Original Research

The Invisible Burden of Violence Against Girls and Young Women in Mexico: 1990 to 2015

Journal of Interpersonal Violence
1–19

DOI: 10.1177/0886260517753851
journals.sagepub.com/home/jiv
SAGE

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Abstract

The increasing burden of interpersonal violence in women in Mexico is a neglected social and health problem that competes with other leading causes of premature death, disability, and health losses in young women. In this article, we focus on revealing the burden of violence in girls and young women and its implications for public policy. This study presents the subnational analysis of Mexico from the Global Burden of Disease study (1990-2015). The global study harmonized information of 195 countries and 79 risk factors. The study analyzed the deaths, years of life lost to premature death (YLL), years lived with disability (YLD), and the healthy years of life lost or disability-adjusted life year (DALY) related to violence. Nationwide, violence in young women accounts for 7% of all deaths in the 10 to 29 years

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age group and arises as the second most important cause of death in all age groups, except 10 to 14 years old, where it stands in the seventh position from 1990 to 2015. The health losses and social impact related to violence in young women demands firm actions by the government and society. It is urgent for health institutions to focus on the health of girls and young women because gender inequities have an enormous effect on their lives. Girls and women are nearly universally less powerful, less privileged, and have fewer opportunities than men.

Keywords
burden of disease, violence, girls, young women, Mexico

Violence is defined as "the intentional use of physical force or power, threatened or actual, against oneself, another person, a group or community that either results in or has a high likelihood of resulting in injury, death, psychological harm, or deprivation." Violence can be self-directed, interpersonal, or collective, and depending on its nature, it can be classified as physical, sexual, economical, psychological, or involving deprivation or neglect. Intimate partner violence may involve psychological, physical, and sexual abuse, whereas collective violence often includes the use of rape as a weapon of war (Rutherford, Zwi, Grove, & Butchart, 2007).

Globally, interpersonal violence was ranked as the 12th leading cause of death in both men (11th) and women (14th) in 2016 (Institute for Health Metrics and Evaluation [IHME], 2016). It has been recognized that 10% to 69% of women reported having been physically assaulted by an intimate partner during their lifetime; around 20% of women versus 5% to 10% of men reported having been sexually abused as children; whereas abuse of elderly people show that between 4% and 6% are abused in some way in their homes (Krug, Dahlberg, Mercy, Zwi, & Lozano, 2002). Nevertheless, one in every three women has suffered some form of violence, a contributing factor to mental health problems, particularly depression and suicide, as well as reproductive health problems (Medina-Mora, Borges, Fleiz, et al., 2005). In a study by Lozano (1999), violence was the third most important source of disability-adjusted life years (DALYs) for women in Mexico. The dissonant health transition in Mexico (1990-2015) was also determined by the impact of violence in men and women (Goméz-Dantés et al., 2016).

Although not all violence suffered by women is lethal or requires medical care, nonfatal forms of violence are not recorded or are usually underreported in most countries, although they may occur on a daily basis. Violence in women happens in private and intimate spaces, and tends to be

kept in secret, it is not declared, care is not seeked, or it is not diagnosed or reported when victims attend medical care, and is far less denounced to the judicial authorities.

The experience of violence is not homogeneous for all women, and varies according to women's social position, class, race, ethnicity, age, nationality, education, family structure, employment status, ability/disability, and sexuality. In all cultures, the main perpetrators of violence are men, as a result of the social constructions of gender and certain forms of harmful/toxicmasculinity,[1] which are crucial elements to understand violence not only as a women's issue but also as a relational phenomenon (Connell, 2002; Kabeer, 2014).

Adolescent girls and young women built the largest cohort with 1.2 billion women maturing into adulthood in the world (AbouZahr, 2014). Mexico, accounts for 19.2 million women aged 12 to 29 years old with very specific risks and health needs (Instituto Mexicano de la Juventud, 2014).

Although adolescence is often a period of low mortality and good health, it is also a period of physical, social, and emotional changes that exposed women to sexual activity, substance abuse, struggle for educational attainment, young marriage, unemployment, as well as particular health risks such as unwanted pregnancy, abortions, sexual abuse, depression, violence, and traffic accidents. Suicide increased by more than 500% from 1980 to 2010 in the 10 to 14 years age group and just more than 180% in the 15 to 19 years age groups. By 2010, suicide was among the five leading causes of death in males aged 15 to 24 years old (third highest) and females (fourth highest; Borges, García, Orozco, Benjet, & Medina-Mora, 2014). The increasing burden of interpersonal violence in women appears as a neglected social and health problem that competes with other leading causes of premature death, disability, and health losses in women distorting its relevance in certain age groups and areas of the country.

The challenges for estimating the burden of violence in young women in Mexico is to have indicators that measure health losses in a comprehensive manner, consistent over time, by age group and state, so as to compare the magnitude of violence with other young women's health conditions as reproductive and maternal health issues that are better known, studied, and recognized.

In this article, we focus on revealing the burden of violence in girls and young women in Mexico and its implications for decision making in public policy.

Method

This study is based on the subnational analysis of the Mexico database of the Global Burden of Disease (GBD) study (GBD1990-2015) and uses the

conceptual and methodological framework created by the IHME of the University of Washington. The GBD approach for estimating all-cause mortality and cause-specific mortality has been described elsewhere, as well as the improvements in the methodology for the GBD 2015 (Lozano et al., 2012; Wang et al., 2016).

Mortality sources in Mexico mainly include data from the national vital registration system, as well as the all-cause mortality for 32 states from 1990 to 2013 (Vital Registration, 2014). Other sources included the hospital discharges database, the 1987 and 1994 National Health surveys, the 2000 and 2006 National Health and Nutrition surveys, the 1988 and 1999 National Nutrition surveys, and epidemiological surveillance records on compulsory reportable diseases. The database also included covariables on demographic, domestic violence (Encuesta Nacional sobre Violencia contra las Mujeres, 2006), and reproductive health issues (Banco de Información, Instituto Nacional de Estadística y Geografía, 2015; Encuesta Nacional de la Dinámica Demográfica [ENADID], 1992, 1997; Grupo de Información en Reproducción Elegida A.C., 2008), and mental health variables basically related to alcohol, tobacco, and drug abuse.

Indicators

The study used various indicators to report health losses related to specific causes of illness and injury: deaths, years of life lost to premature death (YLL), years lived with disability (YLD), and the sum of both, which are healthy years of life lost or DALY.

Results

Interpersonal violence is a problem that affects women all over the world, though the magnitude is lower in developed than in developing countries. Standardized death rates for Spain, Japan, Germany, France, and Australia as well as some Latin American countries with similar economic standards to Mexico, such as Chile, Argentina and Costa Rica show lower rates than the states with the lowest rates in Mexico (Yucatán and Aguascalientes). However, countries such as Honduras and El Salvador in Central America have mortality rates much higher than the most severely affected states in the country (Guerrero and Chihuahua; Figure 1).

Between 1990 and 2015, the trend of violence within the country showed declined standardized mortality rates nationwide except in Guerrero, Chihuahua, Tamaulipas, Quintana Roo, and Nuevo León.

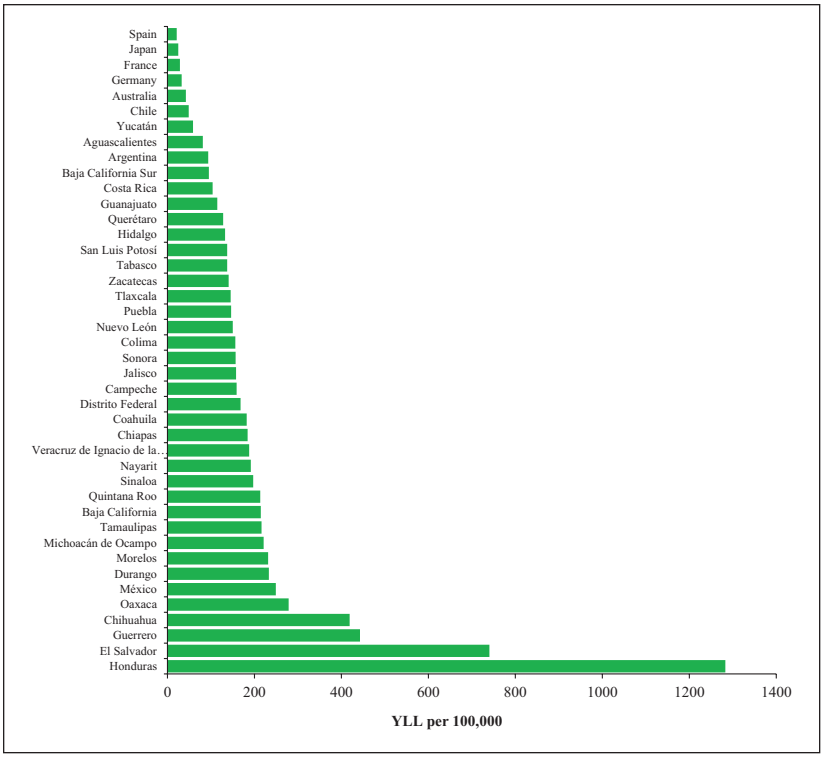

Figure 1. Premature death (YLL) age standardized rates in all females.
Note. Selected countries, México, and by states 2015. YLL = years of life lost.

The country also showed different levels, trends, and rhythms of change. For example, Guerrero showed the highest rate for interpersonal violence in females in the 1990 to 2015 period, 5 times higher than the lowest one in Yucatan. Rates in Chihuahua declined until 2005, when there was a sharp increase in violent deaths in the state, comparable with those seen in Guerrero during the 2010 to 2015 period. The states of Oaxaca and Mexico showed a slight downward trend without sharp increases.

Nationwide, from 1990 to 2015, violence accounts for 7% of all deaths in the 10 to 29 years age group and stands as the second or third most important cause of death in all age groups except 10 to 14 years old, where it holds the seventh position. In the 10 to 14 years age group, violence stands among the leading causes of death in Guerrero, Chihuahua, State of Mexico, Sinaloa, and Tamaulipas. In the 15 to 19 years age group, violence is positioned in the

first five causes of death in most of the states, except Yucatan where it occupied the seventh position. The contribution of violence to the overall mortality in this age group accounts for 11.7% in Guerrero and 14.5% in the State of Mexico. This percentage rose in 2015 to 23.3% in Guerrero, whereas in Chihuahua, it increased from 7.5% to 19.6% of all the deaths in that age group. Between 1990 and 2015, violence also remained among the five leading causes of death among women aged 20 to 24 years: Guerrero (22%), Chihuahua (20.6%), Sinaloa (14.6%), State of Mexico (14.2%), and Tamaulipas (13.9%). In the 20 to 29 years age group, mortality due to violence also rose: in Chihuahua (5.3%-19%), Guerrero (9.6%-17.9%), State of Mexico (10.4%-12.5%), Sinaloa (8.3%-12.5%), and Tamaulipas (6.9%-12.1%; Table 1).

The burden of violence on the health of young women in Mexico varies within different contexts. If we compare four states that varied in their economic, social, and cultural conditions, we can see that the magnitude of violence in certain age groups is much greater in Chihuahua (northern border) than in Chiapas (highly marginalized) or Yucatan. Although violence in the State of Mexico (very low marginalization) has declined, it still accounts for more than 10% of deaths in women aged 15 to 29 years.

Although the impact of violence is immediately visible as premature deaths, the disability associated with surviving violence is more significant if measured through mental and other health parameters in women. DALYs lost to violence ranges from 1% to 5% among young age groups, with Guerrero and Chihuahua showing the highest burden in girls 10 to 29 years old, where it accounts for nearly 25% of total DALYs followed by the State of Mexico (15%; Figure 2).

The burden of homicide and suicide in women aged 10 to 29 years old shows different risk settings. Places with low homicide rates have a major contribution of suicide to the overall mortality as in Yucatan, Campeche, Quintana Roo, and Tabasco in the southern region (Figure 3).

At a regional level, the burden of violence is higher in the Pacific Coast and the bordering states with the United States, which raises the contextual influence of criminal organizations linked to drug production and trafficking. These routes of influence linked the states with the highest proportion of poor, indigenous peoples in the south, where tons of marijuana and heroin are produced and transferred to the northern states (Figure 4; Romero et al., 2016). Drug trafficking has hit the lives of women in ways that endure gender inequalities either by the traditional view of women as sexual objects—exacerbated in these criminal contexts—or their incursion in illegal activities and exploitation as means of transportation, distribution, or selling drugs. This engagement in high-risk activities increases their vulnerability (Carrillo, 2012).

Table 1. Percentages of death due interpersonal violence in girls and young women by state.

	10-14 Years				15-19 Years				20-24 Years				25-29 Years			
	Rank	1990	Rank	2015	Rank	1990	Rank	2015	Rank	1990	Rank	2015	Rank	1990	Rank	2015
National	7	4.7	4	6.2	2	7.1	3	10.4	2	6.8	2	10.7	2	5.9	2	9.3
Aguascalientes	13	2.2	9	2.8	5	3.5	6	4.4	3	3.5	4	4.6	6	3.2	4	4.4
Baja California	6	4.9	4	6.6	2	7.7	2	11.6	2	7.7	2	13.2	2	6.5	1	11.6
Baja California Sur	11	2.3	11	3.0	6	3.8	5	5.1	3	3.9	4	5.2	6	3.5	5	4.2
Campeche	7	4.1	6	4.9	3	6.2	3	7.7	3	6.0	3	8.2	2	5.2	3	6.5
Chiapas	8	3.6	4	5.2	5	4.9	2	8.0	4	4.9	2	7.2	6	3.9	3	5.7
Chihuahua	5	5.2	2	10.4	2	7.5	1	19.6	2	6.7	1	20.6	2	5.3	1	19.0
Coahuila	8	3.7	4	5.2	2	5.0	2	10.0	2	5.8	2	10.1	3	4.9	2	8.5
Colima	7	3.9	4	5.2	2	6.1	3	8.6	2	5.8	2	9.2	2	5.1	2	7.6
Distrito Federal	5	4.4	5	5.1	2	7.1	3	9.3	2	6.6	2	10.2	2	5.8	2	9.3
Durango	4	5.3	4	7.4	2	8.1	2	12.2	2	7.6	2	11.5	2	7.5	2	11.3
Guanajuato	11	2.6	8	3.4	5	4.2	5	5.0	6	3.9	4	6.2	6	3.5	4	5.6
Guerrero	3	8.2	1	14.1	2	11.7	1	23.3	2	10.8	1	22.0	2	9.6	1	17.9
Hidalgo	9	3.0	6	4.3	4	4.0	3	7.1	2	4.3	3	6.5	7	3.7	3	6.4
Jalisco	7	3.2	7	4.3	3	4.9	4	7.2	2	5.1	4	8.5	3	4.3	3	7.8
Michoacán	5	5.1	4	7.2	2	8.3	2	12.1	2	8.5	2	12.5	2	7.5	2	10.4

(continued)

Table 1. (continued)

	10-14 Years				15-19 Years				20-24 Years				25-29 Years			
	Rank	1990	Rank	2015	Rank	1990	Rank	2015	Rank	1990	Rank	2015	Rank	1990	Rank	2015
Morelos	5	5.7	4	6.9	2	8.5	1	13.0	2	8.0	1	13.3	2	7.7	1	11.0
México	2	10.3	3	9.4	1	14.5	1	14.3	1	13.4	1	14.2	1	10.4	1	12.5
Nayarit	5	4.7	4	6.0	2	7.6	2	9.2	2	7.1	2	9.8	2	6.4	2	9.0
Nuevo León	6	3.5	6	4.5	3	5.2	3	9.7	2	5.1	2	11.2	2	4.9	2	9.8
Oaxaca	4	5.3	3	8.1	2	7.5	1	12.9	2	6.9	1	12.2	3	6.5	1	10.8
Puebla	8	3.2	7	4.6	4	4.7	4	6.9	4	4.4	3	7.1	9	3.6	3	6.2
Querétaro	8	3.0	8	3.7	3	4.1	4	5.8	2	4.1	4	5.5	8	3.5	3	5.3
Quintana Roo	5	5.6	5	6.6	2	7.7	2	10.5	2	7.5	2	11.4	2	6.8	2	9.3
San Luis Potosí	8	3.0	6	4.2	4	4.0	3	7.3	3	4.2	2	7.4	6	3.4	2	6.3
Sinaloa	5	5.1	4	6.8	2	8.6	2	13.1	2	9.1	2	14.6	2	8.3	2	12.5
Sonora	8	3.3	5	4.7	2	4.8	3	7.7	2	5.4	2	8.4	2	4.9	2	7.2
Tabasco	8	3.0	8	4.1	5	4.4	4	6.2	4	4.6	3	6.2	3	4.3	5	5.5
Tamaulipas	5	4.9	4	6.9	2	7.9	2	13.2	2	7.7	2	13.9	2	6.9	2	12.1
Tlaxcala	7	4.1	6	4.8	2	5.9	4	6.8	2	5.7	3	7.0	3	5.0	3	6.4
Veracruz	9	3.5	5	4.9	3	4.9	3	9.2	3	5.2	2	8.9	3	4.5	4	7.3
Yucatán	19	1.6	11	1.9	12	2.4	7	3.0	17	2.3	6	3.2	17	2.0	11	2.6
Zacatecas	8	3.3	6	4.2	2	4.7	2	7.5	2	4.2	2	7.3	3	3.8	2	5.9

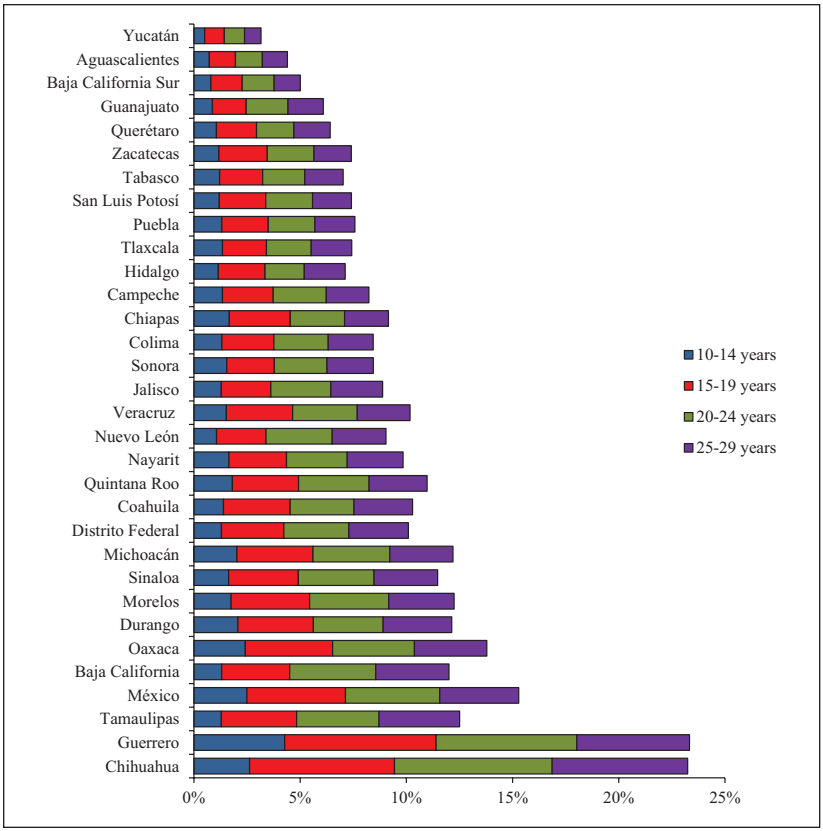

Figure 2. Percentage of disability-adjusted life years due to interpersonal violence in females by age groups by state 2015.

Discussion

Violence affects women throughout their lives; however, it is not perceived and identified by women or diagnosed or reported as a major health problem by health providers. Violence is only recognized when a death is involved; therefore, the various impacts of nonlethal violence on women's health are not appreciated, diagnosed, or associated with violence as a determinant.

This study shows that the number of deaths due to interpersonal violence in young women has failed to decline and deaths are on the rise in some conflicting areas of the country where marginalization (Oaxaca, Guerrero), industrialization (State of Mexico, Chihuahua), or drug production, trafficking, and

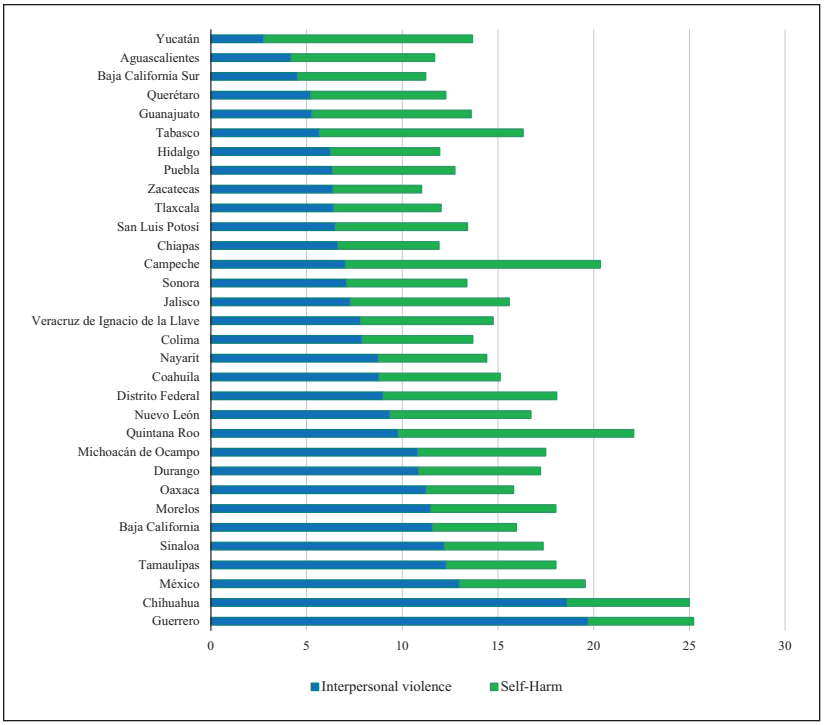

Figure 3. Percentage of deaths from interpersonal violence and suicide to the total deaths in females 10 to 29 years old by state, 2015.

drug cartels are predominant (Sinaloa, Tamaulipas, Michoacan). This panorama shows the diverse determinants and contexts where interpersonal violence appears and where women are highly exposed as a vulnerable group.

Partner and sexual violence increases woman's vulnerability to HIV infection because very few women know how to, and much less are able to, use condoms in high-risk sex practices. In Mexico, 33.3% of AIDS cases and 28.7% of HIV seropositive women are in the 10 to 29 years age group (AbouZahr, 2014; El *VIH*/SIDA en México 2012). Violence is also associated with deteriorated physical health, greater use of medication, prevalence of mental health problems (depression, anxiety, panic disorder, posttraumatic stress, bipolar disorder, agoraphobia, alexithymia, and so on; Medina-Mora, Borges, Lara, et al., 2005), and adoption of risky behaviors (alcohol, drug and tobacco use, etc.), which may last throughout a person's lifetime (Mejía, Zea, Romero, & Saldívar, 2015).

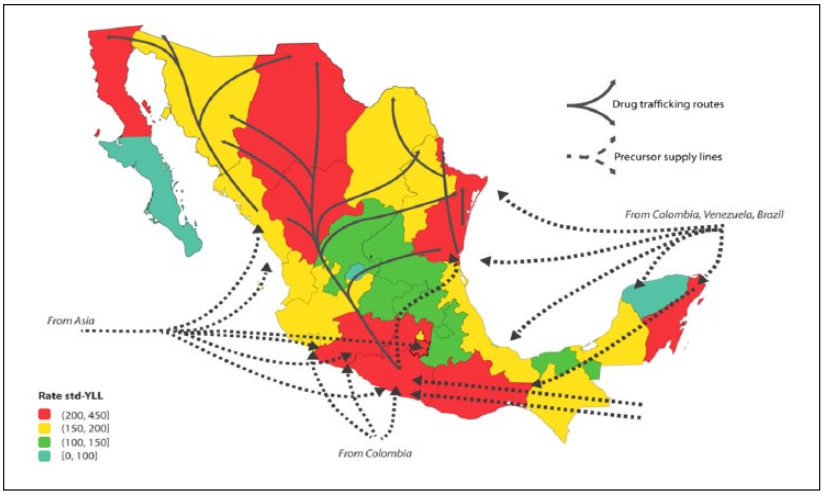

Figure 4. Age standardized rates years lost for premature death (YLL) for interpersonal violence in Mexico 2015.
Source. Adapted from Stratfor: "Areas of Cartel Influence in Mexico is republished with permission of Stratfor 2015." https://www.stratfor.com/interactive/areas-cartel-influence-mexico. Areas of Cartel Influence in Mexico is republished with permission of Stratfor.
Note. YLL = years of life lost.

On Inequity

Among the determinants of violence, we have the nonexistent legal framework or weak legal sanctions against violence, the lax social norms that condone it, and the high levels of social, economic, labor, legal, and political inequality, expressed through a context of legal, social, and family insecurity. This environment promotes partner conflicts, family disintegration, economic stress, male unemployment, and social norms of male domination that ultimately define family dynamics and women's health (Guedes, Bott, García-Moreno, & Colombini, 2016).

The high indices of poverty, acute social marginalization, and discrimination against the indigenous population in Mexico continue exposing girls and young women to specific health risks and high mortality rates that are twice those of wealthy households (Consejo Nacional de Evaluación de la Política de Desarrollo Social, 2016). Conversely, women's relatively higher social status is associated with lower homicide and partner violence rates (Liu & Fullerton, 2015). Although violence is not a direct result of poverty, the precarious economic situation weakens women's empowerment and prevents them from leaving their abusers due to

their low educational attainment, scarcity of job skills, and lack of a safe places to stay (Monárrez, 2010). This is the case of women in Michoacán, Guerrero, Oaxaca, and Chiapas.

Economic policy explanations have focused on the way the forces of globalization and unequal development have created environments in which laws are not enforced or only weakly applied, creating a culture of impunity for the perpetrators of violent crimes. The term "feminicide"—created to describe gender violence—involves abduction, sexual torture, rape, homicide, mutilation, and disappearance, which tends to be systematic; is exercised with misogynistic malice and impunity; and has the complicity of the state (ONU Mujeres, 2011).

Among the 25 countries with the highest rates of feminicides in the world, Honduras, El Salvador, and Mexico ranked among the countries with the highest rates (Geneva Declaration Secretariat, 2015). Indirectly, violence produced by insecurity, drug trafficking, and the conflict between medium and large cartels have caused unstable social contexts such as internal displacements in 12 states, where at least 16,000 people were forced to leave their residence and obliged to cope in unemployment and marginalization. This context makes women more vulnerable and highly exposed to high-risk violent environments (Comisión Mexicana de Defensa y Promoción de los Derechos Humanos A.C., 2014). Between 2007 and 2013, more than 1,900 women and girls were violently killed in Mexico, nearly half of them with firearms. Between 1996 and 2015, 7,185 women were reported missing in Mexico, 44% of whom were not even 18 years old and most of whom disappeared in the states of Mexico and Tamaulipas (Goche, 2015).

Mortality rates due to interpersonal/partner violence among younger groups is also linked to (forced) child marriages. Women who married as children are more likely to report physical and/or sexual intimate partner violence compared with those who married as adults (Kidman, 2017). Fourteen percent of Mexican girls are forced to marry due to indigenous customary law, and 388,831 boys and girls aged 12 to 17 years are married, accounting for 3% of the adolescent population (Grupo Parlamentario PRD LXIII Legislatura, 2015).

Another form of gender violence toward adult women is "dating violence" and is currently identified as a public health problem with severe short-, medium-, and long-term consequences. In the United States, the prevalence of partner violence in teen victims oscillates between 18% and 32%; whereas, 4% to 10% of teenage girls have been forced to have sexual relations against their will, one out of two women on university age have been physically or sexually victimized, and 13% have suffered violence from their previous partners. This phenomenon is a powerful predictor of experiencing any type of violence in women's future relations.

The few studies on dating violence in Mexico (Saldívar, 2013) reported that 15% of 7,960 teens and young people in the public school system in the state of Morelos experienced slight to moderate violence and 0.6% degree of serious violence, whereas 28% of women (12-24 years old) reported dating violence. The Survey on Dating Violence in Mexico reported that 15.5% of Mexicans aged 15 to 24 years old have been victims of physical violence, 75.8% have suffered psychological aggression, whereas 16.5% experienced sexual violence at least once in their lives.

On Information Sources

A major challenge in studying women's health is finding reliable data. There are major gaps in understanding the ways health risks affect women differently from men and not enough is known about how these systems should be structured and handled to effectively respond to the particular needs of girls and women, especially the poorest and most vulnerable ones. Available statistics in Mexico on violence toward women are increasing but not updated or information on the type of violent events by state is scarce. Our study provides a long-term trend of violence in women in Mexico (1990-2015) at the state level and for particular age groups. The burden of disease shows how vulnerable and exposed are young women in the country and demands a high level of alarm regarding this particular health threat.

On Justice Enforcement

One of the problems detected in most of the cases of intentional homicides of women and "feminicides" is that the legal enquiries are incomplete due to the lack of coordination between the various institutions responsible for the prevention, attention, investigation, and sanction of violence against women (Varillas, 2016).

The Health Sector

A key factor in the timely detection of violence against women are the health service providers as the first point of contact for women suffering acute or chronic violence, in the emergency room services, general care, or specialized care. To this end, Mexico has produced the clinical guidelines (*NOM-046-SSA2-2,005. Violencia Familiar, sexual y contra las mujeres. Criterios para la prevención y atención*, Norma Oficial Mexicana NOM-190-SSA1-1,999, Prestación de servicios de salud, 2005), designed to establish criteria for the detection, prevention, medical care, and orientation provided

to health service users in general, and in particular to those involved in situations of family or sexual violence, as well as the notification of cases of violence, which is compulsory. The Health System is also obliged to register cases in the injury database of the National System of Health Information (Sistema Nacional de información en Salud [SINAIS], 2016) of the General Directorate of Health Information (DGIS) of the Health Secretariat and the National Information and Data Bank of Cases of Violence against Women (Banco Nacional de Datos e Información sobre Casos de Violencia contra las Mujeres [BANAVIM], 2016). Reports of cases to SINAIS and BANAVIM are not updated and virtually no knowledge or training is provided for complying with NOM-046. Having better data, better research, and systematic monitoring will help overcome the barriers women face to protect their health and increase health care and access.

It is urgent for health institutions to focus on the health of girls and young women because gender inequities have an enormous effect on their lives. Although it has been a public priority in Mexico to ensure a life without violence for young women and to reach the statement "not one woman less, not one more female death," there is still a long way to go to stop the alarm set by violence against young women in the country.

Authors' Note

Georgina Garmendia and Oscar Netzahual Cocoletzi collaborated with some figures design.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: Bill and Melinda Gates Foundation provided a grant for the research development.

Note

1. Toxic effects of masculinities may include the following: high levels of injury (road crashes); patterns of ill health and mortality resulting from poor diet, drug abuse, inadequate use of health services; high levels of victimization and imprisonment; and patterns of conflict among men that easily lead to violence. Violence also is important in the lives of others: rape and domestic violence against women, homophobic violence and racism (Connell, 2002).

References

AbouZahr, C. (2014). Progress and challenges in women's health: An analysis of levels and patterns of mortality and morbidity. *Contraception*, *90*(6), S3-S13. doi:10.1016/j.contraception.2014.03.007

Banco de Información, Instituto Nacional de Estadística y Geografía. (2015). Retrieved from http://www.beta.inegi.org.mx/app/indicadores/

Banco Nacional de Datos e Información sobre Casos de Violencia contra las Mujeres. (2016). *Total de casos registrados a nivel nacional*. Retrieved from https://banavim.segob.gob.mx/Banavim/Informacion_Publica/Informacion_Publica.aspx

Borges, G., García, J., Orozco, R., Benjet, C., & Medina-Mora, M. E. (2014). Suicidio. In J. R. De la Fuente & G. Heinze (Eds.), *Salud Mental y Medicina Psicológica* [Suicide Mental Health and Medicine] (pp. 195-202). México City, México: McGraw-Hill Education.

Carrillo, E. (2012). ¿Vinculadas al narco? Mujeres presas por delitos contra la salud [Linked to narco? Women in jail for offenses againt health]. *Desacatos*, *38*, 61-72.

Comisión Mexicana de Defensa y Promoción de los Derechos Humanos A.C. (2014). *Desplazamiento interno forzado en México* [Internal forces displacement in Mexico]. México City, México: El Recipiente.

Connell, R. (2002). Understanding men: Gender sociology and the new international research on masculinities. *Social Thought & Research*, *24*, 13-31.

Consejo Nacional de Evaluación de la Política de Desarrollo Social. (2016). *Información de pobreza y evaluación en las entidades federativas* [Information about poverty and evaluation in the federal entities]. Retrieved from http://www.coneval.org.mx/coordinacion/entidades/Paginas/inicioent.aspx

El VIH/SIDA en México 2012. (2012). México City, México: Centro Nacional para la prevención y el control del VIH y sida (CENSIDA), Secretaría de Salud.

Encuesta Nacional de la Dinámica Demográfica. (1992). *Estimaciones del Consejo Nacional de Población con base en: ENADID, 92*. Instituto Nacional de Estadística y Geografía. Retrieved from http://www.beta.inegi.org.mx/proyectos/enchogares/especiales/enadid/1992/default.html

Encuesta Nacional de la Dinámica Demográfica. (1997). *Estimaciones del Consejo Nacional de Población con base en: ENADID, 97*. Instituto Nacional de Estadística y Geografía. Retrieved from http://www.beta.inegi.org.mx/proyectos/enchogares/especiales/enadid/1997/default.html

Encuesta Nacional sobre Violencia contra las Mujeres. (2006). *Secretaría de Salud*. México City, México. Retrieved from http://bdsocial.inmujeres.gob.mx/index.php/envim-146 [National Survey on Violence against women]

Geneva Declaration Secretariat. (2015). Lethal violence against women and girls. In Geneva Declaration Secretariat (Ed.), *Global burden of armed violence 2015: Every body counts* (pp. 87-120). Cambridge, UK: Cambridge University Press.

Goche, F. (2015). Más de 7 mil desaparecidas en México [More than 7 thousand disappeared women in Mexico]. *Contralínea*.Retrieved from http://www.contralinea.com.mx/archivo-revista/index.php/2015/09/13/mas-de-7-mil-desaparecidas-en-mexic

Goméz-Dantés, H., Fullman, N., Lamadrid-Figueroa, H., Cahuana-Hurtado, L., Darney, B., Avila-Burgos, L., . . . Lozano, R. (2016). Dissonant health transition in the states of Mexico, 1990-2013: A systematic analysis for the Global Burden of Disease Study 2013. *The Lancet*, *388*, 2386-2402. doi:10.1016/S0140-6736(16)31773-1

Grupo de Información en Reproducción Elegida A.C. (2008). *Por qué debe despenalizarse el aborto en México?* [Why abortion has to be decriminalize in Mexico?]. México City, México. Retrieved from https://gire.org.mx/wp-content/uploads/2016/08/ProcesoDespena_TD7.pdf

Grupo Parlamentario PRD LXIII Legislatura. (2015). *Erradicar el matrimonio infantil en México exige armonización legislativa: Angélica De la Peña* (Boletín de Prensa) [Erradicate children marriage in Mexico demands legislative harmonization]. Retrieved from http://prd.senado.gob.mx/wp/?p=71197

Guedes, A., Bott, S., García-Moreno, C., & Colombini, M. (2016). Bridging the gaps: A global review of intersections of violence against women and violence against children. *Global Health Action*, *9*, Article 31516. doi:10.3402/gha.v9.31516

Institute for Health Metrics and Evaluation. (2016). *GBD compare data visualization*. Seattle: Institute for Health Metrics and Evaluation, University of Washington. Retrieved from http://vizhub.healthdata.org/gbd-compare

Instituto Mexicano de la Juventud. (2014). *Mujeres jóvenes en México* [Young women in Mexico]. Retrieved from http://www.imjuventud.gob.mx/pagina.php?pag_id=774

Kabeer, N. (2014). *Violence against women as "relational" vulnerability: Engendering the sustainable human development agenda* (Occasional paper). New York, NY: The Human Development Report Office, United Nations Development Program.

Kidman, R. (2017). Child marriage and intimate partner violence: A comparative study of 34 countries. *International Journal of Epidemiology*, *46*, 662-675. doi:10.1093/ije/dyw225

Krug, E. G., Dahlberg, L. L., Mercy, J. A., Zwi, A. B., & Lozano, R. (Eds.). (2002). *World report on violence and health*. Geneva, Switzerland: World Health Organization.

Liu, Y., & Fullerton, T. (2015). Evidence from Mexico on social status and violence against women. *Applied Economics*, *47*, 4260-4274. doi:10.1080/00036846.2015.1026588

Lozano, R. (1999). The impacts of domestic violence on health: Mexico City. In A. R. Morrison & M. L. Biehl (Eds.), *Too close to home: Domestic violence in the Americas* (pp. 81-101). Washington, DC: Inter-American Development Bank.

Lozano, R., Naghavi, M., Foreman, K., Lim, S., Shibuya, K., Aboyans, V., . . . Murray, C. J. L. (2012). Global and regional mortality from 235 causes of death for 20 age groups in 1990 and 2010: A systematic analysis for the Global Burden of Disease Study 2010. *The Lancet*, *380*, 2095-2128. doi:10.1016/S0140-6736(12)61728-0

Medina-Mora, M. E., Borges, G., Fleiz, C., et al. (2005). Prevalencia de sucesos violentos y trastorno por estrés postraumático en la población mexicana [Prevalence of violent events and posttraumatic stress disorder in mexican population]. *Salud Pública de México*, *47*(1), 8-22.

Medina-Mora, M. E., Borges, G., Lara, C., Benjet, C., Blanco, J., Fleiz, C., . . . Zambrano, J. (2005). Prevalence, service use, and demographic correlates of 12-month DSM-IV psychiatric disorders in Mexico: Results from the Mexican National Comorbidity Survey. *Psychological Medicine*, *35*, 1773-1784. doi:10.1017/S0033291705005672

Mejía, B., Zea, P., Romero, M., & Saldívar, G. (2015). Traumatic experiences and re-victimization of female inmates undergoing treatment for substance abuse. *Substance Abuse Treatment, Prevention, and Policy*, *10*, Article 5. doi:10.1186/1747-597X-10-5

Monárrez, J. (2010). Violencia de género, violencia de pareja, feminicidio y pobreza [Gender violence, partner violence, feminicide and poverty]. In J. Monárrez, L. Cervera, C. Fuentes, & R. Rubio (Eds.), *Violencia contra las mujeres e inseguridad ciudadana en Ciudad Juárez* [Violence against women and citizen insecurity in Ciudad Juarez] (pp. 233-273). Tijuana, México: El Colegio de la Frontera Norte, Miguel Ángel Porrúa.

Norma Oficial Mexicana NOM-190-SSA1-1999, Prestación de servicios de salud. (2005). *Criterios para la atención médica de la violencia familiar*, (NOM-046-SSA2-2005). Violencia familiar, sexual y contra las mujeres. Criterios para la prevención y atención. Mexico city, Mexico.

Organización de las Naciones Unidas (ONU) Mujeres. (2011). *Feminicidio en México. Aproximación, tendencias y cambios, 1985-2009*. México City, México: Instituto Nacional de las Mujeres (INMUJERES).

Romero, M., Medina-Mora, M. E., González, H., Vásquez, J., Armas, G., & Magis, C. (2016). *Guía para el uso de metadona en usuarios con VIH dependientes de la heroína intravenosa*. México City, México: Instituto Nacional de Psiquiatría, Centro Nacional para la prevención y control de VIH y el sida (CENSIDA), Secretaría de Salud.

Rutherford, A., Zwi, A., Grove, N., & Butchart, A. (2007). Violence: A glossary. *Journal of Epidemiology & Community Health*, *61*, 676-680. doi:10.1136/jech.2005.043711

Saldívar, G. (2013). Violencia en el noviazgo: Consecuencias e implicaciones [Dating violence: consequences and implications]. In R. Guadarrama, O. Márquez, J. J. López-Flores, M. Veytia, J. Serrano, & G. Huitrón (Eds.), *Psicología: Aspectos fundamentales de la formación y la profesión* [Psychology: Fundamental topics in the professional training] (pp. 97-119). México City, México: Universidad del Estado de México.

Sistema Nacional de información en Salud. (2016). *Lesiones y Causas de Violencia* [Injuries and violence causes]. Retrieved from http://www.dgis.salud.gob.mx/contenidos/sinais/s_lesiones.html

Varillas, A. (2016, January 21). Organizaciones avalan parcialmente informe para decretar alerta de género en Q. Roo [Organizations partially accept the report for enact the gender alert in Q. Roo]. *El Universal*. Retrieved from http://www.eluniversal.com.mx/articulo/estados/2016/06/21/organizaciones-avalan-parcialmente-informe-para-decretar-alerta-de

Vital Registration. (2014, February). *Deaths ICD9 as it appears in World Health Organization (WHO)* (WHO Mortality Database Version, 1979-1997). Geneva, Switzerland: World Health Organization.

Wang, H., Naghavi, M., Allen, C., Barber, R., Bhutta, A., Carter, A., . . . Murray, C. (2016). Global, regional, and national life expectancy, all-cause mortality, and cause-specific mortality for 249 causes of death, 1980-2015: A systematic analysis for the Global Burden of Disease Study 2015. *The Lancet*, *388*, 1459-1544. doi:10.1016/S0140-6736(16)31012-1

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