

# Feeling the risk, living the risk: women in the maquiladoras in a border city in Mexico

Sintiéndose en riesgo, viviendo en riesgo: mujeres en las maquiladoras

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## ABSTRACT

In some parts of the world, women are exposed to atypical acts of violence that include crimes due to war, terrorism, and community violence. Another less prevalent type of violence, not often studied due to its uniqueness, is unpunished female homicides in high-crime cities. Women living under this unusual circumstance may suffer a multitude of effects from “feeling at risk” as a result of direct exposure to community violence and media exposure to female homicide, and by “living the risk” from the effects of domestic violence. These additional effects should be considered when implementing preventive programs in high-crime cities.

*Key words:* Fear of crime, maquiladoras, unsolved women homicides

## RESUMEN

En algunas partes del mundo, las mujeres están expuestas a casos atípicos de violencia que incluyen crímenes debido a la guerra, el terrorismo o la violencia comunitaria. Otros tipos menos comunes de exposición a la violencia, incluyen homicidios de mujeres sin resolver en ciudades con alta criminalidad. Las mujeres que viven en estas circunstancias pueden sufrir una multitud de efectos por “sentirse en riesgo” por la violencia que prevalece, la impunidad y las noticias acerca de los crímenes. De forma adicional, algunas de ellas “están en riesgo” por los efectos de la violencia doméstica.

*Palabras clave:* miedo a ser víctima del crimen, maquiladoras, homicidios de mujeres sin resolver

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## Background

Domestic violence in developing countries has evolved from an issue of relative obscurity to one of primary concern in the last few decades (Miller, 2005; Nasir & Hyder, 2003; Wenzel, Monson, & Johnson, 2004). Although women in developing countries experience several types of violence, domestic violence is the most studied because of its pervasiveness (Stover, 2005; Waltermaurer, Butsashvili, Avaliani, Samuels, & McNutt, 2013). Other types of violence are not evenly distributed across all neighborhoods and/or demographic groups and, in some settings, women are exposed to short- or long-term atypical acts of violence (Asai & Arnold, 2003; Carli, Telion, & Baker, 2003; Gracia & Tomas, 2014; Kennedy, Charlesworth, & Chen, 2004; Pain, 2014; Vlahov et al., 2002). Most of the available studies about this uncommon exposure have concentrated on the women and children affected by violent crime in the society due to war, terrorism, community violence, and fear of crime (Aisenberg & Ell, 2005; Cox, Johnson, & Coyle, 2015; Nicolaidis, Curry, McFarland, & Gerrity, 2004; Wong, Shumway, Flentje, & Riley, 2016).

If we consider that these exposures to violence are not independent but instead interlinked, it will be helpful to determine if there is a relationship between women who feel at risk and women who actually are victimized in an abusive relationship, and are thus, “living the risk”. The significance of this association will help to understand 1) the emotional layers covering an abusive relationship 2) a tangible association between feeling at risk and living the risk (identified by questioning the effect of feeling at risk because it has less stigma associated with it) and 3) the possibility that the appropriate intervention may reduce the effects of feeling at risk and help women to gain understanding of problems involving abusive relationships.

In addition, the collection of data about this uncommon exposure offers an opportunity to study the consequences of victimization and fear of crime on people’s lives, which have re-

ported debated results (Evans, Fyfe, & Herbert, 1992; Fox, Nobles, & Piquero, 2009; Golant, 1984; Krulichová, 2018; Low & Espelage, 2014; May, Vartanian, & Virgo, 2002). For example, some criminologists report that this fear is irrational and that those most likely to be victimized are least afraid, and vice versa (Faramarzi, Esmailzadeh, & Mosavi, 2005; Maxfield, 1984; Smith, 1985; Tran, Nguyen, & Fisher, 2016; Young, 1988a).

During a visit of the Inter-American Commission on Human Rights in 2003 to Ciudad Juarez, Chihuahua, Mexico, the authorities presented information about the killings of 268 women and girls since 1993 (IACHR, 2003). Most of the victims were young women or girls, workers in the maquiladoras, or maquilas (Mexican assembly plants/export-processing factories), who were sexually abused before being brutally killed. The authorities reported that more than 250 missing person reports filed during that period remained unsolved.

Representatives of the civil society presented a letter signed by 5,000 individuals who demanded an effective response to the situation. The letter expressed that women living in this city since 1993 have been afraid to walk the distance between their homes and their jobs. Since 2003, the number of unsolved murders of women has increased, and the city has been recognized worldwide for its maquiladoras, unpunished killings, drug cartels, and pollution (Ensalaco, 2006b; Livingston, 2004; Márquez-Vargas, 2017; Pantaleo, 2010).

In this study, we explored the relationship between feeling at risk and living the risk (victims of abusive relationships) in two groups of women living in Ciudad Juarez, Chihuahua, Mexico. Women living in this city are exposed to information about hundreds of unpunished female homicides. We compared women’s fear of crime between two different groups of working women: 1) maquiladora workers (Maquiladora group), who have been the main target of these homicides and 2) college students (College group).

In order to define more fully this psychological distress, we examined risk factors associated with present/past exposure to domestic violence. Those who were, or had been victims of domestic violence had significantly greater fear of becoming victims of homicide. In addition, working for assembling plants significantly increased the women's fear of becoming victims of crime.

## Method

### Study design

This study involved a convenient cross-sectional sample of 716 women workers (ages 17 to 45), living in Ciudad Juarez, Chihuahua, Mexico. The women came from two different groups: 502 women working in the maquiladora, and 214 college students working in non-maquiladora industries. The occupations of the participants classified as operators and non-operators (non-professional/ semiprofessional jobs). The sample of maquiladora workers was collected from seven different organizations using a self-response questionnaire while workers were on break or at lunch outside of the work place. The college students were interviewed during their attendance at the state University. Participation was voluntary, and the internal review board (IRB) of the University approved the study. Business students collected the information as part of a larger class project during their last semester in the University of Ciudad Juarez, Chihuahua, Mexico (UACJ).

### Study setting and population

Ciudad Juarez is located on the border of the United States and shares with its neighbor in the United States (El Paso, Texas) the largest metropolitan area on the border between Mexico and the United States. This city has many maquiladoras that are owned by foreign (usually United States) capital. They were first established in 1965 on Mexico's northern border. These companies usually employ low-paid young Mexican workers to assemble U.S. produced parts into goods to be sold on the U.S. market. Ciudad Juarez contains one of the largest concentrations of

maquiladora workers in the country.

Many of the maquiladora workers are migrants from the north, center, or south of Mexico who move to Ciudad Juarez. Moving from extreme poverty in their original habitat, these women move to Ciudad Juarez where they pool their resources to live together, with relatives, or with friends of their family.

### Questionnaire

The questionnaire used in this study was a modification of a questionnaire used by Wenzel et al., (Wenzel et al., 2004). The modified questionnaire included demographic information and six questions related to exposure to violence. The questionnaire covered key areas of present physical abuse, threats, and harassment, as well as a history of abuse in the three areas. In addition, the questionnaire examined fear of crime (only violent crime was included)

Questions included:

Present abuse or aggression:

Emotional abuse (non-physical abuse):

Are you in a relationship where a person offends you continuously? (e.g., calls you names, insults you, but does not physically hurt you).

Physical abuse question:

Are you in a relationship with a person that physically hurts you? (e.g., slaps, hits, punches, kicks, pushes, rapes or other violent acts)

Threat question - included intimidation or threats:

Are you in a relationship with a person who threatens you? (e.g., threatens you, your children, your family, your friends, or your property or that of others)

Harassment question included power and control dynamics, such as the use of economic power and isolation to control:

Are you in a relationship with a person who harasses or controls you against your will? (e.g., controls your access to money or transportation, isolates you from family or friends, interferes with your job, etc.)

Past abuse or aggression:

In the past, have you ever been in a relationship with a person who has done any of the things

mentioned in the above questions?

Feeling at risk

Do you feel that you can become a victim of violent acts (murder, attempted murder, or physical victimization including severe injuries)?

### Data analysis

Summary statistics included frequency tables for categorical variables. Binary logistic regression was used to measure associations between feeling at risk for demographic variables, and present/past exposure to domestic violence.

## RESULTS

Of the 716 working women who participated in this study, 70% (502) worked in the maquiladora and 30% (214) were college students working in non-maquiladora industries. Table 1 for descriptive statistics and results of comparative tests. Compared to women working in

the maquiladoras, college students were significantly younger and more likely to work in semi-professional jobs. The College group women felt at risk of being victims of acts of violence, 58 (27.1%) and Maquiladora group 172 (34.3%).

Tabla 1

*The characteristics of the study sample (n = 716)*

	Maquiladora Women N (%)	College Women N (%)	Total (%)
<b>Age</b>			
17-26	164 (32.7)	160 (74.8)	324 (45.3)
27-36	178 (35.5)	44 (20.6)	222 (31.0)
= or > 37	160 (31.9)	10 (4.7)	170 (23.7)
Total	502 (100.0)	214 (100.0)	716 (100.0)
<b>Occupation</b>			
Semiprofessional	72 (14.3)	101 (47.2)	173 (24.2)
Unskilled Manual	430 (85.6)	113 (52.8)	543 (75.8)
Total	502 (100.0)	214 (100.0)	716 (100.0)

To investigate whether the College group and the Maquiladora group differ on feeling at risk or not, a chi square statistic was used. Pearson Chi square results indicate that the College group and Maquiladora group were not significantly different on whether they feel at risk ( $\chi^2=3.5$ ,  $df=1$ ,  $N=716$ ,  $p=0.06$ ). Phi, which indicates

the strength of the association between the two variables, is 0.07 and, thus, the effect size was considered smaller than typical according to Cohen (Cohen, 1988). Reports of feeling at risk, current abuse, and history of abuse, were significant (Table 2).

Tabla 2  
Percentage of women reporting feeling at risk: College women and Maquiladora

	Maquiladora Women N (%)	College Women N (%)	p
Group	172 (34.3)	58 (27.1)	0.06
Current Abuse			
Physical	148 (30.3)	49 (22.9)	0.05
Threats	64 (13.0)	48 (22.4)	<.001
Harassment	21 (4.3)	12 (5.6)	NS
History of Abuse			
Physical, threats or/and harassment	98 (20.1)	59 (12.5)	<.001

Unadjusted odds ratios indicate significant differences with regard to feeling at risk and current abuse: physical abuse OR = 2.6 CI (1.8-3.6)  $p<.001$ ; threats OR = 2.5 CI (1.7-3.8)  $p<.001$ ; and harassment OR=3.4 CI (1.7-7.0)  $p<.001$ .

History of abuse was also significant OR=3.4 CI (2.3-5.0)  $p<.001$ . Feeling at risk between groups was borderline OR=1.4 CI (1.0-2.0)  $p=0.06$  (Table 3).

Tabla 3  
Women reporting feeling at risk and exposure to abuse/aggression

	Unadjusted Odds Ratio (CI)	p
Group	1.4 (1.0-2.0)	NS
Current Abuse		
Physically hurt including slaps, hits, punches, licks, pushes, rapes, or anything else	2.6 (1.8-3.6)	<.001
Threats toward you, your children, your family, your property, or any others	2.5 (1.7-3.8)	<.001
Harassment including control of money, transportation, isolates you from family or friends, interferes with your job	3.4 (1.7-7.2)	<.001
History of abuse		
Including physical, threats or harassment	3.4 (2.3-5.0)	<.001

A logistic regression analysis was conducted with fear of crime as the dependent variable and group, age, occupation, education, and present/past history of domestic abuse as predictor variables. With a total of 697 cases analyzed, the full model was significantly reliable (chi square 84.9, df = 9 p<.0001). This model accounted for between 11.5% and the 16% of the variance of fear of crime, with 91.1% of the women not feeling fear of crime successfully predicted and 28.6% successfully predicted.

Overall 70.7% of predictions were accurate. Table 4 gives coefficients and the Wald statistic and probability values for each of the predictor variables. The results show that group, present physical abuse, threats, and past abuse reliably predicted fear of crime. The values of the coefficients reveal that each unit (present physical abuse, threats, and past abuse) increase in group Maquiladora vs. College students is associated with an increase in the odds of fear of crime by a factor of 1.77, 2.5, 2.8, and 2.6, respectively.

Tabla 4  
Multiple logistic regression models predicting feeling at risk

	Adjusted Odds Ratio (CI)	p
Group (Women College students vs. Women maquiladora)	1.8(1.1-3.2)	0.03
Occupation		
Semiprofessional jobs	1.0	
Non-professional	0.9(0.6-1.6)	0.8
Age (per 10 year incremental increase)	1.0(0.9-1.0)	0.24
Education college vs. not college	1.0(0.8-1.3)	0.81
Current Abuse		
Physically hurt including slaps, hits, punches, licks, pushes, rapes, or anything else	3.1(1.2-8.2)	0.02
Threats toward you, your children, your family, your property, or any others	2.0(0.7-5.7)	0.22
Harassment including control of money, transportation, isolates you from family or friends, interferes with your job	1.2 (0.5-2.9)	0.66
History of abuse		
Including physical, threats or harassment	3.0 (1.9-4.8)	<.001

**Discussion**

Violence against women occurs within and across all socioeconomic, demographic, and geographic regions of the world (Babu & Kar, 2009; Renzetti, 1994). Some conditions exacerbate the exposure to violence against women and include life stressors; community violence;

or unusual conditions due to war, terrorist attacks, or unsolved female murders.

Many of the dynamics related to domestic violence that trap women in violent relationships cross boundaries that include political, socioeconomic, demographic, or geographic perspectives. These dynamics include societal and

community attitudes toward violence, isolation, fear of exposure, lack of resources to facilitate help to women and children victims of violence, and lack of sufficient accessible services for victims of violence. The impact of violence is seldom studied in the context of other risk factors of mental distress, and fear of being a victim of violence from living in a higher risk area. This study examined the relationship between the fear of becoming a victim of violence and the exposure to present and past acts of violence and aggression adjusting for demographic and social characteristics.

Feeling at risk seems to be associated with living the risk. The results suggested that a high percentage of women 32.1% from both different groups felt at risk (fear of crime), which may be a natural response to the conditions that prevail in the city. However, after adjustment by group, and past/present history of violence, women in the Maquiladora group felt more at risk of becoming a victim of violent crime. In addition, women that were present/past victims of violence felt more at risk in general. Given the fact that the trauma caused by domestic violence may also involve cumulative effects of other traumas (e.g. previous child victimization, previous battering, etc.), it is necessary to consider that these women lived in fear, which is very distressful.

Violence has long been considered as a threat to the health of women, a stressful experience that requires psychological adaptation, and an experience that may give rise to psychological consequences (Modi, Palmer, & Armstrong, 2014; Sorenson & Saftlas, 1994). All women who participated in this study were workers, who may be helped with programs that target the effects of the exposure to violence in the city. By addressing this issue, there is a high probability of benefit to women that are present or past

victims of domestic violence.

Feeling at risk of violence may be exacerbated by incidents that have occurred in the past years in Ciudad Juarez, as well as the attention the media gives to the events. After the attention lessens, these women have to live in a city that is known for its maquiladoras, unpunished killings, drug cartels, and pollution (Ensalaco, 2006a; Livingston, 2004; Márquez-Vargas, 2017; Pantaleo, 2010).

Maquiladoras benefit from the work of these women and have historically promoted educational and training programs that can very easily be diversified to also empower them. All these maquiladoras have staff nurses that have or can acquire training to implement programs that increase women's personal strengths and inner resources.

Women who suffer from problems caused by the fear of violence in the city can benefit greatly from educational, preventive programs at work. In addition, these programs enable easier recognition of the victims due to the impersonal nature of accepting feeling at risk instead of accepting to be a victim of domestic violence.

There are some limitations to this study derived from the questionnaire used to collect the information. Detection of present domestic violence is usually underestimated using questionnaires, thus, there is a possibility that the risk found is even greater than that shown.

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