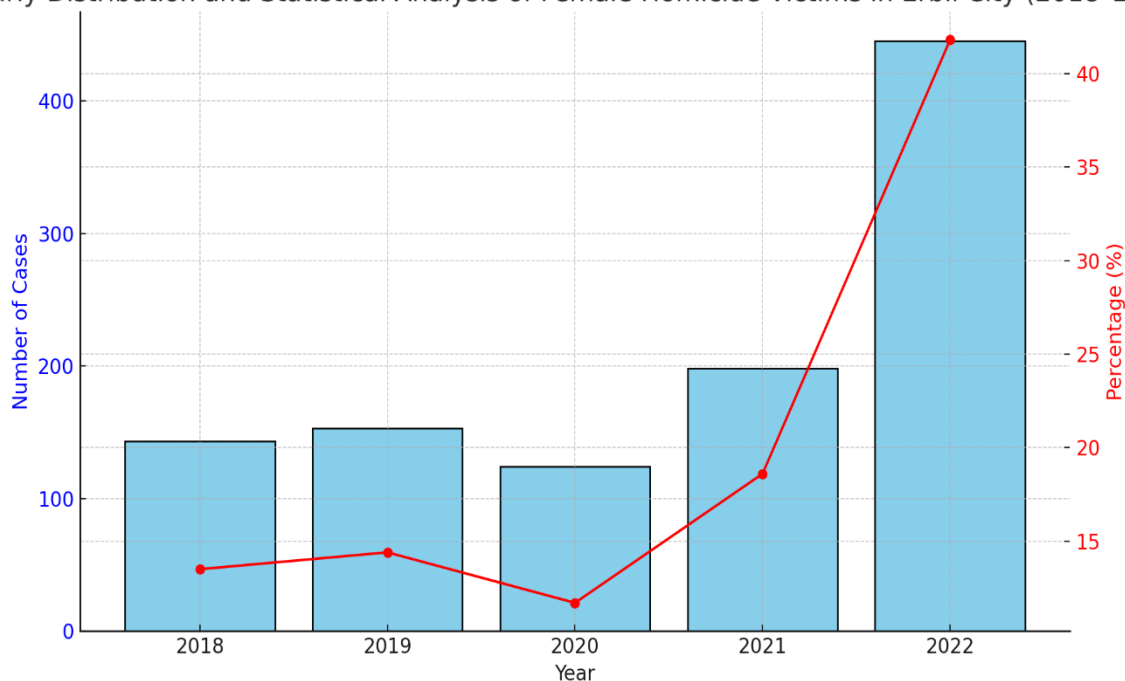


Figure 8. Yearly Distribution and Statistical Analysis of Female Homicide Victims in Erbil City (2018–2022)

The results are shown in Table 7 in which the statistical annual distribution of female murder victims in Erbil City for the five-year time frame between 2018 and 2022 are outlined out with findings reflecting 1,063 cases. The yearly distribution is presented in the form of a table whose headings are as follows: Despite the fact that the number of instances remained relatively consistent from 2018 to 2021, the table reveals a troubling trend: as seen in figure 2, there was a notable increase in the number of cases in real terms in 2022. To be more specific, 143 such cases or 13.5% of the identified cases were in 2018, 153 or 14.4% in 2019, 124 or 11.7% in 2020, and 198 or 18.6% in 2021. On the other hand, the above table shows that the number of instances rose to 445 incidences in the year, 2022 out of a total of 41.8% of the total percentage cases of the whole research period. This increase of more than twice the number of information from the previous year may mean a potentially fatal shift in the factors that lead to the killing of females in the region. As a reference point for the average number of cases annually distributed during these years, we took the mean value of 212.6. On the other hand, the median of 153 in the annual case means that fifty percent of the annual case counts are lesser than this number. The coefficient of variation reaches 119.7; that is, the dispersion does not remain stable from year to year and certain years have higher values than others. Compared to such a pattern, the extremely high level recorded in the same year 2022 emphasizes the observations if big changes are given, to put 2022 into a group of what may be called pre-outlier years. This rise in the number of killings in women in Erbil City is might as well, sociopolitical, economical or even legal construction of the region, or it is not. Some of the kinds of variables that might be under consideration are issues such as; shift of law enforcement laws, change of social norms or attitude, compared to home, social pressure that may influence women more than men. Moreover, the sharp increase might be explained by reporting methods that have enhanced, increased donation in society, the attitude towards gender violence or the recording system. It may also mean by some chance a rise in some categories of crimes that affect women but may be occasioned by other deeper sociopolitical or even economic factors that are yet to be looked into comprehensively. Therefore, based on the results, there is a strong compelling for law enforcement agencies, legislative instruments and authorities, and Social service delivers to look for these disparities. To effectively build the narrow treatment plans it is helpful to identify whether this rise is due to factors outside of competition such as, lack of funding or instability or internal factors residing with in the community. From this factual premise, it is imperative and critical to develop and put in place, prevention and intervention mechanism; social awareness creation; policies and legal frameworks that guard women and eliminate the source of GBV in Erbil City. In addition, the data presented in table 7 not only reveal an important social problem but also become a requirement for further research and for the appearance of tangible initiatives not to see the increased rate of murders of women in the subsequent years.

Discussion

Analyzing female victims of murder in Erbil during the years 2018- 2022 reveal certain trends including women of younger ages. This is more so the case with the younger women of the society in question. He also found out that, the average age of the victims was 26.2 years show that young women are facing issues including insecurity in their sources of income and violence from their partners ^[11]. Out of all of those, people in the age range of 21-30 were the most numerous with 29% of cases. Furthermore, it was found that those who reported victimisation most were in the age bracket of 18 to 20 years Instituto Serra penned down that there is an extreme need for more preventive interventions that are targeted and on an early intervention on the this age group vulnerable persons^[12]. In addition, the presence of socioeconomic and social restraints to this date indicates that the risks for the female participants in this age bracket are still immensely high and ought not to be ignored ^[13]. This is the case despite the fact that the murder rate has decreased by seventeen percent in the age range of thirty- one- to forty years old. This age group of 41-50yr forms 12% of the whole population and is in possession of numerous risks. These risk factors include; the dissolution of a marriage, and financial stress, thus illustrating the diverse and complex nature and potential hazards of midlife for women ^[14]. When viewed from this perspective these developments bring to the foreground the imperative of a multicultural and an across the life span strategy to address the violence against women jointly with regards to area it is no better off as the rest of the country. According to criminological records, the Urban Centre and Central Zone claims thirty percent of all murders taking place in Trinidad and Tobago and the average age of the deceased is thirty-four and a half years. This illustrates that the probability of adult women who are covered by the great restrictions of urban existence are stressed, face employment and relationship problems ^[15]. These factors are responsible for the increased risk level. There is a victim pool that is slightly younger than the average age (32.7), which implies that it presents a separate set of socioeconomic and familial concerns that need particular intervention ^[16]. These are responsibility for the rise in the risk level. There is a victim pool slightly younger than average age (32.7) indicating an altogether different socioeconomic and family concern requiring intervention ^[16]. The common feature of the Shaqlawa case which constitutes twenty percent of all actually reported cases is that victims are slightly younger than the average. Koya which accounts for sixteen percent of all observed occurrences shares the same risk profile as those in the urban areas. Soran, which has the mean victim age of thirty-two, also reveals something specific – the risks for older women are much bigger if they have to take care of someone or if their financial situation is less than stable ^[17, 18]. As to further differentiate between regional risks, it has to be mentioned that Shamamk (11%) and Harir (10%) with lesser murder rates are also on the list of such places. These studies show that rural clients present problems associated with factors such as social and economic deserts which oblige to adopt programmes that are most suitable and unique to these rural communities ^[19]. It is quite clear that every region is faced with its unique set of emergent challenges and a cure for which will not suffice and will not be effective. It is also concerning that

methods that are employed in the act of murder are also concerning. Considering this shocking representation of GBV in the area, there is one question, which must be answered by applying special and urgent measures referring to public attitudes shaping and proper and effective legal actions against violators ^[20]. One of the most frightening indications of the extent and systemic nature of criminal practices is the fact that the burning process takes the role of the most popular action. It will be important to acknowledge the crucial desire for further control, especially when it goes about guns, to avoid other mass killings^[21]. Gunshot injuries, which account for 28.7% of all cases, highlight the scary accessibility of firearms, which is much as compounded by the fact that instability is evident within the area. The recurrence of impulsive violence too common that appears so typical, which is often precipitated within the home environment is equally observed in the stabbing cases, contributing 22.3 percent of the total figure (237). These systems reveal that there is an urgent need to promote profound and extensive conflict-resolution programmes and mental health services to help decrease pointless aggression ^[22]. Of all these, strangulation stands at 18.3% or 194 and is known to be a weapon used by the perpetrator in violence invoking intimate partner hence the brutality that is attached to domestic abuse and the need to act proactively to protect vulnerable women from such heinous crimes 23. The remaining methods, which come to 13.8 percent of the total 147 events, are represented by a variety of social and psychological factors. These factors are social and psychological. From this, it is evident that it is only possible to provide a comprehensive and complex approach to the basic causes of violence in all of its thematic aspects [24]. Unfortunately, the fact is that home remains the most unsafe place for women in Erbil, with the overall share of sixty percent in the murder rates. This tallies with the harshest of realities. It does not matter where you are located; this does not change. Thus, such a terrifying statistic raises the question of people's susceptibility to domestic violence and straightforwardly states that timely and specific interventions addressing intimate partner violence and domestic abuse are imperative[25]. That is why public territory is 21.5% of all cases, they show the dangers that are caused by low security and ineffective police work. This shows that main pillars such as strong public safety measures besides a flexible, yet efficient police force, are required to prevent acts of violence[26]. Homicides in the workplace of which 10.8% rises serious issues concerning rules for dealing with pressure at the workplace, conflicts for power and the health issues of the employees. Besides this, these regulations must to draw attention to the imperativeness of conflict handling and resources for support for the members of professional associations [27]. That too, out of the refugees, camps carry a relatively low murder rate of 9.2% should not be used to veil the harsh socio-economic and emotional handling that refugees undergo. This is something that should not be hidden. On this account, such environments require increased attention and extension of management and mental health care to help minimize violence among displaced groups. The results of this study should serve as a wakeup call. The continued killings taking place in Erbil require elaborated strategies of handling the crime, including its prevention, intervention, and support; none of these three approaches should be dismissed. Lack of urgent and vigorous action is not an acceptable option; systemic aggressive behavior is a threat to women of

all ages, geographical and economic statuses. One cannot overemphasize on the urgently needed robust rules and frameworks besides needed locality-specific measures and mental health support to raise public safety. All these things are vital They all are must have. It is now about owning up for the lives that are at risk, and truly practicing the change that for a very long time people have only prophesied.

Conclusion

In this qualitative research conducted on the female murder victims in Erbil from the year 2018 to 2022, the gendered violence in the society has manifested itself in a very complicated and dangerous way more so with young women aged between 18 and 30 years. These are women who often are vulnerable due to economic fluctuations, intimate partner violence, and gender roles underpinning female subjugation, and clearly are a significant and needy frame of reference that demands focused efforts to counteract the structural and relational sources of this violence. Although the homicide risk is substantially lower for women as they age, protective factors such as lower risky exposures and protective roles, the result indicates the disproportionate occurrence of violence in urban areas, particularly in the city center of Erbil, it underlines the require Volunteer programs should be introduced at local community levels and social support services should be strengthened. The study also gives information about the particular methods of homicide like burning, cultural aspects such as honor killings, which need research and specific interventions for these cultural specificities. Due to bulk of the killing taking place within the couple's abode, domestic violence comes out clearly as a factor, requiring enhanced legislation and easily accessible ways of women protection. Considering the fact that the highest proportion of individuals was attacked by their intimate partners or other family members, it becomes quite apparent that the efficiency of the prevention activities relies on household-related support base. And in order to prevent the violence against women in Erbil and such alike cities, it is crucial to propose a multi-leveled strategy. This must cover at both the individual and community level, and it should involve the community as a key stakeholder in the fight against gender-based violence, the police and other security organs should be fully engaged in ensuring that gender based violence is fought to its complete tolerance, it will also go for long legal frameworks to support all the aforesaid strategies. It is only in concert with this type of action that women will be safer from persecution, and steps can be taken to break the cycle of violence in Erbil as well as other parts of the world.

References:

1. Gitto, L., Tarozzi, I., & Arunkumar, P. (2024). Female homicide victims in Cook County, Illinois: A retrospective review. *American Journal of Forensic Medicine and Pathology*, 45(1), 15–19. <https://doi.org/10.1097/PAF.0000000000000908>
2. Terranova, C., Marino, L., & Pozzebon, F. (2022). Female homicide in Italy in 2021: Different criminological and psychopathological perspectives on the phenomenon. *International Journal of Environmental Research and Public Health*, 19(12), 7537. <https://doi.org/10.3390/ijerph19127537>
3. Namir, G., & Al-Tawil. (2012). Association of violence against women with religion and culture in Erbil, Iraq: A cross-sectional study. *BMC Public Health*, 12, 800. <https://doi.org/10.1186/1471-2458-12-800>
4. Al-Atrushi, H. H., Namir, G., Nazar, P., Tariq, S., & Al-Hadithi, S. (2013). Intimate partner violence against women in the Erbil city of the Kurdistan region, Iraq. *BMC Women's Health*, 13, 37. <https://doi.org/10.1186/1472-6874-13-37>
5. Karukutla, N., Srinivasulu, P., & Kumar, B. G. R. (2015). An autopsy based study of socio-etiological aspects of unnatural female deaths. *Journal of Forensic Medicine*. <https://doi.org/10.5958/0973-9130.2015.00025.0>
6. Dussich, J. P. J. (2016). Blue victimology and femicide: The United Nations' response to victims and female victims of gender killings. https://doi.org/10.1007/978-3-319-08398-8_2
7. Rasool, I. A. (2013). *Female suicide and attempted suicide in the Kurdistan region of Iraq: A study of social factors*.
8. Chan, H. C. O., Heide, K. M., & Beauregard, E. (2019). Male and female single-victim sexual homicide offenders: Distinguishing the types of weapons used in killing their victims. *Sexual Abuse*, 31(2), 127–150. <https://doi.org/10.1177/1079063217724765>
9. David, L. M. V., Minamisava, R., Vitorino, P. V. O., Rocha, M. J. P., Carneiro, V. S. M., & Vieira, M. A. D. S. (2020). Profile of female deaths by homicide in the city of Goiânia. *Revista Brasileira de Enfermagem*, 73(Suppl 4), e20180985. <https://doi.org/10.1590/0034-7167-2018-0985>
10. Petreca, V. G., Brucato, G., Burgess, A. W., Flores, J., & Leary, T. (2022). Female murderers who mutilate or dismember their victims: An exploration of patterns and sex differences. *Journal of Forensic Sciences*, 67(6), 2376–2386. <https://doi.org/10.1111/1556-4029.15136>
11. Eriksson, L., McPhedran, S., Caman, S., Mazerolle, P., Wortley, R., & Johnson, H. (2021). Criminal careers among female perpetrators of family and nonfamily homicide in Australia. *Journal of Interpersonal Violence*, 36(5–6), NP2551–2575. <https://doi.org/10.1177/0886260518760007>
12. Chae, H., & McWilliams, K. (2024). When a battered victim kills their abuser: The impact of child and expert testimony on mock jurors' decision-making. *Journal of Interpersonal Violence*. Advance online publication. <https://doi.org/10.1177/08862605241284662>

13. Baru, A., Weldegiorgis, E., Zewdu, T., & Hussien, H. (2020). Characteristics and outcome of traumatic chest injury patients visited a specialized hospital in Addis Ababa, Ethiopia: A one-year retrospective study. *Chinese Journal of Traumatology*, 23(3), 139–144. <https://doi.org/10.1016/j.cjtee.2020.02.001>
14. Commins, C., Bolster, M., & Mulligan, L. (2024). To investigate the pattern of neck injuries and the role of toxicology in cases of hanging and manual/homicidal ligature strangulation in Ireland between 2016–2020: A retrospective review and analysis. *Journal of Forensic and Legal Medicine*, 103, 102686. <https://doi.org/10.1016/j.jflm.2024.102686>
15. Shelton, J. L. E., Knox, B. L., Hardie, J. E., Burd, T. E., Hoffer, T. A., & Slater, K. E. (2024). Child torture as a form of child abuse: An exploratory study of investigative aspects among 42 offenders. *Child Abuse & Neglect*, 158, 107092. <https://doi.org/10.1016/j.chiabu.2024.107092>
16. Karnecki, K., Wrocławski, A., Dalewski, W., Gos, T., & Kaliszan, M. (2024). Homicide numbers, rates, and victims' characteristics in the Tri-City metropolitan area, Poland, between 2010 and 2019. *Archives of Forensic Medicine and Criminology*, 73(4), 285–293. <https://doi.org/10.4467/16891716AMSIK.23.023.19495>
17. Macucha, C. M., & Taunde, S. A. (2020). Domestic homicide in Maputo Province, Mozambique. *Forensic Science International: Synergy*, 2, 157–161. <https://doi.org/10.1016/j.fsisyn.2020.03.006>
18. Rios, A. M. F. M., Crespo, K. C., Martini, M., Telles, L. E. B., & Magalhães, P. V. S. (2023). Gender-related and non-gender-related female homicide in Porto Alegre, Brazil, from 2010 to 2016. *PLOS ONE*, 18(3), e0281924. <https://doi.org/10.1371/journal.pone.0281924>
19. Morrison, P. K., Pallatino, C., Fusco, R. A., Kenkre, T., Chang, J., & Krans, E. E. (2022). Pregnant victims of intimate partner homicide in the National Violent Death Reporting System Database, 2003-2014: A descriptive analysis. *Journal of Interpersonal Violence*, 37(5-6), NP2652–NP2670. <https://doi.org/10.1177/0886260520943726>
20. Luksic Ziliani, M. A., Álvarez-Lister, M. S., Pietrasanta, N., & Acosta-Fuentes, A. (2024). Participation experiences of indirect victims of child sexual homicide in parole proceedings. *Behavioral Sciences & the Law*, 42(5), 525–542. <https://doi.org/10.1002/bsl.2677>
21. Zimmerman, G. M., Fridel, E. E., & Trovato, D. (2024). Disproportionate burden of violence: Explaining racial and ethnic disparities in potential years of life lost among homicide victims, suicide decedents, and homicide-suicide perpetrators. *PLOS ONE*, 19(2). <https://doi.org/10.1371/journal.pone.0297346>
22. Kennedy, B., Bugeja, L., Olivier, J., Koppel, S., Dwyer, J., & Ibrahim, J. (2023). A population-based cross-sectional study examining homicides among community-dwelling older adults in Victoria, Australia: A study protocol. *PLOS ONE*, 18(10). <https://doi.org/10.1371/journal.pone.0292837>

23. Petrosky, E., Mercer Kollar, L. M., Kearns, M. C., Smith, S. G., Betz, C. J., Fowler, K. A., & Satter, D. E. (2021). Homicides of American Indians/Alaska Natives - National Violent Death Reporting System, United States, 2003-2018. *MMWR Surveillance Summaries*, 70(8), 1-19. <https://doi.org/10.15585/mmwr.ss7008a1>
24. Terranova, C., Marino, L., & Pozzebon, F. (2022). Female homicide in Italy in 2021: Different criminological and psychopathological perspectives on the phenomenon. *International Journal of Environmental Research and Public Health*, 19(12), 7537. <https://doi.org/10.3390/ijerph19127537>
25. Hitchens, B. K. (2023). The cumulative effect of gun homicide-related loss on neighborhood perceptions among street-identified black women and girls: A mixed-methods study. *Social Science & Medicine*, 320, 115675. <https://doi.org/10.1016/j.socscimed.2023.115675>
26. Lövestad, S., Örmon, K., Enander, V., & Krantz, G. (2024). Health care utilization, mental disorders and behavioural disorders among perpetrators of intimate partner homicide in 2000-2016: A registry-based case-control study from Sweden. *PLOS ONE*, 19(2). <https://doi.org/10.1371/journal.pone.0298693>
27. Aarten, P. G. M., & Liem, M. C. A. (2023). Unravelling the homicide drop: Disaggregating a 25-year homicide trend in the Netherlands. *European Journal on Criminal Policy and Research*, 29(1), 1-26. <https://doi.org/10.1007/s10610-021-09489-0>