

HOMICIDE-SUICIDES IN THE GENOA DISTRICT (NORTH-WEST ITALY): A RETROSPECTIVE STUDY FROM 2007 TO 2018

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Abstract: Homicide-suicide is an act in which the murder of a victim is followed by the suicide of the perpetrator usually within a week. Despite being a rare event compared to committing murder alone and scarcely studied and reported in literature, homicide-suicides have attracted major media attention. Between 2007 and 2018 in the province of Genoa, 11 homicide-suicide episodes were registered for a total of 29 deaths, or 16% of murders that occurred in the same province. The most represented age group was the elderly (>60 years), both for the victims and the perpetrator. The victims were 12 women (67%) and 6 men (33%), while the murderer was a man in 10 of the 11 cases investigated. Firearms were found to be the most commonly used weapon for both committing the murder (67%) and the suicide (55%), with gunshots almost always aimed towards the cranial district. They were familicides in 82% of the cases (9 episodes) and the most common crime was uxoricide, that is, the killing of one's wife (8 out of 18 victims). Almost all of the homicidal events (16 out of 18 murders) took place in the home, specifically in the bedroom. The most significant motives for the crime were the so-called "pietatis causa" (4 out of 11 cases), elderly individuals who kill their spouses and then take their own lives either in an attempt to end suffering, or for economic reasons or pathological jealousy. The homicide-suicide rate was found to be 0.11 for every 100,000 inhabitants, a disturbingly high figure that should encourage the introduction of procedures and initiatives to reduce the risk of such events from happening.

Keywords: homicide-suicide, forensic pathology, suicide, uxoricide, homicide, violence.

INTRODUCTION

The homicide-suicide combination is defined as "the homicidal killing of one or more persons immediately after the suicide by the homicidal offender" [1]. Typically this method of crime receives particular attention from the media. However, scientific literature on these tragic events is relatively limited [1].

To better understand this type of crime, several studies have examined the incidence and pattern of homicide-suicides [2].

Most scientific studies on cross-national homicides generally reveal that the prevalence and nature of homicides vary according to location [2]. In a study by Liem *et al.* [3], it was reported that the prevalence of homicide-suicides also varies by country. In this regard, according to the authors, the highest rate of this particular crime was in the United States (0.22

per 100,000 inhabitants) followed by Switzerland (0.09 per 100,000 inhabitants) and the Netherlands (0.05 per 100,000 inhabitants). Large *et al.* [4] conducted a review of 17 countries and found that homicide-suicides occur at a rate of 0.012 to 1.33, with the United States having a rate of about 0.313. The same authors report that homicide-suicides represent about 8% of all murders committed with a low percentage in the United States (3.6%) compared to other industrialized countries (11.6%).

According to available data that has not been updated since its publication, from 2000 to 2008 in Italy, there were approximately 340 recorded events with a total of about 1,000 victims [5-6].

The purpose of this review is to analyze and describe all the homicide-suicide cases reported by the Institute of Legal Medicine of Genoa from 2007 to 2018 for a total period of 12 years.

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MATERIALS AND METHODS

Case studies on the homicide-suicide phenomenon that we analyzed come from the analysis of the Genoese legal medicine sector (The Institute of Legal Medicine at the University of Genoa) from January 2007 to December 2018. The data analyzed for each case include: (1) data on the victim and the murderer; (2) relationship between the involved parties; (3) means of offense; (4) crime scene; (5) year, month and day of the event; and (6) motives for the crime.

RESULTS

Over the period investigated, namely 12 consecutive years (2007-2018), in the relative case studies of the Genoese medical examiners sector, 11 episodes of homicide-suicides were recorded with a total of 29 corpses: 18 murders and 11 murderers who then committed suicide (Table 1). The average number of the events was 0.92 per year with a clear predominance in the summer months of May, August and September (55%) and Thursdays (40%). Almost half of the episodes occurred in the three-year period of 2009-2011 and they all took place within a short period of time. In fact, the murderer would commit suicide within a few hours after the killing. Table 1 illustrates the demographic data, methods, and characteristics of our case studies.

Data on the victim and the murderer

The murder victims were 67% women (12 victims) and 33% men (6 victims). The age group which was most represented for the victims was the “elderly” (>60 years), which, according to our case studies, represents 10 of the 18 victims (56%).

The age of the murderer happens to also be over 60 years in 6 of the 11 episodes (in particular 3 of the murderers are in the 60 to 80-year-old age bracket and 3 of an age >80 years). In fact, the oldest was an 80+ year-old man who killed his equally elderly wife in the bedroom. Out of a total of 18 victims, 12 were younger than the murderer (in particular, in familicides involving children and consorts), while 6 were older than the murderer.

The murders were carried out by male subjects in 10 of the 11 cases (91%) except in the one case of the infanticide (the victim was a 20-day-old infant), where the murderer was a young mother. This is in line with the E.U.R.E.S. Data Bank (Economic and Social Research) [7] regarding Italy, which reports that women are responsible for 7% of homicide-suicides, while 93% are carried out by men.

Furthermore, the phenomenon was found to be intra-ethnic and, above all, autochthonous in that it differentiates itself from murders in general: in all the 11 episodes of our given sample, foreigners were not involved either as the perpetrator or the victim.

Table 1. Demographical aspects, methods and characteristics of homicide-suicide cases

	Age and gender of murderer	Age and gender of victim	Relationship of victim	Method of Murder	Method of Suicide	Motive
Case 1	50, M	43, F	Wife	Blunt object (hammer)	Falling to their death	“Pietatis causa”
Case 2	70, M	81, F; 85, F	Sister	Gunshot with a single bullet wound	Gunshot with a single bullet wound	Economic problems
Case 3	82, M	74, F	Wife	Blunt object (coffee machine measurer)	Carbon Monoxide Poisoning	“Pietatis causa”
Case 4	35, F	20 days, M	Son	Strangulation	Hanging	Depression post-partum
Case 5	58, M	72, M; 55, F	No relationship	Gunshot with a single bullet wound	Gunshot with a single bullet wound	Seizing illegal dog kennels
Case 6	89, M	91, F	Wife	Strangulation	Hanging	“Pietatis causa”
Case 7	75, M	73, M; 69, M; 77, F	Wife, two neighbors	Gunshot with a single bullet wound	Gunshot with a single bullet wound	Pathological jealousy
Case 8	84, M	82, F	Wife	Gunshot with a single bullet wound	Gunshot with a single bullet wound	“Pietatis causa”
Case 9	37, M	37, F; 1, M	Wife, son	Falling to their death, stabbing or knifing	Falling to their death	Pathological jealousy
Case 10	49, M	49, F; 14, F; 10, F	Wife, daughters	Gunshot with a single bullet wound	Gunshot with a single bullet wound	Economic problems
Case 11	78, M	70, F	Wife	Gunshot with a single bullet wound	Gunshot with a single bullet wound	Economic problems

With regard to the social background of the victim and the murderer, 6 of the 11 murders involved retired elderly subjects, while the rest were low-skilled workers with economic problems; in one case, the murderer was a young unemployed mother.

Information was not available regarding any mental illness in the medical history of a murderer, except in two cases: a young family man suffering from ludopathy, who had accumulated significant gambling debts and a young mother suffering from postpartum depression, who took her infant's life and then her own shortly after.

Relationship between the involved parties

Not all the victims were linked to their murderer by family relations, and, in some cases, they were not even acquainted: in one case, the murderer was a hunter who was the owner of an illegal dog kennels. After having killed two zoophile police officers, who had come to seize the premises, he had committed suicide. In the second case, a man in a jealous rage, not only killed his wife but two of his neighbors as well, whom he suspected of being his wife's lovers. However, 82% of the events were considered familicides (9 out of 11 episodes). Among the 14 victims, who had family ties with the murderer, the relationships were: wives (8 cases, 57%), children (4 cases, 29%) and siblings (2 cases, 14%).

From our case studies, we can see how uxoricide is evidently the most common crime, in particular, with cases where all the homicide-suicides involve elderly couples (5 out of 11 total episodes); there was also an infanticide committed by a mother to her newborn child and two episodes of familicide: a man (37 years old) who killed his wife of the same age and their newborn child (13 months) and a father (49 years) who killed his wife and both daughters (aged 10 and 14). This last event is the only episode in our case series that represents a triple murder: a 49-year-old man (policeman with technical duties) killed his wife and young daughters with a service weapon, before committing suicide with the same weapon.

Means of Offence

In the murders committed using firearms (a total of 12 victims), the gun used was a semi-automatic, a repeating kind (9 victims), all of which were with a firearm license, apart from in two cases: in the first case, the perpetrator, already with a previous crime record, killed and then committed suicide using a Smith & Wesson caliber 38 revolver whereas in second

case involved an elderly husband who killed his long suffering wife and then took his own life, using a Beretta M52 revolver, the possession of neither of these firearms having been reported to the authorities. In the other killings using firearms, hunting rifles were used with a total of 3 victims. Out of the total of 12 victims using firearms, 10 were killed by way of a single shot close-range aimed at the head bilaterally, in particular, the zygomatic, frontal and parietal lobe area; only in 2 of the 12 cases, was the fatal gunshot wound inflicted to the stomach area, with death being caused by hemorrhagic hemoperitoneum trauma.

Amongst the other injuries were 2 victims whose deaths were caused by strangulation: a newborn of just 20 days old killed by its own mother using a battery charger lead from a mobile phone and an elderly man, facing not only his own illness but also that of his companion, who strangled her to death before then taking his own life. Only one female victim was killed by being stabbed: on her body were 8 points of entry and cuts to the chest and the abdomen, as well as numerous wounds to her back and the palms of her left hand, probably caused in self-defense.

In another case, the murderer threw his one and a half year old son out of a window, who subsequently fell to his death from a height of 15 meters.

The last two victims were killed by injuries to the skull inflicted by a blunt instrument: in one of the two cases, the murder weapon would appear to have been compatible with that of a hammer, causing the crushing of the skull thus allowing the spilling out of encephalic material. In the second case, the wounds were made using a measuring implement from a coffee machine, found at the scene of the crime.

In regards to the suicides, in 6 of the cases, the murderer committed suicide using a shotgun, aimed at the skull (5 episodes) or in the epigastric area resulting in cardiac lacerations (1 case). In the remaining cases, death was brought about by 2 subjects hanging themselves, 2 falling to their deaths and in one case, that of an elderly man, through carbon monoxide poisoning by deliberately inhaling the gas using a plastic bag covering his head attached to an old stove heater.

In 6 cases, the murderer killed his victim and then committed suicide using the same weapon, that is a firearm.

The Crime Scene

Almost all of the murders (16 out of 18) took place at the murderer's place of residence. Only in one case, in which the murderer, a man, jealous of his

wife, and suspecting that she had sexual relations with neighbors, killed them both in a nearby bar, before then returning to his home to kill his wife.

Those victims who were found at home almost always had a family connection with the murderer (i.e. they were wives or partners, children or siblings). Only in one event was this not the case in that the murderer killed 2 zoophilic policemen while they were attempting to seize an illegally-run dog kennels. In addition, in most of the murders that took place in the home, the victim was found in the bedroom (12 episodes out of 16), with the others having taken place in the kitchen (3 cases) and the entrance hall (1 case). In the latter 2 cases (that of the kitchen and hall), the deaths came about as a result of a quarrel which had involved the protagonists for a variety of reasons.

In regards to the suicides, however, these were always committed at home with 8 subjects in total committing suicide within the domestic walls, 2 falling to their deaths (from the window of their homes) while 1 took place on the landing outside their apartment.

Year, month and day of the crime

Almost half of the homicide-suicides (5 out of 11) took place over a 3-year period (from 2009 to 2011), with 8 out of 18 crimes happening specifically during these 3 years, even if the actual period considered was over a period of 12 years. Regarding the season in which the crimes took place, a clear tendency can be seen during the warmer months (i.e. May, August and September when there were 6 homicide-suicides) whereas the most common day of the week for such crimes is Thursday (with 4 episodes). However, in all the cases investigated, it is important to note that the murder/s that happened, leading up to the successive suicides, all took place on a single day, and within very few hours of each event. Finally, the most common motives for this type of crime can be found in the next section.

Motives for the Crime

In order to better understand the investigated cases, each case can be categorized by one of the 4 motives:

a) Elderly couples with numerous pathologies (4 episodes). In these particular cases, the murderer was always seen to be the elderly husband, usually no older than 65, who murders his wife and then takes his own life. The reason for this gesture often lies in the desperate need to stop the suffering due to bad health which so often afflicts the elderly (called “*pietatis*

causa”). Typically, after a long period of sharing their lives and looking after each other, it is the husband who kills his ill companion, usually using a firearm. In such cases, it is more than often the emotion of desperation which reigns, or rather those emotions which arise from the feeling of both impotence and anger, which together render it impossible to believe that the situation is able to be remedied.

b) Money/financial problems (3 episodes). In these cases, the murderer is once again male and makes a decision to end his family’s lives (his wife, children, sister etc.) because he fears that their economic problems cannot possibly be overcome by his family without him.

c) Pathological jealousy (2 episodes). The suspicion of betrayal in a couple is enough to cause two types of episode : the case in which a man, angered by the possessiveness felt for his partner, decides to kill, not only her but also her son, and the other in which both the wife and 2 neighbors, both suspected lovers of the wife, are killed.

d) Post-partum depression (1 episode). This is the case of a young female who, abandoned by her companion and consequently living in poor economic and social conditions, whilst not mentioning facing psychological suffering, commits infanticide and then takes her own life.

e) In a final separate and lone case, from the investigation of the circumstances provided, the motive was connected to the seizing of the premises of an illegal activity involving a dog kennels owned by the murderer.

DISCUSSION

This article, on the investigation and analysis of homicide-suicide cases undertaken by the Institute of Legal Medicine in Genoa from the year 2007 to 2018, reveals that the rate of this type of crime is 0.11 for every 100,000 inhabitants and represents about 16% of the total murder crimes committed over the 12-year period in which study was carried out.

In this study, the Legal Medicine Department chose to investigate the Province of Genoa, which, in having a population of about 855,000 inhabitants, provides a worthy representative sample of North-western Italy, especially if we consider that, during the total 12 years of the study running, at least 11 cases of homicide-suicide were reported. In addition, while Genoa is the sixth largest city in Italy for its number of inhabitants, the concentration of its autopsy analysis

carried out in one unique centre makes it the third Italian city for the number of admissions to its mortuary.

Furthermore, the rate recorded by us in Genoa would appear to be higher than that of other Italian studies conducted. Indeed, according to Roma *et al.* [7], in Italy between 1985 and 2008, there were 662 cases with a rate of 0.04 for every 100,000 inhabitants per year (with a range of 0.2–0.7), whereas Verzeletti *et al.* [5] found that, in the region of Brescia, there were 19 cases of homicide-suicides recorded over 25 years with a rate of 0.06 per 100,000 inhabitants.

On a more general level, the low rate of incidence of this particular phenomenon has been confirmed by other Italian, European and Non-European studies [3–16]. In regards to the nature of the homicide-suicides reported and their epidemiological characteristics, the emerging data of the present study coincides roughly with that described in other Italian studies [5,7–8].

In regard to the perpetrator and the victim, in paying particular attention to their ages, our research revealed that 10 out of 18 victims (that is, 56%) were older than 60 years old and that in 6 out of 11 murders (in 3 cases), the age was, in fact, greater than 80 years old. In addition, in 12 cases out of 18 (that is, 67%), the victim was younger than the murderer. The fact that often the perpetrator is an older person leads us to assume that the probability of committing a murder increases with age, which is in line with what is sustained by Panczak *et al.* [17].

In considering the personal details of the people involved, from literature several significant differences have arisen depending on the country investigated. For example, in the Netherlands, an ‘over-representation’ of homicide-suicides, which involve young perpetrators and victims, often also children, has been reported whereas, on the contrary, in both Switzerland and in the United States of America, the age of the subject is usually found to be older [3].

However, one factor that does not appear to undergo any variation when comparing countries is that, in most cases, the perpetrator is male and the victim, female. This fact has also been confirmed by our own research in which 10 murderers out of 11 were men, whilst 13 victims out of 18 were women. In fact, also in other countries, the prevalence of males involved in murder crimes has been seen to be true: in Australia 91.4%, in the United States of America 89.2%, in the Netherlands 90%, and in England and Wales 85% [7].

Another characteristic of research found from literature, also confirmed by our own study, is the existence of a close relationship between the murderer

and the victim. In most cases, the victim is not a stranger to the perpetrator but, more likely, it will be either the wife, the companion or the ex-girlfriend (8 victims out of 18) or, in other cases, it could be a child (4 cases) or the perpetrator’s sibling (2 cases). In closely examining the crime scene, the victim is nearly always found in their home (12 episodes out of 16), specifically, the bedroom being the most frequent place to find the victim’s body), followed by the kitchen and the entrance hall. This data is also in line with that reported in other studies [3,8,12–14,18–22].

In addition, in 14 cases out of 19, the victims were relatives of the murderers which is consistent with other studies carried out on this phenomenon: 88% of cases of homicide-suicides in England and Wales (between 1988 and 1992) did, in fact, involve family members [23], as in 90% of case studies investigated in Paris [24].

Moreover, from our particular study, uxoricide (i.e. murdering one’s wife), the most frequent crime recorded in our research, was seen to occur in 5 episodes out of 11. In addition, we can also cite one infanticide, though it should be noted, a sole case, in which the murderer was that of a female.

Furthermore, in just 2 cases, the murderer killed all the members of their own family: in one, the man killed his wife and then his newborn son before taking his own life, whereas in the other, a policeman, first killed his wife and then both of his daughters using his police revolver.

Only in the minority of cases, have there been no family connection recorded between the perpetrator and his victims. In fact, one particular case saw the murderer, who was running an illegal dog kennels, shoot two zoophilic policemen who had come to seize his premises. Then, in a second case, a man, after having killed his wife, killed two neighbors, each of whom he suspected had been his wife’s lovers.

In a study conducted by Milroy on homicide-suicides, it is evident that most of them were wives, with children running second [25] whereas, interestingly, in an Australian study, most of the authors were husbands of partners of the victim, including occasional partners [26].

Turning to the motives that lead a person to commit a homicide-suicide crime, excluding the Dog Shelter case due to it being difficult to classify, four main groups have been identified: in 4 episodes, the protagonists have been elderly couples affected by several pathologies, in 3 episodes, problems relating to economic issues were observed, in 2 cases, the

murderer was seen to manifest a pathological jealousy towards his partner and in one case, a condition of post-partum depression was recorded which led the female to committing infanticide.

We can also see here in regards to this aspect of our research, our classification, in regards to the same area of study, does not differ from the data already recorded in literature [27] and, in fact, mirrors the same motives as our own above-mentioned ones.

In particular, in literature, one can also clearly identify 2 significant categories of partner in this type of crime, one type of perpetrator who is in a pathological relationship, characterized by possessiveness and jealousy and the other, the so-called homicide-suicides of mercy, where typically the protagonists are elderly and are a couple, one of which is usually ill. [27].

Several studies in literature [1,28] underline the presence of a link between a psychological pathology and the phenomenon of the homicide-suicide crime. For example, according to our case studies, the woman who killed her own daughter of only a few months old was affected by post-partum depression, whilst in the case of the young man who killed his wife and his 2 daughters, there had been a history of ludopathy (a gambling addiction) along with grave economic problems. However, in all the other cases, no particular psychiatric pathologies were diagnosed.

It is also more than likely to be true that bouts of depression or even slight pathological conditions are what leads subjects to committing such acts. Likewise, it is not difficult to imagine that the conditions of the lives of the elderly, who have to live with incurable diseases and/or disabilities, losing a loved one and facing becoming a widow along with possible loneliness, alienation or exclusion, could all be factors that create such a desperate situation that it leads them to carrying out such a crime.

In consideration of the social classes involved, our sample groups take into account those people who represent the low or low-to-medium levels of society. 6 offenders out of 11 were retired people whilst the remaining were low-skilled workers who had fallen on hard times economically. In one case, the murderer was a young unemployed mother. In fact, in a previous study from the USA [29], it was reported that only a small minority of murderers and their victims had a degree level education; and in line with this, research carried out in Hong Kong revealed that as much as 76.7% of criminals have less than 9 years of basic school education [20].

Moreover, the condition of being unemployed

or doing a poorly satisfying or rewarding job would also seem to confirm the correlation between the quality of the social integration of an individual and the likelihood of committing murder.

From our study, as we have mentioned, in 16 cases out of 18, the murder was carried out in the murderer's home. Furthermore, also here, our research shows little deviation from that reported in literature. In fact, other studies have also found the home (and, in particular, the bedroom) to be the most common place in which homicide-suicides are committed [24,25,30-32] which makes sense as it is the home environment where most problems and difficulties arise for a couple or a family and where there such problems are linked to the type of relationship and the dynamics which often are established between a murderer and their victim [5].

However, an interesting aspect which does not strictly follow the usual direction of other previously reported research is that the phenomenon of homicide-suicides in Genoa does not involve intra-ethnic relationships, thus differentiating itself from the typical murder phenomenon. In fact, it is clearly evident that, in all 11 of the episodes from our particular sample of cases, there were no foreign subjects acting as either the perpetrator or the victim.

Likewise in the United States of America, the episodes of suicides associated with homicides are also intra-ethnic, being mainly committed by white against whites [31,33-35].

Turning to the analysis of the ways in which injuries were caused, firearms are the most commonly used weapons, given their use in 6 cases out of 11, with the most used type of firearm being the semi-automatic repeat revolver. Such firearms were all owned by the subjects in question with a legal license, except for 2 cases involving a Smith Wesson caliber 38 revolver and a Beretta M52, where neither weapon had been registered.

The total number of victims killed with firearms were 12, 10 of which were killed with a single shot aimed bilaterally at the skull; only in 2 cases was the fatal gunshot inflicted to the stomach area, resulting in death as a consequence of hemorrhagic hemoperitoneum trauma.

Two victims were killed by strangulation, with one being stabbed with a knife and the other (a one and a half year old son) being thrown from an open window. In only 2 cases were the victims killed using a blunt implement (a hammer in the first case and a coffee machine measurer in the second), both of which

caused injuries to the victim's skull. However, regarding the suicides, in 6 cases, firearms were used (5 cases in which the damage was caused to the skull and one, a heart laceration), whereas in 2 cases, the subjects hung themselves, another 2 threw themselves down from a height and 2 died of carbon monoxide poisoning.

In 6 cases, the same weapon, or firearm, was used for both the murder and the murderer's suicide after and often the choice of such weapon was dependent on how easily available it was to obtain based on the law.

For example, in the United States of America, where the law provides quite liberally for a wide public to own a firearm, all, or almost all, murders are committed using a firearm [23].

Likewise, the observations made in a study carried out on homicide-suicides in the French Town of Tours, where hunting is widespread and hunting rifles commonplace, resulted in this type of weapon being the prevalent one [18].

Moreover, in Croatia, the prevalence of firearms used for homicide-suicides can be correlated to the civil war having taken place relatively recently in the country. Therefore, as statistics demonstrate, it is clear that sociological, historical and political factors can all influence the rare events of homicide-suicides [12].

The same deduction can be applied to Ghana where many farmers have a rural lifestyle and often own a single-barreled shotgun of some type for hunting purposes or for killing animals who risk damaging their crops. In addition, it should also be noted that the widespread use of firearms has also increased in Ghana due to the inter-ethnic conflicts with other neighboring states, which has encouraged the entry of numerous weapons, more than often illegally obtained or held. [16].

Contrary to this situation, in looking at Hong Kong, a country where a strict firearms control exists, we can observe a high percentage of asphyxiation (strangulation or suffocation) recorded from 1989 to 1998 [15], together with the use of sharp instruments used as murder weapons from 1989 to 2005 [20].

In conclusion, despite the number of cases investigated being somewhat small, it is possible to conclude that the results from our research are in accordance with previous research work published in literature in the same area of study.

In fact, it is evident from our study that the relationship between the perpetrator and their victim, in most cases, has its roots in the family environment

(only in one case did the relationship concern different dynamics). In more detail, the relationship between a couple, that is between a husband and wife or ex-spouse/partner, were the most common represented, whilst it is rare to find the murderer's children being killed.

In regards to gender, the prevalent gender of a murderer is male, whilst the number of victims are predominantly female.

The age range most represented is that of adults, often with the murderer being between 60 to 80 years old and, in some cases, even older than 80 years old. In regards to the way the murder is carried out, the study has revealed a prevalent use of firearms, not only for the act of murder but also for the subsequent suicide act.

As for the areas of the body most frequently aimed at and shot at using firearms, which are the most commonly used weapons, in nearly all the cases studied, it is the skull-encephalic area, not only in the act of murder but also in the suicide.

Finally, in analyzing the motives for committing homicide-suicides, 4 main groups have been identified by our particular study: firstly, the elderly affected by several pathologies, secondly, economic difficulties, thirdly, pathological jealousy and lastly, post-partum depression.

The evaluation of the causes and methods of death in these cases requires a thorough evaluation of the scene of the death, a complete autopsy and police investigations, such as in cases of complex and complicated suicides [36].

Only in carrying out research by the breaking down of individual cases and the theoretical analysis of these phenomena can we transform and shape our results into an awareness campaign which could help to early identify the scenarios and dynamics of situations characterized by a high level of homicidal risk in order to then structure and put into place operational actions so as to intervene before these events occur and thus lower the risks of such events taking place.

Conflict of interest

The authors declare that they have no conflict of interest.

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