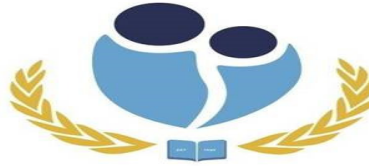


Saint Paul's Hospital Millennium Medical College

Department of Forensic Medicine and Toxicology



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St. Paul's Hospital Millennium Medical College**

**Research Thesis on:
Assessment of homicidal deaths among females in Ethiopia:
A Cross-Sectional study**

By:

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Submitted to Saint Paul's Hospital Millennium Medical College, Department of Forensic Medicine and Toxicology for partial fulfillment of specialty Training in Forensic Medicine and Toxicology.

Dec, 2021

Addis Ababa, Ethiopia

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List of acronyms and abbreviations

WHO	World health organization
CDC	Center for disease control and prevention
CULS	Cornell University low school
CI	Confidence Interval
IACHR	Inter-American commission on Human Right
IRB	Institutional Review Board
IPV	Intimate partner violence
LGBTI	Lesbian, Gay, Bisexual, Transgender, and Intersex
NGO	Non-Governmental Organizations
SPHMMC	Saint Paul's Hospital and Millennium Medical College
SPSS	Statistical Package for Social Sciences
UNODC	United Nations Office on Drugs and Crime
UK	United Kingdom
US	United State
VAW	Violence against women

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Abstract

Background: Violence against women is global dimension makes it very unique as an international crime. The roots of violence against women lie in historically unequal power relations between men and women, and persistent discrimination against women. Violent deaths of women indicate the absence of social and mental wellbeing of a society. It can usually be attributed to their long-term deprivation of socio-economic and human rights, thereby reflecting a negative image of the society they belonged. Studying the profile of violent deaths of women is of extreme importance to a country particularly in Ethiopia especially to draw policy in preventive strategies.

Objective: The objective of the study is to provide a comprehensive report on thorough investigation of homicidal death among females.

Methods and Materials: A Prospective cross-sectional study of was conducted from January 1, 2021 – October 31, 2021 in the department of forensic medicine and toxicology, Saint Paul's Hospital and Millennium Medical College in Addis Ababa, Ethiopia. All cases of violent homicidal deaths of females aged 15 years and above presented to the mortuary of SPHMMC for medico legal autopsy was included using non-probability convenience sampling method. Data was entered and analyzed using Statistical Package for Social Sciences version 24.

Result: A total of 57 (13%) alleged female homicidal cases aged 15 years and above were included in this study which were selected from 488(18.6%) females deaths from a total of 2616 autopsy cases. There were around 40 cases of alleged female homicide case under 15 years of age which is not included in this study. The mean age of victims was 33.16 years. About 50.9% victims were from rural region. 50.9% the victims were married. About 75.4% did not receive any medical care after the fatal incidence. Most of the perpetrators were in the age group 31-40 years (36.8%). Most of perpetrators were farmers. Most of victim had less than 5 year's duration of relationship. More than half of incidence was due to quarrel. Most of the women were mostly killed by their marital partners (42.1%). Majority of the incidence occur in private residences/home in (70.2%, n=40) and during the night time in about 68.4%. About 24.6% of the perpetrators have used alcohol before the incident. Most of the fatal injuries were blunt trauma in

56.1%. The most frequent area wounded by fatal trauma was the head. The most common cause of death was head injury with blunt trauma 33.3% (n=19).

Conclusion: In this study most of the alleged homicide is due to intimate partner violence. Most of them are young adult women and are unemployed. So violence against women's has direct relationship with socio-demographic characteristics of the victim as well as perpetrator. Therefore, effective interventions need to be targeted at men in order to address the underlying discriminatory social norms that legitimize male power, control and use of violence.

Key words: Homicide, Femicide, Female, Ethiopia

1. Introduction

1.1 Background

Violence against women comprises a wide range of acts – from verbal harassment and other forms of emotional abuse, to daily physical or sexual abuse. At the far end of the spectrum is femicide: the murder of a woman(1,2).

Violence against women is a violation of human dignity, and, in its worst form, femicide violates the right to life (3). The World Health Organization (WHO) defines femicide as follows: Femicide is generally understood to involve the intentional murder of women because they are women, but broader definitions include any killings of women or girls”(4)

Collecting correct data on femicide is challenging, largely because in most countries, police and medical data-collection systems that document cases of homicide often do not have the necessary information or do not report the victim–perpetrator relationship or the motives for the homicide, let alone gender-related motivations for murder (5–7). Therefore, understanding the extent and patterns of the killing of women and girls requires a dedicated analysis of case’s related to homicide.

femicide is increasing all over the world and often remains unpunished, which not only intensifies the subordination and powerlessness of women and girls, but also sends the negative message to society that violence against females may be both acceptable and inevitable, Female unnatural deaths are often associated with their long history of deprivation of socio- economic rights. Recognizing that femicide is the killing of women and girls because of their gender, which can take the form of, inter alia: (8) :-

- 1) The murder of women as a result of domestic violence/intimate partner violence;
- 2) The torture and misogynist slaying of women
- 3) Killing of women and girls in the name of “ honour”;
- 4) Targeted killing of women and girls in the context of armed conflict;
- 5) Dowry-related killings of women and girls in some places;
- 6) Killing of women and girls because of their sexual orientation and gender identity; lesbophobic femicides
- 7) The killing of aboriginal and indigenous women and girls because of their gender;

- 8) Female infanticide and gender-based sex selection feticide;
- 9) Genital mutilation related femicide;
- 10) Accusations of witchcraft and
- 11) Other femicide connected with gangs, organized crime, drug dealers, human trafficking, and the proliferation of small arms.

Murders in the name of ‘honour’: ‘Honour’-related murders involve a girl or woman being killed by a male or female family member for an actual or assumed sexual or behavioral transgression, including adultery, sexual intercourse or Pregnancy outside marriage – or even for being raped (9). Or murder of daughter/sister for defying parents wish and marrying a person of their choice of cast/religion due to the thought of bringing disrepute to the family and community (10).

Dowry-related femicide: it is a form of murder of women linked to cultural practices occurs primarily in areas of the Indian subcontinent, and involves newly married women being killed by in-laws over conflicts related to dowry, such as bringing insufficient dowry to the family (5).

Non-intimate femicide: femicide committed by someone without an intimate relationship with the victim is known as non-intimate femicide, and femicide involving sexual aggression is sometimes referred to as sexual femicide (8).

Intimate partner homicide/family: the killing of a woman by a man with whom she had a relationship or intimate connection: husband, ex-husband, life-partner, boyfriend, ex-boyfriend, lover, or person with whom she had a child. This includes the situation where a man murders a female friend or acquaintance that refuses to engage in an intimate relationship (emotional or sexual) with him (8).

Gender-related killing of women: the history of the term “femicide” goes back to the 1970s, (11) it referred to the killing of females by males because they are females. Subsequently, “femicide” was defined in the first anthology on the topic, published in 1992, as “the misogynous killing of women by men motivated by hatred, contempt, pleasure, or a sense of ownership over women, rooted in historically unequal power relations between women and men” (12).

Prostitutes’ homicide: the killing of a woman that works in prostitution and/or another stigmatized occupation (such as strippers, servers, masseuses, or dancers in night clubs) by a man or several men (13).

Child femicide: the killing of a girl under the age of 14 by a man in the context of his position of responsibility, trust, or power as an adult vis-à-vis her status as a minor (8).

Family femicide: the killing of a woman in the context of a familial relationship between the victim and the perpetrator. The relationship might be by blood, marriage, or adoption (8).

Femicide because of association/connection: the killing of a woman “in the line of fire” by a man that was killing or attempting to kill another woman. This might be the victim’s friend, relative, mother, daughter, or a female stranger that was simply in the same place at the same time when the perpetrator attacked the victim (8).

Femicide because of trafficking: the recruitment, transportation, transfer, harboring or receipt of persons, by means of the threat or use of force or other forms of coercion, of abduction, of fraud, of deception, of the abuse of power or of a position of vulnerability or of the giving or receiving of payments or benefits to achieve the consent of a person having control over another person, for the purpose of exploitation. Exploitation includes, at a minimum, prostitution to others or other forms of sexual exploitation, forced labor or services, slavery or practices similar to slavery, servitude, or the removal of organs (14).

Femicide because of smuggling: the killing of women produced in the context of the smuggling of migrants. “Smuggling” here refers to procuring the illegal entry of a person into a state of which the person is not a national or a permanent resident in order to obtain, directly or indirectly, a financial or other material benefit (8).

Transphobic femicide: the killing of a transgender or transsexual woman. The term is used to describe the different variants of gender identity, whose common denominator is that the person’s biological sex and the gender identity traditionally assigned to that sex do not match (8).

Lesbophobic femicide: the killing of a lesbian woman in which the perpetrator kills her because of a hate or rejection of her sexual orientation (8).

Racist femicide: the killing of a woman because of hate or rejection of her ethnic or racial origins or her genetic features (8)

Femicide because of female genital mutilation: the killing of a girl or woman as a result of the practice of genital mutilation. According to WHO female genital mutilation comprises all procedures that involve partial or total removal of the external female genitalia, or other injury to the female genital organs for non-medical reasons (15).

1.2 Statement of the problem

Violence against women (VAW) occurs in countries all over the world regardless of race, ethnicity, religion, or dominant political system. Millions of women live every day in fear of violence and approximately one in three women have been “beaten, raped, or experienced another form of abuse in her lifetime”(16,17).

Worldwide 40–70% of female murdered by their intimate partner. No country in the world is women safe from violence. According to WHO multi country study, domestic violence ranged from 15 % in Japan to 71% in rural Ethiopia (18–21).

Domestic violence has gained prominence around the world as grave violation of human and legal rights. Women are usually the victim of domestic violence that derives from unequal power relationships between men and women (20). More than three women murder per day by their husbands in the United States. About 1,181 women murder by their intimate partner in 2005. About 2 million women experience injuries from intimate partner violence each year. About 84 % of women are victim of spouse abuse. Women of all ages are at risk of domestic violence (21). Based on revised data, the estimated number of women killed by intimate partners or other family members in 2012 was 48,000 (47 per cent of all female homicide victims). The annual number of female deaths worldwide resulting from intimate partner/family-related homicide therefore seems be on the increase (22).

A total of 87,000 women were intentionally killed in 2017. More than half of them (58 per cent)– 50,000– were killed by intimate partners or other family members, meaning that 137 women across the world are killed by a member of their own family every day. More than a third (30,000) of the women intentionally killed in 2017 were killed by their current or former intimate partner–someone they would normally expect to trust. (22).

The largest number (20,000) of all women killed worldwide by intimate partners or other family members in 2017 was in Asia, followed by Africa (19,000), the Americas (8,000), Europe (3,000) and Oceania (300). However, with an intimate partner/family-related homicide rate of 3.1 per 100,000 female populations, Africa is the region where women run the greatest risk of being killed by an intimate partner or other family member, while Europe (0.7 per 100,000 female populations) is the region where the risk is lowest. The intimate partner/family-related

homicide rate was also high in the Americas in 2017, at 1.6 per 100,000 female population, as well as Oceania, at 1.3, and Asia, at 0.9. (22).

In United States femicide, the homicide of women, is the leading cause of death among young African American women aged 15 to 45 years and the seventh leading cause of premature death among women overall (23). American women are killed by intimate partners (husbands, lovers, ex-husbands, or ex-lovers) more often than by any other type of perpetrator. (24–26).

In Finland with its currently 5.5 million inhabitants has one of the highest homicide rates in Western Europe. In 1990 –2012, the mean annual number of homicides per 100,000 inhabitants was in England 0.75, in France 1.31, in the Netherlands 1.36, and in the neighboring Nordic countries Norway 1.11 and 1.45 in Sweden (27). In Finland, the mean annual number during 1983 – 2012 was 2.6 (Official Statistics of Finland), of which almost every tenth (9.7%) was caused by asphyxiation.

In Brazil, in 2010, there were 44,827 male homicides, representing a coefficient of 45/100,000 men, and 4,465 female homicides, with a rate of 4.6/100,000 women. Regarding female homicides, Brazil is the seventh among 84 countries worldwide (28).

There were also fears that the toll will increase with the lockdown, no one allowed out except to buy food or medicine, women living with abusive partners have little chance to escape a situation made even more fraught by the coronavirus pandemic. In the first two weeks of April, alone there was a 47% increase in calls to Spain's domestic violence helpline over the same period in the year, 2019. The number of women contacting support services, which have been designated as essential by the government, by email or on social media is said to have increased by as much as 700%. But there has been a sharp drop in complaints being made to the police, because it's very difficult to report the father of their children to the police and feel guilty because they're going to send their children's father to prison.” - (2020, Guardian News)

Domestic violence is common in Ethiopia both urban and rural families. About 68–81 % of women agree wife beating if husband has justify in at least one of specified situations in Ethiopia (29). About 88 % of rural and 69 % of urban women believe that their husbands have the right to beat them. Approximately, one out of ten women do victim of abduction, early forced marriage, rape and marital rape. Marital rape is still not recognized under the criminal code 2005. Ethiopia

government revises family law in 2000 and criminal law in 2005 to protect women right. The criminal code and constitution article 35(4) condemn harmful traditional practices. Ethiopia ratified the convention on the elimination of all forms of discrimination against women in 1981 (29,30). However, there is a paucity of country wide evidence about domestic violence against women and associated factors in Ethiopia.

A systematic review conducted on studies done in different parts of Ethiopia from 2000 to 2014. Fifteen Published papers were identified. All of the published papers entitled domestic violence against women, intimate partner violence against women, violence against women and associated factors in Ethiopia were considered for systematic review in which 84 % of population lives in rural and poor resource settings (31). The finding from different studies would close the information gap regarding the current situation of violence against women and helps for government officials, policy makers and any other concerned bodies to design prevention and controlling strategies to alleviate the problem. This study also provides additional comprehensive report on homicidal deaths in women in which data retrieved from autopsy finding, medical report and police report to have formal statistics on the outcomes of forensic post-mortem examinations performed on cases reported and referred to the SPHMMC.

1.3 Significance of the study

The killing of a woman by her partner is often the culmination of long-term violence and can be prevented. Local, national and international institutions need to scale up their efforts to help and protect women who fall victim to such violence. The development and effective implementation of national strategies to combat gender-based violence and legislation to address domestic violence, sexual harassment and marital rape accompanying with murder can help build a suitable protective system and ensure that there is no impunity for such crimes. To enforce policies to prevent violence include promoting social awareness to change norms that condone violence against women; equipping young people with skills for healthy relationships; expanding women's access to economic and social resources and to support services; providing training for health services to better identify battered women at risk and support women experiencing violence and to integrate violence prevention into existing programs, including for HIV prevention; and promotion of adolescent health also providing shelters, protection orders, counseling and legal aid will be effective in helping women to leave abusive relationships. To

make States take responsibility for the safety and well-being of their citizens and must tackle the problem with the urgency it requires. Overall the importance of this study is to inform concerned bodies by addressing all the problems that existed in our country concerning homicidal deaths in women and help to alleviate the problem.

2. Literature review

In study done in Portugal, At least 62 women over 15 years old were killed by current or former men-intimate partners, corresponding to an IPV-related female mortality rate of 0.44/100.000 women; intimate partner violence was the reason of homicide in 60.8% of all autopsied women and killed by the non-marital partners 39.3% (32). In United States, North Carolina, femicide rate is 3.5 per 100,000 women 15 years and older (33). In 2005, Jamaica has annual homicide rate of approximately 64 murders per 100,000 persons. Jamaica's homicide rate is more than ten times the rate of homicide in the United States, eight times the world average, and three times the rate in the Americas as a whole (34). In South Africa female homicide rate of 24.7 per 100,000 women 14 years or older; 50.30% of the women were killed by an intimate partner (35). In Italy from 319 femicide 61.75 % were committed by current or former intimate partner. (36). In a systematic review done in Ethiopia, lifetime prevalence of domestic violence against women by husband or intimate partner among 10 studies ranged from 20 to 78 %. The lifetime domestic physical violence by husband or intimate partner against women ranged from 31 to 76.5 %. The life time domestic sexual violence against women by husband or intimate partner ranged from 19.2 to 59%. The mean life time prevalence of domestic emotional violence was 51.7 %. (31).

2.1 Characterization of the victims and perpetrators

In the annual report of UK femicide censuses 2009 to 2017, femicide census on women and girls aged 14 years and over at least 139 women were killed out of this, 64 women (46%) were killed by their current or former partner; 21.6% were killed by a stranger; 12.1% kill by blood relative. each year average of 119 women killed ranging from 113-147 victim (37). A study done in turkey, 25 year study from 1992 to 2016 out of 172 murdered women 86% were by their partner or ex-partner (38). In another study in Turkey and in Dominican Republic the percentage of intimate femicide was 78.2% and 70% respectively (39,40). In a systematic review, (41) showed that 43% of female homicides were committed by intimate partners, and this percentage was higher in South Asia and lower in Eastern Mediterranean (62% and 20%, respectively) (41). In study done in Colombia for 337 cases. About 132 women (32.9%) suffered from intimate femicide; 39 cases (11.6%) were caused by friends or relatives, while 166 cases (49.3%) corresponded to non-intimate femicide.(42).

A 12-city case control design done US from 1994 through 2000 at each site were examined, a total of 220 femicide victims, 79% of the femicide victims aged 18 to 50 years and 70% of the total femicide cases were physically abused before their deaths by the same intimate partner who killed them (43). In study done in Portugal Mean age of the victims and perpetrator; the mean age of victims was 43.8 years old (min. =17, max. =82, SD=17.3) although almost 50% aged 20 to 40. Perpetrators were 49.3 years old on average (min. =20, max. =78, SD=15.7) and the most frequent age group was 40 to 50 years old. (32). In Study done in Italy majority of women killed by men were aged between 36-45years and average age of murdered women was 47.50 ± 19.26 range of (36). In UK femicide study on women and girls aged 14 years and over with 9 (6.4%) young women falling in the 14–17 age band and 20 (14.4%) women falling in the 66+ .The majority of women killed by men in 2017 were aged between 26 and 55 years old (82 women, 59% of total). Perpetrators: 90/139 (71.4%) of perpetrators were aged between 26 and 55. (37). Study In turkey It was determined that the youngest and oldest victims are 14 and 62 years old, respectively. The age average of victims was 27.4 ± 8.5 . The most encountered women who are murdered were in the age group of 19–29 years old (38.5%). Meanwhile, 23 (15.5%) of the victims were 18 years old or younger. (38). In North Carolina the mean age of IPF and non-IPF is 30.4 years and 41.2 years respectively. (35). In Jamaica, 2007 age of the femicide victims ranged from a few months to 90 years old. The average age of the victims was 30 and 46; the mode was 21 years old (34). In study done in Dominican Republic, 56% of the victim were between the ages of 15 and 30, 20% were older than 41 (40). In study done in Turkey from 2000-2010, the mean ages of the IPF victims and non-IPF victims were 34.1 ± 11.7 and 44.0 ± 19.5 years of age, respectively. No victim was between 8 and 14 years old. The IPF perpetrators, 75% (n =57) were between 21 and 50 years of age. However, the non-IPF perpetrators were approximately 10years younger; 79% of the perpetrators were between 15 and 40 years of age. The mean age of the perpetrators was between 32.3 ± 13.4 and 39.6 ± 13.7 years for the non-IPF and IPF groups (44).

In study done in Turkey It was determined considering the education level of the victim in 69 (46.6%), 65 (43.9%) and 14 (9.5%) of the cases had graduated from primary school and below, secondary school and higher education institute, respectively (38).

In study done Portugal, At the time of the death, most women (38.7%) were not working (housewife, unemployed or retired); most men were actively working (33.9%), whilst 25.8% of the men did not. (32). A study in turkey out of 172 victim It was determined that 72 (48.6%), 28 (18.9%), 22 (14.9%) and 26 (17.6%) of the victims were unemployed, officer, laborer and tradespeople, self-employed and working in other jobs, respectively. It was determined in 33 (22.3%) of the cases that the killer was unemployed (38). In study done in Ciudad Juárez, Mexico 494 cases, 57(11.50%) of the women killed were employed (it is specified that four were secretaries, ten worked and studied, and ten were domestic servants). Another 47 (9.50%) worked in free trade zones (maquilas). Other professions accounted for 8.30% of the women: 14 were dancers; four were barroom waitresses; and six worked taverns, but the capacities in which they worked were not specified. Another 17 were described as sex workers. Eleven were merchants, and 9 owned their own small businesses, the latter of the two categories (20 cases) accounting for 4%. Professionals included four teachers, a model, a journalist, a nutritionist, two doctors, a lawyer, and a public accountant (2.20% altogether) (45).

2.2 Characterization of the intimate relationships

In study done in Portugal an important alleged motive for the crime was related to jealousy (31.5%, n=17), 22.2% (n=12) were related to conflicts (marital, familiar, parental and/or financial). In 5 cases (8%), homicides' witnesses were killed apart from the female victim (including 2 sons and 1 ex-stepson) and in 2 cases other persons were seriously injured (32). In turkey the most common motives for known IPF cases were jealousy/infidelity/honour (36 cases± 47.4%). However in non-IPF victims the most common ones being domestic altercations (27 cases± 42.2%) and robbery/sexual case in 32.8%: six of the cases involved sexual assault (44). In South Africa rape homicide was suspected in 16.30% of all female homicides, with a rape homicide rate of 3.65 per 100,000 females 14 years and older. Rape homicides were more likely to occur when the perpetrator was a stranger (46). In study done Jamaica 2005, most common motives for femicide were disputes (44%), reprisals/revenge killings (27%), and robbery (11%). Rape-related killings accounted for 5% of all the femicide cases (34). In study done in Sri Lanka the underlying reason for homicide as expressed by the relatives and the police was family disputes in a majority (40%) and unknown in 36% of the cases. (47). In Denmark the most common alleged motive was jealousy in 36% (48).

A study done in turkey, It was determined that 12/172 (8.1%) women who were victims of the murder were pregnant at the time of the incident (murder). It was observed that all the women who were killed while pregnant were killed by their husbands (38). In study done in Italy, the number of prostitutes among murdered women was 28/319 (8.77 %) (36). In study done in Ethiopia, Significant number of women experienced violence during their pregnancy period. Domestic violence against women significantly associated with alcohol consumption, chat chewing, family history of violence, occupation, religion, educational status, residence and decision making power (31).

2.3 Characterization of the circumstances surrounding the death

In study done in Italy, method of inflicting the injury is primarily by sharp object in 102/319(32%) caused by followed by firearm 87/319 (27.27%) of the cases, asphyxiation in 52/319 (16.30 %) (36). In UK, 66/139 (47.4%) cases men used a sharp instrument to kill their victims, and in USA 66% perpetrators use firearm weapon in most common cases. (33,37). In turkey, It was determined that women are most frequently killed with a sharp object (n=73, 49.3%), followed by a firearm (n=59, 39.9%) (38). In another stud in turkey a 10 year study with total of 162 death of female, Firearms were used to kill in 75% of the femicide, death due to blunt trauma and strangulation (27.2%) was higher in this group than in other groups at a clear level of statistical significance ($p < 0.05$). (44). In Portugal fatal injury is due to gunshot trauma (45.2%), then blunt trauma (14.5%), sharp and chop trauma (27.4%), other involve combination method. (32). In study done South Africa in 1999 with study population comprises females, 14 years and older, The most common cause of homicide was a gunshot wound injury (n= 1,145) with a firearm mortality rate of 7.5/ 100,000 women, 14 years and older then sharp force injury, then blunt force injury(33%) (35).

In study done in India, out of 1318, 236 cases(18%) of homicidal strangulation was there and 49 cases(21%) out of them 77.55% cases were belongs to 0 to 30 years of age group, women were sexually assaulted before strangulating to death (49). In Denmark 33% strangulation(48). In study in Dominican Republic 50% of the women killed using bladed weapons, 39% by firearms, and remainder using other weapons or methods (40). In Siri Lanka, Majority 40% of the homicidal deaths were a result of sharp force injuries then blunt trauma in 30% of the cases. (47).

In study done in Italy the place where the femicides occurred, 209/319 (65.51 %) were committed inside the victim's house (36). In UK location of incidents of femicide committed in Victim/perpetrator's home 45(32.4%), Victim's home 37 (26.6%), Outdoors: public area 31 (22.3%), Perpetrator's home 14(10.1%), House: no further information 42.9%, Relative's home 4(2.9%), Garden/street outside victim's home 2 (1.4%), Victim's workplace 1 (0.7%), Care home 1 (37). In study done in Jamaica 2005, Location of the homicide event occur at home(38%, school(1%), street/roadway(34%), commercial(5%), residential/ penal(2%), country side/river/sea(1%), open lot(2%,) undetermined premises 14%. (34). In study in Dominican Republic 50% of women killed in their home. (40). In Siri Lanka Location of incidence of killing was at home in 76% of the cases and 21% of the cases it is in isolated place, 3% in public (47).

In study done in south Africa among 1349 perpetrators of intimate femicide, 19.4% committed suicide within a week of the murder (50) and 24.2% in Portugal, 23% in USA and 25% in Denmark (32,33,48).

2.4 forensic autopsy finding

In Portugal the most frequent area wounded by fatal trauma was the thorax (48.4%), followed by the head, neck and face. More than half of the victims (54.8%) suffered fatal multiple wounds. (32). In another study in turkey, the head 19.3% was the most common target for firearm wounds then the thoracic region 29.9% was the most common target for edged and pointed weapon. (44). In study done in South Africa on Injury Patterns of Female Homicide Victims in South Africa, over all the result is the head and face, and thorax was the most common location of injuries in female homicides. Importantly, pattern of injuries differed by cause of homicide. Head and face injuries were more likely to have blunt force injuries, and neck injuries were most common in strangulation deaths whereas thoracic injuries were more likely caused by sharp force injuries. The most common type of injuries were contusions of the head and face (26.6%) and intracranial hemorrhage (25.9%) of the head followed by penetrating incised wounds (22.5%) of the thorax (35). In study done in Turkey the most common cause of death was Pulmonary and cardiac injuries with hemopneumothorax were determined as the most frequent cause of death in cases (n=82, 55.4%) (38). In South Africa rape homicides were more likely to occur when the perpetrator was a stranger, and cause of death was more likely blunt force injury, strangulation, or asphyxiation. A gunshot was less likely to be the cause of death in rape homicides. (46).

3. Objective

3.1 General Objective

To assess homicidal deaths among females presented for medico legal autopsy to SPHMMC, Addis Ababa, Ethiopia, from Jan 1, 2021 to Oct 31, 2021.

3.2 Specific Objectives

- 3.2.1** To assess socio-demographic profiles of the victim and perpetrator
- 3.2.2** To assess relationship between the victim and the perpetrator, circumstances and assumed motives of the offense, and any associated evidence of sexual assault.
- 3.2.3** To assess injury pattern and cause of death.
- 3.2.4** To identify the medical treatment of the victim, additional examinations, and their results.

4. Methods and Materials

4.1 Study design

Prospective cross-sectional descriptive study design was used.

4.2 Study period

The study was conducted from Jan 1, 2021 to Oct 31, 2021.

4.3 Study area/Setting

The study was conducted in the department of forensic medicine and toxicology, SPHMMC, Addis Ababa, Ethiopia.

4.4 Target or reference source population

The source population was all females age 15 years and above presented to the mortuary for medico-legal autopsy to the department of forensic medicine and toxicology.

4.5 Study population

The study was conducted on cases of all homicidal deaths among females victims of homicides aged 15 years and above brought for medico legal autopsy to the department of forensic medicine and toxicology, SPHMMC in Addis Ababa, Ethiopia during data collection period from Jan 1, 2021 to Oct 31, 2021. All cases during the study period were reviewed.

4.6 Eligibility Criteria

Inclusion Criteria

All cases of homicidal deaths among females age 15 years and above received for post mortem examination.

Exclusion Criteria

- ✓ Those with the cause of death not determined by postmortem examination.
- ✓ Foreigners

4.7 Sample size and sampling technique

Non-probability convenience sampling method was used since all eligible cases available during study period are involved.

The sample size was determined by the number of homicidal female victim who are aged 15 years and above received for postmortem examination in the study period were the study population (total cases whose information obtained with complete records, police and family history).

4.8 Study instrument and Data Collecting method

A well-structured self-filled questionnaire for data collection on pre autopsy interview is developed depending on International Standard Verbal Autopsy Questionnaire; a well-structured, self-filled predesigned proforma was developed depending on standard book sample formats and similar studies with some modifications which comprised relevant data in order to attain the objective of this study.

Information regarding the data of the deceased and various factors regarding the circumstances of death was gathered from all possible sources like police, police records, hospital records, death certificates and also by direct interrogation with the investigating officer, eye witnesses, relatives and friends of the deceased accompanying the dead body. Complete autopsy was performed following standard procedures and recorded as described in standard books (51).

4.9 Study variables

Dependent variables

Homicidal death of females 15 years and above.

Independent variables:

- ✓ Socio-demographic variables (victims and perpetrators)
- ✓ Pattern of injury
- ✓ Severity and type of the injury
- ✓ Relationship of victims and perpetrators
- ✓ Time and place of occurrence of homicide
- ✓ Alleged motive of the offence

4.10 Operational definition

Violence:

“The intentional use of physical force or power, threatened or actual, against oneself, another person, or against group or community, that either results in or has a high likelihood of resulting in injury, death, psychological harm, mal development or deprivation.” (52). So violent death is a death that is not natural or a death caused by an accident or the actions of another person.

Homicide:

Is the act of one human killing another, a homicide requires only a volitional act by another person that result in death, and thus a homicide may result from accidental, reckless, or negligent acts even if there is no intent to cause harm (53).

4.11 Data processing and data quality

Data entry was done by using Statistical Package for Social Sciences (SPSS) version 24. Data was cleaned with consistence checks and analyzed using the same SPSS package. Any error identified at this time was corrected after revision of the original data using the code numbers. The investigator performed data collection procedures on daily basis. Anything, which was unclear and ambiguous, was discussed with the advisor on a daily basis. Any error, ambiguity, incompleteness encountered was addressed before starting next activities. The data analysis was carried out using SPSS package after appropriate data entry task is completed.

4.12 Data analysis

Data enter in to excel and analysis was done using SPSS version 24. The descriptive analysis such as proportions, percentages, measures of central tendency and measure of dispersion was done. Finally, the finding was presented by using tables and graphs as appropriate. Chi square was used as a test of independence and independent t-test was used to test mean age among different variables. The level of significance was set at the P value < 0.05.

4.13 Ethical Consideration

The study was started after approval of Saint Paul's hospital and Millennium Medical College Institutional Review board (IRB). Information used in this study was anonymized. Consent form was prepared which was signed by the information giving person to whom all relevant facts about the study was explained in the language he could understand, the potential value that the findings may add to forensic practice, national policy formulation and prevention and the low risk involved in the use of the data.

4.14 Dissemination of Results

The result of the study will be presented and submitted to Saint Paul's hospital and Millennium Medical College, Department of Forensic Medicine and Toxicology as part of final thesis. Additionally, the study result will be disseminated to Federal ministry of health, to concerned Non-Governmental Organizations (NGO) and academic partners working on this area, the final paper will be sent for publication on peer reviewed international journals. Further attempt will be made to publish it on national and international scientific journals.

5. Result

A total of 2616 autopsy cases were done in 10 month period of study in the forensic department of St. Paul's hospital. from Jan 1- Oct 31, 2021, about 488 were female cases and out of this 97 cases were female homicidal cases and among this a total of 57(13%) alleged female homicidal cases aged 15 years and above were included in this study which comprises about 11.6% of total female autopsied cases.

5.1 Characterization of the victims and perpetrators

The mean age of victims was 33.16 years old (min. =15, max. =95, SD= ± 15.7). More than half (50.9%) of the victims were murdered in age group 21-30 years. The mean age of the perpetrator was 37.72 years. (min. = 18, max. =90, SD=12.23). The most frequent age group of the perpetrator was 31-40 years (36.8%) followed by 21-30 years (21.1%) (Figure.1). Most of victim's religion was orthodox (66.7%) (Figure.2). Most of the case of homicide occurred in Oromia region (42.1%) (Figure.3). More than half (50.9%) of the victims were from rural region and the rest from urban region.

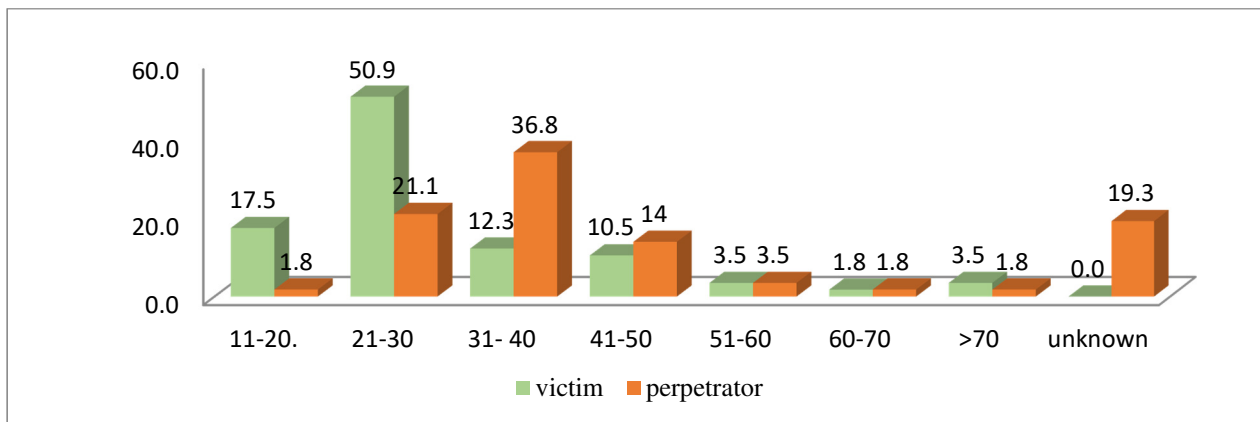


Figure.1 Age range of the victim and the perpetrator of homicide, SPHMMC, Addis Ababa, January to October 2021

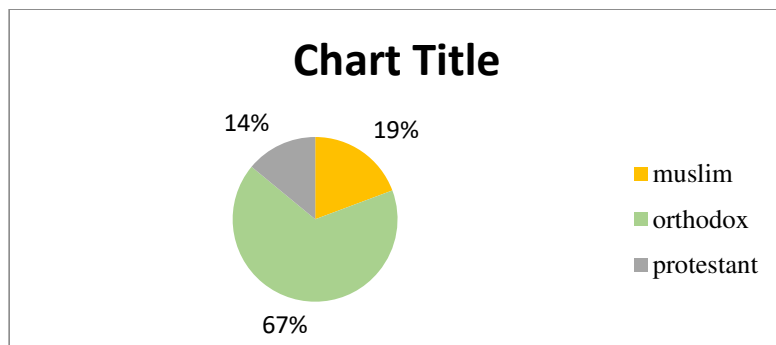


Figure 2. Religion status of the victim

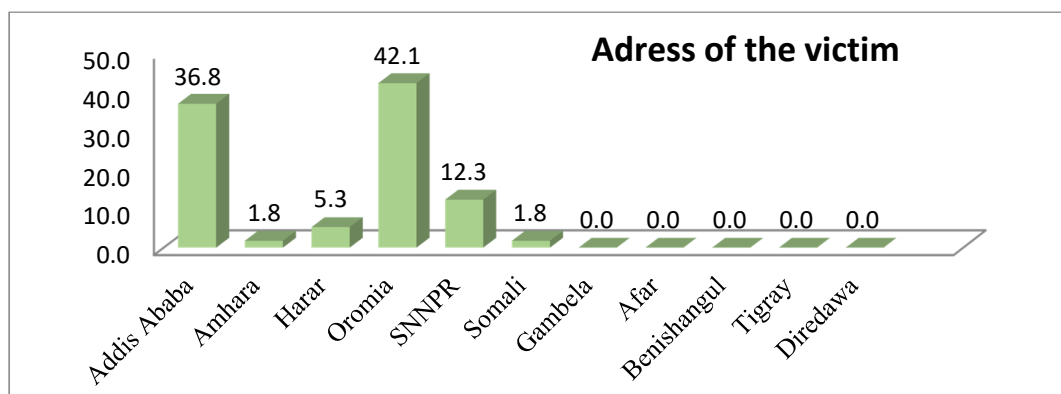


Figure 3. Address of the victim

In this study 50.9% of victims were married, (figure 4). The occupation of most of the victims was housewife (33.3%), followed by self-employed (22.8%). The occupational status of the perpetrators majorly was farmers (40.4%) (Figure 5.)

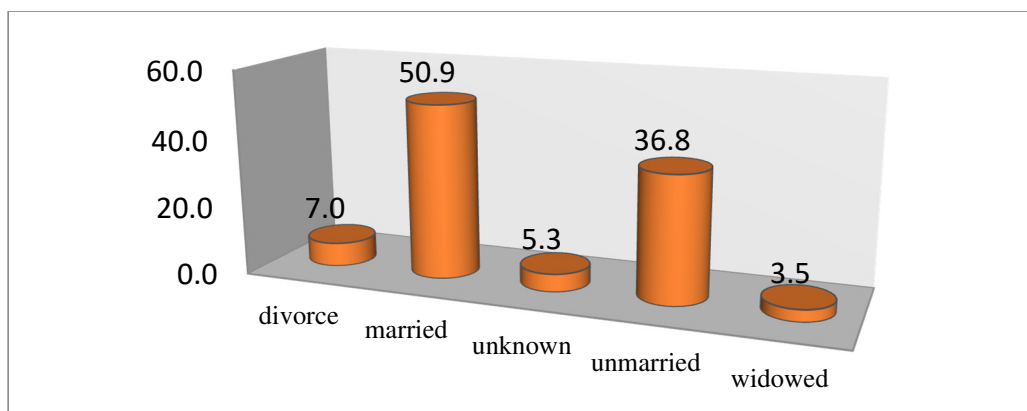


Figure 4. Marital status of the victim

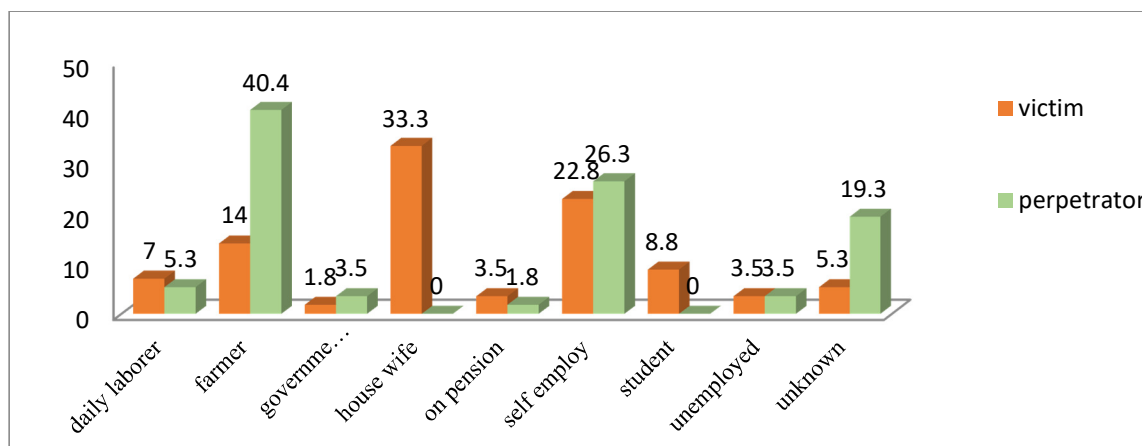


Figure 5. Occupational status of the victim and perpetrator

The educational status of the victim determined to be those who can't read and write were 35.1% and those who attended primary school were 28.1%. Majority 33.3% of the perpetrators attended primary school and those unknown of their education status were 21.1%. (Figure 6).

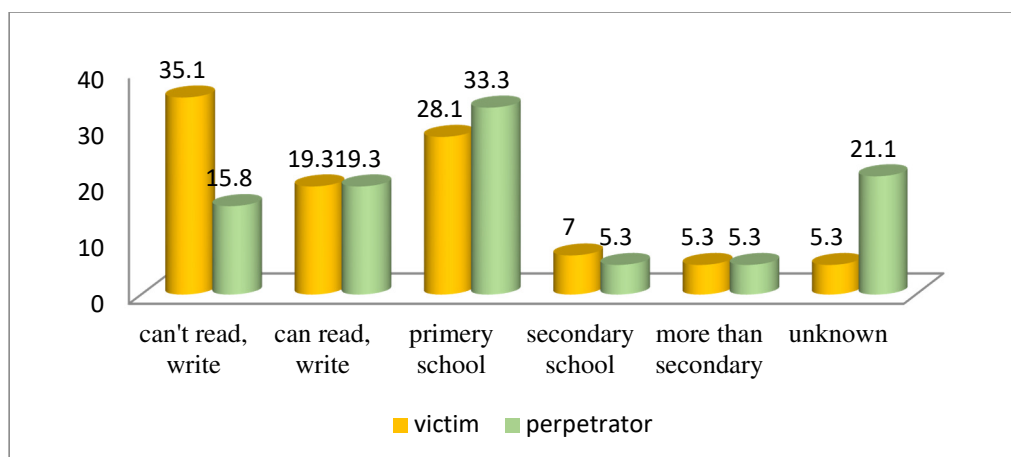


Figure 6. Educational level of victim and perpetrator

5.2 Characterization of the intimate relationships

The shortest length of relationship between the victim and the perpetrator was determined to be 1-5years (33.3%). out of this 28% of were with current intimate partner. On the other hand the longest relationship length was ranged between 36-40years (1.8%). The average length of relationship until the fatal event was 9.34 years (SD=10.7). In 40.4% of the cases there was no intimate relationship was attributed. In two cases (3.5%) the length of relationship was unknown.

According to the information available from identified perpetrator 86% (n=49) most of the murder was committed by current intimate partner 52.6% (n=30). The other 14 % (n=8) perpetrators were neighbors, stepson. (Figure7).

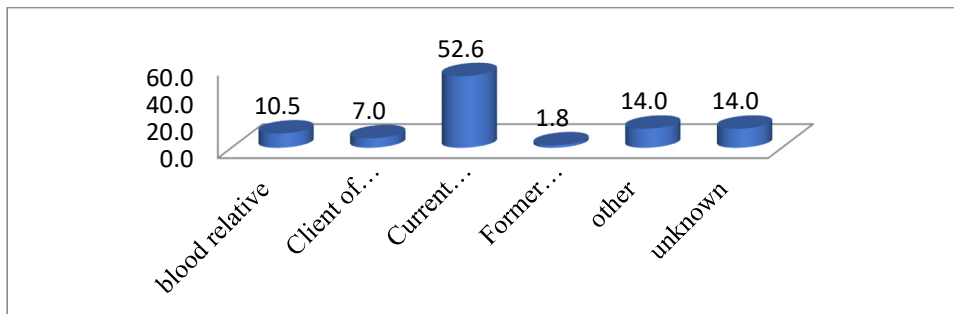


Figure.7. Relationship status of the victim with the perpetrator

The characteristics of the relationship in majority of the cases were marital 42.1% (n=24). The extramarital comprises 7% which include the sex workers. The remaining 29.8% included in other which includes strangers, former intimate partner, neighbors and so on. (Figure 8.)

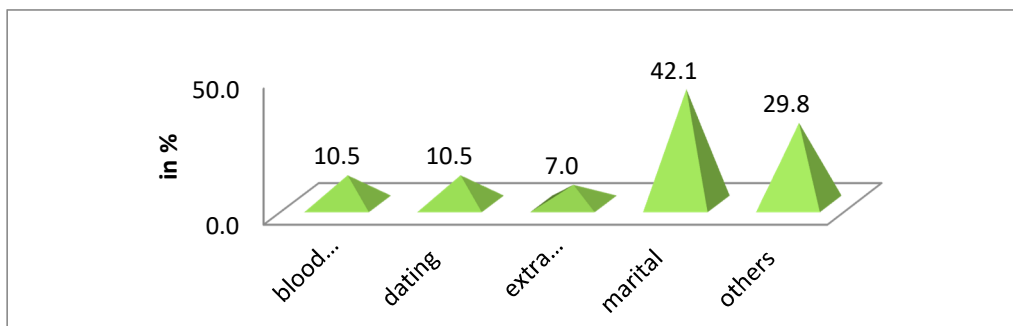


Figure.8. Characteristics of relationship nature

5.3 Characterization of the circumstances surrounding the death

Majority of the circumstance of the incidence for the killing of women is Quarrel and dispute (42.1%, n=24) followed by jealousy and love (14%)(figure 8)

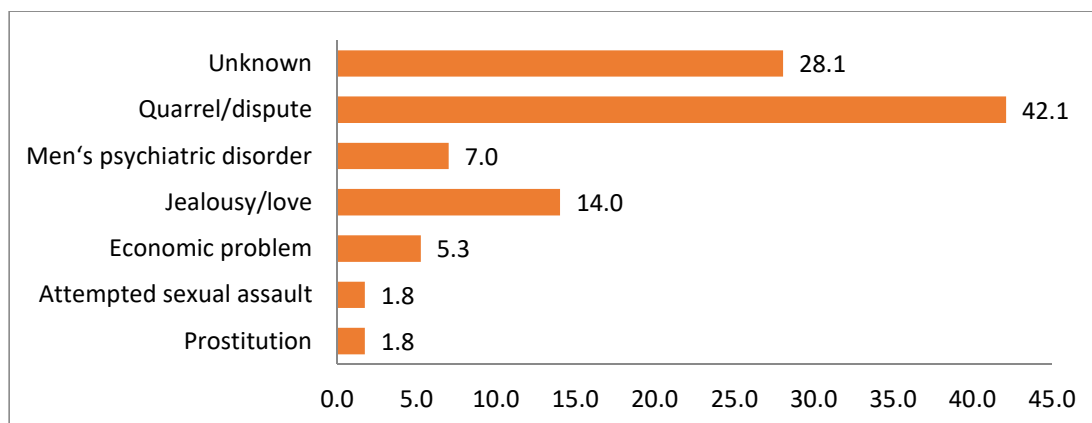


Figure 9. Circumstance of the incidence

Majority of the incidence took place in private residences (70.2%, n=40) usually in homes shared by the victim and perpetrator. Followed by isolated place 14% (n=8). (Figure 10).

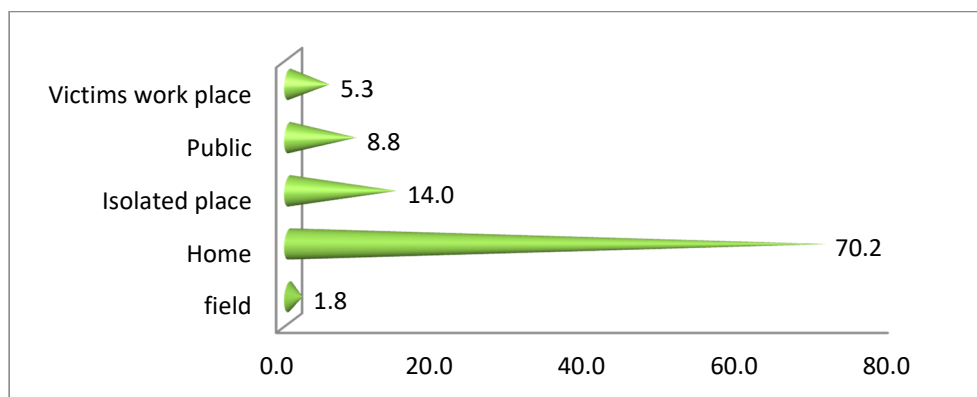


Figure.10 Place of occurrence of assault

In four cases (7%), homicides' witnesses were killed apart from the female victim (including two husband, mother, and friends) and in one case other persons were seriously injured by soldier perpetrator. He killed the prostitute out of jealousy and injured others.

Majority of the incidences occur during the night time in about 68.4% (Figure 11.).

The number of assailant involved in the killing of the women was one in 75.4% of case, 2 assailant in three cases, 3 assailant in one case, 4 assailant in one case, 5 assailant in one case, seven assailant in one case, and unknown number of assailants in seven cases.

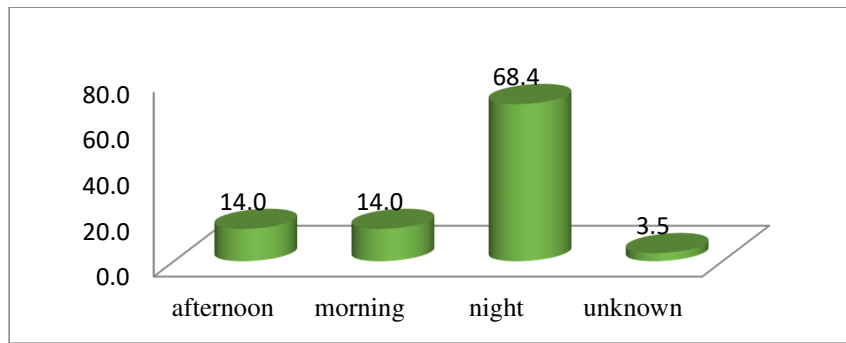


Figure. 11 Time of occurrence of assault.

During the fatal incidence about 24.6% (n=14) of the perpetrators have used alcohol before murder and about 47.4% (n=27) of perpetrators did not use alcohol or any other drug. In 28.1% of perpetrators no information obtained about history of taking alcohol.

The majority of the victims (75.4%) did not receive any professional medical care after the offense and the victim died at the scene. In 11 cases (19.3%) victim went to hospital and in 3 cases (5.3%) victim went to nearby health center. Out of this death occur in 7% (n=4) after few days of the assault.

5.4 forensic autopsy finding

In this study the common fatal injuries sustained by the victim was blunt trauma (56.1%) followed by stab injury (12.3%) (Figure 12.)

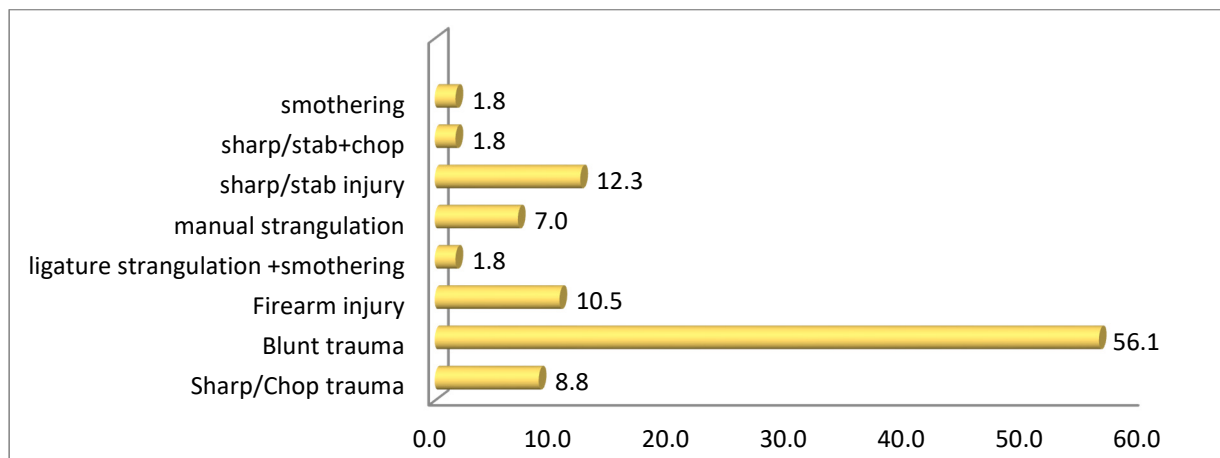


Figure.12 Types of mechanical injury inflicted during the incident

The most frequent area wounded by fatal trauma was the head (35%), followed by the Neck (19.3%). (Figure13).

Attempted rape was involved in three cases and vaginal swab was done for spermatozoa and only one case becomes positive for the sperm cell. Vaginal swab was also done for the seven cases of suspected sexual assault it was negative for all of them.

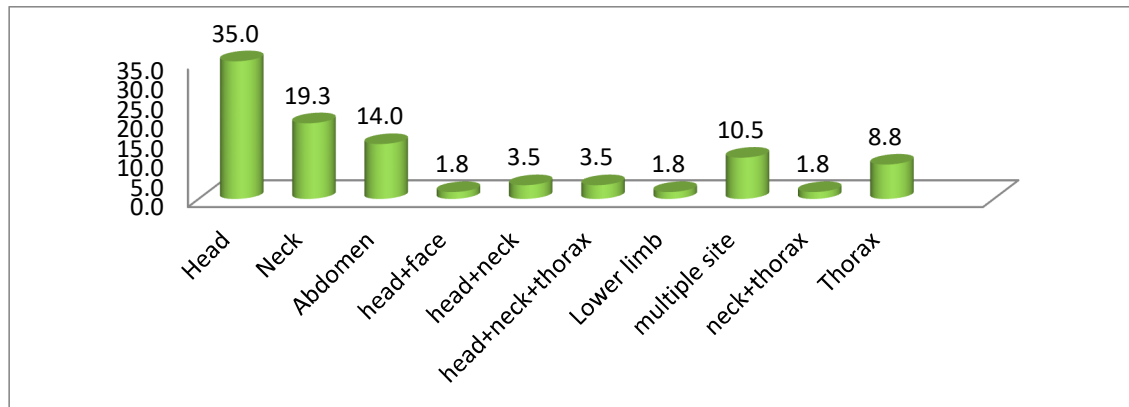


Figure 13. Most commonly injured site in frequency/location of the injury

The most common cause of death is head injury with blunt trauma 26.3% (n=15) and one case of head injury was with sharp weapon; then followed by firearm injury 10.5 % (n=6) (Table.1)

Table.1 Cause of death of the victim.

Cause of death	frequency	Percentage (%)
abdominal injury, blunt trauma	4	7.0
Chest injury, blunt trauma	2	3.5
chop trauma	5	8.8
Firearm injury	6	10.5
Head injury, blunt trauma	19	33.3
Head injury, sharp weapon	1	1.8
Multiple injuries, blunt trauma	5	8.8
multiple injury, sharp weapon	1	1.8
peritonitis, blunt abdominal trauma	2	3.5
sepsis, sharp injury	2	3.5
smothering	1	1.8
Stab injury	4	7.0
Strangulation	5	8.8
Total	57	100.0

5.5 Legal case progression and judicial outcomes

Since from the time of our study none of them were prosecuted before being declared guilty of a criminal offence by the verdict of jury or the decision of a judge in a court of law. About 64.9 % (n=37) the perpetrator was on trial in prison and In 33.3% of perpetrators were unknown of their whereabouts and there was deficient information to obtain what exactly happened and what was the circumstance and the motive. In one case perpetrator committed suicide

6. Discussion

Very few studies are available about the incidence of femicide in Ethiopia. When femicide-oriented research is conducted, it most likely relies on empirical data extracted from clear-cut and conclusive cases of homicide, analyzed using criminological data variables and commonly provided by official enforcement agencies. It misses that a hidden bulk of femicide cases not recognized as such like ‘concealed femicide’ cases so femicide rate is higher than normally reported. Other various homicide methods normally overlooked by both the criminal system and scholars researching the field.

This is the first nationwide study, autopsy-based concerning female homicide victims. Despite the representative population – 57 cases with in 10 month of study period- this investigation does not allow us to reach conclusions about trends.

In this study the result of female murdered victim are, globally, in accordance with other data that show that between 33- 70% of female murder victims are related to intimate partner violence. (Table 2.)

Table 2. Comparison on prevalence of IPV-related homicides of women among all alleged General homicides and all alleged homicides of women.

Country	IPV-related homicides / general homicides (%)	IPV-related homicides / homicides of women (%)
Portugal (32)	13	61
Northern Europe (48)		45
England and Wales (54,55)	15	37-52
Spain (56)	-	63
USA (33,57,58)	11	33-50
Canada (59)	15	50
South Africa (60)	-	50
Dominican Republic (5)	-	70
Australia(61)	-	53
Ethiopia(current study)	-	52.6

6.1 Victim and perpetrator

Young adult victim’s age range in this study was between 21-30years age group which suggests that younger women are at increased risk of violence and death. This fact is supported by previous research. (37,38,40). We also found most perpetrators were aged between 31-40 years which is also supported by other literature (37,44). On average, perpetrators were 12 years older than the

corresponding victim, which shows a trend that is in accordance with different studies which refer that there is higher risk of IPV homicide for age discrepant couples (62).

In this study most women are house wife and were not working, which is similar to results from a study that showed that a higher proportion of the victims were not employed (32,38,48).

In this study most of (75.5%) the perpetrators are employed and among this farmers constitute 40.4%; only 5.3% of perpetrators are unemployed and on pension; which is employment rate is higher than the study in Portugal 25.8% of the perpetrators were working at the time of homicide. (32). This result discrepancy shown above is due to mostly more than 85% of Ethiopian economy is dependent on farming and most men's are engaged in farming field.

This study revealed that 24.6% of perpetrators presented with a history of alcohol which associated with increased risk of attempted or consummated female homicide which is higher rate compared to the study done in Portugal which was 17.7% (32). But also compare to the prevalence of lifetime alcohol abuse considering the Ethiopian population 44.16% (95%CI; 34.20- 54.62) and current alcohol use was found to be 23.86% (95% CI; 17.53-31.60) it may be considered as a risk factor. (63). From our study result the reason behind the higher rate of consumption alcohol is due to the production traditional local beverage in the village which makes it easily accessible.

Also in systematic review domestic violence against women significantly associated with alcohol consumption, chat chewing, family history of violence, occupation, religion, educational status, residence and decision making power (31).

In this study men with some personality disorders and psychiatric problems found to be perpetrator in 7% of cases which is below the rate referred in other study (32). Which is considered to be risk factor for killing of women (the prevalence of common mental illness in Ethiopia general population is 21.58% (64).

6.2 The intimate relationship and the circumstances of the death

This study revealed that women were mostly killed by their marital partners (42.1%). Published data also show great number of intimate partner femicide ranging from 40 to 86% which our study is consistent with the rates referred in other studies (32,35–41).

Most of the victim where living with perpetrator at the time of the event in contrary to dating relationship (10.5% in our study) similar with the study in Portugal 11.3% (32) and 19-28% in other studies (43,60,65) which indicate that homicide rate is lower as compared to the partners living together.

In this study more than 83.3% of the victim and perpetrator have off springs some researchers argued that childlessness is associated with higher risk of physical and sexual abuse (66) but this result is not in accordance with ours, where most couples had offspring.

The present study revealed that the length of the couple's relationship at the time when homicide occur was with in the 1st five years of marriage and majority of them where marital partners (28%) this is similar with the study in Portugal (32). this indicate that most of the relation will end up in the death of women with in few years of marriage. Few relations continue beyond 30 years of marriage. In our study we did not get exhaustive information about previous history of intimate partner violence perpetrated by killer partner. Which remain concealed due to the relatives was not willing to tell, or the information obtained from police was insufficient to reach to conclusion. The other factor is women's will not openly discuss/tell about the ongoing physical abuse and treat with relative and neighbors. Information about history of separation of victim could not be obtained since most of the time the victim may not separate and leave alone due various factors like economic reason, absence of families and relatives nearby. So she might be forced to live in abusive relation in the perpetrators house.

Concerning the homicide's motivation, our results show that quarrel and dispute is the most frequent alleged reason (42.1%) which is more close to the study done in Jamaica 44% (34), Sri Lanka 40% (47) and higher than the study result in Portugal 22.2%. (32). Furthermore the second most common homicide motive was jealousy 14% which is lower than as compared to 31.5% in Portugal, 36% Denmark (32,48).

In this study majority of the victims are killed in their private residency usually in their own home as in earlier study. (34,36,37,40,47).

The present study revealed that in one case (1.8 %) perpetrator commit suicide by hanging. This is lower rate as compared to a study done in South Africa on femicide-suicide 19.4% committed suicide within a week of the murder (50) also 24.2% in Portugal, 23% in USA and 25% in Denmark (32,33,48). In the present study result has discrepancy with other study is, mostly femicide- suicide occur due to morbid jealousy and delusions that lead him to kill his partner which will have direct relation with personality disorder or psychiatric problem of the perpetrator which we have less prevalence in our study.

6.3 Forensic autopsy findings

In the present study, most of the victims were killed by blunt trauma (56.1%) followed by stab injury. In this study blunt trauma is the most common cause of inflicting injury which is a

different result as compared to other research reports from different countries show dissimilar percentages of general homicides involving blunt trauma, firearm, stab and chop trauma and strangulation which are commonest methods of IPV-related homicide of women (33,48,55,56,60). The most common method of killing in other study is gunshot trauma, 75% in turkey, 66% in USA, 45% in Portugal, (32,33,44). Women were mainly killed by other methods apart from gunshot wounds, such as, South Africa (33% blunt trauma) (60), Denmark (33% strangulation) (48). Dominican Republic UK, Italy; (50% , 47.4% and 32%) sharp trauma, respectively (36,37,40).

In this study the increase in the use of blunt trauma indicate that the perpetrator uses whatever materials, blunt weapons available nearby will use to inflict the injury upon the victim without any premeditated or careful plan out of anger which is lethal as equal as those who have access to firearms as is seen in other studies result.

This study revealed that most frequent area wounded by fatal trauma was the head (35%), followed by the neck which is comparable with the findings from study on injury pattern of female homicide victim in South Africa where the head and face, and thorax were the most common location of injuries in female homicides. Head and face injuries were more likely to have blunt force injuries, and neck injuries were most common in strangulation deaths whereas thoracic injuries were more likely caused by sharp force injuries (35).

In our case only one case (1.8%) was identified as sexual motive for the homicide. It is far below the rate referred in South Africa; rape homicide was suspected in 16% of all female homicides. (46).

Strength and Limitation of the study

The study tried to estimate the prevalence of female homicide by documentation of autopsy-based data these would provide an invaluable epidemiological data necessary for planning of medical service, prevention and control activities, teaching and further research.

However, One of the weaknesses of the present study is the adopted methodology - cases were selected through the forensic system (selecting the suspected cases) and but not confirmed by judicial outcomes (selecting only the proved cases) so cases were identified and characterized according to our medico-legal knowledge on the manner of death. Therefore, some extra parameters which were not included in the study could not be analyzed, because of the deficiencies in the archive records. The data was collected by reviewing the autopsy reports and

the investigation documents. The results of the court could not be gathered because of the inability to access extensive data on murderers was an important constraint of the study.

Even though the total number of deaths disclosed through this study, are all suspected cases, it should be considered as an underestimated number since we admit that there can still be others, which were not included as: some few cases may have escaped the mandatory forensic autopsy; other cases may have been filed due to lack of evidence of homicides.

There are also suicidal cases, which we should not forget and is not included in this study, which is induced by violence against her and long term experience of violence that result in high level of depression and suicidal ideation from coercive and abusive perpetrator.

7. Conclusion and Recommendation

Conclusion

This is the first nationwide study concerning death of women age 15 and above among the Ethiopian adult population; and it may be considered a portrait of the current national situation and the lockdown in corona virus pandemic, with data as recent as possible. considering all alleged homicides based on the autopsy conclusions more than half of homicide cases are due to intimate partner violence in which the typical victims are young adult woman in the 3rd decade of life and most of them are unemployed. Victims are vulnerable by their marital partner and the fata incidence occurred with in short-term relationship. Most of the perpetrators are on average 10 years older than the victim, who are employed, with a history of substance abuse. Most fatal events took place in homes shared by the victim and perpetrator and were allegedly triggered by quarrel/dispute. So tackling the problem of intimate partner violence should be priority and concern to policies to prevent violence include promoting social awareness to change norms that condone violence against women; equipping young people with skills for healthy relationships; expanding women's access to economic and social resources and to support services; providing training for health services to better identify battered women at risk and support women experiencing violence. There should be standardized and sustainable way of recording the gender-based dimension of all offences and facilitates the measurement of violence against women and girls. Standard framework for recording the gender characteristics of victims, severity of the injuries suffered by victims and perpetrators in killing of women and girls relation to all crimes, including homicide.

Recommendation

Our analysis and also literatures suggest that the following aspects should have a positive impact in decreasing and preventing IPV fatal outcomes:

- For the government attempt to identify timely high-risk IPV situations (risk assessment) allowing domestic violence protective measures to be timely implemented, in order to avoid or reduce fatal outcomes; to empower women economically to avoid dependency on their partner.
- For the police, prosecutors, judges and other judicial officers need to give adequate support to victims who present denouncement of IPV; ensuring the adequate capacity of

justice system in order to increase the likelihood of successful apprehension, prosecution and conviction of offenders;

- For health and social services to improve the intervention of mental health care services in this issue and preventing alcohol and other substance abuse;
- For the criminal investigators and forensic technicians promoting the recognition and assessment of this form of violence which could be critical for the fair judicial progress of these cases.
- For social workers promoting a human rights-based and gender-responsive approach basing violence prevention programs on a conceptual framework that covers perceptions of masculinity and gender relations; engaging men as part of the solution
- For Federal police commission controlling and prohibiting access to firearms for perpetrators;
- This work also emphasizes the need to deepen the research on this issue, adopting standard comparable concepts, doing systematically homicide reviews and creating a national IPV homicide database, in order to formulate better evidence-based policy responses but, particularly, for prevention purposes on both fatal and non-fatal IPV.

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Annexes

Proforma 1.

1. Preliminary Particulars

1. PM NO
2. Age
3. Sex
4. Address
5. Whence Brought
6. Police No. & Police Commission
7. Date and Time of receipt of dead body
8. Autopsy Time (Examined between
9. Occupation, women's income contribution
10. Education
11. Marital Status
12. History as Furnished by police: -
13. History as Furnished by the family:- (Past medical history, Family history, Drug history ,History of surgery or invasive procedure, Personnel history like smoking, multiple sexual partners etc.)
14. Death certificate and detailed medical record information

2. Observation Schedule

1. External examination
2. Injuries
3. Internal examination
4. Result

3. Relationship status of the victim with perpetrator

- | | |
|------------------------------|-----------------------------|
| 1. 1 st marriage, | 5. Current intimate partner |
| 2. 2 nd marriage | 6. Former intimate partner |
| 3. Divorce | 7. Friend |
| 4. Single | 8. Client of sex workers |
| 5. Colleague | 9. Any other/Unknown |

4. Characteristics of intimate relationship nature

1. Marital
2. Dating
3. Extramarital.

5. Perpetrator

1. Known
 - a. Blood relative
 - b. Husband
2. Unknown, stranger

6. Factors related to perpetrator

1. Age of husband
2. Education status of husband
3. Occupation
4. Alcohol /khat use

7. What happened to the Perpetrator?

1. Committed suicide
2. Died
3. In prison
4. Trial

8. Circumstance of the incident

- | | |
|-------------------------------|--|
| 1. Jealousy/love a | 7. Homicide taking with him and his family |
| 2. Women's illness | 8. Work related quarrel |
| 3. Quarrel/dispute | 9. Attempted sexual assault |
| 4. Economic problem | 10. History of substance abuse |
| 5. Men's psychiatric disorder | 11. Unknown |
| 6. Prostitution | |

9. Type of mechanical injury

- | | |
|-------------------------|-----------------------|
| 1. Blunt trauma | 5. Asphyxial death |
| 2. Sharp/Chop trauma | 6. Combination method |
| 3. Firearm injury | 7. Multiple methods |
| 4. Thrown from building | |

10. Location of the injury

- | | |
|-----------|---------------|
| 1. Head | 5. Abdomen |
| 2. Face | 6. Upper limb |
| 3. Neck | 7. Lower limb |
| 4. Thorax | |

11. Number of offspring?

12. Time of occurrence of assault?

1. Noon
2. Evening
3. Night

13. Place of occurrence

1. Home
2. Public

3. Isolated place
 4. Victims work place
 5. Unknown
14. When did occur intimate partner violence and length of relationship
1. 1st year
 2. 1-10 years
 3. 10-20 years
15. Is there history of separation, if yes for how long?
1. 0-1year
 2. > 1 year
 3. Unknown
16. Number of assailant
1. One
 2. Two-Nine
 3. > Ten
17. Does Homicide occur with other?
1. Son or ex-stepson
 2. Daughter or ex-stepdaughter
18. Number of offspring?
19. Does the Homicide involve rape if yes, what is the result of Collected specimens from vaginal swab.

Proforma 2: Information sheet and Consent form

Hello, my name is _____, I am one of the participants who is working on Assessment of homicidal deaths among females cases based on gross postmortem findings, in cases that are brought to the mortuary of St. Paul's Hospital Millennium Medical College.

Purpose of the study – To assert cases as homicidal deaths among females based on gross postmortem findings and to assess the sociodemographic profiles, pattern of injury, time and place of occurrence of homicide, magnitude and severity of the injury presented for medicolegal autopsy to the department of forensic medicine and toxicology, Saint Paul's hospital and millennium medical college in Addis Ababa, Ethiopia.

Risk and benefits – There are no risks to the disbursement of justice for the deceased and you for participating in the study but I need about 10 minutes of your precious time. The deceased will not benefit directly from this study but the study will benefit the society when the information deducted finally shades light.

Payments for participating – You will not receive any payment for participating in this study.

Confidentiality – The information collected from this study will be kept confidential and it will only be used for research purposes. The information will be stored in a file without any personal identifiers but a code number will be assigned to it.

Right to refusal or withdrawal – You have full right to refuse and/or withdraw from the study at any time.

Do you have any questions?

May I begin?

Consent form

I am willing to participate in the study after it has been explained to me thoroughly in a language that I understand. Signature _____

Name of interviewer: _____ Signature: _____ Date: _____

Identifiers

PME No. _____

9. Case presentation

- Case1: PMN: 558-21
 - This is 38 years old unidentified female body brought by Addis Ababa police commission on 04/03/2021. She was found dead under Lafto bridge in running water with blue shoe lace around her neck and scarf/towel around her mouth on 04/03/2021 G.C. the perpetrator was client of sex worker and. He quarreled with her he took her some isolated place and strangle and smothered her with his friend and left her under bridge. He was drunk at the time of incidence.
 - She was single, her education status was unknown, she was prostitute, the incidence has occurred during the night time.
 - Cause of death was ligature strangulation with smothering.



- Case 2: PMN: 584/2021.

- This is 30 years old female brought from Oromia region West Shewa Zone. She sustained firearm injury on her left side of the neck and back of chest and died on spot on 07/03/2021.
- She was farmer, she can't read and write. Length of relationship with the perpetrator was about 12 years. They had six offspring's. The fatal incidence occurred in the jungle while she was walking with her mother and the husband killed them both in the middle of the day. He had quarrel with her. He is a farmer, he can't read and write. Now he is in prison.
- The cause of death is fire arm injury to chest and neck.



- Case 3: PMN: 99/2021

- This is 24 years old female deceased was found dead in her home with cut throat 10/01/2021.
- She was house wife and she had 2year old child. She can read and right. She was killed by her husband. Length of relationship was 2years. The perpetrator was self-employed, he attended primary school. after killing her he escaped and unknown f his whereabouts.



- Case 4. PMN:754/2021

- This is 65 year old female deceased was assaulted in her bedroom with an iron rod, which was covered with plastic, to the face and mouth region and bleed massively and injured teeth. She died on 27/03/2021 G.C at 5:45 P.M.
- She is house wife. She can't read and write. She was killed by her husband. Length of relationship with him was 37 years. He was 90 year old, had history of psychiatric illness before.
- The cause of death is injuries to the head, face, neck and chest by blunt force trauma.



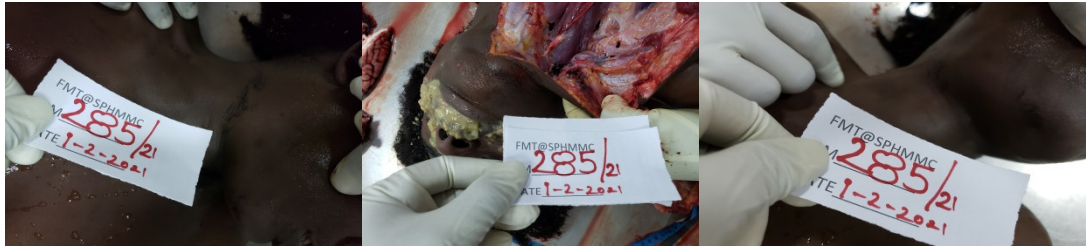
- Case 5. PMN:200/2021

- This is 30 year old female deceased was assaulted on 22/1/2021 by her former intimate partner. She is divorced. She had three children. Length of relation with him was 5years. She is self-employed. He hit her head and she died. He is 35 year old farmer, has attended primary school.
- Cause of death is head injury.



- Case 6. PMN: 285/21

- This is 15 year old female deceased was found dead in isolated place. She is grade 5 students, unmarried. Perpetrators and the motive were unknown.
- Cause of death is manual strangulation.



- Case 7. PMN: 1757/21

- This is 35 year old female The deceased was found dead at home with unspecified date and time. She had history of kick to her lower abdomen by the shoe of her husband 06 days back. 02 days later, she was taken to nearby health center and then referred to higher institution but she died. Externally no appreciable injury but internally there is perforation of the intestine.
- She is house wife, this was her second marriage and the assault occurred 3month after the wedding. The new husband was 35 year old farmer. He was drunk while he kicked her. He is in prison.
- Cause of death was generalized peritonitis as a result of bowel perforation.

