

ORIGINAL RESEARCH

DOI: <http://dx.doi.org/10.15446/revfacmed.v65n4.61615>

The magnitude of the injury pattern in femicides by stabbing in Colombian women

La magnitud del patrón de lesión en los feminicidios con arma cortopunzante en mujeres colombianas

Received: 16/12/2016. Accepted: 23/01/2017.

John Vergel¹ • Andrea-Catalina Trompetero-González¹¹ Universidad del Rosario - School of Medicine - Centro para la Educación en Ciencias de la Salud (CECS) - Bogotá D.C. - Colombia.Corresponding author: John Vergel. Centro para la Educación en Ciencias de la Salud, Escuela de Medicina y Ciencias de la Salud, Universidad del Rosario. Carrera 24 63b-74. Phone number: +57 1 2970200 ext 3466. Bogota, Colombia. Email: john.vergel@urosario.edu.co.

| Abstract |

Introduction: Assessing the severity of the injuries suffered by victims may contribute to prevent femicide more effectively.

Objective: To establish whether the amount of wounds recorded in femicides by stabbing vary according to the age of the victim and the victim-offender relationship.

Materials and methods: Cases of Colombian women who were stabbed to death between 2011 and 2013 (n=331; age: 14-91 years) were included in the study. They were classified according to age ranges and the type of relationship with the offender. Descriptive analyses were conducted. Two one-way ANOVAs and a factorial ANOVA were performed to assess the differences in the mean number of the stab wounds received by the victim, and to determine the effects of interaction among the established categories.

Results: The pattern of injury severity was higher in women aged 22 to 40 years than in those aged 41 to 55 years, and in women attacked by their intimate partners than in those attacked by strangers and acquaintances. Age ranges and types of relationship had an interaction effect on the dimension of the sustained wound.

Conclusion: The age of the victims and the types of relationship they had with the offender are variables that should be considered to propose preventive policies on femicide since both are correlated to violent acts with greater injury patterns.

Keywords: Homicide; Battered women; Public health; Forensic medicine; Wounds and injuries (MeSH).

.....
Vergel J, Trompetero-González AC. The magnitude of the injury pattern in femicides by stabbing in Colombian women. Rev. Fac. Med. 2017;65(4):559-63. English. doi: <http://dx.doi.org/10.15446/revfacmed.v65n4.61615>.

| Resumen |

Introducción. Estudiar la gravedad del trauma físico en las víctimas de feminicidio podría contribuir a prevenirlo de forma más efectiva.

Objetivo. Determinar si el número de heridas en los feminicidios con arma cortopunzante varía respecto a la edad de la víctima y su relación con el atacante.

Materiales y métodos. La población correspondió a mujeres colombianas lesionadas hasta la muerte con arma cortopunzante entre 2011 y 2013 (n=331; edad promedio 14-91 años), quienes fueron categorizadas por rangos de edad y tipos de relación con los agresores. Dos análisis ANOVA de una vía y uno factorial permitieron identificar diferencias entre los promedios de las lesiones de las víctimas y los efectos de interacción entre las categorías establecidas.

Resultados. El patrón de gravedad del trauma físico fue mayor en mujeres entre los 22 y 40 años y con vínculos románticos con los agresores. Los rangos de edad y tipos de relación tuvieron efectos de interacción sobre la cantidad de heridas sufridas.

Conclusión. La edad de las víctimas y el tipo de relación que tenían con el agresor son variables a considerar al diseñar políticas de prevención del feminicidio dado que su conexión con actos violentos resulta en un patrón peor de lesiones.

Palabras clave: Homicidio; Maltrato conyugal; Salud pública; Medicina legal; Heridas y traumatismos (DeCS).

.....
Vergel J, Trompetero-González AC. [La magnitud del patrón de lesión en los feminicidios con arma cortopunzante en mujeres colombianas]. Rev. Fac. Med. 2017;65(4):559-63. English. doi: <http://dx.doi.org/10.15446/revfacmed.v65n4.61615>.

Introduction

Although femicide is recognized as a public health problem around the world (1,2), in Colombia, most studies on this topic have focused on characterizing the victims and describing the violent acts (3-7); however, research directed to assess the relationship between femicide risk factors and the severity of the physical trauma suffered by the victims is scarce. This work proposes that studying this relationship is relevant because the magnitude of the injury pattern may provide

information about the extent of misogynistic attitudes, dynamics, and types of violent acts (8-10), contributing to prevent femicide more effectively. For instance, the act of violence may rise according to specific risk factors, resulting in worse wound patterns, as logically expected, as well as in more negative effects on morbidity and mortality. Consequently, creating differential preventive policies against these particular risk factors may substantially reduce morbidity and mortality.

There is plenty of information about how to measure the magnitude of physical trauma in femicide such as the Homicide Injury Scale (8) and the Injury Severity Score (11), which are scales that quantify qualitative descriptions of the cause of death. Nevertheless, these scales are limited to measure the severity of the trauma because they equate multiple types of injuries, such as strangulation, smothering or blunt trauma, in one single category. As the scales do not differentiate among various types of injuries, it is difficult to establish a valid measure of injury severity because trauma mechanisms are not equivalent. Therefore, for the purpose of this research, the magnitude of the injury pattern is focused on one cause of death and is quantified through the amount of wounds received by the victim.

According to Mize *et al.* (12), the cause of death in femicide cases tend to show “hands-on” methods, like stabbing. Studying femicide by stabbing may provide more valid measures of the injury severity as the dependent variable since it has the same trauma mechanism. Although deaths by firearms are more frequent than by stabbing, the number of wounds by firearm is limited to ammunition whereas stabbing attacks depend on the extent of physical violence in the offender.

Regarding independent variables, the reproductive status seems to be a relevant risk factor in femicide (13). In other words, the risk of femicide in younger women of reproductive age is higher than in older women, and the link between the victims' age and the magnitude of the injury pattern seems to be unnoticed. As a result, this study aims to establish whether the amount of wounds in femicides by stabbing vary significantly according to the victims' age. Moreover, because the victim-offender relationship seems to have a relevant role in the severity of the injury (11), this research also seeks to determine if the type of relationship with the killer has a significant interaction with the age of the victim and the severity of the injury pattern.

Specifically, Jordan *et al.* (11) pointed out that women are more likely to be murdered by an intimate partner than by a stranger. Likewise, if the offender is the victim's partner, physical violence may be greater than that inflicted by strangers or acquaintances (14,15). Consequently, the victim-offender relationship might have a significant correlation with the age of the victims and the magnitude of the injury.

All these reasons lead to hypothesize that a) the magnitude of the injuries inflicted on murdered women in fertile age ranges is greater than in peri- or postmenopausal women; b) femicides committed by intimate partners have more severe patterns of trauma than those by relatives/friends or strangers/acquaintances, and c) the victim-offender relationship has a significant interaction with the age and the amount of wounds inflicted on the victims.

Backgrounds of femicide in Colombia

Femicide is defined as “the misogynous killing of women by men” (16), which means that this is an act that entails hatred-based components because of gender reasons and contributes to devaluing women's lives (17). In Latin America, the concept of femicide (*feminicidio*) has evolved, and has finally been established as the “tolerance of the State to the different forms of violence that end

with the women's deaths, the impunity of this crime, and the lack of access to justice, truth, and reparation” (18).

According to Masatugó (19), 8 020 women of all ages were murdered in Colombia between 2009 and 2014. The annual average rate of femicides was 5.7 per 100 000 inhabitants, and approximately half of these women were aged between 18 and 34 years and had a low level of education. Regarding social variables, 16.8% of these women were peasants, 11.7% were sexual workers, 9.8% were addicted to some illegal drug, and 8.4% were homeless. 62.7% of these women was killed by means of a firearm and 18.6% by a sharp weapon.

In Colombia, the legal framework (20) establishes that the Government must create and implement preventive policies regarding violence against women. Some projects include training health workers, government employees, and educational communities to attend the victims and their relatives (21). However, Ramirez-Cardona (21) claims that there is a limitation in the knowledge necessary to execute preventive policies taking into consideration the victim's particularities or how the types of violence affect women differently. Therefore, it is not completely clear how preventive policies for femicide are being implemented in a differentiating way.

Materials and methods

Study design and population

An observational, transversal and retrospective study was conducted with 331 women aged 14 years and older who were stabbed to death in Colombia from 2011 until 2013. Data were collected from the External Causes of Injury Observation System (SIVELCE by its acronym in Spanish), which gathers the information about violent deaths in the country.

It is worth noting that Colombian laws allow people to have intimate partners since the age of 14. For this reason, 14 year-olds were included in this research. 716 cases of stabbing femicides during the studied period (286 in 2011, 230 in 2012, and 200 in 2013) were observed, from which 385 were excluded due to the lack of information about the killer and the number of stab wounds.

Information gathering

The variables selected included number of stab wounds, victim-offender relationship, and victim's age. Data were gathered into a database using Microsoft Excel® for further analysis.

This study was approved by the Research Ethics Committee of the National Legal Medicine and Forensic Sciences Institute. There is no conflict of interest related to this research.

Analysis and data processing

Descriptive analyses were conducted. Two one-way ANOVAs were performed to assess differences in the mean number of victims presenting stab wounds according to specific age ranges and types of relationship with the offenders. The classification used for the victim-offender relationship was based on the SIVELCE variables and is presented in Table 1. Additionally, the analyses involving victims' ages were made using ranges as categorical stratification (14–21, 22–40, 41–55, and 56–91 years of age). Importantly, because homicides in Colombia are committed predominantly against the younger population (22), the age ranges could not be arranged by women's reproductive life spans due to important differences in the sample sizes of the groups, therefore, the age ranges were arbitrary.

However, attempts were made to reflect the reproductive age ranges. The information was analyzed using SPSS 22.

Table 1. Classification of the victim-offender relationship.

| Intimate Partner | Relatives and friends | Strangers and acquaintances |
|------------------|-----------------------|-----------------------------|
| Lover | Friend | Stranger |
| Partner | Brother-in-law | Renter |
| Husband | Brother | Client |
| Ex-husband | Son | Classmate |
| Ex-lover | Father | Co-worker |
| Ex-boyfriend | Stepfather | Acquaintance |
| Ex-partner | Cousin | Delinquent |
| Boyfriend | Other relatives | Neighbor |
| Partner | | Employee |
| | | Gangster |
| | | Intelligence- member |

Source: Own elaboration based on information supplied by SIVELCE database.

Furthermore, a factorial ANOVA (3×4) was conducted to determine the correlation between the victims' age ranges and the types of victim-offender relationships on the numbers of inflicted wounds.

Results

Information regarding the victim-offender relationship was obtained for 337 cases. 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. Information on the number of injuries in 6 of the 337 cases was not obtained, so they were excluded and analyzes were conducted on the remaining 331 cases. Descriptive statistics of the mean number of wounds are shown in Table 2.

Table 2. Mean ratings of wounds by victims' age ranges.

| Independent Variables | | n | M | SD | Min | Max |
|------------------------------|-------------------------|-----|------|-------|-----|-----|
| Age ranges | 14-21 | 85 | 6.06 | 7.063 | 1 | 49 |
| | 22-40 | 161 | 5.97 | 5.673 | 1 | 25 |
| | 41-55 | 57 | 3.68 | 3.920 | 1 | 21 |
| | 56-91 | 28 | 6.75 | 7.609 | 1 | 32 |
| | Total | 331 | 5.66 | 6.042 | 1 | 49 |
| Victim-offender relationship | Intimate partners | 131 | 6.95 | 6.290 | 1 | 27 |
| | Relatives/friends | 44 | 4.89 | 4.794 | 1 | 19 |
| | Strangers/acquaintances | 156 | 4.81 | 5.989 | 1 | 49 |
| | Total | 331 | 5.66 | 6.042 | 1 | 49 |

M: Mean of wounds; SD: Standard Deviation.

Source: Own elaboration based on information supplied by SIVELCE database.

The results indicate that the mean number of wounds differs significantly between age ranges — $F(3,327)=2.63, p<0.05$ — and victim-offender relationships — $F(2,328)=5.00, p<0.05$. To estimate which ranges and relationships differed significantly, a Tamhane post-hoc test was performed since the homogeneity assumption was violated in both analyses. This violation was verified by the Levene's statistic, $L(3,327)=4.10, p<0.05$ (for age ranges) and $L(2,328)=4.21, p<0.05$ (for relationships).

The mean number of stab wounds in the 22–40 year old group was significantly higher than in the 41–55 year old group ($M=2.28, SD=0.68, 95\%$). In contrast, there were no significant differences regarding the 14–21 and 56–91 ranges.

Similarly, the mean number of stab wounds in femicides committed by intimate partners was significantly higher than in those by strangers/acquaintances ($M=2.13, SD=0.72, 95\%$), but no significant differences were found in those perpetrated by relatives/friends.

Finally, a 3 (type of victim-offender relationship)×4 (victim's age range) factorial ANOVA showed an interaction effect between these two independent variables on the number of stab wounds. Results are shown in Table 3 and Figure 1, and indicate that the number of the stab wounds received by the victims in the age range 22-40 increased significantly when the attacker was the intimate partner of the victim, compared with women in the age range 41 to 55 that were killed by strangers.

Table 3. Interaction effect: Offender * Victims' Age Ranges.

| Source of variation | Sum of Squares | d.f. | F | p |
|-------------------------------|----------------|------|-------|-------|
| Corrected model | 1118.309a | 11 | 2.967 | 0.001 |
| Offender | 209.734 | 2 | 3.061 | 0.048 |
| Victims' age range | 304.930 | 3 | 2.967 | 0.032 |
| Offender * victims' age range | 455.485 | 6 | 2.216 | 0.041 |
| Residual | 10929.467 | 319 | | |
| Total | 12047.776 | 330 | | |

Source: Own elaboration based on information supplied by SIVELCE database.

Discussion

Results indicate that women aged 22–40 suffered an average of 5.97 stab wounds, which is significantly higher (2.28 wounds) than in the 41–55-year-old group. Therefore, younger women presented worse patterns of physical trauma than perimenopausal women, excluding women aged 14–21 and 56–91 years, which showed no significant correlation with the number of wounds. Furthermore, although the results were not significant for offenders like relatives and friends, the wounding pattern inflicted by intimate partners was significantly more severe than by strangers or acquaintances. This figures are similar to countries such as the United States and Canada, where femicides committed by current or former partners account for 60% and 70% of femicides, respectively (2).

These findings support previous studies that have found associations between the age of the victim and the severity of the traumatic pattern, and between the victim-offender relationship and the brutality of the violent act. Nonetheless, the role of age in the magnitude of trauma has had confusing results. Some researchers have found that the magnitude of injury sustained by victims was higher in older than in younger women (11).

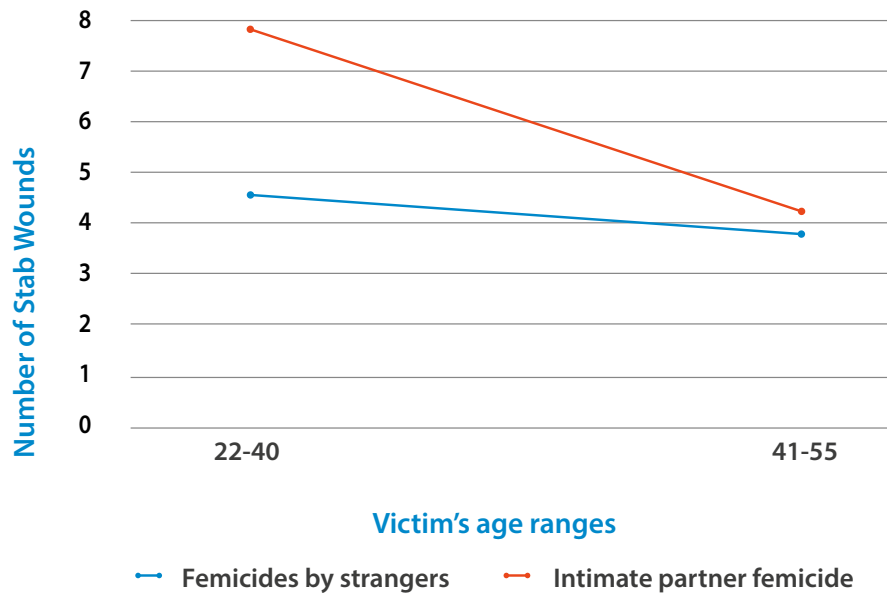


Figure 1. Interactional effect victims' age*offender.

Source: Own elaboration based on information supplied by SIVELCE database.

Other studies have established that, at least in the cases of death by intimate partners, women of reproductive ages are more likely to be killed by more violent methods than post-reproductive-aged women (12). This phenomenon has been explained by some theories such as “sexual terrorism” (23) and “sexual proprietariness” (24-26), in which women who resist control of their reproductive capability by their partners are violently murdered. As younger and more fertile women are considered more “valuable” than post-reproductive age women, the injury pattern exerted by men would be greater to communicate to other men that they have exclusive sexual access and control on the reproductive capability (12). In this way, as highlighted by Wigdor & Artazo (27), men exert control over the lives and bodies of women within a patriarchal society context as the fruit of the colonization process and establishment of a strict religiosity.

Likewise, other researchers have pointed out that physical violence against women may be greater if offenders are current or former partners rather than strangers or acquaintances (13-15,28,29). Multiple reasons have been attached to this phenomenon by psychologists, but these reasons may be classified into two main trends (13). On the one hand, the situational perspective connects some variables, such as the availability of weapons or urbanicity, with the causes of killing an intimate partner (30,31). The evolutionary perspective, on the other, states that killing a female partner is linked with jealousy as a mechanism for men to avoid the end of the relationship (32).

Regarding the study design, one possible criticism for establishing if the magnitude of physical trauma in women fatally stabbed varied according to their age ranges and the type of relationship with the killer might be that these women were killed regardless of whether they received 1 or 49 wounds. However, as explained by Sternberg in his triangular theory of hate, the hated person triggers off a feeling of disgust, anger, and devaluation in the hater that may be manifested by expressions of contempt (33), for example, the multiplicity of injuries in stabbing attacks. Studying the differences in the number of wounds according to the types of victim-offender relationship and victims' age ranges may elucidate which categories are related to more severe attacks. It

could be said that more severe attacks have worse consequences regarding morbidity and mortality. This understanding may lead to create differential policies for femicide prevention that take into consideration the risk for women to suffer a worse injury pattern, hence possibly decreasing the probability to die in a misogynist stabbing attack.

Finally, the main contribution of this research is outlining the types of victim-offender relationship and victims' age ranges that have cumulative effects on the mean number of inflicted injuries. This result supports the idea that younger women with greater risk of suffering a violent attack by their intimate partners should receive a differentiating approach by the health and justice system. Such differentiating approach is necessary because those victims could have a worse injury pattern if the attack actually happens, that is, a possibly higher risk of dying in the violent attack. Based on these findings, preventive policies regarding femicide, including training of health workers, should highlight that younger women threatened by their intimate partners need more protection and continued monitoring of their violence phenomenon.

Conclusions

This work provided evidences that younger women attacked by an intimate partner suffered greater injury patterns in femicide by stabbing. Moreover, variables such as the age of the victims seem to have influence on the magnitude of the physical trauma according to the victim-offender relationship. This knowledge should be taken into consideration for developing femicide prevention policies in a differentiating approach. Since a greater injury pattern may end in worse health results, the policies should consider that victims in reproductive ages and threatened by their intimate partners need more opportunities of attention and protection.

Limitations

This study was primarily concerned with necropsy findings. Therefore, all the cases were in a preliminary criminal investigation stage. The

information regarding the offender was collected by the crime scene investigator according to the witnesses' testimonies. As these cases were unsolved, the final victim-offender relationship might have changed during the course of the investigation.

Conflict of interest

None stated by the authors.

Financing

None stated by the authors.

Acknowledgments

The authors would like to express their gratitude to the Instituto Nacional de Medicina Legal y Ciencias Forenses.

References

- Abramsky T, Watts CH, Garcia-Moreno C, Devries K, Kiss L, Ellsberg M, *et al*. What factors are associated with recent intimate partner violence? Findings from the WHO multi-country study on women's health and domestic violence. *BMC Public Health*. 2011;11:109-25. <http://doi.org/chscmh>.
- Meneghel SN, Hirakata VN. Femicides: female homicide in Brazil. *Rev Saude Pública*. 2011;45(3):564-74. <http://doi.org/fhx5Sp>.
- Huertas-Díaz O, Jiménez-Rodríguez NP. Femicidio en Colombia: reconocimiento de fenómeno social a delito. *Pensamiento Americano*. 2016;9(16):110-20.
- Moreno-Cubillos CL, Sepúlveda-Gallego LE, Restrepo-Rendón LF. Prevalencia de violencia y discriminación contra la mujer en la Facultad de Ciencias para la Salud, Universidad de Caldas, Colombia, 2010-2011. *Rev Colomb Obstet Ginecol*. 2013 [cited 2016 Sep 15]; 64(1):12-20. Available from: <https://goo.gl/PKAJUUb>.
- Burgos D, Canaval GE, Tobo N, Bernal-de Pheils P, Humphreys J. Violencia de pareja en mujeres de la comunidad, tipos y severidad Cali, Colombia. *Rev salud pública*. 2012 [cited 2016 Sep 15];14(3):377-89. Available from: <https://goo.gl/tJSn8G>.
- Zapata-Giraldo FF. Violencia de pareja en el Departamento del Quindío, Colombia. *Rev salud pública*. 2013 [cited 2016 Sep 15];15(2):247-57. Available from: <https://goo.gl/4WceTd>.
- Vergel J, Díaz D, Martínez O. Relación entre el *overkill* por arma blanca y el femicidio íntimo. *Revista Colombiana de Medicina Legal y Ciencias Forenses*. 2013 [cited 2016 Sep 16];1(1):19-24. Available from: <https://goo.gl/Th6YmB>.
- Safarik ME, Jarvis JP. Examining Attributes of Homicides. Toward Quantifying Qualitative Values of Injury Severity. *Homicide Stud*. 2005;9:183-203. <http://doi.org/czzqbs>.
- Last SK, Fritzon K. Investigating the nature of expressiveness in stranger, acquaintance and intrafamilial homicides. *J Investig Psych Offender Profil*. 2005;2(3):179-93. <http://doi.org/c4tqk7>.
- Burgess AW, Burgess AG, Koehler SA, Dominick J, Wecht CH. Age-Based Factors in Femicide. *J Forensic Nurs*. 2005;1(4):151-7. <http://doi.org/ddwxpq>
- Jordan CE, Pritchard AJ, Duckett D, Wilcox P, Corey T, Combust M. Relationship and injury trends in the homicide of women across the life span: A research note. *Homicide Studies*. 2010;14(2):181-92. <http://doi.org/cm2xqt>.
- Mize KD, Shackelford TK, Weekes-Shackelford VA. Younger women incur excess risk of uxoricide by stabbing and other hands-on killing methods. *Pers Individ Dif*. 2011;50(7):1120-5. <http://doi.org/bgp5g4>.
- Mize KD, Shackelford TK, Shackelford VA. Hands-on killing of intimate partners as a function of sex and relationship status/state. *J Fam Violence*. 2009;24(7):463-70. <http://doi.org/fmv88t>.
- Sheridan L, Davies G. Violence and the prior victim-stalker relationship. *Crim Behav Ment Health*. 2001;11(2):102-16. <http://doi.org/bfkd74>.
- Mohandie K, Meloy JR, McGowan MG, Williams J. The RECON typology of stalking: Reliability and validity based upon a large sample of North American stalkers. *J Forensic Sci*. 2006;51(1):147-55. <http://doi.org/fft5rh>.
- Radford J, Russell DEH, editors. Femicide: The politics of woman killing. Boston: Twayne Publisher; 1992.
- Rodríguez G. From Misogyny to Murder: Everyday Sexism and Femicide in a Cross-Cultural Context. *CSW; 2010 [cited 2014 Dec 15]*. Available from: <https://goo.gl/7bjMnN>.
- Lagarde M. Feminist keys for understanding femicide: theoretical, political, and legal construction. In: Fregoso RL, Bejarano C, editors. Terrorizing women: Femicide in the Americas. Durham: Duke University Press; 2010. p. xi-xxiv.
- Cifuentes-Osorio S. Homicidio de Mujeres en Colombia, 2009-2014. *Masatugó*. 2016 [cited 10 Apr 2017];(1):14-50. Available from: <https://goo.gl/6SuSwG>.
- Colombia. Congreso de la República. Ley 1257 de 2008 (diciembre 4): Por la cual se dictan normas de sensibilización, prevención y sanción de formas de violencia y discriminación contra las mujeres, se reforman los Códigos Penal, de Procedimiento Penal, la Ley 294 de 1996 y se dictan otras disposiciones. Bogotá D.C.: Diario Oficial 47193; diciembre 4 de 2008.
- Ramírez-Cardona CC, coordinator. Ley 1257 de 2008 sobre no violencias contra las mujeres: herramientas para su aplicación e implementación. Bogotá D.C.: Corporación Sisma Mujer; 2010 [cited 2017 Apr 10]. Available from: <https://goo.gl/HF86PG>.
- Instituto Nacional de Medicina Legal y Ciencias Forenses. Comportamiento del homicidio, Colombia, 2013. Bogotá D.C.: Instituto Nacional de Medicina Legal y Ciencias Forenses; 2014 [cited 2016 Oct 20]. Available from: <https://goo.gl/ZkuLNp>.
- Taylor R, Jasinski JL. Femicide and the feminist perspective. *Homicide Stud*. 2011;15(4):341-62. doi: <http://doi.org/fcpx8t>.
- Daly M, Wilson M. Homicide. New York: Aldine de Gruyter; 1988.
- Wilson M, Daly M. Sexual rivalry and sexual conflict: Recurring themes in fatal conflicts. *Theoretical Criminology*. 1998;2(3):291-310. <https://goo.gl/9NaHdU>.
- Wilson M, Daly M. Male Sexual Proprietariness and Violence against Wives. *Curr Dir Psychol Sci*. 1996;5(1):2-7. <http://doi.org/b4h47r>.
- Bard-Wigdor G, Artazo G. "La maté porque es mía": femicidios en la provincia de Córdoba. *URVIO, Revista Latinoamericana de Estudios de Seguridad*. 2015;(17):67-79.
- Farnham FR, James DV, Cantrell P. Association between violence, psychosis, and relationship to victim in stalkers. *Lancet*. 2000;355(9199):199. <http://doi.org/fgcswt>.
- Racine C, Billick S. Classification systems for stalking behavior. *J Forensic Sci*. 2014;59(1):250-4. <http://doi.org/f57j82>.
- Gallup-Black A. Twenty years of rural and urban trends in family and intimate partner homicide. *Homicide Stud*. 2005;9(2):149-73. <http://doi.org/cvww4fj>.
- Dutton DG, Kerry G. Modus Operandi and Personality Disorder in Incarcerated Spousal Killers. *Int J Law Psychiatry*. 1999;22(3-4):287-99. <http://doi.org/cgrssp>.
- Shackelford TK, Buss DM, Weekes-Shackelford VA. Wife Killings Committed in the Context of a Lovers Triangle. *Basic and Applied Social Psychology*. 2003;25(2):137-43. <http://doi.org/ffj3kp>.
- Sternberg RJ. Understanding and Combating Hate. In: Sternberg RJ, editor. The Psychology of Hate. Washington DC: American Psychological Association; 2004.

MANUELA AGUDELO A.
“Las cuatro estaciones: verano”
TÉCNICA: ILUSTRACIÓN DIGITAL

