**Rising violence against women in Mexico, 2005-15 [Intended to Health Affairs]**

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Word count:

[Research Article: 2,000 words to 5,000 words, including an abstract--between 100 and 150 words--and no more than 4 exhibits-- tables and figures, doubled spaced]

Title: Rising violence against women in Mexico, 2005-15.

Abstract [100-150 words]

Key words

**Introduction [~450]**

Homicides rates fell by 9.2% around the globe in the first decade of the 21st century.(1)However, in developing countries homicides declined only by 3.1 percent.(1) Some Latin American countries even have unprecedented high levels of homicides and almost 80% of victims are males.(2) In Mexico, for example, male homicides rates doubled between 2007 and 2012.(3, 4) The impact was such that male national life expectancy stagnated in 2000-10 and, between 2005-10, average lifespan was reduced in every Mexican state.(5, 6). Little attention has been paid, however, to the public health impact on women.

Over 31 thousand female have been victims of homicide in Mexico in the new century.(3) Homicides represent the ultimate form of violence, but only a piece of the health and social burden, particularly for children and women.(7) For example, victims of violence are at risk of depression, alcohol abuse, suicidal behavior, psychological problems, among other detrimental consequences over their life course.(8-11) Even witnessing violence can affect the wellbeing of the population. Those who witness violence have higher rates of post-traumatic stress disorder, depression, and are more likely to externalize violent behaviors.(12, 13) In particular, women who witnessed violent acts are twice as likely to experience depressive and anxiety symptoms compared to those who did not witness violence.(14)

This is particularly important in the Mexican context since Mexico has undergone a rise in violence related to specific policies trying to mitigate drug cartels operations.(15) Despite major public health interventions in the last decade, such as the enactment of a universal health coverage program (*Seguro Popular*) and ongoing public health systems,(16, 17) drug-related policies has had unprecedented consequences in the last ten years on population health.(18-20)

Previous evidence has documented the drug-war consequences on males’ longevity and homicide rates after 2005.(4, 5, 21) However, little attempt has been made to investigate its consequences on women’s emotional health and mortality from a public health perspective in Mexico, and even less with recent data. For example, a study prior to the war on drugs found that violence against women during pregnancy is largely related to men learning violent behavior during childhood.(22) Homicides, as the most comparable and accurate marker of violence,(7) have spread throughout the country unevenly(3, 23) and their share of overall mortality varies regionally.(24) Therefore, women homicide rates could have increased in tandem with emotional and domestic violence after 2005, specially in historically violent states, such as Chihuahua (bordering the U.S. with Texas) and Guerrero (South).(25)

The aim of this study is to quantify the heterogeneous impact of perceived vulnerability on life expectancy among women across states in Mexico. Given the importance of the effect of rising violence and its cost on the Mexican society and healthcare systems,(26, 27) understanding its consequences from a public health perspective is a step towards explaining the impact of Mexico’s epidemic of violence on women’s health.

**Study Data And Methods [650 including limitations]**

Need to describe the data sources used. We can delegate this.

We have 4 exhibits maximum. We need to discuss with coauthors which would be the best way to tell our story once we have a nice introduction and they have looked to their data sources.

I propose exhibit 1 as the change between 2005 and 2016 on homicide rates for women by state and possibly the 10 years before that, maybe including, rape rates, suicide rates.

MPJ, what do you think?

**Study Results [650]**

**Discussion [1200]**

**Conclusion [200]**

**References**

1. Institute of Health Metrics and Evaluation. GBD cause patterns- intentional injuries <https://vizhub.healthdata.org/gbd-compare/2018> [Available from: <https://vizhub.healthdata.org/gbd-compare/>.

2. United Nations Office on Drugs and Crime. Global study on homicide 2013: trends, contexts, data: UNODC; 2014.

3. Mexican National Institue of Statistics (INEGI). National Institute of Statistics: Micro-data files on mortality data 1995-2017 2018 [Available from: <http://www.beta.inegi.org.mx/proyectos/registros/vitales/mortalidad/default.html>.

4. Gamlin J. Violence and homicide in Mexico: a global health issue. The Lancet. 2015;385(9968):605-6.

5. Aburto JM, Beltrán-Sánchez H, García-Guerrero VM, Canudas-Romo V. Homicides in Mexico reversed life expectancy gains for men and slowed them for women, 2000–10. Health Affairs. 2016;35(1):88-95.

6. Canudas-Romo V, García-Guerrero VM, Echarri-Cánovas CJ. The stagnation of the Mexican male life expectancy in the first decade of the 21st century: the impact of homicides and diabetes mellitus. J Epidemiol Community Health. 2015;69(1):28-34.

7. Mikton CR, Butchart A, Dahlberg LL, Krug EG. Global status report on violence prevention 2014. American journal of preventive medicine. 2016;50(5):652-9.

8. Davidson JR, Hughes DC, George LK, Blazer DG. The association of sexual assault and attempted suicide within the community. Archives of general psychiatry. 1996;53(6):550-5.

9. Fergusson DM, Horwood LJ, Lynskey MT. Childhood sexual abuse and psychiatric disorder in young adulthood: II. Psychiatric outcomes of childhood sexual abuse. Journal of the American Academy of Child & Adolescent Psychiatry. 1996;35(10):1365-74.

10. Heise L, Ellsberg M, Gottemoeller M. Ending violence against women. Population reports. 1999;27(4):1-.

11. Wiederman MW, Sansone RA, Sansone LA. History of trauma and attempted suicide among women in a primary care setting. Violence and Victims. 1998;13(1):3.

12. Buka SL, Stichick TL, Birdthistle I, Earls FJ. Youth exposure to violence: Prevalence, risks, and consequences. American Journal of Orthopsychiatry. 2001;71(3):298-310.

13. Brookmeyer KA, Henrich CC, Schwab‐Stone M. Adolescents who witness community violence: Can parent support and prosocial cognitions protect them from committing violence? Child development. 2005;76(4):917-29.

14. Clark C, Ryan L, Kawachi I, Canner MJ, Berkman L, Wright RJ. Witnessing community violence in residential neighborhoods: a mental health hazard for urban women. Journal of Urban Health. 2008;85(1):22-38.

15. Ríos V. Why did Mexico become so violent? A self-reinforcing violent equilibrium caused by competition and enforcement. Trends in organized crime. 2013;16(2):138-55.

16. González-Pier E, Barraza-Lloréns M, Beyeler N, Jamison D, Knaul F, Lozano R, et al. Mexico's path towards the Sustainable Development Goal for health: an assessment of the feasibility of reducing premature mortality by 40% by 2030. The Lancet Global Health. 2016;4(10):e714-e25.

17. Knaul FM, González-Pier E, Gómez-Dantés O, García-Junco D, Arreola-Ornelas H, Barraza-Lloréns M, et al. The quest for universal health coverage: achieving social protection for all in Mexico. The Lancet. 2012;380(9849):1259-79.

18. Csete J, Kamarulzaman A, Kazatchkine M, Altice F, Balicki M, Buxton J, et al. Public health and international drug policy. The Lancet. 2016;387(10026):1427-80.

19. Heinle K, Ferreira OR, Shirk DA. Drug violence in Mexico. Data an. 2014.

20. Godlee F, Hurley R. The war on drugs has failed: doctors should lead calls for drug policy reform. BMJ: British Medical Journal (Online). 2016;355.

21. Gómez-Dantés H, Fullman N, Lamadrid-Figueroa H, Cahuana-Hurtado L, Darney B, Avila-Burgos L, et al. Dissonant health transition in the states of Mexico, 1990–2013: a systematic analysis for the Global Burden of Disease Study 2013. The Lancet. 2016;388(10058):2386-402.

22. Castro R, Peek-Asa C, Ruiz A. Violence against women in Mexico: a study of abuse before and during pregnancy. American Journal of Public Health. 2003;93(7):1110-6.

23. Espinal-Enríquez J, Larralde H. Analysis of México’s Narco-War Network (2007–2011). PloS one. 2015;10(5):e0126503.

24. Romero Mendoza MP, Gómez-Dantés H, Manríquez Montiel Q, Saldívar Hernández GJ, Campuzano Rincón JC, Lozano R, et al. The invisible burden of violence against girls and young women in Mexico: 1990 to 2015. Journal of interpersonal violence. 2018:0886260517753851.

25. Corradi C, Marcuello-Servós C, Boira S, Weil S. Theories of femicide and their significance for social research. Current sociology. 2016;64(7):975-95.

26. Miller TR, Cohen MA, Rossman SB. Victim costs of violent crime and resulting injuries. Health Affairs. 1993;12(4):186-97.

27. Butchart A, Mikton C. Global status report on violence prevention, 2014. 2014.

28. Mercy JA, Rosenberg ML, Powell KE, Broome CV, Roper WL. Public health policy for preventing violence. Health Affairs. 1993;12(4):7-29.