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Original communication

## Medico legal and epidemiological aspects of femicide in a judicial district of north eastern Italy

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### ABSTRACT

Femicide is the intentional killing of a woman because she is female, and often occurs when there are pre-existing relations, intimate or otherwise, between the victim and the murderer.

A retrospective epidemiological study was made of 34 female homicides recorded in a university departmental register of post-mortems, pertaining to a judicial district of about 700,000 inhabitants in north eastern Italy, during a 21-year period from January 1st 1993 to December 31st 2013.

The temporal trend, the socio-demographic characteristics of victims and perpetrators, the circumstances surrounding the crime and the risk factors for femicide were studied with the aim of identifying and developing preventive strategies.

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## 1. Introduction

Femicide was first mentioned by a number of European writers in the eighteenth century, but it has only received widespread media attention in recent years.<sup>1,2</sup>

Although no standard or commonly accepted definitions exist, femicide is usually defined as the killing of a woman, where the victim's gender appears to be of primary importance for the perpetrator (and should be distinguished from the incidental killing of a female during robbery, brawling, war or acts of terrorism).<sup>3,4</sup>

A typical feature of femicides is that there is frequently a pre-existing relationship, often of an intimate nature, between the victim and the perpetrator or a situation where the murderer knows the victim because he has observed her from a distance.<sup>4</sup> According to North American publications, the male partner or ex-partner is responsible in 40–50% of cases.<sup>5–8</sup>

Various scientific studies have attempted to identify the risk factors for femicide and to put forward appropriate preventive measures. Many studies were based on epidemiological research using questionnaires (e.g. the Danger Assessment and the Spousal

Assault Risk Assessment, currently also used in some Italian centres).<sup>4</sup> Such questionnaires are normally used to identify risk factors for femicide and are completed at the crime scene or during hospital admission by the local health or social welfare personnel working with the victims of domestic violence.<sup>4</sup>

In 2012 Eures, a private Italian socio-economic research institute which maintains a homicide database, published the first research into femicides in Italy between 2000 and 2011.<sup>9</sup> This research showed that 70.8% were committed in a family or relationship context with a fairly constant temporal trend over the period of time studied; in 66.3% of cases the partner or the ex-partner of the victim was the perpetrator; in many cases (41.6%) victim and perpetrator were married or co-habiting, but the number of homicides carried out by ex-husbands or ex-partners was also significant (17.6%).<sup>9</sup>

The aim of this work was to conduct a retrospective epidemiological study of female homicides recorded in a university departmental register of post-mortems, involving the temporal trend, the socio-demographic characteristics of victims and perpetrators and the circumstances and risk factors surrounding the crimes, in order to identify possible preventive strategies.

## 2. Methods

The cases of 34 female homicides recorded in the Departmental Section of Legal Medicine of the University of Udine during the period from January 1st 1993 to December 31st 2013, from a

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judicial district of almost 700,000 inhabitants in north eastern Italy, were examined.

A retrospective and descriptive statistical study of the phenomenon was carried out in order to identify: a) the temporal trend over the twenty one-year period, b) the victim's background (age, history of alcohol or drug use, nationality and occupation), c) the perpetrator's background (relationship with the victim, mental disorder, age and nationality), d) the specific circumstances surrounding the homicide (existence of known risk factors where victim and perpetrator were a couple, motive, crime setting, weapons, cases of murder-suicide).

### 3. Results

A total of 34 female homicides, recorded in the Departmental Section of Legal Medicine of the University of Udine during the period from January 1st 1993 to December 31st 2013, was reviewed.

A total of 51 male homicides occurred during the above time interval in the same judicial district.

#### 3.1. Temporal trend

During 1993, 1995 and 2005 no cases of femicide were recorded, while 2009 saw the highest number ( $n = 4$ ). The majority of femicides occurred in the second half of the period studied. Frequency was therefore fairly constant over the whole period, with only minimal variations (Fig. 1).

#### 3.2. Socio-demographic data of victims

- Age: 9 cases of femicide involved the age group of 30–39 years (26.5%), 8 cases involved the age group of 20–29 years (23.5%), 5 cases involved the age group of 40–49 years (14.7%), 5 cases involved the age group of 60–69 years (14.7%), 3 cases involved the age group of 80–89 (8.8%), 1 case involved the age group of 0–9 (2.9%), 1 case involved the age group of 10–19 (2.9%), 1 case involved the age group of 50–59 (2.9%) and 1 case involved the age group of 70–79 (2.9%) (Fig. 2).
- Alcohol or drug use: according to the toxicological investigations carried out at autopsy, 3 victims (8.8%) had blood alcohol levels indicating inebriation, and in 1 woman (2.9%) blood analysis revealed levels of alcohol, methadone and morphine suggesting she was intoxicated.

- Nationality: 25 were Italian (73.5%), 3 were Albanian (8.8%), with one each (2.9%) of the following nationalities: Antigua, Argentinian, German, Nigerian, Romanian, Tunisian.
- Occupations: 8 retired (23.5%), 7 prostitutes (20.6%), 4 blue-collar workers (11.8%), 2 students (5.9%), 2 teachers (5.9%), 2 unemployed (5.9%), 1 white-collar worker (2.9%), 1 postwoman (2.9%), 1 janitor (2.9%), 1 legal practitioner (2.9%), 1 businesswoman (2.9%) and 1 elderly carer (2.9%). It was impossible to identify the occupation of 3 of the victims (8.8%) (Fig. 3).

#### 3.3. Socio-demographic data of perpetrators

The perpetrators were identified in 30 cases out of 34 (88.2%). In 2 cases the same person killed 2 women and in 1 case the woman was killed by 2 different people. A total of 29 perpetrators were therefore identified [28 males (96.6%) and 1 female (3.4%)]. The main demographic features were as follows:

- Relationship with the victim: 17 women were killed by their partners (50.0%), of whom 15 were current partners (44.1%) and 2 were ex-partners (5.9%). One woman (2.9%) was killed by 2 people: her current partner and one of her relatives. Of the remaining perpetrators 3 were relatives (8.8%), 2 were brother/sister (5.9%), 2 were friends/acquaintances (5.9%), 1 was the father (2.9%), 4 were strangers (11.8%), and in 4 cases the killer was not identified by investigators (11.8%) (Fig. 4).

As regards the prostitutes, 1 was killed by a current client, 2 were killed by a new client, 1 was killed by her partner and cousin and 3 were killed by an unidentified perpetrator.

- Mental disorders: mental disorders were documented in 11 (37.9%) of the 29 perpetrators: depression in 6 (20.7%), with 1 case each (3.4%) of senile dementia and schizophrenia. 2 refused their psychiatric medication some days before committing murder and another, aged 16, killed his teacher after being told off. There were 3 cases of unspecified mental disorders (10.3%). In the other 18 cases (62.1%) no mental disorder was recorded (Fig. 5).
- Age: the age of 2 of the perpetrators (6.9%) is unknown. The majority were aged 30–39 (12 cases – 41.4%). Of the other age groups: 5 were aged 50–59 (17.2%), 3 were 80–89 (10.3%), 2 were 40–49 (6.9%), 2 were 60–69 (6.9%), and there was 1 case (3.4%) in each of the following groups: 10–19, 20–29, 70–79 (Fig. 6).

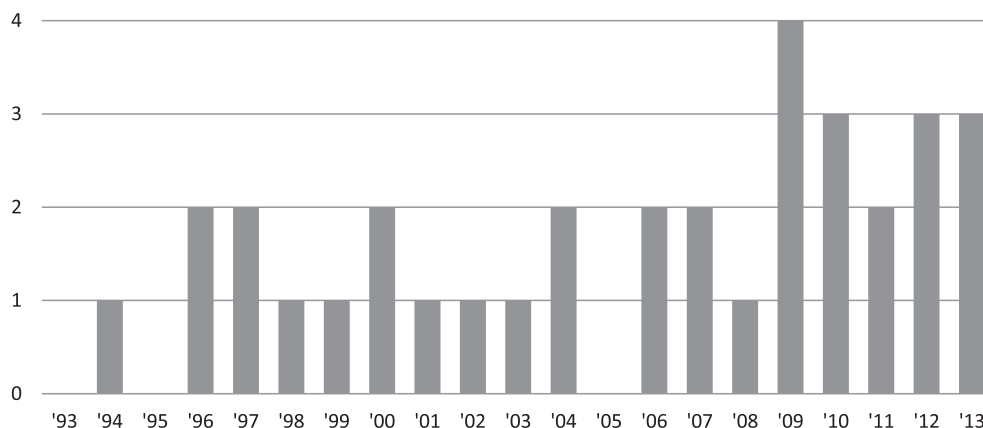


Fig. 1. Annual trend of femicides during the period 1993–2013.

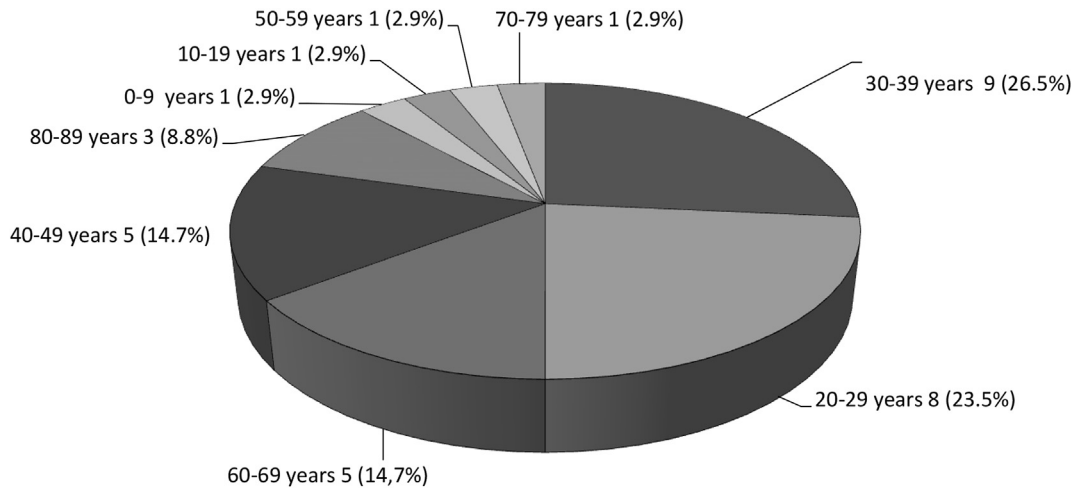


Fig. 2. Victims' age.

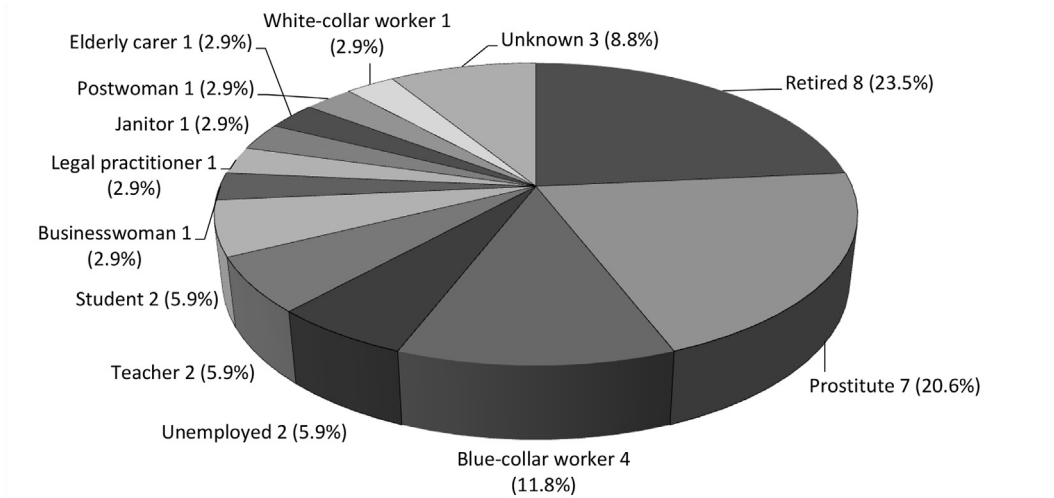


Fig. 3. Occupation of the victims.

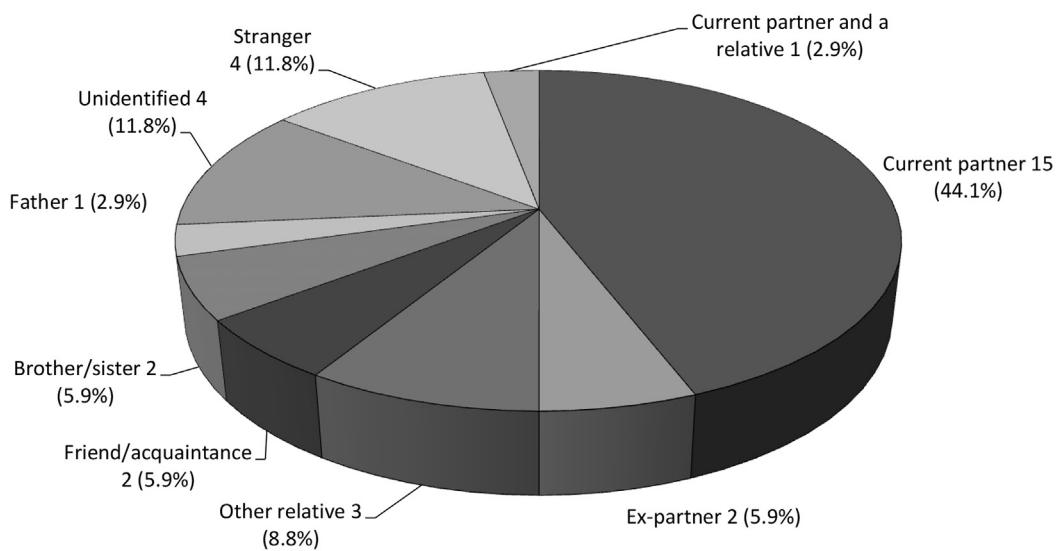


Fig. 4. Murderer-victim relationship.

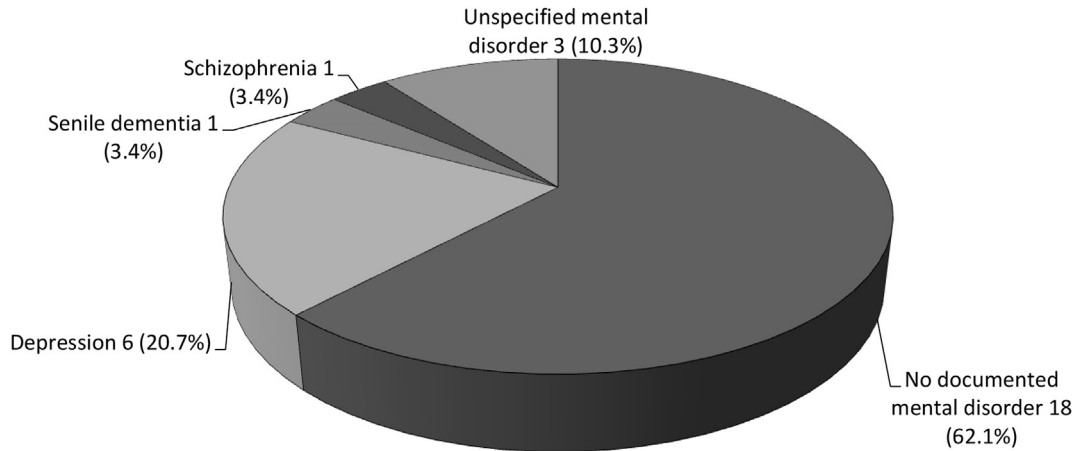


Fig. 5. Mental illness among perpetrators.

- Nationality: the majority were Italian (24 cases – 82.8%) and there was one case each (3.4%) of the following nationalities: Albanian, Argentinian, Austrian, Egyptian and Tunisian.

3.4. Circumstances and medico-legal aspects

- Specific risk factors for femicide were seen especially within intimate relationships (current or previous): 18 (52.9%) of the femicides occurred within this setting, i.e. involving spouses, cohabitees, fiancés and fiancées, lovers, ex-spouses, ex-cohabitees, ex-fiancés and ex-fiancées.

Other factors which were observed in the group of 18 women who were involved in such a relationship included: marriage relationship between victim and perpetrator (12 cases – 66.7%), legal possession of firearm by perpetrator (9 cases – 50.0%), perpetrator's mental disorder (7 cases – 38.9%), previous violence and threats (7 cases – 38.9%), age difference of 8 years or more (5 cases – 27.8%), previous stalking behaviour reported (or not) to authorities (3 cases – 16.7%), alcohol abuse or presence of significant alcohol levels at autopsy (2 victims – 11.1% and 1 perpetrator –

5.6%), short time interval following the ending of a relationship (2 cases – 11.1%), reported violence during pregnancy (2 cases – 11.1%), previous instances of forced sexual intercourse (2 cases – 11.1%), perpetrator's unemployed status (1 case – 5.6%) and perpetrator's criminal record (1 case – 5.6%) (Fig. 7).

- Perpetrators' motives: the most frequent motive (8 cases – 23.5%) was related to the perpetrators' mental disorder. Passion was the motive in 3 cases (8.8%), which increases to 6 cases (17.6%) if we include a combination of passion and mental disorder. One femicide (2.9%) was brought about by the victim's persistent jealousy, while 4 deaths (11.8%) occurred due to issues related to the ending of their relationship. Trivial issues and fighting led to 4 femicides (11.8%) and a robbery (in which the victims were specifically targeted) determined 3 femicides (8.8%). 2 of the women (5.8%) were killed for compassionate reasons (mercy killing) and 1 (2.9%) resulted from an attempt to extort information. In 5 cases (14.7%) the murderers' motives are unknown (Fig. 8).

- Crime scene: most femicides (25 cases – 73.5%) were committed in a domestic setting. The second most frequent settings were countryside and woodland (6 cases – 17.6%). One murder was

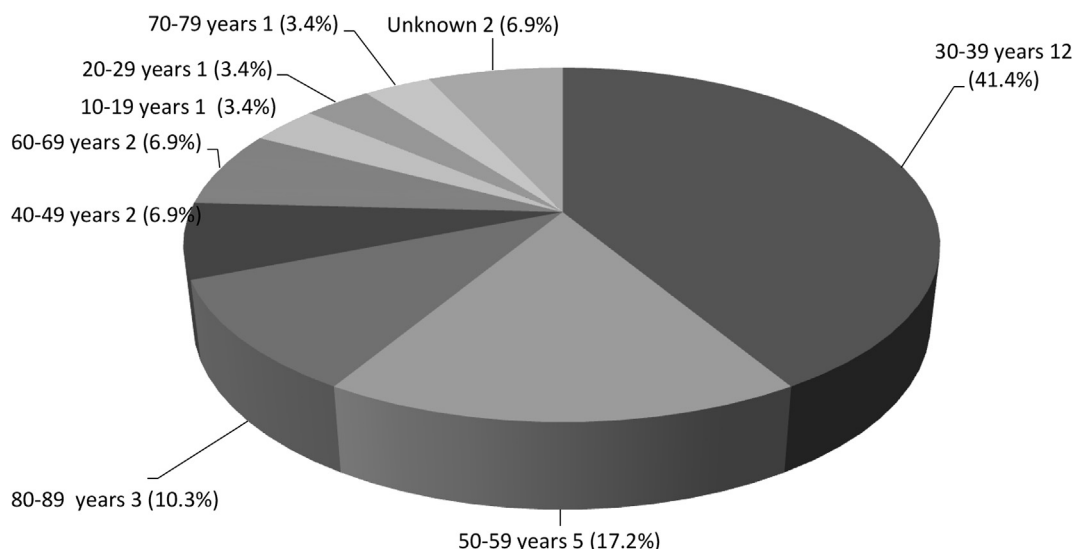


Fig. 6. Perpetrators' age.

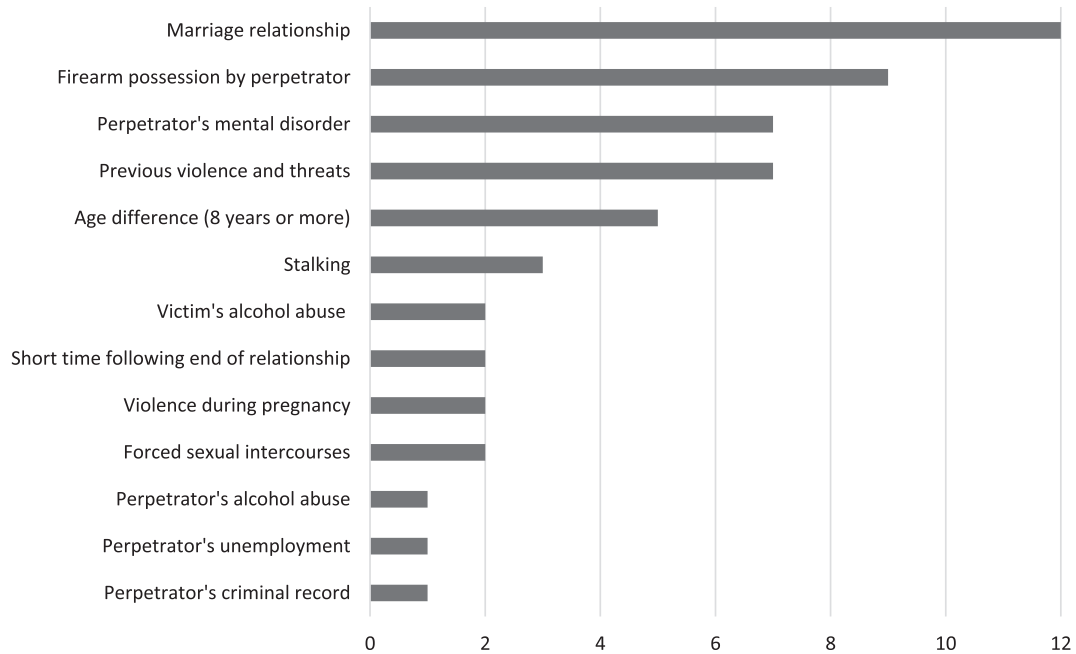


Fig. 7. Risk factors for femicide within a relationship.

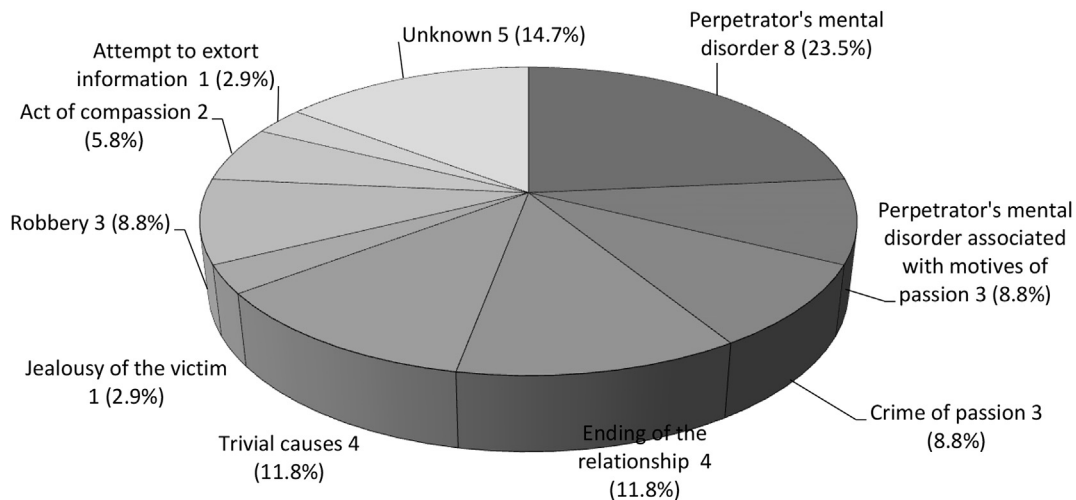


Fig. 8. Perpetrators' motives.

committed in the street (2.9%) and another in a caravan (2.9%). In one case (2.9%) the victim's corpse was found in a river, but the exact location of the homicide is unknown (Fig. 9).

- Weapons: the most frequently used weapons were edged weapons (14cases—41.2%) and firearms (13 cases – 38.2%) while asphyxiation, assault and battery, and blunt force were only used in a minority of cases as can be seen below:

- edged and pointed weapons (41.2%): knife in 10 cases (29.4%), crossbow in 2 cases (5.9%), a billhook in 1 case (2.9%), and an unidentified weapon in 1 case (2.9%);
- firearm (38.2%): handgun in 5 cases (14.7%), shotgun in 5 cases (14.7%), carbine in 1 case (2.9%), unidentified firearm in 2 cases (5.9%);
- asphyxiation (8.8%): manual strangulation in 2 cases (5.9%), ligature strangulation in 1 case (2.9%);
- physical aggression (5.9%): assault and battery in 2 cases (5.9%);

e) blunt force (5.8%): broom in 1 case (2.9%), impact with the floor in 1 case (2.9%) (Fig. 10).

- Murder-suicides: we documented 9 cases of murder-suicide, resulting in a total of 12 victims of homicide 10 of whom were females (29.4% of the total number of femicides) and 2 were males, and 1 instance of multiple, unsuccessful suicide attempts, which occurred immediately after the murders of 2 people (the father and stepmother of the perpetrator). A total of 23 people died (9 murderers who then committed suicide, 12 victims of murder, and 2 people whose deaths were followed by unsuccessful suicide attempts by the perpetrator).

The successful murder-suicides occurred in 1999, 2000, 2003, 2004, 2006, 2007 (2 events), 2009 and 2012; the unsuccessful murder-suicide attempt was in 1994.

The victims of these murders, where the perpetrator then committed suicide, were the perpetrator's wife (5 cases – 41.7%),

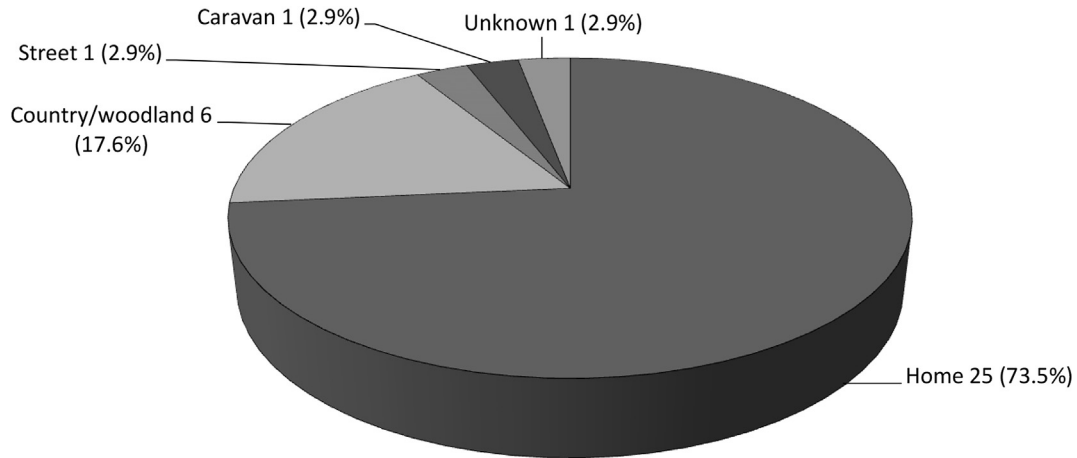


Fig. 9. Scene of crime.

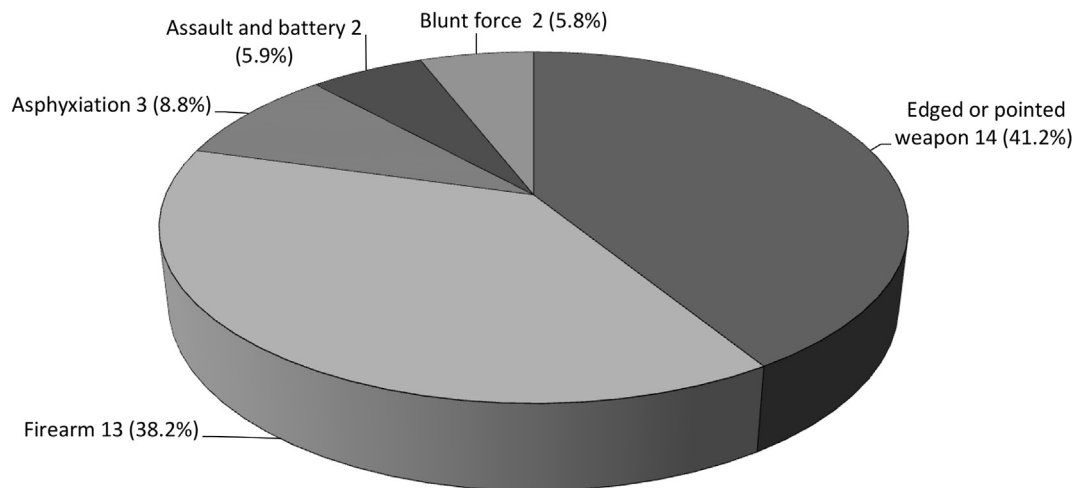


Fig. 10. Murder weapon.

ex-wife (1–8.3%), son/daughter (3–25.0%), sister (1–8.3%), sister-in-law (1–8.3%) and son's fiancée (1–8.3%). The motives for the 9 murder-suicides were as follows: 5 episodes (55.6%) originated from problems associated with the perpetrator's mental illness (depression in 4 cases and an unspecified mental disorder in 1 case). Two events (22.2%) were examples of mercy killing (the victims had been ill for a long time) and 2 events (22.2%) followed the ending of a relationship. An unspecified mental disorder seems to be behind the above-mentioned case where the man murdered his father and stepmother and then failed in his own suicide attempt.

The weapons used were as follows: handgun (6 victims – 50.0%), shotgun (4–33.3%) and kitchen knife (2–16.7%). When a firearm was used, the same weapon was also used for the suicide. When no firearm was used for the homicide, one perpetrator killed himself by asphyxiation with a plastic bag and one hanged himself using an electric cable.

In the case of the killing of the father and stepmother, the victims were killed with a kitchen knife while the perpetrator's 3 suicide attempts involved the gas cooker, a knife and drowning.

#### 4. Discussion

The trends observed in our data, notwithstanding the small sample size, appear to be consistent with crime reports obtained

from official Italian and international statistics, which indicate a substantially unchanging scenario over recent decades and puts into perspective the supposed rise in femicide reported by the media and supported by popular belief.<sup>10</sup>

Official data for the period 1955–2009 provided by the Italian Ministry of the Interior show that the total number of homicides involving victims of both sexes peaked in 1991 and declined over the following years.<sup>11</sup> Regarding the statistics for homicide in general in Italy, the greatest decrease was seen in the number of killings (mainly of men) involving organized criminal activity, while it is crimes of passion (involving the killing of women in most cases) and domestic homicides which represent the most frequent kind of murder from 2001 on.<sup>12</sup> This over-estimation of the frequency of femicide in Italy (stable in absolute terms, but apparently on the increase if compared to the total number of homicides) may have been produced by public opinion and the media (where reports of the frequent, widespread femicide tend to dominate) and because governmental authorities fail to distinguish between femicide and other kinds of homicide involving women.

According to official Italian data<sup>9</sup> and other published material the victims of femicide are mainly adults who are killed in a domestic setting in crimes of passion.<sup>10,12–15</sup> In the USA between 2000 and 2004, 1400 women were killed every year by their partner or ex-partner, while 300 men were killed in analogous circumstances over the same period.<sup>16</sup>



As regards the age of the victims in our study, the largest age group was 30–39, which was broadly similar to the age of the perpetrators.

The majority of the victims and the perpetrators of the homicides examined in our study were Italian and intra-ethnic, confirming the Goetting and Smith et al. findings about a frequent occurrence of femicides involving intra-ethnic relationships.<sup>23,24</sup>

The shared nationality of victim and perpetrator presumably follows on from the fact that femicide mostly occurs in a domestic setting.<sup>9,12,16,25</sup>

In fact, intimate relationships and marriage usually arise, not only in Italy, between people who share a similar linguistic and cultural background.<sup>28</sup>

In terms of employment categories, the majority of the victims were either retired women or young prostitutes. This is partly because elderly women form such a large part of Italian society, while the isolation of prostitutes makes them particularly vulnerable to potentially fatal aggression.

Our study revealed that in more than half the cases the women were murdered by their current or ex-partner. In line with other published reports femicide appears to occur mainly in a domestic setting.<sup>9,12,16,25</sup>

These femicides, where victim and perpetrator were often involved in an intimate relationship, highlighted various risk factors which have already been reported in the literature:

- spousal status,<sup>25</sup>
- perpetrator's legal possession of a firearm,<sup>7,26</sup>
- perpetrator's mental illness,<sup>26,27,29–31</sup>
- history of physical violence or rape (which are considered by some authors as one of the main risk factors for femicide) and threats suffered by the victim,<sup>7,26,29,32</sup>
- significant age difference gap.<sup>13–15,33</sup>

Unlike other studies, we did not find the following risk factors to be predominant:

- a) history of stalking: we only encountered this phenomenon in a small number of cases, unlike McFarlane et al., who found a strong association between stalking and homicide or attempted homicide, with documented stalking episodes during the 12 months prior to the attack in 68% of their sample.<sup>34</sup> In this regard, Ianni found that in Italy, of the approximately 200 women killed every year in crimes of passion, about 80 had been previously molested or stalked by the perpetrator.<sup>35</sup>
- b) chronic alcohol abuse by the perpetrator: this was not a relevant feature of the victims of the intimate partner femicide we examined (though it was relevant among the victims of femicide in general). The available published data are not in agreement here. According to Campbell et al., chronic alcohol abuse does not represent a risk factor for femicide.<sup>26</sup> Belfrage and Rying, by contrast, observed that 44% of perpetrators and 37% of victims were under the effects of alcohol at the moment of the crime.<sup>29</sup> Belfrage and Rying also noted that the frequency of chronic alcohol abuse in femicide (51%), is generally lower than in other categories of homicide (61%) or in cases of aggression by the partner.<sup>29</sup> Gondolf and Shestakov noted that 60–75% of the perpetrators of uxoricide had a history of alcoholism.<sup>36</sup>

Our study also found little evidence of the following circumstances which were found by other authors to be significant: a) murder occurring a short time after the ending of the relationship (Belfrage and Rying<sup>29</sup> found that 40% of femicides were associated with this) or after divorce/separation (Wilson and Daly<sup>13</sup> suggested that divorce or separation was the precipitating cause of

uxoricides); b) episodes of violence during pregnancy (Garcia et al.<sup>33</sup> claimed that homicide is now the main cause of death among pregnant women who are the victims of violence); c) previous acts of forced sexual intercourse (for Campbell et al.<sup>26</sup> this was an important risk factor for femicide); d) perpetrator's unemployed status (Campbell et al.<sup>26</sup> considered unemployment to be the most relevant demographic factor in the perpetrators of femicide as opposed to other kinds of violent male); e) perpetrator's criminal record (Bailey et al.<sup>7</sup> considered this as an independent risk factor for femicide, Belfrage and Rying<sup>29</sup> found that it was a factor in 61% of the cases of uxoricide they examined and Campbell et al.<sup>26</sup> did not find a criminal record to be more of a factor in perpetrators of femicide compared with other kinds of violent partner. Campbell et al. also noted that a previous imprisonment for domestic violence seemed to decrease the risk of this kind of crime, probably because potential victims and their partners are monitored more closely by the authorities).

The relationship factor in femicide (whether as family, intimate partner or acquaintance) was clearly underlined in the results of our study, and indicates the absolute preponderance of the domestic setting in these crimes (as Belfrage and Rying<sup>29</sup> noted, 85% of femicides take place in the couple's, victim's or perpetrator's home). This might in turn suggest that family and domestic issues are contributing to femicide.<sup>12</sup> Furthermore, the private domestic setting is one where it is difficult to intervene to prevent fights and/or murder attempts. In these circumstances the only action that can be taken is either to educate and guide in advance or to ensure that information furnished by potential victims or witnesses to acts of violence or threatening behaviour is promptly passed on to the authorities.

In our study the most frequently used weapons were edged or pointed weapons. In agreement with Belfrage e Rying, this ties in with the fact that most femicides were committed in a domestic setting, where knives or similar objects can readily be found. Firearms were the second most frequently used weapon and the number of victims murdered using them reflects the large number of perpetrators who are able to obtain a firearms licence (for handguns and/or shotguns).<sup>29</sup>

The toxicological data evaluated in our study showed that, at the time of death, some women ( $n = 4$ –11.8%) were under the influence of alcohol or drugs.<sup>17,18</sup> Alcohol and drugs have been reported by Authors as risk factors for femicide because the resulting psychophysical changes can reduce perceptions of danger and make women more vulnerable to aggression or incapable of defending themselves.<sup>19–22</sup> Leth noted that chronic substance abuse (mainly alcohol) may occur more frequently in femicide than in other kinds of homicide.<sup>19</sup> The literature also suggests that 40–50% of femicide victims ingested alcohol in the period immediately before being killed.<sup>20–22</sup>

The weapons used to kill the prostitutes were different: handgun, assault and battery, crossbow, manual strangulation or ligature strangulation. In this last case, the blood analysis carried out during autopsy revealed the presence of both alcohol and drugs (methadone and morphine) suggesting that the victim was inebriated, unable to evaluate the danger she was in or to offer effective resistance to the aggressor.

In 2 cases the prostitutes were killed at the murderers' home, while the corpses of the other prostitutes were found out in the countryside, on a street or in a river. These remote, solitary locations highlight the isolation in which these women work, which makes them even more vulnerable to potentially fatal aggression (in one case a previous episode of serious aggression by a client was reported). The above circumstances, associated with the victim's continuous contacts with many different clients, may also explain why the perpetrators and the motives in 3 femicides out of 7

(42.9%) were not identified by the authorities. Motives were clear in only three cases: one resulted from an extortion attempt and the other two occurred when the prostitutes were robbed while working. These last two murders of prostitutes were committed by the same perpetrator, who had previously been convicted of manslaughter. In one case of homicide involving a prostitute the authors were known: they were the victim's partner and cousin, but the motives of the femicide resulted unclear.

Although our sample was small, the cases of murder-suicide were an important part of our study.

In our study, murder-suicides causing female victims occurred more frequently in a domestic setting than femicides while the perpetrators were usually male.<sup>12,36–38</sup>

Murder-suicides also appear to take place mainly within a family or intimate relationship and the most frequent victims, as other published work suggests, are wives, ex-wives, partners and ex-partners.<sup>10,19,37,39,40</sup>

The weapons most frequently used in murder-suicides were firearms. Their use represents an element which is key to the lethal nature of the event: in one case where the suicide was unsuccessful, a firearm was not used. Furthermore, the weapon used for the homicide is also generally used for the suicide and in fact, in the cases we studied, all the men who killed their victims with a firearm, and who then committed suicide, used the same gun to kill themselves.<sup>41</sup>

In these cases of murder-suicide, mental illness was a factor in the majority of cases, with compassion being the motive in two mercy killings. This contrasts with other published studies which indicate that jealousy and possessiveness are the triggers in more than half of the homicide-suicides.<sup>42</sup>

Our observation that mental illness plays a dominant role (37.9% of perpetrators suffered from a mental disorder) is also borne out in the literature: other studies have shown a high incidence of mental disorders in males who killed their female partner, and these mainly involve depression, personality disorders, delusional disorders, and antisocial or controlling/repressive behaviour.<sup>26,27</sup>

All the 11 psychiatric subjects we studied had obsessive-compulsive or depressive symptoms at the time they committed murder and some of them were not following a program of supervised treatment, while 1 of them, a high school student, killed his teacher after being reprimanded.

The frequency of mental illness in the perpetrators we evaluated is slightly at odds with Italian Interior Ministry findings on femicides committed after 2001. These suggested a prevalence of crimes of passion, or murders where jealousy or adultery in intimate relationships was involved.<sup>12</sup>

This discrepancy may be due to the historical and cultural background of North East Italy, an area where the inhabitants are regarded as less emotive and hot-blooded than their compatriots in the south of Italy but where mental and psychiatric illness is, however, widespread.

Even though mental illness does not necessarily equate with a greater propensity for crime, we need to consider seriously how we might prevent femicide through appropriate psychiatric intervention. This would involve identifying people who show signs of mental disease, treating them appropriately and promptly, and monitoring the administration of the prescribed therapy.

In conclusion, it is clear that femicide is a crime which is frequently committed in a domestic environment, and it is therefore difficult for the authorities to monitor and prevent except when information is voluntarily furnished by potential victims or by people who witnessed acts of violence or threatening behaviour.

The fact that the most frequent cause of femicide is the perpetrator's mental illness (when the media would have us believe that most are crimes of passion) or a context of alcohol abuse involving

both perpetrators and victims or in a climate of ongoing violence and threats, suggests that control and prevention procedures by the health and social services and the courts are essential although sometimes subjects may refuse of assistance.

More specifically, families characterized by risk factors for femicide should be monitored more carefully. Questionnaires filled in by health and social workers when interviewing the victims of aggression or violence could be a particularly useful way of identifying the most dangerous situations. Adequate and effective monitoring and prevention should be planned in the following way: a) the identification of domestic contexts where mental illness is a risk factor and the planning of an appropriate programme of psychological or pharmacological support; b) full co-operation between the various health and social service departments in order to ensure that treatment is adhered to and to flag up any signs of mental impairment; c) alerting the courts to any episodes of domestic violence; d) campaigning against alcohol and drug abuse.

#### Conflict of interest

None declared.

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None declared.

#### Ethical approval

None declared.

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