# The link between Violence Against Women in public and urban infrastructure:

## A case study in Corregidora, Mexico

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**CONACYT**

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## Declaration

I, Ana Margarita Garfias Royo, confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

Signed:

Date:

# Abstract

Violence Against Women (VAW) is widespread in Mexico, with approximately 66.1% of women (30.7 million) having experienced at least one incident of VAW in their lifetime (INEGI, 2017a). Using the municipality of Corregidora, in the state of Querétaro, Mexico, as a case study, this research sought to explore the routine experiences of VAW in the public space to understand the link between public and urban infrastructure and the perpetration of this violence. A mixed methods approach was taken, which combined 272 household surveys (HHS) and 7 focus group discussions (involving 50 women). It was found that the most common type of VAW women experienced in the public sphere, as well as the most recurrent, was catcalling or hearing offensive or sexual remarks including whistling. The following 4 most common types of VAW were fear of being sexually abused, stalking, groping and public indecent exposure. Additionally, the younger women were, the more violence they seemed to experience. Heat maps were generated based on HHS data to identify areas in the urban public space where incidents of VAW took place. These maps were used to select specific high concentration locations to conduct structured observations and inductive visual analysis at street level to identify situational factors that might influence the perpetration of VAW in those locations. The key features identified linked to the facilitation of opportunities for the perpetration of VAW included lack of infrastructure, presence of physical obstacles, poor visibility and restricted pedestrian mobility (Garfias Royo et al., 2020). Finally, semi-structured interviews with local government agents revealed challenges to the provision of security to women in public spaces including lack of gender protocols for planning and delivering infrastructure, as well as limited collection and access to crime data. It was also found that the government assists in the creation of gated communities, resulting in a fragmented city.

# Impact statement

This work contributes to the advancement of multidisciplinary studies for understanding Violence Against Women (VAW). This research highlights the importance of documenting the experiences of gender-based violence which women experience in the public sphere and mapping where these incidents take place. The proposed methodology is a valuable approach to conduct infrastructural assessments at street level to identify situational factors that might influence the perpetration of VAW. The methodology could be applied in other settings with poor crime recording practices by organisations seeking to understand to experiences of VAW in public spaces and to influence decisions around built environment and infrastructure for inclusive and safer cities. It has additionally made a contribution to the academic body of research by emphasizing the role governments play in the enabling and perpetration of VAW through poor delivery and maintenance of urban infrastructure.

Additional work carried out throughout the duration of this PhD included promotion of work implemented in Andolo community in Kibera, Kenya (as part of a Master's thesis), which was presented in the 1st ICE EngineeringLate (London, 09/2017) and in the Engineers Without Borders UK outreach programme at UCL (London, 12/2016). I was also invited to assess MSc students in their final presentation of a group project as part of UCL's Engineering for International Development module in 11/2017

I participated in other research projects during my PhD. For example, I was awarded the 2017-2018 UCL Grand Challenges Doctoral Students' Small Grants Scheme: Human Wellbeing to conduct interdisciplinary work to understand the experiences of violence of female students in New Delhi, India. The research was conducted in collaboration with Dr. Kusha Anand and Professor Marie-Carine Lall (UCL Institute of Education), with the support of Dr Priti Parikh (CEGE); Dr Jyoti Belur (Dept of Security and Crime Science) and Prof Rukaiya Joshi (SP Jain Institute of Management & Research).

I led a group project for the MSc in Engineering for International Development, in which students developed an app mock-up for mapping VAW in the streets. I carried out co-supervisory activities throughout the duration of the module from 10/2018 to 03/2019.

I presented work or assisted at the following conferences and seminars:

- Presentation on the intersection of gender and infrastructure – WEDC Conference (Loughborough, 07/2016).
- Logistical support and attendance at a high level conference on methodologies to identify linkages between sanitation and Sustainable Development Goals – hosted by UCL and Vitol Foundation (London, 09/2019).
- Presentation of the findings of my doctoral research – Geospatial Show and Tell seminar, UCL

CEGE (London, 09/2019).

- Attendance at the Urban Frontiers conference (London, 11/2019).
- Presentation on conducting fieldwork in challenging settings – Talk About sessions, UCL CEGE Researchers' Society (London, 02/2020).

During the course of this PhD, two papers were published:

**Publication I**: Garfias Royo, M., Parikh, P., Mutwiri, F., Harper, J., Bukachi, V., and Mulligan, J. (2018). Using Future Scenario Planning as a tool for informed decision making on infrastructure interventions in Kibera, Nairobi in Kenya. *Habitat International*, 79:30–41

This paper presents a methodology which I deployed in fieldwork undertaken before starting my PhD for assessing the perceived impacts of two infrastructure interventions for flood mitigation in the Andolo community in Kibera, Kenya.

**Publication II**: Garfias Royo, M., Parikh, P., and Belur, J. (2020). Using heat maps to identify areas prone to violence against women in the public sphere. *Crime Science*, 9(1):15

This paper presents the methods used to generate heat maps and select specific high concentration areas to conduct structured observations and inductive visual analysis at street level used in this thesis.

The published papers show a track record of developing methods to collect information in challenging environments where there is lack of available data.

# Acknowledgements

inspired me to be the best version of myself and to dream big. To my parents, thank you for raising me and my brother as equals. Mom, thank you for being the strong woman you are, you have always guided me with your example and thank you for never letting me give up. Dad, thank you for always cheering me on and being my biggest fan. Fran, thank you for always raising the bar but never making me feel like I can never make it. And also thank you for bringing Zaira Razú into my life, another example of powerful woman to inspire me throughout my life. Thank you Zaira for encouraging me through this journey. And thank you both for giving me the biggest gift of all during this PhD: my precious nephew Sebastian. I hope we can make a better world for you.

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# Abbreviations

## Acronyms in Spanish

| | | |
|---|---|---|
| AGEB | Area Geoestadística Básica | Basic Geostatistical Area |
| AMAI | Asociación Mexicana de Agencias de Inteligencia | Mexican Association of Intelligence Agencies |
| CEAV | Comisión Ejecutiva de Atención a Víctimas | Executive Commission for Attention to Victims |
| CONAPO | Consejo Nacional de Población | National Population Council |
| CONEVAL | Consejo Nacional de Evaluación de la Política de Desarrollo Social | National Council for the Evaluation of the Social Development Policy |
| ENDIREH | Encuesta Nacional sobre la Dinámica de las Relaciones en los Hogares | National Survey on the Dynamics of Household Relationships |
| IMPLASCO | Instituto Municipal de Planeación de Corregidora | Municipal Institute of Planning and Sustainability of Corregidora |
| INEGI | Instituto Nacional de Estadística y Geografía | National Institute of Statistics and Geography |
| OCNF | Observatorio Ciudadano Nacional del Feminicidio | National Citizen Observatory of Feminicides |
| OCQ | Observatorio Ciudadano de Querétaro | Citizen Observatory of Queretaro |
| SEDESOL | Secretaría de Desarrollo Social | Secretariat of Welfare |
| SESNSP | Secretariado Ejecutivo del Sistema Nacional de Seguridad Pública | Executive Secretariat of the Public Security National System |
| SDUOP | Secretaría de Desarrollo Urbano y Obras Públicas | Ministry of Urban Development and Public Works |
| SHCP | Secretaría de Hacienda y Crédito Público | Secretariat of Finance and Public Credit |
| UAQ | Universidad Autónoma de Querétaro | Autonomous University of Queretaro |

## Acronyms in English

| | |
|---|---|
| CPTED | Crime prevention through environmental design |
| csv | comma separated values |
| FGDs | Focus group discussion |
| GM | Gender Mainstreaming |
| Gvmt | Government |
| HHS | Household Survey |
| IACHR | Inter-American Court of Human Rights |
| OECD | Organisation for Economic Co-operation and Development |
| RAs | Research Assistants |
| RQ | Research Question |
| SDGs | Sustainable Development Goals |
| SES | Socioeconomic Status |
| SSH | Stop Street Harassment |
| ToR | Terms of Reference |
| UCL | University College London |
| UN | United Nations |
| UNODC | United Nations Office on Drug and Crime |
| VAW | Violence Against Women |
| WHO | World Health Organization |

# Chapter 1

# Introduction

The configuration of the built environment and urban infrastructure have an impact on social interactions, and by extension, on the power relations that occur within the urban space (McIntosh et al., 2015; McIlwaine, 2013; Khosla, 2009; Brantingham and Brantingham, 1995). This can, in turn, influence the susceptibility to violence of members of a community, particularly women and girls (McIntosh et al., 2015; McIlwaine, 2013; Khosla, 2009; Brantingham and Brantingham, 1995). When designing cities, carrying out gender analysis of how designed spaces are used by different people, especially women, is typically not considered or often viewed as not important by local governments (Purkayastha and Ratcliff, 2014; ActionAid International, 2013). The complexity of the problem requires comprehensive approaches, not only to provide immediate, pragmatic solutions, but also to focus on changing the sociocultural norms that create the environment for these issues (Bianchi Alves and Dominguez Gonzales, 2015).

Gender-based violence distinguishes itself from other types of violence in that the gender of the victim relates directly to the motive of the attack (McIlwaine, 2013). While women, girls, men and boys experience violence differently, both as perpetrators and victims, women and girls tend to be more vulnerable to gender-based violence (McIlwaine, 2013; Trench et al., 1992). There is growing evidence of the gender related violence that women and girls experience in public spaces, better known as Violence Against Women (VAW), which can range from unwanted sexual remarks to rape and femicide[1] (UN Women, 2018). Incidents of VAW tend to take place in the streets, public transportation, parks, public sanitation facilities and water and food distribution sites (Belur et al., 2016; UN Women, 2017; Parikh et al., 2015; Willman and Corman, 2013; Dymén and Ceccato, 2012). The lack of access to services as well as poorly maintained or delivered urban infrastructure, can make a community more prone to VAW in the public domain (Parikh et al., 2015; Moser and McIlwaine, 2014; Moser, 2004a).

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[1]According to the Latin American Model Protocol for the investigation of gender-based killings of women (OHCHR and Mujeres, 2014, p. 14), a femicide (or feminicide) refers to the murder of women because of their gender—because they are women—whether it is perpetrated by a family member, a partner or any other interpersonal relationship in their community, or whether it is committed or tolerated by the state or its agents.

VAW is a deeply rooted problem in many societies, which have institutionalised attitudes and practices that support violence in custom and law at all levels of society—including at the personal, community and state levels (Purkayastha and Ratcliff, 2014; Ertürk and Purkayastha, 2012; Johnson et al., 2008). A pervasive culture of VAW erodes women's fundamental rights to life, food, health, shelter, security, body integrity and work (Johnson et al., 2008). Since the 1990s, VAW has been recognised as a human rights issue (Johnson et al., 2008). This recognition allows the definition of VAW to be expanded to include the inequalities and discrimination that are tolerated or maintained by the state, which increase women's vulnerability to violence (Purkayastha and Ratcliff, 2014; Johnson et al., 2008).

Research consistently shows that VAW is vastly under-reported (Leclerc et al., 2016; Johnson et al., 2008; Lindsey, 1997). The reaction of other people, including victim-blaming, can increase trauma and prevent victims from seeking help or reporting to the police (Johnson et al., 2008). There are several routes in which a victim can disclose their experience of VAW if they choose to do so, from informally informing their family and friends, to disclosing the incident to researchers, medical and social service professionals, or formally reporting the incident to the authorities (Sinha, 2013; Johnson et al., 2008; WHO, 2001). Such disclosure may not happen immediately after the event, and sometimes happens years later.

State inaction enables VAW through the inability or unwillingness of communities to address such violence or provide sufficient support for victims of violence, which can in turn normalise the escalation of violence in everyday life (Purkayastha and Ratcliff, 2014). A state's unwillingness to report data on VAW may limit the possibility of accessing information from the outset. Personal or political views of state agents may interfere with an administration's decision making powers by hindering the ability to make comparisons or understand the depth of the problem on a given location (Purkayastha and Ratcliff, 2014; Ertürk and Purkayastha, 2012). Additionally, poor crime recording practices, deficient data management and that some types of VAW might not be considered crimes may mean that incidents of VAW do not get recorded (Garfias Royo et al., 2020; Zepeda Lecuona, 2017; Johnson et al., 2008). Consequently, this may limit informed decision making at other government levels to introduce measures to make the built environment and cities safer for women and girls.

## 1.1 VAW in Mexico

Violence Against Women in Mexico is a widespread, but neglected, problem at national level (Frías, 2017), as demonstrated by the scarce official figures, despite countless unofficial accounts and anecdotal evidence from women throughout the country. Reports of harassment, rape and femicides flood news channels, newspapers and social media on a daily basis. A national survey showed that approximately 66.1% (30.7 million) of Mexican women who are 15 years of age or older have

experienced at least one type of VAW incident in their life, including both Intimate Partner Violence as well as violence inflicted by strangers (INEGI, 2017a, 2016a; Cruz Vargas, 2017). Furthermore, 38.7% (18 million) of women who are 15 years of age or older have been victims of VAW by strangers in the public sphere, in spaces such as parks, streets and public transportation. And 66.8% of the aggressions committed in the public sphere were of a sexual type, such as offensive remarks, intimidation, attempted rape and/or rape (INEGI, 2017a, 2016a). Women have become frustrated at the government's inability to respond to this violence, as demonstrated by recurrent protests (c.f. Corona and Lafuente, 2019; Villegas, 2020; Wattenbarger, 2020b, see figure 1.1), including the occupation of the Human Rights Commission building by a feminist group in 2020 (Wattenbarger, 2020a; see bottom left image of figure 1.1).



*(a) Protest against femicides in Chimalhuacán, photo by Cabrera (2016)*

*(b) Protest against the femicide of Alexis in Cancún, photo by Ruiz (2020)*

*(c) "We don't forgive nor forget!", occupation of the Human Rights Commission building by a feminist group, photo by Murcia (2020)*

*(d) "Die pig cops", the Angel of Independece with graffiti markings protesting against police inaction to VAW, photo by Cortes (2019)*

*Figure 1.1 – VAW Protests throughout Mexico.*

The high levels of VAW take place in a context of increasing rates of various forms of violence across Mexico, exacerbated by an over a decade-long war on drugs and a social fabric that has been steadily deteriorating (Estévez-Soto and Pérez Esparza, 2017; Rodríguez Ferreira and Kuckertz, 2017; Lakhani, 2016; Rodriguez Ferreira, 2016). This violence has led to internal displacement and forced migration, which has negative consequences for national economic activity and contributes to rapid urbanisation and urban sprawl in the destination areas (Fernandez-Dominguez, 2020; Quiroz

Félix et al., 2015; Robles et al., 2013). Rapid urbanisation of cities also leads to the proliferation of medium-sized cities, generating challenges for infrastructure delivery and development policies (Berdegué and Soloaga, 2018).

Given the increasing rates of violence, as well as the escalating concern over incidents of VAW, Mexico was selected as the country of focus for this study. There is a growing interest at local, national and international levels to understand why VAW is occurring, as well as the measures that can be taken to prevent and eradicate it. Furthermore, there are many gaps in the data regarding the experiences of violence of women nationwide (Frías, 2017) and studies regarding VAW conducted outside Mexico City are scarce. A national survey showed that Querétaro—where the case study is located—is the state with the second highest percentage of women who reported VAW in urban public spaces at national level after Mexico City (33.9% and 37% respectively; INEGI, 2016a). Understanding why this violence takes place is therefore critical to take measures to eradicate it, particularly within a context where there is insufficient data. Furthermore, having previously lived in Querétaro and experienced various forms of gender-based violence discussed in the literature, the researcher understood the local context. The researcher was also in a position to establish personal and professional networks that could facilitate collaborations and access to information in order to conduct this sensitive research.

Addressing VAW is crucial for the eradication of inequalities and discrimination (Dhar, 2018). Attempting to end or reduce this violence is part of ensuring the equal participation of women in society, including in the economic and productive sphere, and could have an effect in addressing several Sustainable Development Goals all at once[2] (Sen, 2019; UN Women, 2009; Blaustein et al., 2018; WHO, 2018). The built environment on its own will not reduce crime nor deter those determined on criminal activity (Trench et al., 1992, p. 281), but, improving urban infrastructure could create safer environments and potentially limit opportunities for violent behaviour.

## 1.2 Structure of this thesis

This thesis is organised in nine chapters. Chapter 1 presents the introduction, the Research Questions (RQs) and motivation guiding this work. Chapter 2 reviews the literature used throughout this work, which guided the design of the methodology as well as the analysis and interpretation of the results. Chapter 3 presents the case study used for this research. Chapter 4 outlines the approach and methodology of this work as well as the methods used. Chapters 5 though 7 present the results of the application of the methods, with chapter 5 responding to the first RQ, chapter 6 addressing the second and third RQs and chapter 7 presenting the results of the last RQ. Chapter 8 presents a

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[2]For example, Sustainable Development Goal (SDG) 3: Good Health and Wellbeing, SDG 5: Gender Equality, SDG 10: Reduced Inequalities, and SDG 16: Peace, Justice and Strong Institutions (Sen, 2019; Blaustein et al., 2018; WHO, 2018; Heidari and García Moreno, 2016; Rosche, 2016).

discussion of the results, bringing together the implications of all the findings, to understand whether there is a link between urban infrastructure and VAW perpetrated in the public space. And finally, chapter 9 presents the conclusions, the limitations and recommendations that derived from the findings of this work.

## 1.3 Research scope and questions

The evidence base exploring the role that infrastructure plays in the perpetration of VAW in the public sphere is growing globally. Likewise, efforts are being made in Mexico by local universities, non-government organisations and civil societies and associations to investigate why VAW occurs. Until recently, police and national statistics were the only source of information regarding the prevalence of violence against women. This data, as in many other countries, unfortunately does not show the full picture given the under-reported nature of VAW crimes, the legal definitions of VAW (including sexual assault, harassment, stalking or other violent forms of VAW), police discretion regarding charges and recording incidents in official statistics (Johnson et al., 2008, p. 11). Furthermore, studies carried out at national level linking VAW and urban infrastructure are scarce.

In the specific case of the municipality of Corregidora in Mexico, rapid growth and increasing violence, particularly VAW, have proven a challenge for targeted delivery of urban infrastructure. The aim of this research was to carry out an exploratory study to identify the most common types of violence women experience in the public sphere of the urban localities of Corregidora and the link between VAW with the surrounding urban infrastructure. It also sought to broaden the understanding of this relationship by identifying vulnerable locations for VAW and examining which aspects of the built environment in these areas might influence VAW. A third aim was to understand the official processes for the creation and delivery of urban infrastructure and public spaces in Corregidora, Mexico. The research questions this study sets to address were the following:

1. What are the most common types of Violence Against Women (VAW) experienced in the public spaces of Corregidora?
2. Where does VAW take place in the public spaces of Corregidora?
3. What factors do these locations have in common regarding the delivery and condition of urban infrastructure?
4. What are the possible infrastructure drivers for VAW in the public spaces of Corregidora?

This project sought to add to the literature on VAW on whether there is a link between urban infrastructure and VAW perpetrated in the public sphere. The results of this research are used to propose possible preventive measures and recommendations for policy makers.

## 1.4 Initial research partner: Government of Corregidora

The municipality of Corregidora is located in the southwest state of Querétaro (see figure 1.2 for the map of Corregidora). In 2015, when the latest census estimations were made, it had a population of approximately 181,073 inhabitants, of which 52% were female and 48% were male (INEGI, 2015c; Gobierno de Corregidora, 2015). Corregidora is a rapidly growing Municipality, with different estimates showing population growth projections ranging from 5.2% to 8% annually (INEGI, 2015c; Banda Campos, 2017, 2019). As already mentioned, according to a national survey, the state of Querétaro had the second highest percentage of women who reported VAW in urban public spaces at national level and 46.8% had experienced at least one type of gender violence in their lifetime (INEGI, 2016a). The municipality of Corregidora is facing an increase in reported cases of VAW, with 282 reported cases from July to September of 2017 (OCQ, 2018), and an increase of 7.57% of VAW in 2019 compared to the previous year, but there is little contextual information to indicate what this number means (OCQ, 2019). Moreover, disaggregated data is difficult to find and is usually only provided upon request.



*Figure 1.2 – Location of Corregidora municipality (in black) in relation to the State of Querétaro. Figure made with maps from INEGI (2015b).*

During the 2015-2018 administration, the local government took an active role in implementing research projects for understanding the problems the Municipality faced. Some of these projects focused on applying crime prevention strategies in order to mitigate the increasing violence faced by the inhabitants of the municipality (Ayuntamiento de Corregidora, 2015). These strategies were targeted on the creation of social programmes, specifically regarding social cohesion, policing and urban space appropriation, but an assessment of infrastructure had not been carried out in relation to VAW at that point. This was a motivation to approach the local government with a proposal for

collaboration on this project, which overlapped with their interests, and there was initially a positive response[3]. During the course of this research, however, a change in the administration diluted the partnership, but the case study and RQs remained the same.

## 1.5 The story of how this study came to be

I grew up in a city called Querétaro, three hours outside of Mexico city. Whilst I was born in the capital city of Mexico, my family moved to Querétaro when I was just a baby, as my parents wanted us to escape the high levels of pollution Mexico City suffered from in the late 1980s. During my childhood and teenage years, my mother never allowed me to walk on my own around the streets of my city and I was strictly forbidden to use public transportation, especially on my own. I was born in a privileged family that could afford a car, so I did not have to worry about finding ways to navigate the city, and I was able to ask my parents to take me to places if needed. Always the rule breaker, I of course used public transportation, mainly when I was with my cousin, who had no alternative to travel around the city. That always made me feel very empowered, to be able to move from place to place without having to ask to be driven. I never understood my mother's reasoning for her rules or why she always showed distress whenever me, my cousin or my aunt would tell her that I had hopped on a bus and *nothing happened*. At that point, I was also clueless as to why she would think anything could happen, but I never gave too much thought to it. So I always mentioned whenever I dared to go places on my own, but not fully understanding the implications of my actions—or anybody else's.

I only ever understood the significance of what my mother was trying to tell me when I returned to Mexico City in my mid-20s. I moved there to work at a research centre–Centro Mario Molina, a prestigious think tank dedicated to environmental studies. I was part of a team looking at sustainability in cities. My team looked into creating a database for carbon emissions for construction materials, which later evolved into trying to estimate emissions that urban sprawl could generate if cities grew one way or another. However, the projects never looked into how that growth could be planned or the social impacts each scenario could have. When presenting the project at the University of California Los Angeles (UCLA), a comment we received was "but where are the people?". This comment implied that user input was missing and that this growth, if badly planned or unplanned, could foster a number of negative consequences such as unequal access, misuse of the space for criminal purposes (such as drug use) or violence, whether gender-based or otherwise.

In parallel, in my personal life, several incidents drew my attention to various aggressions against women in public places: the stares, the passing of disturbing comments while walking on my own, people taking pictures of me without my permission, and once a man felt entitled to my body and

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[3]There were also previous connections with members of IMPLASCO.

started rubbing himself against my back while we were both standing up in a carriage of the metro. Whenever these incidents took place, I initially thought that maybe it was my fault, for being alone, for being light skinned, for wearing a skirt, for sitting down next to a man, for having my hair down. I also noticed that these incidents took place in specific areas of the city: near construction sites, at the intersection of two main avenues, or while using public transport systems.

In 2015, I got accepted into UCL to study a Master's programme: Engineering for International Development. I persuaded Dr Priti Parikh, then Programme Director, to allow me to take Gender in Policy and Planning at DPU as an extra module, as it could not count for credits towards my degree. I was very interested in the topic and wanted to explore it more, as my mother raised me as a feminist in practice, yet my knowledge of feminist theories and studies was very limited. The readings and discussions in class reminded me of the experiences I had as a kid (my mother telling me not to go around on my own) and later when living in Mexico City. I was particularly struck by the notion that urban planning could influence the perpetuation of violence, and how the design of the cities could affect the experiences of women while navigating them and facilitate violence towards them. It was at that point that I approached Dr Parikh, Dr Belur and Mr Walker to guide me in this research. My hope is that the findings of this research might ultimately contribute to girls and women around the world being able to transit their cities freely, and not have to worry about telling their relatives they arrived safely to their destination.

# Chapter 2

# Literature review

This chapter integrates literature in 3 disciplines: gender, built environment and criminology (see figure 2.1), seeking to set a holistic base for understanding the relationship between urban infrastructure and Violence Against Women (VAW) in the public sphere. The basis for this integration was to create a methodology to investigate VAW and apply it on the ground. This thesis sets to highlight the need for interdisciplinary research and integrated efforts to reduce VAW.
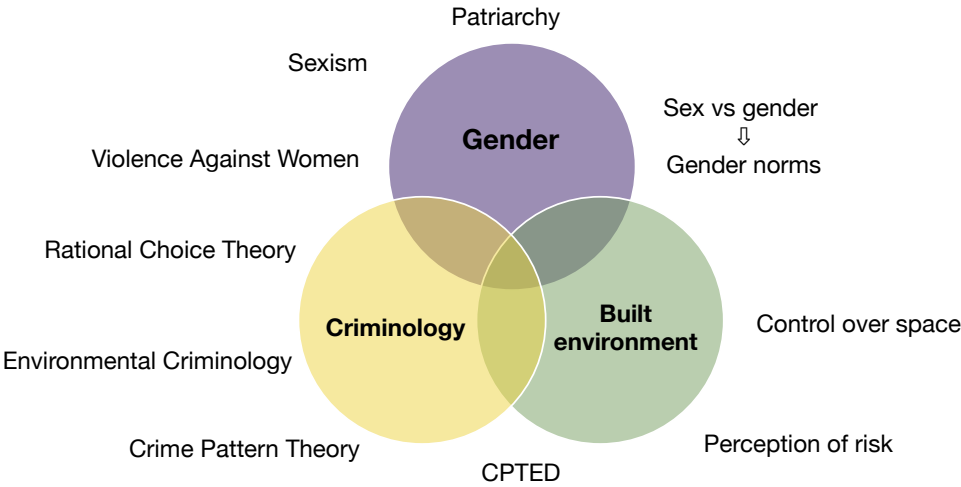


*Figure 2.1 – Bodies of literature explored in the thesis.*

Despite many institutions, academics and organisations recognising that social issues should be integrated into the design of infrastructure, there is still a challenge within the building engineering sciences to do so when physically designing cities or infrastructure. Understanding the differences between sex, gender and gender performativity is still lacking within the built environment engineering sciences, and how these differences have any connection with the design of urban infrastructure. This is particularly the case within developing countries, including Mexico. There is a need for gender inclusive and feminist cities, which demand the incorporation of gender issues in urban planning.

This chapter is organised in 4 sections. The first section focuses on the differences between sex

and gender, gender norms and gender relations, and how these give way to patriarchal and sexist structures. This first chapter also sets the basis for understanding VAW in this work. The second section presents the link between VAW and infrastructure, including how the built environment can foster fear of violence and reduce women's freedom of movement. This section also aims to connect between different disciplines to find explanations for social control over space and perceptions of risk. The third section discusses some of the main theories in crime literature, such as Rational Choice Theory, CPTED and Crime Pattern Theory, and their intersection with the built environment. The first and third sections introduce the theoretical underpinnings of this work and contain the most common discussions about these subjects as well as the gaps found in the literature. The last section presents the framework that was used to discuss the results of this research.

«Some passages of this chapter have been published in the researcher's article in Crime Science (August 2020), which have been abridged for this thesis:

»Garfias Royo, M., Parikh, P., and Belur, J. (2020). Using heat maps to identify areas prone to violence against women in the public sphere. *Crime Science*, 9(1):15 »


## 2.1 Gender, women and violence

The distinction between sex and gender and how they intersect in the way people behave and relate to each other is still not widely understood or acknowledged. The two concepts tend to be used interchangeably, but since the 1980s they have been recognised as two different aspects of the human experience (Hernandez and Blazer, 2006; Cornwall, 2004). While it can be argued that both concepts are socially constructed (Butler, 2011), the former is an ascribed status with which a person is born, due to their body and its biological characteristics, while the latter is an achieved status that is learnt through sociocultural context (Lindsey, 2010). Sex is what makes a person female or male and includes physiological components of the human body such as anatomy, reproductive systems, chromosomes and hormones. Some studies have shown that sex is more complicated than previously thought, as findings point towards a more nuanced view of sex. These findings include variations at anatomical level as well as hormonal, cellular or chromosome differences, indicating that a spectrum of sexual identities exists rather than a binary between male and female (Ainsworth, 2015; Hernandez and Blazer, 2006). Gender refers to the psychological, social and cultural traits which are linked to females and males in any particular social context (Lindsey, 2010, p. 4). Gender is a form of identity for the ordering of society that is culturally specific, although globally recognised, that arises from the physical attributes of a person. However, it cannot be assumed as a transhistorical or universal system of identity production, nor do individuals experience gender in the same manner, even within the same contexts (Jakobsen, 2014).

Gender sets the norms for acceptable personal and social behaviour, including rights and re-

sponsibilities, within a certain sociocultural context (Walker et al., 2012; Lindsey, 1997). These sets of norms can also be called *gender roles*, and they prescribe the manner in which gender should be expressed, including dress codes, posture and gestures associated with each acknowledged gender and the activities they should perform (Harris and White, 2013). These roles are contextual, as they are shaped and influenced by many biological, personal, familial, societal, racial, ethnic, cultural, political, religious and situational contingencies (O'Neil, 2015b; Rotman, 2009). They are further shaped by restrictive and sexist masculinity and femininity contextual ideologies and distorted gender role *schemas*. According to O'Neil (2015b), these *schemas* are related to a person's self-concept of the cultural definitions of femaleness and maleness which guide and organise an individual's perception of femininity and masculinity based on sex and gender roles, and are used to evaluate personal adequacy to fulfil the demands of contextual stereotypes. In essence, "individuals are both product and productive of their social environments, positing a socially constructed individual within a similarly socially constructed matrix of gender relations" (Shepherd, 2008, p. 48). Regardless of how limiting they may appear, gender role identities are an evolving process in which individuals, whether actively or passively, seek to understand and redefine masculinity and femininity (Shepherd, 2008).

Gender is a system of social practices that organises the interaction and structure of society, which operates simultaneously at individual, interactional and macro levels through mutually reinforcing processes (Jakobsen, 2014; Ridgeway, 2007; Risman, 2004). The gender role that each individual performs also takes part in "their entitlement to accessing and controlling a range of resources, and thus their different *gender needs* or *gender interests*" (Walker et al., 2012, p. 112). There are different theories that aim to provide an approach to the study of the nature and origin of power to perpetuate subordination. These theories seek to conceptualise gender relations and the main determinants of gender inequalities and oppression, mainly that of women, in order to understand social processes and outcomes, sharing the understanding of gender as a social product (Little, 1994; Radtke and Stam, 1994). The most commonly accepted theories regarding gender subordination are those based on feminist theories, which range from liberal, radical, multicultural and global and eco, as well as sex role theory, Marxists theories and dual systems theory. While the basis of analysis for gender relations and the oppression of women varies among these theories, they all share the common ground that oppression and inequality are based on systems of patriarchy and sexism.

Sexism refers to the belief, unsupported by any evidence, that females or males as a group are inferior or superior in social value, ability, personal worth, or other traits or characteristics (Albee, 1981, p. 20). In other words, sexism supports the perception that females are categorically inferior to males (Lindsey, 1997; Albee, 1981). According to Lindsey (2010), while males are not immune to the consequences of sexism, females are more likely to experience it. The author states that

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"beliefs about inferiority due to biology are reinforced and then used to justify discrimination directed toward females" (p. 3). Sexism promotes power differences between women and men as natural and necessary, preserving the hegemonic and patriarchal status quo, and generally resulting in injustices (O'Neil, 2015a, p. 60).

Patriarchy is the structure of society based on the rule, authority and, usually, domination by a male figure (Harris and White, 2013; Lindsey, 1997). Patriarchy exhibits male-centred norms (androcentrism) that operate throughout all social institutions of a society (Lindsey, 2010), and typically expresses economic oppression and overt discrimination towards women, particularly at family, religious, political, career and civic life levels (O'Neil, 2015c). The patriarchy is commonly regarded as "fundamental to the explanation of women's position in society" (Little, 1994, p. 5). However, the power relations through which discrimination against and domination over women operate are not universal in either direction or strength (Lindsey, 2010, p. 24). Considering the macrosocietal context is therefore crucial when analysing gender relations and the power structures that assist them. O'Neil (2015c, p. 59) defines a macrosocietal context as the economic, political, social and religious systems based on patriarchy that shape the gender role socialisation of women and men. The author argues that its evolution is based on patriarchal values, which have been responsible for the creation of hegemonic masculinity,[1] sexism and restricted gender and gender role stereotypes, which are embedded in the political, economic, religious, ethnic and familial structures of most societies. With regards to hegemonic masculinity, it idealises discourses of gender practice and is invested with fantasies of power and agency, giving legitimacy to the patriarchy, which guarantees the subordination of women and the dominant position of men (Parkes, 2015; Connell, 1995). Many masculine ideologies have rooted fears of femininity, regarding feminine attitudes, values and behaviours as inferior, immature or inappropriate and devaluing all that is feminine (O'Neil, 2015b, p. 108).

Masculinity ideology and conflicts between gender roles "contribute to social injustice when patriarchal and sexist norms cause societal oppression and discrimination against both men and women" (O'Neil, 2015a, p. 127). There is also a reciprocal relationship, in which societal oppression contributes to women's and men's internalisation of sexist femininity and masculinity ideologies, producing stereotypes and unequal power bases between the sexes (O'Neil, 2015b,a). Similarly, the dependence theory proposes that "greater gender inequalities at societal levels translates [sic] into traditional attitudes toward gender roles at the individual level" (Sani and Quaranta, 2017, p. 32). This means that women are more likely to adapt to *traditional roles* and are less likely to hold egalitarian attitudes, the more dependent they are on men.

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[1]Hegemonic masculinity arises when a community or culture has one ideal of masculinity (O'Neil, 2015c; Connell, 2000).

### 2.1.1 Violence Against Women (VAW)

Violence has strong links to social structures, norms and subjectivities intrinsic in gender and other dimensions such as religion, physical appearance, sexuality, religion and ability (Parkes, 2015, p. 6). Shepherd (2008, p.45) argues that the communal, interpersonal, individual and societal levels contribute to produce violence that is regulated by and regulates existing social norms and practices. These power structures support Violence Against Women (VAW). Gender-based violence distinguishes itself from other types of violence in that the gender of the victim relates directly to the motive of the attack (McIlwaine, 2013). Gender shapes the meaning of violent acts differently for women and men, as well as the meaning attributed to this act and the reaction towards it, and they vary depending on the situational and cultural context (Frías, 2017; Russo and Pirlott, 2006). Russo and Pirlott (2006, p. 179) contend that, to fully understand gender-based violence, an examination of various aspects of how gender shapes the dynamics, predictors and outcomes of violence for women and men is required.

VAW is a form of gender-based violence that is perpetrated towards people that socially identify as women as a result of their identity (Council of Europe, 2011; Shepherd, 2008). (See appendix A for the list of international treaties, agreements an conventions regarding VAW). The UN (1993) defines VAW as:

> Any act of gender-based violence that results in, or is likely to result in, physical, sexual or psychological harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or in private life.

Similarly, the Istanbul Convention (Council of Europe, 2011, p. 8) defined VAW as:

> A violation of human rights and a form of discrimination against women [. . . ] [encompassing] all acts of gender-based violence that result in, or are likely to result in, physical, sexual, psychological or economic harm or suffering to women, including threats of such acts, coercion or arbitrary deprivation of liberty, whether occurring in public or in private life.

The acceptance of traditional gender roles in patriarchal societies is closely related to escalating VAW given the hegemonic masculinity traits (such as aggression, toughness, self-reliance and sexual conquest) that males are expected to perform (Lindsey, 1997). O'Neil (2015b) proposes that fears of femininity may be a source of hostility between sexes and motivate acts of VAW. The author states that some boys and men may perceive femininity as threatening and emasculating to such an extent that they may attempt to destroy it in order preserve their own masculinity and deny some of their own feminine traits. Furthermore, according to Little (1994, p. 30), there are strong links between male violence and the control of women's sexuality in patriarchal structures. The author

states that violence, particularly rape, may be used by men to ensure dominance of male sexuality, and argues it is a medium to establish and reinforce power over women. Russo and Pirlott (2006, p. 181) add that gender roles and expectations in conjunction with sexual objectification, male entitlement and discrepancies in status and power have legitimised, sexualised, rendered invisible and helped in perpetuating VAW.

**Categorisation of VAW**

This research considers the broad definition of VAW proposed by the Istanbul Convention. Yet considerations need to be made regarding the different expressions of violence against women and what each of these types entail. According to the WHO (2005, p. 3), "one of the main challenges facing international research on gender-based violence against women is to develop clear definitions of different types of violence, that permit meaningful comparisons among diverse settings" as well as to understand the consequences, prevalence and offering legal protection to victims (Owens, 2016, p. 2198). These types of violence generally overlap with each other, presenting challenges in their conceptualisation and categorisation. Furthermore, they can occur both in private and public spheres, as well as at different levels: domestic, community, state and/or work environment (OAS, 1994). It is important to recognise that while VAW is perpetuated towards women, this does not necessarily mean that the perpetrator is a man (Shepherd, 2008; Russo and Pirlott, 2006).

VAW can be framed by categorising it in three main types: physical, sexual and psychological (see figure 2.2). While in most cases VAW is perpetrated by a partner (Inter Partner Violence; WHO, 2012), this study deals with violence inflicted in the public sphere (which may or may not be perpetrated by strangers or partners), so the definitions of the main types of violence will be outlined and considered accordingly.
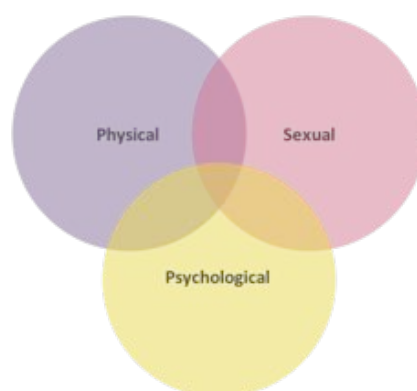


*Figure 2.2 – Intersection of types of violence (Source: Adapted from UNESCO and UNGEI, 2015).*

Psychological violence is usually used interchangeably with psychological or emotional abuse. This type of violence usually stems from aspects of power and control which a person exerts over another (victim) in order to prevent the victim from physically or emotionally separating from them, or retaliating if the victim shows efforts to do so (Mechanic et al., 2000). It is usually perceived as a

gendered crime, as it is generally perpetrated by men against women (Scott et al., 2015, p. 3309). It has harmful impacts for the victim and it is strongly correlated to physical aggression (Scott et al., 2015). This type of violence encompasses the following behaviours: threats, insults, yelling, belittling, constant humiliation, isolation and domination, restrictive or monopolizing behaviour, extreme and/or pathological jealousy (often unfounded), surveillance and monitoring behaviour, intimidation (such as harming of pets, destroying and/or damaging property), harassing (such as unwanted visits or calls or following a person in the street), threats of harm (including taking away belongings) and attempted physical harm, which can exist both with and without co-occurring physical violence (WHO, 2012; Johnson, 2006; Mechanic et al., 2000).

A subtype of psychological abuse is stalking (Basile and Hall, 2011). Although there is no clear consensus on its definition (Logan and Walker, 2017; Owens, 2016; Basile and Hall, 2011), according to Logan and Walker (2017, p. 201) definitions often "include a variation of two main components: (1) course of conduct (two or more acts) (2) that induces fear or concern for safety" of the person being targeted or a family member. The authors describe the first element as behaviours including leaving gifts, showing up uninvited, repeated calling and/or texting, and asking friends and family about the target; and relate the second element to the impact it has on the victim and the cumulative effect it has over time, as stalking interferes with many aspects of the target's life. Rafter (2003, p. 253) states that "although stalkers vary in their motives, types of victim, mental stability, and potential for violence, stalking is generally related to control and power over the person stalked". According to Owens (2016, p. 2197), stalking "is a widespread problem with serious economic, social, medical, and psychiatric consequences".

Another subtype of psychological violence that intersects with sexual violence is exhibitionism. According to Hanafy et al. (2016), a common definition includes "an urge to show one's genitalia in order to obtain a great degree of satisfaction". The authors also suggest there are different types of exhibitionism which include deliberate exposure (no physical or psychotic disorder, but drugs and alcohol can act as facilitators), repeated exposure (impulsive/compulsive behaviour), imposed exposure (without the consent of the victim) and inappropriate exposure (unacceptable place/circumstances). Exhibitionism is more than a straightforward behaviour of sexual exposure, but real and identified category of pathology, which means that many perpetrators of acts of sexual exposure are not diagnosed as exhibitionists. Hanafy et al. (2016, p. 62) suggest that the experiences of the victims should be taken into consideration, as "this type of aggression is often trivialized whereas it can sometimes be experienced by the victim as extremely violent", not only because of the element of surprise, which the authors associate "with the incongruity of such sexual crudity outside of any intimate context", but also due to fear of physical injury or sexual abuse.

Physical violence is the most commonly understood form of abuse. It is exercised through physically aggressive acts and differs from sexual violence in that it does not include any sexual trait. It

includes hitting or beating with fists or weapons, kicking, slapping, biting and strangling, and may or may not result in physical injury (Johnson, 2006; Krantz and Garcia-Moreno, 2005).

The World Health Organisation (2007, p. 5) defines sexual violence as:

> Any sexual act, attempt to obtain a sexual act, unwanted sexual comments or advances, or acts to traffic, or otherwise directed, against a person's sexuality using coercion, by any person regardless of their relationship to the victim, in any setting, including but not limited to home and work.

Sexual violence can take many forms, which include sexual abuse, sexual harassment, sexual exploitation, forced abortion and attempted rape/rape (WHO, 2007; IASC, 2005).

The concept of sexual harassment and its meaning is shaped by context, as the distinct legal framings of the concept stem from differences in political, legal and cultural constraints and resources, which impact its social understanding (Saguy, 2003). When committed in the public sphere it can be referred to as 'street harassment', and it includes unwanted interactions in public spaces between strangers, motivated by a person's actual or perceived gender, gender expression or sexual orientation (Arancibia Garrido et al., 2017). A victim's response may range from confusion and annoyance, to humiliation, anger or fear. It differs from other forms of harassment in that it is most commonly perpetrated by a stranger (Solymosi and Newton, 2020; Arancibia Garrido et al., 2017; Ceccato, 2017; Tripathi et al., 2017; Loukaitou-Sideris, 2016; Kearl, 2014).

Rape is one of the most severe and aggressive forms of sexual violence. The World Health Organisation WHO (2007, p. 5) defines rape as "physically forced or otherwise coerced penetration–even if slight–of the vulva or anus, using a penis, other body parts or an object". Attempting to do so is known as attempted rape, and rape of a person by two or more perpetrators is referred to as 'gang rape'. It can include the use of physical force, intimidation and threats, as well as forced participation in degrading sexual acts, usually accompanied by the denial of the right to use contraceptives or adopt protection measures against sexually transmitted diseases (Krantz and Garcia-Moreno, 2005, p. 819). Rape is associated with male entitlement to sex to re-establish traditional male dominance and achieve submission by the victim (Lindsey, 1997).

### 2.1.2 Challenges studying VAW

One of the biggest challenges when studying VAW is quantifying the extent of the problem. Finding statistics that reflect the reality and prevalence of this violence, as well as estimating the number of women that have been victimised, are challenging tasks for various reasons.

**Under-reporting.** First and foremost, it is widely accepted that VAW is vastly under-reported (Leclerc et al., 2016; Johnson et al., 2008; Lindsey, 1997). Women tend to be reluctant to disclose their experiences of violence, whether by holding back from reporting the incident to the authorities

or in their responses to researchers and survey interviewers (Sinha, 2013; WHO, 2001). The reasons to not disclose an incident of VAW are influenced by the context and circumstances in which the incident took place, including the perceived seriousness of the event, the location, injuries sustained, the perpetrator, and whether it was a one-off incident or part of a continuation or pattern of abuse (Johnson et al., 2008). The act of reporting can become impractical or stressful for many victims due to the lack of adequate resources, the effects of gender socialisation or fear of retaliation and stigmatisation (Rafter, 2003), particularly when the abuser is a male intimate partner (Lindsey, 1997).

**Under-counting.** Secondly, regardless of the survey instrument used, the possibility of under-counting exists (Sinha, 2013), especially if victims are not willing to share their experiences. Furthermore, there is no universal definitions of the different types of violence and crimes and so they vary among data sources and countries (Leclerc et al., 2016).

**Estimates variation.** Thirdly, estimates of the prevalence of VAW vary vastly depending on the survey applied—due to the sensitivity of the subject, questions asked, how they are framed and what is asked or not asked (Parkes, 2015; EU FRA, 2014; Russo and Pirlott, 2006). In addition, there are differences in the measuring strategies of victimisation and crime between administrative and population-based surveys. For example, police-reported surveys only record criminal code offences, in contrast with population-based surveys which document information on crimes regardless of if they were reported or substantiated by the police (Sinha, 2013).

**Police or State's unwillingness to report VAW.** Finally, a State's unwillingness to report data on VAW may limit the possibility of accessing information from the outset. Personal or political views may interfere with an administration's decision-making powers, hindering the ability to make comparisons or understand the depth of the problem at a given location (Purkayastha and Ratcliff, 2014; Ertürk and Purkayastha, 2012). As Johnson et al. (2008, p. 3) state, "even where VAW is officially prohibited by law, societal attitudes and legal systems are permeated by social norms that reinforce gender inequality and prevent women from having access to justice".

## 2.2 Links between VAW and infrastructure

The multifaceted and context-specific nature of VAW, in conjunction with the different subtle expressions of control, has led to the normalisation and condoning of less severe forms of violence and exclusion, and it can be argued that this has contributed to the perpetuation of VAW (Frías, 2016). In most cases, the underlying causes of VAW are rooted in patriarchal relations and the social control exercised in the interests of dominant gender, class, ethnic, religious, sexuality and age groups over most women (McIlwaine, 2013; Levy, 2013). Furthermore, the burden of responsibility of this violence generally falls on women, as they are compelled to believe that their protection and wellbeing

is dependent on how alert they are and their failure or success in avoiding vulnerable places, ultimately restricting their freedom of movement and agency (Lindsey, 1997; Radtke and Stam, 1994). VAW can hamper women's autonomy to move in public spaces, leading to restriction of movement and control over mobility, and can be aggravated by a physical space that facilitates it (Chant and McIlwaine, 2016; McIlwaine, 2013; Levy, 2013). Restricting women's movement can lead to oppression, subordination and exclusion, reflecting and reinforcing patterns of inequality, where women are disproportionately more affected than men (Loukaitou-Sideris, 2016). Control over mobility can be implicit, explicit or indirect and can come in the form of violence but also physical barriers, such as insufficient or absent infrastructure (McIlwaine, 2013). Different urban layouts can also present different challenges for women than for men, such as the relocation of industrial areas to the periphery of cities or the segmentation of services by major roads in large city centres (Little, 1994), which can restrict women's access to services or participation in society. Furthermore, risk in cities is not homogenous; some studies have found that women are more likely to experience violence in certain environments and urban areas than in others (Dymén and Ceccato, 2012). Transportation nodes, city centres and areas of mixed land use tend to be more criminogenic than residential areas (Dymén and Ceccato, 2012). In terms of specific urban environments, sexual violence committed in public has been associated with spaces such as parks, construction sites, vacant fields and buildings, narrow paths, public transportation, distant latrines and poor street lighting (Belur et al., 2016; Parikh et al., 2015; Willman and Corman, 2013; Dymén and Ceccato, 2012). However, there is a need for more research to understand how the existing design of urban infrastructure creates opportunities for the commission of violent crimes against women in public places (c.f. Mohamed and Stanek, 2019; Belur et al., 2016; Bhattacharyya, 2016; Parikh et al., 2015; McIlwaine, 2013; Whitzman et al., 2013; Wesely and Gaarder, 2004; Massey, 1994). There is a corresponding need for more research to improve the understanding of how urban infrastructure might be designed creatively to prevent or restrict opportunities for crime commission in public places.

### 2.2.1 Fear of violence and perceptions of risk

Fear of violence and (subsequent) experience of violence reinforce each other, reducing women's freedom of movement, fundamentally affecting well-being, and ultimately hampering their ability to participate in work, school and public life (UN Women, 2018; Moser, 2004b). Perceptions of risk and feelings of safety are closely related to people's relationship with particular parts of a city and their ability to occupy that space (Little, 1994). Safety constraints can hamper women's access to and experience of particular parts of the city, as they can be perceived and/or experienced as hostile places for a variety of reasons, including the urban design and the environmental context (Dunckel Graglia, 2016; Loukaitou-Sideris, 2012; Foster and Giles-Corti, 2008; Koskela and Pain, 2000; Pain, 2000; Little, 1994; Valentine, 1989, 1992).

Fear of crime can be associated with the general fear of being attacked, suffering physical harm or an intrusion of privacy and dignity. It is enhanced by personal physical vulnerability and lack of control over the situation, and can be higher for potentially vulnerable individuals that find themselves alone in the public space (Brantingham and Brantingham, 1995). Lane (2013) argues that gender is the most consistent predictor of fear of crime, and it is independent of the time, place, ethnicity, race or social class of the person. The author suggests that women tend to be more afraid of becoming victims of crime and violence than men, and some factors contributing to this fear include generalised physical vulnerability; different gender socialisation, in which masculine attitudes and behaviours show less fear; perceived threat of rape and physical and emotional harm; and gender inequality and greater social and physical power among men associated with patriarchy.

The knowledge that violence in the private sphere is more common than attacks by strangers in the public space has little effect on the fear of crime women experience (Dymén and Ceccato, 2012). The fear of strangers perpetrating violence in public spaces is more commonly instilled in women than in men (Chant and McIlwaine, 2016; Dymén and Ceccato, 2012; Valentine, 1992). Fear of attack and insecurities associated with VAW are one of the most influential constraints on women and girls' freedom of movement within the urban environment (Chant and McIlwaine, 2016; Dymén and Ceccato, 2012). Little (1994, p. 63) provides examples of the most frequently cited factors by women that contribute to their fear both in residential areas and in the wider built environment. The author states that the list is not exhaustive and that attempting to pin down exact causes of fear and isolate those that relate directly to planning and design environment is problematic, as they tend to be inter-related and difficult to identify. These factors include spaces without adequate lighting (such as dark environments which can be perceived as threatening, increase fear and the likelihood of being attacked), environments that offer 'hiding places' to would-be attackers (e.g. blind alleys, corners, blocked views, thick vegetation, communal garages or rubbish areas), or places that threaten health (such as busy roads, or pollution from traffic and industry).

Solymosi et al. (2019) argue that many studies looking at fear of crime focus on individual factors, but there is little research considering fear of crime as a context-specific phenomenon. The authors suggest the reason for this may partially be due to the tendency of criminology studies to highlight personal factors over the causal role of the immediate environment. Another reason may be the lack of available data describing the environmental context in which the experiences of fear of crime take place, making place-based approaches unfeasible. Solymosi et al. (2019) suggest that it is vital to better understand the contexts in which people experience fear in order to re-conceptualise the perception of crime and place as a function of people and their environment.

**Coping strategies**  Gender differences in the perception of risk can be noted in travelling patterns; trip times, purposes and destinations; transport choices; and work locations (Tripathi et al., 2017;

Levy, 2013). As a result of fear of crime and perceptions of safety, many women adopt coping strategies for self-protection to address the risk of being a victim of crime and to minimise the feelings and realities of danger within the built environment (Nieder et al., 2019; Ceccato, 2017; Chant and McIlwaine, 2016; Lane, 2013; Little, 1994; Valentine, 1989, 1992). There are several ways of categorising the behaviours and strategies women take for their protection and safety. A study conducted in India by Nieder et al. (2019) categorised the mechanisms women use to ensure their safety into:

1. Safety strategies: not going out alone, assessing risk factors, making fake phone calls, carrying pepper spray or sharp objects or running away from an assumed dangerous situation.
2. Avoidance strategies: avoiding public spaces, avoiding attention or ignoring sexual violence.
3. Empowerment strategies: practicing self-defence, showing self-confidence, sharing experiences with others and staying educated.

Similarly, Valentine (1992) categorised them into three groups (as summarised in Little, 1994, p. 64):

1. Time space avoidance strategies: reducing the perceived threat by simply not going out, or at least not alone.
2. Physical defence strategies: adjustment of physical appearance, including dressing 'modestly' or to pass as a man, or the carrying of weapons for self-defence.
3. Environmental response strategies: walking more quickly, being alert and aware of possible attackers, and conceptualising places as 'dangerous' or 'safe'.

Little (1994) contends that these strategies solely represent a response to the built environment as it currently exists rather incorporating the notion of changing the nature of the urban space. Massey (1994) suggests that taking gender seriously in the analysis of development can produce a more nuanced evaluation of regional policy and a better understanding of the organisation and reorganisation of the economic space. Gender expertise in the ways in which economic investments and urban design decisions contribute to gender inequality, including fear of violence, is necessary for building inclusive cities (Cosgrave et al., 2019). Although it should be considered that while the built environment may play a role in the constitution of fear of crime and violence, it has a social meaning in particular spaces, which should be equally addressed (Pain, 2000).

## 2.3 Violence and the built environment

«Some passages of this section have been published in the researcher's article in Crime Science (August 2020), which have been abridged for this thesis:

»Garfias Royo, M., Parikh, P., and Belur, J. (2020). Using heat maps to identify areas prone to

violence against women in the public sphere. *Crime Science*, 9(1):15 »

Even though the interconnections between crime, violence and urbanisation are complex, the configuration of the built environment can influence the interactions between people, their community and the urban space (Dakin et al., 2020; Armitage and Monchuk, 2017; Gupte et al., 2014; Moser, 2004b; Foster and Giles-Corti, 2008; Low, 1996; Brantingham and Brantingham, 1995; Massey, 1994; Clarke and Felson, 1993). The settings that produce fear and crime are a result of the environments that support daily life, such as public spaces, neighbourhoods, parks or transport systems (Brantingham and Brantingham, 1995). Urban spaces can provide the setting for many types of crime and violence, particularly when a government's capacity to provide basic services to its residents, such as security, is overwhelmed by high rates of growth (Gupte et al., 2014; Willman and Corman, 2013). Local crime, violence and fear of violence patterns, however, can be useful for understanding how people interact with their physical environment (Doran and Burgess, 2012; Loukaitou-Sideris, 2012; Moser, 2004b; Koskela and Pain, 2000; Felson and Clarke, 1998; Low, 1996; Brantingham and Brantingham, 1995).

### 2.3.1 Situational factors that facilitate crime

Elements of the built environment can facilitate violence and crime by providing a space that makes them safe, easy and profitable (Brantingham and Brantingham, 1995). Environmental criminology is interested in the interactions between people and their environment, and argues that crime should be understood as the product of victims, offenders and their setting, including time and laws (Brantingham and Brantingham, 1981). Places can facilitate the interactions between potential targets and potential offenders, which in turn has an impact on the number, types and timings of different crimes (Felson and Clarke, 1998; Brantingham and Brantingham, 1995; Clarke, 1995). The Rational Choice theory also derives from the concept of the interactions between target, offender and place; suggesting that for a crime to occur, a convergence in space and time of three elements must take place: the absence of a capable guardian, a suitable target and a likely offender (Felson and Clarke, 1998). A capable guardian is any person or implement whose proximity or presence could discourage a crime from taking place (Felson and Clarke, 1998). A target could be a person or object, whose risk of becoming a victim of crime is influenced by four elements: value, inertia, visibility and access, from the offender's perspective. This theory also supports the idea that community life "can change to produce more crime opportunities without any increase in criminal motivation" (Felson and Clarke, 1998, p. 5), which emphasizes changes in technology and organisation on a societal scale.

According to the Crime Pattern theory, crime is not a random phenomenon (Weisburd, 2015). From an environmental perspective, the location where a crime takes place is an important element for understanding the causes and prevention measures. Dakin et al. (2020) argue that the config-

uration of the urban layout and the design of buildings can be embedded with crime opportunities. Design measures can be incorporated in urban interventions by focusing on situational prevention approaches to reduce and prevent violence and crime opportunities (Farrington and Welsh, 2002; Clarke and Felson, 1993). Crime Prevention Through Environmental Design (CPTED) is an approach to crime reduction which aims to reduce situational opportunities for crime and violence through infrastructure improvements, as well as influencing the design and maintenance of an environment (Armitage, 2018; Armitage and Monchuk, 2017; Willman and Corman, 2013). According to CPTED, environments can be planned and designed to reduce the possibility of crime by encouraging surveillance, reducing areas of conflict by controlling access or movement, managing and maintaining a space, presence of physical security measures and promoting territoriality (Armitage, 2018; Armitage and Monchuk, 2017; Cozens and Love, 2015; Crowe and Fennelly, 2013; Dymén and Ceccato, 2012; Ekblom, 2011). Studies have found that situational prevention measures and applying CPTED principles can reduce crime (Cozens and Love, 2015). For example, buildings with ground-floor windows have been found to foster a sense of safety and promote pedestrian activity; removing footpaths or alleyways allows movement control; and improvements in street lighting have been associated with reduced vehicle and property theft (Armitage, 2018; Oreskovic et al., 2014; Cozens and Love, 2015; Farrington and Welsh, 2002). In the case of street lighting, Farrington and Welsh (2002, p. 316) argue that it "can act as a catalyst to stimulate a reduction in crime through a change in the perceptions, attitudes, and behaviour of residents and potential offenders". A number of studies have also indicated that adopting a situational approach can similarly have a positive impact on sexual offending against women by reducing opportunities for such crimes to be committed in public places (c.f. Leclerc et al., 2016; Cubbage and Smith, 2009; King, 2009; Eck, 1994). According to Willman and Corman (2013) the evidence base of these measures indicates that they are most efficient in combination with social components aiming for behavioural and social norms changes.

In Mexico, a large Federal government infrastructure investment programme was randomly allocated across low-income urban neighbourhoods with the aim of increasing social capital and social cohesion (McIntosh et al., 2015). The programme did not produce the expected outputs as the investment showed an insignificant effect on increasing the index of social capital and social cohesion in the neighbourhoods in question; however, it showed declines in the rate of misbehaviour among teens and violent crime, particularly violent assault. The investment consisted of upgrading infrastructure (including roads, sidewalks, access to water and sanitation and lighting) as well as public spaces (such as parks, community centres and sports facilities; McIntosh et al., 2015). The project increased walkability and had significant impacts in the quality of the households and basic infrastructure in the areas where the investment was applied, and a large increase in youth engagement activities that were specifically promoted. While the infrastructure interventions of this programme do

not appear to have been planned according to crime prevention or CPTED principles, it nonetheless suggests a link between infrastructure improvements and reduction of crime.

Certain attributes of the built environment correlate with higher incidents of crime, and allow for the creation of crime attractors or crime generators. Crime attractors and crime generators, as explained below, are two related concepts in Crime Pattern theory used to explain the spatial concentrations of criminal activity. They include locations, places, sites or buildings with characteristics that make them vulnerable to crime (Bernasco and Block, 2011, p. 35). Potentially relevant crime attractors and crime generators include parking places, supermarkets, public housing areas, bus stops or public transport stations, schools, bookstores, warehouses, pharmacies and clothing stores (Clarke and Eck, 2003; Ariel and Partridge, 2017; Bernasco and Block, 2011; Brantingham and Brantingham, 1995).

Crime generators are places that are usually easily accessible to the public. They are areas with large numbers of people, attracted by reasons unrelated to criminal activities or criminal motivations (Bernasco and Block, 2011), and include places that lack capable guardians, thus creating opportunities for crime (Ariel and Partridge, 2017). These areas may become hot spots as the large presence of people creates opportunities for crime (Brantingham and Brantingham, 1995). Crime attractors do not generally bring together large groups of people, but their function provides the opportunity for strongly motivated criminal offenders to find potential victims or targets (Clarke and Eck, 2003; Bernasco and Block, 2011; Brantingham and Brantingham, 1995). Crimes in such locations tend to be committed by outsiders of the area (Brantingham and Brantingham, 1995). These areas are called 'pockets of crime', and are usually located near nodes of cash economies, such as fast-food restaurants, bars, ATM cash machines and pawn shops (Bernasco and Block, 2011). Another example of crime generator is public transport, which a growing body of research is investigating, particularly regarding sexual offending against women (c.f. Solymosi and Newton, 2020; Mazumder and Pokharel, 2019; Gekoski et al., 2017; Ceccato, 2017; Ceccato and Paz, 2017; Natarajan et al., 2017; Tripathi et al., 2017; Dunckel Graglia, 2016; Newton, 2016; Chui and Ong, 2008). There are also a number of studies that have found solutions in situational measures to VAW on public transport (c.f. Lea et al., 2017; Natarajan et al., 2015; Newton, 2014; Dunckel Graglia, 2013; Smith, 2008).

### 2.3.2 Spatial analysis to aid crime prevention

«This section have been published in the researcher's article in Crime Science (August 2020), which has been abridged for this thesis:

»Garfias Royo, M., Parikh, P., and Belur, J. (2020). Using heat maps to identify areas prone to violence against women in the public sphere. *Crime Science*, 9(1):15 »

Becoming a target of crime depends on particular situational dynamics shaped by micro geo-

graphic opportunity structures (Cornish and Clarke, 1986). The criminology of place focuses on understanding why crime occurs at specific places, as "crime has an inherent geographical quality" (Chainey and Ratcliffe, 2005, p. 1), and a nature to be concentrated in local geographical areas which are not distributed randomly in space (Weisburd, 2015; Rossmo, 2014). Concentrations of crime incidents can be referred to as *hot spots*, which tend to be no larger than a street segment, a road intersection, a specific address or a single plot of land in some cases (Ariel and Partridge, 2017; Mazeika and Sumit Kumar, 2017; Weisburd, 2015; Bernasco and Block, 2011).

Chainey and Ratcliffe (2005, p. 147) define hot spots as representations of "an area of high crime concentration, relative to the distribution of crime across the whole region of interest", which can contain specific and accurate point data (Kulyk and Sossa, 2018; Chainey and Ratcliffe, 2005). There is, however, no universal standard definition or measurement of the number of crimes that need to occur for an area to be defined as 'hot', and continuous monitoring of an area needs to be carried out to understand the patterns of crime of that area (Eck et al., 2005; Clarke and Eck, 2003). Heat maps are an applied visualisation method for spatial patterns (Yu and He, 2017) that can be used as an alternative tool for crime mapping when the available data is not suitable for hot spot analysis (Garfias Royo et al., 2020). This method is based on surface density maps which process data as a gradient of continuous colour distribution, and the *'heat'* derives from the high geographic concentration of events in or around a particular location (Kulyk and Sossa, 2018).

Crime prevention planning and policing by law enforcement agencies around the world have widely used crime mapping (Leong and Chan, 2013; Chainey and Ratcliffe, 2005). The use of crime maps in Mexico, however, is still in its early stages. The only state in the country which is known to produce georeferenced data as well as openly and publicly publish crime data is the government of Mexico City (Gobierno de CDMX, 2020; FGJ CDMX, 2020). The remaining information relies on data published by academics or grassroots organisations. Such as the work by Calderón et al. (2019), which produced a national level heat map for Organized-Crime-Style Homicide, examining trends in organized crime and violence in Mexico during 2018. Or the work by Valle-Jones (2019), which uses national open data to produce maps and visualisations of Mexico City's crime spots.

Crime mapping for modelling spatial patterns of VAW is still a relatively new area of study (Manazir et al., 2019; Mohamed and Stanek, 2019; Serendipia, 2019; Gracia et al., 2015). One development of this application has been the creation of apps for female users to report of events of violence and potential areas of risk (Manazir et al., 2019; Muldoon et al., 2019; Nieder et al., 2019; SafetiPin, 2020; HarassMap, 2020).

In the case of Mexico, only a handful of examples of the application of crime mapping of VAW were found. One of this examples was a state-level heat map to display the areas most at risk of VAW in Nuevo León created by a partnership between the United Nations Office on Drug and Crime (UNODC) in Mexico and the State Institute of Women of the state of Nuevo León (López Padilla

et al., 2018). The maps were generated using official crime data recorded by different state and national institutes. Another example was an exploratory analysis to identify patterns of harassment in the metropolitan area of Querétaro, conducted by San Román Tajonar and Meza de Luna in 2019. In this case, the data was based on a web harvesting exercise based on victims of VAW registered online. A grassroot level exercise conducted by Salguero (2020a) is widely recognised within activist groups and by the general public, as it is often reported in the news as well as social media. Salguero (2020b) continuously maps femicides reported in the media throughout the country, which generally differ greatly from the number reported by the authorities. With regards to policing, besides the data published by Mexico City's local government, no evidence or other publicly available data was found to suggest that VAW crimes are georeferenced by the police at municipal, state or national levels.

## 2.4 Frameworks for understanding the links between VAW and infrastructure

This research focuses on the intersection between VAW and the built environment. Therefore, in order to provide guidance in the analysis and discussion of the results of this research, a framework (FW) that could emphasize the intersection between social factors and the built environment was needed. It was important to understand how the dynamics of gender relations are linked to the perpetration of VAW, but also how the built environment shapes people's behaviour, with a focus on the generation or attraction of crime to gather information on what produces violent spaces. Various FWs were considered to analyse and discuss the findings of this work, including the Interactions between urban forms and everyday violence by Gupte and Commins (2016), the Theory of Change model by Unterhalter et al. (2014) and the Social-Ecological Model.

### 2.4.1 Interactions between urban forms and everyday violence

by Gupte and Commins (2016)

The FW derived from a futures workshop aimed at characterising the plausible challenges that security provision in cities in 2040 might pose and "formulating ideas on how development policy and practice can pre-emptively respond today" (Gupte and Commins, 2016). The framework conceptualises violence and order in cities as a function of three interconnected dimensions (D) of the urban form:

- **D1. Grid:** City spaces, layout and planning, shaped by political, technological, economic, social and gendered factors.
- **D2. Governance:** The structures and processes that constitute the institutions through which people are excluded or included, capacity and willingness of state actors, participation and socio-political voice, versus exclusion and marginality.

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- **D3. Ephemerality:** Shifting dynamics and identities of violence that frequently relate to the grid and governance of the city, "but [are] not reducible to them" (p. 16).

The authors state that the FW is not an exhaustive description of the urban form and that cities display a different set of configurations and interrelations among the three dimensions, depending on local, spatial and temporal contexts (p 16). The purpose of the FW is to systematise cities into various dimensions and provide a focus on their overlaps, recognising that both ordered and violent outcomes result from different combinations of elements of the three dimensions. The FW nonetheless lacks a level for understanding how a person may be more vulnerable to becoming a victim of violence.

### 2.4.2 Theory of Change model

by Unterhalter et al. (2014)

The FW was developed for reviewing the types of interventions which research suggests are capable of expanding and improving girls' education (Unterhalter et al., 2014, p. 1). It originated from the understanding that gender equality and girls' education are influenced by processes within and beyond schools, including contextual aspects at local, national and global levels, as well as hierarchies and forms of exclusions, engagements with power and distribution of resources. The FW categorises interventions into three types depending on their focus:

1. Infrastructure and resources: material and physical inputs that target supply, demand or both.
2. Policy development and changing institutional culture at different levels (local, provincial, national or international): Through the implementation of changes in practice and policy or reshaping the social relations and culture of institutions.
3. Addressing changing norms on gender and girls' and women's rights and support: Increasing inclusion, discussion, reflection, decision making and action for previously excluded groups and individuals (p. 15).

The FW acknowledges that interventions can have overlapping concerns and the relationships between them are dynamic. It was developed as a multi-level model "to enable an examination of the relationships between context, different forms of interventions, outputs relating to girls' education and broader gender equality outcomes" (p. 1). While this model presents a very sophisticated categorisation and links among levels, its focus is very narrow towards education, and its complexity could present a challenge for its application on the topic of this research.

### 2.4.3 Social-Ecological Model

The Social-Ecological Model suggests that the prevention of violence requires a better understanding of the risk factors that have an influence on its perpetration at different levels of analysis (Centers

for Disease Control and Prevention, CDC, 2020). This model derives from the ecological FW, which suggests that there is no single factor that can explain why some people are at higher risk of violence, and sees violence as the interaction of many factors at four levels: individual, relationship, community and societal (WHO, 2020). The model suggests that in order to prevent violence, "it is necessary to act across multiple levels of the model at the same time", and this approach is more likely to have sustainable outcomes over time (CDC, 2020). Heise's work (1998) is one of the earliest examples of the application of the ecological framework to understand VAW. Heise (1998) contends that a single factor explanation for male dominance as the foundation for theorising VAW is inadequate. Thus the author suggests that an ecological approach to VAW conceptualizes violence as a "multifaceted phenomenon grounded in an interplay among personal, situational and sociocultural factors" (p. 263), which can then account for both why men become violent and why women as a class are often their target.

The levels proposed by the model are the individual, relationship, community and societal levels (see figure 2.3). According to the model, at the individual level, biological traits or personal history might have an influence on a person's behaviour and increase or decrease their likelihood of becoming a victim or perpetrator of violence (CDC, 2020; WHO, 2020). Some of the factors include, but are not limited to, having experienced violence, their education level, substance abuse or income. The CDC (2020) states that prevention strategies include promoting behaviours, attitudes and beliefs that prevent violence, including conflict resolution and life skills training. The second level–the relationship level–is closely related to the individual level, as it examines close relationships that can have an influence to increase risk of becoming a victim or perpetrator (CDC, 2020). For instance, a person's close social circle, their family members or partners, might influence this person's behaviour and contribute to their experience (CDC, 2020; WHO, 2020). At this level, prevention may come in the form of mentoring and family-focused strategies or peer programmes designed to strengthen healthy relationships and problem-solving skills (CDC, 2020).

The physical settings, or community context, are explored in the third level, where social relations take place. The aim of this level is to identify the characteristics of these places which are associated with becoming a victim or perpetrator of violence (CDC, 2020). Risk factors include but are not limited to mobility, population density or the existence of a local drug trade (WHO, 2020). The CDC (2020) describes prevention strategies at this level having an impact at the social and physical environments, and can include improving economic and housing opportunities and reducing social isolation. The last level looks at broad societal and institutional factors that create an environment in which violence is encouraged or inhibited (CDC, 2020; WHO, 2020). These consist of macro-level social and economic policies, including institutions and governance, as well as cultural norms that maintain socioeconomic inequalities and support violence as an acceptable conflict resolution strategy (CDC, 2020; WHO, 2020). It can also include other societal factors or norms such as male

dominance over women or availability of weapons (WHO, 2020).



*Figure 2.3 – The Social-Ecological Model. (Source: CDC, 2020).*

**Social construction of space**

The concept of space as a social construct is crucial for understanding woman's exclusion from the urban spaces (Koskela, 1999). An individual's use of space is a product of social and gendered power relations, where "space is not just a medium for interaction but is also produced by this interactions" (Koskela, 1999). According to Rodman (1992), places are not 'inert containers', but culturally relative, politicised, historically specific and local, which are socially constructed and have multiple constructions. Low (1996) distinguishes between the *production of space* and the *construction of space*. The author defines the *production of space* as the factors intended for the physical creation of a setting, including technological, economic, social and ideological factors (Low, 1996). Low suggests there is a materialist emphasis on the term, which allows for defining the historical emergence and economic and political formation of the urban space. Whereas the term *social construction of space* is applied to the symbolic and phenomenological experiences of space negotiated through social processes, such as exchange, conflict and control (Low, 1996). The term can therefore be defined as the "transformation of space [...] into scenes and actions that convey symbolic meaning" (Low, 1996, p. 862). Rodman (1992) states that "spaces have multiple meanings that are constructed spatially" which include physical, emotional and experiential realities for inhabitants at particular times which also need to be understood in addition to their setting. Age, class, gender, ethnicity and cultural values influence how a person navigates and interprets the urban space (England, 2018). For Massey (1994, p. 179) "space and place are important in the construction of gender relations", from the symbolic meanings and gendered messages they transmit, to exclusion by violence. In the author's view, "spaces and places are not only themselves gendered but, in their being so, they both reflect and affect the ways in which gender is constructed and understood".

Both the production and construction of space are contested for ideological and economic reasons (Low, 1996). Understanding these reasons can in turn be useful to determine how local conflicts over space can be used to identify and explore larger issues (Low, 1996). Rodman (1992) notes that while individuals have agency, there is a dimension of power beyond the individual control. This power ties into the way in which social structures are set up, which also plays a role in the social construct of a place. Ertürk and Purkayastha (2012, p. 150) state that women's freedom

from violence and physical security "are directly linked to the material basis of relationships that govern the distribution and use of resources and entitlement as well as authority within the home, the community, the state and the transnational realm". The authors contend that cultural rationales for negating or limiting women's rights are grounded in economic interests and power dynamics.

### 2.4.4  Selected Framework

A model that could integrate the overlapping and interconnectedness of different attributes such as personal, social, physical and political was needed to understand how the environment has an effect on people's lives. The FWs which were considered to analyse and discuss the findings of this work included the 'Interactions between urban forms and everyday violence' FW by Gupte and Commins (2016) and the 'Theory of Change model' by Unterhalter et al. (2014). However, the former FW lacked an explanation of how a person may be more vulnerable to become a victim of violence; and the focus of the latter FW was very narrow towards school settings. A simpler model that could be applied to broader situations was needed. These FWs were deemed unsuitable for this research as they did not offer the adaptiveness of the Social-Ecological Model, which was decided was the most suitable for this study. It was adapted however to include an analysis of the social construction of space within the last two levels of the FW.

Maruthaveeran and Konijnendijk van den Bosh (2015) developed the socio-ecological FW for analysing fear of crime, which has a socio-ecological approach and was developed as a summary of the main findings of a systematic review of attributes evoking fear of crime in urban green spaces. It integrates multidisciplinary perspectives drawn from criminology and environmental psychology, and focuses mainly on the social and environmental levels, which according to the authors, represent a two-way interaction, "as signs of disorders not only evoke fear of crime but also indicate to criminal offenders the absence of social cohesion among people or that an area is not managed or cared for" (p. 16). Similarly, this research focuses mainly on the last two levels of the Social-Ecological Model. The research questions of this work focus on the community and social levels in terms of locations for the commission of VAW, infrastructure features linked to violence and infrastructure delivery. Focusing on these levels allows for the identification of prevention measures and the provision of recommendations for policy makers and urban planners as an outcome of this research. In addition to the definitions of community and societal levels in the Social-Ecological Model, the social construction of space was used as a supportive conceptual framework to discuss the findings on how space is contested and constructed through VAW or the failure to address it.

# Chapter 3

# Corregidora municipality as a case study

A case study is an in-depth exploration from multiple perspectives of a particular topic in a 'real life' context, which is evidence-led, research-based and inclusive of different methods (Simons, 2009, p. 21). The primary purpose of a case study is to generate understanding through the process of conducting critical and systematic inquiry for informing policy and community or civil action (Simons, 2009). It is especially useful when the boundaries between context and phenomenon are not evident and a myriad of mutually dependent variables require integrating (Simons, 2009; Scholz and Tietje, 2002). In feminist research, case studies can be useful to explore, critique and analyse the factors which contribute to the control and oppression of women from a variety of perspectives (Wallace, 2012), including an enabling environment. The use of a case study research methodology requires interpretation of the data gathered, supported by a clear explanation of the basis of that interpretation, including clearly addressing the decision-making process that was used, the methodological logic under which these decisions were made and the process of making interpretations (Wallace, 2012).

In the case of this research, a single case study was conducted in the urban public space of Corregidora municipality in Mexico (see figure 3.1) to explore the link between urban infrastructure and the perpetration of Violence Against Women (VAW) (Bleijenbergh, 2012, p. 62). This location was chosen as a case study on the basis that there is a lack of studies regarding the perpetration of VAW[1] in public spaces outside of Mexico City. Additionally, as outlined in section 1.4 and further described in section 4.4.2 later in this thesis, an agreement for collaboration was signed with the local government, given the active role the local government at the time had adopted in implementing research projects for understanding the problems the municipality faced. Furthermore, the rapid growth of the municipality presents an opportunity for intervention in the way infrastructure is

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[1]That do not focus on femicide.

delivered to produce safer spaces and a safer city for women from the inception of built environment projects. This chapter introduces background information on Mexico as well as Corregidora. This chapter also outlines the need for collecting primary data, as it was not possible to draw conclusions regarding the extent of VAW in the municipality of Corregidora from the publicly available data, particularly where incidents of VAW take place.

«Some passages of this chapter have been published in the researcher's article in Crime Science (August 2020), which have been abridged for this thesis:

»Garfias Royo, M., Parikh, P., and Belur, J. (2020). Using heat maps to identify areas prone to violence against women in the public sphere. *Crime Science*, 9(1):15 »



*Figure 3.1 – Municipality of Corregidora. Figure by the author with shapefiles from INEGI (2015b).*

## 3.1 Mexico: Background

Mexico has experienced rapid urbanisation since the 1960, with average annual population growth of 3% (World Population Review, 2018; World Bank Data, 2018; see figure 3.2). As of 2015, about 77% of the population lived in urban areas (INEGI, 2015d), and the national intercensal survey of 2015 showed that 47% of the population (56.2 million people) live in urban areas of more than 100,000 inhabitants (INEGI, 2015d). Economic growth has resulted from this urbanisation process, with a steady annual average growth of 2.6% in GDP and 1% in GDP per capita as of 2016 (World Bank Data, 2018).

Rapid urbanisation in Mexico has resulted in unorganized, uncontrolled and exponential expansion of towns and cities throughout the country, characterised by being dispersed, distant and disconnected (Kim and Zangerling, 2016). Corruption, unplanned strategies and general lack of vision have had a negative impact in the development of planning policies and practices, which in turn has
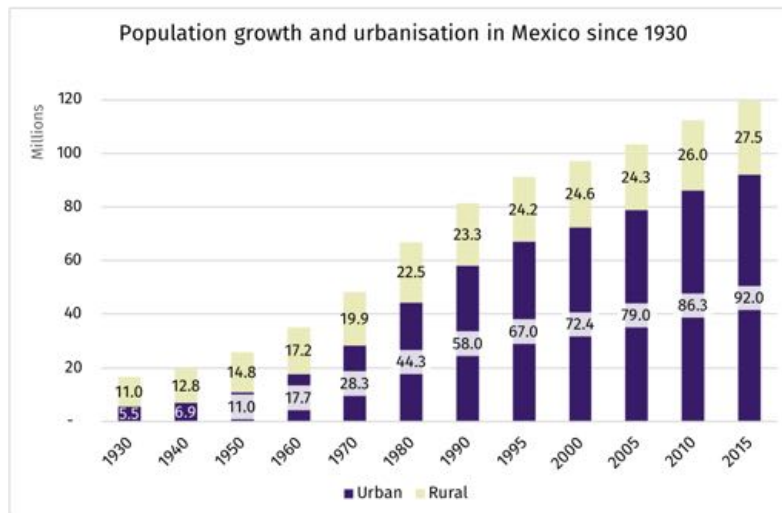
*Figure 3.2 – Population Growth and Urbanisation in Mexico since 1990. (Sources: INEGI, 1980, 2001, 2005, 2010).*

had a negative effect in the delivery of housing, provision of urban infrastructure and suitable land management (Marosi, 2017; Kim and Zangerling, 2016).

### 3.1.1 Corruption, impunity and injustice

Mexico is listed among the most corrupt countries of the Organisation for Economic Co-operation and Development (OECD) member states. The 2017 Corruption Perceptions Index ranked Mexico 135 out of 180 countries in perceived levels of public sector corruption, with a score of 29 out of 100 points (where 0 was highly corrupt and 100 was very clean; Transparency International, 2018), putting the country below the global average of perception of corruption (see figure 3.3). This can be seen as a reflection of the persistent misuse of federal and state public office and the impunity climate that permeates society (International Crisis Group, 2017). According to Rodriguez Ferreira (2016), a series of economic crises between the 1980s and the 1990s brought sharp increases in certain types of crimes such as robbery and theft, and by the mid-1990s an increase in assault, rape and other sexual offenses was observable. Moreover, the 1990s acted as a breaking point for organised crime related violence, leading to the provision of public security increasingly falling into federal and military jurisdiction (Estévez-Soto and Pérez Esparza, 2017; International Crisis Group, 2017), leaving municipal level police forces without support (Angélica de la Peña in UNAM, 2018). Additionally, an over a decade-long war against drugs has contributed to an increase of both petty and serious crime and complaints of violations of human rights by security forces, which targeted by-standers and suspect criminals indiscriminately (Estévez-Soto and Pérez Esparza, 2017; Rodríguez Ferreira and Kuckertz, 2017; Rodriguez Ferreira, 2016). This increase in crime undermined the collective sense of security, which—together with the failure to create law-abiding and effective police forces—led to a decrease in crime reporting and overall erosion of social capital (Rodriguez Ferreira, 2016).

The country's social fabric has been steadily deteriorating, with violent crimes spreading amid

almost total impunity (Lakhani, 2016). Impunity is exposed when the relation between preliminary investigations against the number of incarcerated murderers is observed (Melgoza et al., 2017). Estimates show that about 99.5% of the reported crime cases go unpunished. Moreover, only 6.3% of criminal incidents are reported at national level, and only in 14.1% of those cases a crime was prosecuted. This means that only 0.89% of the reported cases get solved (Zepeda Lecuona, 2017). There is substantial lack of information regarding crimes due to ineffective actions by the state and failure to follow the appropriate processes and documentation, resulting in a large number of unknown and unclassified victims.



*Figure 3.3 – Corruption perceptions index 2017 of the Americas: Mexico was given 29 out of 100 points, ranking 135 of 180 countries (Source: Transparency International, 2018).*

### 3.1.2 The widespread Violence Against Women

The impunity that permeates the justice system has facilitated and encouraged the expression of many different types of violence, including Violence Against Women (VAW). Women have become targets of torture, abductions and disappearances, arbitrary detention, criminalisation and murder in alarming numbers (Bautista, 2017). According to a survey from the National Institute of Statistics and Geography in Mexico (INEGI, 2017a) regarding household relation dynamics with a focus on gender related VAW, 66.1% of women over 15 years old in Mexico have been victims of at least one type of violence, whether physical, sexual, emotional or economic violence. According to the survey, the states that exceed the national average for VAW include Mexico City, Estado de México, Querétaro (where the case study is located), Aguascalientes and Jalisco (Cruz Vargas, 2017; see figure 3.4). Moreover, it is reported that 38.7% of women have been victims of violence by strangers in the public sphere, in spaces such as parks, streets and public transportation, with 66.8% of the aggressions being of sexual type, such as offensive remarks, intimidation, attempted rape and/or rape (INEGI, 2016a, 2017a). The Executive Commission for Attention to Victims (CEAV) reported that from 2010 to 2015, the total number of sexual crimes committed in the country was of 2,996,180—an average of 600,000 sexual crimes per year—of which an estimated 81% of the victims were female (CEAV,

2016). CEAV reported that the highest percentage of preliminary investigations were sexual abuse and rape crimes, representing a 67.4% (or 56,227 cases) of the total number of inquiries for sexual crimes, with 29.2% of the crimes reported by females occurred on public transportation or in taxis, and 6.2% occurred in a public space, the street or in a community.



Fuente: Encuesta Nacional sobre la Dinámica de las Relaciones en los Hogares, 2016

*Figure 3.4 – Proportion of women that have been victims of at least one type of VAW in their lifetime per state in Mexico. 71.2% of women in Querétaro, where the case study is located, reported experiencing VAW (Source: INEGI, 2017a).*

The widespread VAW in Mexico is manifested in its most extreme expression: femicide. In 2009, the Mexican State was condemned by the Inter-American Court of Human Rights (IACHR) for violating the human rights of three victims of femicide in Ciudad Juárez (the 'Cotton Field Case'), as well as for the violation of the human rights of their mothers and next of kin (Medina Rosas, 2010, p. 5). The families of the three murdered women denounced authorities regarding irregularities in the investigation, including of the failure to preserve the crime scene and the destruction of the corpses by local animals (Bautista, 2017). It was the first time in history that a nation-state was condemned and prosecuted by a supranational institution, the IACHR, using normative frameworks on VAW, specifically those outlined by the Convention of Belém do Parà (see appendix A).

Regardless of this precedent, the rates of femicide are on the rise (Bautista, 2017). The National Citizen Observatory of Feminicides (OCNF, 2014) recorded the killing of 3,892 women nationwide between 2012 and 2013, of which only 15.75% of the cases were investigated as femicides. However, 46% of those cases involved death through the use of excessive physical force, such as battering, burns, wounding with sharp weapons or suffocation, 16% by firearms, and authorities had failed to disclose the cause of death for the remaining 38%. A study conducted by ONU Mujeres, Inmujeres and the Ministry of the Interior of Mexico (2016) showed that the number of deaths officially recognised as femicides duplicated in Mexico since 2007, from 1,089 annually in 2007 to 2,746 annually in 2016. Between 1985 and 2014, there were 52,210 female deaths with a presumption of

homicide and which share characteristics of brutality and impunity which often feature in femicides, such as investigatory authorities first ruling the deaths as suicides before dismissing the possibility of femicide and neglecting to follow the protocols in place (Bautista, 2017). The study by ONU Mujeres et al. (2016) also reveals the rate of impunity in such cases by comparing the number of preliminary investigations to convictions. Aristegui Noticias (2017) reported that the National Census of Law Enforcement recorded 2,277 allegations of intentional homicide against women in 2015, of which only 76 (3.33%) concluded in condemnatory sentence.

Salguero (2020a) created an interactive map in 2016 to map and track all the cases of femicides reported in the media (Coppel, 2017). The map documents 2,083 cases for 2016, 2,275 for 2017, 2,246 for 2018, 1,790 for 2019 and 1,332 from January to July of 2020 (a combined total of 9,726 cases, Salguero, 2020b; see figure 3.5). These numbers contradict the national official number, which reported an aggregated 3,720 cases for the same period of time (SESNSP, 2020). The tool Salguero (2020a) created is useful to illustrate the magnitude of the problem. There are no clear records at national level that allow the extent of this violence to be measured, as authorities often fail to follow the national and international protocols associated with femicide, including proper reporting of the cases.

Although this thesis was not directly concerned with femicide, as a subject it illustrates both the increasing prevalence of VAW in Mexico and many of issues associated with it, including an absence of reliable official statistics and the inadequate response by authorities at state and national levels.



*(a) Google Map of georeferenced femicides. Each colour represents a different year (Source: Salguero, 2020a).*

*(b) Crowdmap of georeferenced femicides showing the aggregated number of cases in different areas of the country. (Source: Salguero, 2020b).*

*Figure 3.5 – Screenshots of the femicides reported in the press and media from January 2016 to July 2020, georeferenced by Salguero.*

## 3.2 Municipality of Corregidora

The municipality of Corregidora is one of the 18 municipalities of the State of Querétaro, north-central Mexico. Corregidora municipality is located in the South West of the state (see figure 3.6)

and has an average extension of 235.541 km$^2$ (INEGI, 2015a; SEDESOL, 2013b). The municipality has an annual population growth of 5.2% (INEGI, 2015c), with some estimates showing up to 8% annual population growth (Banda Campos, 2017). The growth trend of the municipality has been steadily increasing since the 1980s, when industrial development took place due to the construction of the Federal Highway no. 45 (Joulia Lagares, 2011).
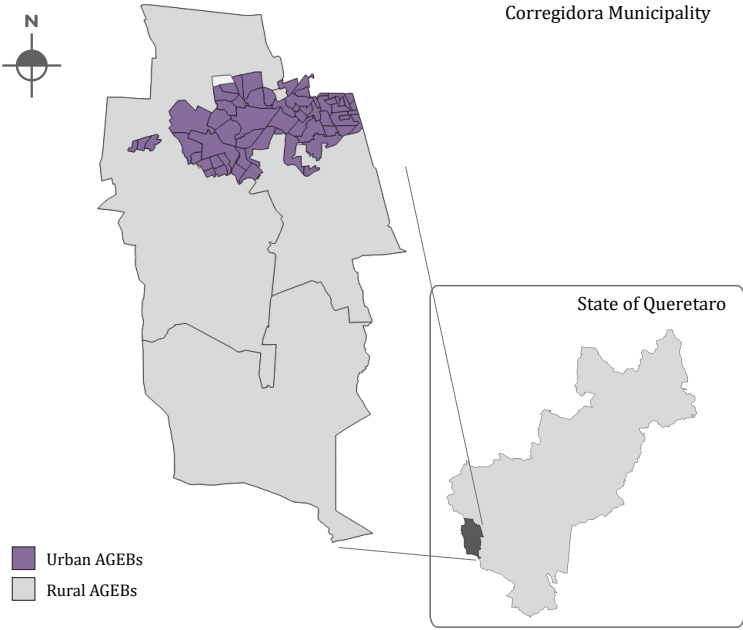


*Figure 3.6 – Municipality of Corregidora within the state of Querétaro. AGEB: Basic Geostatistical Area. Figure made with shapefiles from INEGI (2015b).*

The rapid growth of the municipality has brought challenges in the planning and delivery of infrastructure. The local administration of 2015-2018 took an active role in implementing research projects to understand the diverse array of problems the municipality faced. The aim of these projects was to identify pressing issues for the creation of targeted preventive measures and suitable programmes, strategies and policies (Corregidora Municipality, personal communication, November, 2017). A motivation for the administration's renewed interest in research projects came from the implementation of a results-based financing model, known as Budget Based on Results. The model requires the local governments to provide evidence of the results of their programmes and the percentage of accomplishment of each programme, measured through a Performance Evaluation System (SHCP, 2008). The local administration consequently sought to establish programmes with measurable indicators of performance (Corregidora Municipality, personal communication, November, 2017 & 2019). Other initiatives included collaborating with local universities to develop research projects evaluating the municipality's performance in different areas. The municipality of Corregidora was the first jurisdiction in the state of Querétaro to activate the Municipal System for the Integral Protection of Children and Teenagers. This system aims to protect, improve and restore the rights of children and teenagers through the creation of adequate instruments, programmes, public policies and ser-

vices. The municipality works in collaboration with the Autonomous University of Querétaro (UAQ) to conduct research into the main issues faced by children and teenagers in the municipality, such as bullying, child labour, teenage pregnancy, alcoholism, drug addiction and other similar challenges (Morales Arias, 2017a,b).

### 3.2.1 Studies carried out in the area

The administration of 2015-2018 had a specialised institute to carry out statistical studies in order to provide planning strategies, the Municipal Institute of Planning and Sustainability of Corregidora (IMPLASCO). However, the administration of 2018-2022[2] dissolved the institute. During the years it was active (2003 until December 2018), IMPLASCO carried out several studies to understand the social and infrastructure challenges the municipality faced. One of these studies included a survey on marginalisation in different localities of the municipality, which was based on the National Marginalisation Index[3] (developed by the National Population Council - CONAPO) and the Social Recession Index[4] (developed by the National Council for the Evaluation of the Social Development Policy - CONEVAL). Given that these indexes are not carried out at neighbourhood level, IMPLASCO combined them in order to measure the level of marginalisation in its different neighbourhoods and assess the changes in the levels of marginalisation in the 29 localities that had historically high levels of marginalisation and social deprivation. The results showed that the levels of marginalisation reduced 59% and social deprivation reduced 66% in the surveyed localities within the five years prior to the survey taking place. However, increasing demands as a result of the rapid urban growth still constrained resources for many of the surveyed localities, which did not see any changes or their conditions worsened during the same period of time (see table 1 in appendix B).

Another project that was carried out in the municipality took place in 2016 when the government at state level in Querétaro upgraded 1.6km of the riverbank infrastructure of the river that crosses a locality called El Pueblito. The influence area of the project was of 397,568 inhabitants (see figure 3.7). The aim of the project was to prevent flooding by containing the river, which severely affected the neighbouring communities, and to upgrade the road adjacent to the river path. Another objective was to generate an open urban space for recreational purposes in the upgraded path to foster a sense of community and reduce violence in the area through an urban regeneration programme (SDUOP, 2016, 2017). The project was carried out, however it was not possible to find evidence or studies measuring the social impact of the project or whether it actively reduced violence in the neighbouring communities.

Official data regarding VAW is scarce in the municipality of Corregidora. The municipal police do

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[2]Which came into power in December of 2018, when the fieldwork of this research was being conducted.

[3]The National Marginalisation Index helps to identify localities with extreme poverty that lack access to education, adequate housing and general lack of assets and is calculated every five years (CONAPO, 2012).

[4]The Social Recession Index combines information regarding different dimensions of poverty and is calculated at state, municipality and local levels every five years since 2005 (CONEVAL, 2017).

*Figure 3.7 – Aerial view of the area of intervention. (Source: SDUOP, 2016).*

not publish official municipal crime records and it was disclosed informally to the author of this thesis that crime data is not georeferenced. For this reason, autonomous and independent institutions frequently replace official data in the dissemination of cases of VAW. Observatorio Ciudadano de Querétaro (OCQ), an organisation consisting of universities, businesses and civil society with the aim of influencing public issues, reported 282 cases of VAW from July to September 2017 (OCQ, 2018). OCQ also reported an increase of 7.57% of VAW cases in 2019 compared to 2018, however there is no other information to indicate what this percentage means in number of cases (OCQ, 2019).

Other publicly available data on VAW in the municipality include statistics reported to the Mexican Secretariat of Public Security (SESNSP)– which also reports other types of criminal activity. The methodology for municipalities to report crime, however, was not standardised nationally until the beginning of 2018 (SESNSP, 2018a,b). A positive outcome of the standardisation process should be more granular data in the future regarding difference types of gender violence and VAW. The methodology used from 2011 until 2017 only categorised gender-related crimes in three types: rape, statutory rape and other sexual crimes (SESNSP, 2018a,b). The standardisation amendments to the methodology allowed for these crimes to be disaggregated into more categories including femicides[5], rape[6], statutory rape or sexual intercourse with a person that cannot oppose resistance[7], incest, family violence, sexual abuse, sexual harassment[8], other crimes that threaten freedom and sexual security and gender violence in all its forms other than family violence (SESNSP, 2018c). The crime data published by SESNSP is only available at municipal level, however, and not locality level,

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[5]Subdivided depending on the weapon used: with a firearm, a knife, another implement or unspecified.
[6]Subdivided into two types: simple or rape by objects other than a penis.
[7]Due to illness, loss of consciousness, disability or any other cause
[8]Subdivided into two types: general sexual harassment or harassment between a person in a similar power hierarchy or by a person in a superior power hierarchy.

which does not allow for a more micro-level analysis of crime. Furthermore, "official records regarding the number of reported cases, registered pre-trial investigations and/or investigation files over time is readily available and there are inconsistencies in the figures and types of reported crimes" (Garfias Royo et al., 2020). For example, tables 3.1 and 3.2 and figure 3.8 show a comparison in numbers between methodologies regarding the annual registered pre-trial investigations and/or investigation files from 2011 – 2017 for the municipality of Corregidora (data for the old methodology is only available until December 2017). The numbers reported under each methodology vary vastly (apart for those reported for rape), although an overall increasing trend of VAW crimes since 2011 can be noted under both methodologies.

*Table 3.1 – Old methodology: Annual numbers of registered pre-trial investigations and/or investigation files from 2011 – 2017 for the entire municipality. Table by the author with data from SESNSP (2018a) - NOTE: Data for the old methodology is only available until December 2017.*

| Year | Rape | Statutory rape | Other sexual |
|------|------|----------------|--------------|
| 2011 | 11 | 1 | 10 |
| 2012 | 23 | 3 | 23 |
| 2013 | 19 | 0 | 17 |
| 2014 | 13 | 1 | 25 |
| 2015 | 19 | 0 | 21 |
| 2016 | 8 | 2 | 35 |
| 2017 | 17 | 2 | 26 |

*Table 3.2 – New methodology: Annual numbers of registered pre-trial investigations and/or investigation files from 2015 – 2017 for the entire municipality. Table made with data from SESNSP (2018a) - NOTE: Data for the old methodology is only available until December 2017.*

| Year | Feminicide | Sexual abuse | Sexual harassment | Rape | Incest | Other crimes | Family violence | Gender violence |
|------|-----------|--------------|-------------------|------|--------|--------------|-----------------|-----------------|
| 2015 | 3 | 21 | 0 | 19 | 0 | 3 | 78 | 0 |
| 2016 | 0 | 30 | 5 | 8 | 0 | 2 | 90 | 0 |
| 2017 | 0 | 26 | 0 | 17 | 0 | 4 | 97 | 0 |
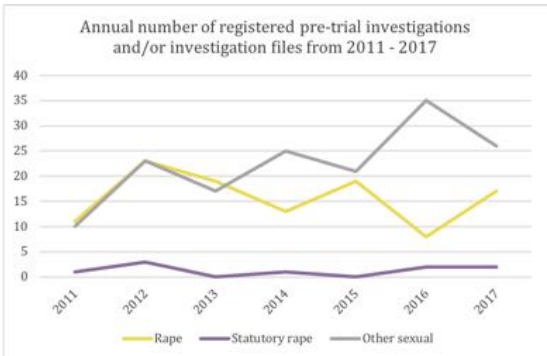


(a) Old methodology.
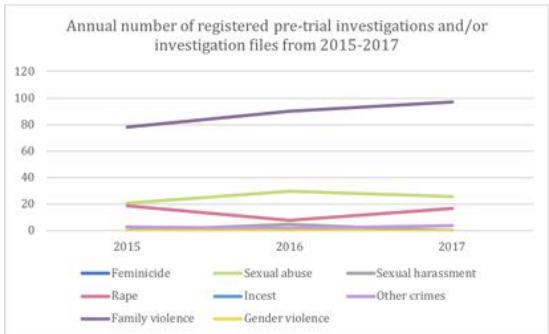


(b) New methodology.

*Figure 3.8 – Number of registered pre-trial investigations and/or investigation files from 2011-2017 for the entire municipality. Figures made with data from SESNSP (2018a) - NOTE: Data for the old methodology is only available until December 2017.*

The numbers reported by SESNSP can be compared with the survey conducted by INEGI in 2016 regarding Dynamics of Household Relations (ENDIREH, for its acronym in Spanish; INEGI,

2016a). The survey found that 46.8% of the urban female population in the state of Querétaro had experienced at least one type of gender violence in their lifetime, and 28.5% had experienced at least one type of gender violence within the past 12 months prior to the survey taking place. Additionally, the survey reported that 9.7% had experienced at least one incident of physical violence and 43.9% had experienced at least one incident of sexual violence at community level. At family level, 11.5% reported an incident of family violence within the last 12 months before the survey was conducted.

## 3.3 Limitations of the available data

The publicly available data is not consistent in its categorisation of violence, particularly VAW. It is not possible to draw comparisons among the different numbers reported in the publicly available crime data and surveys. Furthermore, the official crime data at federal level does not provide all the recorded crimes at state or municipal level. The methodologies for recording crimes vary at different levels of government, which means that only the reports that contain all the necessary information to be standardised are transferred to the following level (from municipal to state then federal; SESNSP, 2018b). Furthermore, the data does not account for open reports or the cases that were archived. In the case of the ENDIREH survey, while it is statistically relevant at national level, it does not register information regarding the locations where women experienced violence, notably those that take place in the public space. This represents a gap in the data for identifying locations where women are more vulnerable to violence in public spaces.

It is not possible to draw conclusions on the extent of VAW in the municipality of Corregidora from the publicly available data, particularly regarding the locations where these incidents take place. There is a lack of studies addressing VAW and a need for the creation of datasets that collect information about this issue in the municipality. The local government could benefit from such studies, in order to create more targeted programmes, that not only deliver infrastructure, but create safer cities for its inhabitants, particularly women.

# Chapter 4

# Methodology

This chapter outlines the methodology used to find a link between urban infrastructure and Violence Against Women (VAW). It explains how the research was conducted to answer the research questions and analyse the data. This chapter is divided into four sections. The first section presents the methodological approach which shaped this research and addresses the mixed-methods approach used in this study. The second section explains the design of the different instruments that were used to collect data during fieldwork, including information on the unit of analysis of the area of study. It further outlines the selection of participants or locations for each type of instrument, and where relevant, how they were sampled. Section three outlines the methods used to analyse the data collected by each of the instruments, as well as presenting the process of data analysis. The fourth section provides a detailed description of all the fieldtrips that were conducted for this research. It also includes a reflection on issues that arose within the research, and a discussion of the effects of the researcher and data collectors on the process and outcomes of the research (Anderson, 2011).

«Some passages of this chapter have been published in the researcher's article in Crime Science (August 2020), which have been abridged for this thesis:

»Garfias Royo, M., Parikh, P., and Belur, J. (2020). Using heat maps to identify areas prone to violence against women in the public sphere. *Crime Science*, 9(1):15 »

## 4.1 Methodological approach

Considering the challenges when studying VAW, research and comparisons should be made cautiously (Leclerc et al., 2016; Sinha, 2013). As outlined in chapters 2 and 3, not many studies regarding VAW[1] carried out in the public spaces have been conducted in Mexico, particularly outside of Mexico City. Additionally, given the low rates of reporting of cases of VAW in Mexico—which would not necessarily reflect the prevalence of VAW, particularly those committed in the public spaces,

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[1]Which do not focus in femicide.

paired with the scarcity of publicly available data and the obstacles faced to gain access to official crime statistics of Corregidora, it was decided to conduct primary data collection for this research.[2] The aim was to estimate the extent of VAW and also to obtain a more nuanced understanding of the lived experiences of that violence. The analysis was based on the reported experiences of women in order to find patterns of VAW in the public urban sphere of Corregidora Municipality, linking these experiences to the surrounding urban infrastructure and its delivery by the local government. This was driven by the sensitivity of the subject to be studied and lack of crime statistics.

Links between infrastructure and the perpetration of VAW in the public sphere were explored in this study. This drew on literature and evidence from feminist research with respect to VAW and crime pattern theories, which led to the adoption of an interdisciplinary approach for data gathering and analysis. Interdisciplinary research is concerned with conducting exploratory collaborations between disciplines to identify areas of common interest or new approaches to common issues (The British Academy, 2016). According to Tobi and Kampen (2017), "the study of the interaction between humans and their environment requires knowledge, ideas and research methodology from different disciplines" (p. 2). Interdisciplinary research is useful for addressing complex problems posed by global social challenges, as it integrates separate disciplinary methods, tools, theories and concepts that generate a holistic view of a complex problem (The British Academy, 2016; Pan and Katrenko, 2015). In the case of feminist theories, they use cross-disciplinary theories and methods that allow dynamic fields of study to be created over time (such as VAW studies), which "sometimes transcend disciplines in terms of the data and information taken into account (resulting in transdisciplinary work)" (Wickramasinghe, 2010, p. 44). However, it is important to provide an analysis of the problem from the perspective of each discipline and provide an evaluation of the relevant insights they contribute, to identify strengths and weaknesses (Repko, 2008); which in the case of this research included outlining conclusions derived from crime pattern theories.

### 4.1.1 Research approach: Mixed-methods

Stanley and Wise (1993, p. 191) argue that researchers often manage to combine elements of a number of positions in their work and this suggests the human ability to work within contradictions. This study started out with a positivist approach, making use of mostly quantitative methods and the idea that patterns could be drawn by collecting the diverse stories of VAW of the different participants. However it was acknowledged at an early stage that "positivism is particularly guilty of denying the social processes by which 'social facts' arise as data" (Letherby, 2003, p. 66), and there was a recognition for the need of the inclusion of qualitative discussions that could assist in the co-production of knowledge. A grounded theory approach was therefore taken, in which the systematic

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[2]Yet use methods developed by the National Institute of Geography and Statistics (INEGI) in order to make future comparisons.

coding and structuring of the qualitative data was used to construct and interpret theory (Charmaz, 2000; Simons, 2009; Olesen, 2007; Corbin and Strauss, 1990). Data analysis used mostly inductive methods, which according to Wickramasinghe (2010) "have been useful for empirical work – especially as a means of eliciting theory from women research participants", although the author argues that "feminist research can never be completely inductive or theory-free", as researchers' own preconceptions and ideas influence how they conduct research.

During the process of doing research, particularly data collection but mostly data analysis, there was a recognition that it was impossible to remove the researcher from the research (Letherby, 2003), and the need to report on some of the issues that arose during the research was identified. Stanley and Wise (1993, p. 189) suggest integrating a number of key areas drawn from feminist epistemology into the research process: critically unpacking conceptualizations of 'objectivity' and 'subjectivity' as binaries or dichotomies; the existence and management of the different 'realities' or versions of reality held by researchers and researched; the researcher/researched relationship; issues surrounding authority and power in research; the 'intellectual autobiography' of researchers, in other words, the processes by which 'understanding' and 'conclusions' are reached; and emotion as an aspect of the research process (which, they argue, can be analytically interrogated). As the research progressed, the initial positivist approach was enriched by these epistemological reflections.

## 4.2 Data collection methods

« An abridged version of some passages of this section have been published in the researcher's article in Crime Science (August 2020):

»Garfias Royo, M., Parikh, P., and Belur, J. (2020). Using heat maps to identify areas prone to violence against women in the public sphere. *Crime Science*, 9(1):15 »

The data collection methods sought the address the research questions through a mixed-methods approach. Mixed methods research combines diverse research techniques to envision multiple realities, add context, fill gaps, play different sources of data off each other and provide a sense of both the general and the particular (Elwood and Cope, 2009, p. 5). Insights gained from 1 data source, subject group or technique may be examined recursively with other findings and the path of the research may shift in response (Elwood and Cope, 2009). Quantitative methods, such as household surveys and mapping of locations were complemented by qualitative data in the form of focus group discussions, site visits for conducting observations and visual analysis as well as semi-structured interviews. The stakeholder interviews were carried out concurrently to the rest of the methods, which were carried out sequentially. The justification for the selection of the methods linked to each research question is found in table 4.1 and figure 4.1 shows a diagram of the research methods.

*Table 4.1 – Research questions, methods and justification.*

| Research question | Methods | Justification |
|---|---|---|
| 1. What are the most common types of Violence Against Women (VAW) experienced in the public spaces of Corregidora? | Household surveys, focus group discussions. | Surveys were conducted at local level to gather primary data to understand the extent of the problem. |
| 2. Where does VAW take place in the public spaces of Corregidora? | Mapping with data from household surveys. | Maps were created with spatial data collected through household surveys. These maps were useful to identify spatial patterns at municipal level, for decision-making for site visits and informed the areas to conduct focus group discussions. |
| 3. What factors do these locations have in common regarding the delivery and condition of urban infrastructure? | Site visits (observations and visual analysis). | Site visits allowed for analysing the urban space and the delivery of infrastructure qualitatively and quantitatively. They supported the identification of patterns of infrastructure features that can potentially be linked to VAW. Semi-structured interviews with stakeholders involved in the delivery of this infrastructre provided an understanding of the processes of this delivery. While focus group discussions allowed for a deeper understanding of how this infrastructure plays a role in the perpetration of VAW. |
| 4. What are the possible infrastructure drivers for VAW in the public spaces of Corregidora? | Site visits (observations and visual analysis), semi-structured interviews, focus group discussions. | |
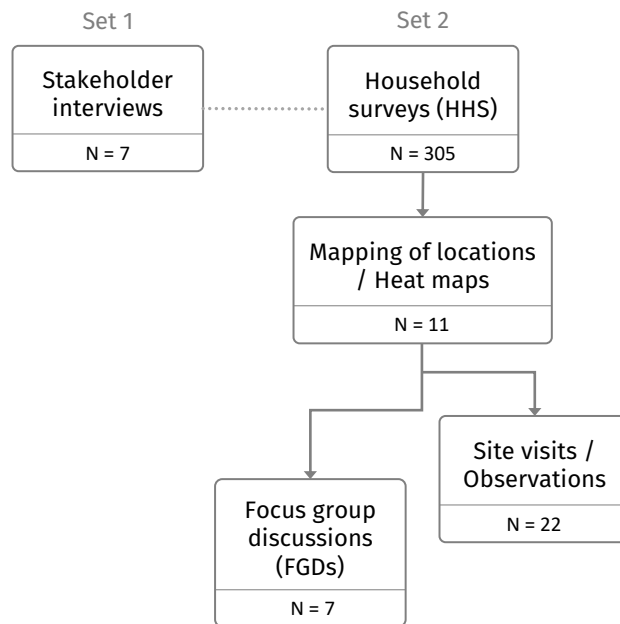


*Figure 4.1 – Data collection methods.*

The social-ecological model (CDC, 2020), introduced in section 2.4, was used as a framework for understanding and discussing the findings of this work. Figure 4.2 shows how the 4 levels the model proposes for understanding violence (individual, relationship, community and societal) were adapted to accommodate the findings of the different data collection methods used in this research.

Fieldwork for establishing collaborations and data collection was conducted in 3 stages, which
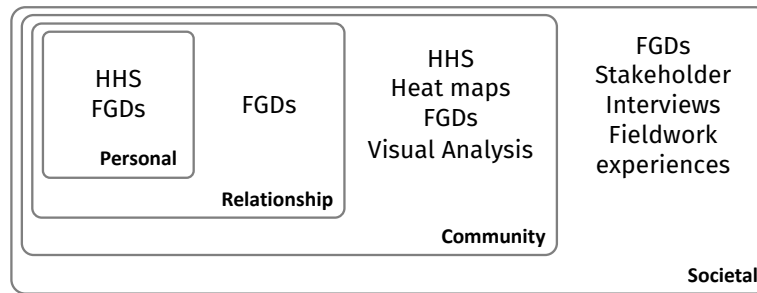
*Figure 4.2 – Social-ecological model and data collection methods. HHS: Household Surveys; FGD: Focus Group Discussions.*

required an equal amount of trips to the field, between November 2017 and April 2019 (see section 4.4.1).

This section describes the research methods employed for primary data collection, as well as the unit of analysis of this case study. As can be noted in figure 4.1, the methods are divided into 2 sets: a standalone method which comprised stakeholder interviews; and a series of sequential methods based on household interviews, mapping of locations, site visits and focus group discussions. Below is a description of each of these methods.

### 4.2.1 Unit of analysis in study area

The unit of analysis of the case study for this research was the urban public sphere of Corregidora Municipality. This was based on the collaborations initially established in the fieldtrip conducted at the beginning of this research (see section 4.4.1). When the sampling for this research was carried out, the municipality of Corregidora was comprised of 6 urban localities (see figure 3.6 and section 3); however, only 5 were considered for the selection of the sample. The additional urban locality, Colonia Los Angeles, was disregarded due to its location in reference to the other localities, as it is further away from the rest of the city.[3] The selected urban localities were Los Olvera, Venceremos, San José de los Olvera, La Negreta and El Pueblito (see figure 4.3).

During the time the sampling of this project was carried out, the municipality was divided into 64 basic geostatistical areas (AGEBS), of which 60 were classified as urban and were clustered into 6 localities. Between the time the sampling was carried out and the time this thesis was written, another urban locality was added to the catalogue, *Candiles*–which was formerly part of the locality of El Pueblito–as well as 258 additional rural localities (see SEDESOL, 2013a).

### 4.2.2 Stakeholder interviews

A stakeholder is an "an individual or a group which can have an impact, either positive or negative, on a given situation" (Honadle and Cooper, 1989, p. 1532), and who has access to resources

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[3]There were also concerns for the researcher and the data collectors to access this area due to its proximity with the border with the neighbouring state of Guanajuato and the dangers this could potentially pose to the data collectors at the time of fieldwork. This is further discussed in section 4.4.
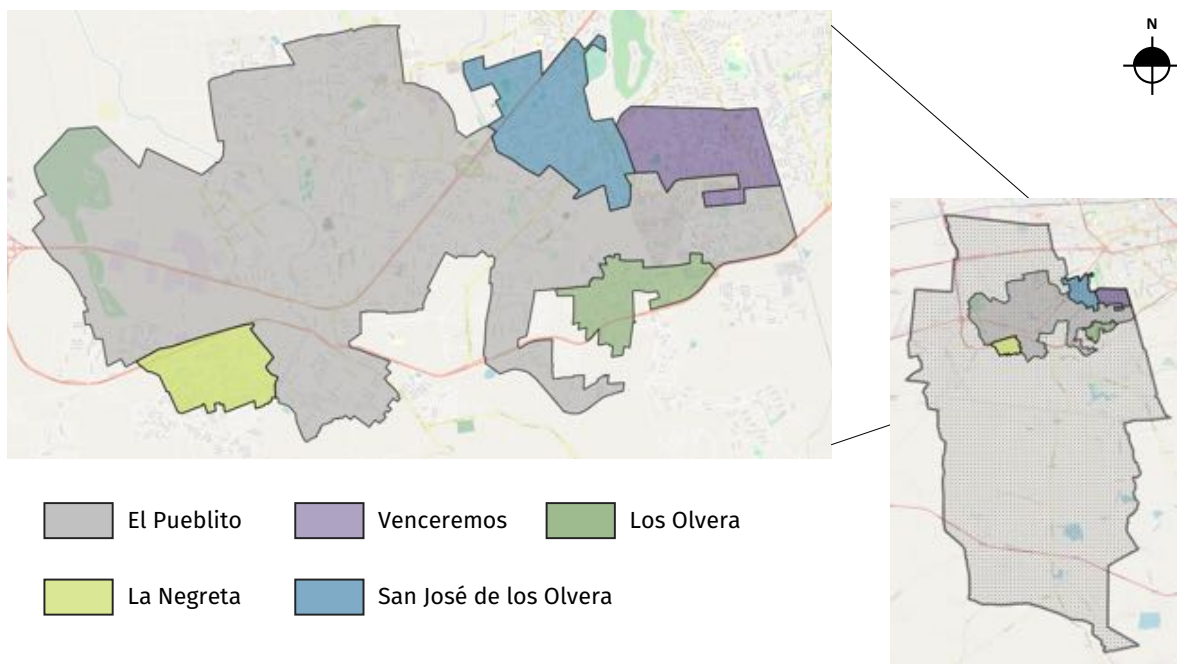
*Figure 4.3 – Selected localities in relation to the municipality. Maps made with data from INEGI (2015a).*

necessary to either carry out an activity or prevent an activity from being performed. Stakeholder mapping is the identification and classification of stakeholders that might have an influence on a certain problem or topic within an organisation (Palacios and Coppa, 2015; Honadle and Cooper, 1989). Stakeholder mapping attempts to find links across different stakeholders, their actions or responsibilities, their goals and the institutions that regulate their interactions (Mehrizi et al., 2009). A brief stakeholder mapping of the local government was carried out in order to identify the actors that may have an influence on these decision-making processes. This was done in collaboration with a member of the former institute IMPLASCO, who informed the decision of which Institutes, Secretariats or Ministries to approach. It must be noted that the mapping was based on the former local government administration of 2015-2018.[4] As will be discussed later in sections 4.4.1 and 4.4.2, there was a change of administration in 2018, which caused unforeseen challenges for this research, and led to an internal re-organisation of the administration. The Secretariats, Ministries and Institutes that were selected from the 2015-2018 Administration[5] were the Ministry of Public Works, the Treasury and Finance Secretariat, the Ministry of Urban Development and Public Works and the Ministry of Social Development.

The aim of the stakeholder interviews was to understand the decision-making processes that currently exist within the local government with regards to infrastructure delivery and urban plan-

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[4]See appendix C for the organisation charts of the local government.

[5]The second data gathering fieldtrip took place in April 2019, when the 2018-2021 administration had taken power of the local government. Some Institutes and Ministries remained under the same name (Institute of Public Works, Finances and Social Development), however IMPLASCO was dissolved and Mobility, Urban Development and Ecology were merged into a single Ministry. Despite this administrative decision, the Ministry of Mobility was still in transition, therefore 2 more interviews were conducted, with in the former Ministry of Mobility and the newly created Ministry of Mobility, Urban Development and Ecology.

ning. The interviews covered questions regarding the role the interviewee performed in the local government; their understanding of the mechanisms that exist within the local government to identify, explore or understand challenges that the different communities of the municipality face; their awareness of the different processes, protocols or codes for planning infrastructure and urban expansion, including the application of gender-related protocols; their knowledge of decision-making processes; and their perception of violence within the municipality. (See appendix D for the interview questions in English and Spanish.)

Seven interviews were conducted, 5 of which took place in January of 2019 and the remaining 2 in April of 2019. The interviews took place at 2 locations: 1 interview took place at a cafe and the remaining 6 took place in the offices of the Municipal Government, mainly at the personal office of each participant, with the exception of 1 which took place in 1 of the gardens of the premises. All the interviews were conducted in Spanish and were recorded with a digital recorder in an encrypted SD card.

### 4.2.3 Household surveys (HHS)

«Some passages of this section have been published in the researcher's article in Crime Science (August 2020), which have been abridged for this thesis:

»Garfias Royo, M., Parikh, P., and Belur, J. (2020). Using heat maps to identify areas prone to violence against women in the public sphere. *Crime Science*, 9(1):15 »

A household survey (HHS) was designed to gather information regarding incidents of VAW experienced in the urban sphere by females who were 18 years of age or older and residents of the selected urban localities of Corregidora municipality. The questions consisted of 13 types of VAW, which were taken from INEGI's National Survey on the Dynamics of Household Relationships (ENDIREH for its acronym in Spanish) (INEGI, 2016a). It was decided to adopt the same categories INEGI applies in order to facilitate comparison between the results presented in this research with other work available in Mexico. The types of violence included in the survey included the following:

- Type 1: Whistling or offensive sexual remarks
- Type 2: Stalking
- Type 3: Offended or humiliated for being a woman
- Type 4: Ignored for being a woman
- Type 5: Pinched, pulled hair, pushed, pulled, slapped or thrown an object
- Type 6: Lifted skirt or dress or pulled clothes
- Type 7: Been touched, groped, leaned against or kissed without consent
- Type 8: Fear of being attacked or sexually abused
- Type 9: A person showed them their private parts or touched themselves in front of them
- Type 10: Was forced to watch porn or sexual acts

- Type 11: Kicked or punched

- Type 12: Attempted rape

- Type 13: Rape

Some of these types of violence are crimes in and of themselves. Some involve actions which are not necessarily criminal in Mexico or elsewhere, such as offensive remarks or shaming someone for being a woman, and some of these types focus on the feelings or perceptions of the woman, rather than the intention or actions of another, such as when a woman fears what might happen. For the purposes of this study, which seeks to understand VAW from the perspective of women, each type is nonetheless considered violence. The survey also gathered information regarding the participants' households, ethnographic data based on their personal perceptions, as well as their perceptions of their community cohesion and other experiences of urban violence. Mexico already monitors household dynamics and Intimate Partner Violence through a population-based survey (the ENDIREH survey), which was first conducted in 2003 and has been conducted every 5 years since 2006 (INEGI, 2016a). This survey was used as a blueprint for designing the HHS for this research. Additionally, ENVIPE (survey on victimisation and perception of safety) and ECOPRED (survey of social cohesion and crime prevention)–also designed by INEGI–were used to supplement the survey instrument. The International Violence Against Woman Survey (IVAWS) was used as an additional supporting document during the design of the HHS.

The survey was designed taking into consideration the agreement that was drafted with the local municipality of Corregidora, which required the survey to be based on instruments designed by INEGI in order to be recognised by the local government. Considering the challenges of making comparisons between VAW data due to the different instruments and standards that are applied, the requirements of the local government, and the fact that the Mexican population is already familiar with the census process of INEGI (generally showing a disposition to participate in their surveys),[6] it was deemed important that the survey instrument met this criteria.

The survey explored topics such as the types of violence experienced; the percentage of women that have experienced VAW in the public sphere; the frequency of incidents; the time and date of the incidents; the severity of incidents according to risk of injury or emotional impact; the locations where the incidents took place; and demographic data of the perpetrators. The questions in the survey were a mix of open and closed questions, multiple answer questions and specific questions regarding geographic information data.

The surveys were distributed randomly among the 5 urban localities of the municipality of Corregidora. The surveys were carried out in Spanish and took between half an hour to an hour, depending on whether the participants had experienced incidents of violence in public places, the number of

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[6]Since 1895, The National Institute of Statistics and Geography (INEGI) has carried out national census every 10 years, in addition to various other surveys, to generate relevant geostatistical information (INEGI, 2018).

incidents and the amount of information the participants were willing to disclose. See appendix E for the survey questionnaire in English and Spanish.

It was hoped that the sociodemographic data of respondents would be useful in understanding the intersectionality of women's victimisation (Ceccato, 2017; Rotman, 2009). It is worth noting that this data was based on the women's personal perceptions of themselves and their experiences. Socio-economic data of households was captured through direct questions using an established and standardised index developed by the Mexican Association of Market Research and Public Opinion Agencies (AMAI; INEGI, 2008) that has been used since 1994. The AMAI defines socioeconomic level as the level of well-being of a household by measuring how well it provides for the needs of space, health, practicality, entertainment, communication and planning (Comité de Nivel Socioeconómico AMAI, 2017, p. 12). The index is based on a statistical model that aims to group and classify Mexican households in socioeconomic levels, and measures their socioeconomic level based on the accumulation of economic and social capitals (AMAI, 2018; INEGI, 2008). The economic capital represents the possession of material goods and is measured accordingly, and social capital represents the stock of knowledge, contacts and social networks and is measured by the education level of the head of the household (INEGI, 2008). Through its Socioeconomic Levels Committee, and in the latest revision of the model, it was found that 6 variables showed the greatest prediction potential and the clearest associations to household incomes: education level of the head of the household; number of bathrooms in the house (shower and toilet); number of cars (understood as the sum of cars, vans and pick-ups); internet connection; number of members in the household over 14 years of age who work; and number of bedrooms in the house. The levels are divided in 7, from highest to lowest: A/B, C+, C, C-, D+, D and E (NSE AMAI, 2018), and are calculated based on 7 questions, each representing a variable. Each variable is assigned a specific number of points, which account for a maximum of 300 points, representing the highest socioeconomic level (Comité de Nivel Socioeconómico AMAI, 2017; see table 2 in appendix F).

**Survey application**   The surveys were applied by a team of 8 research assistants (RAs) and the researcher. Information sheets regarding the survey were provided to participants to read prior to the survey being applied. Consent forms were also provided prior to the survey application, with surveys not being applied if the consent form was not signed. The software used for data collection was KoBo Toolbox.[7] (KoBoToolbox, 2019) The software allows users to download the collected data directly from the online platform. Given the sensitivity of the research, all the questions and answers were pseudonymised[8] as a risk mitigating strategy in case of breach of information within

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[7]A free, secure and open source software that offers electronic tools for data collection. For more information visit: https://www.kobotoolbox.org

[8]E.g. They were recorded in the tool as 'Question 1' and the possible answers as options 'a', 'b', 'c', ... , with no further context.

the software (see figure 4.4 for a screenshots). In order to ask the survey questions, hard copies of the survey were used, but the answers were recorded on a tablet in the tool's app. The locations were recorded using the geographic data collection option of 'area' available in KoBo Toolbox, which allows for the use of Open Street Maps Software Development Kit to input locations as answers. The software's pre-set coordinate system was used to georeference.[9] the locations.
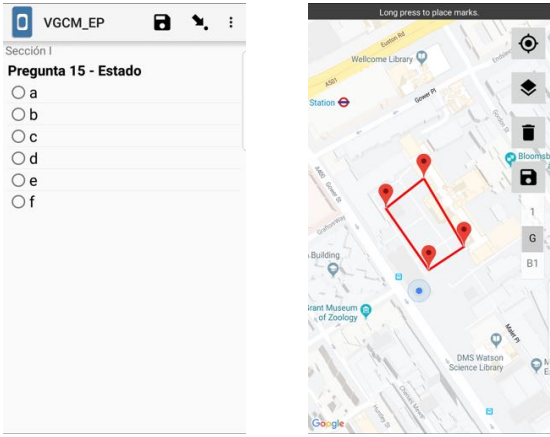


*(a) Pseudonymised question in KoBo Toolbox.*

*(b) Registering of locations in the app KoBoCollect.*

*Figure 4.4 – Use of KoBo Toolbox for data collection.*

**Survey application**   The sampling strategy was only used for the application of the HHS and it followed a clustered sampling approach. The aim of the sample was to understand the different experiences of VAW that different groups of women have across the urban extent of the municipality. The sample unit was blocks, with each block in the sample representing 1 woman to help retain anonymity of participants.

A two-stage simple random sample[10] with a finite population correction design was used, with proportional allocation. Initially, a simple stratified random sample with a finite population correction was carried out for the total blocks with inhabited dwellings, where 4 localities were considered in their entirety, and a sub selection of areas was carried out for the largest locality of El Pueblito (see appendix G for the application of the method). However, since a percentage of blocks fell within gated communities with no access for the research team, 20% of the sample had to be replaced in a second stage and the remaining areas of the locality of El Pueblito were included. The issue of gated communities is further discussed in section 4.4.2.

A sample of 300 units (blocks) was calculated based on the population size, which included an additional 15% to account for no responses. The following formulas were used to calculate the

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[9]"Georeferencing is the process of assigning locations to geographical objects within a geographic frame of reference" (Yao, 2009) In the case of this research, the frame of reference refers strictly to a geographic coordinate system.

[10]Random sampling method implies that every unit within the population of a sample has an equal chance of selection and every member is selected independently (Fuller, 2009).

sample size:

$$n_0 = \frac{z^2 pq}{e^2} = \frac{1.96^2 \times 0.4 \times 0.6}{0.05^2} = 368.91 \qquad (4.1)$$

Where:

$n_0 = $ sample size $n_0$

$z = $ confidence level, set at 95%

$p = $ estimated proportion of interest, assumed to be 45%, which was

calculated by dividing the number of females over 20 years of age by

the total population $\frac{40,485}{101,116}$

$q = (1 - p)$

$e = $ margin of error (5%)

A finite population correction formula was applied to calculate the final sample size (Eq. (4.2)) and an additional 15% was added to the sample size (Eq. (4.3)), considering no response rates, and rounded up to 300.

$$n = \frac{n_0}{1 + \frac{n_0}{N}} = \frac{368.91}{1 + \frac{368.91}{828}} = 255.21 \qquad (4.2)$$

Where $n$ is the final sample size, $n_0$ is the sample size $n_0$ and

$N$ is the number blocks with more than 3 inhabited dwellings.

$$255.21 \times 1.15 = 293.49 \approx 300 \qquad (4.3)$$

The sample population was based on the 2010 Population and Housing Census[11] of the National Institute of Statistics and Geography of Mexico (INEGI, 2010, 2015c). While the blocks were selected randomly using a random selection [12] in RStudio[13] applied to the spatial data provided by the National Housing Framework of 2016[14] (INEGI, 2016b).

At the time of data collection, a random household within the sampled block was chosen based on convenience sampling, with no quota sampling. In some cases, the data collectors knocked on every door until there was a willing participant, and there were no call-backs if no participants

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[11] The census data reported a total estimated population of 181,684 inhabitants in 2018 (INEGI, 2010, 2015c) and was the most recent census at the time the sample was calculated.

[12] set.seed() function.

[13] RStudio is an open source software for the R statistical environment. R is a programming language and software environment for statistical computing and graphics. See more about R here: https://www.r-project.org

[14] Which reports 828 inhabited dwellings with more than 1 household and information regarding population (INEGI, 2016b).

were found within a block (in which case the survey was marked as 'no response'). The HHS were applied in November 2018, Monday to Friday from 800hrs to 1830hrs and Saturday and Sunday from 1000hrs to 1830hrs.

### 4.2.4 Site visits and observations

«Some passages of this section have been published in the researcher's article in Crime Science (August 2020), which have been abridged for this thesis:

»Garfias Royo, M., Parikh, P., and Belur, J. (2020). Using heat maps to identify areas prone to violence against women in the public sphere. *Crime Science*, 9(1):15 »

The site visits were useful to visually investigate urban infrastructure attributes of the locations, such as whether they had sidewalks, lighting, and bus stops, and their maintenance status and condition. The aim of the visual analysis was to gather first-hand information on the ground and provide more nuance to the mapping data. Methodical field notes were generated through a checklist (see appendix H for the checklist), photographs and video recordings[15] during the site visits, and the collected data was analysed inductively. Site visits to 22 locations were conducted, and they were all visited during the day and night.

**Checklist for infrastructure assessment**

The checklist was designed for carrying out infrastructure assessments and documenting the types of infrastructure and urban development available in the sites and their condition. The checklist was useful for taking systematic field notes, including information about the type of location, surrounding environmental features (such as housing densities, pedestrian facilities and road attributes) and other details observed at the time of the visit. It was also useful for deciding which pictures to take, by ensuring that the features mentioned in the checklist were present. The notes taken through the checklist were useful for informing the inductive visual analysis of the sites. The development of the checklist was based on previous experience carrying out transect walks[16] in development work (Garfias Royo et al., 2020). A similar approach was found in the work of Crowe and Fennelly (2013, Appendices D to F), where a CPTED approach was used to survey spaces. The authors used CPTED as an approach "to evaluate the physical setting of facility and maintenance factors that affect the safety and crime quotient capability of a particular [area]" (Crowe and Fennelly, 2013, p. 305). The checklists used by the authors include an analysis of space using the CPTED principles of surveillance, areas of access or movement, lighting, maintenance of space, as well as surrounding housing facilities, types of neighbourhoods, types of streets, businesses and institutions and

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[15]The video recordings were only taken at night time, as the sites were visited at by car, due to safety concerns for the researcher and data collection team.

[16]Transect walks are a type of participatory method that consists of investigatory walks conducted alongside or by participants where observations, discussions and identification of areas are carried out to identify problems, solutions and opportunities. The results generally include diagrams and maps of the findings (Chambers, 1994).

access to public transport (Armitage, 2018; Armitage and Monchuk, 2017; Cozens and Love, 2015; Crowe and Fennelly, 2013; Dymén and Ceccato, 2012; Ekblom, 2011). A more recent method to evaluate the built environment and understand its relationship with crime includes the development of an automated machine learning approach. In this method, data is collected by capturing street-level images using Google Street View and analysed through automated image feature recognition techniques to recognise elements of the built environment (Dakin et al., 2020).

Other methodologies for assessing, auditing and collecting environmental data found in the literature focus on evaluating walking environments. A notable example is the Pedestrian Environmental Data Scan (PEDS), developed by Clifton et al. (2007), to evaluate pedestrian environments, with the aim to be used as an assessment tool for investment prioritisation and physical activity and transport research. According to the authors, the PEDS tool "was designed to capture a range of elements of the built and natural environment efficiently and reliably" (Clifton et al., 2007, p. 97), including type of housing and other surrounding environmental features, pedestrian facilities, road attributes, and the walking/cycling environment, in addition to subjective evaluation items (Clifton et al., 2007, p. 97-98).

A drawback of top-down approaches includes overlooking information from local sources that may be relevant to the assessment, which the methods are unable to identify due to their nature. Alternatively, built environment assessments can be based on co-production and engagement with participants, whether these are stakeholders, users or a mixture of both. An example if this type of assessment is a toolkit created in (2007) by the Commission for Architecture and the Built Environment (CABE) to assess and measure the quality of public space to help local planners in the United Kingdom apply national design policy for better investment in public spaces. The toolkit captures perceptions of stakeholders and users through questionnaires and workshops (CABE, 2007). While these types of assessments provide in-depth and accurate evidence of issues faced by local communities, they can be time and resource consuming, including the need of special facilitators and the engagement of participants; and if not carried out as intended, they may not provide the intended outcomes.

**Women's safety audits**   Women's safety audits were first developed in Canada, by the Toronto's Metro Action Committee on Public Violence Against Women and Children, with the purpose of reducing the opportunities for sexual harassment and assault and to integrate women in the design and management of safer spaces (Whitzman et al., 2009; WISE, 2005). Whitzman et al. (2009, p. 206) describe women's safety audits as a participatory method where "a group of women users of a particular urban or community space walk around that space, noting factors that make those users feel unsafe or safe in that space [using a checklist]". These safety audits have been adapted and used around the world since their initial development, aiming to empower women to participate in local

decision-making and take ownership of public spaces (Lambrick and Travers, 2008). While women's safety audits have drawbacks (such as creating unrealistic expectations of outcomes, not involving the most marginalised or vulnerable groups of women, difficulties implementing recommendations of lack of criteria for evaluation and/or evaluating frameworks), they highlight the effectiveness of international networking, legitimise women as experts of experience in their local environments, help in the identification of safe and unsafe spaces, and train women in the process of advocating for change (Whitzman et al., 2009). An example of a grassroots application of a women's safety audit in Mexico was an exercise conducted by Ciudata (2019) in Mexico City, Puebla, Monterrey and Mérida, where groups of women have carried out 10 assessments between October 2016 and November 2018. The results of the assessments are online, and were conducted in collaboration between inhabitants, community leaders and different institutions, including the Women's Institute of Benito Juárez, the Secretariat of Public Security of Mexico City, NGOs such as Reflection and Feminist Action, academic institutions such as the Autonomous University of Yucatán and the Observatory of Sustainable Mobility of Mérida (Ciudata, 2019).

**Decision making process of site selection for observations**

The locations for the site visits were chosen based on the results of heat maps generated with household data. This will be discussed in more detail in section 4.3.1, but broadly, the data was disaggregated in 10 clusters, and 1 to 3 locations were chosen per cluster. A heat map showing the concentration of events of VAW per cluster was generated. Two additional maps assisted in the selection: a point map showing the type of VAW as a marker of the severity of the reported incidents, and a map showing the polygons as the participants reported them in the HHS, to inform about the polygon size of the responses (see appendix I). The locations with the highest concentration of reported incidents were prioritised for selection. The second priority was the severity of the reported types of VAW that took place at a certain location within the cluster. This meant that if a cluster had a low number of incidents, areas within the cluster that had fewer but more serious types of incidents were prioritised over areas with a higher concentration of less serious incidents. A third priority was polygon size, where a more specific location (a polygon the size of a block or a corner) was given more importance in decision-making to conduct observations in terms of fieldwork feasibility than areas containing neighbourhood size polygons. A last consideration included the geography of the site, so if several incidents were reported alongside a road segment covering a few blocks (200m), the entirety of the stretch was considered as a single location.

Almost all the locations (except clusters 3 and 4) were subjected to the same site selection method. However, given the variations on the number of incidents per locations, a qualitative, case-by-case perspective was needed for the site selection for conducting observations, resulting in a mixed-methods approach for selecting locations for site visits.

For example, in the case of clusters 3 and 4, both clusters had a low number of reported incidents (7 and 4 respectively), therefore the concentration maps were not useful for choosing locations. In cluster 3, the location where the second most serious incident took place was visited, as the polygon for the most serious event encompassed half of the neighbourhood, making it difficult to select a specific location to visit, and the highest concentration area did not include the polygon for the second most serious event. In cluster 4, it was decided to visit the place where the most serious event occurred, as only 4 incidents were reported in that neighbourhood and they had occurred in its 4 corners, meaning there was no obvious 'heat' concentration.

### 4.2.5 Focus Group Discussions (FGDs)

Focus group discussions (FGDs) are a useful tool for getting in-depth understanding of social issues (O.Nyumba et al., 2018; Rabiee, 2004). FGDs provide insights into how a group (usually purposely selected) thinks about a certain topic, as it allows for different ideas, opinions, beliefs and experiences to be put forward (O.Nyumba et al., 2018; Rabiee, 2004). They can highlight the variation and inconsistencies that exist in a particular community regarding a particular topic. FGDs can also encourage participants to express their views, perceptions, motives and reasons, and generate a wide range of data quickly and cost efficiently (Hennink, 2015; Punch, 2014; Steward and Shamdasani, 2015; Rabiee, 2004).

The FGDs aimed to understand the role that the built environment and urban infrastructure play in the generation of VAW from the perspective of the participants. The aim of this data was to facilitate the interpretation of the results following the analysis of the quantitative HHS by adding depth to the obtained responses (Steward and Shamdasani, 2015). The FGDs were based on a semi-structured discussion administered and moderated by the researcher. The questions focused on definitions of public space; perception of safe and unsafe spaces; experiences of violence; fear of violence and crime; understanding of VAW;[17] and measures for safety (see appendix J for the FGDs programme). In some FGDs, participants addressed these questions without prompting, whereas in some FGDs the researcher had to find different ways to ask the same question in order to move the discussion forward.

A total of 7 focus group discussions were conducted, of which 5 were carried out through the network of Cultural Centres[18] within different localities of the municipality. The remaining 2 were carried out through a local library, that has close contact with the Cultural Centres administration, and through a youth group organised by the Municipal Institute of Youth.

Convenience sampling allowed for the selection of participants based on their accessibility (O.Nyumba

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[17]The topic of VAW was introduced by asking the participants if they knew the definition of *catcalling*—or *street harassment* as it is called in Mexico—and if they had any experiences of this nature.

[18]Cultural Centres are a form of community centres. Corregidora has 9 Cultural Centres of which 6 are located within the study area: *Casa de la Cultura Candiles, Centro Cultural Tejeda, Casa de Cultura Sta. Bárbara, Centro de Desarrollo Humano Lomas de Balvanera, Casa de Cultura El Pueblito* and *Centro de Desarrollo Humano Los Olvera*.

et al., 2018). The sample consisted of women over 18 years of age who are residents of the Municipality of Corregidora, and the number of participants was mostly of 6-8 participants per session (following the recommendation of O.Nyumba et al., 2018). The recruitment of the participants was carried out through the Cultural Centres. Their role as collaborating organisation was to provide access to their premises in order to recruit participants, and to provide a safe, neutral space to conduct the FGDs. It was not possible to conduct a discussion group in 1 selected Cultural Centre due to a lack of internal organisation at the centre, who were regularly contacted to confirm participation but failed to announce the activity, with the result that no participants attended on the day.

## 4.3  Data analysis

The analysis of the collected data was conducted in different stages. It followed a similar structure as the data collection methods design, particularly for the methods that were carried out in a sequential manner, however the analysis did not adhere to the same structure. Therefore the data analysis of the methods will be described in the order in which they were analysed.

### 4.3.1  Mapping of locations: Generating heatmaps

«Some passages of this section have been published in the researcher's article in Crime Science (August 2020), which have been abridged for this thesis:

»Garfias Royo, M., Parikh, P., and Belur, J. (2020). Using heat maps to identify areas prone to violence against women in the public sphere. *Crime Science*, 9(1):15 »

The first data to be analysed was the spatial data provided in the HHS regarding the events of VAW that occurred in the public sphere. This was a crucial step given that the visual data could not be collected without the creation of heat maps, as mentioned in section 4.2.4. Likewise, choosing where to conduct the FGDs was informed by the heat maps. The heat maps were the result of the analysis of the spatial data provided by the HHS respondents that experienced VAW in the public spaces of Corregidora. The analysis of the data and the creation of the maps were carried out using two programmes: QGIS[19] for clustering the incidents, and RStudio for the density analysis which resulted in the heat maps. The heat maps were generated at two levels: cluster level and the urban extent of the municipality, which was useful for identifying different concentrations of VAW at different areas.

The HHS asked participants if they had experienced 13 types of VAW in the public sphere and where each of these incidents took place (however many each participant reported). If a participant had an experience of VAW and remembered the location, the location was recorded as a line or a polygon over a map (see section 4.2.3). If the participant did not remember the location, a multiple choice question was asked to give the participant the option to disclose the type of location where

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[19]Free open source Geographic Information System (GIS) software: `https://www.qgis.org/`

the incident took place. Given the low percentage of answers with spatial data (see section 6.2), it was decided to aggregate the different types of VAW for generating the heat maps. During the initial visualisation of the data, it was found that some polygons marked a street corner while others covered an entire neighbourhood. This difference in sizes proved challenging for obtaining accurate locations, therefore it was decided to use the centroids[20] of the polygons as point maps to generate the heat maps. It was decided that the centroid was a less biased coordinate than using a random point or feature within the polygon, as given the nature of the data, it was not possible to determine where the incident took place within the reported location. The centroids were determined using the QGIS in-built Polygon centroid function. The centroids were used to subset the reported incidents into 10 clusters, and were generated using the QGIS K-Means clustering plugin. A range of number of clusters was tested (between 7 and 12), as a balance between number of incidents contained within the clusters and geographical coverage was needed. The greater the number of clusters, the fewer incidents they contained; on the other hand, the fewer number of clusters, the larger the geographic area they covered. After testing a range of different numbers of clusters, 10 clusters was found to demonstrate a good balance between both factors. The clusters also allowed the urban space to be segregated into smaller areas, which in turn was useful for generating heat maps at local level and informing the decision of which locations to visit for carrying out observations.

A simple density analysis was carried out in RStudio, using ggplot2 and 2D kernel density estimation with contour lines to show the rate of change across the surface (Mitchell, 1999). The code was developed based on Ellis's (2018) and Collier's (2013) work (see appendix K), yielding the maps in section 6.2. To assist in the decision-making process of site selection for observations, 3 maps were printed alongside one another (see appendix I):

1. A cluster level heat map;
2. A map showing all the polygons as they were reported (to inform about polygon sizes); and
3. A point map showing the centroids of the polygons with a tag of the type of VAW as a marker of the severity of the reported incidents.

### 4.3.2 Data analysis of remaining methods

Following this, the visual data was analysed. Part of the visual analysis was conducted on site, through a visual checklist developed by the researcher (see appendix H). This checklist was translated into Excel and informed by field notes. Photographs of the sites were taken, but given the varied number of pictures taken of each site and the amount of pictures gathered, all the images were subjected to a systematic method for choosing which images to analyse:

1. No more than 3 pictures per site were chosen.[21]

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[20] The geometric central point of a polygon or plane figure.
[21] Three pictures during daytime and three pictures during night time.

2. The majority of the site must be visible.[22]

3. The pictures must show the most possible features of the site.

4. Night-time pictures must show similar angles and features as daytime pictures.

These photographs were later grouped to find trends across the sites.

Visual analysis was followed by analysing data collected through HHS, such as sociodemographic information of the respondents and VAW related data. This information is further explored in the results section.

Both the FGDs and semi-structured interviews were analysed thematically. The analysis was completed in several stages. The first stage was the transcription of the recordings. One of the research assistants who conducted surveys during fieldwork supported in the transcription of the FGDs and half of the semi-structured interviews. The remaining stages were conducted by the researcher. The second stage was to read and code the transcriptions. A mix of selective and open coding was used (Ellsberg and Heise, 2005; Corbin and Strauss, 1990), in which the pre-determined themes explored in the questions were listed in categories and subcategories, and modified in an iterative process as the coding took place. This was done with the aim of allowing for data comparisons and for themes to emerge from the data. The third stage was to revise and refine the codes, which included categorising the stories shared by the participants in the same types of violence as the HHS or revising the communication channels among the different levels of the government. The final stage comprised translating the stories into English. It is possible that through the process of translating the stories, some of the meanings and intricacies that the participants tried to convey were lost, particularly when translating colloquialisms.

## 4.4 Fieldwork activities and reflection on methods

### 4.4.1 Fieldwork activities

In order to establish collaborations and gather all the necessary information to conduct this research, 1 preliminary field trip and 2 data collection field trips took place, each comprising different aims and activities (see 4.5 for a flow chart of the field trips). The objective of the first field trip was to establish networks (which are further outlined below); the second was to conduct HHS, site visits and stakeholder interviews; and the third was to conduct FGDs and stakeholder interviews. A risk assessment was completed prior to each trip, to establish action plans and risk mitigating procedures, as well as to ensure the safety and security of the researcher, data collectors and participants. No harmful incidents or accidents were experienced or reported during data collection, but each field trip posed its own challenges, which are further discussed in the reflexivity section (4.4.2).

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[22]An attempt was made to choose pictures that showed the entire site.

| Field trip one | Field trip two | Field trip three |
|---|---|---|
| Establish collaborations | Data collection<br>HHS, site visits & stakeholder<br>interviews | Data collection<br>Stakeholder interviews & FGD |
| November & December 2017 | November & December 2018, January 2019 | March & April 2019 |

*Figure 4.5 – Field trips.*

**Field trip one**

A preliminary field trip to Mexico was conducted in the early stages of the research (November and December 2017) to establish an area of study and to contact relevant organisations for carrying out the data collection activities. This preliminary fieldtrip was useful for making initial contact with relevant stakeholders and to begin establishing research relationships with potential collaborators and/or local actors prior to the development and application of the research protocols. This early stage of the research was useful for understanding the different roles of the collaborators, as well as for identifying the specific ethical procedures that needed to be undertaken for carrying out the research (such as approaching the local State University, Universidad Autónoma de Querétaro, for conducting local ethical clearance for the human interaction elements of the study). No data was collected during this visit.

A successful collaboration was established with the local government of Corregidora Municipality, with whom several meetings were held. These meetings involved presentation of the project objectives as well as a request for collaboration. The meetings were positive and the local government showed interest in collaborating, granting access to the area of study and to some available data. Collaboration with the local government was deemed appropriate for this research based on the following assumptions:

- Allowing access to police reports and other relevant geostatistical data which the local government had already gathered.
- Facilitating access to the locations and providing logistical help for carrying out field work, including access to staff for surveying

A collaboration letter was signed with the local government of Corregidora Municipality through the Municipal Institute of Planning and Sustainability of Corregidora (IMPLASCO), where it was stated that the offer for collaboration was accepted (see appendix L). It was only verbally agreed that the government would facilitate access to further data for the research, and that the findings and recommendations from the research would be shared with the government.

### 4.4.2 Reflection on methods and positionality

**Collaboration with local government**

The local government of Corregidora was initially keen to collaborate in this research and provide access to data and personnel. This willingness to collaborate allowed for an agreement to be signed at the end of 2017, yet this agreement did not outline the responsibilities or terms of reference (ToR) of each party. It was however not possible to carry out data collection activities until late 2018, when the methods were finalised and the appropriate fieldwork permissions were granted. By this time IMPLASCO had been dissolved by the administration of 2018-2021. This resulted in uncertainty about the previous agreement and whether the letter was still effective, whether there would still be collaboration between the local government and the researcher (and if so, to which extent), and whether there would still be any deliverables of the outcomes of the research.

The HHS were carried out when the new administration came into power. The uncertainty of the status of the ToR materialised with challenges regarding permits to access gated communities (an issue that was not communicated when the intentions to carry out HHS were shared—see sections 7.2 and 7.3.1). Additionally, the member of IMPLASCO most involved in establishing the collaboration was transferred to another department, hampering and restricting their ability to assist with the research (having now a more limited power to share data), as well as creating political implications for their own work. The newly elected administration showed signs of unwillingness to re-establish the collaboration, regardless of the signed agreement, which resulted in the researcher encountering numerous obstacles when carrying out the research. Despite these issues, it was possible to complete the HHS. And the signed letter was useful later to provide evidence of an *"established"* collaboration with the municipality when contacting the Cultural Centres, so that they should therefore participate in the research and provide access to their users for conducting FGDs.

**Stakeholder interviews**

The semi-structured interviews with government agents were set up by the collaborator in the local government. Most of the meetings took place in offices of the local government, which may have played a role in the dynamics of disclosing information. It seemed that the setting of these interviews made it less likely for the stakeholders to share their actual thoughts on the administration and the processes within it, particularly for the older, male stakeholders. Those interviews that took place with younger stakeholders and in a more relaxed setting seemed to prompt the stakeholders to share more controversial views and more personal statements than they may have otherwise disclosed.

**Household survey sampling strategy**

The sampling strategy was chosen based on the collaboration with the local government, who stated that could only work with formalised settlements. The INEGI's National Housing Framework was

chosen for the sampling strategy on this basis. This meant that the experiences of women who reside in informal settlements or in the peri-urban areas of the city were excluded from this study. This included women living between urban and rural communities, where the boundaries are not well defined due to urban sprawl. Communities that are situated in the difference between the demarcation lines of the maps that were used for sampling and the real borders of the city (given when the maps were produced). And in communities which, when seen in person, appear to be part of the city, but which are not recognised as such by local authorities and national institutions.

During weekdays, the HHS coincided with office hours, which meant that women that either worked or studied were most likely not available at their home address at the time of visit. Due to security reasons for the data collection teams, however, it was forbidden to conduct data collection activities beyond 1830hrs as, given the time of year, it was dark by that time. This could have been mitigated by conducting the HHS during another time of the year, when days last longer and longer collection times could have been programmed, allowing for a more diverse sample of women the opportunity to be at their homes. In the case of this research, in order to include at least some of the experiences of the women that were not in their homes during weekdays, weekend visits were programmed, with the intention of collecting as diverse a sample of experiences as possible within the limitations of the research.

**Focus Group Discussions**

It was initially intended to conduct one-on-one, semi-structured interviews with women that reported experiences of VAW in the HHS. Given the sensitivity of the subject, the taboo surrounding VAW and the overall perceptions of insecurity in Mexican society, it was not possible to carry them out as planned. No respondents showed interest in being further interviewed as no trust relationship or rapport was built during the survey time, particularly in a country in which VAW is normalised, people do not normally talk about these experiences, and other forms of violence against strangers are common. On this basis, a better strategy was needed to approach female residents of Corregidora which would respect their space, processes and autonomy, while collectively maintaining their anonymity. It was therefore deemed appropriate to use Focus Group Discussions (FGDs) for collecting qualitative data regarding the different range of perspectives, perceptions and experiences of VAW within the municipality. This change included seeking an amendment to the ethical approval provided for the project.

The heat maps were initially thought to be used to inform where the FGDs should take place and the areas where participants should be recruited from. Prior to the field trip, five areas with the most reports of VAW were identified. The strategy changed on the ground due to difficulties in recruiting participants in those specific areas. Instead, Cultural Centres were approached for permission to access the institutions and assistance in recruiting participants. In 1 of the areas lacking a Culture

Centre, a library was approached. In the case of the library, 3 visits were needed to organise the FGDs, as there was a lack of engagement from the community as well as a lack of trust in the research, despite multiple attempts to explain its purposes and use of data.

Analysing the FGDs was difficult and time-consuming due to the length of the discussions and their content. While I was prepared to face emotional distress due to the participants' answers (given that it is the most commonly reported effect on researchers when studying VAW; Fontes, 2004), the analysis of the FGDs was more emotional than previously anticipated, as it evoked feelings of impotence and frustration to issues of normalisation of VAW and the levels of violence women are willing to endure without complaining or reporting (as later discussed in chapters 5 and 8). Additionally, some FGDs led to conversations regarding the clandestine disposal of bodies in the municipality, and the analysis coincided with widespread, national uproar at an extreme case of femicide (BBC, 2020), which led to protests throughout the country. This combination of factors led to the analysis of the FGDs being more emotionally difficult than anticipated.

**Ethical issues in HHS and FGDs**

This research raised several ethical challenges regarding a sensitive topic, VAW, and working with a vulnerable group that has experienced violence. Lee and Renzetti (1990, p. 512) define a sensitive topic "as a topic that may pose a substantial threat to those involved in the research and that therefore makes the collection, holding, and/or dissemination of research data problematic". The authors further describe this threat as including psychological costs, such as shame, guilt or embarrassment as well as other unwelcome consequences. To address these considerations, ethical approval from the UCL Ethics Committee (project no. 9277/003), coverage of the project by the UCL Data Protection Registration (reference No. Z6364106/2018/05/118 social research), and local permissions to conduct the research were obtained. Local permissions consisted of the ethical approval of the project from a local university (Universidad Autónoma de Querétaro, project no. DIP/573-18), as well as a collaboration letter signed by IMPLASCO. Security measures were also thoroughly considered for data collection, which included risk assessment clearance from UCL CEGE Department. Careful thought was given to the use of appropriate language while conducting the research, the locations for applying the methods, how to reduce and manage participants' distress, and the safety of the data collectors, including working in pairs at all times and not sharing personal information. See appendices L and M for a copy of all the letters of approval, relevant documentation, and risks and mitigating actions.

The WHO (2001) developed safety and ethical guidelines for conducting research on domestic violence and trafficking. These guidelines focus on privacy and confidentiality of the interview process, and provide recommendations regarding special training on gender issues for the collection phases of research regarding VAW. These were considered when addressing the ethical issues that

arose while conducting this research, including consent measures, right of withdrawal, confidentiality and anonymity, privacy, distress and disclosure,[23] and data storage and handling. It was ensured that the research complied with these standards.

According to Fontes (2004, pp. 143), research into VAW differs from other sensitive topics in that women that agree to partake in the research, may be doing so "in a societal context of disbelief, fear and shame [...] [having] possibly suffered from a variety of humiliating experiences related to their victimisation". Researchers are therefore recommended to remain mindful of the degree of sensitivity of research (Fontes, 2004). It was possible that participants in the survey would be distressed by the questions asked. In the case of the HHS, the data collection team made their best effort to survey women in strict privacy, when no family members were present. However, in some cases this was not possible. Some surveys could only be conducted while other members of the women's household were present. Despite repeated attempts to terminate the survey if there were other members present, the participants themselves sometimes wanted to continue the survey. In some instances, this occurred when it was clear there was a man listening behind a door or a man was responding on behalf of a woman (answers given in such circumstances were marked as *Not Answered* for the purposes of data analysis). In the case of the FGDs, the flexibility and anonymity of the method allowed for participants who did not feel comfortable speaking out to remain silent. And in approximately half the FGDs, some participants left the discussion room. All participants were reminded that the survey could be terminated or that they were free to leave the FGD session at any point to reduce distress. All HHS and FGD participants were provided with information sheets regarding referral services for health care, emotional support and legal protection centres (Ellsberg and Heise, 2005; Fontes, 2004; WHO, 2001).

The act of data collection also brought to light that studying VAW can also have an impact on the researchers and data collectors. As Fontes (2004) states, "their well-being is also a legitimate ethical concern", and as my primary supervisor, Dr Parikh, suggested while I was on the field, "no data is more important than personal safety". While no serious incidents occurred to the data collection team,[24] many of us were subjected to violence while conducting data collection. Some of the research assistants were catcalled while walking from one home to another. A team of 2 were stunned to see a man walking towards them with a machete asking them to terminate a survey they were applying to his daughter.[25] And an entire team was asked to come inside a house and not

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[23]In the case of disclosure, "the best interests of a [..] violence survivor may sometimes be to ensure the act is not reported to authorities" (Jewkes et al., 2012). Therefore, the standard action was that no incidents would be reported, as that was not the role of the researcher or this research. Participants were not asked if they wished to report any incident that was disclosed during the data collection process, however they were provided with resources to orient them to the relevant authorities in case they wanted to file a report or were in need of help.

[24]Regarding risk mitigation while conducting HHS in dangerous locations, while conducting HHS in the 3 neighbourhoods anecdotally known be the most violent, the police were informed about the survey activities and asked to support the safety of the data collection team by patrolling these areas more often.

[25]The situation was clarified when it was disclosed that the man was returning home from working on the fields and that the daughter had managed the situation without endangering the data collectors.

allowed out for about an hour, during which they were both threatened to hand over the information about the survey and threatened that once they did so, the information would be put up on social media to discredit the research. This prompted a change in the already rigorous[26] risk mitigation strategy to not allow any team member to go inside any house for the rest of the surveys. Although there were measures in place to mitigate the intrinsic risks of the research, situations like these were difficult to foresee.

**Site visits and observations**

Despite conducting the observations with 2 research assistants, a man and a woman,[27] who acted as informants for the method, these were mostly conducted by me. It is possible that the way I read violence in space differs from other women (given my own experiences and position in society), particularly from residents of those specific areas or other urban areas of Corregidora. The method of conducting observations did not consider the views of the female residents of Corregidora, regardless of taking into consideration the spatial data provided by their experiences to select the locations. Additionally, it is possible that the locations visited were not the same as where the incidents of violence were experienced, since not all the spatial data was used to create the maps and some of the incidents mapped were over a year old, meaning infrastructure may have changed since they occurred. There is also a question around whether the spatial data was the most accurate, as it was based on the memory of the participants, as well as the previously mentioned issues regarding the recording of the incidents (such as the size of the polygons).

In terms of experiences and emotions on the field, I was nervous to visit most of the locations to conduct observations. These were areas where many women reported experiencing violence. Some distressing incidents occurred while conducting these observations which affected the entire data collection team. For example, 6 officers pulled over to interrogate us about our activities and to ask if the project had *"the appropriate paperwork"* (Anonymous police officer, personal communication, 9 January, 2019). The dynamics of the interaction were slightly menacing, particularly as this took place in an area that reported more violence. After a short conversation with the police officers about the project and its collaborators, they decided that the activity was neither illegal nor threatening and resumed their patrolling activities. In other sites, people would either stand on the door of their houses or peek through their windows to observe what the team was doing. In 1 of the locations, a park, a man approached me to inquire about the pictures and notes being taken, and decided to report further issues with the park once he was told the project was being conducted in collaboration with the local government. The data collected at night-time was possibly compromised, as due to security reasons, they were visited by car and only videos were taken while the car was running.

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[26]Continuous text message monitoring about teams whereabouts, water breaks, morning and afternoon team turns, asking police to patrol areas when going to the most dangerous neighbourhoods, personally driving everyone from the meeting point to the different neighbourhoods, teams always surveying in neighbouring areas and never walking alone.

[27]One of the previously recruited data collectors and her partner at the time, who decided to join us for extra security.

Thus it was not possible to collect much information regarding visibility or lighting, people or activities being conducted, which leaves a gap in the analysis of the locations.

**Researcher's role in the research process**

Letherby (2003, p. 68) suggests that "researchers are not the only people involved in research and respondents are also likely to have an emotional and political involvement with the research. Thus, respondents have their own view of the researcher and the purpose of the research, and present themselves and their stories accordingly". This means that they form their own opinion of the researcher and the purpose of the research, what the researcher may be seeking to answer and may respond accordingly. Wickramasinghe (2010) talks about a "compelling epistemological issue" that arises from the researcher in the research process, and suggests that a "discussions on privilege, truth, location and the possibility of full representation of respondents and their realities" can be employed as a method of problematising them even if it cannot resolve them. It is important to therefore reflect on my positionality within this work and how the participants may have perceived me and provided their responses accordingly.

In my case, I am a young, white Mexican female from an upper middle-class family. This research was conducted in a familiar environment, the city I grew up in, although not in locations I had previously visited. This facilitated the process of being acquainted with the city and some spaces, however, the research process allowed me to see the city in a new light and explore other areas of the city. Being able to recognise places and areas was useful to connect with participants, who were able to see me as *'local'*, and it also made it easier to understand which locations participants were referring to, particularly when using local terminology.

My positionality is one of privilege, particularly in a country that inherited historical colonial class and race structures (Consejo para Prevenir y Eliminar la Discriminación de la Ciudad de México, 2017; Escobar Ledesma, 2012). My identity represented power differences, particularly when approaching areas of lower SES, where my presence provoked various dynamics. For example, to organise the FGD in the poorest, most remote area, it took several trips, various phone calls and considerable convincing to build rapport and engage participants in the research. When the day of the discussion arrived, less than half of the women who agreed to participate showed up, and those that did were very reluctant to engage in conversation.

As a young female student, my position changed depending on who I was interacting with. Older, male officials seemed to want to explain gender and women's issues while I was trying to conduct an interview, and in their view, having female staff seemed to be almost enough to bridge gender disparity in society, which seemed to dismiss my research. Or when trying to arrange a meeting with the Municipal Manager of the Cultural Centres, he rescheduled a couple of times, until I waited for a couple of hours outside his office and he was forced to see me as I saw him walking into his office,

only to then delegate the work to a younger, male representative. On the other hand, my positionality was possibly useful for engaging younger government stakeholders in conversation, who appeared keen to disclose information and were open with their opinions on what they saw as challenges for the local government. Younger government stakeholders also appeared more willing to collaborate with the research, as was the case of the younger official of the Cultural Centres or the Municipal Manager of the Youth Institute, who also granted access to conduct FGDs.

The RAs team were all young Mexican women who looked very different from each other in terms of height, body and skin complexions. We ranged from 20 to 30 years of age and came from an array of different socioeconomic backgrounds, but had similar education levels (having finished secondary education and progressed to higher education). It is impossible to know whether older participants would have been more willing to disclose their experiences of VAW to women whom they perceived as closer to their own age, rather than young women asking them about these issues (Fontes, 2004).

Feminists argue that it is not possible to detach completely from their work: "emotional involvement cannot be controlled by mere effort of will and this subjective element in research should be acknowledged" (Letherby, 2003, pp. 68). Throughout the process of doing this research, there has been a strong emotional component. Engaging with some of the literature review was the first barrier to overcome, as some of the readings were very difficult to get through. They inadvertently made me reflect on my own experiences of VAW. The data collection process itself was challenging. In some instances, it was challenging to maintain objectivity and distance, especially given the nature of experiences being shared. While conducting a survey with 1 participant, it was clear from her answers that, had I asked a few more questions, I would have learned who was the perpetrator of a serious incident of VAW against her. However, I had to reconcile my natural desire to ask more questions with the fact that I was doing research with a specific purpose. Following my survey script served as a tool to keep focus on this purpose. It allowed me to detach from my survey subject, but at the same time it made me feel powerless. From this point onwards, I managed to enter a *'researcher'* mindset, which served as a shield from becoming more distressed, however it prompted weird dreams and anxiety attacks. Analysing the FGDs was difficult as it coincided with a particular gruesome femicide in Mexico—of which I was unfortunate enough to stumble upon the images while reading the news. To this moment, these images linger in my mind when trying to write this research. And while that incident has nothing to do with this work or the data it analayses, it made me think of all the different ways in which this research could have been conducted.

# Chapter 5

# The routine experience of VAW in the streets of Corregidora

This chapter presents the results that address the first Research Question (RQ) of this thesis:

«*What are the most common types of Violence Against Women (VAW) experienced in the public spaces of Corregidora?*»

The results derive from conducting household surveys (HHS) in five urban localities of Corregidora as well as from focus group discussions (FGDs). This chapter consists of three sections. Section one outlines the results from the HHS, which illustrate the extent of VAW in the public spaces of the urban localities of the municipality of Corregidora. The second section presents the stories that were shared during the FGDs. These anecdotal experiences were important for understanding nuances in the perpetration of Violence Against Women (VAW). The third section presents results from the FGDs in which women discussed factors which they believe makes them more vulnerable to VAW and the coping mechanisms and prevention measures they adopt to increase personal protection and avoid being victims of VAW. The results of this chapter relate to the first level of the Social-Ecological Framework, which looks at the individual experiences of individuals and their likelihood of becoming victims of violence (CDC, 2020; WHO, 2020).

## 5.1 Incidents of VAW in the public spaces of Corregidora

The HHS participants were introduced to the topic of VAW in the survey as "the experiences that women have in public spaces of their communities", whether this took place in their neighbourhood, locality or municipality[1] (see appendix E for the survey programme). They were then asked about each of the 13 types of VAW separately, and then asked further questions about the most memorable

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[1]Participants were provided with examples such as the street, public transport, markets, parks, sport and recreational areas, churches or other recreational areas like bars, pubs, restaurants, clubs saloons or places to dance, party, fairs, assemblies or neighbour or religious meetings.

incident. Each type of violence will be referred to as type 1, type 2, etc., and the description of each type is available in table 5.3. This categorisation is the same as the one used in the HHS as well as the one developed by INEGI for their survey of household dynamics (ENDIREH; INEGI, 2016a). All the results presented in this section are disaggregated by age in order to make comparisons with the total sample. For more information about the sampling of the HHS see section 4.2.3.

### 5.1.1 Household survey participants

A total of 305 households were visited with a response rate of 89.18%, yielding 272 effective surveys. Table 5.1 shows the distribution of surveys and response rates disaggregated by locality (for consistency with the sampling method). The first section of the HHS consisted of 16 questions that focused on collecting sociodemographic data, both to assess the age and socioeconomic level (SES) of the participants——based on the AMAI methodology (section 4.2.3), as well as data regarding the participant's occupation, marital status and whether they considered themselves indigenous. The aim of collecting sociodemographic data of the participants was to have a better understanding of the intersectionality of violence across different groups of women, and assess whether there were any particular groups of women in Corregidora that were more vulnerable to or experience more violence than others.

*Table 5.1 – Response rates of survey: total and per locality.*

| Locality | Name | Total surveys | Answered surveys | Response Rate |
|---|---|---|---|---|
| **All** | **Corregidora** | **305** | **272** | **89.18%** |
| Locality 1 | Pueblito | 129 | 114 | 88.37% |
| Locality 2 | Negreta | 33 | 32 | 96.97% |
| Locality 3 | San Jose de los Olvera (SJO) | 71 | 62 | 87.32% |
| Locality 4 | Venceremos | 57 | 51 | 89.47% |
| Locality 5 | Olvera | 15 | 13 | 86.67% |

**Age ranges**

To homogenise data, the ages were grouped by age range, in a 10 year age bracket from the age of 31 onward.[2] The youngest participant was 18 years of age, the eldest was 90 years old and the average age of the respondents of the survey was 45 years old. Figure 5.1 shows a graph of the breakdown of age ranges of all the survey participants. Additionally, a comparison with the population of females of over 18 years of age of the largest urban locality of Corregidora, El Pueblito, was made, and it was found that both surveys found a similar percentage of females within the same age ranges (INEGI, 2015d).

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[2]This was due to the age range 51 to 55 missing in the survey questionnaire as an entry mistake. This did not influence the accuracy of the results, however, as the correct number of responses in the age group of 51 to 60 was registered. Only one participant chose to record her age in the range of 55-60 and 5 participants provided their exact age (at the time of the survey) within that age range.
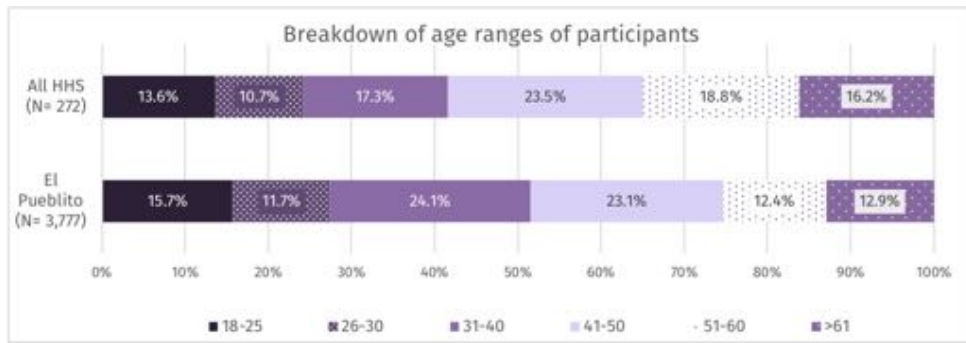
*Figure 5.1 – Breakdown of age ranges of participants in comparison with the female population breakdown of El Pueblito (INEGI, 2015d).*

**Socioeconomic Status (SES)**

The socioeconomic status (SES) of the respondents was calculated using the AMAI methodology (section 4.2.3), which uses a points-based system that provides a score depending on the participant's answers, and consequently an SES level (see table 2 in appendix F). The breakdown of SES level of the participants is found in figure 5.2. Based on this points system, the majority of the participants of the sample were scored on the higher spectrum of the socioeconomic scale. This is something that will be later addressed in limitations (section 9.1).
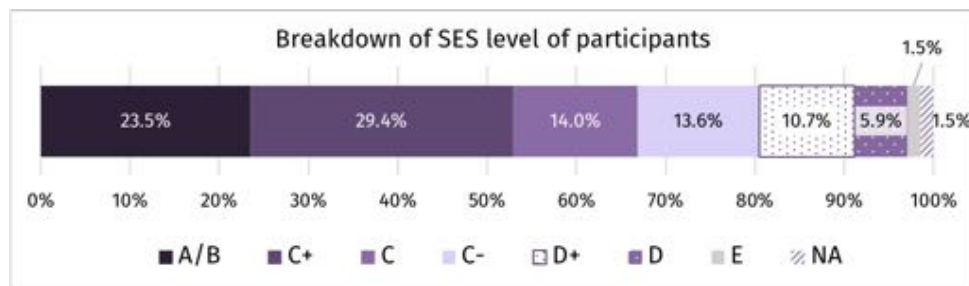


*Figure 5.2 – Distribution of socioeconomic levels of all the household survey respondents; N= 272.*

**Occupation**

Three questions were asked regarding occupation of participants: whether they were students, whether they had a job, and a verification question regarding the productive activities they performed the prior week. 43% (117) of the participants self-reported having a job and 11% (30) being students. These numbers were compared with the verification question, which reported 44.9% (122) of the participants having full or part time work and only 5.5% (15) of the participants reporting being full time students. This difference could possibly be due to the participants having to work alongside their studies and prioritising providing an answer regarding having worked rather than having studied. Figure 5.3 below shows the results broken down per age range.
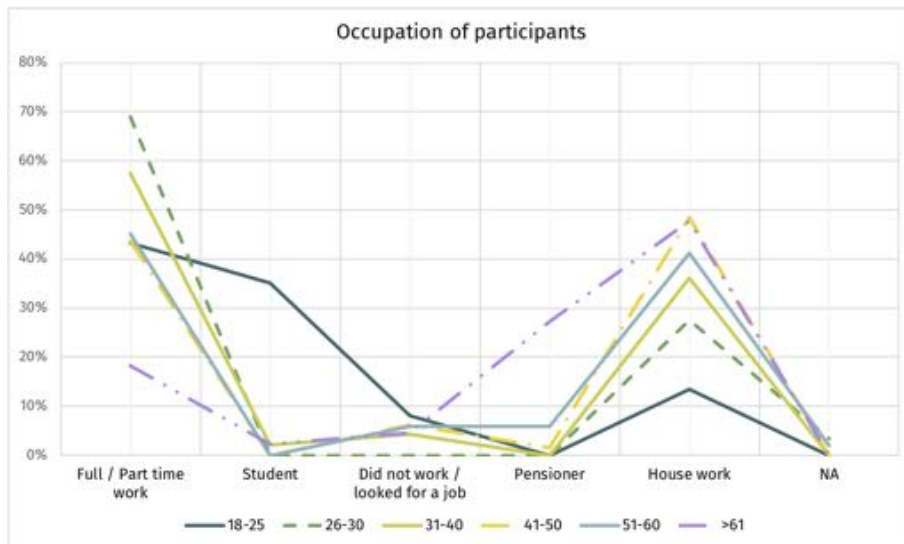
*Figure 5.3 – Occupation of participants per age range.*
*18-25, N=37; 26-30, N=29; 31-40, N=47; 41-50, N=64; 51-60, N=51; >61, N=44.*

**Ethnicity**

While the issue of race and ethnicity was not addressed directly in this research, a question regarding whether the participants self-identified as indigenous or belonging to an indigenous group was asked. Framed as "according to your culture, do you consider yourself indigenous?", 61% (166) of the participants said they did not consider themselves indigenous, 2.6% (7) of the participants did not know if they considered themselves indigenous, while one participant decided to not provide an answer to the question. Those that did consider themselves indigenous, or partly, comprised 36% of the survey participants, divided equally between those that answered "yes (indigenous)" or "partly" – 18% (49 answers) each (see 5.2). This is consistent with the findings of INEGI, which found that for the state of Querétaro, 19.2% of the population at state level consider themselves indigenous.

*Table 5.2 – Responses regarding ethnicity.*

| Response | No of participants | % of total (N= 272) |
|---|---|---|
| Indigenous | 49 | 18% |
| Partly | 49 | 18% |
| No | 166 | 61% |
| Doesn't know | 7 | 2.6% |
| NA | 1 | 0.4% |

The question of identity was based on the participants' own perception, where 36% of participants self-declared as indigenous, either fully or partly, while 61% did not think of themselves as belonging to any group. In comments to the surveyors, some participants distinguished between indigenous people who retained their own language, culture and clothing and were resistant to modernising influences and those who adopted the language, culture and clothing of the mainstream culture. The latter were implied to be superior to the former, and in some cases, this subjective and problematic hierarchy seemed to be the basis for the participants' self-identification as non-indigenous.

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**Marital status**

Most participants were married or in a partnership, as shown in figure 5.4. Of those participants that were married or in a partnership, they were asked for the gender of their partner. All participants reported having only male partners.
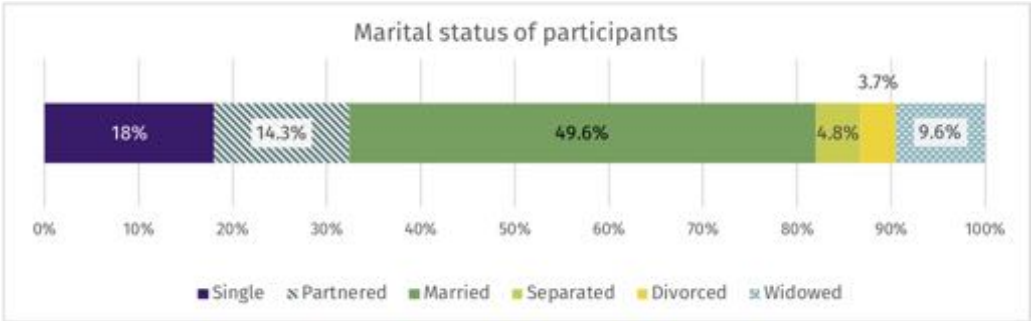


*Figure 5.4 – Marital status of participants; N=272.*

### 5.1.2 Experiences of VAW

Of the 272 women that were surveyed, 39% (106 women) expressed having experienced at least one type of violence within the year prior to the survey taking place, with many reporting multiple incidents, yielding a combined total of 279 incidents of experienced violence. An additional 22.4% (61 women) of the survey respondents recounted incidents that took place more than a year prior to the survey, which included an additional 102 incidents of violence. According to the INEGI survey, 33.9% of the women living in urban areas of Querétaro experienced violence at "community level" (in the public sphere) within the 12 months before the survey took place and 53.6% throughout their life (INEGI, 2016a). The survey conducted for this research shows that the problem may be more widespread than previously thought.

*Table 5.3 – Types of VAW used in this research.*

| Type | Abbreviation | Description |
|------|--------------|-------------|
| 1 | Catcall | Whistling or offensive sexual remarks |
| 2 | Stalk | Stalking |
| 3 | Offend | Offended or humiliated for being a woman |
| 4 | Ignore | Ignored for being a woman |
| 5 | Push | Pinched, pulled hair, pushed, pulled, slapped or thrown an object |
| 6 | Lift clothes | Lifted skirt or dress or pulled clothes |
| 7 | Grope | Been touched, groped, leaned against or kissed without consent |
| 8 | Fear | Fear of being attacked or sexually abused |
| 9 | Flash | A person showed them their genitals or touched themselves in front of them |
| 10 | Show porn | Was forced to watch porn or sexual acts |
| 11 | Punch | Kicked or punched |
| 12 | AR | Attempted rape |
| 13 | Rape | Rape |

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**Number of types of incidents of VAW per respondent**  According to the results of the HHS applied in this research, of the respondents that reported having experienced incidents of VAW, whether it was within the year prior to the survey or beforehand, 43% (71 women) reported only experiencing one type of violence, 22% (37 women) stated that they experienced a combination of two types of incidents; 15% (25 women) reported having experienced a combination of three types of incidents; and the remaining 20% (34 participants) experienced a combination of 4 to 9 types of incidents.  On average, each woman experienced 2.4 types of VAW in the public sphere within the context of this study (see tables 5.4 and 5.5 for an overview of this information).

*Table 5.4 – Reported number of incidents women experienced.*

| No. of types of incidents experienced | No. of women | % of women who experienced VAW |
|:---:|:---:|:---:|
| 1 | 71 | 43% |
| 2 | 37 | 22% |
| 3 | 25 | 15% |
| 4 | 12 | 7% |
| 5 | 12 | 7% |
| 6 | 7 | 4% |
| 7 / 8 / 9 | 1 | 1% |

It must be noted that these numbers include reports of incidents that occurred more than a year prior to the survey taking place, despite the survey asking if the incidents occurred within the year prior.[3] It was not possible to disaggregate this particular aspect of the data.[4]

*Table 5.5 – Number of women who experienced violence and number of incidents.*

| | | % of total |
|:---|:---:|:---:|
| Total women surveyed | 272 | |
| Women that experienced no incidents | 105 | 39% |
| Women that experienced at least one incident | 167 | 61% |
| Women that experienced at least one incident within the year prior to the survey | 106 | 38.97% |
| Combined number of incidents | 394 | 2.4 * |

\* Weighted average of incidents per women who reported experiencing violence.

**Prevalence of VAW: Most common types of violence**

The most common types of violence that occurred within the year prior to the survey taking place were types 1: catcalling, 8: fear of being attacked, 2: stalking and 7: groping.  Figure 5.5 shows the percentage of women who experienced each type of violence as well as a breakdown per type per age range.  Type 1, catcalling, was the most common type of violence, experienced by 35.3% of participants.  This was followed by type 8: fear of being attacked, with 12.1% of the participants disclosing an experience of this nature.  Type 2: stalking was the third most common type of violence,

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[3]A verification question was asked regarding the number of times the participant experienced each type of violence, or whether it took place more than a year prior to the survey taking place.

[4]The numbers presented in this section do not consider recurrence of the same type of incident of violence, which was possible to disaggregate and explained later in section 5.1.2.

with 11.4% of the participants disclosing an incident of this type. Type 7: groping was experienced by 10.3% of the survey participants within the year prior of the survey taking place. These types were followed by violence type 9: exhibitionism and being offended or ignored (types 3 and 4). These types of violence, despite being experienced by many women, (8.1% for types 9 and 4 and 7.4% for type 4), were experienced by less than 10% of the women that were surveyed, thus no conclusions about their prevalence can be gathered, although they are included in qualitative discussions later in this thesis.
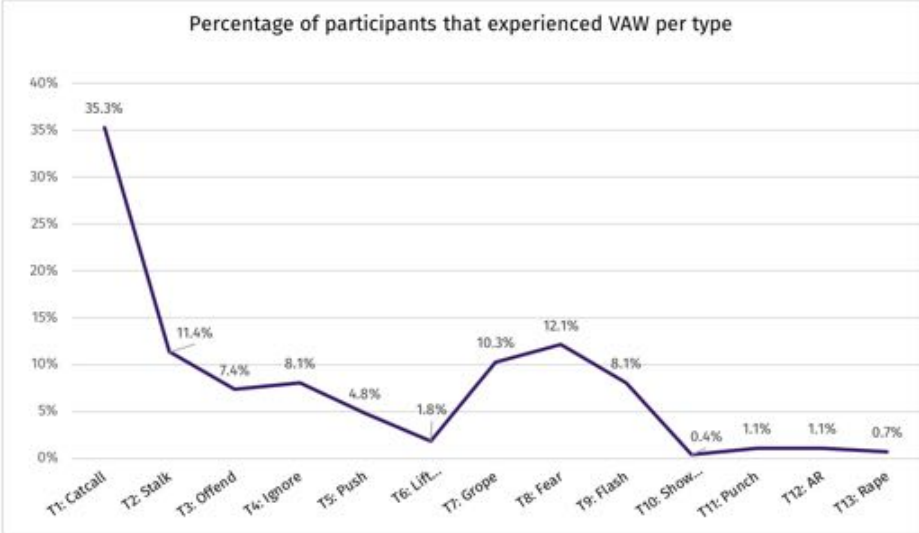


*Figure 5.5 – Percentage of survey respondents that experienced VAW per type within the year prior to the survey. N=272.*

**The recurring nature of VAW:** The HHS also included a question regarding the recurrence of incidents of the same type of violence. It is worth mentioning that despite the survey asking whether participants had experienced an incident of VAW within the year prior to the survey, many women recounted incidents that happened more than a year prior. Almost a third of the 394 incidents reported in the HHS took place over a year before the survey took place (see figure 5.7). These events were not considered for the analysis presented in some of the sections of this thesis; however if added to the analysis, they did not have a big effect on the overall trends in victimisation per type, as can be noted in figure 5.6. This will be discussed later in the limitations of this work.
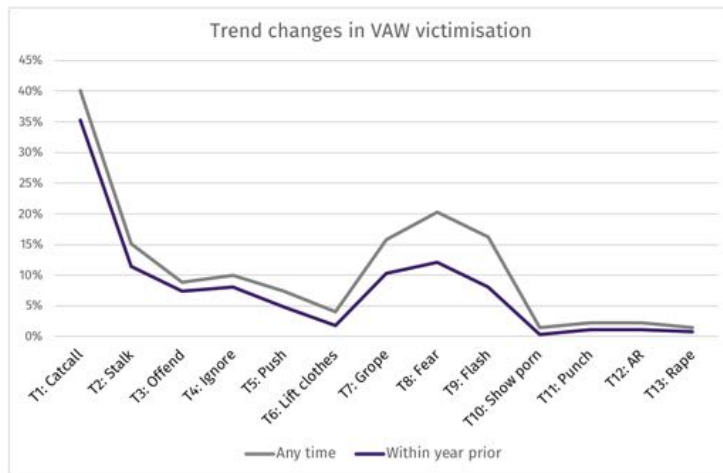
*Figure 5.6 – Trend changes in VAW victimisation; N=272.*

An alarming pattern can be identified regarding the incidents of VAW reported in the survey: half of the participants reported experiencing the same type of violence repeatedly within a single year. Of these participants, almost a third experienced VAW over 5 times in a year, as can be seen in figure 5.7.
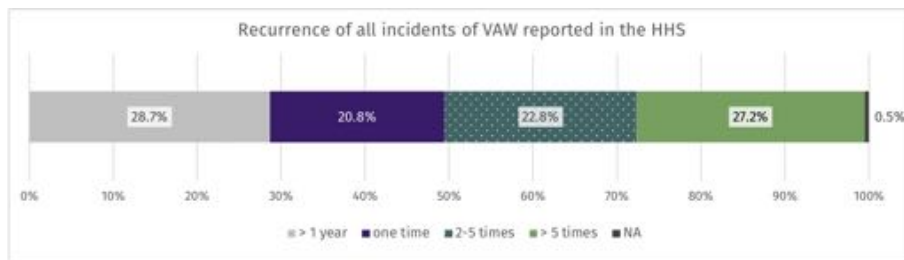


*Figure 5.7 – Percentage of recurrence of all incidents of VAW reported in the HHS; N=394.*

A more detailed breakdown of this recurrence can be seen in figure 5.8, in which it can be noted that over half (56%) of the participants that reported incidents of violence type 1: catcalling experienced over five events within the same year; and another third (29.4%) experienced 2 to 5 incidents.
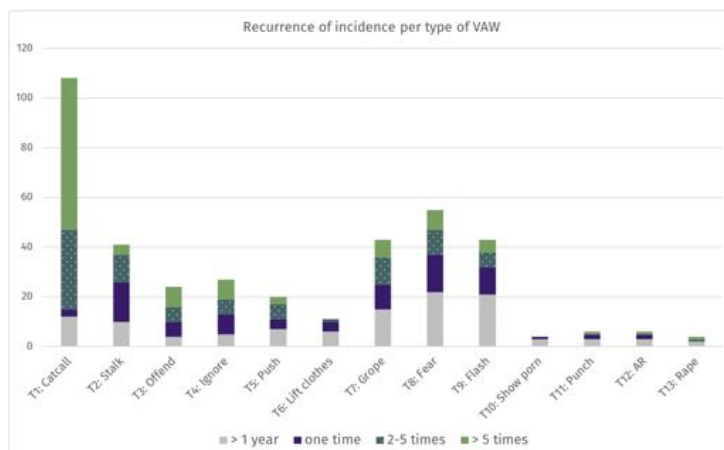


*Figure 5.8 – Number of recurring incidents per type of VAW.*

**Times**

When asked at what time of day did they experienced VAW, participants reported that these occurred most frequently in the evening, between 15:00hrs and 19:00hrs, when 37.1% (146 of 394) of the total incidents of violence occurred. This was followed by morning and noon (morning–between 6:00hrs and 10:00hrs, noon:–between 11:00hrs and 14:00hrs), when 21.2% (83 of 394) of the cases occurred respectively. See figure 5.9 for the most common times of victimisation.
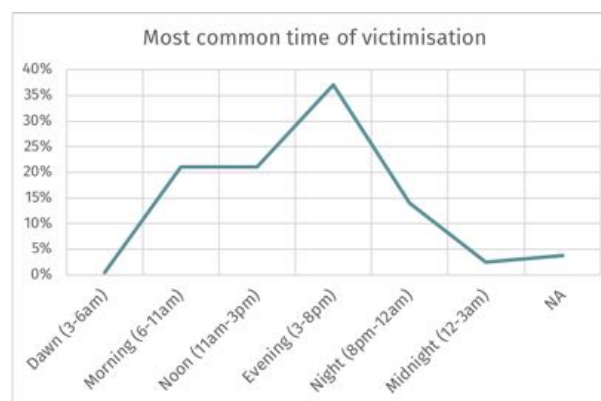


*Figure 5.9 – Most common times of victimisation.*

### 5.1.3  Women who experienced VAW

Figure 5.10 shows a breakdown per age group per type of VAW of the 106 women that experienced VAW within the year prior to the survey taking place. It can be noted that younger women, particularly those within the age range of 18 to 30 years of age seemed to experience more violence than the other age groups, namely catcalling, stalking, groping and fear of attack. Women between the ages of 30 to 50 seemed to also be subjected to catcalling and stalking, although to a slightly lesser degree, while women over 61 years of age, reported very low incidents of VAW in public spaces.
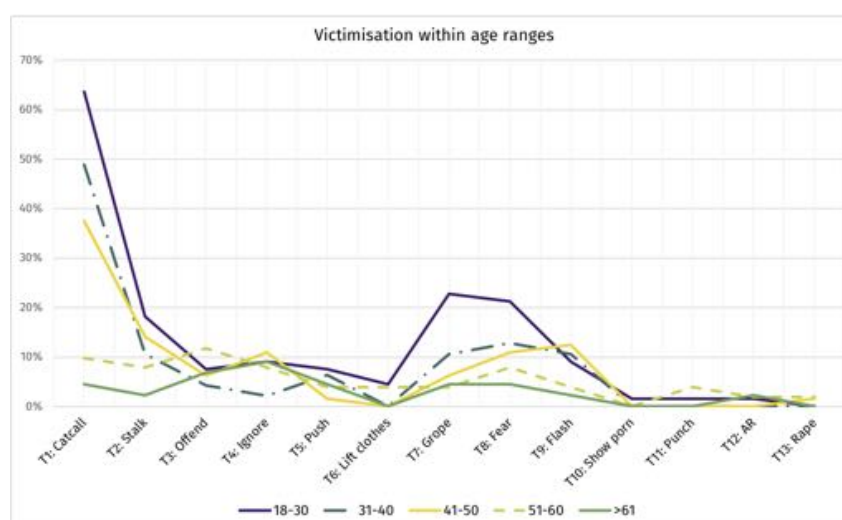


*Figure 5.10 – Number of respondents that experienced VAW per type per age group.*
*18-30, N=66; 31-40, N=47; 41-50, N=64; 51-60, N=51; >61, N=44.*

Women from 18 to 30 years of age accounted for a third (31.14%) of the total reported incidents of violence – 18.56% were women between 18 to 25 years of age and 12.57% between 26 and 30. Figure 5.11 shows two graphs comparing the victimization results when aggregating and disaggregating age ranges 18 to 25 and 26 to 30. The aim of the graphs is to show that when looking at the experiences of the younger participants collectively, it can be noted that younger women seem to experience higher proportions of VAW.
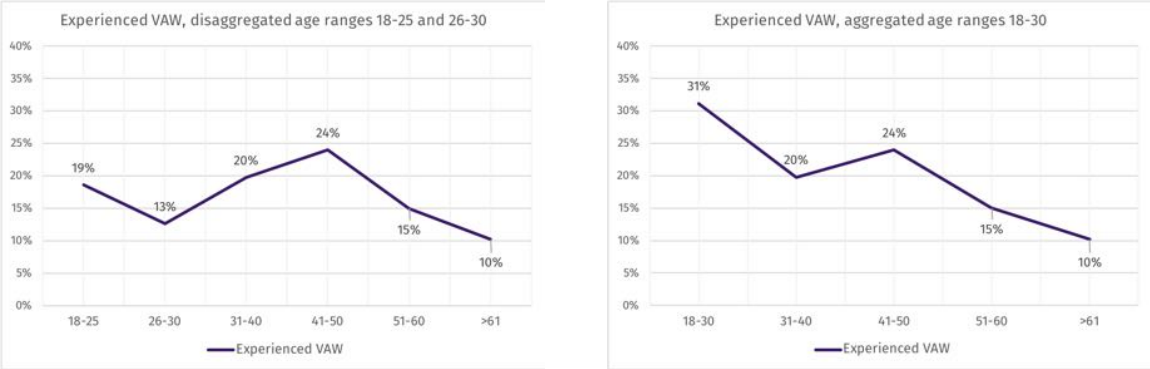


*(a) Experienced VAW, disaggregated age ranges 18-25 & 26-30. N = 167*

*(b) Experienced VAW, aggregated age ranges 18-30. N = 167*

*Figure 5.11 – Incidents of VAW per age groups, aggregated in different age ranges.*

The second largest age group to experience VAW were women between 41 to 50 years old, accounting for 25% of the participants that experienced incidents of violence. Figure 5.12 shows a graph with the total number of participants per age group in contrast with the number of women within the same age group who reported having experiences of VAW.
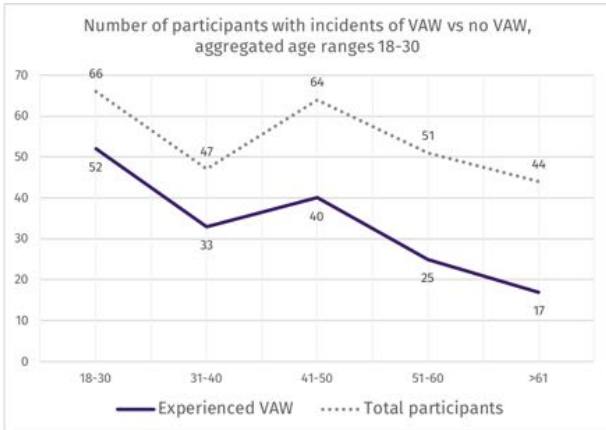


*Figure 5.12 – Number of participants with incidents of VAW per age groups compared to participants with no incidents.*

If the same numbers as above are compared within the different age groups, the numbers look very different. The age range of 18 to 25 years of age will be used to illustrate this difference. Of the total surveyed women, 13.6% (37 women) were in the age range of 18 to 25 years old. Of these 37 women, 31 experienced some form of violence, meaning 83.78% of the participants between 18 to 25 years of age experienced an incident of violence in a public space. With this in mind, table 5.6

and figure 5.13 show these numbers for the other age ranges.

Table 5.6 – Victimisation within age ranges.

| Age range | Total participants | Experienced VAW | % | No VAW | % |
|-----------|-------------------|-----------------|-------|--------|-------|
| 18-25 | 37 | 31 | 83.8% | 6 | 16.2% |
| 26-30 | 29 | 21 | 72.4% | 8 | 27.6% |
| 31-40 | 47 | 33 | 70.2% | 14 | 29.8% |
| 41-50 | 64 | 40 | 62.5% | 24 | 37.5% |
| 51-60 | 51 | 25 | 49% | 26 | 51% |
| >61 | 44 | 17 | 38.6% | 27 | 61.4% |
| Total | 272 | 167 | 61.4% | 105 | 38.6% |
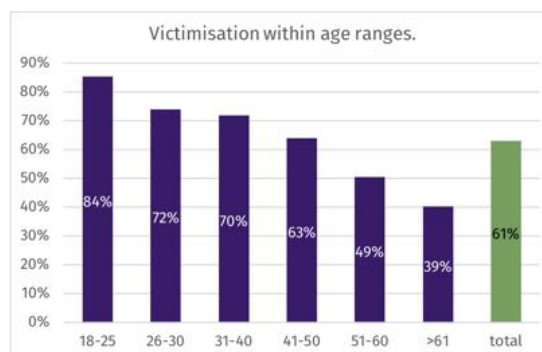


Figure 5.13 – Victimisation within age ranges.

Pearson's chi-squared test was conducted to determine whether there is an association between age groups and experiencing gender-based violence in public spaces. The result, P = 0.0002375, suggests an association between age groups and experiencing VAW in the street. In figure 5.14, positive residuals cells show a positive number (in purple), which specify a positive association or attraction between corresponding column and row variables. In this case, a positive association between experiencing VAW and the younger age ranges is shown. Conversely, a positive association was found between not experiencing VAW and older age ranges. Negative residuals show a negative number (figure 5.14 in green), implying negative association or repulsion between corresponding column and row variables. In this case, the older age ranges show negative association with experiencing VAW, and the younger age groups with not experiencing VAW. These results can be interpreted as there being an association between younger women experiencing VAW in public spaces, and older women not experiencing VAW in public spaces. Figure 5.14 shows a visualisation of Pearson's residuals.
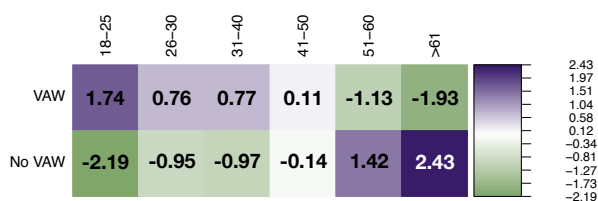


Figure 5.14 – Pearson's residuals for testing GVAW and age groups. Positive residuals are in purple, while negative residuals are in green.

As for the socioeconomic status (SES) of the women that experienced incidents of violence, the highest proportion, accounting for over a third of the women that experienced VAW (35.33%, 59 participants) was of those belonging to level C+, which is associated with second highest strata of society, with car ownership, good access to internet and the spending of about a third of income on food (NSE AMAI, 2018). The second largest group encompassed a quarter of the women (23.95%, 40 women) who experienced VAW and belonged to A/B level, the highest strata of society. This level is associated with having household heads with high education levels and is the SES level that invests the most in education (NSE AMAI, 2018). 14.97% of women (25 participants) reported having experienced VAW at SES level C, and the percentage declines further to 10.78% (18 respondents) at SES level C-. The remaining 13.17% includes SES levels D+, D and E ( 8.38%/14 participants, 3.59%/6 participants and 1.2%/2 participants respectively). See figure 5.15 for a graph displaying this information in comparison with the SES level of all the participants as well as against those that did not experienced any incidents of VAW.



*Figure 5.15 – SES breakdown of participants that experienced VAW versus no VAW.*

In 80.96% of the total cases (394) of violence, the women reported being alone when the incident took place. The remaining 18.53% (73 responses) of the cases reported being in the company of another person(s), while 0.51% (2 responses) did not offer any response. Figure 5.16 shows a graph of the percentages of women who were alone when the incident of violence took place per type. It can be noted that in almost all the types of VAW, the majority of the women were alone were the incident took place. This was especially true for the less severe type of VAW (catcalling), as well as being shown porn, fear of attack and the most severe types of VAW (attempted rape and rape). However, this was not the case for being offended for being a woman, and to a lesser degree being ignored for being a woman, in which a majority of participants suggested being in the company of a person.
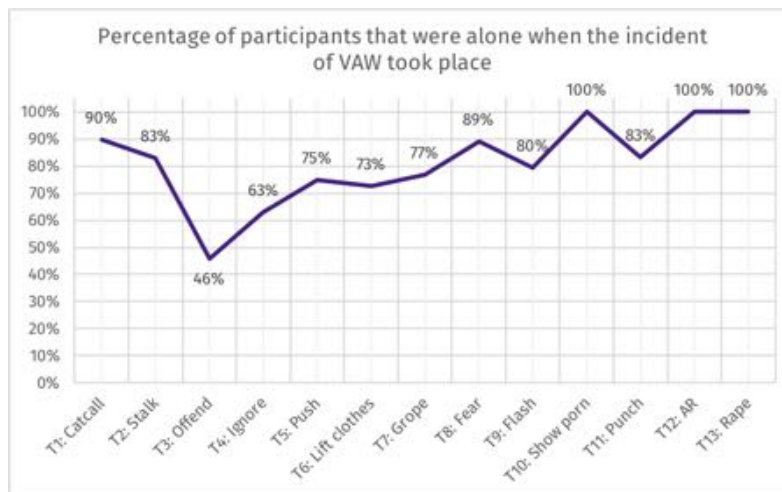
Figure 5.16 – Percentage of participants that were alone when the incident of VAW took place.

Table 5.7 shows the most common types of company present with those participants that dis-closed being with someone when the incident of VAW took place (73 participants, 18.52% of inci-dents), and figure 5.17 shows a breakdown per type of VAW. The most common type of company present was a family member, with almost a third of participants recalling being with a family mem-ber. The survey however did not ask for the gender of the person in the company of the participant.

Table 5.7 – Company present when the incidents of violence took place.

| Company type | Responses | % of in company (73) | % of incidents (394) |
|---|---|---|---|
| Family member | 42 | 57.53% | 10.66% |
| Friend | 15 | 20.55% | 3.81% |
| Acquaintance | 5 | 6.85% | 1.27% |
| Neighbour | 1 | 1.37% | 0.25% |
| Work colleague | 7 | 9.59% | 1.78% |
| Other people | 1 | 1.37% | 0.25% |
| NA | 2 | 2.74% | 0.51% |

| | T1 (10%) | T2 (17%) | T3 (54%) | T4 (37%) | T5 (25%) | T6 (27%) | T7 (21%) | T8 (11%) | T9 (20%) |
|---|---|---|---|---|---|---|---|---|---|
| Family member | 45.5% | 85.7% | 46.2% | 40% | 100% | 66.7% | 33.3% | 83.3% | 66.7% |
| Friend | 27.3% | 14.3% | 15.4% | 10% | 0 | 33.3% | 44.4% | 16.7% | 22.2% |
| Acquaintance | 18.2% | 0 | 15.4% | 0 | 0 | 0 | 11.1% | 0 | 0 |
| Neighbour | 0 | 0 | 0 | 10% | 0 | 0 | 0 | 0 | 0 |
| Work colleague | 0 | 0 | 23.1% | 30% | 0 | 0 | 11.1% | 0 | 0 |
| Other people | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 11.1% |
| NA | 9.1% | 0 | 0 | 10% | 0 | 0 | 0 | 0 | 0 |

Figure 5.17 – Company present when the incidents of violence took place per type of VAW.

In 94.16% (371 incidents) of the cases the perpetrator was a male; only 3.3% (13 incidents) of the cases were perpetrated by a female; while 1.27% (5 incidents) were carried out by both male(s) and female(s), and an equal amount did not disclose or could not recall who did it. In most types

of violence the perpetrator was a male and a stranger, except for violence types 3 and 4 (being offended or ignored) or physical violence (type 5: pinched, pulled hair, pushed, pulled, slapped or thrown an object; and type 11: kicked or punched), where the data showed evidence that females engage in these kinds of behaviour, and/or were predominantly perpetrated by a family member or an acquaintance.  In these kinds of violence, it cannot be determined with certainty that the attacks were gender-based rather than motivated by other reasons.  However, this will be further discussed under the limitations of the work (see 9.1). Figure 5.18 shows the breakdown of answers the participants provided regarding the perpetrator of the incident, where it can also be observed that for violence type 12: attempted rape, this was predominantly perpetrated by a family member or an acquaintance.

|  | T1 | T2 | T3 | T4 | T5 | T6 | T7 | T8 | T9 | T10 | T11 | T12 | T13 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Family / Partner | 0 | 0 | 4.2% | 3.7% | 10% | 0 | 0 | 1.8% | 2.3% | 0 | 33.3% | 50% | 50% |
| Acquaintance | 0 | 4.9% | 20.8% | 11.1% | 15% | 0 | 2.3% | 1.8% | 2.3% | 25% | 16.7% | 16.7% | 0 |
| Friend | 0 | 0 | 0 | 3.7% | 0 | 0 | 0 | 1.8% | 0 | 0 | 0 | 0 | 0 |
| Neighbour | 6.4% | 2.4% | 8.3% | 0 | 10% | 0 | 0 | 5.5% | 0 | 0 | 16.7% | 0 | 0 |
| Police | 0.9% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Government agent | 0 | 0 | 4.2% | 11.1% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Conductor | 1.8% | 2.4% | 0 | 0 | 0 | 0 | 0 | 0 | 4.5% | 0 | 0 | 0 | 0 |
| Doctor | 0 | 0 | 0 | 3.7% | 0 | 0 | 2.3% | 0 | 0 | 0 | 0 | 16.7% | 0 |
| Work / clients | 0 | 0 | 20.8% | 18.5% | 0 | 0 | 0 | 1.8% | 4.5% | 0 | 0 | 0 | 0 |
| At a shop | 0 | 0 | 4.2% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Builder | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1.8% | 0 | 0 | 0 | 0 | 0 |
| Stranger | 90.8% | 90.2% | 37.5% | 48.1% | 65% | 100% | 93% | 85.5% | 86.4% | 75% | 16.7% | 0 | 50% |
| Other | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 16.7% | 0 |
| NA | 0 | 0 | 0 | 0 | 0 | 0 | 2.3% | 0 | 0 | 0 | 16.7% | 0 | 0 |

Figure 5.18 – Perpetrator.

## 5.2  Stories of VAW as told by women of Corregidora

The stories shared by the FGD participants provided nuanced perspectives of the power dynamics that occur when incidents of VAW take place. They also assisted in understanding the continuum of definitions (types) of violence used in this work. These discussions opened up a space for women to share personal stories of harassment and violence, their response to VAW and some of their thoughts as to why they think these incidents took place.  There were several topics that arose during these conversations, such as the normalisation of violence, feelings of fear as well as the vulnerability of women while using public spaces.

### 5.2.1 Focus group discussions participants

A total of 7 FGDs were held, which had a combined total of 50 participants (see table 5.8). A small survey questionnaire was handed out to the focus group discussion participants, either at the beginning or the end of the discussion, containing the same 16 questions regarding sociodemographic data as the ones in the HHS. The aim was to collect the same type of data to understand the participant demographics, as the discussions were partly organised by the researcher, but the call for participants was made by the culture centres. There was a need to understand the composition of the sample while maintaining their anonymity. As no names were shared during the FGDs nor written in the surveys, it is not possible to triangulate personal demographic data provided in this section with the stories shared in later sections.

*Table 5.8 – Focus Group Discussions (FGDs).*

| Cultural Centre | No. Participants | FGD duration |
|---|---|---|
| Lomas de Balvanera | 6 | 47' 55" |
| El Pueblito | 13 | 28' 07" |
| Santa Barbara | 8 | 39' 56" |
| Tejeda | 6 | 53' 39" |
| Candiles | 4 | 34' 33" |
| Biblioteca de la Negreta | 4 | 21' 31" |
| Municipal Institute of Youth | 9 | 54' 56" |

Each of the FGDs had a different dynamic, as 3 FGDs took place instead of a class offered by the culture centre, 2 took place while women were waiting for their children's classes, and the remaining 2 were groups that were formed specifically for the purpose of this research.[5] In all the FGDs, the participants were familiar with each other to various degrees, for example, women seemed to know at least another participant within the same FGD. Most of the groups seemed quite comfortable sharing their thoughts on safety and violence, particularly if they were in smaller groups (except for 1 group). However, there seemed to be a hesitation to disclose personal stories of VAW when the others were known, unless another participant had already disclosed a personal incident. As with any participatory method, each group had participants that were more vocal than others, and in the larger groups, some participants left the room in the middle of the discussion without having made any comments.

**Age ranges**

The mean age of the 7 FGDs that were held was 35 years of age, with the minimum age being 17 and the maximum age being 75. The FGD with the youngest average age demographic was the one held with FGD7, where the maximum age reported was 23 years of age. This group had the most homogenous age ranges, with 100% of the participants being between 18 and 25 years old. The

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[5]One group was formed by the Culture Centre. The other group was formed by persuading women using the space over a period of several visits, which proved challenging.

second most homogenous group was the one held in FGD6, where 75% of the participants were between 31 and 35 years of age,[6] and also had the youngest participant of all the groups. The most diverse group was the FGD held in FGD1, with participants from 4 different age groups, and which also hosted the oldest participant. Figure 5.20 shows a graph with the age range breakdown of all the FGDs participants.
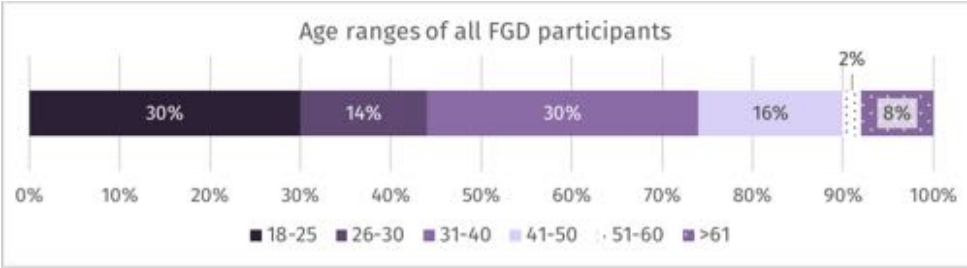


*Figure 5.19 – Age ranges of all FGD participants; N=50.*

**Socioeconomic Status (SES)**

The same methodology for calculating SES as used for the HHS was used for calculating the SES of the FGD participants. A breakdown of the percentages of participants belonging to each SES level as a total can be found in figure 5.20.
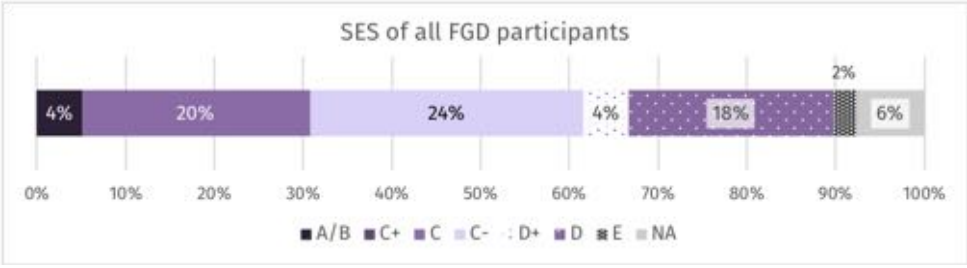


*Figure 5.20 – SES of all participants; N= 50.*

**Occupation**

The same difference between work and studies was found as in the HHS (possibly due to the same reason): 38% (19) of the participants mentioned they worked, while 44% (22) suggested they had full time or part time work in the verification question; while 18% (9) of the participants said they were students, but only 12% (6) of the participants were full time students. Figure 5.21 shows a breakdown with the occupation of all the FGD participants.

**Ethnicity**

Overall, 64% of the total FGD (32) participants did not consider themselves indigenous. 30% (15) of the participants considered themselves either fully or partly indigenous, although the reasons behind this decision were not asked. Table 5.9 has a breakdown of answers regarding ethnicity.

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[6]Information not disaggregated in the table below but the data can be provided upon request.
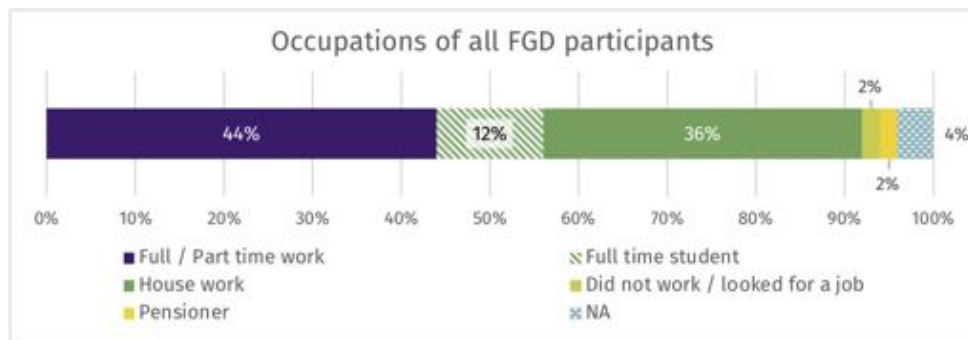
Figure 5.21 – Occupation of all FGD participants; N= 50.

Table 5.9 – Responses regarding ethnicity.

| Response | No of participants | % of total (N= 50) |
|---|---|---|
| Indigenous | 4 | 8% |
| Partly | 11 | 22% |
| No | 32 | 64% |
| NA | 3 | 6% |

**Marital status**

Almost half (46%, 23 participants) of the FGD participants were married. An equal proportion of participants (20%, 10 participants) were single or had a partner. It was the same case for those that were divorced or did not provide an answer, both accounting for 6% of the answers (3 participants), and only 2% (1 participant) were widowed. Of all the women that reported a romantic relationship, whether this was a current or former relationship, 97% of them (35 participants) reported that partner to be male, and 3% (1 participant) reported their partner to be a woman. This was the only instance in the entirety of the study that a participant disclosed having a partner of the same sex. Figure 5.22 shows a breakdown of the marital status of all the participants of FGDs.
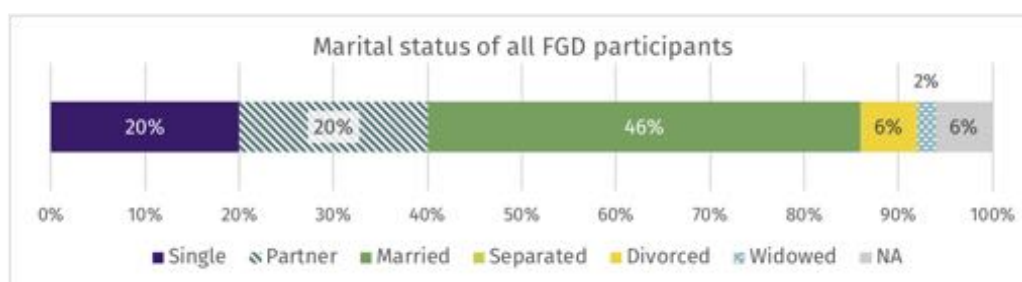


Figure 5.22 – Marital status of all FGD participants; N= 50.

## 5.2.2 Stories of VAW

There were a total of 34 personal stories of harassment and violence shared during the FGDs, most of which coincide with the most common types of violence identified in the HHS. Violence types 1: catcalling, 2: stalking, 7: groping and 9: flashing, were the most common types of violence featured in stories of the FGDs. In order to be consistent with the results of the HHS, some of the stories that were shared were disaggregated (and later aggregated) under these same categories of violence, to

better understand how these incidents take place in real life. A description of each type of violence can be found in table 5.3.

The normalisation of everyday violence was a recurrent topic in all the FGDs. It seemed that all the participants were aware that this is a reality faced by women in Mexico on a regular basis. In Mexico, VAW perpetrated in the public spaces is generally known as *street harassment*. Thus the participants were asked if they knew the definition of this violence, which then led to discussions about VAW. All the women in all the discussion groups knew the definition of *street harassment* and gave examples to define it. The examples ranged from whistling, lewd stares, offensive sexual remarks, slaps, groping, physical violence, to rape. However when asked about their particular experiences, there were differences in how the participants in each of the groups responded.

There was a particular FGD in which participants did not recognise less severe forms of VAW (such as catcalling) as 'violence' *per se*. This particular FGD was held with the participants with the lowest SES levels. It was after much prompting that the participants shared stories of themselves. This reluctance to discuss personal incidents of VAW, or perhaps a lack of recognition that what they had experienced could qualify as VAW, was contrasted with their willingness to describe incidents that occurred to someone else. From the start of this FGD, participants focused on incidents of VAW which had happened to other women. In contrast, during the FGD held with the youngest participants, who were mostly students of diverse SES, a personal incident of catcalling was shared within the first 5 minutes of the discussion (which lasted 55 minutes), without any prompting. The youngest participants regarded this as an act of violence, and while they were aware that these incidents could unfortunately be part of their everyday life, they did not think it was something they were obliged to endure or internalise as 'normal' behaviour.

**Type 1: Catcall, whistling or offensive sexual remarks**  This type of violence was the most talked about violence in the FGDs. As in the HHS, it seemed to be the most commonly experienced aggression women face when being out in public spaces. This violence ranged from remarks or comments to more directed attacks that left women feeling unsafe and fearful, regardless of their background or age. Despite this type of violence not including any type of physical contact, women reported feeling attacked:

> "I was coming back from dropping off my kids at school and I go through a place that is a bit lonely. [. . . ] And a man, told me things like, I mean, horrible things. I mean, I was passing through the same sidewalk, and still I passed by, like, fast, I felt, like, I mean, attacked" (Participant in FGD5).

A participant in FGD6 noticed that she is told things in the street when she is wearing specific types of clothing "I hear [things], but when... sometimes when I am wearing a skirt or shorts" (Participant in FGD6). There were 2 other instances in which clothing was raised. In the first, an older,

more affluent women shared how she would not allow her younger daughter to walk around the neighbourhood wearing her gymnastics clothes, as she would be stared at:

> "I told her 'pay attention from here, the block where we are walking until we get to your, to the gym, see how many people turn around'. Well yes, as we walked, everyone, they turned around to see her. I told her 'it's not that I don't trust you or because... It's the people!' " (Participant in FGD4).

In the second incident, another mother disclosed how she overheard a man shouting "whores" at her daughter and her daughter's friends simply for going out wearing party dresses. This participant disclosed that she "didn't say anything, I stayed quiet. I mean 'cause the girls like didn't even notice, they didn't notice he yelled" (Participant in FGD2).

As mentioned in the case study chapter in section 3.1.1, there is a lack of trust in the authorities in Mexico, particularly for reporting gender crimes. Younger participants provided insights to this problem from their personal experiences with security guards or policemen perpetrating harassment. A participant in FGD6 expressed having been told sexual remarks by a guard by stating "even the guards themselves tell you 'goodbye mamacita [hot mama]'. I mean a guard cannot tell you that" (Participant in FGD6). A participant in FGD7 commented on how policemen themselves act as perpetrators of this violence:

> "I have seen that, I mean, you're only just walking by, but policemen themselves in some occasions... Well you say, perhaps because of the simple fact of being men, the instinct they have maybe, a girl passes by and they whistle or I've heard that they try to give her a compliment [catcall]" (Participant in FGD7).

During the HHS, data collectors noticed that almost all of the women over 40 years of age seemed to mention they were neither young, teenagers, 16, 17 or 20 years of age—the most commonly referred to ages[7]—anymore, thus they did not experience catcalling. A participant in FGD4 provided a comment that captures these type of responses:

> "When I was young, I mean I am 49 years old, when I was 16 years old, I studied in Xalapa and walking on my own, I am talking about a long time ago, they would tell you 'ay mamacita [hot mama], I don't know what' " (Participant in FGD4).

Similarly, some women in other FGDs noted that once they became mothers, they no longer experienced this.

Regarding the recurrence of this type of violence, in the FGDs held in FGD3, FGD5 and FGD7, comments regarding how all the participants had experienced this type of violence emerged. These groups had the youngest participants (apart from the participants in FGD6), their ages ranged from

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[7]The data collectors did not keep track of the number of women that provided this comment.

18 to 33 years. As a participant in FGD5 described: "I think that at some point [it has happened] to all of us" (Participant in FGD5). Another participant stated that "the worst part is that they say it behind you, they don't say it to your face" (Participant in FGD3). Additionally, in FGD3 there was a conversation among the participants in which discussion included walking in the streets with their children and their children's safety. The group was mainly composed of mothers, so they shared how even when walking with their children, they are subjected to acts of violence.

**Type 2: Stalking**    The stories that were shared during the FGDs that fit within the category of being followed, open up the discussion of defining *being followed* within the context of violence against women and the continuum this term poses: can it be used for when it happens only once and only in a stretch of a street? Or should it only be applied when it happens repeatedly over the course of several days, as it is used in the context of *stalking*?

The niece of a participant of FGD6 was followed by a pickup truck. She "blocked out of fear" [froze] (Participant in FGD6) and stopped at a shop to order a taxi as a response to the situation. Similarly, a participant in FGD7 reported being chased while riding her bike and stated that the first thing that came to her mind was to get into the nearest house. The participant made reference to the fight-or-flight response by stating "that by survival instinct you run, scream or throw a rock or [...] something similar" (Participant in FGD7), adding that she was unsure why she reacted that way. Another participant in FGD7 was chased by a man while going back home late at night (11pm). The participant stated that she always uses the same route, so she is very acquainted with it. In that particular occasion, the street was empty, which she suggested allowed for the attack to take place. Another participant referred to her experience of being followed as *'peculiar'*. It is unclear what the participant meant by using this term, as this was not clarified later in conversation. An interpretation is that she suspects that she was being followed, but she could not be certain, therefore she felt the need to introduce the story carefully and without making assertions.

Many of the stories shared by the participants included a single, short instance of being followed through a street segment. There was only a particular story, shared by a participant in FGD7, in which there was evidence of stalking. The participant was followed by a man for about a month on her way to school. The stalking began one day when she was waiting for the bus and a man approached her and forcefully wanted to gift her a rose and asked for her name. She told her family, her classmates and school about the man. Both her family and school representatives did not allow her to go to or leave school on her own at any point as a response. She also tried telling the police, who talked to the man, but the participant claimed that the man "justified that he was going to do paperwork at that school, which is why he was going every day" (Participant in FGD7), which was untrue according to the participant but the police did not check or follow up the story. Besides there being evidence of stalking, the man did not try to contact her directly beyond the first day. It is unclear

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what the participant in FGD7 could have expected the police to do in a country where, regardless of specific laws for stalking (Gobierno de Mexico and INMUJERES, 2014), it has little history of their implementation (Ureste, 2020). Stalking, as well as being followed, can have harmful psychological consequences on the victim, however short the incident is or the amount of times it occurs. This impact should not be disregarded, as it may not necessarily be proportional to the length of the incident. This will be further discussed in section 5.3.3.

**Type 7: Groping**   In the HHS the most common place for this type of violence to occur was public transport, however, in the FGDs, this pattern did not emerge. Most of the stories referred to men "slapping women's backsides" in the street (Participants in FGD4 and FGD7). There are 2 stories in particular worth mentioning, both of which may not have happened if the sidewalks had been wider.

The first story that took place in the street was perpetrated by a child towards a participant in FGD1:

> "One time a little boy that was about 10 years old passed by in his bicycle and I didn't change sides [in the sidewalk], I said 'ah, it's a child'. Well that child grabbed my booty. [. . . ] A 10 year old boy touched me, and I was left very surprised 'cause it was a boy and I wasn't expecting it" (Participant in FGD1).

It is unclear whether this boy performed this action for shock value or from simple rebelliousness, rather than with a full understanding of its sexual overtones, but it is concerning that he already felt entitled to act this way towards women. Additionally, the fact that the participant would normally feel the need to change sides for a man speaks of how the participant would rather take a longer route to avoid interactions with men altogether.

The second story happened to the friend of a participant in FGD7 while she was waiting for her:

> "We were going out that day so I was waiting for her in the corner because she was about to arrive. So, well, she arrived all desperate and crying, because a guy had passed by in a motorbike and had spanked her. And she, well, the outrage, she said 'how dare he!' And yes, it was because the sidewalk was, well yeah very reduced in the street, and well, it was very easy to get very close to the sidewalk and be able to do that" (Participant in FGD7).

**Type 9: Flashing or masturbating**   A participant in FGD4 had 2 incidents of this nature at 2 different points in her life. Once she encountered a man that was seemingly asking for directions for a cinema during daytime, but she could see he was visibly masturbating. And the second time was during night-time, while walking up the avenue near her house, before lighting was installed. She expressed having no interest in reporting either incident, yet the second man was reported by other

women as the man kept on exposing himself, which lead to the neighbours putting pressure on the municipality to install lighting in the avenue:

"That person that I am telling you about that was exhibiting, was going around several streets of [the neighbourhood] and he appeared [flashed] to some girls, well I heard about this because I am in a group with the parish, but some girls did report him" (Participant in FGD4).

There were other accounts of men exposing themselves or masturbating on women in crowded buses. There was a particular account shared by a participant in FGD1, who struggled to express her experience and only managed to say what the man was doing when questioned directly. "I didn't know what she was talking about until I saw, that he was doing the same to another girl. [MG – Could you tell me what was he doing?] Well, he was approaching his, his penis" (Participant in FGD1). As the participant struggled to express what the man was doing, it is unclear from her account whether the man was flashing or masturbating.

**Type 10: Was forced to watch porn or sexual acts**    While this type of violence was not a common occurrence and the story that was categorised under this type of violence does not precisely fit the definition on this research; it was decided to include it in this analysis and classify it under this category as the participant was forced to overhear a sexual conversation between 2 people, even when the people having the conversation were aware of her presence. Real life situations like this one, a lady overhearing a sexual conversation in a taxi, show how incidents of this nature may occur more often than how the question was asked during the HHS. This story sheds some light on the nuances of how these events take place on a daily basis on the life of many women, which takes an emotional and psychological toll on their lives, as will be discussed later in section 5.3.3.

"I took a taxi and the taxi driver [...] grabbed his phone and he started talking with, I imagine it was his partner, he was talking very mature stuff, he was saying very coarse remarks of sexuality. [...] A woman's voice said 'Shut up! If you are taking a ride, why are you speaking like this?', 'it doesn't matter, who cares?', I mean, what values are there? I started getting scared, I panicked and I didn't say anything. I said, what is this man? I mean, he has got no scruples, he can go and throw me in a ditch right now, I don't know. I got really scared" (Participant in FGD1).

**Other types of violence**    Women recounted stories they have heard over their neighbourhoods, which have guided their use of some spaces. For example, in FGD1, there is a channel where:

"You hear many rumours that near the little channel over there women are hurt at night, that they are raped, that they are hit, but you never know whether this is true or not, it's

rumours one hears from other people, but in reality I have never seen that" (Participant in FGD1).

Another example was shared by a participant in FGD3, where a participant disclosed that an incident was reported over a bridge joining the neighbourhood with La Negreta, which had an effect on the behaviour of the women in the neighbourhood.

"I have an acquaintance that comes to school in the evening and she doesn't pass by the bridge anymore, because about 15 days ago they say that, well, the girl was raped and the boy was beaten and that he was even sent to the hospital, that his ribs were broken" (Participant in FGD3).

Additionally, the following story was shared in FGD6 after talking about rumours that people— implying it is men—steal taxis and pretend to be taxi drivers to commit crimes: "It could be that women get raped [in the stolen taxis]" (Participant in FGD6).

Another type of violence that was not covered by the survey was kidnapping of women and girls. This type surfaced in the FGDs as violence they see over videos shared in social media, as illustrated by this participant in FGD1:

"My sister told me about a video [...] It's just that that's part of the problem as well, is that girls are going around with their phones and headphones. In the middle of down-town, there in Corregidora, a girl was lifted [kidnapped] because she didn't hear the car because she was wearing headphones [...] [and a car] stopped and they just pulled her [into the car]" (Participant in FGD1).

## 5.3 Becoming a victim of VAW and preventive measures

The participants in the FGDs quoted factors that make women appear and be more vulnerable in the eyes of perpetrators, by sharing stories of their own vulnerability when using public spaces and moving around the city. Also, while no specific stories of fear of attack (classified as violence type 8) were shared, there were discussions regarding the constant fear that most of the participants have on a daily basis. There were also discussions regarding how this fear influences their behaviour, as well as their different coping mechanisms and fear management. This section will outline the sources of vulnerability that arose during the FGDs, broadly divided in two categories: (1) those linked to the identity of women and (2) those linked to situational and design factors, including infrastructure. As well as the prevention measures and personal safety mechanisms that participants adopt to increase their personal protection and avoid being victims of VAW.

It must be noted that there seemed to be a commonality in the language used by women to de-scribe their experiences of VAW, particularly with regards to catcalling. When recalling experiences

of catcalling, women used generic language to refer to the expressions men use to harass them on the street, such as "goodbye, I don't know what", "mamacita [hot mama]", etc., without referring to specific comments men have made of their bodies or of any other nature. And although this language was generic, the description of the participant's experiences showed that the use of words can still make women feel vulnerable and attacked.

There were also comments on the current climate of vulnerability created by the news and the media, as suggested by a participant in FGD2: "you feel more vulnerable outside because of everything that is happening right now" (Participant in FGD2), presumably speaking about news regarding crime, narco wars, reports of femicide and insecurity. However this will be further discussed in section 7.3.2.

### 5.3.1 Vulnerability linked to the identity of women

Vulnerability linked to the identity of women can be subcategorised in age and appearance of women, their socio-economic status, accessing public spaces by themselves and/or feeling alone in the city, and using public transport or being on foot.

**Age and appearance**

Age was the most contested feature of vulnerability discussed in the groups. Although most women seemed to think that age was not a factor for becoming a victim of violence, many women recognised that it was the younger women who faced the most violence, particularly girls. This notion was consistent with what was found in the HHS and the statistical test performed to the results. A possible explanation could be that, as a participant in FGD3 captured it:

> "Age does not matter [for being a victim of VAW]. And I do think sometimes girls are the ones who are harassed the most, because they cannot defend themselves, they are scared" (Participant in FGD3).

A participant in FGD1 believed that the younger women were, the more vulnerable they were. A participant in FGD5 suggested that "younger women generally tend to be seen as more defenceless" (Participant in FGD5); while another participant in FGD4 suggested that

> "Maybe they are more vulnerable by size, by weight, that a man can overpower them in physical size or strength, but also then they are already vulnerable not only because of sex, man - woman" (Participant in FGD4).

Another participant in FGD4, which was the group with women in the older age ranges, suggested "maybe for the people, the stalkers, we are not their target object, right? I mean, they prefer other [women that have] the element of surprise that is precisely part of what is attractive for them" (Participant in FGD4), meaning that as they are older and more experienced, they are able to predict, possibly, what the attackers are likely to do, thus not surprised at their behaviour.

However, other participants believed that "sometimes we all get it, right? The violence, no matter the age" (Participant in FGD4). Participants in FGD7 thought that all women faced violence in general, regardless of their age. And another participant in FGD3 said that she believed it was equal "because if you are big, young, or an old lady, there is always someone that tells you 'bye lady', 'how beautiful' or that will whistle at you" (Participant in FGD3).

**Socio-economic status**

Participants in FGD7 thought that women with lower SES were more vulnerable to violence as compared to middle class women. A participant in FGD5 stated that "it is not the same that something happens to someone that has more economic possibilities [...] than to someone that does not have the resources, what are they going to say? Well they [the authorities] won't even listen to us" (Participant in FGD5). There is also a possibility that women in lower SES levels walk and use public transport in a higher proportion than women in higher SES levels. However, a participant in FGD4 found it important to suggest that a relevant clarification in vulnerability lied in what could maybe have an influence would be that "women themselves feel as more vulnerable because of their inferior socioeconomic status" (Participant in FGD4), rather than their economic position on its own. However, in some instances, it may be that some women may not associate more economic power proportionally with more safety or less vulnerability.

**Accessing public spaces alone**

Women identified not being alone as a way to reduce their vulnerability to being victims of violence, as suggested by this participant in FGD5 "I think that when they see you with someone, they don't disrespect you as when they see you alone" (Participant in FGD5). However, this vulnerability women feel when they are alone, is not only about when they are trying to move around the city, but also when they are victims of attack and feel isolated from their communities. A participant, also in FGD5, recounted one of her experiences of VAW, and expressed how lonely she felt after it happened: "I don't have friends here, I mean, I didn't have anyone I trusted here that I could tell" (Participant in FGD5).

### 5.3.2 Vulnerability linked to situational factors

The vulnerability of becoming a victim of VAW is also linked to situational factors which depend on the time of the day, presence of guardians, the urban design/layout and the presence of infrastructure in a specific location (Willman and Corman, 2013; Felson and Clarke, 1998; Brantingham and Brantingham, 1981, 1995).

Regarding times of day when women are more vulnerable to being victims of violence, it seemed that women think that there is not a particular time of day to become a victim. A participant in FGD5 stated that "before we used to think that there were like certain times of the day. Now we know

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there are not. I mean it can happen to you at midday" (Participant in FGD5). However, it could be dependent on the place and infrastructure available in that particular location. For example, participants in FGD2 suggested that women are victims of attack when their shifts at the factories are over, as the areas outside the factories are generally lonely, not well furnished with infrastructure and badly lit. And despite some of these factories having presence of guardians at their entrances, this may possibly make women more vulnerable, as these guards are sometimes the perpetrators of violence, rather than overlooking for the safety of the women leaving their work. As noted by the experiences of a participant in FGD1, who expressed "apparently you feel safe because there are guards and it's not true [that you are safer]" (Participant in FGD1), as these men were the ones perpetrating violence against her.

A participant in FGD3, thought fear and the possibility of being a victim is dependent on your environment and the people in it, particularly if these people are men: "if you go out at night and you are in a very dark street, there is not much lighting or I don't know, for example you see one person, two, three men or even one man that is there standing... I mean a person that is drinking or doing drugs, you do think 'should I pass or not?'". This was also suggested by another participant in FGD1, who suggested she "generally change[s] sidewalk sides if [she] see[s] many men because of the insecurity [she] has always felt", which speaks of how women prefer to avoid men altogether, for the fear of not knowing what they could do to them. Other participants contributed by saying that "if lighting is poor and is very alone or it's on the river bank" (Participants in FGD3) they might think the area is insecure.

Some participants referred to how the design of the streets may make women more vulnerable. For example, a woman in FGD2 stated that "there are many neighbourhoods or streets even that, well, make you feel more unsafe because they are more reduced [in size], like, you feel cornered" (Participant in FGD2). With regards to public transport, participants living on the fringes of the city, such as those in FGD1, complained that "when there is no transport and you are coming from Querétaro [...] you have to come up and it is very lonely around here" (Participant in FGD1), which increases their fear of attack, and possibly their vulnerability to being victims of attack. Or when there is public transport, the stops may be very distant from one another or not well planned. Another participant in FGD5 who provided an example of very distant bus stops from one another, "I think [long streets] are a vulnerable point [...] having to expose yourself to such a long journey" (Participant in FGD5).

### 5.3.3 Coping mechanisms to avoid being victims of VAW

Many participants of the FGDs expressed emotions of fear of attack through their stories—regardless of not sharing any specific stories of fear of attack (classified as violence type 8). There were discussions regarding the constant fear that most of the participants have on their daily lives and how

this fear influences their behaviour, as well as their different coping mechanisms and fear management. These conversations led to participants sharing their prevention measures and personal safety mechanisms to increase personal protection and avoid being victims of VAW. These measures were consistent with those mentioned in the literature, and can be categorised into 3 broad groups (Valentine, 1992 as summarised in Little, 1994, p. 64):

1. Time-space avoidance strategies.
2. Physical defence strategies.
3. Environmental response strategies.

However, some of the fear management practices shared during the FGDs do not fit these categories, so an extra category was added:

4. Other active measures to increase personal protection.

It is arguable whether this fear comes from constant, recurrent events, such as being whistled at on a daily basis: "I don't think you can live with the fear of whether you will be whistled at, you won't go out anymore, you have to go out" (Participant in FGD3); or by fear instilled through reports of VAW in news outlets and social media: "if you see in the news that I don't know how many girls have been kidnapped and how they are killed and how they are found, well imagine, it is like [...] inducing fear, no?" (Participant in the FGD7). The younger participants, particularly those in the FGD7, and many of the older participants, particularly those in FGD4, stated that they did not feel fear. However, their reasons came from different approaches. For the younger participants it was due to the rejection of the narrative that they would live a life of fear: "I think it is wrong [...] you just instilled her to be afraid. [...] If you can't avoid [an attack], you can at least defend yourself in the moment" (Participant in FGD7), whereas for the older women it was due to their age: "no, [I am not afraid,] not anymore" (Participant in FGD4).

**1. Time-space avoidance strategies**

Some women shared that by learning about stories of VAW and the fear they instill, they have slowly changed their habits and daily schedules, either by changing the time when they do certain activities or through stopping these activities altogether.

> "You don't know what they are going to do. So you start changing certain activities and you start doing them later or when there are more people or you definitively stop doing them and don't take risks" (Participant in FGD2).

Women disclosed not going out at night as the safest practice: "during the day I have to go out, out of necessity, to go to work, but at night I don't [go out]" (Participant in FGD1). This was seconded by another participant, particularly due to the nature of the location of her house:

"Not going out at night, because where we live, on one side there is an empty lot, full of branches, and that is the danger, that there is no light. Sometimes the dogs bark a lot, but we lock ourselves in" (Participant in FGD1).

A participant in FGD4 also made suggestions regarding staying inside the home after dusk, "not risking going out at night, I mean, always be accompanied, that you are not alone, that you go to places that are illuminated" (Participant in FGD4).

## 2. Physical defence strategies

In relation to personal appearance, some participants are mindful of what they wear, as expressed by a participant in FGD6:

"You take care of yourself when you go out [...], for example, you say, 'oh no! how will I go in shorts?' what if I find somebody that will whistle at me or will say profanities? So yeah, one takes care of their clothing" (Participant in FGD6).

Another participant in FGD1 said that she tries not to wear "flashy things" (Participant in FGD1). A participant in the FGD7 added an important consideration regarding clothing:

"I am in favour of everyone dressing as they like, but it makes you prone to people staring at you. So it also counts as a form of self-safety. If you know that you are going to go through some place where you don't feel very safe, don't be dressing in such a way. Not because you don't have the freedom to do it, but because you are preventing them from doing something to you, and that you cannot defend yourself" (Participant in FGD7).

A participant in FGD7 suggested that women "should know how to defend [themselves] because there is not always going to be someone accompanying you" (Participant in FGD7). Some participants referred to the use of props, like this participant in FGD6:

"I am always carrying a stick or something on my hand, an umbrella or something [...] for if someone approaches, then I can give them something, a blow, at least, because then they can't run or something like that" (Participant in FGD6).

A last resource for some, is the one quoted by this other participant also in FGD6 "you're almost praying that they don't do anything to you or that they don't say anything to you" (Participant in FGD6).

Another participant found that buying a bicycle as a mode of transportation allowed her to feel safer "the only security measure that I was able to take was to buy a bike and [...] go on the other side of the street" (Participant in FGD7).

### 3. Environmental response strategies

Another fear management mechanism quoted by the participants was the speed at which they walk, like this participant in FGD3

> "Outside my house, there is a factory [...] all the trucks are always parked there. So that street is dark since about 9 at night, ... and I have to go to the store far away, so I have to go through there, so I have to run because I am scared. But if I cross the road, there is [a wine shop], and there are all the drunkards. So I better go through the trucks, and I just run" (Participant in FGD3).

Others prefer just walking briskly and confidently, particularly young participants in the FGD7. Similarly, a participant in FGD4 recommended "show[ing themselves] sure of the [...] pace [they] take", in contrast to "walking with the head down, like they don't want to see anyone, like they avoid [people]" (Participant in FGD5), as a way to reduce vulnerability. A participant in FGD4 summarised a view expressed by several other participants, mainly in FGD5 and FGD4, regarding how the body language women use in public spaces and walking around the city may increase their vulnerability of attack:

> "The body language that you use in public space has to do [with vulnerability]. If you are fearful, I feel like you are more vulnerable to be attacked. But if you are more sure [of yourself] and they tell you something and you stop, they shut up. Because they tell you that because they know that you won't answer, so the body language that you use in the street is very important. If you are very shy, fearful, you get attacked. I feel like you are more vulnerable to be told things in the street" (Participant in FGD4).

Participants talked about the possibility of changing routes if this was available for them, or "not taking certain routes at certain times" (Participant in FGD7), as a participant in the FGD7 suggested. Other participants described a dilemma of having options in terms of which route to take, but with the 'safer' route being longer and therefore feeling more exposed. However, even this dilemma was not always an option:

> "If one has possibilities of... has other routes and they reach the same destination, well, then not taking the other route. But when there is not, then you say 'I don't know what to do, oh well, I have to go through there every day' " (Participant in FGD6).

As a participant in FGD5 added:

> "Sometimes you cannot change [...] the route because there is no other route, that is, you go that way or you go that way, then you cannot say well, I am never going out in life, [...] you don't have a choice" (Participant in FGD5).

Participants shared that they preferred to walk in places that are more crowded, as a participant in FGD2 stated "personally I look for crowded spaces [...] I try to make short trips and transport [...] routes, the most common, where there are more people" (Participant in FGD2). Another participant in the same group added that when she takes the bus she never goes to the back and takes care of which seat she chooses. Another participant in FGD3 commented that she prefers walking in the opposite direction of traffic. A participant in FGD4 also suggested that cars made her feel uncomfortable when walking, and if a car approaches the sidewalk while she is walking, she tends to move away from the edge. Many participants in various groups repeated that they are always aware of who is walking either besides or behind them and what is happening around them. As expressed by this participant in FGD5:

> "Be more aware of who walks by next to you, I personally do. Every time I go out [...] I see someone behind me and I am turning or I wait for them to come pass me and then I keep on walking. Stuff like that, checking around you what happens" (Participant in FGD5).

A participant in FGD3 also said she actively moves away when she feels she is being followed "for example if I see that someone is following me, [...] I try to change sides or move to a place where there is more people" (Participant in FGD3).

When using vehicles, one participant described being mindful of her surroundings when parking her personal car: "I always [...] try to park in [...] the first places, [...] where I see that there is security, that someone is taking care of" (Participant in FGD4), possibly to try to protect her property, but also as a way to protect herself when walking towards her car.

**4. Other active measures to increase personal protection**

Being in the company of another person was a safety mechanism suggested by a few participants. A participant in FGD5 thinks that "when they see you with someone, they no longer disrespect you as if they saw you alone" (Participant in FGD5), while a participant in the FGD7 said that she and her friends have a rule that after a certain time her friends tell her "it is late, we will walk with you, we won't allow you to go by yourself'. Even at work too, even though it is always the same route, they try to accompany me" (Participant in FGD7).

A couple of participants, in FGD1 and FGD5, suggested that their safety mechanism is to approach other people so that people around them can see that they are talking to someone or somebody in the vicinity knows them:

> "If I see that, for example, if it is someone of the male gender and I cannot recognise him because I have not seen him there on the street, and if I see the [female] neighbour, I approach her 'hey there neighbour?' right? Even if there is not much chitchat, but like, so that they see that I know her" (Participant in FGD5).

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Some comments regarding getting rides from strangers were shared by the youngest participants in the FGD7, in which the participants suggested that a way to minimise risk and keep themselves safe would be to deny these rides.

"Cars pass by saying that if they can [...] give you a ride, right? So I never accept, for example. Because they are strange people who you do not really know what they can do" (Participant in FGD7).

To which another participant suggested that they should never take what strangers offer.

A participant in FGD1 suggested that using taxis as a mode of transport made her feel safer, particularly as she had to start work very early and the area she had to go through was very empty:

"There are times when I have to work and I have to leave very early, I better take a taxi because I don't like going down here anymore, [...] it is very empty. [...] I told them, if you want me to come in at 5 in the morning, pay me a taxi to take me, if not, I'm not [coming]" (Participant in FGD1).

With this story she implied that she persuaded her employer to pay for this mode of transport otherwise she preferred losing her job than to keep on having to walk there, for fear of attack. However it is not clear whether other employers would be so accommodating to other women in similar situations. In terms of staying safe while using a taxi, a participant in FGD6 suggested that her husband asks her "to write down the plate number and send them to [him]" (Participant in FGD6) whenever she takes a taxi to increase the likelihood of getting the driver caught in case something happens to her while she is riding the taxi.

Some participants in FGD5 suggested how women in higher socioeconomic strata that have access to a car could reduce their exposure to violence by removing themselves from using public transport, "you expose yourself less using your car than when using public transport or on the road" (Participant in FGD5), as a participant in FGD5 suggested. Although another participant in the same group contested that notion by saying that "you also expose yourself in your car, to, I don't know, the *limpia vidrios* or someone like that, to tell you something, because they do exist as well" (Participant in FGD5). A *limpia vidrios* is a person who approaches to clean your car window shield at a traffic light to ask for money. This is a common practice in Mexico, together with people selling products at traffic lights, which is part of the country's informal economy, generally practiced by people from the lowest strata of the socioeconomic spectrum. This is an important consideration, because the car represents a physical barrier between a woman with more economic power and a man of a (presumably) lower economic position, however the woman still perceived that this barrier, both physical and economic, would not protect her from this man if he decided to attack her.

Other measures, such as keeping in contact with someone when travelling or travelling alone, a practice that is becoming increasingly common elsewhere, did not come up in conversation in any

of the FGDs. In fact, regarding the use of mobile phones, in FGD3, participants agreed that not using mobile phones nor headphones while walking was the safest choice, while a participant in the FGD7 added that it was also important to "not being distracted on the mobile phone, that is, not being constantly looking at it, [but looking] to the sides, not just being focused on walking forward" (Participant in FGD7). As for the use of headphones, a participant in FGD4 said that she does "walk with headphones and everything but, I use them at low volume to listen to the outside and I am aware of my surroundings always" (Participant in FGD4).

### 5.3.4  Links between urban infrastructure and VAW

The perceived links between infrastructure and VAW were evident in some of the coping mechanisms used by FGD participants to avoid being victims of VAW. Participants cited a lack of lighting as allowing men to hide at night to expose themselves to women passing by. In a story shared by a participant, she mentioned how a man stopped performing these acts in her neighbourhood as soon as the municipality installed street lamps and improved the avenue. Another participant expressed that at night she runs through a dark place in front of her house to go to the shop, due to the fear this space instils in her. It is unsurprising, then, that improvements in infrastructure, particularly more lighting, was noted as one way in which VAW could be prevented. Another prevention strategy was sidewalk improvement. Many participants expressed they changed sidewalk sides whenever they saw a man. Also, FGD respondents commented that, in their experience, men were able to grope them due to the reduced sizes of the sidewalks (either through forcing them to walking close by or by leaving them in reach of a passing bicycle, motorbike or car), and if the sidewalk was wider, allowing for more space for them to walk through, maybe these instances could have been prevented. In terms of better sidewalks, however, it was not a straightforward solution for some participants. For example, participants in FGD6 did not equate better sidewalks with safety, as it seems that they use the road instead. One participant mentioned that if the streets were improved the would be able to "run fast and not trip with rocks" (Participant in FGD6). It is not possible to know why this is the case, whether this has to do with fear of being too close to buildings, and using the road is a way to put space between them and whoever may be at the entrance of those buildings; or simply because of cultural norms. However, this is still linked with road improvement, which was another form of prevention cited by the participants with regards to urban infrastructure.

## 5.4  Summary of findings and conclusions

This chapter presented the results that address the first research question of this thesis: «*what are the most common types of Violence Against Women experienced in the public spaces of Corregidora?*» The results derive from the household surveys (HHS) as well as from the focus group

discussions (FGDs). A total of 305 households were visited, with a response rate of 89.18%, effectively conducting 272 surveys; while 7 FGDs were held, which had a combined total of 50 participants. Both methods were useful to confirm results obtained in each method. Through both these methods, it was found that the most common type of violence women experience in Corregidora is catcalling or hearing offensive or sexual remarks about their bodies including whistling, with 35.5% of the survey participants experiencing this type of violence over the year prior to the survey taking place, as well as FGD stories shared being overwhelmingly of this nature. This type of violence was also the most recurrent type of violence that women reported experiencing, with 56% of the survey participants having more than 5 experiences during the year prior to the survey. This was followed by fear of being attacked, with 12% of the survey participants disclosing an incident of this type, and while none of the FGD participants shared a particular story of this nature, they shared fearing being victims of VAW. Stalking was the third most common type of violence, with 11% of the survey participants disclosing an incident of this nature in the year prior of the survey taking place. Finally, groping (being touched, groped, leaned against or kissed without consent) was experienced by 10% of the survey participants within the year prior of the survey taking place, which was an experience that many FGD participants also seemed to share.

The younger the women were, the more violence they seemed to experience. The only exceptions were being ignored, humiliated or the exposure of genitals and/or public masturbation, where the opposite trend was observed, and women in their 40s to 50s reported having proportionally more incidents of these nature. Additionally, 81% of the participants reported being by themselves when the incidents took place. The majority of acts of VAW in public spaces were perpetrated by men (as reported by 94% of the HHS respondents) who were unknown to the participants, particularly for catcalling, being shown porn, fear of attack and the most severe types of VAW (attempted rape and rape). The exceptions were violence perpetrated for being a woman or physical violence, where the evidence showed that females engaged in these kinds of behaviour, and/or they were predominantly perpetrated by a family member or an acquaintance. In these cases, it could not be determined with certainty that the attacks were gender-based or motivated by something else.

The coping strategies identified in the FGDs were categorized as time-space avoidance, environmental response, physical defence strategies and other active measures to increase personal protection. The most common time of the day for VAW to occur was in the evening, between 3pm and 8pm, regardless of the type of violence, with 37% of the incidents occurring during this timeframe, followed by morning (6am to 11am) and noon (11am to 3pm), accounting for 21% of the incidents respectively. This means that most of the violence that women experience in public spaces occurs during daytime, which points to the adoption of the time-space avoidance measures reported in the FGDs, with women avoiding going out at night, particularly those living in areas that had reduced lighting. Another measure was being in the company of somebody else as a way to minimise the

likelihood of being a victim of VAW in the public space. Measures categorised as environmental response strategies included participants walking quickly, or even running, as a way to avoid spaces they identified as dangerous, being hyper-aware of their surroundings, as well as letting people pass by if they felt like someone was walking behind them. As for physical defence strategies, a participant declared carrying items they could use as weapons for self-defence as a last resource, and some others talked about being mindful of their clothing.

The results presented in this chapter illustrate the extent of VAW in the public spaces of the urban areas of the municipality of Corregidora, by presenting data on victimisation as well as lived stories of women who reside and live their life in the municipality of Corregidora. This chapter also presented factors that make women appear and be more vulnerable in the eyes of perpetrators and the coping strategies that women adopt to avoid victims of VAW. The qualitative evidence presented in this chapter is important to show the perceived links between infrastructure and the facilitation of violence, which was evident in some of the coping mechanisms used by FGD participants to avoid being victims of VAW. The following chapter will present the findings on where these incidents took place and the type of locations where women reported being victims of VAW. It will also look at the infrastructure characteristics at these sites.

# Chapter 6

# Locations where VAW occurred: Common factors in infrastructure and the urban environment

This chapter presents the results that address the second and third questions of this research:

«*Where does Violence Against Woman (VAW) take place in the public spaces of Corregidora?*»

And:

«*What factors do these locations have in common regarding the delivery and condition of urban infrastructure?*»

The data gathered through the household survey (HHS) provided evidence to analyse situational factors that might influence the perpetration of VAW at street level. To conduct this analysis it was crucial to identify where these incidents took place. This chapter is divided into four sections to present the results of the 2 questions it addresses. The first section presents the results of the HHS regarding where the incidents of VAW took place. The second section presents the heat maps created with the HHS data, which were instrumental to inform site visits to conduct structured observations to answer the third question of this study. Section 3 presents the results of the site visits of locations that were identified with the support of the heat maps. It also presents the categorisation of these locations and the summary of the observations that were made at street level. The fourth section of this chapter presents the common characteristics of all the sites that were visited, and how these characteristics can assist in the commission of crime by creating opportunities for crime as well as reducing guardianship. These results link to the third level of the Social-Ecological Framework, which aims to identify characteristics of the physical settings, where social relations take place, that increase the likelihood of a person becoming a victim or a perpetrator of violence (CDC, 2020; WHO, 2020).

## 6.1 Household Survey Locations

As discussed in section 5.1, the HHS participants were introduced to the topic of VAW in the survey as "the experiences that women have in public spaces of their communities", whether this was their neighbourhood, locality or municipality[1] (see appendix E for the survey programme). They were then asked about each of the 13 types of VAW separately, where most of the information came from the most memorable incident. This meant that the question was already targeted towards requesting information solely for incidents of VAW that took place in public spaces. Two types of data were gathered during the HHS regarding the locations where the respondents reported experiencing incidents of VAW in the public spaces of Corregidora: quantitative information regarding pre-determined types of public spaces (multiple choice answers) and participant-provided places (open question in the form of georeferenced data). Three types of answers were collected through these 2 methods:

1. Those that provided georeferenced data, whether participants remembered exactly where the most memorable incident took place or the area in which it happened.
2. Those that did not provide GIS data but selected predetermined answers from the survey and/or provided a description of the type of place where the incident took place.
3. Those that did not remember a specific location where they experienced this type of violence.

The HHS was concerned with VAW experienced in public spaces, but faced a number of challenges in terms of gathering data about where such incidents had occurred. There was a possibility that respondents disclosed incidents that occurred in private spaces, such as their homes, whether due to confusion on the part of the respondent about what was being asked, or due to women not talking about their experiences of violence very often (Leclerc et al., 2016; Sinha, 2013; Johnson et al., 2008; Rafter, 2003; WHO, 2001; Lindsey, 1997). In those circumstances, the data collectors were not permitted to collect this spatial data due to anonymity and data confidentiality protocols. There were also instances in which participants could not remember the exact location where they were victimised in a public space, particularly with less severe forms harassment, such as catcalling (where polygons covering larger areas were usually provided as answers). It must also be noted that some participants may have been reluctant to provide information about their experiences of

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[1] Participants were provided with examples such as the street, public transport, markets, parks, sport and recreational areas, churches or other recreational areas like bars, pubs, restaurants, clubs saloons or places to dance, party, fairs, assemblies or neighbour or religious meetings.

VAW to data collectors, due to them being strangers (WHO, 2001, p. 15-17). Some of these issues will be further discussed in section 8.2.

Figure 6.1 shows a graph with the different types of locations where respondents reported experiencing VAW per type of violence (see table 5.3 in section 5.1 for the list of types of VAW and their abbreviations). This graph was generated by combining the predetermined survey answers and the descriptions some of the participants provided of the places which were not recorded as spatial data. Some trends can be noted in the type of locations where women were victimised: public transport was a common location where many incidents take place, particularly for type 7 (being touched, fumbled, leaned against or kissed without consent), while spaces in the boundary between private and public such as workplaces, businesses, schools, government offices and hospitals were very common for VAW types 3 and 4 (being offended, humiliated or ignored for being a woman).

| | T1: Catcall | T2: Stalk | T3: Offend | T4: Ignore | T5: Push | T6: Lift clothes | T7: Grope | T8: Fear | T9: Flash | T10: Show porn | T11: Punch | T12: AR | T13: Rape |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Respondent provided GIS location | 71.6% | 80.5% | 29.2% | 14.8% | 65% | 36.4% | 16.3% | 60% | 54.5% | 50% | 66.7% | 0 | 25% |
| Park / plaza | 5.5% | 0 | 0 | 7.4% | 5.0% | 9.1% | 4.7% | 1.8% | 0 | 0 | 0 | 0 | 0 |
| Public transport | 3.7% | 0 | 0 | 3.7% | 10% | 18.2% | 65.1% | 5.5% | 11.4% | 25% | 0 | 0 | 0 |
| Taxi | 0 | 2.4% | 0 | 0 | 0 | 0 | 0 | 0.0% | 2.3% | 0 | 0 | 0 | 0 |
| Church | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 1.8% | 0 | 0 | 0 | 0 | 0 |
| Bar / Party | 0 | 0 | 4.2% | 3.7% | 0 | 0 | 4.7% | 1.8% | 0 | 0 | 0 | 0 | 0 |
| Street | 7.3% | 0 | 8.3% | 3.7% | 0 | 9.1% | 2.3% | 3.6% | 4.5% | 0 | 0 | 16.7% | 0 |
| Empty plot / construction site | 1.8% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 2.3% | 0 | 0 | 0 | 25% |
| Driving | 0.9% | 0 | 8.3% | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Work | 0 | 0 | 20.8% | 18.5% | 0 | 0 | 0 | 3.6% | 4.5% | 0 | 0 | 0 | 0 |
| Other public spaces * | 3.7% | 2.4% | 20.8% | 33.3% | 10% | 9.1% | 4.7% | 1.8% | 0 | 0 | 0 | 0 | 0 |
| Private space | 0 | 0 | 0 | 3.7% | 0 | 0 | 0 | 1.8% | 0 | 0 | 16.7% | 50% | 25% |
| Outside Corregidora | 3.7% | 12.2% | 4.2% | 0 | 5% | 18.2% | 4.7% | 12.7% | 20.5% | 25% | 0 | 0 | 25% |

*Figure 6.1 – Types of locations where the different types of incidents of VAW took place.*

### 6.1.1 Georeferenced data

Figure 6.2 shows a map of all the incidents where it was possible to obtain a georeferenced location that fell within the boundaries of the municipality of Corregidora. It must be noted that only those incidents that took place within the municipality are shown in the maps used in this thesis. The experiences of some participants took place in locations that fell outside the boundaries of the municipality, however those locations were not included in this study. Section 6.2 contains more detail regarding the locations where the incidents took place and the features that were used for the spatial analysis.
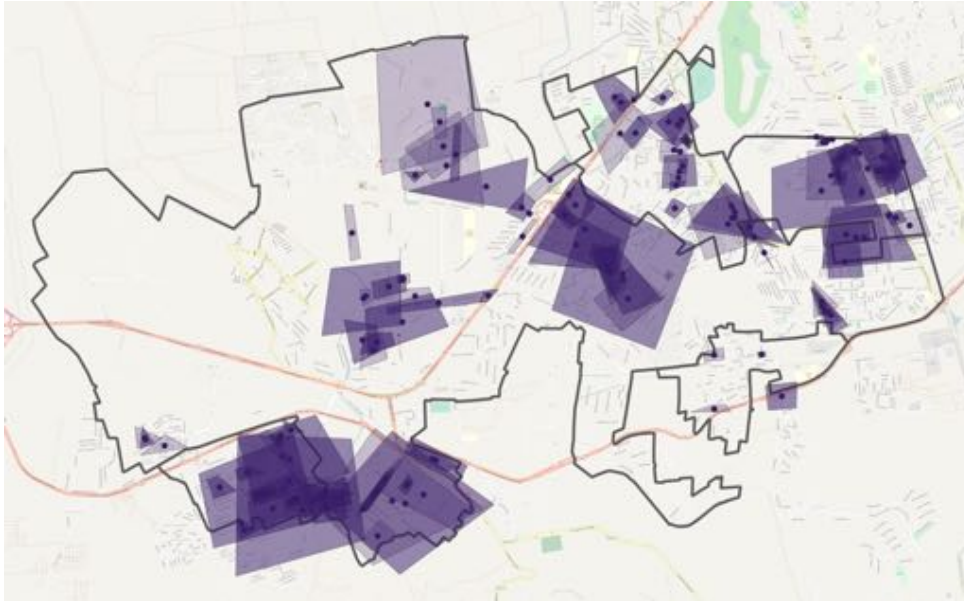
*Figure 6.2 – Map of all incidents GBVAW. The darker areas show where several polygons are overlaid.*

### 6.1.2 Women remember where incidents of VAW take place

The types of VAW with the most data regarding locations were catcalling (type 1), stalking (type 2), groping (type 7), fear of being sexually abused (type 8) and flashing (type 9), which were also the 5 most common types of VAW reported in the HHS and FGDs (see chapter 5).

**Type 1, Catcalling:** The most surprising finding was that many participants remembered the location, or the area, where they were catcalled, as it suggests that it has a psychological impact on women despite often being downplayed as a type of violence. 69.72% (76 women) of participants who experienced this type of violence knew the location where the most memorable incident took place, while 1.83% (2 women) had only a vague idea of where it happened yet still provided an approximate location. The combined answers yielded a total of 78 georeferenced locations. However, only 59 locations (75.64% of the provided locations) were used, as the remaining 19 features either fell outside the boundaries of the municipality (8 features, 10.26%) or were lines (11 features, 14.10%).

**Type 2, Stalking:** 80.49% (33 women) of participants who experienced this type of violence knew the location where the most memorable incident took place, yielding 33 georeferenced locations. However, only 26 locations (78.79% of the provided locations) were used, as the remaining 7 features either fell outside the boundaries of the municipality (4 features, 12.12%) or were lines (3 features, 9.09%).

**Type 8, Fear:** 60% (33 women) of participants who experienced this type of violence knew the location where the most memorable incident took place, yielding 33 georeferenced locations. However, only 21 locations (63.64% of the provided locations) were used, as the remaining 12 features either fell outside the boundaries of the municipality (9 features, 27.27%) or were lines (3

features, 9.09%).

**Public transport, a big hub for groping (type 7).** Regarding GIS data, 13.95% (6 women) of participants who experienced this type of violence knew the location where the most memorable incident took place, and 2.33% (1 woman) gave a vague location, yielding 7 georeferenced locations. The remaining 86.05% (36 participants) who were not able to recall a specific location provided quantitative information regarding a type of location where the incident took place. The most common response was 'public transport', with 75.68% (28 participants, 65.12% of total) of responses in this category.

**Type 9, Flashing:** 54.55% (24 women) of participants who experienced this type of violence knew the location where the most memorable incident took place, yielding 24 georeferenced locations. However, only 19 locations (79.17% of the provided locations) were used, as the remaining 5 features (20.83%) fell outside the boundaries of the municipality. The remaining 45.45% (20 participants) that were not able to recall a specific location provided quantitative information regarding a type of location where the incident took place. The most common response was 'outside of Corregidora', with 45% (9 responses, 20.45% of total) of the responses. This was followed by 'public transport', with 25% (5 participants, 11.36% of total) of responses in this category.

**Other types of VAW:** While women remembered where they experienced other types of VAW, and were willing and able to disclose information regarding the location where their most memorable incident took place (65% for type 5; 67% for type 11; 50% for type 10; 36% for type 6; 25% for type 13; 29.17% for type 3; and 14.81% for type 4), these numbers represent very few women in nominal terms, despite appearing as a considerable percentage within the type of VAW in some instances. For example, in violence type 5, 65% of the HHS participants remembered a location, but this number represents only 13 women, or about 8% of all the women that experienced VAW.[2] While some of the locations provided in relation to Types 3, 4, 5, 6, 10, 11 and 13 were used in the creation of the heat maps that informed later stages of this research, they represent only 16.7% (35) of the total locations provided and 12.4% (18) of the locations used for the heat maps.

## 6.2 Heat maps

There were 394 incidents of VAW reported in the HHS, of which 210 (53%) contained some form of spatial data, either a line or a polygon. Only 145 of the provided locations (37% of total responses, 69% of responses with spatial data) contained information that met the criteria for the creation of the heat maps, which meant being a polygon within the boundaries of the municipality (see table 6.1). See 6.3 for the overlay of the concentration analysis and the centroids on the heat map.

The maps presented in figures 6.4 and 6.5 resulted from the application of the concentration

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[2]The remaining percentages represent the following quantities: type 3 - 7 women; type 4 - 4 women; type 6 - 4 women; type 10 - 2 women,; type 11 - 4 woman; and type 13 - 1 woman.

*Table 6.1 – Spatial data per type of VAW.*

| | Remembered a location and provided GIS data | | Data points used | | Polygons outside Corregidora | | Lines | |
|---|---|---|---|---|---|---|---|---|
| | Number of data points | % of the reported incidents per type | Number of data points | % of GIS data | Number of data points | % of GIS data | Number of data points | % of GIS data |
| T1: Catcall | 78 | 71.6% | 59 | 75.6% | 8 | 10.3% | 11 | 14.1% |
| T2: Stalk | 33 | 80.5% | 26 | 78.8% | 4 | 12.1% | 3 | 9.1% |
| T3: Offend | 7 | 29.2% | 6 | 85.7% | 0 | - | 1 | 14.3% |
| T4: Ignore | 4 | 14.8% | 1 | 25% | 2 | 50% | 1 | 25% |
| T5: Push | 13 | 65% | 6 | 46.2% | 5 | 38.5% | 2 | 15.4% |
| T6: Lift clothes | 4 | 36.4% | 0 | - | 2 | 50% | 2 | 50% |
| T7: Grope | 7 | 16.3% | 2 | 28.6% | 4 | 57.1% | 1 | 14.3% |
| T8: Fear | 33 | 60% | 21 | 63.6% | 9 | 27.3% | 3 | 9.1% |
| T9: Flash | 24 | 54.5% | 19 | 79.2% | 5 | 20.8% | 0 | - |
| T10: Show porn | 2 | 50% | 2 | 100% | 0 | - | 0 | - |
| T11: Punch | 4 | 66.7% | 2 | 50% | 0 | - | 2 | 50% |
| T12: AR | 0 | - | 0 | - | 0 | - | 0 | - |
| T13: Rape | 1 | 25% | 1 | 100% | 0 | - | 0 | - |
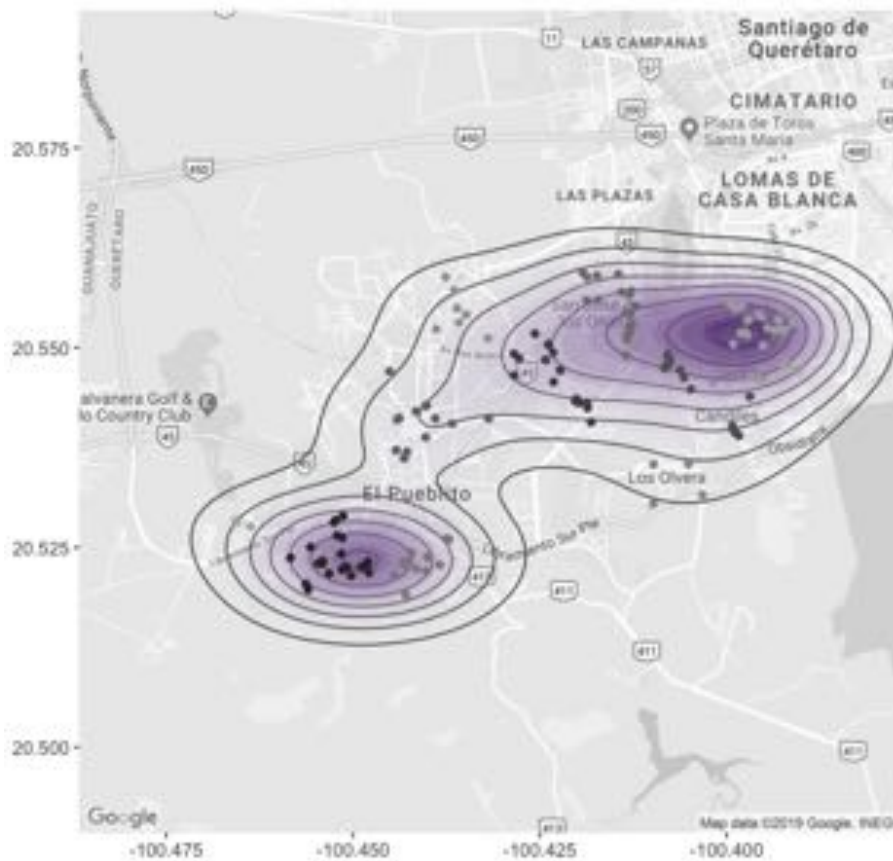


*Figure 6.3 – Incident occurrence density plot showing the centroids of the polygons. Source: Garfias Royo et al. (2020).*

analysis into each of the clusters. These maps were used for finding specific locations within each of the areas to carry out visual analysis at street level—the findings of which are discussed in section 6.3.
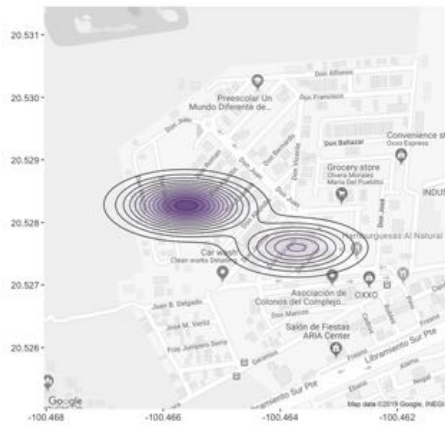
*(a) Cluster 1.*
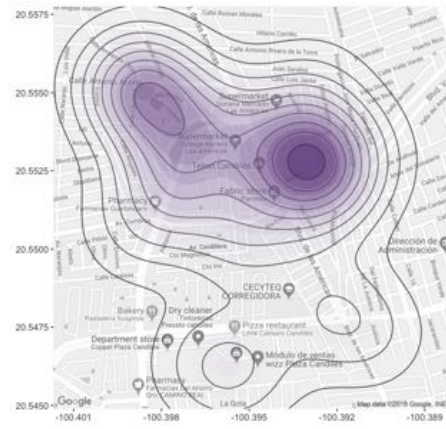
*(b) Cluster 2.*

*(c) Cluster 3.*
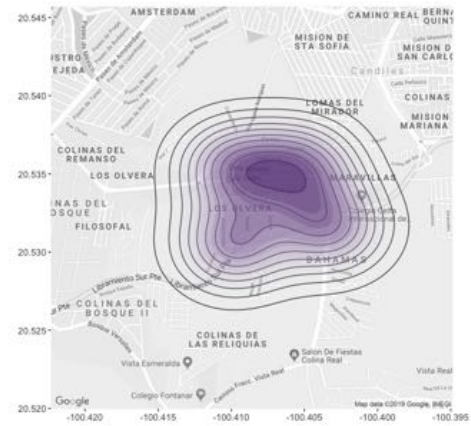
*(d) Cluster 4.*
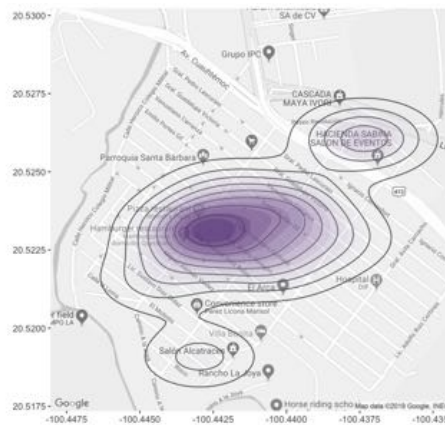
*(e) Cluster 5.*

*Figure 6.4 – Incident occurrence density plots, clusters 1 to 5.*
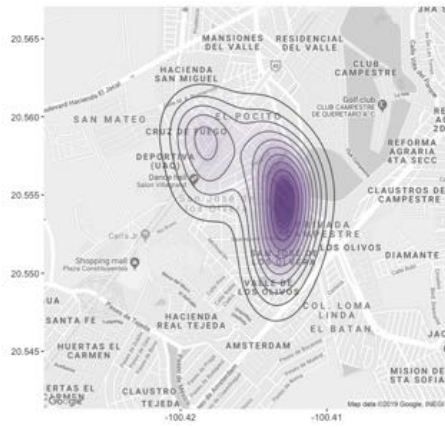
*(a) Cluster 6.*
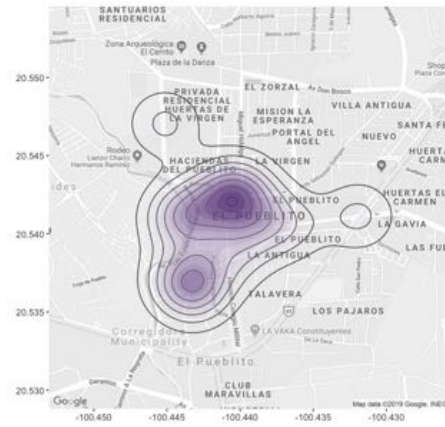


*(b) Cluster 7.*



*(c) Cluster 8.*
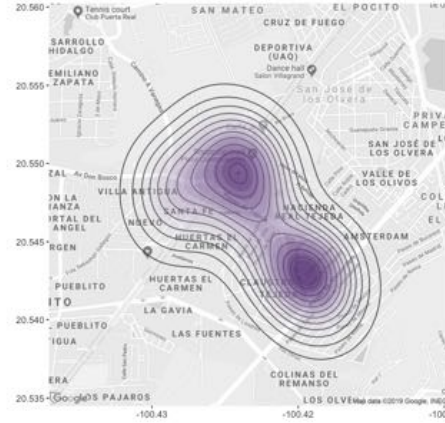


*(d) Cluster 9.*



*(e) Cluster 10.*

*Figure 6.5 – Incident occurrence density plots, clusters 6 to 10.*

### 6.2.1 Heat maps including line features

The heat map exercise was replicated after returning from the field to include the 26 line features that were not included in the initial analysis, to assess whether the results would have led to choosing other areas for conducting visual analysis. The results of the exercise at urban level are found in figure 6.6 and side by side comparisons at cluster level are found in appendix N.
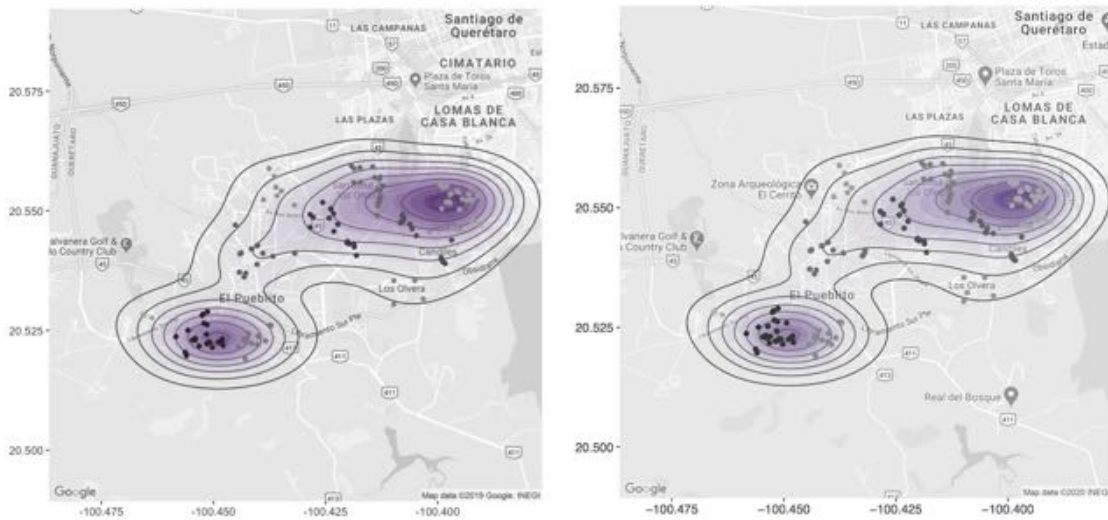


*(a) Incident occurrence density plot. Source: Garfias Royo et al. (2020).*

*(b) Incident occurrence density plot with line features.*

*Figure 6.6 – Comparison of density plots at urban level which include line features.*

This exercise was useful to find that including line features would not have led to different locations for site visits, except for cluster 7, where one more location would have been visited if these features had been included in the analysis (see figure 6.7), and possibly cluster 4, where the concentration analysis highlights another area as the location with the highest cluster of incidents (see figure 6.8). However, in cluster 4, the heat map was not used to select a location for site visits in any case, as further discussed in section 4.2.4.
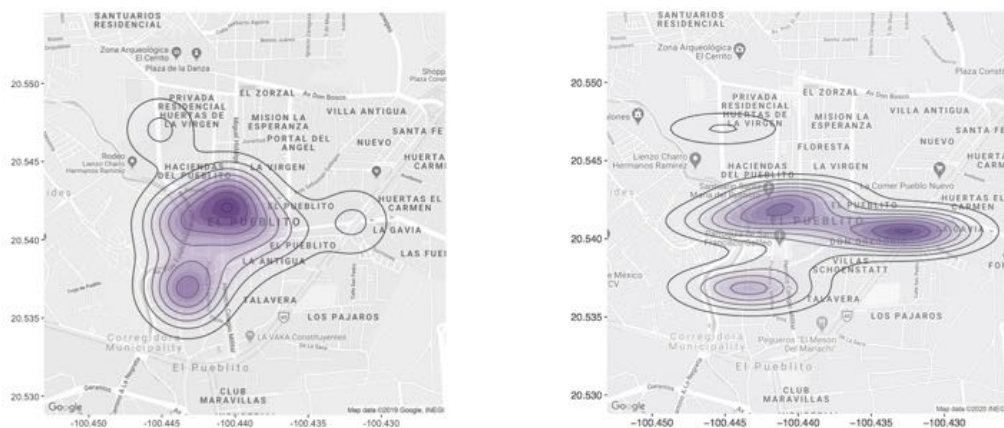


*(a) Cluster 7.*

*(b) Cluster 7 with line features.*

*Figure 6.7 – Comparison of density plots including line features, cluster 7.*

<div align="center">

(a) Cluster 4.          (b) Cluster 4 with line features.
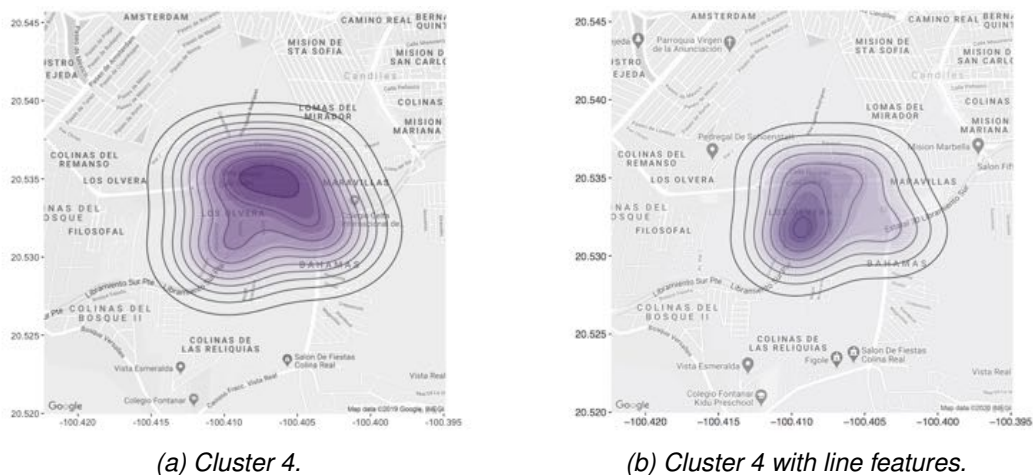
*Figure 6.8 – Comparison of density plots including line features, cluster 4.*

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## 6.3 Site visit locations

«Some passages of this section have been published in the researcher's article in Crime Science (August 2020), which have been abridged for this thesis:

»Garfias Royo, M., Parikh, P., and Belur, J. (2020). Using heat maps to identify areas prone to violence against women in the public sphere. *Crime Science*, 9(1):15 »

Site visits to 22 locations, identified through the heat maps, were carried out to conduct structured observations. The locations were scattered throughout the 10 different clusters (section 4.2.4 discusses how these sites were chosen). Table 6.2 shows the number of locations visited per cluster and the selected pictures for visual analysis per location. All the selected images used for the visual analysis can be found in appendix O.

<div align="center">

*Table 6.2 – Number of incidents, visited locations and photographs taken per cluster.*

</div>

| Cluster | 1 | 2 | | | 3 | 4 | 5 | | | 6 | | | 7 | | 8 | | | 9 | | 10 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| VAW incidents | 3 | 33 | | | 7 | 4 | 13 | | | 18 | | | 13 | | 14 | | | 16 | | 24 | | |
| Visited locations | 1 | 3 | | | 1 | 1 | 3 | | | 3 | | | 2 | | 3 | | | 2 | | 3 | | |
| Location | 1 | 1 | 2 | 3 | 1 | 1 | 1 | 2 | 3 | 1 | 2 | 3 | 1 | 2 | 1 | 2 | 3 | 1 | 2 | 1 | 2 | 3 |
| Pictures daytime | 3 | 3 | 3 | 3 | 3 | 3 | 3 | 2 | 3 | 3 | 2 | 2 | 3 | 3 | 3 | 2 | 2 | 3 | 3 | 2 | 3 | 2 |
| Pictures night-time | 2 | 2 | 3 | 3 | 2 | 2 | 1 | 2 | 4 | 1 | 2 | 3 | 3 | 2 | 2 | 2 | 1 | 2 | 2 | 1 | 3 | 1 |

### 6.3.1 Types of locations

The 22 places that were visited were divided into three categories (see table 6.3 for the breakdown of the locations per type):

- roads: 13 locations (59%)

- parks or plazas: 7 locations (32%)

- bridges: 2 (9%) locations

<div align="center">126</div>

| Type | # | % |
|------|---|---|
| Road | 13 | 59% |
| Segment | 9 | |
| Intersection | 4 | |
| Park / plaza | 7 | 32% |
| Park | 6 | |
| Plaza | 1 | |
| Bridge | 2 | 9% |

**Roads**   The 13 locations concerning roads were further subdivided into segments and intersections (see table 6.4). 1 of the locations had no road surface nor sidewalks and the remaining 12 locations had narrow sidewalks[3] and were blocked by lamps and electric posts, trees, ramps or steps leading to houses, broken surfaces, rubbish or a combination of the above, and people were observed walking on the roads instead of using the sidewalk.

*Table 6.4 – Breakdown of road locations per type.*

| Type | # |
|------|---|
| Segment | 9 |
| High street / main rd | 4 |
| Secondary rd | 5 |
| Intersection | 4 |
| Main rd & secondary rd | 1 |
| Between secondary rds | 3 |

**Segments in main roads**   4 locations were identified under this subcategory. 2 locations were on high streets with mixed land use (combination of residential areas with shopping areas). Another location was along a main road going through a residential area and a bus stop with no marker and a pedestrian crossing towards a bridge over a channel with no crossing signs at the end of the segment. The remaining location was a road joining a main street of a residential area with a highway running transversely along the urban areas of the municipality. The 4 locations had sidewalks, however they were narrow and were blocked at some point.

**Segments on secondary roads**   5 locations were identified within this subcategory, which were all located within residential areas. 4 locations had a shop within the segment, 3 locations had empty plots, 2 locations had warehouses within the segment and 1 location had a primary school and abandoned cars within the segment. One location had no infrastructure besides lighting posts (no sidewalks and the street was not paved or surfaced). The other 4 locations had sidewalks, but they were narrow and blocked at some point. See figure 6.11 for photographs of some of the locations.

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[3]Defined as "sidewalks in which only two people standing side by side fit in the surface width of the sidewalk or narrower than this" (Garfias Royo et al., 2020).

*Figure 6.9 – Photographs of road intersections.*





*Figure 6.10 – Photographs of road segments.*

**Intersections**   3 of the intersections were between secondary roads within neighbourhoods and the remaining intersection was between a main road going uphill within the neighbourhood and a secondary road.  1 intersection was in a warehouse area located in between a highway and a motorway further down a hill.  The other 3 locations were located within residential areas.  In 2 locations there were empty plots and premises selling alcohol (a store and a bar).  2 locations had cobblestone roads and the other 2 had cracked asphalt surfaces.  All the locations had narrow sidewalks that were blocked at some point.

**Parks / plazas**

6 locations were parks and 1 location was a plaza. The parks varied in size (from one of the largest open city parks to a small local recreation area) and in development levels.  All the locations were open throughout the day and night.  In the parks, lighting was inconsistent at night and seemed to be concentrated at the edges, particularly in the bigger parks.  In one of the parks there was a large area of darkness directly behind a bus stop.
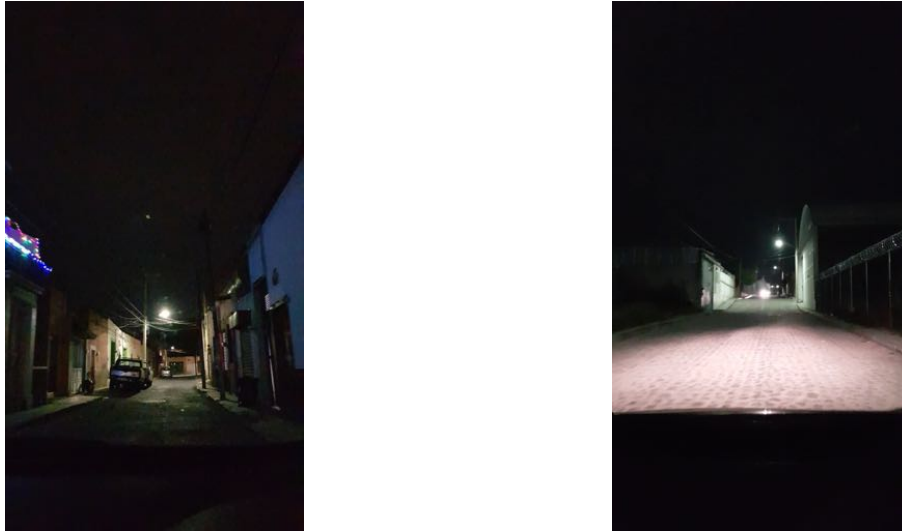
*Figure 6.11 – Photographs of road intersections at night time.*

**Parks**   3 parks were longitudinal, running along a stretch of land, and the other 3 encompassed a single medium-size block, mostly square or rectangular in shape. 5 parks had playground equipment and benches, which were generally well-maintained, although some of the equipment had graffiti and markings. 2 parks had bus stops in one of the corners, but only 1 had a bus stop sign and a shelter. The remaining park was located next to houses, occupying most of the block. It only had a small basketball court on a platform, a water point and empty space with a few trees. There was a single dwelling on the opposite side of the other houses, on the empty edge of the park.

**Plaza**   The plaza encompassed a single medium-size block, located in what can be considered the downtown area of the municipality of Corregidora, near a community centre and a state clinic. It had food stalls on one side of the plaza, a bus stop in the adjacent corner, and public toilets (with narrow windows at the top and entry on only one side) in the opposite corner of the plaza. It had raised areas of greenery surrounded by small hedges.

**Bridges**

2 location were bridges, which were located on the edge of a neighbourhood. 1 bridge was a 1.5m wide footbridge that extended for approximately 125m over an open channel, joining 2 neighbour-hoods. On the side that was visited, the handrails of the bridge extended for approximately further 12m beyond the end of the bridge reaching the road, extending the bridge through a small open space. Another bridge was a motorway bridge over an avenue which was located on the boundary of a locality, surrounded by strip malls, empty plots, private schools and gated communities. There were 4 uncovered bus stops on the 4 slip roads leading up to the motorway, facing the embankment of the raised motorway, with no buildings having direct views of the bus stops. See figure 6.13 for images of the bridges.

*Figure 6.12 – Photographs of parks.*



*Figure 6.13 – Photographs of bridges.*

## 6.4 Physical infrastructure: the built environment as possible facilitator of VAW

«Some passages of this section have been published in the researcher's article in Crime Science (August 2020), which have been abridged for this thesis:

»Garfias Royo, M., Parikh, P., and Belur, J. (2020). Using heat maps to identify areas prone to violence against women in the public sphere. *Crime Science*, 9(1):15 »

Despite the 22 sites outlined in section 6.3 having different features, such as the type of loca-

tion (road, park or bridge), land use (residential/commercial) or neighbourhood in which they were located (lower/higher socioeconomic status for example), they all had at least one of the following characteristics:

a) Lacked some form of infrastructure;

b) Had physical obstacles challenging mobility and access;

c) Had spots of poor visibility at two levels:

    (i) Private space towards public space,

    (ii) Within the public space; and

d) Were related to restricted pedestrian mobility.

These characteristics were found to be consistent with CPTED literature, which focuses on limiting crime risk through maximizing natural surveillance and natural access control as well as maintenance of the spaces, to foster a sense of territorial influence over its users (Armitage and Monchuk, 2017; Crowe and Fennelly, 2013). It can be argued that these characteristics are interconnected and can assist in the commission of crime by creating opportunities for crime as well as reducing guardianship (Garfias Royo et al., 2020; Belur et al., 2016; Willman and Corman, 2013; Brantingham and Brantingham, 1995). Natural surveillance and access control were both hampered in most of the sites that were visited, as these sites created opportunities and reduced risk for potential offenders by reducing guardianship (Cozens and Love, 2015). As for maintenance and management of the sites, it can be argued that the absence of certain infrastructure, as well as signs of deterioration in the infrastructure which was in place, indicates less investment, involvement and control over the space by the users or the municipality and implies a greater tolerance of disorder (Crowe and Fennelly, 2013; Ekblom, 2011). Lack of maintenance and management might affect the image of a given location by portraying visible signs or crime or insecurity (Ekblom, 2011). These characteristics of the sites were also reported by the FGD participants, as outlined in section 5.3.4. The participants quoted lack of lighting and dark spaces, narrow sidewalks and uneven surfaces as sources of vulnerability and fear of VAW.

**Lacking infrastructure** While urban infrastructure and street furniture, such as street lamps, sidewalks or surfaced roads, were present, to a greater or lesser degree, in all the sites, they had not been delivered to completion. Every location visited lacked some form of infrastructure, whether this was proper lighting, sidewalks, covered bus stops, bus stop signs, good road surfaces or pedestrian crossings. It is also unclear whether the absence of some of the infrastructure was the result of it never having been envisioned or not being built or pursued to completion. It can be argued that infrastructure deficiencies reduce guardianship (such as lack of lighting) or act as crime generators (such as reduced sidewalks which force people to walk closer together).

**Physical obstacles**   Most sites had inadequate space for pedestrians to transit without encountering obstacles.  Many of the visited locations, including parks, had narrow sidewalks (or lacked sidewalks in some cases) with uneven and/or broken surfaces, electric and lighting posts built in the middle of the path, and/or rubbish, commercial goods or other types of obstacles.  In the case of the pedestrian bridge, the railing continued once the bridge had reached the other side of the river channel, not allowing for the users to exit the space after crossing.  These obstacles might create spots of reduced guardianship by reducing visibility while at the same time facilitate the commission of crime opportunities.

**Poor visibility**   All the sites had areas or features that challenged or hampered visibility.  Within the public spaces, badly placed crossings, vegetation or shops and houses encroaching on the sidewalks blocked visibility and created blind spots which reduced guardianship, notably after dark. Additionally, the boundaries between private and public spaces were divided by long stretches of fences or high walls, most of which had no windows or other features which could offer signs of occupancy or deter crime.  In the residential areas, most households had fences or gates in front of their houses, and most windows could be observed to have closed curtains even during the day. This could be a sign of people choosing to not exercise their guardianship abilities, but also as a sign of fear of crime from people outside looking inside their homes.

**Restricted pedestrian mobility**   The layout of the sites indicated that cars were prioritised above pedestrians in terms of city planning and infrastructure design.  This was evident through street lights that illuminated the road rather than the sidewalks, narrow or non-existent sidewalks or few road crossings signs, as indicated in the site descriptions in section 6.3 (and more thoroughly in appendix P). There was also a lack of consideration for pedestrians evident in the design of the footbridge, where the continuation of the handrail extended the crime opportunities the bridge already offered, and created new ones in combination with the small open space.  There is a possibility that lack of consideration for pedestrians in city planning and infrastructure design contributed to the reduction of guardianship and creation of opportunities for crime through the problematic infrastructure features identified above.  This lack of consideration is a reflection of how the urban layout responds to the construction of space through the socio-political and gender relationships that take place for the creation of that urban landscape.

Some spaces, regardless of how well designed and planned they are, if delivered within contexts of social and political tensions, may still be used in unplanned and criminogenic ways.  Such was the case of one of the parks in cluster 2, which had been recently renovated at the time of visit, was well maintained, relatively well illuminated at night and had good infrastructure delivery (although the neighbouring houses were observed to have closed curtains even during the day).  Yet it was

the only specific area where a rape was reported in the HHS, and where unofficial accounts of men masturbating in public looking at children leaving school were provided (as mentioned in the additional comments section of the HHS). This park, however, was located in the border with the adjacent municipality, where it is possible that the boundaries of policing are unclear. And, when visiting the area, it could be observed that the infrastructure in the adjacent roads to the park varied in terms of maintenance and infrastructure available (sidewalk size, road paving, lighting), vegetation and graffiti markings, as well as the types of housing (size, appearance, materials and physical defences). However, it is impossible to make any more specific assumptions regarding criminality, as it was not possible to obtain official crime data.

## 6.5 Summary of findings and conclusions

As outlined in chapter 5, the most common types of VAW reported both in the household surveys (HHS) and focus group discussions (FGDs) were catcalling (type 1), fear of being sexually abused (type 8), stalking (type 2) and groping (type 7). Consequently, these were the types of Violence Against Women (VAW) with more answers regarding locations. 69.72% (76 women) of the HHS participants that experienced catcalling knew the location where the most memorable incident took place. As for stalking, 80.49% (33 women) of HHS participants that experienced this type of violence knew the location where the most memorable incident took place. Regarding fear of being sexually abused, 60% (33 women) of the HHS participants that experienced this type of violence knew the location where the most memorable incident took place. The combination of all the locations recorded in the HHS allowed for the generation of heat maps, which used 145 responses (69% of spatial data, 37% of the total responses) for their creation. These heat maps were then used to select 22 locations to conduct site visits and structured observations. Three types of locations were identified: roads (13 locations), parks or plazas (7 locations) and bridges (2 locations). Despite all the locations being of different types, they all lacked some form of infrastructure; had physical obstacles challenging mobility and access; had spots of poor visibility at two levels: private space towards public space and within the public space; and were related to restricted pedestrian mobility. This chapter reviewed how these characteristics present criminogenic opportunities for the commission of VAW.

# Chapter 7

# Drivers for the widespread prevalence of VAW in Corregidora

This chapter presents the results that address the fourth question of this research:

«*What are the possible infrastructure drivers for Violence Against Women (VAW) in the public spaces of Corregidora?*»

This chapter aims to analyse how the planning, construction and delivery of infrastructure can act as drivers for VAW. These results derive from the interviews held with stakeholders, and also draw on reflections from participants during the focus group discussions (FGDs). This chapter also presents an unexpected finding that was encountered during fieldwork: the resistance of residents of gated communities to collaborate with the research. This chapter is divided into three sections. The first section presents the results of the stakeholder interviews, which provided insights into the decision-making and planning processes of the municipality of Corregidora. The second and third sections do not directly address any research questions, but present unexpected results regarding gated communities and other interactions held with government officials throughout this research, which may pose barriers to the reduction of VAW, as well as explanations from the FGDs participants about why VAW occurs. They respond to wider community and societal issues regarding the production of violence through the lens of the Social-Ecological Framework (fourth level) and are important in understanding how violence is constructed and perpetrated through a space that is socially constructed (CDC, 2020; WHO, 2020; Low, 1996; Massey, 1994; Rodman, 1992).

## 7.1 Soft infrastructure: The lack of gender perspective

The aim of the stakeholder interviews was to provide insight into the decision-making and planning processes that underpin the delivery of infrastructure in the municipality of Corregidora. The main focus of the interviews was to understand if there were protocols in place to mitigate VAW at any point

in the process of planning and delivery of infrastructure. Another point of interest was gaining an understanding of the mechanisms used by the local government to identify problems and challenges of the communities in the municipality. Table 7.1 shows the Secretariats, Ministries and Institutes that were interviewed.

*Table 7.1 – Stakeholders interviews with members of the local government of Corregidora.*

| # | Interviewee Department | Administration | Interview duration |
|---|---|---|---|
| 1 | Resource Management Unit / Sustainable Planning Unit | 2015-2018 / 2018-2021 | 46' 25" |
| 2 | Ministry of Urban Development and Public Works: Works Execution Management (Ministry of Public Works) | 2015-2018 / 2018-2021 | 14' 26" |
| 3 | Performance Evaluation System Unit of the Treasury and Finance Secretariat | 2015-2018 / 2018-2021 | 20' 20" |
| 4 | Ministry of Urban Development and Public Works: Urban Development Management / Ministry of Mobility, Urban Development and Ecology: Urban Development Management | 2015-2018 / 2018-2021 | 19' 24" |
| 5 | Ministry of Social Development | 2015-2018 / 2018-2021 | 21' 08" |
| 6 | Ministry of Mobility, Urban Development and Ecology | 2015-2018 / 2018-2021 | 19' 47" |
| 7 | Ministry of Mobility, Urban Development and Ecology | 2018-2021 | 20' 17" |

The interviews indicated that, at the time, the local government stakeholders were not aware of any gender protocols in place for planning or delivering infrastructure nor for dealing with gender issues within the local government. None of the stakeholders seemed to know of any set of criteria for the design of public infrastructure to minimize the risk of VAW. And there also seemed to be a limited understanding of the term *gender perspective*, as illustrated by this response by a male government stakeholder, who stated that:

> "There is always a gender perspective, because if we carry out a social [public] work—a park—there are security considerations. More than gender [perspective] these [considerations] are for security for people" (Stakeholder 2, Male, Gvmt Employee).

This stakeholder had a clear focus on security, but seemed to be more concerned with general security considerations, rather than targeted efforts to reduce gender-based violence and/or VAW.

The stakeholder interviews were additionally useful to understand the following topics, which will be further explored in this section:

• Mechanisms used by the local government to identify problems.

• Organisation within local government, specifically the processes for approval of projects within the institution.

• Collaboration among the different departments of the local government, as well as collaboration with other municipalities and the state government.

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• The level of technical expertise within the municipal government.

### 7.1.1 Problem identification mechanisms

The problem identification mechanisms that were identified through the stakeholder interviews were Citizens' complaints, conducting studies and a new mechanism called *Project Bank*. Four of the 7 stakeholders mentioned that the main way in which the local government identifies needs is based on Citizen complaints, which can take 2 forms:

1. At the beginning of a government's administration, when a municipal consultation is set up for citizens to place petitions for projects to be carried out during that administration (Stakeholder 2, Male, Gvmt Employee).

2. Approaching the local government with petitions at any point in time (Stakeholder 1, Male, Gvmt Employee).

**Conducting studies.**  Three stakeholders agreed that the local government does not conduct many studies to identify the problems the local communities experience, as there is "not a specific mechanism" to carry this out (Stakeholder 7, Female, Gvmt Employee).  Additionally, the Institute in charge of conducting most of those studies was IMPLASCO, which was dissolved under the administration of 2018-2021.  At the time the interviews took place, a new mechanism called Project Bank was being introduced. According to a stakeholder, the aim of the mechanism is to encourage the identification of problems and needs, and have a common platform for all the different Ministries and Secretariats of the local government to store projects for which it was not possible to allocate a budget (Stakeholder 3, Female, Gvmt Employee). The mechanism included:

> "A process in which a need [is] detected [and] channelled [to the corresponding areas], [which] can be infrastructural, for social [public] work, or even a diagnostic survey" (Stakeholder 3, Female, Gvmt Employee).

The process in which Ministries and Secretariats would identify or detect needs, however, was not clarified.

**Public consultations.**  A stakeholder implied that the Urban Development Plan is usually submitted to public consultations before authorization.

> "For any type of document, [...] the procedure is to call citizens, call the Colleges, call the Chambers, so that they participate. And in some way, we would have the opportunity to get feedback from civil society, the government, and reach a successful conclusion in terms of getting a good document" (Stakeholder 6, Male, Gvmt Employee).

The stakeholder further explained that the method to manage public works started by consulting citizens regarding their needs, although there was no clarification on how this was done. The conversation quickly moved towards the government mechanisms that are needed for decision making and approval of a project, and there was no other mention of the citizens input on the project or their involvement at any other point of the process. Besides this instance, no other stakeholder made any reference to public consultations.

The mechanisms for public consultations applied by the local government provide a narrow scope for identifying problems and challenges that communities in the municipality experience. Citizens seem to not be given many opportunities to communicate their needs and/or requests, besides approaching the local government in the hope that their complaints will be heard. This possibly means that the experiences of women using public spaces or what they prioritize for their safety when using these spaces are not taken into consideration when planning and designing municipal programmes. It is also unlikely that these consultations will be able to gather information regarding experiences of VAW in the public spaces of the municipality, given the taboo nature of VAW revealed by some of the FGDs and results shown later in section 7.3.1.

### 7.1.2 Application of regulations in the approval of projects

There seemed to be a lack of consistent application of regulations and rules in the approval of projects, as it is a process conducted by different regulated bodies. The approval of projects to be carried out in the municipality, including decisions on land use, is mainly made by Cabildo, which is a group composed of the municipal president and elected members of the city council. However, a stakeholder suggested that the municipality "always [has] to be very supported by the state to build infrastructure" (Stakeholder 5, Male, Gvmt Employee). Article 115 of the Mexican Constitution gives power to municipalities to regulate their planning resources and processes (Secretaría de Gobernación, 2020). These processes, however, need to align to federal, state and municipal codes. According to a stakeholder, "although we are independent and the Municipality elaborates [the plans], it has to go through an authorization from the state" (Stakeholder 4, Female, Gvmt Employee). The stakeholder also mentioned that the Urban Code determines the minimum requirements that must be contained in an urbanisation project and "as long as these basic requirements are met, the Municipality can add [anything additional]"[1] (Stakeholder 4, Female, Gvmt Employee). Furthermore, any particular type of project has specific legal frameworks to follow:

> "Projects have to be subjected to a review depending on the regulatory body, based on
>
> the type of project to be carried out [sic]. For example, a sanitary drain for a neighbour-

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[1]The different development plans, codes and regulations that were mentioned in the different interviews were the Urban Code, the Municipal Development Plan, the Urban Development Plan (which includes the developable area, the ecological preservation area, the area where the industry has to grow and the Habitable zone), the Land Management programme, the Ecological Management Programme, the Zoning regulation and the Land Use of the Municipality.

hood has to request an authorization with the State Water Commission" (Stakeholder 2, Male, Gvmt Employee).

These regulations require every type of project to be inspected by a specific regulatory body, this means that urban development projects are subject to the idiosyncrasies of the different units, which may or may not be working in collaboration.

### 7.1.3 Collaboration among government departments and private sector

Three levels of communication were identified: internal collaborations, communication with federal and state levels and communication with the private sector.

**Internal collaborations.** There were mixed accounts of internal collaboration between departments or institutes within the local government, regarding the police, public works and urban development departments. Some stakeholders mentioned there was coordination among departments:

> "We have regular meetings with people from Public Security, from Crime Prevention, who are the ones who have advise us more or less based on the complaints they have received about what is a point of insecurity [sic] or how we can combat it" (Stakeholder 2, Male, Gvmt Employee).

Other stakeholders mentioned this was not the case by stating that:

> "There is a need for the Ministry of Public Security to get involved with us [Ministry of Mobility, Urban Development and Ecology], right? Because they are the ones who get to know what happens in the streets, we only [make decisions regarding projects]" (Stakeholder 4, Female, Gvmt Employee).

**Federal and state level.** Communication channels and partnership with federal and state government seemed to be insufficient. According to a stakeholder:

> "Federal, municipal and state financing were sometimes being applied in the same neighbourhoods and there was no correct coordination, [and as a result] sometimes the building work got complicated" (Stakeholder 1, Male, Gvmt Employee).

Another stakeholder implied that a body to whom inhabitants of the municipality would complain about a given problem may not have the power to solve it, creating a need for constant communication between different levels of government. For example, the municipal government is the first point of contact for inhabitants to request services from the government, but the local government may not have the ability to cover those requests. According to the stakeholder, all the requests:

"Have to go up [a level] because if they ask us for a street, we don't make streets. It is the state government who does it. We maintain these streets, we maintain the lamps, we collect garbage" (Stakeholder 5, Male, Gvmt Employee).

There are efforts being made for this collaboration, as the urban areas of Corregidora are now part of the metropolitan area of Querétaro city. According to a stakeholder, being part of a metropolitan area means:

"More collaborations are being [...] made; there are 4 municipalities that right now are coming together to carry out this type [...] of studies and that all the [urban] plans are on the same axis, that they all coincide" (Stakeholder 7, Female, Gvmt Employee).

**Private sector.** A stakeholder mentioned that private developers have "certain obligations", including "in kind contributions" (Stakeholder 1, Male, Gvmt Employee; described by the stakeholder as upgrading a street next to a development being built) and the relationship with private sector, including authorisations, is managed by the Urban Development Ministry. But there were no comments on this topic from members of this Ministry. Another relevant stakeholder was reluctant to provide information about this by stating:

"We have no direct relationship with private sector. Previously we did, but responsibilities were changed internally here and we no longer carry out reviews with private people" (Stakeholder 2, Male, Gvmt Employee).

There were mixed accounts regarding collaboration among different levels of government, as well as within the local government. As previously mentioned, this means that urban development projects are possibly designed and delivered by different units which do not work in synchrony. This can pose problems in terms of governance, accountability for dysfunctional projects, tracking the progress of projects, maintenance of public works and general trust in government by the public, among other issues that will be discussed further in section 8.3.3.

### 7.1.4 Government decision makers: Technical expertise and professional knowledge

Conversations with stakeholders of the Ministry of Mobility, Urban Development and Ecology revealed that the government sometimes has no capacity or technical expertise to develop their programmes: "we do not have enough staff and [...] also the people who collaborate within [the local government], well, they are not the most adequate people, right? Qualified to do this type of studies" (Stakeholder 7, Female, Gvmt Employee). Therefore, they resort to contracting experts in the area to conduct more technical studies for them:

"Normally all that kind of information, for example, development programs and such, we contract with an external [person/organisation], and they are the ones who do [all] these studies" (Stakeholder 4, Female, Gvmt Employee).

One of these external organisations is UN Habitat, whom one of the stakeholders was in the process of contacting to conduct "a reclassification of the territory and [...] from that, perhaps they will make us an integral [...] proposal [of urban development, mobility and ecology, that are our 3 areas]" (Stakeholder 7, Female, Gvmt Employee).

There is a question over whether the private sector is acting in the best interest of society, either through the government outsourcing workload which its employees are unable, uncapable or unqualified to do, or through private developers' *obligations* when collaborating with the government. The former raises issues regarding expenses and whether this is the most cost-efficient solution rather than hiring personnel with the required technical expertise, particularly for delivering government programmes. And the latter, more alarmingly, raises concerns regarding the transfer of authority to regulate public goods to non-public entities, such that they fall into the domain of the private space (Vesselinov et al., 2007).

## 7.2 Gated communities as a manifestation of violence in social attitudes and the built environment

As discussed in the methodology chapter in sections 4.2.3 and 4.4.2, 20% of the initial HHS sample had to be replaced due to that percentage of blocks falling within gated neighbourhoods, most of which denied access to the data collection team. The topic of gated communities is crucial to this research because it involves the privatisation of public spaces. The creation of these communities can also be seen as a manifestation of the social response to crime and violence in the built environment (Aguilar and Mateos, 2012; Vilalta Perdomo, 2013; Caldeira, 2000; Low, 1997).

### 7.2.1 Definition of gated communities within the context of Corregidora

A definition of what a *gated community* means in this context must be provided. According to Roitman (2010) there are several definitions used to conceptualise gated communities which, despite having context-specific features, have common characteristics. The first published definition was provided by Blakely and Snyder (1997, p. 2), who explained that:

"Gated communities are residential areas with restricted access in which normally public spaces are privatised. They are security developments with designated perimeters, usually walls or fences, and controlled entrances that are intended to prevent penetration by non-residents. They include new developments and older areas retrofitted with gates

and fences, and they are found from the inner cities to the exurbs and from the richest neighbourhoods to the poorest."

Other definitions include attributes such as the social homogeneity of residents, the provision of services and amenities for the use of residents and the autonomy that these places command in being *'self-contained'* (Roitman, 2010; Caldeira, 2000). Other features include social exclusivity and segmentation (Roitman, 2010; Svampa, 2001) and the existence of codes of conduct within the limits of the residential complexes (Atkinson and Blandy, 2005).

The types of gated communities that exist in Mexico range from luxury country clubs to working class gated communities (García Peralta and Hofer, 2006). After a decade of rising assault and burglary rates which led to increased perceived insecurity in Mexico City and an economic crisis in 1982, the real estate sector in the country perceived the need for residential protection (Aguilar and Mateos, 2012; García Peralta and Hofer, 2006). As a result, developers promoted "high-security [...] enclosed developments for luxury housing" (García Peralta and Hofer, 2006, p. 129), which gave rise to country clubs as the prototype for a remote and socially secluded residential life for the extremely wealthy (García Peralta and Hofer, 2006). These developments included residential areas with low density and single-family villas, big parks with sporting facilities as the only kind of infrastructure, fences and gates with CCTV as borders and armed guards at the entrance. As a consequence, new patterns of dispersion within the cities started emerging, as the places of residence, work and services for the elite were located within the perimeters of the poor neighbourhoods of the peripheral areas, giving way to *islands of modernity* (Aguilar and Mateos, 2012). Simultaneously, middle and upper-income residential areas within the city adopted some forms of these techniques, by closing off streets or neighbourhoods and protecting the entrances with guards and gates, or building windowless facades and big garage gates (Aguilar and Mateos, 2012; García Peralta and Hofer, 2006). "These measures transformed former public streets into secluded, privatised spaces or simply lifeless approach roads" (García Peralta and Hofer, 2006, p. 130).

Building dwellings for the wealthy, while profitable, was only a marginal share of the building sector in a society with a relatively small upper class. This changed in 1992, when public financial institutions modified the financial mechanisms applied to land and housing costs, as suggested by international agencies, promoting a free market in order to improve efficiency and increase loan recovery rates in the public housing sector.[2] This change allowed for gated communities to be available to lower-income households and for the creation of *the gated community for the working class*: mega-housing development projects of variable quality, contributing to social distancing and spatial segregation (García Peralta and Hofer, 2006).

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[2]In the Mexican context, social housing is not for rent and it involves relatively affordable housing. Homes can be purchased with assistance and loans provided by governmental financial institutions which have loan regulations for people who would otherwise not be able to finance the purchase of a house (García Peralta and Hofer, 2006).

### 7.2.2 Gated communities in Corregidora

Roitman (2010) draws attention to the difficulties of defining gated communities. Scholars do not consistently consider or agree on the types of housing, location, socio-economic status of the residents encompassed by the term ("exclusively targeted at affluent and middle-class groups or at all strata"; Roitman, 2010), or whether the community emerged as a closed settlement since its inception. In the case of Corregidora, or more widely, the metropolitan area of Querétaro City—of which the urban localities of Corregidora are a part—a study conducted by Gómez-Maturano and Alvarado-Rosas (2016) found that there were 399 gated communities of 7 different types at the time the study was conducted. The analysis was centred on the autonomy within the gated communities to be independent of their urban environment, the degree of division that these neighbours promote in their surrounding urban environment and the level of dispersion with the urban layout. The types of gated communities the authors identified varied in nature, and included tower blocks, walled cities, neighbourhood associations that decided to gate their street, as well as gated communities created by design. All the developments were still dependent on the surrounding urban structure to various degrees, were segregated from the surrounding urban structures and divided the surrounding space at different levels. Gómez-Maturano and Alvarado-Rosas (2016) highlight the diversity of gated communities that exist within the Querétaro metropolitan area, which were also encountered in the field, where the most common type of gated community the authors found were single-family housing units in joint ownership (51.4% of the developments), ranging from few units to hundreds, typically encompassing a single street to a small block with a small recreation area.

The creation of neighbourhoods in the municipality of Corregidora is dictated by the Regulation of Real Estate Developments, which stipulates what types of neighbourhoods are allowed to be developed, and which should be done in accordance with the Urban Code. The regulation makes clear that it is the responsibility of the developers to build infrastructure as well as to "introduce and ensure the provision of services and urban equipment" within the development until the "delivery and reception" of the project back to the municipality (Article 17 & Article 46, Ayuntamiento de Corregidora, 2017). The regulation also outlines that developers should consider the physical integration of the development with their immediate context through the design and continuation of all existing public roads on the boundaries of the property (Article 33, Ayuntamiento de Corregidora, 2017). It is unclear whether developers follow this clause, at least according to some FGD participants whose views will be described in section 7.2.3. The regulation also includes a definition for private roads,[3] which may be read as an indication that the code is geared towards regulating the construction of gated communities. It was also found that neighbourhoods or communities can request permission from the state and municipal governments to gate an already existing neighbourhood, so long

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[3]"Space destined to the stay, connection, movement and transport of the population as well as the transport of goods, including sidewalks, parking spaces, etc; whose use, enjoyment and accessibility are limited and determined privately" (Article 1, Ayuntamiento de Corregidora, 2017).

as a neighbourhood association exists (Ref. P. O. No. 21, 16-III-18, Ayuntamiento del Estado de Querétaro, 2019; Article 168 & Title 6 Ayuntamiento de Corregidora, 2017).

A stakeholder provided a crucial insight regarding the municipality being aware of the shortcomings of allowing the creation of a high number of gated communities throughout the urban extents of the municipality, and how these neighbourhoods create a physical barrier that divide these communities and the city. The stakeholder stated the following:

> "All developers who intend to build gated communities [need] to have visual permeability. That is, if you are inside, you can also see what happens on the street. We ask for this visual permeability be [done] with a fence, or in some cases they do not like to be so exposed, they [can] have trees or some type of vegetation, that the visibility inside the gated community is not so frank" (Stakeholder 4, Female, Govt Employee).

However, this is not a regulation, but simply a criterion within these guidelines. The municipal government asks "for 50% visual permeability of the adjoining area to a public area" (Stakeholder 4, Female, Govt Employee), but this seemed to be more of a suggestion than a rule and the municipality lacked enforcement measures. The stakeholder also added that the request for the creation of the high number of gated communities possibly stemmed from insecurity:

> "The way that people feel safe today is by being locked up. And what they are asking is for the streets to be closed [...]. That outsiders cannot transit through the neighbourhood, and obviously the avenues of a neighbourhood are public, so anyone can transit at any time. But right now it's like the request of all the neighbours, to enclose themselves, literally, gated up. And well, if so many programmes are being implemented, [...] surveillance cameras, [emergency buttons for 'calling' the police on the spot] [...], the Vigilant Neighbour, it is because there has been an increase in crimes" (Stakeholder 4, Female, Govt Employee).

### 7.2.3 Gated communities as retreats for safety

Gated communities can be regarded as a response to concerns for security, fear of crime and not feeling properly protected by public institutions (Aguilar and Mateos, 2012; Roitman, 2010; Sheinbaum, 2008; Atkinson and Blandy, 2005). Gómez-Maturano and Alvarado-Rosas (2016) seemed to disagree with the idea that the developments found in the metropolitan area of Querétaro City were created as a result of "defensive urban design", as not many of them achieved autonomy from their urban environment. Although the authors agree that there seemed to be a desire to be segregated or isolated from other public spaces, as shown by the physical walls constructed around many of the developments of their study (physical elements), and the presence of guards (human elements), although technological elements were lacking; and the level of dispersion or separation with the

urban layout that these developments created. However, their analysis was based on quantitative definitions, rooted in an object system analysis that did not consider the motivations of the residents who live in those developments.

During 3 of the 7 FGDs (FGD2, FGD4 and FGD5), 10 participants shared their opinions on gated communities. Six of these participants mentioned they lived in gated communities and this made them feel safer and another participant mentioned that she did not live in a gated community but thought that they were safer. This may be true while residing within the compounds of the development, however Giglia (2008, p. 67) suggests that "enclosure does not always have a positive effect on the general conditions of urban security", particularly as "heightened security measures on the residents' part bring about deserted surroundings which are less collectively cared for and, therefore, less secure". Which was, in a way, confirmed by a participant in FGD2 suggesting that within her neighbourhood it was safe, but it was no longer the case once she left the gates of her community: "the surroundings when going out to the streets [are] not [safe] anymore" (Participant in FGD2). In the same FGD, another participant noted that the police have preferences for certain types of neighbourhoods.

> "I believe that there is like a preference for residential developments *[fraccionamientos]* and condominiums, because there the police is patrolling and when you call them they are immediately there" (Participant in FGD2).

The participant's comment suggests that the police do not patrol other areas of the municipality as regularly or do not promptly arrive, if at all, when calling from other neighbourhoods in the municipality.

### 7.2.4 The restriction and regulation of movement as a safety mechanism

An overarching factor that was noted in the comments about why participants felt safe in these types of neighbourhoods was the ability to surveil or regulate people's movements in terms of the activities they perform, even within confines their own private life. A participant living in an open community in FGD4 mentioned "there's movements that you see that you say 'this is not a normal movement from a person that works' " (Participant in FGD4) referring to a neighbour who she suggested worked as a prostitute. Another participant living in a gated community echoed this comment, yet in her case, the participant together with her neighbours managed to expel another neighbour who they did not desire in their community,

> "I too have had neighbours of this type in my own [gated community], and among all of us, since this neighbour is suspicious, we filed our complaint with the neighbourhood's association, our neighbourhood, and he left. Because we all wanted him to leave, we didn't want neighbours like that" (Participant in FGD4).

While this participant did not mention the source of insecurity, it was clear that living in a gated community allowed her and her neighbours to monitor, regulate and restrict actions and attitudes within the neighbourhood compounds, which gave them a sense of control over their own safety. Other key factors identified as safety mechanisms concerning the regulation of movement were filtering, foot traffic and social cohesion (as discussed below).

**Filtering.** It seemed that the topic of being able to *filter* entry to the gated community was an important measure for safety, as stated by this participant in FGD4:

> "I think that it is safer to live in a [gated community], because at least there is already a filter before they reach your house and any neighbour can see them, and say that they [the neighbours] saw them [whoever entered] and that they were suspicious or something" (Participant in FGD4).

**Foot traffic.** A second measure that was identified was the *foot traffic* of the neighbourhood, which seemed to make some of the participants associate the number of people that enter the community with insecurity. A participant that lived in a gated community stated that she felt safer living in her gated community as:

> "Not as many people enter as if it were an open street, I mean, you know that those who enter is because they live there or are going to see someone there, I mean, there are not so many foreign people to the [gated community]" (Participant in FGD5).

**Social cohesion.** Knowing their neighbours and *familiarity* with the people, either living in other areas of the neighbourhood or entering it, was identified as another key factor in making participants feel safer (Merry in Low, 1997). A participant in FGD4 living in a gated community with security, stated that "I am surrounded by good neighbours, that I know very well and for years" (Participant in FGD4). However there were similar comments from participants living in open neighbourhoods, whom expressed feeling safe based on knowing their neighbours, as expressed by a participant in FGD3 living in an open neighbourhood, "the day that, God forbid, something happens, you know you count on them" (Participant in FGD3).

Social cohesion and familiarity, even if produced by insecurity and unpleasant crime experiences, can also promote the creation of gated communities that were not conceived by design. Such was the case of a FGD5 participant's neighbourhood. While having a conversation with her neighbour, she learnt that her neighbourhood was not initially gated, but the neighbours' association decided to gate the street (which can be requested by a neighbourhood's association, as mentioned in section 7.2.2).

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"Where I live, it is not a [gated community] as such, but the access is limited. [...] The neighbours themselves decided to gate it. [...] Some years ago, they found a dead person in a car and that's why they decided 'well we are closing everything, there will be no access or anything and only the ones we live here [can come in]' [...] And even the neighbours from other [streets, now gated communities]... they even closed total access" (Participant in FGD5).

## 7.3 Social explanations for the widespread prevalence of VAW in Corregidora

This section presents social explanations for the widespread prevalence of VAW in Corregidora. This includes the barriers encountered when conducting fieldwork, and the resistance of the government to engage fully with this research; the refusal of police to provide access to data or to participate in this research; the reluctance of residents of gated communities to provide access; as well as the FGDs participants' reflections on why Violence Against Women (VAW) occurs in Corregidora.

### 7.3.1 Barriers to conduct fieldwork as resistance to work on VAW

Residents of gated communities and their guards were reluctant to engage with this research, and denied access to their neighbourhoods to conduct HHS with their residents.[4] Two methods were used to try to gain access: asking a passing neighbour for an interview, or asking the neighbourhood administration or guardians if it was possible to contact anyone from the neighbourhood. Neither method worked, however. An official letter signed by the main academic supervisor of the project and a copy of the letter of collaboration with the municipality were shown in some cases. Unfortunately this did not persuade either the residents—who in some cases actively prevented access to their communities or became visibly aggressive—or the guards. In one of the neighbourhoods, the data collectors were informed by a guard that, if an official letter by the municipal government requesting access for surveying was shown (described as "due process"; Anonymous, personal oral communication, 12 November, 2018), access would be granted. It is uncertain if this reluctance to cooperate should be attributed to residents not wanting to talk about VAW, or to not wishing to grant access to strangers, as outlined in section 7.2.4. Both the prevalence of gated communities and the difficulties of gaining access were not identified when designing this project, and the methods used were not best suited to approach the residents of these neighbourhoods.

The resistance to work on the reduction of VAW by the municipality might be explained by the

[4] If a formal neighbourhood association exists (as a civil association) within a neighbourhood, they are entitled to deny access to any person without providing any grounds. If such association exists, the municipality allows for the association to "own" the area or streets and only the municipal services are allowed in to carry out cleaning, infrastructure maintenance and police services (Article 168, Ayuntamiento de Corregidora, 2017).

taboo that surrounds this topic, as revealed through the following interactions. IMPLASCO was the institute in charge of conducting surveys within the municipality. At the time of planning the surveys, there was an active collaboration with the institute and meetings were held to prepare for the work. Yet no information regarding protocols for accessing gated communities were shared during these meetings. IMPLASCO was subsequently dissolved by the 2018-2022 municipality administration, before fieldwork had started (as described in section 4.4.2). The need for an official letter to access gated communities was later communicated to the main point of contact in the municipality's new administration, but this letter was not provided. Since access to these neighbourhoods was not possible without the support of the municipal government, resampling of other areas had to be carried out instead (see section 4.2.3 and appendix G).

During the first data collection field trip, a request to use the logo of the local government on the badges worn by the data collectors to convey trust to the participants was denied on the grounds that "by allowing the use of the logo of the municipality, the local government was accepting that there is violence against women" (Anonymous, personal oral communication, 21 November, 2018).

During the second data collection field trip, FGDs were being organised through formal and informal channels. A call for participants was done through Facebook. An informal meeting was held with the police department in parallel, to request access to access data on crime reports and formalise a collaboration. During this meeting, it was disclosed and confirmed that, at least at the time this study was conducted, the police department did not use any form of crime mapping. A few days after the meeting with the police, during a call with a government official, the stakeholder mentioned that due to the Facebook call for participants, the municipality had decided to cancel the police collaboration with the research. The stakeholder mentioned that the chief of police's perception of the Facebook post to recruit participants was that it left the municipality's reputation in a bad light.

Given the lack of collaboration and access to crime data, a freedom of information request was made, which yielded a response. But the request took almost 6 months to be answered and the information would only be provided in 562 printed sheets of paper, despite a request for electronic versions, and could only be delivered in person in the offices of the local government. This was not possible given that the researcher had left the country by this time. A complaint was made, but no response has been received to date. Additionally, a Mexican NGO that deals with open data, Data Cívica, was consulted regarding georeferenced data at municipal level, and advised it is unavailable as this type of data is not collected.

### 7.3.2  Explanations of VAW according to the FGD participants

The participants of the FGDs reflected on why VAW occurs. Given the government's lack of channels for women to express their concerns for safety and experiences with violence, and that the focus of

this research is on the perspectives of the women of Corregidora, it was deemed valuable to have a space to share the FGDs participants' thoughts on VAW. The views expressed in this section do not necessarily reflect the researcher's own opinions, and are discussed further in chapter 8.

Participants expressed that no matter what the victim does, it is the aggressor's perspective which determines whether a person becomes a victim of VAW. As this participant in FGD4 explained:

"I think that, like, the important element there is that the aggressor feels that their prey is more vulnerable than him, right? [...] I feel like it would be like the aggressor is the one that determines which is the vulnerability of their victim. Because obviously they won't try to attack a person that they feel will overpower them. [...] Maybe if he sees a woman that is very physically large, corpulent, and he is tiny, skinny, [...] he won't mess with her, right? So I mean it is rather within the thinking of the aggressor whom they see as vulnerable" (Participant in FGD4).

Another participant in FGD1 expressed that in her opinion, many of the attacks on women were calculated, if not even premeditated, by stating that:

"Men feel stronger than us [women], because they say 'ay, I can grab this one, and, let go, let's see!' [...] They tend to do things more on the sly, why? Because they tend to grab, I mean they know how. Or on their mind they are already thinking 'how am I going to push her?' or 'how will I grab her?', whereas you are just walking calmly, right? [...] So they are in their mind already preparing what they are there for, what's their objective" (Participant in FGD1).

A participant in FGD6 suggested that she felt vulnerable when walking, which resonates with the comment in which the participant in FGD1 suggested the premeditation of VAW, as when:

"You are walking and there is people behind you and you don't know if they are there just to walk off because the want to do something to you" (Participant in FGD6).

The discussion group in FGD1 considered that attitudes regarding respect for women stem from learnt behaviours, or education, that people—mainly men—receive from their families at home. The conversation moved towards how this education of respect needs to be reproduced by society, and discussed the role that government plays in reinforcing violence. The participants' discussion suggested that early education is key to ensuring equality for women in future generations. A participant suggested that:

"Before they didn't get like much education in that aspect of respecting women. Now I think or I believe that if at home you teach your boy since he is little to respect women, I think we can get rid of this [disregard for women's lives]. But not with older people, no" (Participant in FGD1).

Another participant suggested that negative examples also lead to a lack of respect for women: "a woman is passing by, and the whole family is there and the husband says 'look, that one is really hot', or things like that, it is a pattern that the children are learning" (Participant in FGD1). Some participants pointed towards a community-wide education system, in which no matter what values are taught at home, if those values are not sustained everywhere else, the impact will be minimal.

> "I have the idea that in my house my kids are one way and in the street they are another [way]. Me in my house I can believe them to be saints, [...] in the streets who knows. Because I can send my son to football [practice], but if the coach says 'move wey[5]', what is my son to do? So there they are not reinforcing those values" (Participant in FGD1).

A participant suggested that this violence also stems from the way politicians behave in public. In her opinion, scenes of fighting politicians on screen sets a bad example about how to behave in society, indirectly endorsing people to do the same in public.

> "A lot of violence started also since the House of Representatives, and I'll say it out loud, that they started to fight as well, the kids would see such things. For example they would ask me, why are they fighting like that if they are the government?" (Participant in FGD1).

In her opinion, Mexico is "hitting rock bottom, and now, precisely [because of that], there are robberies, assaults, kidnappings, everything, and we are all afraid" (Participant in FGD1) as a result of systemic violence, lack of societal values and bad governance.

The FGD2 talked about gender role disparities, particularly on how women are allowed to dress in public or not welcomed in public spaces altogether if they are above a certain age. A participant thought that the reason men attack women, particularly when they are wearing clothing that exposes skin (like a short skirt), is because "that's how they are educated or that's how they see it and they are used to it" (Participant in FGD2). Another participant believed that this had to do with *men being men*, as in her opinion:

> "It has to do with the gender in general. Well, as a woman you feel bad. Well, here I have noticed that there are times that men pass by, right? And you're coming back from doing exercise, and they yell at you 'go back home to clean up!' I mean... It makes you angry, you are not doing anything wrong, it's not even how you're dressed, they don't even see you, they don't even know you, and just because you are a woman, they have a stereotype and that's it" (Participant in FGD2).

Another participant suggested that gender stereotypes limit society by categorising people, mostly women, according to how they look or what they wear. The participant stated that she believed this was wrong, and in her opinion it would take time for society to change those views:

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[5] *Wey* means 'bro' or 'dude', however it can have derogatory connotations and can be offensive for some people.

"But little by little we need to remove those stereotypes and, like, I think that [having stereotypes] is something certain groups of the society [hold], but it's not something that can be changed overnight, so it's not like you can do much" (Participant in FGD2).

The participant did not clarify which groups of society hold these views, nor which actions can be taken to change these stereotypes. Yet the frustration that the participant felt that change was needed could be noted in her response.

The FGD4 focused on discussing the normalisation of violence stemming from within the household, focusing particularly on the topic of normalisation of violence among women with lower economic resources. A participant seemed to think it was important to clarify that it was women in lower socioeconomic strata that experienced domestic violence at a higher rate, "the aggressor is sometimes at home, and especially among people with fewer resources" (Participant in FGD4). Another participant added, that if this was the case:

"If it is their way of life and they are used to it, I mean, to feel attacked or to be harassed in some way, for them it is, in quotation marks, 'normal', that this happens, right? So if someone attacks them on the street, then they must say 'well, it's the same thing' " (Participant in FGD4).

However, some participants disagreed, suggesting that it may not be the case for all women, "in some cases, yes, I think that maybe that's how they see it [violence as normal], but I think that it is not the generality" (Participant in FGD4). While another participant added that "there are many sick people on the street [...] who attack many women, especially young women" (Participant in FGD4), suggesting that violence occurs not because women see it as normal or are used to it as *a way of life*, but because some men are violent.

In FGD7, participants discussed the apathy of society to intervene in acts of violence perpetrated in public. A participant expressed how in situations of danger, if someone yells for help by using the word *"help"*:

"People tend to flee, because they say, ah, well he is going through something, or how about I get involved and instead of defending him, they hurt me" (Participant in FGD7).

Another participant replied saying this happens when Inter Partner Violence occurs in public:

"Even in relationships, right? When the guy or the girl is hitting the boyfriend or girlfriend, like in a certain way it makes us laugh, but when we see that it is something more intense, like, we leave or let them solve the situation themselves. We don't have that ... [Empathy to intervene]" (Participant in FGD7).

With regards to what made people, particularly men, partake in gender violence, especially catcalling, the younger participants were divided in that some believed that it stemmed from education

while some others believed it was 'instinct' that made men participate in such behaviours. A couple of participants shared a personal story of how once they could not resist turning around to look at a handsome young man. This experience made them think that it must be *instinct* that makes men stare and catcall women in the streets.

> "Once it happened to us here [...] that we saw a handsome young man and we instinctively turned around to see him because we had never seen him, so I say that it is instinct. Well, that in this case we did it not because of evil or violence, but rather because it was like, oh wow, he's handsome" (Participant in FGD7).

There is a distinction however between looking and catcalling, and this example does not explain why some men decide to attack women physically or verbally, or disrespect and invade their personal, physical, psychological and sexual boundaries.

A participant suggested that education at home was the root of VAW. She did not believe that the government had any power to change behaviour in society:

> "Everything comes from the home, right? So we can't be blaming the government for saying 'you know what, is this person doing this to me or if I go through this place someone who is going to do something to me'. Because that doesn't depend on the government, that depends on the culture that you have [...] If you teach a man that a woman always has to be respected, whoever she is or however she is dressed, the same man will grow with this culture and will get used to the idea that he shouldn't harass women and so on. So it's not a question of blaming the government, but you should have to educate your own family so that they don't do it" (Participant in FGD7).

However, another participant suggested that the country is going through a crisis of values, in which the family and social fabrics are in decline. According to the participant "[violence] is not a topic that is talked about at home" (Participant in FGD7), and in her opinion, that has had a big impact in this decline. Additionally, she believes that:

> "There has always been violence, but right now you can see more [violence], because there is more media and not only television, which was the only media that kept you informed (and that because it used to be given away for free [making reference to political campaigns that give away home appliances in exchange for votes]). But right now there are more journalists who go out to produce their news and they don't care if they are killed or not, but that information is already out there and social media is a way for you to get informed" (Participant in FGD7).

She finished by stating that while there has always been VAW, which has perhaps been even more visibly as in previous generations, as now "there are women's associations, there are more

things that help, to like, let's say, balance this a little" (Participant in FGD7). And regardless of general violence being more visible, so is VAW, which has allowed the creation of organisations and institutions to raise awareness and fight against it.

## 7.4  Summary of findings and conclusions

The interviews indicated that, at the time, the local government did not have gender protocols in place for planning or delivering infrastructure, and also lacked protocols for dealing with gender issues within the local government. The municipality's resistance to investigate and prioritise the reduction of Violence Against Women (VAW) could be explained by the taboo that surrounds this topic, as revealed through the interactions with the municipality throughout the research. There was also a reluctance to the research from the residents of gated communities and their guards, as was shown by their denial of access into these spaces to learn more about the female residents' experiences of VAW. This reluctance may have come, however, from the method used to approach residents, which was not designed with the context of gated communities in mind. This led to replacing 20% of the initial household survey sample due to this percentage of blocks falling within gated neighbourhoods. The topic of gated communities is crucial to this research due to the privatisation of public space. It can be argued that gated communities are spaces constructed by the middle class in order to make it possible for them to remove themselves from public life in the city (Giglia, 2008). But it can also be argued that the creation of gated communities are a result of an approach to housing policy in which government policies favour the private building sector, facilitating the creation and construction of these neighbourhoods for the working class as well (García Peralta and Hofer, 2006). Within the gated communities, the restriction and regulation of movement of people was found to be the greatest factor making FGD participants living in this type of neighbourhoods feel safer. It was found that filtering access to these communities, the number of people coming in and a general sense of tighter social cohesion were the main reasons for feeling safer. However, social cohesion and familiarity with neighbours were also suggested as reasons why participants living in open communities felt safer, therefore more research on this topic is needed. A final finding suggests that the municipal and state codes facilitate the creation of gated communities so long as neighbourhood associations are formed, which indicates the willingness of the government to remove itself from the responsibility of delivering, maintaining and upgrading infrastructure, particularly within the spaces contained inside gated communities.

# Chapter 8

# Reconciling perspectives

The urban space of Corregidora municipality in Mexico was used as a case study to investigate the link between urban infrastructure and the perpetration of Violence Against Women (VAW) in the public space through a mixed methods approach. This work sought to determine the most common types of VAW, where these incidents take place and to identify possible infrastructure drivers in those locations. It also sought to gain an understanding of the processes behind infrastructure delivery at local government level, such as whether there are gender protocols in place for the planning and delivery of this infrastructure. This chapter brings together the implications of all the findings of this research through the use of the Social-Ecological Framework (FW) to understand how infrastructure and VAW are linked. The Social-Ecological FW sees violence as an interaction between many factors at four levels: individual, relationship, community and societal (WHO, 2020), and requires an understanding of the risk factors that have an influence on its perpetration at these levels of analysis (CDC, 2020). This work does not look at the relationship level of the FW, and is mainly interested in the last two levels (community and societal levels) which are useful for identifying infrastructural prevention measures.

In accordance with the FW, this chapter is divided in three main sections (see figure 8.1), with an additional closing section. The first section focuses on the personal level of the FW, which is embodied in the routine experiences of VAW. Section two (which refers to the community level of the FW) reviews the situational factors and settings where incidents of VAW took place. The third section looks at infrastructure drivers as possible explanations for the widespread prevalence of VAW in Corregidora (which corresponds to the societal level of the FW) and includes discussion of the desire for self-segregation in gated communities, which was found to be an overarching theme between the community level and the societal level. This section also discusses social attitudes towards VAW such as the normalisation of VAW and the state's inaction, impunity and complicity. The fourth section includes concluding remarks regarding how layers of the FW can interact with one another and how this could potentially be applied for the identification of problems or interventions.

Level/section 1: **Personal**
•Experiences of VAW
•Coping mechanisms

Level 3/section 2: **Community**
•Situational factors & settings for VAW
•Infrastructure deficiencies & environmental features

Gated communities

Level 4/section 3: **Societal**
•Desire for self-segregation
•Normalisation of VAW & disregard for women's lives
•State's inaction, complicity & impunity

Social construction of space

*Figure 8.1 – Adapted model including discussion themes and the Social-Ecological FW. Adapted by the researcher using data from CDC (2020) and WHO (2020).*

## 8.1 The routine experiences of VAW

The first research question of this study sought to assess the extent of VAW in the urban space of Corregidora and identify the most common types of violence women experience, based on evidence from the household survey (HHS) respondents and the focus group discussion (FGDs) participants. This question relates to the personal experiences of victimisation of women, which according to the Social-Ecological Framework (FW) pertains to the first level (personal level).[1] While this work sought to understand victimisation rates, it did not seek to review the individual traits of women or what made them more vulnerable to violence. Nonetheless, the rates of violence and personal coping mechanisms relate to the first level of the FW and will be discussed under this level.

### 8.1.1 The extent of VAW in Corregidora

It was found that 39% of the HHS participants experienced at least one type of VAW over the year prior to the survey taking place. A similar survey conducted by INEGI in Queretaro found that an average of 33.9% of women at state level had been victims of VAW in urban public spaces in the year prior to the survey (INEGI, 2017b, 2016a). In terms of context at national level, the same survey found that the national average of women being victims of VAW in urban public spaces was 26.4% during the year prior to the survey. According to the survey, Querétaro had the second highest percentage of women who reported VAW in urban public spaces at national level (after Mexico City, 37%; INEGI, 2016a). The FGDs corroborated the findings of the HHS results, in that the most common types of violence the participants experienced were catcalling, stalking, fear of attack, groping and exposure of genitals/public masturbation.

Both the HHS and FGDs showed that catcalling was the most recurrent type that women reported experiencing. Frías (2016) states that the multifaceted nature of VAW, in conjunction with the different subtle expressions of control, has led to the condoning and normalisation of less severe

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[1] According to CDC (2020) and WHO (2020) the first level of the Social-Ecological Framework (FW) is influenced by biological traits or personal history, which might play a role in a person's likelihood of becoming a victim or perpetrator of violence.

forms of exclusion and violence, and it can be argued that this has contributed to the perpetuation of this violence. Catcalling falls within the category of less severe forms of VAW and has generally been condoned and normalised. Less severe types of VAW, such as catcalling or whistling, occur with more frequency as shown by the results of this research. These types of VAW can have serious psychological impacts in those who experience it. Some consequences of catcalling or whistling include the fear of being attacked and feeling more vulnerable to violence, and lead to women changing their behaviour (such as avoiding certain areas, or avoiding walking alone) and moving less freely around the city. A number of studies have found that less severe forms of VAW remind women of the threat of other forms of violence (such as being touched, groped, followed by a stranger, indecent exposure, having their pictures taken or of other sexual nature; Natarajan et al., 2017; Koskela, 1999). This highlights importance of recognising that these less severe types of VAW have pernicious consequences, and the importance of conducting studies like this research, to better understand the extent and impacts of VAW (Painter, 1992).

### 8.1.2 Becoming a victim of VAW

The Social-Ecological FW states that personal characteristics might make a person more prone to becoming a victim of violence (CDC, 2020). It was found that the younger women were more likely to experience VAW in public. The only exceptions were being ignored, humiliated or the exposure of genitals and/or public masturbation, where the opposite trend was observed, and women in their 40s to 50s reported having proportionally more incidents of these types. Some studies have found that older women tend to report lower rates of physical and sexual violence, but the psychological or emotional violence does not show the same inverse relationship to age (Pathak et al., 2019; Crockett et al., 2015). It is not clear whether these trends in victimisation stem from vulnerabilities associated with patriarchal power dynamics, aging, or a combination of both factors (Crockett et al., 2015). Younger participants may be more exposed to violence given their patterns of movement in comparison with older women. It is possible that younger women travel more and by themselves more often than older women. As for women aged 26 to 40, they may be at work for longer periods of time, or with children, reducing their exposure to incidents of VAW in public spaces. Similarly, older women above the age of 50 may not go out into public life as often, or at least not on their own, as expressed by some participants in the FGDs. However, more research is needed to understand the experiences of VAW of older women (Pathak et al., 2019; Crockett et al., 2015), and the reasons for the differences in their experiences of VAW.

The generational changes regarding talking about experiences of violence and the different views regarding VAW and its normalisation may be another explanation for this trend (Parkes, 2015; Cook et al., 2011). The normalisation of everyday VAW seemed to be a topic with which younger participants in the FGDs were more familiar, and were able to discuss more articulately. According to

Herrera and Agoff (2018, p. 54), agency is a "capacity for action [to negotiate within power relations] created and made possible by specific relations of subordination, where resistance to the norms is only one of a number of options". The authors further state that what can be seen as "passivity from a progressive viewpoint, can be a form of agency, since agency does not refer solely to actions that result in radical or even progressive changes, but can also apply to those that seek continuity and stability" (p. 54). So, in this context, despite many of the younger participants having had experiences of violence but not having reported it, they were less willing to internalise VAW as something that was just an inevitable part of their everyday life. This refusal to normalise VAW was evident in their awareness of the definition of catcalling and harassment, their sorority to one another and their knowledge of support services that exist to address VAW.

Becoming a victim of VAW, as a FGD participant stated, depends ultimately on the aggressor's perspective. While a target's personal characteristics may play a role in this choice, and women may take precautionary measures to avoid being victims of VAW, it is the aggressor who determines who they perceive as vulnerable (Loukaitou-Sideris and Eck, 2007; Clarke and Eck, 2003; Felson and Clarke, 1998; Pain, 1997; Valentine, 1989; Cohen and Felson, 1979). Offenders may also accomplish their goals through the opportunities provided by their physical environment and the social attitudes and disposition of the population in which they live (Clarke and Eck, 2003; Felson and Clarke, 1998). However, while this study suggests that the physical environment may present opportunities for offenders to commit acts of VAW, as well as some societal root causes of VAW, more research is needed to understand the personal motivations of those who carry out gender-related VAW.

### 8.1.3 Coping strategies

Traditional gender norms that dictate women's role in society shape their fear of public spaces, as violence and harassment tend to emerge as a response to deviation from these roles (Dunckel Graglia, 2016). The coping strategies that women adopt in Corregidora to avoid VAW were consistent with measures found in the literature. A study in India found that the protection strategies quoted by women could be categorised as safety, avoidance and empowerment strategies (Nieder et al., 2019). The most quoted strategy in several studies was reduced mobility due to avoidance behaviour; i.e. women avoiding going out altogether (Nieder et al., 2019; Newton and Felson, 2015; Lorenc et al., 2012; Foster and Giles-Corti, 2008; Loukaitou-Sideris and Eck, 2007; Pain, 1997; Valentine, 1992, 1989; Valentine, 1992 as summarised in Little, 1994; Valentine, 1992, 1989). The coping strategies discussed in the FGDs of this study were categorised as time-space avoidance, environmental response, physical defence strategies and other active measures to increase personal protection. These strategies were reflected in the results of the HHS and FGDs. It was found that most of the violence that women experience in public spaces in Corregidora occurs during day-

time. This finding reflects the time-space avoidance strategies women adopt of avoiding going out to public spaces at night due to the perceived or, arguably, actual danger of doing so. This was confirmed in the FGDs by some of the participants, particularly those that stated living in areas that had reduced lighting, who quoted not going out at night altogether. This included participants suggesting going out in the company of somebody else as a way to minimise the likelihood of being a victim of VAW in public spaces. It may not be surprising that many women agreed that being in the company of somebody else was a good strategy to avoid becoming a victim of VAW. The participants did not necessarily refer to this company as the company of a male. But it could be argued that having to be in the company of somebody else[2] in order to prevent an attack, reinforces the patriarchal values of that society (of which a woman is already subject to) and makes a woman exercising independence a target for criticism, attack or victimisation, and removes her agency to move freely through the city (Valentine, 1989). In Mexico City, there are initiatives to raise awareness of VAW while using public transport (c.f. Dunckel Graglia, 2016). In the context of Corregidora, these efforts appear limited to self-defence classes provided by the municipality and other private institutions (c.f. Trueba, 2020). Ultimately, the coping strategies that women adopt to avoid being victims of violence places the burden of responsibility for protection on women, rather than addressing the root causes of VAW.

## 8.2  Infrastructure drivers: A situational approach to understanding VAW

The second and third research questions sought to understand the locations where incidents of VAW occur in Corregidora and whether there are patterns in the elements of the built environment or types of infrastructure that could be linked to VAW. To answer this, heat maps were created based on HHS data, site visits were carried out to conduct inductive visual analysis, and stories shared during the FGDs were used to triangulate data. According to the Social-Ecological FW, the physical settings where social interactions take place are explored in the third level (community level). This level in the FW seeks to identify risk factors characteristics of locations which are associated with becoming a victim or perpetrator of violence (CDC, 2020). In addition, the Routine Activity Theory is based on the interaction between a likely offender, a suitable target and the lack of a capable guardian and the convergence of these elements in space and time (Felson and Clarke, 1998). Therefore, from an environmental perspective, the location in which a crime, or in this case an incident of VAW occurs, is an important element for understanding the causes and the prevention measures that can be taken to prevent it. Additionally, the social construction of space will be used as a supportive conceptual FW. This theory argues that spaces have multiple meanings which are constructed spatially through physical, emotional, political and experiential interactions of people using that space (Low, 1996; Massey, 1994; Rodman, 1992). It also argues that "space and place

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[2]Even when this company is the company of a female that could generate sorority by providing female to female protection as an alternative until there is a less violent society towards women.

are important in the construction of gender relations" (Massey, 1994, p. 179), from the symbolic meanings and gendered messages they transmit, to exclusion by violence through the experiences of women.

### 8.2.1 Remembering where VAW occurs: Crime mapping as a tool for decision-making

Remembering where experiences of violence take place plays a role in the women's decision-making on how they go about their day, shaping their daily routines and even the activities they continue or stop doing, as highlighted by the coping mechanisms shared in the FGDs (Mohamed and Stanek, 2019; Ceccato, 2017; Kearl, 2014; Lane, 2013; Dymén and Ceccato, 2012). Furthermore, over half of the participants of the HHS that experienced incidents of VAW were able to recall a location where the incident took place. This was particularly true for incidents of catcalling or whistling, even if this location was an estimate, with 70% of the HHS participants providing a location. This shows the impact that catcalling has on women and suggests a need to denormalise this type of behaviour in public perception. Catcalling can have severe consequences and effects on the lives of women and should not be minimised as a form of VAW (Arancibia Garrido et al., 2017; Kearl, 2014). As for stalking, 80% of HHS participants that experienced this type of violence were able to provide a location, as could 60% of participants who feared being sexually abused. Fear of violence also influences how women navigate the city (Loukaitou-Sideris, 2016; Pain, 2000, 1997; Painter, 1992). The conversations held with the FGDs participants pointed towards the constant and prevalent fear women face while using public spaces in Corregidora. Fear and concerns about safety negatively influence travel decisions for women and have an effect on the actions and behaviours they take to ensure their own safety, affecting women's participation in urban life (Tripathi et al., 2017; Pain, 1997; Painter, 1992). Space is socially constructed through the experiences of violence of women, which may play a role in the exclusion of some women from public life, or their avoidance of certain areas of the city (Low, 1996; Painter, 1992). This hampers their autonomy to move in public spaces, with negative consequences for their health and well-being, access to essential services and overall participation in society (UN Women, 2018; ActionAid International, 2013; WHO, 2013; Monqid, 2012; García-Moreno et al., 2005; WHO, 2005; Painter, 1992).

Participants reported experiences of groping mostly on public transportation. This finding adds to the growing body of research looking at VAW in public transport as an example of crime generators (c.f. Solymosi and Newton, 2020; Mazumder and Pokharel, 2019; Solymosi et al., 2018; Ceccato and Paz, 2017; Gekoski et al., 2017; Natarajan et al., 2017; Tripathi et al., 2017; Dunckel Graglia, 2016; Newton, 2016; Chui and Ong, 2008). VAW in public transportation can drive women to modify their travel behaviour, thus reinforcing their traditional 'household' role (Dunckel Graglia, 2013; Loukaitou-Sideris, 2008). In Mexico City, women-only transport modes were created as a response to this issue, as a way to increase women's participation in urban life and a measure to ensure their

safety (Dunckel Graglia, 2016, 2013). Women-only transport modes may limit opportunities for VAW and provide women with a safe means to navigate the city, but it does not tackle the more deeply-rooted causes of VAW, and research in Mexico suggests this strategy has not significantly reduced violence or harassment towards women (Dunckel Graglia, 2016). There is a need to develop inclusive transport that adequately addresses women's safety requirements; effective campaigns to tackle the problem of under-reporting of incidents; and more research looking into the root causes of VAW in public transport (Mazumder and Pokharel, 2019; Solymosi et al., 2018; Dunckel Graglia, 2016, 2013; Loukaitou-Sideris, 2008).

Crime mapping can be a useful tool for identifying where VAW is more likely to occur within a city (Manazir et al., 2019; Mohamed and Stanek, 2019; Serendipia, 2019; Fontes et al., 2018), and for understanding the patterns of movement of women (Natarajan et al., 2017; Loukaitou-Sideris, 2016). In terms of maps for alerting women of dangerous areas, the creation of apps for reporting incidents of VAW and where it happens is a growing area. There are initiatives, networks and campaigns working towards raising awareness of the impact of this violence worldwide (c.f. HarassMap, 2020; SafetiPin, 2020; Stop Street Harassment, 2017; Kearl, 2014; to name a few). Caution is needed about these types of initiatives and the use of crime maps for public consumption, in order to guard against the possible unanticipated consequence of creating containment and exclusion zones, further isolating identified hot spots, and reducing guardianship in those spaces (Pain, 2000). While such maps can help the public make informed decisions about navigating public spaces safely, it might also have unanticipated and negative consequences. The only local government known to georeference crime data in Mexico is the government of Mexico City. It is not clear how the information that is collected is used to inform planning or the design of urban infrastructure. There is potential for the government of Mexico City to collaborate with other levels of government across the country for sharing knowhow on the integration of georeferenced crimes into the databases already in use, as well as for such data to feed into urban planning and policing.

This research shows the importance of georeferencing crimes, especially VAW crimes, and the importance of identifying hot spot areas where these crimes are being committed, to better inform policing and policy making. This research also shows the value of data surveys to understand spatial patterns of VAW in settings with poor official recording practices, such as Corregidora. The methodology presented in this research could be used to develop situational crime prevention strategies in areas where official spatial crime data is unavailable or lacking, for organisations with limited access to expensive mapping technologies, or as an independent method for validating official data (Garfias Royo et al., 2020).

### 8.2.2 Possible environmental features linked to VAW

The lack of access to infrastructure can reinforce forms of structural violence, yet access to infrastructure may not necessarily exempt women from violence (Datta and Ahmed, 2020). The observations carried out during site visits were validated through the experiences shared in the FGDs. The observations, which included the use of a checklist to ensure thorough and methodical note taking, were useful for identifying common characteristics of the different visited locations. Despite all the locations being of different types (roads, parks/plazas or bridges), they all lacked some form of infrastructure, had physical obstacles challenging mobility and access, spots of poor visibility at two levels: private space towards public space and within the public space, and had areas that restricted pedestrian mobility. The crime literature suggests that environmental features that contribute to crime-related opportunities include deficient infrastructure that reduces natural surveillance, physical obstacles that hamper visibility or reduced access and connectivity (Armitage, 2018; Armitage and Monchuk, 2017; Cozens and Love, 2015; Crowe and Fennelly, 2013; Loukaitou-Sideris, 2012; Bernasco and Block, 2011; Brantingham and Brantingham, 1995), which are consistent with the features found at the 22 locations that were visited. Different forms of infrastructure, not only the design and planning of spaces, and their maintenance status can indicate the level of involvement or control by the users or the municipality and a greater tolerance of disorder over a given space. This can in turn signal the level of guardianship and care of a space to individual perpetrators, and have an effect on the opportunities for to commit violence. Lacking infrastructure can act as a crime generator when people are forced to walk closer to each other when having to use a narrow sidewalk, or reduce guardianship through, for example, a lack of lighting, which in turn reduces visibility. Physical obstacles can create opportunities for crime as well as spots of reduced guardianship, by hampering and obstructing visibility, which can create blind spots which reduce guardianship (Armitage, 2018; Newton, 2018; Armitage and Monchuk, 2017; Cozens and Love, 2015; Newton, 2014; Crowe and Fennelly, 2013; Loukaitou-Sideris, 2012; Ekblom, 2011). And the above characteristics indicate a lack of consideration for pedestrians in city planning and infrastructure design, which has, as a result, reduced pedestrian mobility.

Many of the sites identified through the heat maps were located on roads, particularly secondary roads, as confirmed by the site visits. van Wilsem (2009, p. 199) suggests that a "hypothesis derived from Crime Pattern Theory [states] that the daily functions of streets serve as a selection mechanism for who visits the street and subsequently determine against whom violence is committed in that locality". This might explain that men *know* that their actions are not acceptable, leading them to perform these actions in less transited streets. It can be argued that the lack of regard for pedestrians in the planning of the urban landscape contributes to the creation of opportunities for crime and the reduction of guardianship, as the characteristics identified in this research are possibly inadvertently included (or excluded) in this planning. Planning spaces that inadvertently have physical

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obstacles, poor visibility, restrict mobility and generally have poor infrastructure (contributing to the other three elements), can create opportunities for crime as well as spots of reduced guardianship, by hampering and obstructing visibility (Armitage, 2018; Armitage and Monchuk, 2017; Belur et al., 2016; Wortley and Townsley, 2017; Cozens and Love, 2015; Crowe and Fennelly, 2013; Willman and Corman, 2013; Brantingham and Brantingham, 1995; Clarke and Felson, 1993; Cohen and Felson, 1979). It can also be argued that the way in which the city is planned is a reflection of how the urban layout responds to the construction of space through socio-political relationships, in which wealthier citizens and cars are given priority over pedestrians (CMM, 2013; Low, 1997). Therefore, the principles that underpin CPTED should be incorporated into future infrastructure design and planning decisions in Corregidora, to ensure that such projects include crime prevention interventions to reduce opportunities for VAW and other criminal activities (Armitage, 2018; Clarke, 1995). Pedestrian mobility should also be prioritised and public transport solutions which respond to public needs should be integrated, as well as better management and maintenance of existing public infrastructure (Nikšičsš, 2017; CMM, 2013; Crowe and Fennelly, 2013; Ekblom, 2011; Clarke, 1995).

There is also a consideration regarding the gender relations that take place for the creation of that urban landscape and how it disregards the experiences of women using public spaces (Purkayastha and Ratcliff, 2014; Koskela and Pain, 2000; Koskela, 1999; Low, 1997; Massey, 1994). The motivations for VAW have strong links to the social norms, structures and subjectivities intrinsic in gender and other personal dimensions (such as physical appearance, ability, religion and sexuality; Parkes, 2015), which can also be embedded in the people who are in charge of planning the city (Low, 1997; Massey, 1994; Rodman, 1992). Consequently it is critical to carry out a gender analysis of how the designed spaces will be used by different people, especially women, in order to reduce criminal opportunities and increase security (Leclerc et al., 2016; Purkayastha and Ratcliff, 2014). The complexity of this analysis requires comprehensive approaches, not only to provide immediate, pragmatic solutions, but also to focus on changing the sociocultural norms that create the environment for issues such as VAW to emerge (Bianchi Alves and Dominguez Gonzales, 2015).

## 8.3 The normalisation and widespread prevalence of VAW in Corregidora

The fourth research question explored the possible infrastructure drivers for VAW in the public space of Corregidora through stakeholder interviews. The question was also informed by comments from the participants during FGDs, as well as by the resistance of the residents of the gated communities to access their neighbourhoods to conduct HHS.

The last level proposed by the Social-Ecological (FW) is the societal level, which looks at institutions, governance and broad societal factors that create an environment in which violence is encouraged or inhibited (CDC, 2020; WHO, 2020). These include social and economic policies at

macro-level or cultural norms that maintain socioeconomic inequalities which support violence as an acceptable conflict resolution strategy. Some of these cultural norms can include male dominance over women or availability of weapons (WHO, 2020). The social construction of space is also used as a supportive conceptual FW to discuss the findings of this research, as this FW states that space is both produced and constructed through social processes and structures that are contested for ideological and economic reasons (Low, 1996).

### 8.3.1 The desire for self-segregation as a response to insecurity

The types of gated communities that exist in Mexico, particularly in Corregidora, range from country clubs to gated communities for the working class. The promotion of these neighbourhoods as secluded and secure seems to have had an impact on the demand to live in these types of developments (García Peralta and Hofer, 2006). This was evident in the percentage of the sample that had to be replaced in the HHS and further confirmed by the stakeholder who suggested that citizens are requesting to close off streets or neighbourhoods to be self-segregated from the rest of the city. According to Giglia (2008), *self-segregation* is "the organisation of urban experience in spaces increasingly detached from urban surroundings deemed [as] *undesirable* ". Citizens, in collusion with the authorities—who seem to facilitate their requests—exclude themselves from public life to create their own environments disassociated from the rest of the city, which is regarded as dangerous. The restriction and regulation of movement as a safety mechanism, paired with the ability to surveil people's movements, as quoted by the FGDs participants, was also indicative that there is a social need for protection from the perceived insecurity and the possible failure of the authorities to perform their protective function. Nonetheless, there is no evidence suggesting that gated communities in Mexico offer benefits for reducing the likelihood of being a victim of crime as compared to living in open neighbourhoods (Vilalta Perdomo, 2013; Enríquez Acosta, 2007). Furthermore, due to their privatised nature, municipal police have no jurisdiction inside these communities, failing to provide patrolling and policing services (Enríquez Acosta, 2007). And, in any case, according to Lucio et al. (2010), the isolated nature of these communities seems to aggravate the problems that led to their proliferation, where associations have been found between the emergence and expansion of these types of communities, and the increase in inequality in public services and the distribution of resources, the deterioration of public areas, the increase of urban segregation and marginalization, and the violation of some freedoms of the residents of these communities.

Given the resistance to collaborate with this research due to its focus, particularly by those in higher political positions—and in a country with a strong patriarchal history—it was not surprising to find that the codes that are followed to design the urban landscape do not directly dictate that a gender perspective must be included. What was surprising however, was the ease in which citizens are allowed to remove themselves from being part of public life. The creation of gated communities

was facilitated, and almost encouraged, by the municipal code. Low and Iveson (2016) argue that there is a growing significance of private entities in the governance of cities, in which the main example is the privatisation of the public space, where control and access depend on private means. The municipal code of Corregidora differentiates between private and public streets, and who does and does not have access to them. It also dictates that neighbourhood associations are legally entitled to deny access to any person without providing any grounds (Article 168, Ayuntamiento de Corregidora, 2017). It can be argued that this reflects the state's willingness to facilitate the creation of private-public spaces and to remove itself from the responsibility of the creation of those spaces, including the delivery infrastructure. Sheinbaum (2008) suggests that privatisation can result in unregulated self-governance in countries with high levels of illegality, particularly as developers take on responsibilities for building infrastructure and providing services that would ordinarily be delivered by local governments.

Giglia (2008, p. 67) argues that that "the insufficient capacity of the public institutions to organize and establish regulation for the use of public space" goes together with processes of globalisation, exclusion and polarisation, including the proliferation of real estate developments undertaken by private capital and a boom in the production of enclosed public spaces. The author argues that the combination of these phenomena produce a situation of aggravated conflict which in turn affects what people may and may not do with and within the public spaces. Similarly, García Peralta and Hofer (2006) suggest that working class gated communities in Mexico are a result of a bad approach to housing policy. So, it can be argued that infrastructure and housing developments at the neighbourhood scale are responding to violence by excluding public spaces from the urban landscape. One of the biggest implications of self-segregation by some of the most influential citizens, who retreat to the private-public spaces provided within the gated communities, is that they remove themselves—by no longer having a need—from applying pressure to the government to deliver urban infrastructure (Lucio et al., 2010; Davis, 2004), and, through this bypassing of established democratic institutions, ongoing historical processes of segregation that have characterised the socio-spatial structures of Mexico are perpetuated (Sheinbaum, 2008). It is therefore crucial to strengthen the ability of municipalities to implement housing and development alternatives that will not segregate the urban space, further cutting off communities and encoding and producing a landscape of fear (García Peralta and Hofer, 2006; Low, 1997).

### 8.3.2 Entitlement, impunity & disregard for women's lives

The majority of the acts of VAW in public spaces were perpetrated by men, as reported by 94% of the respondents, which shows, unsurprisingly, that men display more aggression in the public sphere. The stories shared in the FGDs point towards wider, social attitudes problem in which men are possibly not *'bad hombres'* for the sake of it, but raised in a society in which they are taught

that public spaces belong to men (Dunckel Graglia, 2016; Pain, 1997; Massey, 1994; Painter, 1992; Valentine, 1989). It would seem that the men performing acts of VAW are often not doing these actions towards any particular woman, but women are simply collateral damage to achieving men's desires (Hanafy et al., 2016). Men's actions seem to stem from acts of recklessness (encompassing entitlement to women's bodies and impunity), but they also raise questions of intent. It is possible that most of the types of violence, besides targeted stalking, are opportunistic in nature (Natarajan et al., 2017; Tripathi et al., 2017; Clarke and Eck, 2003; Felson and Clarke, 1998). For example, in the case of exposure of genitals and public masturbation, a FGD participant suggested that perpetrators of this type of violence "are not going to do anything else but exhibit, I think they won't attack you". Studies have found that some types of exhibitionists see their target merely as an *'object'* with whom to relieve internal tensions, sometimes disconnected from sexuality, which are not necessarily directed towards the target (Hanafy et al., 2016). And once they have called the attention of their target, they tend to escape, supporting the participant's view that the perpetrator would not do anything to her. This can be an indication for the lack of regard and respect for the life and desires of others, particularly woman, who may be regarded as objects whose purpose is to fulfil or achieve the desires of men (means to an end), despite the harm this may cause to them. Van Wilsem (2009, p. 199) suggests that the Crime Pattern Theory can be further applicable "to street-level variation in qualitative aspects of crime, such as the relation between offender and victim and the use of weapons". In the case of this research, most of the relationships between offender and victim was that of stranger, and it could be argued that the weapon was the gendered nature of the violence towards woman.

Some of the stories shared in the FGDs showed inadvertent complicity by some women in the commission of VAW through being bystanders while an attack was taking place. There was a story shared by a mother of a teenager, who overheard a man yell *'whores'* to her daughter and her friends but remained silent, as the two young girls had not heard the shouting (see section 5.2.2). While she may not have wanted to risk aggravating the situation, it could be argued that she inadvertently assisted in the normalisation of this violence. According to a study, bystander intervention is as a preventive measure for sexual assault (Burn, 2009). This is not surprising, as according to the Routine Activity Theory, capable guardians can discourage an attack from occurring (Clarke and Eck, 2003; Felson and Clarke, 1998; Cohen and Felson, 1979), and speaking out in support of a victim while an attack is taking place may show that a capable guardian is present. Speaking out while an attack is taking place, however, requires norms and attitudinal changes in society, such as recognising VAW in all its forms as a human right's issue and as discrimination against women (Purkayastha and Ratcliff, 2014; Johnson et al., 2008), which goes together as seeing a victim as worthy of intervention, noticing an attack and knowing how to best intervene (Burn, 2009).

Older, more affluent women seemed to have assimilated the patriarchal ideals of womanhood

and hegemonic masculinity. For example, believing that women should always be in the company of someone else, or not dressing in *'certain ways'*, such as wearing tight clothing or small skirts/shorts. In comparison, while many participants from lower socioeconomic (SES) levels shared similar views, these views were shared as a strategy for avoiding becoming a victim of VAW, rather than from a position of moral judgement. It can be argued that more affluent women are able to buy their way out of some public spaces and evade unwanted experiences, by moving around in cars and not making use of public transport, generally making less use of public spaces and retreating to private-public spaces (Loukaitou-Sideris, 2016; Pain, 1997; Painter, 1992; Valentine, 1989). The implications of this is that they do not feel the need to use their influence to raise concerns about safety for women. But, in any case, more affluent women retreating from public life does not mean that unwanted experiences will go away for the remaining women who are not able to buy their way out, or that the improvements to the women's homes or their ability to evade public spaces will translate to less exposure to violence when occupying public spaces (Datta and Ahmed, 2020; Mohamed and Stanek, 2019; Loukaitou-Sideris, 2016; Pain, 1997). Consequently, there is a collective interest in improving public infrastructure.

Women's education and socioeconomic level may play a role in the conceptualisation and normalisation of VAW, as well as provide confidence and articulacy in talking about gender norms, sexuality and reproductive health in front of strangers. Some communities, particularly in poorer and more remote communities, may have entrenched taboos about openly discussing these issues (Parkes, 2015). This could explain why the HHS data suggests that the lower the SES level (which is associated with lower levels of education), the less likely participants were to experience VAW. There was probably a reluctance to talk about these issues (Parkes, 2015; Fontes, 2004; WHO, 2001), but also possibly an inability to recognise *'less severe'* forms of VAW, like catcalling, as violence. Similarly, participants in the areas with the lowest SES level of the FGDs, despite having some of the youngest participants, were more reluctant to talk about their personal experiences of VAW, and some participants were visibly uncomfortable with the topic. This was noticeable in instances were women struggled to bring themselves to say words such as *'rape'*, which is indicative of the social taboo that surrounds discussing sexual crimes, as well the human body and bodily functions associated with reproduction and sexual health more generally. There is a need for interventions at community and institutional level which address and open up discussions to disrupt norms and taboos regarding sexual and reproductive health, including bodily empowerment. Such interventions, however, need to be undertaken in a context-sensitive way which creates safe spaces for women to openly discuss and reflect on these subjects (Parkes, 2015).

The experiences of the data collection team and the barriers to conducting fieldwork also brought to light the taboo nature of VAW in the society of Corregidora (Parkes, 2015). For example, when a man asked to terminate a survey with his daughter while holding a machete in hand, or another

participant refused to allow the data collection team to leave her home until she was handed in the survey questionnaire to post in social media to discredit the research. This not only points towards the risk to the team, but also to cultural norms of people feeling threatened or challenged when speaking out on VAW. Media also plays a role in the perpetration of different norms and the overall perception of insecurity in the country, by the constant portrayal of crimes and VAW in the news or social media, which may give the impression that these incidents are more recurrent than they are (Russo and Pirlott, 2006). On the other hand, the news and social media may present better depictions of reality than statistics published by authorities. But without accurate figures of the extent of the problem, it is not possible to draw conclusions about the extent of VAW at local or national levels.

The levels of impunity that the 'narco wars' in Mexico have exposed, paired with the increase in femicide cases (as shown in chapter 3), have highlighted how most perpetrators of violence face no consequences (Melgoza et al., 2017; Lakhani, 2016). Some estimates show that only 6.3% of crime incidents are reported at national level, of which about 99.5% of the reported cases go unpunished and only 0.89% of the reported cases are solved (Zepeda Lecuona, 2017). And in the case of femicides, some estimates carried out by civil society groups—which, in the case of femicide, intervene when the state fails to provide figures on the extent of the problem—have shown that 46 out of 100 murders of women should have been classified as femicides. 3,056 cases of femicide were reported from 2012 to 2018, of which 56.7% (1,732) led to suspects being arrested, and in which only 24% (738) resulted in a person being charged (Durán, 2020). The report also suggests that a further 2,646 cases that fit the typology of femicide (see OHCHR and Mujeres, 2014) were found within the same timeframe after a freedom of information request, almost doubling the typified number of cases of femicide, which would have led to these crimes being more rigorously investigated due to the femicide protocols. As a result, people, particularly men, may feel encouraged to commit acts of VAW with impunity, knowing that the risk of being charged or facing justice is very slight. Additionally, the HHS and FGDs showed that not many women report incidents or are interested in doing so, due to low levels of trust in police and fears of being re-victimised by insensitive policing. Other surveys, like the one conducted by INEGI regarding household dynamics—which also looks at VAW—found that 93.4% of the women that experienced violence in public spaces did not report the incident (INEGI, 2017b). There is also a question regarding how the types of violence which have so far not been considered 'critical enough' to be categorised as criminal (such as catcalling) should be treated by authorities.

### 8.3.3 The state's inaction and complicity with VAW

The stakeholder interviews showed how the mechanisms for public consultation on infrastructure do not allow citizens to prioritize their opinions on safe spaces, except for approaching the local

government in the hope that their complaints will be heard. And while a complaints mechanism exists, it seems unlikely that citizens will raise issues of gender, given the taboo nature of VAW, as revealed through the FGDs and the barriers faced when conducting this research. The stakeholder interviews also indicated an absence of planning criteria for infrastructure delivery in Corregidora in a way that reduces the risk of VAW. This means that the production of space in Corregidora, so far, has been conducted without regard for the experiences of women using those spaces nor taking into consideration their safety when using them (Koskela and Pain, 2000).

Women's freedom from violence and physical security is directly related to the material basis of the relationships that control the use and distribution of entitlement, resources and authority within a community and the state (Ertürk and Purkayastha, 2012). If a state facilitates violence by addressing it in limited ways, a culture of violence is produced, "which in turn normalises the escalation of violence in everyday life" (Purkayastha and Ratcliff, 2014, p. 23). This production of violence is further aggravated through the poor planning and delivery of infrastructure, which is based on outdated building requirements which do not consider the safety of women, resulting in the creation of opportunities for crime and the perpetration of VAW. Therefore, the inclusion of a gender perspective into planning and infrastructure delivery that is sensitive to the needs of the population, and which could be applied to issues such as safety, violence and crime reduction and changing gender norms is needed (Cosgrave et al., 2019; Kwami and Cosgrave, 2018; Parkes, 2015).

There is also the issue of reporting VAW and crime more broadly, and the accurate reporting of figures which show the extent of VAW by authorities. Law enforcement's response to VAW so far has been problematic (Bautista, 2017). According to Purkayastha and Ratcliff (2014), the literature constantly treats VAW as actions of deviant individuals, which enables states to downplay such violence. The authors further suggest that this inaction by the state enables VAW through the inability or unwillingness of communities to address such violence or provide sufficient support for victims. Furthermore there is the issue of disengagement between society and government. And although some opinions shared during the FGDs suggested that the government could not be blamed for attitudinal problems pertaining gender engrained in culture and society, this could be seen as indicative of the deep disconnection between government, culture and society, in which each level is seen as an isolated entity. Better governance to communicate how these different levels are interconnected and influence each other is needed (Honeybone et al., 2018; Purkayastha and Ratcliff, 2014; Ertürk and Purkayastha, 2012; Russo and Pirlott, 2006), as well as better prevention and response strategies to VAW, which do not re-victimise, stigmatise or discourage victims to come forward, and which help to illustrate the extent of the issue (World Bank et al., 2014; Ertürk and Purkayastha, 2012; IASC, 2005; WHO, 2005).

Since the stakeholder interviews took place, the local government appears to have attempted

to promote gender mainstreaming (GM),[3] by introducing new regulations for the use of parks and gardens, for citizen participation, and for access to a life free of violence and equality between men and women. This strategy was announced in the local government's monthly gazettes.[4] This is a positive step, since including standards and norms which hold governments accountable for maintaining conditions which perpetuate violence puts pressure on them to address these issues (Johnson et al., 2008).

The gazette that introduces the regulation for an access to a life free of violence and equality between men and women states that the Municipal Institute of Women has carried out the following activities: (Ayuntamiento de Corregidora, 2019c, p. 65):

> "Dissemination, awareness and attention activities on the gender perspective and pre-vention of Violence Against Women have been carried out, including training and aware-ness workshops for municipal public administration officials, face-to-face conferences for citizens, a diagnosis on the gender disparity that exists in the municipality, and citizen consultations for the generation of proposals that improve the situation of women."

It also states that the Municipal Institute of Women promotes and strengthens these actions, as well as the generation of public policies with a gender perspective, paying attention to gender main-streaming throughout the municipal public administration. However, the publication is vague regard-ing when these activities took place. During interviews with government agents, a female stake-holder contested this information by mentioning that the working environment within the municipality still faced gender inequality issues and saw no sign of any gender protocols within the local govern-ment as an institution, stating that "the gender issue here is still very biased, I think. There is still a lot of *machismo*, but there are no protocols for that" (Stakeholder 7, Female, Gvmt Employee).

GM, despite being developed as a form of gendered political and policy practice to include gen-der equity within development, has raised "complex questions as to the relationship between global, regional and national levels of governance" (Walby, 2005, p. 454). GM has been criticised of hav-ing different interpretations of gender equality (including different 'mainstreams'), of lacking a clear

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[3] Gender mainstreaming aims to achieve gender equality (National Commission for the Promotion of Equality (NCPE), 2012) by incorporating gender analysis and a gendered perspective to policies, programmes and projects (Caglar, 2013).

[4] Since the stakeholder interviews, *gender perspective* has been mentioned on three different occasions in the local municipal gazette:

1. Once regarding the guidelines through which the administration regulates the use of parks and gardens in the mu-nicipality. This publication states that the State should promote norms, policies and actions to reach equity between men and women in all areas, in addition to incorporating the gender perspective and human rights perspective in all plans and programmes, as well as training public servants for their mandatory application in all government agencies (No. 6, Ayuntamiento de Corregidora, 2019a, p. 102).
2. The second mention is in an issue which reports the promulgation of the Regulation of the Municipal System for Women's Access to a Life Free of Violence and for Substantive Equality Between Women and Men (Article 6, Ayuntamiento de Corregidora, 2019c).
3. The third mention is contained in the announcement of the Regulation of the System of Municipal Councils for Citi-zen Participation. A definition of gender perspective is found at the start of the document (Chapter 1, Ayuntamiento de Corregidora, 2019b, p. 4).

methodology for change, creating a depoliticised and 'acceptable' alternative to discussing female subordination, and ineffectively addressing gender as an intersecting factor of wider structural inequalities (Tolhurst et al., 2012). In the case of the local government of Corregidora, while its publications increasingly refer to gender protocols and VAW commitments, this may be policy rhetoric and there is no evidence yet of such policies being substantively delivered or translated into procedures.

There has also been pressure at state level to implement the Regulation for the Municipal System for Women's Access to a Life Free of Violence, which derives from a national law from 2007 that establishes that all states, at all levels, must ensure women have access to a life free of violence (Article 2, Cámara de Diputadors del H. Congreso de la Unión, 2007). In addition, a state law initiative that facilitates citizens' inclusion in government decisions regarding infrastructure was approved in August 2020 (Redacción, 2020). How these efforts will materialise in practice, particularly within a space that has already been delivered, is still unclear.

## 8.4  Interaction of factors between FW levels

The ecological FW sees the interaction between factors at different levels as equally important as the influence of factors within a single level WHO (2020). This reinforces the idea that there is no single factor which is most important to predict violence, with interventions being most effective when addressing issues from all levels. This chapter presented the factors that have an influence within each level. How these interaction among levels take place in practice, including the social meanings constructed into space, was witnessed while conducting fieldwork. While conducting a site visit, the researcher's video of the site captured a woman walking past a construction site. Two men were working on the roof and one was working at street level. As the woman walked past the man at street level, she appeared to hold her breath and walk more decisively, and he continued to stare at her as she walked away. While this was happening, one of the men working on the roof walked across the roof in order to take a better look at her. Their colleague did not appear to find their behaviour troublesome.

At the individual level of the FW, the woman was experiencing some form of violence, such as leering stares or catcalling,[5] and her experience of the urban space, including her construction and navigation of that space, was very different from that of the men in the building site. At community level of the FW, the men considered their behaviour acceptable, and at societal level, their actions went unchallenged. All these interactions occurred in a building, which is a setting that has been consistently identified as problematic. While this example could be considered a less severe form of violence, it clearly had an impact on the woman's navigation of the urban space and the coping mechanism she adopts, and the pernicious impact of such repetitive actions should not be under-

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[5]The researcher was not close enough to hear whether any comments were said to the woman.

stated. At a societal level, the consequence can have a detrimental impact on people's attitudes towards women and women's rights to the city and make more severe forms of violence acceptable.

Understanding how the layers of the FW interact with each other can be useful to diagnose problems across different scales and identify specific interventions that could help mitigate issues within the different levels. For example, if there are specific public space interventions that could question harassment behaviours in specific areas or public policies that could help reduce the commission of sexual crimes within a specific population.

# Chapter 9

# Conclusions

The urban space of Corregidora municipality in Mexico was used as a case study to explore the link between urban infrastructure and Violence Against Women (VAW) in public spaces. It was found that the most common type of violence that women face as well as the most recurrent, was whistling or hearing offensive sexual remarks, which was experienced by 35.3% of the HHS participants. This was followed by fear of being attacked, and stalking was the third most common type of violence. Additionally, the younger the women were, the more violence they seemed to experience, with older women experiencing less violence. The stories shared by the FGDs participants provided nuanced perspectives of the power dynamics that occur when incidents of VAW take place through qualitative data on the different ways in which these events take place, the women's response to VAW, and their thoughts as to why these incidents take place. There were several topics that arose during these conversations, such as the normalisation of violence, feelings of fear, and the vulnerability of women while using public spaces.

The majority of acts of VAW in public spaces were perpetrated by men, while women were alone (94% of incidents reported by the HHS respondents were committed by men, and 81% of incidents occurred while the respondent was alone). According to the Routine Activity Theory, crime occurs at the convergence in space and time of the interaction between a likely offender, a suitable target and the lack of a capable guardian (Felson and Clarke, 1998). According to a FGD participant, it is the aggressor's perspective that determines the vulnerability of a woman as a prospective victim of VAW. As a result, women adopt different strategies and coping mechanisms for their safety (Nieder et al., 2019; Ceccato, 2017; Chant and McIlwaine, 2016; Lane, 2013; Little, 1994; Valentine, 1989, 1992). It was found that the measures women quoted during the FGDs were consistent with the literature, and included time-space avoidance, environmental response and physical defence strategies (Valentine in Little, 1994), with additional active measures to increase personal protection identified. Regarding time-space avoidance strategies, many women quoted being in company of somebody else as a way to minimise the likelihood of being a victim of VAW in public spaces. As for physical defence

strategies, a participant declared carrying items she could use as a weapon for self-defence as a last resource, and some others talked about being mindful of their clothing. And some of the environmental response strategies included participants who suggested walking quicker, some even running, as a way to avoid spaces they identified as dangerous. Others quoted being hyper-aware of their surroundings, including letting people pass by if they felt like someone was walking behind them.

As for the locations where these incidents took place, 70% of the women who experienced whistling or hearing offensive sexual remarks remembered the location where the most memorable incident occurred. Similarly, 80.5% of the participants that experienced stalking knew where it took place. The third most common type of violence for which women were able to provide spatial data was fear of violence, with 60% of the survey participants doing so. Groping and public masturbation mostly occurred in public transportation, with 65% of the participants reporting an incident of this nature in this setting. There is a growing body of literature looking at sexual offenses in public transport, and the results of this study confirm that there is an issue of this nature in Corregidora.

Heat maps were generated with spatial data gathered in the HHS to identify locations to conduct structured observations and inductive visual analysis at street level. These observations were useful for assessing whether these areas had situational factors or elements of the urban built environment that may influence the perpetration of VAW in the public space. Four broad elements were identified during the site visits which can be linked to the facilitation of opportunities for the commission of VAW: lacking infrastructure, presence of physical obstacles, poor visibility and restricted pedestrian mobility. The methodology used for this analysis could be applied by organisations or researchers working in other settings with poor crime recording practices to understand VAW in public spaces, and to inform decisions around planning more inclusive and safer cities through the built environment and infrastructure.

It was found that local government stakeholders were not aware of gender protocols for the planning or delivery of infrastructure that would reduce the risk of VAW in public spaces. It was also found that there was a lack of regard for women's lives and right to participate fully in the social fabric of Corregidora, which is possibly driven by impunity in the criminal system, but also by the normalisation of VAW in everyday life. A final finding suggested that the government facilitates the creation of gated communities, which seemed to indicate the government's willingness transfer the responsibility for infrastructure delivery and security to private organisations. This allows citizens to remove themselves from a society (by creating their own communities within the city) which they seem to perceive as dangerous, thus removing pressure from the government to improve the urban landscape.

«Some passages of this chapter have been published in the researcher's article in Crime Science

(August 2020), which have been abridged for this thesis:

»Garfias Royo, M., Parikh, P., and Belur, J. (2020). Using heat maps to identify areas prone to violence against women in the public sphere. *Crime Science*, 9(1):15 »

## 9.1 Limitations and challenges of the work

This section outlines the limitations of this work, which range from working with the INEGI methods for conducting household surveys (HHS), challenges in analysis and testing, and the lessons learnt to improve the methods proposed in this work.

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### Limitations of INEGI methods: Improving the household surveys

The decision to collaborate with the municipal government meant that this work had to build on established frameworks elaborated by the National Institute of Statistics and Geography (INEGI) as part of the methods to collect data (Collaborating stakeholder, personal communication, November 2017). This meant that the cartographic resources INEGI produces and some of their survey methodologies were used for the development of the data collection tools of this study. In the case of the cartographic resources, the maps produced by INEGI were the ones used for sampling the household surveys (HHS).

It was not possible to represent the experiences of every woman in the municipality despite calculating a geographically random sample. This means that the experiences of some women, particularly those living in peri-urban areas, may have been overlooked by focusing on urban areas and not including adjacent rural areas to the urban localities. The urban areas recognised by INEGI (AGEBs) cover only 12.2% of the extent of the municipality (INEGI, 2015b). Not including rural statistical areas meant that some neighbourhoods or communities, and the experiences of the women living there—which have now become part of the peri-urban areas of the city due to urban sprawl since the INEGI maps were last reviewed—were not considered. Experiences of VAW in public spaces in these areas is also an important area of study.

Another minor issue encountered during the field was inconsistencies regarding land division in Mexico. This posed a challenge regarding requesting data, as well as colloquially sharing information about the research. These divisions included:

- INEGI: Statistical land division, used for census and research purposes.
- *Colonias* (neighbourhoods): Comprise determined perimeters, have formal names and are

registered with their allocated municipal government.

- Colloquial names given to areas within the city.

Another implication of working with the local government was that the study could only be carried out within formal neighbourhoods or communities, as the government could not work with informal settlements (Collaborating stakeholder, personal communication, November 2017). A unique set of experiences of VAW in public was therefore outside the boundaries of this study. This had implications for the results, particularly the HHS, where it was found that the method used to measure the socioeconomic status (SES) of the participants was not the most adequate tool. While the AMAI methodology is a useful tool for making urban-rural comparisons and measuring overall wealth disparity, it was found that the latest version of the methodology was not sufficiently nuanced to reflect the different SES of residents in the urban localities of Corregidora, as it prioritised household assets over personal assets or income. The AMAI method has shortcomings for understanding and detecting differences at urban level, particularly for detecting granularities in neighbourhoods which have many similar characteristics.

The HHS would benefit from expanding the survey questionnaire to better understand the intersectionality of women, besides age. For example, the question about indigenous identity was based on the participants own perception, based on the state's definition of what it means to be indigenous (i.e. whether they or their relatives speak an indigenous language, or maintain any indigenous traditions/customs). While this is generally a good measure, when an act of violence is perpetrated, it can be argued that it is the perpetrator who decides how they perceive a target.

There were difficulties in disaggregating the data of incidents, such as whether they took place more than a year prior to the survey taking place (particularly when trying to understand the number of types of incidents women experienced) or the gender of the offender (to better determine if the attacks were gender-based or personal). If the exercise was to be repeated, the survey questions should be framed with greater clarity in order to ensure that the data is collected in such a way which allows for better manipulation.

The way in which the HHS framed the questions of VAW was contested by the stories shared in the focus group discussions (FGDs), raising questions on whether the survey respondents had in mind the same definitions of violence as the researcher. It is impossible to know whether there was a mutual understanding on the definitions of the types of VAW.[1] There were no conversations held on the definitions, besides providing a few words to ask each question, given the constraint for time. It is not possible to measure how this might have affected the results of the survey. Additionally, the experiences of VAW shared in the FGD did not always fit in the categories used in the HHS. As a result, drawing comparisons between the two methods proved challenging.

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[1]A further, if unrelated, example of the risks of relying on survey participants understanding of certain terms came from a FGD participant who associated the term *socioeconomic level* with poor.

## Improving the mapping method

The mapping strategy could have incorporated participatory and inclusive methods (such as transect walks) for understanding how women perceive their environment. However, despite the methodology not making use of a more community engaging method, it still resulted in maps which showed the most risky areas in the localities according to responses to the HHS. Additionally, maps always depend on which data is included/excluded. One limitation of the heat maps produced in this research is that they appear fixed in time, whereas, in reality, the 'riskiness' of an area morphs and changes depending on people's movement through it during the day (and may change over time due to changes in the city around it). Without access to crime statistics and without recording other types of data, it is difficult to understand which are the most risky areas for women to transit, and it is even more difficult to understand why that is the case, and how to address these risks.

The calculations used for generating the heat maps were based on pre-programmed density values built into the R package—including the calculation method in itself and the search radius, cell size and bandwidth. The heat maps therefore show no statistical significance of the areas. This means that the patterns that emerged may be too generalised, and may smooth out more criminogenic areas or show concentration levels in areas where no incidents took place (Chainey and Ratcliffe, 2005). In future studies, this can be overcome by using methods that quantitatively weight line, point and possibly aerial data. This can be achieved by using plugins included in Geographic Information Systems (GIS) software, more advanced packages imported to GIS software or the use of more complex methods that allow for parameter manipulation (for example, to give more importance to incidents that are considered crimes; Bowers et al., 2004). Another limitation includes the clustering method used, which required the number of clusters to be specified in advance, forcing all the data to be included within a cluster (Vickers and Rees, 2007; Ester et al., 1996). This may be troublesome as isolated data points may skew the results of the overall heat map. Other clustering methods could lead to improved results. Such is the case of density-based clustering methods, like DBSCAN, which allows for the identification of clusters with arbitrary shapes and ignore noise (Ester et al., 1996). It must be noted that the intention of this research was to conduct an exploratory analysis of where VAW might be taking place, rather than to establish the statistical significance of any identified hot spots, particularly where no other data was available. In circumstances where quick results are needed and resources are limited, the methodology adopted in this research is valuable.

## Improving site visits

Further improvements on the methodology for site visits and more testing of its application is needed. This could include in-depth spatial analysis that allows for or the discrimination of areas identified as relevant based on tests of statistical significance and more advanced manipulation of multiple variables. Additionally, a control sample was not used when conducting site observations. The

possibility that the characteristics found in the visited locations are present in other parts of the city cannot be excluded. To state with some level of confidence that the absence of infrastructure is a significant facilitator for VAW would require more testing. But it is worth noting that the methodology presented in this work incorporates data that would not be available from official government datasets as some of the types of VAW included are not considered crimes and many crimes go unreported. Nonetheless, the findings, together with the literature, suggest that there could be an influence on crime opportunity and occurrence, as features associated with CPTED literature and opportunistic crime were found in all the locations that were visited.

## 9.2 Final recommendations and conclusions

This research was based on a single municipality, Corregidora in Querétaro, Mexico, with the aim to explore the experiences of VAW of its female residents. The data used is based on first-hand accounts of different types of VAW, which may not be considered crimes by national or state entities and which therefore provide a more nuanced insight than official data sources. Moreover, surveys seem to be more reliable sources for figures of VAW in Mexico, as demonstrated by their use by the main institutions that report VAW in the country (c.f. OCNF 2018; SEGOB et al. 2017) (Garfias Royo et al., 2020).

### Key findings

The most common types of violence were the following:

1. Catcalling or hearing offensive sexual remarks
2. Fear of being sexually abused
3. Stalking
4. Groping
5. Public indecent exposure or public masturbation

Catcalling or hearing offensive sexual remarks was the most common and also the most recurring type of VAW. The most common trend was that the younger women were, the more violence they seemed to experience. Additionally, regardless of the type of violence they experience, women remember where they experience it, whether this is an area, a specific location or a setting.

Maps were created using household data, which in turn were useful for selecting locations for site visits to conduct structured observations. The locations were categorised in 3 types: roads, parks and bridges. These locations shared the following characteristics, which can create opportunities for crime and reduce guardianship:

1. Lacked some form of infrastructure.

2. Had physical obstacles challenging mobility and access.

3. Had spots of poor visibility at two levels:

   (a) Private space towards public space.

   (b) Within the public space.

4. Were related to restricted pedestrian mobility.

This thesis argues that the planning, construction and delivery of infrastructure can act as facilitators for VAW through the lack of protocols to reduce VAW, including the lack of citizen consultation. It was found that the government assists in the creation of gated communities, leading to a fragmented city and the reduction of guardianship in the urban space due to the walls of these neighbourhoods. Finally, social attitudes, including the disregard towards women and condoning and normalisation of less severe forms of VAW, act as barriers to the reduction of VAW.

**Knowledge gaps**

More research is needed to expand on the intersectionality of women, including building on the survey design used in this research. Studies that integrate the experiences of women living in different parts of the urban environment, particularly in the peri-urban areas, are needed to understand the different experiences of VAW women face in the diverse urban spaces of Corregidora and the wider city of Querétaro. A more inclusive approach, such as transect walks with victims of violence could provide more details on the specific environmental and social features that make a space unsafe for women.

Future research could focus on disaggregating and generating heat maps of the different types of VAW asked in the HHS to identify where each type occurs within the urban space of Corregidora. This would be useful to understand whether different spatial concentrations of the different types of VAW exist within the urban space and if so, which types of infrastructure are linked to each type of VAW. This study therefore highlights the importance of georeferencing where VAW is committed, particularly for understanding where women are most at risk within the urban space. It also shows the importance of georeferencing crimes to inform policy making and policing at municipal level. It is not possible to identify hot spot areas to conduct further investigation without this information nor to understand why crimes are committed in these locations.

This study found that groping and public masturbation mostly occurred in public transportation. This finding adds to the literature on VAW which takes place in public transport, and how this setting can be viewed as a crime generator. There is a need for inclusive transport that adequately addresses women's safety requirements. The findings of this study could lead to further research to find links between VAW and its commission in public transport in other areas of Mexico besides Mexico City (Dunckel Graglia, 2016; Tudela Rivadeneyra et al., 2015; Dunckel Graglia, 2013; Vilalta,

2011).

A need was identified to conduct further studies to understand the social and economic dynamics of citizens that request to remove themselves from public life to live in gated communities. Based on the observations made while approaching these neighbourhoods to request entrance, these communities range from social housing to very wealthy neighbourhoods. It would be crucial to understand the definition of *"middle class"* in this context and who constitutes this group when conducting further research, to understand the power dynamics between what seems to be the dominant class and the political class, who are shaping the development of the urban landscape for the disadvantage for those who are unable to buy their way out of public life. More research is needed to understand whether gated communities are indeed safer than open communities, as, so far, there is little evidence that living in a gated community provides more safety from crime (Vilalta Perdomo, 2013; Enríquez Acosta, 2007). There is also a need to understand whether these developments create more insecurity in the surrounding public streets due to the lack of guardianship given the boundary walls that tend to enclose them (Giglia, 2008). Additionally, there is a need to further understand the refusal to address VAW as an issue in infrastructure planning as well as the privatisation of public spaces and public infrastructure (in the form of gated communities), which leads to women's safety becoming a private responsibility rather than a public good.

**Community interventions**

The Social-Ecological Framework states that the prevention strategies for the community level can have an impact in the social and physical environments, and generally include improving economic and housing opportunities and reducing social isolation (CDC, 2020). The identification of factors that increase the risk of violence and victimisation are important for developing prevention and intervention strategies (Johnson, 2006). Integrating data to facilitate a more informed and holistic view of a problem is important in order to identify how it can be addressed from a multi-agency perspective (Chainey and Ratcliffe, 2005).

Another use for the methodology presented in this study could be used for the creation of grassroots safety or crime mapping tools which could help women avoid 'risky' routes, particularly in violent places or in places with high crime rates. Although it could be argued that such tools would represent a response to the built environment as it currently exists, rather than seeking to change the nature of the urban space (Dunckel Graglia, 2013; Little, 1994) or the root causes of VAW. These mapping tools have benefits, provided their unintended, negative consequences can be avoided (see section 8.2.1).

**Social recommendations**

The results of this research show that people may feel encouraged to commit acts of VAW with impunity, knowing that the risk of being charged or facing justice is very slight. Additionally, the HHS and FGDs showed that not many women report or show interest in reporting incidents of VAW due to low levels of trust in police and fears of being re-victimised by insensitive policing. Further promotion of bystander intervention as a preventive measure for sexual assault could be encouraged as a situational model for behavioural change (Burn, 2009).

Additionally, a need was identified to implement interventions at community and institutional level which address, discuss and disrupt norms and taboos regarding sexual and reproductive health, including bodily empowerment.

**Governance recommendations**

There is a need for better prevention and response strategies to VAW, which do not re-victimise, stigmatise or discourage victims to report their experiences. This, in turn, will help clarify the extent of the problem.

The identification of locations that could encourage VAW would be useful for the creation of policy recommendations and urban planning measures to tackle this violence. Examining how the infrastructure in these spaces can enable VAW through the triangulation of victims' accounts, crime data and links to the literature could be useful for understanding spatial patterns and plausible causes of crime. This could in turn help to develop targeted programmes and resources aimed at crime reduction and prevention. These measures could include social components aiming for behavioural and social norm changes regarding VAW, and infrastructure interventions, such as road paving, sidewalks or public lighting, or a combination of both (Garfias Royo et al., 2020; Willman and Corman, 2013). The government of Mexico City is setting an example at national level of how crime data can be georeferenced, but it is not clear how this mapping is used to inform policy making, planning or the design of urban infrastructure at the local level.

**Planning recommendations**

Each area that was visited to conduct visual analysis seemed to face particular challenges at local level, such as a lack of lighting, lack of adherence to drinking regulations, or low levels of social cohesion. Without access to socioeconomic data at a local level or crime records (particularly georeferenced data), comparisons are difficult to make. Bridging this gap is necessary if targeted programmes are to be developed for those areas identified as possibly at risk for VAW. Nonetheless, this study and the literature suggest that including gender recommendations when designing spaces can improve women's safety when using public spaces (Garfias Royo et al., 2020). For example, many of the sites which were visited would benefit from street and infrastructure upgrading

programmes, which could include widening of sidewalks as well as maintenance and pavement of streets. Some areas may also require broader programmes that encompass policing and monitoring of the area, especially at night time, as well as community initiatives to foster greater social cohesion. Understanding the needs of each location would lead to the more efficient and strategic use of resources.

Finally, the local government could consider planning infrastructure interventions based on the principles of Crime Prevention Through Environmental Design (CPTED), which pertain to physical security, surveillance, movement control, management and maintenance and defensible space (Armitage and Monchuk, 2017). It should be noted, however, that there is limited consensus regarding the particular attributes or combinations which are optimal in the design of housing and street networks to reduce crime (Dakin et al., 2020), which is why it is important to understand the particular social dynamics of each location. Additionally, the local government could expand on their public consultations to include community engagement in other forms than citizens' complaints and further invest in research to better understand the needs of citizens. It seems that steps towards this have been taken, as a recent legal initiative at state level was approved in August 2020 that allows citizens to have a say in public expenditure for public works (Redacción, 2020).

**Final remarks**

Women are often excluded from planning decisions, not only by being under-represented in decision making processes, but their needs and economic contribution are often overlooked in the planning process (Cosgrave et al., 2019; UN-Habitat, 2016), as highlighted in this research. Addressing women's needs is critical for promoting equitable and sustainable urban development that responds equally to women and men (Garfias Royo et al., 2020; Cosgrave et al., 2019; UN-Habitat, 2016; Khosla, 2009). This should be done through the integration of gender inclusive recommendations in urban development and taking women's experiences of the city into consideration (Purkayastha and Ratcliff, 2014; Whitzman et al., 2013; Khosla, 2009). Failing to address gender inequality in urban spaces can lead to restricted mobility and the reinforcement of oppressive gender roles (Garfias Royo et al., 2020). Therefore, addressing VAW is crucial for the eradication of inequalities and discrimination and a step towards ensuring equal participation of women in society (Dhar, 2018; UN Women, 2009; UN, 1979). Efforts towards ending VAW could address several Sustainable Development Goals all at once (Sen, 2019; UN Women, 2009). The built environment on its own might not reduce crime nor deter those determined on criminal activity (Trench et al., 1992, p. 281), but there is a collective interest in improving urban and public infrastructure, which could create the preconditions for safer and more inclusive cities that prevent Violence Against Women.

# References

ActionAid International (2013). Women and the City II: Combating violence against women and girls in urban public spaces - the role of public services. Technical report, ActionAid International, Johannesburg.

Aguilar, A. G. and Mateos, P. (2012). Segregación socioeconómica en la Ciudad de México Análisis con clusters geodemográficos. In Rodríguez Hernández, F., editor, *Pobreza, desigualdad y desarrollo: Conceptos y aplicaciones*, chapter 7, pages 177–218. Centro Regional de Investigaciones Multidisciplinarias, Ciudad de México.

Ainsworth, C. (2015). Sex Redefined: The Idea of Two Sexes Is Simplistic. Biologists Now Think There Is a Wider Spectrum Than That. *Nature*, 518(7539):288–291.

Albee, G. W. (1981). The prevention of sexism. *Professional Psychology: Research and Practice*, 12(1):20–28.

AMAI (2018). Qué es NSE.

Anderson, L. (2011). *Reflexivity*. SAGE Publications Ltd, London.

Arancibia Garrido, J., Billi, M., and Guerrero González, M. J. (2017). ¡Tu 'piropo' me violenta! Hacia una definición de acoso sexual callejero como forma de violencia de género. *Revista Punto Género*, 7:112–137.

Ariel, B. and Partridge, H. (2017). Predictable Policing: Measuring the Crime Control Benefits of Hotspots Policing at Bus Stops. *Journal of Quantitative Criminology*, 33(4):809–833.

Aristegui Noticias (2017). Se duplican asesinatos de mujeres en la última década (Reportaje e informe).

Armitage, R. (2018). Burglars' take on crime prevention through environmental design (CPTED): Reconsidering the relevance from an offender perspective. *Security Journal*, 31(1):285–304.

Armitage, R. and Monchuk, L. (2017). What Is CPTED? Reconnecting Theory with Application in the Words of Users and Abusers. *Policing*, 13(3):312–330.

Atkinson, R. and Blandy, S. (2005). Introduction: International Perspectives on The New Enclavism and the Rise of Gated Communities. *Housing Studies*, 20(2):177–186.

Ayuntamiento de Corregidora (2015). Plan Municipal de Desarrollo de Corregidora 2015-2018. Technical report, Ayuntamiento de Corregidora, Queretaro.

Ayuntamiento de Corregidora (2017). Reglamento de Desarrollos Imobiliários para el Município de Corregidora, Querétaro.

Ayuntamiento de Corregidora (2019a). Lineamientos que emite la Secretaría de Administración a través de los cuales se regula el uso de Parques y Jardines para el Municipio de Corregidora, Qro.

Ayuntamiento de Corregidora (2019b). Reglamento del Sistema de Consejos de Participación Ciudadana Municipal de Corregidora, Qro.

Ayuntamiento de Corregidora (2019c). Reglamento del Sistema Municipal de Acceso de las Mujeres a una Vida Libre de Violencia y para la Igualdad Sustantiva Entre Mujeres y Hombres.

Ayuntamiento del Estado de Querétaro (2019). Código Urbano del Estado de Querétaro.

Banda Campos, L. (2017). Crece tasa poblacional en Corregidora al 8%.

Banda Campos, L. (2019). Corregidora crece al 6% anual: Sosa - Diario de Querétaro.

Basile, K. C. and Hall, J. E. (2011). Intimate Partner Violence Perpetration by Court-Ordered Men: Distinctions and Intersections Among Physical Violence, Sexual Violence, Psychological Abuse, and Stalking. *Article Journal of Interpersonal Violence*, 26(2):230–253.

Bautista, N. (2017). Justice for Lesvy: Indifference and Outrage in Response to Gender Violence in Mexico City.

BBC (2020). Ingrid Escamilla: Hundreds protest against woman's brutal murder.

Belur, J., Parikh, P., Daruwalla, N., Joshi, R., and Fernandes, R. (2016). Perceptions of gender-based violence around public toilets in Mumbai slums. *International Journal of Comparative and Applied Criminal Justice*, 00(00):1–16.

Berdegué, J. A. and Soloaga, I. (2018). Small and medium cities and development of Mexican rural areas. *World Development*, 107:277–288.

Bernasco, W. and Block, R. (2011). Robberies in Chicago: A Block-Level Analysis of the Influence of Crime Generators, Crime Attractors, and Offender Anchor Points. *Journal of Research in Crime and Delinquency*, 48(1):33–57.

Bhattacharyya, R. (2016). Street Violence Against Women in India: Mapping Prevention Strategies. *Asian Social Work and Policy Review*, 10(3):311–325.

Bianchi Alves, B. and Dominguez Gonzales, K. (2015). Smart measures in transport: Moving beyond women's-only buses. *World Bank Blog*.

Blakely, E. J. and Snyder, M. G. (1997). *Fortress America: Gated Communities in the United States*. Brookings Institution Press; Lincoln Institute of Land Policy, Washington, D.C. : Cambridge, Mass.

Blaustein, J., Pino, N. W., Fitz-Gibbon, K., and White, R. (2018). Criminology and the UN Sustainable Development Goals: The Need for Support and Critique. *British Journal of Criminology*, 58:767–786.

Bleijenbergh, I. (2012). Case Selection.

Bowers, K. J., Johnson, S. D., and Pease, K. (2004). Prospective Hot-Spotting: The Future of Crime Mapping? *British Journal of Criminology*, 44(5):641–658.

Brantingham, P. and Brantingham, P. (1995). Criminality of place. *European Journal on Criminal Policy and Research*, 3(3):5–26.

Brantingham, P. J. and Brantingham, P. L., editors (1981). *Environmental Criminology*. SAGE Publications, Beverly Hills, California.

Burn, S. M. (2009). A situational model of sexual assault prevention through bystander intervention. *Sex Roles*, 60(11-12):779–792.

Butler, J. (2011). Bodes that matter. In *Bodies that matter: On the discursive limits of "sex"*, chapter 1, pages 3–28. Routledge, Abingdon.

CABE (2007). Spaceshaper: A user's guide. Technical report, Commission for Architecture and the Built Environment (CABE).

Cabrera, J. (2016). Marchan en Chimalhuacan contra los feminicidios.

Caglar, G. (2013). Gender mainstreaming. *Politics and Gender*, 9(3):336–344.

Caldeira, T. P. R. (2000). *City of Walls: Crime, Segregation and Citizenship in São Paulo*. University of California Press, Berkeley, CA.

Calderón, L. Y., Heinle, K., Ferreira, O. R., and Justice, D. A. S. (2019). Organized Crime and Violence in Mexico. Technical report, Department of Political Science & International Relations, University of San Diego, San Diego.

Cámara de Diputadors del H. Congreso de la Unión (2007). Ley General de Acceso de las Mujeres a una Vida Libre de Violencia.

CDC (2020). The Social-Ecological Model: A Framework for Prevention.

CEAV (2016). Resultados preliminares del Diagnóstico sobre la atención de la violencia sexual en México. Technical report, Comisión Ejecutiva de Atención a Víctimas (CEAV), Mexico City.

Ceccato, V. (2017). Women's victimisation and safety in transit environments. *Crime Prevention and Community Safety*, 19(3-4):163–167.

Ceccato, V. and Paz, Y. (2017). Crime in São Paulo's metro system: Sexual crimes against women. *Crime Prevention and Community Safety*, 19(3-4):211–226.

Chainey, S. and Ratcliffe, J. (2005). *GIS and crime mapping*. Wiley, Chichester, West Sussex, England.

Chambers, R. (1994). The Origins and Practice of Participatory Rural Appraisal. *World Development*, 22(7):953–969.

Chant, S. and McIlwaine, C. (2016). *Cities, Slums and Gender in the Global South: Towards a feminised urban future*. Routledge, London, 1st edition.

Charmaz, K. (2000). Grounded theory. Objectivist and constructionist methods. In Denzin, N. K. and Lincoln, Y. S., editors, *Handbook of Qualitative Research*, chapter 20, pages 509–535. SAGE Publications, Thousand Oaks.

Chui, W. H. and Ong, R. (2008). Indecent assault on the public transport in Hong Kong. *International Journal of Law, Crime and Justice*, 36(1):2–14.

Ciudata (2019). Synthetic results of #CallesVioletas / PurpleStreets.

Clarke, R. V. (1995). Building a Safer Society: Strategic Approaches to Crime Prevention. *Crime and Justice*, 19:91–150.

Clarke, R. V. and Eck, J. (2003). Become a Problem Solving Crime Analyst. Technical report, Jill Dando Institute of Crime Science, London.

Clarke, R. V. and Felson, M. (1993). Introduction: Criminology, Routine Activity, and Rational Choice. In Clarke, R. V. and Felson, M., editors, *Routine Activity and Rational Choice*, chapter 1, pages 1–14. Routledge, New York.

Clifton, K. J., Livi Smith, A. D., and Rodriguez, D. (2007). The development and testing of an audit for the pedestrian environment. *Landscape and Urban Planning*, 80(1-2):95–110.

CMM (2013). Reforma Urbana: 100 Ideas para las Ciudades de México. Technical report, Centro Mario Molina, Ciudad de México.

Cohen, L. E. and Felson, M. (1979). Social Change and Crime Rate Trends: A Routine Activity Approach. Technical Report 4.

Collier, A. B. (2013). Contour and Density Layers with ggmap.

Comité de Nivel Socioeconómico AMAI (2017). Nivel Socio Económico AMAI 2018. Technical report, Asociación Mexicana de Agencias de Inteligencia de Mercado y Opinión, Mexico City.

CONAPO (2012). Indice de Marginación por localidad 2010. *Consejo Nacional De Población*, 1:11–14.

CONEVAL (2017). ¿Que es el índice de rezago social?

Connell, R. W. (1995). *Masculinities*. Polity Press, Cambridge, 3rd ed edition.

Connell, R. W. (2000). *The Men and The Boys*. Polity Press, Cambridge.

Consejo para Prevenir y Eliminar la Discriminación de la Ciudad de México (2017). Encuesta sobre Discriminación en la Ciudad de México 2017.

Cook, J. M., Dinnen, S., and O'donnell, C. D. (2011). Older Women Survivors of Physical and Sexual Violence: A Systematic Review of the Quantitative Literature. *Journal of Women's Health*, 20(7):1075–1081.

Coppel, E. (2017). Una mexicana crea un mapa para que los feminicidios en su país no caigan en el olvido.

Corbin, J. M. and Strauss, A. (1990). Grounded theory research: Procedures, canons, and evaluative criteria. *Qualitative Sociology*, 13(1):3–21.

Cornish, D. B. and Clarke, R. V. G. (1986). *The Reasoning Criminal: Rational Choice Perspectives on Offending*. Springer, New York, NY.

Cornwall, A. (2004). Men, masculinity and 'gender in development'. In *Men and Masculinity*, pages 8–13. Oxfam, Oxford.

Corona, S. and Lafuente, J. (2019). El grito feminista retumba en México.

Cortes, L. (2019). El Ángel de la Independencia, en Ciudad de México, con pintadas.

Cosgrave, E., Lam, T., and Marcon, S. (2019). Gender Inclusive Climate Action in Cities. Technical report, C40 Cities, London.

Council of Europe (2011). Council of Europe Convention on preventing and combating violence against women and domestic violence.

Cozens, P. M. and Love, T. (2015). A Review and Current Status of Crime Prevention through Environmental Design (CPTED). *Journal of Planning Literature*, 20(4):393–412.

Crockett, C., Brandl, B., and Dabby, F. C. (2015). Survivors in the Margins: The Invisibility of Violence Against Older Women. *Journal of Elder Abuse & Neglect*, 27(4-5):291–302.

Crowe, T. D. and Fennelly, L. J. (2013). *Crime Prevention Through Environmental Design*. Elsevier, third edit edition.

Cruz Vargas, J. C. (2017). La violencia de género afecta al 66.1% de las mujeres en México: Inegi.

Cubbage, C. J. and Smith, C. L. (2009). The function of security in reducing women's fear of crime in open public spaces: A case study of serial sex attacks at a Western Australian university. *Security Journal*, 22(1):73–86.

Dakin, K., Xie, W., Parkinson, S., Khan, S., Monchuk, L., and Pease, K. (2020). Built environment attributes and crime: an automated machine learning approach. *Crime Science*, 9(12):1–17.

Datta, A. and Ahmed, N. (2020). Mapping Gendered Infrastructures: Critical Reflections on Violence Against Women in India. *Architectural Design*, 90(4):104–111.

Davis, D. E. (2004). Middle Classes and Prosperity in East Asia and Latin America. In *Discipline and Development: Middle Classes and Prosperity in East Asia and Latin America*, chapter 2, pages 26–63. Cambridge University Press.

Dhar, S. (2018). Gender and Sustainable Development Goals (SDGs). *Indian Journal of Gender Studies*, 25(1):47–78.

Doran, B. J. and Burgess, M. B. (2012). *Putting Fear of Crime on the Map: Investigating Perceptions of Crime Using Geographic Information Systems*. Springer, New York.

Dunckel Graglia, A. (2013). Women-only transportation: How "pink" public transportation changes public perception of women's mobility. *Journal of Public Transportation*, 16(2):85–105.

Dunckel Graglia, A. (2016). Finding mobility: women negotiating fear and violence in Mexico City's public transit system. *Gender, Place & Culture*, 23(5):624–640.

Durán, V. (2020). Feminicidas libres. Technical report, Ciudadanos Contra la Corrupción.

Dymén, C. and Ceccato, V. (2012). An International Perspective of the Gender Dimension in Planning for Urban Safety. In Vania Ceccato, editor, *The Urban Fabric of Crime and Fear*, chapter 13, pages 311–339. Springer, Dordrecht.

Eck, J. E. (1994). *Drug Markets and Drug Places: A Case-control Study of the Spatial Structure of Illicit Drug Dealing*. PhD thesis, University of Maryland College Park.

Eck, J. E., Chainey, S., Cameron, J. G., Leitner, M., and Wilson, R. E. (2005). Mapping Crime: Understanding Hot Spots. Technical report, US Department of Justice, Washington D.C.

Ekblom, P. (2011). Deconstructing CPTED... and Reconstructing it for Practice, Knowledge Management and Research. *European Journal on Criminal Policy and Research*, 17(1):7–28.

Ellis, L. (2018). Map Plots Created With R And Ggmap.

Ellsberg, M. and Heise, L. (2005). Researching Violence Against Women: A Practical Guide for Researchers and Activitsts. Technical report, World Health Organization, Geneva.

Elwood, S. and Cope, M. (2009). Introduction: Qualitative GIS: Forging Mixed Methods Through Representations, Analytical Innovations, and Conceptual Engagements. In Elwood, S. and Cope, M., editors, *Qualitative GIS: A Mixed Methods Approach*, chapter 1, pages 1–12. SAGE Publications, London.

England, S. (2018). Picturing Halifax: Young Immigrant Women and the Social Construction of Urban Space. *The Journal of Undergraduate Ethnography*, 8(1):3–21.

Enríquez Acosta, J. Á. (2007). Ciudades de muros. Los fraccionamientos cerrados en la frontera noroeste de México. *Scripta Nova: Revista electrónica de Geografía y Ciencias Sociales*, XI(230).

Ertürk, Y. and Purkayastha, B. (2012). Linking research, policy and action: A look at the work of the special rapporteur on violence against women. *Current Sociology*, 60(2):142–160.

Escobar Ledesma, A. (2012). Presencia africana en Querétaro.

Ester, M., Kriegel, H.-P., Sander, J., and Xu, X. (1996). A Density-Based Algorithm for Discovering Clusters in Large Spatial Databases with Noise. In *KDD'96: Proceedings of the Second International Conference on Knowledge Discovery and Data Mining*, pages 226–231.

Estévez-Soto, P. R. and Pérez Esparza, D. (2017). As the cartels grow deadlier, should the Mexican military be involved in law enforcement?

EU FRA (2014). Violence against women: an EU-wide survey. Technical report, European Union Agency for Fundamental Rights (EU FRA), Belgium.

Farrington, D. P. and Welsh, B. C. (2002). Improved Street Lighting and Crime Prevention. *Justice Quarterly*, 19(2):313–342.

Felson, M. and Clarke, R. V. (1998). Opportunity Makes the Thief: Practical theory for crime prevention.

Fernandez-Dominguez, A. O. (2020). Effect of Actual and Perceived Violence on Internal Migration: Evidence from Mexico's Drug War. *IZA Journal of Development and Migration*, 11(8):1–27.

FGJ CDMX (2020). Estadísticas Delictivas.

Fontes, K. B., Carolina, A., Alarcão, J., Nihei, O. K., Pelloso, S. M., Andrade, L., Dalva, M., and Carvalho, B. (2018). Regional disparities in the intimate partner sexual violence rate against women in Paraná State, Brazil, 2009-2014: an ecological study. *BMJ Open*, 8(2):1–8.

Fontes, L. A. (2004). Ethics in Violence Against Women Research: The Sensitive, the Dangerous, and the Overlooked. *Ethics & Behavior*, 14(2):141–174.

Foster, S. and Giles-Corti, B. (2008). The built environment, neighborhood crime and constrained physical activity: An exploration of inconsistent findings. *Preventive Medicine*, 47:241–251.

Frías, S. M. (2016). Violentadas.

Frías, S. M. (2017). Violence against Women in Mexico : 25 Years of Qualitative and Quantitative Research. *Reality, Data and Space: International Journal of Statistics and Geography*, 8(2):5–57.

Fuller, W. A. (2009). Probability Sampling from a Finite Universe. In *Sampling Statistics*, pages 1–93.

García-Moreno, C., Jansen, H. A., Ellsberg, M., Heise, L., and Watts, C. (2005). WHO Multi-country Study on Women's Health and Domestic Violence Against Women: Initial results on prevalence, health outcomes and women's responses. Technical report, World Health Organization, Geneva.

García Peralta, B. and Hofer, A. (2006). Housing for the Working Class On the Periphery of Mexico City: A New Version of Gated Communities. *Social Justice*, 33(3):129–141.

Garfias Royo, M., Parikh, P., and Belur, J. (2020). Using heat maps to identify areas prone to violence against women in the public sphere. *Crime Science*, 9(1):15.

Garfias Royo, M., Parikh, P., Mutwiri, F., Harper, J., Bukachi, V., and Mulligan, J. (2018). Using Future Scenario Planning as a tool for informed decision making on infrastructure interventions in Kibera, Nairobi in Kenya. *Habitat International*, 79:30–41.

Gekoski, A., Gray, J. M., Adler, J. R., and Horvath, M. A. (2017). The prevalence and nature of sexual harassment and assault against women and girls on public transport: an international review. *Journal of Criminological Research, Policy and Practice*, 3(1):3–16.

Giglia, A. (2008). Gated communities in mexico city. *Home Cultures*, 5(1):65–84.

Gobierno de CDMX (2020). Carpetas de investigación FGJ de la Ciudad de México.

Gobierno de Corregidora (2015). Corregidora, Querétaro. Technical report, Gobierno de Corregidora.

Gobierno de Mexico and INMUJERES (2014). Legislación Penal en las Entidades Federativas: Acoso Y Hostigamiento Sexual. Technical report, Dirección General de Transversalización de la Perspectiva de Género.

Gómez-Maturano, R. and Alvarado-Rosas, C. (2016). Fragmentación física-material y las urbanizaciones cerradas en la Zona Metropolitana de Querétaro-México. *Prospectiva. Revista de Trabajo Social e intervención social*, (21):57–76.

Gracia, E., López-Quílez, A., Marco, M., Lladosa, S., and Lila, M. (2015). Original Contribution The Spatial Epidemiology of Intimate Partner Violence: Do Neighborhoods Matter? *American Journal of Epidemiology*, 182(1):58–66.

Gupte, J., Bogati, S., Lind, J., and Schultze-Kraft, M. (2014). Key Challenges of Security Provision in Rapidly Urbanising Contexts: Evidence from Kathmandu Valley and Terai Regions of Nepal. Technical report, Institute of Development Studies, Brighton.

Gupte, J. and Commins, S. (2016). Cities, Violence and Order: the Challenges and Complex Taxonomy of Security Provision in Cities of Tomorrow. Technical Report 175, Institute of Development Studies, Los Angeles.

Hanafy, I., Clervoy, L., and Brenot, P. (2016). Exhibitionists, so much inhibition... *Sexologies*, 25:61–63.

HarassMap (2020). HarassMap.

Harris, J. and White, V. (2013). *A Dictionary of Social Work and Social Care*. Oxford University Press, 1st ed edition.

Heidari, S. and García Moreno, C. (2016). Gender-based violence: a barrier to sexual and reproductive health and rights. *Reproductive Health Matters*, 24(47):1–4.

Heise, L. L. (1998). Violence Against Women: An Integrated, Ecological Framework. *Violence Against Women*, 4(3):262–290.

Hennink, M. M. (2015). Introducing Focus Group Discussions. In *Understanding Focus Group Discussions*, chapter 1, pages 1–32. Oxford University Press.

Hernandez, L. M. and Blazer, D. G., editors (2006). *Genes, Behavior, and the Social Environment: Moving Beyond the Nature/Nurture Debate*. The National Academies Press, Washington, D.C.

Herrera, C. and Agoff, M. C. (2018). The intricate interplay between victimization and agency: Reflections on the experiences of women who face partner violence in Mexico. *Journal of Research in Gender Studies*, 8(1):49–72.

Honadle, G. and Cooper, L. (1989). Beyond coordination and control: An interorganizational approach to structural adjustment, service delivery, and natural resource management. *World Development*, 17(10):1531–1541.

Honeybone, P., Collins, B., Barnes, K., Cosgrave, E., and The Liveable Cities Team (2018). The Little Book of Governing the City. Technical report, Lancaster.

IASC (2005). Guidelines for Gender-based Violence Interventions in Humanitarian Settings Focusing on Prevention of and Response to Sexual Violence in Emergencies. Technical report, Inter-Agency Standing Committee (IASC), Geneva.

INEGI (1980). X Censo General de Población y Vivienda 1980.

INEGI (2001). Indicadores Sociodemográficos de México (1930-2000). Technical report, Instituto Nacional de Estadística y Geografía (INEGI), Aguascalientes.

INEGI (2005). II Conteo de Población y Vivienda 2005 - Tabulados Básicos. Technical report, Instituto Nacional de Estadística y Geografía (INEGI), Mexico City.

INEGI (2008). Nivel Socioeconómico AMAI.

INEGI (2010). Censo de Población y Vivienda 2010.

INEGI (2015a). Anuario estadístico y geográfico de Querétaro 2015. Technical report, Instituto Nacional de Estadística y Geografía (INEGI), Mexico City.

INEGI (2015b). Cartografía Geoestadística Urbana y Rural Amanzanada. Cierre de la Encuesta Intercensal 2015.

INEGI (2015c). Encuesta Intercensal 2015.

INEGI (2015d). Microdatos. Encuesta Intercensal 2015.

INEGI (2016a). Encuesta Nacional sobre la Dinámica de las Relaciones en los Hogares (ENDIREH).

INEGI (2016b). Inventario Nacional de Viviendas (INV).

INEGI (2017a). Boletín de Prensa Núm. 379/17: Resultados de la Encuesta Nacional Sobre la Dinámica de las Relaciones en los Hogares (ENDIREH) 2016.

INEGI (2017b). Encuesta Nacional sobre la Dinámica de las Relaciones en los Hogares (ENDIREH) 2016 Principales Resultados. Technical report, Instituto Nacional de Estadística y Geografía (INEGI).

INEGI (2018). Quiénes somos.

International Crisis Group (2017). Veracruz: Fixing Mexico's State of Terror.

Jakobsen, H. (2014). What's Gendered About Gender-based Violence? An Empirically Grounded Theoretical Exploration From Tanzania. *Gender & Society*, 28(4):537–561.

Jewkes, R., Dartnall, E., and Sikweyiya, Y. (2012). Ethical and Safety Recommendations for Research on the Perpetration of Sexual Violence. Technical report, Sexual Violence Research Initiative, Medical Research Council, Pretoria.

Johnson, H. (2006). Measuring Violence Against Women: Statistical Trends 2006.

Johnson, H., Ollus, N., and Nevala, S. (2008). *Violence Against Women: An International Perspective*, volume 53. Springer.

Joulia Lagares, A. (2011). 2011 Atlas de Riesgo del Municipio. Technical Report PP11/22006/AE/1/084, Sedesol, Querétaro.

Kearl, H. (2014). Unsafe and Harassed in Public Spaces: A National Street Harassment Report. Technical report, Stop Street Harassment (SSH), Reston, Virginia.

Khosla, R. (2009). Addressing Gender Concerns in India's Urban Renewal Mission. Technical report, United Nations Development Programme, New Delhi.

Kim, Y. and Zangerling, B. (2016). Mexico Urbanization Review: Managing Spatial Growth for Productive and Livable Cities in Mexico. Technical report, World Bank Group, Washington, D.C.

King, R. (2009). Women's fear of crime on university campuses: New directions? *Security Journal*, 22(1):87–99.

KoBoToolbox (2019). KoBoToolbox.

Koskela, H. (1999). 'Gendered Exclusions': Women's Fear of Violence and Changing Relations to Space. *Geografiska Annaler: Series B, Human Geography*, 81(2):111–124.

Koskela, H. and Pain, R. (2000). Revisiting fear and place: women's fear of attack and the built environment. *Geoforum*, 31:269–280.

Krantz, G. and Garcia-Moreno, C. (2005). Violence against women. *Journal of Epidemiology and Community Health*, 59:818–821.

Kulyk, V. and Sossa, R. (2018). Determining the tourist attractive regions by gis analysis using heatmaps. *Geodesy and Cartography*, 44(1):22–27.

Kwami, C. and Cosgrave, E. (2018). Transforming the engineering of cities: 'points of departure' for future visioning. *Proceedings of the Institution of Civil Engineers – Urban Design and Planning*, 171(4):157–165.

Lakhani, N. (2016). 'Impunity has consequences': the women lost to Mexico's drug war. *The Guardian*.

Lambrick, M. and Travers, K. (2008). WOMEN'S SAFETY AUDITS: What Works and Where? Technical report, UN Habitat.

Landes, J. B. (1998). *Feminism, the public and the private*. Oxford University Press, Oxford.

Lane, J. (2013). Theoretical explanations for gender differences in fear of crime. In Renzetti, C. M., Miller, S. L., and Gover, A. R., editors, *Routledge International Handbook of Crime and Gender Studies*, chapter 2, pages 57–72. Routledge, London.

Lea, S. G., D'Silva, E., and Asok, A. (2017). Women's strategies addressing sexual harassment and assault on public buses: An analysis of crowdsourced data. *Crime Prevention and Community Safety*, 19(3-4):227–239.

Leclerc, B., Chiu, Y. N., Cale, J., and Cook, A. (2016). Sexual violence against women through the lens of environmental criminology: Toward the accumulation of evidence-based knowledge and crime prevention. *European Journal on Criminal Policy and Research*, 22(4):593–617.

Lee, R. M. and Renzetti, C. M. (1990). The Problems of Researching Sensitive Topics: An Overview and Introduction. *American Behavioural Scientist*, 33(5):510–528.

Leong, K. and Chan, S. C. (2013). A content analysis of web-based crime mapping in the world's top 100 highest GDP cities. *Crime Prevention and Community Safety*, 15(1):1–22.

Letherby, G. (2003). *Feminist Research in Theory and Practice*. McGraw-Hill Education.

Levy, C. (2013). Travel choice reframed: "deep distribution" and gender in urban transport. *Environment and Urbanization*, 25(1):47–63.

Lindsey, L. L. (1997). *Gender Roles: A Sociological Perspective*. Prentice-Hall, New Jersey, 3rd ed edition.

Lindsey, L. L. (2010). The Sociology of Gender: Theoretical Perspectives and Feminist Frameworks. In *Gender Roles: A Sociological Perspective*, pages 1–21. Pearsons, London, 5th edition.

Little, J. (1994). *Gender, Planning and The Policy Process*. Elsevier Ltd, Oxford, 1st ed edition.

Logan, T. and Walker, R. (2017). Stalking: A Multidimensional Framework for Assessment and Safety Planning. *Trauma, Violence & Abuse*, 18(2):200–222.

López Padilla, I., Mobayed, S., and Chambon, L. (2018). Mapa Georreferenciado de la Violencia Contra las Mujeres en el Estado de Nuevo Leon 2008-2017. Technical report, Mexico City.

Lorenc, T., Clayton, S., Neary, D., Whitehead, M., Petticrew, M., Thomson, H., Cummins, S., Sowden, A., and Renton, A. (2012). Crime, fear of crime, environment, and mental health and wellbeing: Mapping review of theories and causal pathways. *Health and Place*, 18(4):757–765.

Loukaitou-Sideris, A. (2012). Safe on the Move: The Importance of the Built Environment. In Ceccato, V., editor, *The Urban Fabric of Crime and Fear*, chapter 4, pages 85–110. Springer, Stockholm.

Loukaitou-Sideris, A. (2016). A gendered view of mobility and transport: next steps and future directions. *Town Planning Review*, 87(5):547–565.

Loukaitou-Sideris, A. and Eck, J. E. (2007). Crime Prevention and Active Living. *American Journal of Health Promotion*, 21:380–389.

Loukaitou-Sideris, A. L. (2008). How Safe Is the Ride? Evaluation of Design and Policy Responses to Women's Fear of Victimization and Crime. Technical Report 4, University of California Transportation Center, UC Berkeley.

Low, S. and Iveson, K. (2016). Propositions for more just urban public spaces. *City*, 20(1):10–21.

Low, S. M. (1996). Spatializing Culture: The Social Production and Social Construction of Public Space in Costa Rica. *American Ethnologist*, 23(4):861–879.

Low, S. M. (1997). Urban Fear: Building the Fortress City. *city & Society*, 9(1):53–71.

LSE (2016). Inter-American Convention on the Prevention, Punishment and Eradication of Violence against Women (Belém do Pará Convention).

Lucio, J. D., Ramírez, E. E., and Cárdenas, S. (2010). ¿Libertad para quién? El efecto de comunidades cerradas en el espacio urbano. *CIDE*, 251:1–21.

Manazir, S. H., Govind, M., and Rubina (2019). My Safetipin Mobile Phone Application: Case Study of E-Participation Platform for Women Safety in India. *Journal of Scientometric Research*, 8(1):47–53.

Marosi, R. (2017). A failed vision - Mexico's Housing Debacle.

Maruthaveeran, S. and Konijnendijk van den Bosh, C. (2015). Fear of crime in urban parks – What the residents of Kuala Lumpur have to say? *Urban Forestry & Urban Greening*, 14:702–713.

Massey, D. B. (1994). *Space, place and gender*. Polity Press.

Mazeika, D. M. and Sumit Kumar, B. (2017). Do Crime Hot Spots Exist in Developing Countries? Evidence from India. *Journal of Quantitative Criminology*, 33:45–61.

Mazumder, H. and Pokharel, B. (2019). Sexual Violence on Public Transportation: A Threat to Women's Mobility in Bangladesh. *Journal of Aggression, Maltreatment & Trauma*, 28(8):1017–1019.

McIlwaine, C. (2013). Urbanization and gender-based violence: Exploring the paradoxes in the global South. *Environment and Urbanization*, 25(1):65–79.

McIntosh, C., Alegría, T., Ordóñez, G., and Zenteno, R. (2015). Infrastructure Upgrading and Budgeting Spillovers: Mexico's habitat experiment.

Mechanic, M. B., Weaver, T. L., and Resick, P. A. (2000). Intimate Partner Violence and Stalking Behaviour: Exploration of Patterns and Correlates in a Sample of Acutely Battered Women. *Violence and Victims*, 15(1):55–72.

Medina Rosas, A. (2010). Cotton Field. Proposals for analysis and monitoring of the "Cotton Field" case sentence, regarding human rights violations committed by the Mexican State. Technical report, Red Mesa de Mujeres de Ciudad Juárez A.C., Comité de América Latina y el Caribe para la Defensa de los Derechos de la Mujer (CLADEM), Chihuahua.

Mehrizi, M. H. R., Ghasemzadeh, F., and Molas-Gallart, J. (2009). Stakeholder mapping as an assessment framework for policy implementation. *Evaluation*, 15(4):427–444.

Melgoza, A., López, M. A., and Pigeonutt, V. (2017). Se duplican asesinatos de mujeres en la última década (Reportaje e informe).

Mitchell, A. (1999). *The ESRI Guide to GIS Analysis, Volume 1: Geographic Patterns & Relationships*. Environmental Systems Research Institute, Inc, Redlands, California.

Mohamed, A. A. and Stanek, D. (2019). Street networks, pedestrian movement patterns and sexual harassment. *Journal of Gender-Based Violence*, 3(1):7–28.

Monqid, S. (2012). Violence against women in public spaces: the case of Morocco. *Égypte/Monde arabe*, 3(9):105–117.

Morales Arias, A. (2017a). Se instala en Corregidora el Sistema Municipal de Protección Integral de Niñas, Niños y Adolescentes.

Morales Arias, A. (2017b). Se realiza la primera sesión ordinaria del SIPINNA Corregidora.

Moser, C. O. (2004a). Urban violence and insecurity: An introductory roadmap. *Environment and Urbanization*, 16(2):3–16.

Moser, C. O. (2004b). Urban violence and insecurity: An introductory roadmap. *Environment and Urbanization*, 16(2):3–16.

Moser, C. O. and McIlwaine, C. (2014). New frontiers in twenty-first century urban conflict and violence. *Environment and Urbanization*, 26(2):331–344.

Muldoon, K. A., Galway, L., Reeves, A., Leach, T., Heimerl, M., and Sampsel, K. (2019). Geographies of Sexual Assault: A Spatial Analyses to Identify Neighborhoods Affected by Sexual and Gender-Based Violence. *Journal of Interpersonal Violence*, pages 1–18.

Murcia, A. (2020). No Perdonamos, Ni Olvidamos.

Natarajan, M., Clarke, R., Carcach, C., Ponce, C., Beneke De Sanfeliú, M., Polanco, D. E., Chávez, M., and Shi, M. (2015). Situational prevention and public transport crime in El Salvador. *Crime Science*, 4(1):1–15.

Natarajan, M., Schmuhl, M., Sudula, S., and Mandala, M. (2017). Sexual victimization of college students in public transport environments: A whole journey approach. *Crime Prevention and Community Safety*, 19(3-4):168–182.

National Commission for the Promotion of Equality (NCPE) (2012). Checklist on Gender Mainstreaming in Infrastructure. Technical report, National Commission for the Promotion of Equality (NCPE), Malta.

Newton, A. (2014). Crime on Public Transport. In Bruinsma, G. and Weisburd, D., editors, *Encyclopedia of Criminology and Criminal Justice*, pages 709–720. Springer New York, New York, NY.

Newton, A. (2016). Crime, transport and technology. In McGuire, M. R. and Holt, T. J., editors, *The Routledge handbook of technology, crime and justice*, chapter 16, pages 281–294. Routledge, London, 1st edition.

Newton, A. (2018). Macro-Level Generators of Crime, Including Parks, Stadiums, and Transit Stations. In Bruinsma, G. J. and Johnson, S. D., editors, *The Oxford Handbook of Environmental Criminology*, chapter 22, pages 497–517. Oxford University Press, New York.

Newton, A. and Felson, M. (2015). Editorial: Crime patterns in time and space: The dynamics of crime opportunities in urban areas. *Crime Science*, 4(1).

Nieder, C., Muck, C., and Kärtner, J. (2019). Sexual Violence Against Women in India: Daily Life and Coping Strategies of Young Women in Delhi. *Violence Against Women*, 25(14):1717–1738.

Nikšičsš, M. (2017). Is a Walkable Place a Just Place? The Case of Ljubljana. *Built Environment*, 43(2):214–235.

NSE AMAI (2018). ¿Cuántos Niveles Socioeconómicos hay y cuáles son sus principales características?

OAS (1994). Inter-American Convention on the Prevention, Punishment, and Eradication of Violence against Women (Convention of Belém do Pará).

OCNF (2014). Estudio de la Implementación del Tipo Penal de Feminicidio en México: Causas y Consecuencias 2012 y 2013. Technical report, Observatorio Ciudadano Nacional del Feminicidio (OCNF), Mexico City.

OCNF (2018). Implementación del Tipo Penal de Feminicidio en México: Desafíos para Acreditar las Razones de Género 2014-2017. Technical report, Observatorio Ciudadano Nacional del Feminicidio (OCNF), Mexico City.

OCQ (2018). Resultado de la cuarta evaluación. Municipio de Corregidora. Technical report, Observatorio Ciudadano Querétaro (OCQ), Querétaro.

OCQ (2019). Evaluación Ciudadana Semestral 01-2019. Municipio de Corregidora. Technical report, Observatorio Ciudadano Querétaro (OCQ), Queretaro.

OHCHR (2018). World Conference on Human Rights.

OHCHR and Mujeres, O. (2014). Latin American Model Protocol for the investigation of gender-related killings of women (femicide/feminicide). Technical report, Regional Office for Central America of the United Nations High Commissioner for Human Rights (OHCHR), UN Women, Ciudad Mexico.

Olesen, V. L. (2007). Feminist qualitative research and grounded theory: complexities, criticisms, and opportunities. In Bryant, A. and Charmaz, K., editors, *The SAGE handbook of grounded theory*, pages 417–435. SAGE.

O'Neil, J. M. (2015a). A Multicultural Psychology of Men Model: Reviewing Research On Diverse Men's Gender Role Conflict. In *Men's Gender Role Conflict: Psychological Costs, Consequences, and an Agenda for Change*, chapter 6, pages 123–164. American Psychological Association, Washington, DC.

O'Neil, J. M. (2015b). *Men's Gender Role Conflict: Psychological Costs, Consequences, and an Agenda for Change*. American Psychological Association, Washington, DC.

O'Neil, J. M. (2015c). New Contextual Paradigms for Gender Role Conflict Theory, Research, and Practice. In *Men's Gender Role Con ict: Psychological Costs, Consequences, and an Agenda for Change*, chapter 3, pages 41–77. American Psychological Association, Washington, DC.

ONU Mujeres, Instituto Nacional de las Mujeres (Inmujeres), and Secretaría de Gobernación (Segob) (2016). Resumen ejecutivo. Technical report, ONU Mujeres, Instituto Nacional de las Mujeres (Inmujeres), Secretaría de Gobernación (Segob), Mexico City.

O.Nyumba, T., Wilson, K., Derrick, C. J., and Mukherjee, N. (2018). The use of focus group discussion methodology: Insights from two decades of application in conservation. *Methods in Ecology and Evolution*, 9(1):20–32.

Oreskovic, N. M., Roth Suzanne Lanyi Charles, P., Tsigaridi Kathrine Shepherd, D., Nelson, K. P., and Bar, M. (2014). Attributes of Form in the Built Environment That Influence Perceived Walkability. *Journal of Architectural and Planning Research*, 31(3):218–232.

Owens, J. G. (2016). Why Definitions Matter: Stalking Victimization in the United States. *Journal of Interpersonal Violence*, 31(12):2196–2226.

Pain, R. (2000). Place, social relations and the fear of crime: A review. *Progress in Human Geography*, 24(3):365–387.

Pain, R. H. (1997). Social Geographies of Women's Fear of Crime. *Transactions of the Institute of British Geographers*, 22(2):231–244.

Painter, K. (1992). Different Worlds: The spatial, temporal and social dimensions of female victimisation. In Evans, D. J., Fyfe, N. R., and Herbert, D. T., editors, *Crime, Policing and Place: Essays in environmental criminology*, chapter 9, pages 164–195. Routledge, London, 1st edition.

Palacios, C. L. and Coppa, C. R. (2015). Informe de sostenibilidad. Criterios y procedimientos en el mapeo de stakeholders. Un estudio de caso. *Cuadernos de Contabilidad*, 16(40):233–259.

Pan, L. and Katrenko, S. (2015). A Review of the UK's Interdisciplinary Research using a Citation-based Approach. Technical report, Elsevier, London.

Parikh, P., Fu, K., Parikh, H., Mcrobie, A., and George, G. (2015). Infrastructure Provision, Gender, and Poverty in Indian Slums. *World Development*, 66:468–486.

Parkes, J. (2015). Theory and diagnostics: Introduction. In Parkes, J., editor, *Gender Violence in Poverty Contexts: The Education Challenge*, chapter 1, pages 3–10. Routledge, Oxon.

Pathak, N., Dhairyawan, R., and Tariq, S. (2019). The experience of intimate partner violence among older women: A narrative review. *Maturitas*, 121:63–75.

Punch, K. F. (2014). *Introduction to Social Research: Quantitative & Qualitative Approaches*. SAGE Publications, London, 3rd edition.

Purkayastha, B. and Ratcliff, K. S. (2014). Routine Violence: Intersectionality at the interstices. *Gendered Perspectives on Conflict and Violence: Part B, Advances in Gender Research*, 18:19–43.

Quiroz Félix, J., Castillo Ponce, R. A., Ocegueda Hernández, J. M., and Varela Llamas, R. (2015). Delincuencia y actividad económica en México. *Norteamérica*, 10(2):187–209.

Rabiee, F. (2004). Focus-group interview and data analysis. *Proceedings of the Nutrition Society*, 63:655–660.

Radtke, H. L. and Stam, H. J. (1994). Introduction. In Radtke, H. L. and Henderikus, J. S., editors, *Power/Gender: Social Relations in Theory and Practice (Inquiries in Social Construction)*, chapter 1, pages 1–14. SAGE Publications, London.

Rafter, N. H. (2003). *Encyclopedia of Women and Crime*. Checkmark Books, New York, 2nd edition.

Redacción (2020). Se aprueba por mayoría presupuesto participativo en obra pública.

Repko, A. F. (2008). *Interdisciplinary Research : Process and Theory*. SAGE Publications, Los Angeles, 3rd edition.

Ridgeway, C. L. (2007). Gender as a Group Process: Implications for the Persistence of Inequality. In Shelley J. Correll, editor, *social Psychology of Gender*, volume 24, pages 311–333. Emerald Group Publishing Limited, Burlington, UK.

Risman, B. J. (2004). Gender as a Social Structure: Theory Wrestling with Activism. *Source: Gender and Society*, 18(4):429–450.

Robles, G., Calderón, G., and Magaloni, B. (2013). Las consecuencias económicas de la violencia del narcotráfico en México.

Rodman, M. C. (1992). Empowering Place: Multilocality and Multivocality. *American Anthropologist*, 94(3):640–656.

Rodriguez Ferreira, O. (2016). Violent Mexico: Participatory and Multipolar Violence Associated with Organised Crime. *International Journal of Conflict and Violence (IJCV)*, 10(1):40–60.

Rodríguez Ferreira, O. and Kuckertz, R. (2017). México, una sociedad extremadamente violenta.

Roitman, S. (2010). Gated communities: definitions, causes and consequences. *Urban Design and Planning*, 163(1):31–38.

Rosche, D. (2016). Agenda 2030 and the Sustainable Development Goals: gender equality at last? An Oxfam perspective. *Gender & Development*, 24(1):111–126.

Rossmo, D. K. (2014). Geographic Profiling.

Rotman, D. (2009). Historical Archaeology of Gendered Lives. In Rotman and Deborah, editors, *Historical Archaeology*, chapter 2, pages 11–39. Springer.

Ruiz, E. (2020). Protest for the femicide of Alexis in Cancún.

Russo, N. F. and Pirlott, A. (2006). Gender-based violence concepts, methods, and findings. *Annals of the New York Academy of Sciences*, 1087:178–205.

SafetiPin (2020). SafetiPin.

Saguy, A. C. (2003). *What is Sexual Harassment?* University of California Press, Berkeley.

Salguero, M. (2020a). Feminicidios en México.

Salguero, M. (2020b). Los feminicidios en México.

San Román Tajonar, G. and Meza de Luna, M. E. (2019). Geografía del acoso callejero en Querétaro. *Revista de análisis de Arte, Ciencia y Cultura Multidisciplinario*, 11(20):9–18.

Sani, G. M. D. and Quaranta, M. (2017). The Best Is Yet to Come? Attitudes Toward Gender Roles Among Adolescents in 36 Countries. *Sex Roles*, 77(1-2):30–45.

Scholz, R. W. and Tietje, O. (2002). Types of Case Studies. In Scholz, R. W. and Tietje, O., editors, *Embedded Case Study Methods*, chapter 1, pages 9–14. SAGE Publications, Thousand Oaks.

Scott, A. J., Rajakaruna, N., Sheridan, L., Gavin, J., and Centre, S. (2015). International Perceptions of Relational Stalking: The Influence of Prior Relationship, Perpetrator Sex, Target Sex, and Participant Sex. *Journal of Interpersonal Violence*, 30(18):3308–3323.

SDUOP (2016). Obras Entregadas: Paseo Río El Pueblito. Technical report, Secretaría de Desarrollo Urbano y Obras Públicas (SDUOP).

SDUOP (2017). Paseo Río El Pueblito. Technical report, Secretaría de Desarrollo Urbano y Obras Públicas (SDUOP), Querétaro.

Secretaría de Gobernación (2020). Title 5, Article 115.

SEDESOL (2013a). Catálogo Localidades.

SEDESOL (2013b). Datos Generales.

SEGOB, Inmujeres, and ONU Mujeres (2017). La Violencia Feminicida en México: Aproximaciones y Tendencias 1985-2016. Technical report, SEGOB, Inmujeres and ONU Mujeres, Mexico City.

Sen, G. (2019). Gender Equality and Women's Empowerment: Feminist Mobilization for the SDGs. *Global Policy*, 10(S1):28–28.

Serendipia (2019). Mapa de intentos de secuestro en Ciudad de México y Estado de México.

SESNSP (2018a). Datos Abiertos de Incidencia Delictiva.

SESNSP (2018b). Formato del nuevo Informe Policial Homologado.

SESNSP (2018c). Instrumento para el Registro, Clasificación y Reporte de los Delitos y las Víctimas CNSP/38/15 Manual de llenado. Technical report, Secretariado Ejecutivo del Sistema Nacional de Seguridad Pública (SESNSP).

SESNSP (2020). Datos Abiertos de Incidencia Delictiva.

SHCP (2008). Presupuesto basado en Resultados (PbR) y Sistema de Evaluación del Desempeño (SED).

Sheinbaum, D. (2008). Gated communities in Mexico City: An historical perspective. *Urban Design International*, 13(4):241–252.

Shepherd, L. J. (2008). *Gender, Violence & Security: Discourse as Practice.* Zed Books, London.

Simons, H. (2009). Evolution and Concept of Case Study Research. In Simons, H., editor, *Case Study Research in Practice*, chapter 1, pages 12–27. SAGE Publications, London.

Sinha, M. (2013). Measuring violence against women: Statistical trends. Technical Report 85-002-X, Minister of Industry, Ottawa.

Smith, M. J. (2008). Addressing the Security Needs of Women Passengers on Public Transport. *Security Journal*, 21(1-2):117–133.

Solymosi, R., Cella, K., and Newton, A. (2018). Did they report it to stop it? A realist evaluation of the effect of an advertising campaign on victims' willingness to report unwanted sexual behaviour. *Security Journal*, 31(2):570–590.

Solymosi, R., Gil, D. B., laura Vozmediano, and ines Guedes (2019). A place-based approach to fear of crime: A systematic review of app-based and crowdsourced measures. pages 1–44.

Solymosi, R. and Newton, A. (2020). London, UK. In Loukaitou-Sideris, A. and Ceccato, V., editors, *Transit crime and sexual violence in cities: international evidence and prevention*, pages 185–195. Routledge, New York.

Stanley, L. and Wise, S. (1993). *Breaking out again: Feminist ontology and epistemology*. Taylor & Francis, London, 2nd editio edition.

Steward, D. W. and Shamdasani, P. N. (2015). *Focus groups: Theory and practice*. SAGE Publications, Thousand Oaks, 3rd edition.

Stop Street Harassment (2017). Stop Street Harassment: Our Work.

Svampa, M. (2001). *Los que Ganaron. La Vida en los Countries y Barrios Privados.* Editorial Biblos Sociedad, Buenos Aires, 2a edition.

The British Academy (2016). Crossing Paths: Interdisciplinary Institutions, Careers, Education and Applications. Technical report, The British Academy, London.

Tobi, H. and Kampen, J. K. (2017). Research design: the methodology for interdisciplinary research framework. *Quality & Quantity*, pages 1–17.

Tolhurst, R., Leach, B., Price, J., Robinson, J., Ettore, E., Scott-Samuel, A., Kilonzo, N., Sabuni, L. P., Robertson, S., Kapilashrami, A., Bristow, K., Lang, R., Francelina Romao, and Sally Theobald (2012). Intersectionality and gender mainstreaming in international health: Usinga feminist participatory action research process to analyse voices and debatesfrom the global south and north. *Social Science & Medicine*, 74(11):1825–1832.

Transparency International (2018). Corruption Perceptions Index 2017.

Trench, S., Oc, T., and Tiesdell, S. (1992). Safer Cities for Women: Perceived Risks and Planning Measures. *The Town Planning Review*, 63(3):279–296.

Tripathi, K., Borrion, H., and Belur, J. (2017). Sexual harassment of students on public transport: an exploratory study in Lucknow, India. *Crime Prevention and Community Safety*, 19:240–250.

Trueba, E. (2020). Ampliará regidora programa de defensa personal para mujeres.

Tudela Rivadeneyra, A., Lopez Dodero, A., Mehndiratta, S. R., Bianchi Alves, B., and Deakin, E. (2015). Reducing Gender-Based Violence in Public Transportation. *Elizabeth*, 2531:187–194.

UN (1979). Convention on the Elimination of All Forms of Discrimination against Women.

UN (1993). Vienna Declaration and Programme of Action.

UN (1995). Fourth World Conference on Women, Beijing 1995.

UN-Habitat (2016). Urbanization and Development: Emerging Futures - Key Findings and Messages. Technical report, UN Habitat, Nairobi.

UN Women (2009). Short History of CEDAW Convention.

UN Women (2012). Key international and regional laws, instruments and agreements.

UN Women (2017). Safe Cities and Safe Public Spaces. Technical report, UN Women, New York.

UN Women (2018). Ending violence against women.

UNAM (2018). La Ley de Seguridad Interior viola derechos fundamentales de la población.

UNESCO and UNGEI (2015). School-related gender-based violence is preventing the achievement of quality education for all - Education For All Global Monitoring Report.

Unterhalter, E., North, A., Arnot, M., Lloyd, C., Moletsane, L., Murphy-Graham, E., Parkes, J., and Saito, M. (2014). Interventions to enhance girls ' education and gender equality. Education Rigorous Literature Review. Technical Report 22, Department for International Development, London.

Ureste, M. (2020). Casi el 100% de los casos de acoso y hostigamiento sexual en contra de la mujer queda impune: Red TDT.

Valentine, G. (1989). The geography of women's fear. *The Royal Geographical Society (with the Institute of British Geographers)*, 21(4):385–390.

Valentine, G. (1992). Images of Danger: Women's Sources of Information about the Spatial Distribution of Male Violence. *The Royal Geographical Society*, 24(1):22–29.

Valle-Jones, D. (2019). Crimen por tu Rumbo.

van Wilsem, J. (2009). Urban Streets as Micro Contexts to Commit Violence. In Weisburd, D., Bernasco, W., and Bruinsma, G. J. N., editors, *Putting Crime in its Place: Units of Analysis in Geographic Criminology*, chapter 9, pages 199–216. Springer, New York.

Vesselinov, E., Cazessus, M., and Falk, W. (2007). Gated Communities and Spatial Inequality. *Journal of Urban Affairs*, 29(2):109–127.

Vickers, D. and Rees, P. (2007). Creating the UK National Statistics 2001 output area classification. *J. R. Statist. Soc. A*, 170(2):379–403.

Vilalta, C. J. (2011). Fear of crime in public transport: Research in Mexico City. *Crime Prevention and Community Safety*, 13(3):171–186.

Vilalta Perdomo, C. J. (2013). La inefectividad de las comunidades cerradas para controlar el miedo al crimen. *Gestion y Politica Publica*, pages 127–155.

Villegas, P. (2020). Las mujeres de México toman las calles para protestar contra la violencia.

Walby, S. (2005). Introduction: Comparative gender mainstreaming in a global era. *International Feminist Journal of Politics*, 7(4):453–470.

Walker, J., Frediani, A. A., and Trani, J. F. (2012). Gender, difference and urban change: Implications for the promotion of well-being? *Environment and Urbanization*, 25(1):111–124.

Wallace, P. (2012). Case Study Research in Feminism.

Wattenbarger, M. (2020a). Mexican women's patience snaps at Amlo's inaction on femicide.

Wattenbarger, M. (2020b). Mexico police open fire on femicide protest in Cancún.

Weisburd, D. (2015). The law of crime concentration and the criminology of place. *Criminology*, 53(2):133–157.

Wesely, J. K. and Gaarder, E. (2004). The Gendered "Nature" of the Urban Outdoors: Women Negotiating Fear of Violence. *Gender and Society*, 18(5):645–663.

Whitzman, C., Legacy, C., Andrew, C., Klodawsky, F., Shaw, M., and Viswanath, K., editors (2013). *Building Inclusive Cities: Women's Safety and the Right to the City*. Routledge, London.

Whitzman, C., Shaw, M., Andrew, C., and Travers, K. (2009). The effectiveness of women's safety audits. *Security Journal*, 22(3):205–218.

WHO (2001). Putting Women First. Technical report, World Health Organization (WHO), Geneva.

WHO (2005). WHO multi-country study on women's health and domestic violence against women: summary report of initial results on prevalence, health outcomes and women's responses. Technical report, World Health Organization (WHO), Geneva.

WHO (2007). WHO ethical and safety recommendations for researching, documenting and monitoring sexual violence in emergencies. Technical report, World Health Organization (WHO), Geneva.

WHO (2012). Understanding and addressing violence against women: Intimate partner violence. Technical report, World Health Organization (WHO), Geneva.

WHO (2013). Global and regional estimates of Violence Against Women: Prevalence and health effects of intimate partner violence and non-partner sexual violence. Technical report, World Health Organization (WHO); London School of Hygiene and Tropical Medicine; South African Medical Research Council.

WHO (2018). WHO: Addressing Violence Against Women Key achievements and priorities. Technical report, World Health Organization, Geneva.

WHO (2020). The ecological framework.

Wickramasinghe, M. (2010). *Feminist research methodology : making meanings of meaning-making*. Routledge.

Willman, A. M. and Corman, C. (2013). Sexual and Gender-Based Violence: What is the World Bank Doing, and What Have We Learned? A Strategic Review. Technical report, World Bank, Washington D.C.

WISE (2005). Women's Community Safety Audit Guide. Technical report, Women's Initiatives for Safer Environments (WISE).

World Bank, The Global Women's Institute, and Inter-American Development Bank (2014). Violence Against Women & Girls (VAWG) Resource Guide: Introduction. Technical report, World Bank Group, Washington, D.C.

World Bank Data (2018). Mexico.

World Population Review (2018). Mexico Population.

Wortley, R. and Townsley, M. (2017). Environmental criminology and crime analysis: Situating the theory, analytic approach and application. In Wortley, R. and Townsley, M., editors, *Environmental Criminology and Crime Analysis: Second Edition*, chapter 1, pages 1–25. Routledge, New York, 2nd edition.

Yao, X. (2009). Georeferencing, Geocoding.

Yu, C. and He, Z.-C. (2017). Analysing the spatial-temporal characteristics of bus travel demand using the heat map. *Journal of Transport Geography*, 58:247–255.

Zepeda Lecuona, G. R. (2017). Índice Estatal de Desempeño de las Procuradurías y Fiscalías. Technical report, Impunidad Cero, Mexico City.

# Appendices

## A International treaties, agreements and conventions regarding Violence Against Women

International interest to end violence against women began gaining recognition as an international concern around the 1970s, when the emphasis on human rights was growing and the boundaries of the State for private and public spheres of life began blurring (UN Women, 2009; Landes, 1998). Since then, several global engagements and international agreements regarding norms and standards have been drafted in order to provide guidance to the international community in the response for overcoming discrimination and providing women a life free of violence. The most prominent include the following:

- The Convention on the Elimination of All Forms of Discrimination against Women (CEDAW) was adopted in 1979 by the UN General Assembly. It is often described as an international bill of rights for women; however, it does not explicitly mention violence against women (UN Women, 2018, 2009; UN, 1979).

- The 1993 World Conference on Human Rights—in which the Vienna Declaration and Programme of Action was adopted—was the first to recognise violence against women as a human rights violation and contributed to the Declaration on the Elimination of Violence Against Women. It called for the appointment of a Special Rapporteur on violence against women in the Vienna Declaration and Programme of Action and it became a tipping point in the recognition of women's rights (OHCHR, 2018; UN Women, 2018; UN, 1993).

- The Declaration on the Elimination of Violence Against Women. It is considered the first international instrument that explicitly addressed violence against women, proposed a framework for international action, and provided a definition for violence against women, which is now internationally acknowledged (UN Women, 2018; UN, 1993).

- The Beijing Platform for Action, adopted in in 1995 at UN 4th World Conference on Women, commits the governments to strategic objectives regarding gender-sensitive human rights education to the police, military and law enforcement, as well as provide information regarding

international and regional instruments and strengthen institutional mechanisms with respect to violence against women (UN Women, 2012; UN, 1995).

- The Inter-American Convention to Prevent, Eradicate and Punish Violence Against Women "Belém do Parà Convention". It is considered the first international binding international treaty to recognise that violence against women constitutes a violation of human rights, condemning violence against women as an assault to human dignity, and outlines states' obligations to eliminate it (LSE, 2016; ONU Mujeres et al., 2016; OAS, 1994).

- The Council of Europe Convention on preventing and combating violence against women and domestic violence 2011 – Istanbul Convention. It is one of the two treaties in the world, together with the Convention of Belém do Parà, that focuses exclusively on eliminating all forms of violence against women (LSE, 2016; Council of Europe, 2011).

- The Latin American Model Protocol for the Investigation of Gender-Related Killings of Women (femicide/feminicide). Published in 2014, it is a practical tool on how to perform investigation and prosecution of such acts. Its purpose is to offer guidance and lines of action for specialised person working on these cases (UN Women, 2018; OHCHR and Mujeres, 2014).

# B Level of marginalisation and social deprivation of 29 localities of Corregidora municipality

Table showing the results of the level of marginalisation and social deprivation of 29 localities of Corregidora municipality. The results are based on a study that combined the National Marginalisation Index developed by the National Population Council (CONAPO, 2012) and the Social Recession Index developed by the Social Development Policy (CONEVAL, 2017).

*Table 1 – Level of marginalisation and social deprivation of 29 localities of Corregidora municipality (Source: provided by IMPLASCO in 2017).*
*POP = Population, HH = Households || VH = Very High, H = High, M = Medium, L = Low, VL = Very Low*

|  | Locality | POP | HH | Marginalisation Index | | Social deprivation | |
|---|---|---|---|---|---|---|---|
|  |  |  |  | 2010 | 2016 | 2010 | 2016 |
| 1 | 20 de Enero | 396 | 92 | H | H | M | VL |
| 2 | Bosques de Lourdes | 38 | 8 | H | H | M | M |
| 3 | Buenos Aires | 9 | 3 | VH | H | H | L |
| 4 | Charco Blanco | 1752 | 420 | H | M | VL | VL |
| 5 | Colonia Doctores | 129 | 29 | H | VL | L | VL |
| 6 | Colonia Ecológica (Valle de Oro) | 112 | 29 | H | M | L | VL |
| 7 | Colonia el Paraíso | 681 | 155 | H | H | L | VL |
| 8 | Colonia las Cabañas (Colinas de los Ángeles) | 110 | 25 | H | H | L | L |
| 9 | Colonia Ricardo Flores Malagón | 96 | 19 | H | H | M | L |
| 10 | Colonia Valle Dorado Dos Mil | 914 | 203 | H | H | VL | L |
| 11 | Colonia Vista Hermosa | 354 | 88 | H | H | VL | L |
| 12 | Hacienda el Batán | 27 | 9 | H | VL | L | VL |
| 13 | El Jaral | 1820 | 444 | H | M | L | VL |
| 14 | La Cantera | 142 | 30 | H | L | VL | VL |
| 15 | Rancho la Pichona | 10 | 4 | H | VL | L | VL |
| 16 | La Poza | 324 | 82 | H | H | M | VL |
| 17 | La Purísima de la Cueva | 421 | 102 | H | L | L | VL |
| 18 | Lomas de Charco Blanco | 71 | 20 | H | M | L | VL |
| 19 | Lomas de la Cruz | 545 | 122 | H | H | M | L |
| 20 | Lomas de Zaragoza | 182 | 44 | H | H | L | L |
| 21 | Praderas de Lourdes | 100 | 21 | H | M | VL | VL |
| 22 | Puertas de San Rafael | 978 | 248 | H | M | L | VL |
| 23 | Rancho Vanegas | 22 | 7 | H | H | L | L |
| 24 | San Felipe Calichar | 7 | 3 | H | L | L | VL |
| 25 | San Rafael | 813 | 183 | H | M | M | VL |
| 26 | Taponas | 305 | 67 | H | H | L | VL |
| 27 | Valle de los pinos | 639 | 138 | H | M | L | VL |
| 28 | Boulevares del Cimatario | - | - | H | L | - | VL |
| 29 | Jardínes de la Corregidora | - | - | H | M | - | VL |

# Municipio de Corregidora
## Organigrama General

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                    Ayuntamiento
                         |
                    Presidente
                    Municipal
                         |
                 Coordinación
                 General de
                 Gabinete
```

**Sector Centralizado**

Secretaría Técnica

Secretaría Particular

| Secretaría del Ayuntamiento | Secretaría Gobierno | Secretaria de Tesorería y Finanzas | Secretaría de Servicios Municipales | Secretaría de Desarrollo Urbano y Obras Públicas | Secretaría de Desarrollo Sustentable | Secretaría de Desarrollo Social | Secretaría de Seguridad Pública | Secretaría de Administración | Secretaría de Control Interno y Combate a la Corrupción |

**Sector Paramunicipal**

Sistema Municipal DIF

Instituto Municipal de la Mujer

19 Julio 2017

# Coordinación de Gabinete
## Organigrama

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                    ┌─────────────────────┐
                    │     Coordinación     │
                    │      General         │
                    │    de Gabinete       │
                    └─────────────────────┘
                              │
                    ┌─────────────────────┐
                    │     Unidad de        │
                    │     Entidades        │
                    │  Desconcentradas y   │
                    │ Gestión de Recursos  │
                    └─────────────────────┘
              ┌───────────────┼───────────────┐
    ┌──────────────┐  ┌──────────────┐  ┌──────────────┐
    │   Instituto  │  │  Instituto   │  │  Centro de   │
    │   Municipal  │  │   Mpal. de   │  │ Conservación y│
    │ de la Juventud│  │ Planeación y │  │ Fomento del Rio│
    │              │  │Sustentabilidad│  │  El Pueblito │
    └──────────────┘  └──────────────┘  └──────────────┘
```
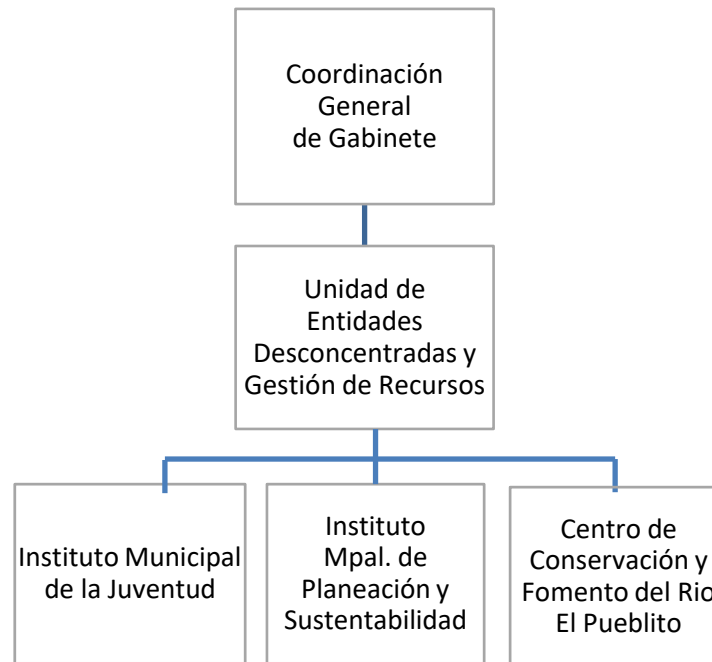
# Organigrama General
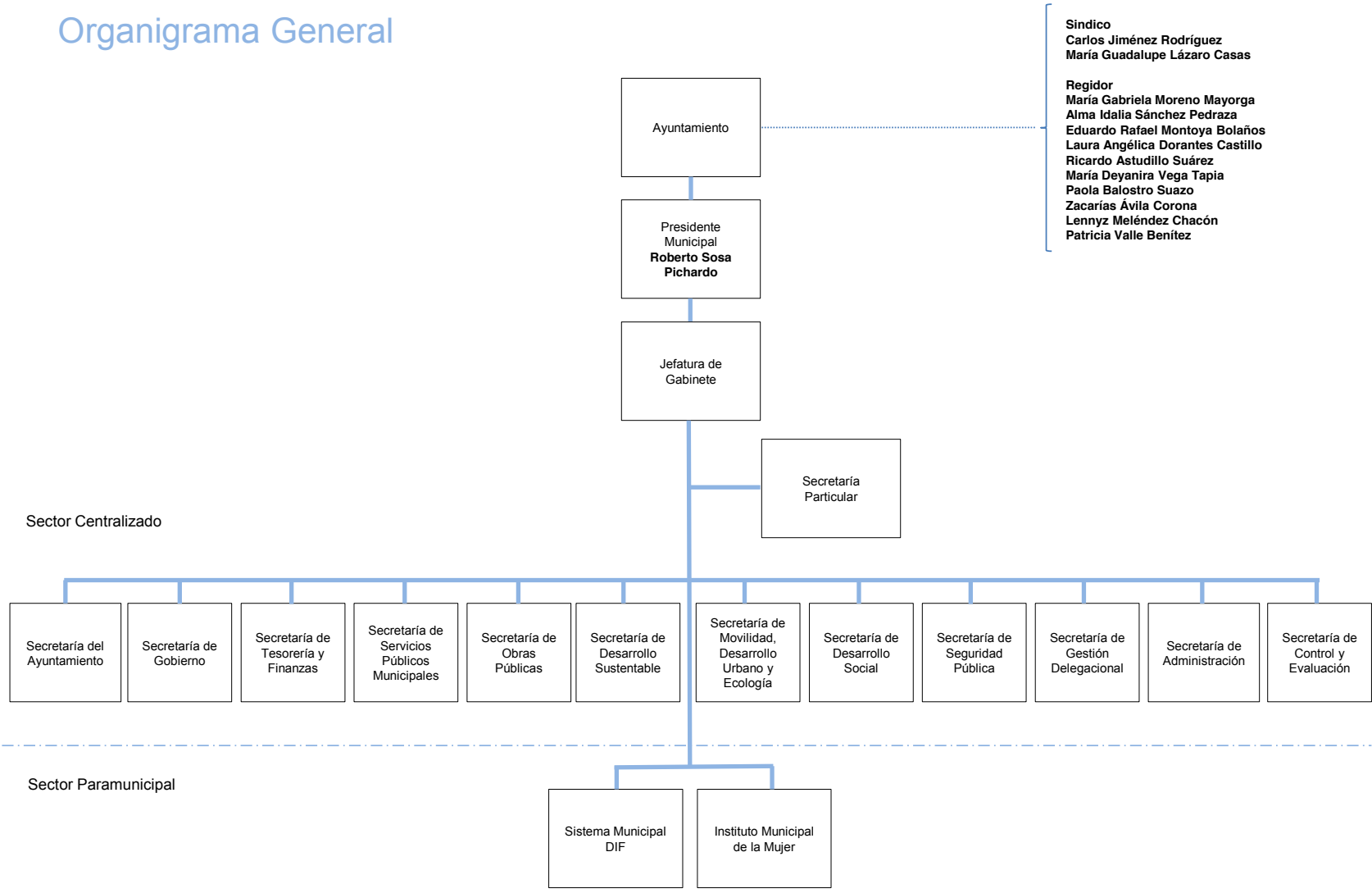
**Sindico**
**Carlos Jiménez Rodríguez**
**María Guadalupe Lázaro Casas**

**Regidor**
**María Gabriela Moreno Mayorga**
**Alma Idalia Sánchez Pedraza**
**Eduardo Rafael Montoya Bolaños**
**Laura Angélica Dorantes Castillo**
**Ricardo Astudillo Suárez**
**María Deyanira Vega Tapia**
**Paola Balostro Suazo**
**Zacarías Ávila Corona**
**Lennyz Meléndez Chacón**
**Patricia Valle Benítez**

Ayuntamiento

Presidente Municipal
**Roberto Sosa Pichardo**

Jefatura de Gabinete

Secretaría Particular

**Sector Centralizado**

| Secretaría del Ayuntamiento | Secretaría de Gobierno | Secretaría de Tesorería y Finanzas | Secretaría de Servicios Públicos Municipales | Secretaría de Obras Públicas | Secretaría de Desarrollo Sustentable | Secretaría de Movilidad, Desarrollo Urbano y Ecología | Secretaría de Desarrollo Social | Secretaría de Seguridad Pública | Secretaría de Gestión Delegacional | Secretaría de Administración | Secretaría de Control y Evaluación |

**Sector Paramunicipal**

| Sistema Municipal DIF | Instituto Municipal de la Mujer |

# D Stakeholder semi-structured interview in English and Spanish

**Stakeholder interview**
**IMPLASCO, Planning Unit and Finance Area (project approval) agents**

<u>Introduction [5-10 minutes]</u>

- Present and explain research
- Provide consent form
- Instructions: Reassure anonymity

<u>Questions [~30 minutes]</u>

1. What is your role(s) and responsibilities within the local government of the municipality?

2. What are the mechanisms the municipality has to identify, explore and/or understand the problems or challenges that the municipal communities face?
   a. Who carries them out? For example, government agencies (at local or state levels), commissions, different sectors associations, NGOs, consultancies...
   b. Is there collaborations with other sectors (governmental or private) or institutions to explore these issues? For example, with the police department, IMPLASCO, Inmujeres, the urban planning unit...
   c. How are these collaborations used?
   d. Do you know of any examples of how this worked or how they were applied?

3. Speaking of infrastructure/public works planning, do you know if there are processes, protocols or codes that need to be included to carry them out?
   a. Which are them?
      i. In case there are not, is it (infrastructure planning / public works or urban expansion) that is controlled by the market? For example, private investment, housing developers, businesses, industry...

4. Who decides what type of public work regarding public spaces (i.e. streets, sidewalks, parks, public squares, bus stops)? Do you know if these decisions are related to identified needs—as solution proposals?
   a. Who decides which agency will carry it out?
   b. Who designs and approves them?
   c. Are there any protocols/strategies that are required to be applied in the design and/or implementation of these works? Prompt for gender protocols (gender mainstreaming), other examples: social needs, environmental crime prevention strategies.

5. Do you think violence grown in the municipality?
   a. If yes, what kind of violence?
   b. Do you know if there been an observed increase in gender-based violence against women? Such as higher rates of reported harassment, female disappearances, rape, feminicide.
      i. What do you think is the role of the municipality to reduce this violence? Do you think/believe that the municipality can do to reduce it?
      ii. Do you know if there is any pressure at local, state or national level to understand why this violence is happening and find ways to alleviate it? Such as better management, better design and implementation, better policing policies, more patrolling and policing, social programmes.

<u>Wrap up session [5-10 minutes]</u>

- Any further protocols that are relevant to the built environment/public spaces
- Re-iterate anonymity
- Thank participant for their time

**Entrevista a agentes de gobierno**
**IMPLASCO, Unidad de planeación y Finanzas (Aprobación de proyectos)**

- Presentar y explicar investigación
- Formulario de consentimiento informado
- Instrucciones: Asegurar anonimato

Preguntas [~30 minutos]

1. ¿Cuál es su puesto de trabajo y/o responsabilidades dentro del gobierno local del municipio?

2. ¿Con qué mecanismos cuenta el municipio para identificar, explorar y/o comprender los problemas o retos que las comunidades del municipio tienen?
   a. ¿Quienes llevan a cabo estas actividades? Por ejemplo, agencias de gobierno (locales o estatales), comisiones, asociaciones de diferentes sectores, ONGs, consultores…
   b. ¿Existe colaboración con otros sectores (tanto de gobierno o privados) o instituciones para explorarlos? Por ejemplo, con el departamento de policía, IMPLASCO, Inmujeres, la unidad de planeación urbana…
   c. ¿Para que tipo de proyectos se usan estas colaboraciones?
   d. ¿Conoce algún ejemplo de cómo hayan funcionado o cómo fueron aplicadas?

3. Hablando de planeación de infraestructura/obra pública y de expansión urbana, ¿conoce si existen procesos, protocolos o códigos que deban de ser incluidos para llevar a cabo el proyecto u obra?
   a. ¿Cuáles son?
      i. En caso de no haber, ¿es algo (planeación de infraestructura/obra pública o expansión urbana) que está controlado por el mercado? Por ejemplo, inversión privada, como desarrolladoras (de vivienda), negocios, industria…

4. ¿Quién decide qué tipo de obra pública tiene que ser llevada a cabo en cuanto a desarrollo de espacios públicos e infraestructura (calles, banquetas, parques, plazas, paradas de autobús)? ¿Sabe si estas decisiones están relacionadas a la identificación de retos—como propuestas de solución?
   a. ¿Quién decide qué agencia llevará a cabo esta obra pública?
   b. ¿Quién la diseña y quién la aprueba?
   c. ¿Existen protocolos o estrategias que deben de ser aplicadas en el diseño y/o implementación de estas obras? Sugerir **protocolos de género (incorporación de perspectiva de género)**, necesidades sociales, estrategias ambientales de prevención de delito.

5. ¿Cree que la violencia ha incrementado en el municipio?
   a. En caso de que sí, ¿qué tipos de violencia?
   b. ¿Sabe si se ha observado un crecimiento en la violencia de género contra las mujeres? Tales como un incremento en los reportes de acoso callejero, desaparición de mujeres, violación o feminicidio.
      i. ¿Cuál es/cree que es el rol del municipio para reducir esta violencia? ¿Qué puede/cree que pueda hacer municipio para reducirla?
      ii. ¿Sabe si existe presión a nivel local, estatal o nacional para entender porqué esta sucediendo esta violencia y si se están explorando maneras de mitigarla/solucionarla? Tal como mejor administración y manejo de obra pública y expansión urbana, mejor diseño e implementación de la misma, mejores políticas de seguridad, vigilancia y policía, programas sociales.

Finalizar entrevista [5-10 minutos]

- ¿Cualquier otro protocolo que sea relevante para el medio urbano / espacios públicos / infraestructura?
- Reiterar anonimato
- Agradecer al participante por su tiempo

# E Household survey in English and Spanish

**Household code:**

[Locality code + Ageb code + Block code] + Number of try

Example:

019**0227**05**002**

If there are 2 or more women over 18 years of age in the household who wish to participate:
Select the women whose birthday is sooner to the date of the survey.

<u>Introduction [5-10 minutes]</u>

- *Reassure anonymity and confidentiality*
    - *Everything that is disclosed in the survey will be strictly anonymous and confidential.*
    - *No names will be asked, neither from the participant nor from people from the stories she decides to share, and the participant should be discouraged from mentioning names (including hers) at all times.*
- *Reassert consent*

<u>Was the survey successful?</u>

a. Yes
b. Partly
    a. The respondent decided not to give more information
    b. Lack of time
    c. Another reason, specify
c. No
    a. Absence of a woman
    b. Disabled woman
        b.1 Cannot hear / talk
        b.2 Cannot understand, concentrate or has a mental disability that does not allow her to answer
        b.3 Another type of disability
    c. Ill who cannot give the interview
    d. Does not speak Spanish
    e. She is not allowed to give information
    f. She does not wish to participate due to lack of time
    g. She does not wish to participate due to lack of trust
    h. Another reason, specify

Questions [~30 minutes] – 47 questions

**Section I. Sociodemographic characteristics.**

1. How old are you?  _____

| | | |
|---|---|---|
| a. 18-25 | d. 36-40 | g. 55-60 |
| b. 26-30 | e. 41-45 | h. 61-65 |
| c. 31-35 | f. 46-50 | i. Over 66 |

| 2. How many full bathrooms are there in the house? (with shower and toilet)<br><br>a. None<br>b. 1<br>c. 2 or more | 3. How many cars, pick-ups and/or vans does your household has?<br><br>a. None<br>b. 1<br>c. 2 or more | 4. Does your house have internet connection?<br><br>a. Yes<br>b. No | 5. Of all the people over 14 years of age that live in this house, how many of them were in full/part-time employment during the last month?<br><br>a. Yes<br>b. No | 6. How many rooms are used for sleeping? (Do not count hallways and bathrooms)<br><br>a. None<br>b. 1<br>c. 2<br>d. 3<br>e. 4 or more |
|---|---|---|---|---|

| 7. Are you the head of the household?<br><br>a. Yes (go to next question)<br>b. No (go to question 9) | 8. Until which year or grade did you course? Write grade (go to question 10).<br><br>a. None<br>b. Preschool<br>c. Primary school<br>d. Secondary school<br>e. High school or baccalaureate<br>f. Technical or commercial studies with finished primary school<br>g. Technical or commercial studies with finished secondary school<br>h. Technical or commercial studies with finished high school<br>i. Normal school with finished primary or secondary school<br>j. Normal degree<br>k. Bachelor or professional<br>l. Postgraduate (specialty, masters or PhD) | 9. Until which year or grade did you course? Write grade.<br><br>a. None<br>b. Preschool<br>c. Primary school<br>d. Secondary school<br>e. High school or baccalaureate<br>f. Technical or commercial studies with finished primary school<br>g. Technical or commercial studies with finished secondary school<br>h. Technical or commercial studies with finished high school<br>i. Normal school with finished primary or secondary school<br>j. Normal degree<br>k. Bachelor or professional<br>l. Postgraduate (specialty, masters or PhD) | 10. Do you know how to read and write a message?<br><br>a. Yes<br>b. No |
|---|---|---|---|

| 11. Do you currently go to school (high school / university)?<br><br>a. Yes<br>b. No | 12. Do you have a paid employment (includes self-employment)?<br><br>a. Yes<br>b. No | 13. Last week, you…<br><br>a. Made or sold a product<br>b. Helped in a business (family or other)<br>c. Offered a service in exchange of money (carried bags, washed cars, babysat, etc…)<br>d. Are employed in a business or company<br>e. Attended your own business<br>f. Had work but did not go to work (by license, sick leave or holidays)<br>g. Looked for a job<br>h. Student<br>i. Are retired or pensioned<br>j. Housewife<br>k. Do not work | 14. According to your culture, do you consider yourself indigenous/native?<br><br>a. Yes<br>b. Yes, partly<br>c. No<br>d. Do not know |
|---|---|---|---|

| 15. At present, you… | If the response was b-f in question 14. |
|---|---|
| a. Are single<br>b. Have a partner<br>c. Are married<br>d. Are separated<br>e. Are divorced<br>f. Are widowed | 16. What is the gender of your partner?<br><br>a. Male<br>b. Female<br>c. Prefer not to say<br>d. Other _____ |

**Section II. Perceptions of community and social cohesion.** We are interested in knowing a bit more about your house, your community and the interaction between neighbours.

| 17. How long have you lived in this… | 18. Do you know your neighbours? | 19. Do you have friends or acquaintances that live in this neighbourhood or locality? |
|---|---|---|
| a. Neighbourhood or locality?<br>____<br>b. City? ____ | a. Yes, everyone<br>b. Yes, some<br>c. No | a. Everyone<br>b. Most of them<br>c. Some of them<br>d. None<br>e. Does not know / does not answer |

| 20. Sometimes people in neighbourhoods meet to carry out community activities, how often do you have meetings in your neighbourhood for… | a. Very frequently<br>b. Frequently<br>c. Infrequently<br>d. Never<br>e. Not applicable<br>f. Do not know / No answer |
|---|---|
| 1. religious events? | |
| 2. organising parties? | |
| 3. solve issues regarding public services like water, lighting, paving of streets or garbage collection? | |
| 4. organising neighbourhood security? | |
| 5. request services from the delegation or municipality? | |
| 6. to gather and socialise casually in a communal or public area (patio, garden, hall, street, etc.) | |
| 7. other purpose? (specify) | |

| 21. Do you feel safe in this neighbourhood?<br>a. Yes<br>b. No<br>c. Do not know / No answer | |
|---|---|
| Open question if the response was **a** or **b** in question 19. ||
| 22. Why Yes/No?<br>a. Do not know / No answer ||
|  ||

| | 23. Have you ever witnessed or been the victim of any of these crimes within your neighbourhood?<br><br>a. Once<br>b. More than once *(specify number of times)*<br>c. Never<br>d. Not applicable<br>e. Do not know / No answer | | If the response was a or b in question 22.<br>24. What of the following happened?<br><br>a. Neighbours confronted the person<br>b. Neighbours gathered to solve it<br>c. Police intervened<br>d. Nothing was done<br>e. Do not know / No answer |
|---|---|---|---|
| 1. | Loud noise (playing loud music, parties, repairing something or doing house chores)? | | |
| 2. | Someone doing graffiti in walls or scratching cars? | | |
| 3. | Someone breaking windows of houses, businesses, cars or other objects? | | |
| 4. | Someone street racing? | | |
| 5. | Someone drinking alcohol in the streets? | | |
| 6. | Someone selling pirate products? | | |
| 7. | People selling drugs? | | |
| 8. | Someone consuming drugs? | | |
| 9. | Someone blocking the streets? | | |
| 10. | Someone gang fighting? | | |
| 11. | Someone arguing or fighting among neighbours? | | |
| 12. | Someone prostituting? | | |
| 13. | Someone assaulting or stealing houses, businesses or cars? | | |
| 14. | Someone assaulting or stealing people in the streets? | | |
| 15. | Someone threatening or extorting? | | |
| 16. | Someone firing any kind of firearm? | | |

| 25. Did any of these incidents affect your behaviour?<br><br>a. Yes<br>b. No *(go to question 27)* | 26. ¿Cómo afectó este incidente a su comportamiento? *(Opción múltiple)*<br><br>a. You barely go out of the house<br>b. You avoid going out at night<br>c. You go out, but you have to be very alert<br>d. You go out, but you carry something to protect yourself from other people (clubs, pocket knives, knives, gun)<br>e. You join or form a gang that demands respect by force<br>f. You have not changed your habits<br>g. Do not know / No answer |
|---|---|

4

## Section III. Violence against women at community level

I would now like to ask you about some situations that us women live in public spaces or public areas of our communities (neighbourhood, locality, municipality), like the street, public transport, markets, parks, sports areas, churches, places of fun like bars/pubs, restaurants, clubs, saloons or places for dancing and partying, fairs/carnivals, assemblies or neighbourhood or religious gatherings.

| *Remind participants if the events took place in public spaces.* | 27. In the streets of your neighbourhood, locality or municipality, have you ever… a. Yes b. No **Go to next questions if answer is "Yes"** | 28. How many times did this happen during the last year? a. More than 5 b. From 2 to 5 times c. Once d. It was more than a year ago | 29. The most recent time, do you remember where it happened? a. Yes b. Vaguely c. No *If answers YES, write down location or note in map.* *If answer is VAGUELY, go to next question.* | 30. This happened at… *Note down (area) if remembers* a. Park b. A plaza c. Market / mall d. Public transport e. Taxi f. Church / chapel g. Bar/club h. Fair / party / assembly i. Other (specify) | 31. Do you remember the time at which this happened? a. Morning b. Noon c. Evening d. Night e. Midnight f. Dawn g. 6-10am h. 11-2pm i. 3-4pm j. 5-7pm k. 8-11pm l. 12-2am m. 3-5am n. Doesn't know / does not want to answer | 32. From this list, who did what you mention? *Write age and gender (Female/Male)* a. Family b. Acquaintance c. Friend d. Neighbour e. Security agent / police f. Military / marine g. Priest / minister of worship h. Public transport driver i. Stranger j. Other (specify) | 33. Where you alone with this happened? a. Yes b. No *(go to question 35)* | 34. Who were you with? a. Family member b. Acquaintance c. Friend d. Neighbour e. Work colleague f. Family member g. Other (specify) |
|---|---|---|---|---|---|---|---|---|
| 1. been whistled, told unpleasant or offensive remarks of sexual nature or regarding your body? | | | | | | | | |
| 2. been watched over or followed? | | | | | | | | |
| 3. been offended or humiliated for being a woman (made you feel less or badly)? | | | | | | | | |
| 4. been ignored or not considered in the street because of being a woman? | | | | | | | | |
| 5. been pinched, pulled hair, pushed, pulled, slapped or thrown an object? | | | | | | | | |
| 6. been lifted the skirt or dress or pulled clothes to see your underwear or any part of your body? | | | | | | | | |

| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| 7. | been touched, fumbled, kissed or been leaned against without your consent? | | | | | | | |
| 8. | feared of being attacked or sexually abused? | | | | | | | |
| 9. | someone showed you their private parts or touched him/herself in front of you? | | | | | | | |
| 10. | been forced to watch sexual acts, scenes depicting sexual acts or pornography (photos, magazines, videos or movies)? | | | | | | | |
| 11. | been kicked or punched? | | | | | | | |
| 12. | someone attempted to force you to have sexual intercourse against your will? | | | | | | | |
| 13. | been forced to have sexual intercourse against your will? | | | | | | | |

**---------------------------Question 27: If all answers are "No": go to question 35 then <u>finish survey</u> ---------------------------**

| 35. What do you think you could have done to prevent this/these event(s) from happening? (Open question) | 36. What do you think others could have done to prevent this/these event(s) from happening? (Open question) |
|---|---|
| | |

| 37. To date, have you ever told anyone about your experience?<br><br>a. Yes<br>b. No *(go to question 39)* | 38. Did you tell… *(Multiple choice)*<br><br>a. Your spouse, partner, boyfriend/girlfriend<br>b. A family member<br>c. Friend or acquaintance<br>d. Psychologist or social worker<br>e. Lawyer<br>f. Priest, nun or religious minister<br>g. Another person | 39. Why did you not seek help or reported what happened to you? *(Multiple choice)*<br><br>a. Shame<br>b. You thought you would not be believed or you would be told it was your fault<br>c. For fear of threats or consequences<br>d. You did not want your family to find out<br>e. You were convinced to not do so<br>f. Because it was something of little importance that did not affect you<br>g. Because that is/was custom/convention<br>h. You did not know how or where to report a complaint<br>i. Because it is a waste of time or you did not have time<br>j. You do not trust the authorities<br>k. Other *(specify)* |
|---|---|---|

## Section IV. Trust and performance of the public safety authorities

40. Did you request any support, information or services to any government public dependence or any other non-governmental or private organisation, institution or association?
      a. Yes
      b. No

| 41. Did you ask for support, information or services to…<br><br>a. Yes<br>b. No<br><br>*If no to all, go to question 44* | 42. In (this place), did you ask for… *(multiple choice)*<br><br>a. Orientation and information?<br>b. Legal support?<br>c. Psychological support?<br>d. Medical care<br>e. Other *(specify)* | 43. That last time you visited (this institution), how were you treated?<br><br>a. Was treated well and with respect<br>b. Was treated badly and humiliated<br>c. They did nothing to help you<br>d. There was no one to attend you<br>e. Other *(specify)* |
|---|---|---|
| 1. Women's National Institute? | | |
| 2. the State's or municipality's Women's Institute? | | |
| 3. any phone line? | | |
| 4. some civil association or organisation? | | |
| 5. Women's Justice Centre? | | |
| 6. Public Defender | | |
| 7. any clinic, health centre or public hospital (ISSSTE, IMSS, State's health services)? | | |
| 8. doctor's office, private clinic or hospital? | | |

| | | 211 | |
|---|---|---|---|
| 9. DIF? | | | |
| 10. other public institution? (specify) | | | |

| 44. Did you or any of your family filed a complaint or reported what happened to… <br><br> a. Yes <br> b. No <br><br> *If no to all, <u>finish survey</u>.* | 45. When you presented your complain… <br><br> a. It was received and an investigation was started. <br> b. It was received but an investigation was **NOT** started <br> c. It was not received (go to question 47). | 46. As a result of your complain… <br><br> a. The aggressor was consigned before a judge <br> b. The aggressor was sanctioned <br> c. Nothing happened because you did not ratified the report <br> d. Nothing was done <br> e. Sent to another agency <br> f. You have no idea what happened | 47. Your complaint was not received because… <br><br> a. You were told it could proceed <br> b. You were offered conciliation <br> c. You were not believed and your complaint was ignored <br> d. You were convinced to not file a complaint <br> e. Did nothing to help you <br> f. You were told it was not important <br> g. Other (specify) |
|---|---|---|---|
| 1. The police? | | | |
| 2. Municipal authorities? | | | |
| 3. Public Ministry? | | | |

<u>Wrap up session [5-10 minutes]</u>

- *Reassure anonymity and confidentiality*
- *Provide service sheet*
- *Thank the participant for her time*

8

**Código de vivienda:**

[Código de Localidad + código de Ageb + código de manzana] + Número de intento

Ejemplo:

019**0227**05**0****2**

Si hay 2 o más mujeres mayores de 18 años de edad en el hogar que desean participar:
Seleccionar a la mujer cuya fecha de cumpleaños sea la más próxima.

<u>Introducción [5-10 minutos]</u>

- *Asegurar confidencialidad y anonimato*
    - o *Todo lo que se discuta en la entrevista quedará estrictamente confidencial y anónimo.*
    - o *No se preguntará nombres, ni del participante ni de las historias que desee compartir, y la participante debe de ser alentada a no mencionar nombres (incluido el suyo) en ningún momento*
- *Reiterar consentimiento*

<u>¿Se pudo realizar la encuesta?</u>

a. Si
b. Parcialmente
    a. La encuestada decidió no dar más información
    b. Falta de tiempo
    c. Otra razón, especificar
c. No
    a. Ausencia de alguna mujer
    b. Mujer con discapacidad
        b.1  No puede oír y/o hablar
        b.2  No puede entender, concentrarse o tiene una enfermedad mental que no le permite responder
        b.3  Otro tipo de discapacidad
    c. Enferma que no puede dar la entrevista
    d. No habla español
    e. No le permiten dar información
    f. No desea participar por falta de tiempo
    g. No desea participar porque no confía
    h. Otra razón, especificar

1

Preguntas [~30 minutos] – 47 preguntas

## Sección I. Características sociodemográficas y de la vivienda.

1. ¿Cuántos años cumplidos tiene? _____

   a. 18-25    d. 36-40    g. 55-60
   b. 26-30    e. 41-45    h. 61-65
   c. 31-35    f. 46-50    i. Más de 66

| 2. Cuántos baños completos con regadera y excusado hay en esta vivienda?<br><br>a. Ninguno<br>b. 1<br>c. 2 ó más | 3. Cuántos automóviles o camionetas (incluyendo camionetas cerradas, o con cabina o caja) tienen en su hogar?<br><br>a. Ninguna<br>b. 1<br>c. 2 ó más | 4. Sin tomar en cuenta la conexión móvil que pudiera tener desde algún celular, ¿este hogar cuenta con internet?<br><br>a. Si<br>b. No | 5. De todas las personas de 14 años o más que viven en el hogar, ¿cuántas trabajaron en el ultimo mes?<br><br>a. Ninguna<br>b. 1<br>c. 2<br>d. 3<br>e. 4 ó más | 6. En esta vivienda, ¿cuántos cuartos se usan para dormir, sin contar pasillos ni baños?<br><br>a. Ninguno<br>b. 1<br>c. 2<br>d. 3<br>e. 4 ó más |
|---|---|---|---|---|

| 7. ¿Es usted la jefa del hogar?<br><br>a. Si *(Pase a la siguiente pregunta)*<br>b. No *(pase a la pregunta 9)* | 8. Cuál fue el ultimo año de estudios que aprobó en la escuela? *(Pase a pregunta 10)*<br><br>a. Ninguno<br>b. Preescolar<br>c. Primaria incompleta<br>d. Primaria completa<br>e. Secundaria incompleta<br>f. Secundaria completa<br>g. Preparatoria o bachillerato incompleto<br>h. Preparatoria o bachillerato completo<br>i. Licenciatura incompleta<br>j. Licenciatura completa<br>k. Posgrado | 9. Pensando en el jefe o jefa del hogar, ¿cuál fue el ultimo año de estudios que aprobó en la escuela?<br><br>a. Ninguno<br>b. Preescolar<br>c. Primaria incompleta<br>d. Primaria completa<br>e. Secundaria incompleta<br>f. Secundaria completa<br>g. Preparatoria o bachillerato incompleto<br>h. Preparatoria o bachillerato completo<br>i. Licenciatura incompleta<br>j. Licenciatura completa<br>k. Posgrado | 10. ¿Sabe leer y escribir un recado?<br><br>a. Si<br>b. No |
|---|---|---|---|

| 11. ¿Asiste actualmente a la escuela?<br><br>a. Si<br>b. No | 12. ¿Tiene empleo remunerado?<br><br>a. Si<br>b. No | 13. La semana pasada…<br><br>a. hizo o vendió un producto<br>b. ayudó en un algún negocio (familiar o de alguien más)<br>c. ofreció algún servicio por un pago (cargó bolsas, lavó autos, cuidó niñas o niños…)<br>d. trabajó en un negocio o compañía<br>e. tenía trabajo, pero no trabajó (licencia, incapacidad o vacaciones)<br>f. buscó trabajo<br>g. es estudiante<br>h. es jubilada o pensionada<br>i. se dedica al hogar<br>j. no trabajó | 14. De acuerdo con su cultura, ¿se considera indígena?<br><br>a. Si<br>b. Si, en parte<br>c. No<br>d. No sabe |
|---|---|---|---|

| 15. Actualmente usted… | 16. ¿Cuál es el género de su pareja? |
|---|---|
| a. es soltera *(pasar a pregunta 17)*<br>b. tiene pareja<br>c. está casada<br>d. está separada *(pasar a pregunta 17)*<br>e. está divorciada *(pasar a pregunta 17)*<br>f. es viuda *(pasar a pregunta 17)* | a. Masculino<br>b. Femenino<br>c. Prefiere no decir<br>d. Otro (especificar) |

**Sección II. Percepciones de comunidad y cohesión social.** Nos interesa conocer un poco acerca de su vivienda, su comunidad y cómo es la interacción entre los vecinos o colonos.

| 17. ¿Cuántos años ha vivido en esta… | 18. ¿Conoce a sus vecinos? | 19. ¿Tiene amigos o conocidos que vivan en esta colonia o localidad? |
|---|---|---|
| a. Colonia o localidad? ____<br>b. Ciudad? ____ | a. Sí, a todos<br>b. Sí, a alguno(s)<br>c. No | a. Todos<br>b. La mayoría<br>c. Algunos<br>d. Ninguno<br>e. No sabe / no desea responder |

| 20. La gente en ocasiones se llega a reunir para realizar actividades comunes, ¿con qué frecuencia se reúnen en su colonia o barrio… | a. Muy frecuente<br>b. Frecuente<br>c. Poco frecuente<br>d. Nunca<br>e. No aplica<br>f. No sabe / no desea responder |
|---|---|
| 1. para eventos religiosos? | |
| 2. para organizar fiestas? | |
| 3. para solucionar problemas de servicios públicos como agua, alumbrado, pavimentación de calles o limpieza? | |
| 4. para organizar la seguridad de la colonia? | |
| 5. para solicitar servicios del municipio? | |
| 6. para convivir casualmente en un área común o pública (patio, jardín, salón, calle, etc.) | |
| 7. con otro objetivo? (especificar) | |

| 21. Se siente segura en esta colonia o localidad? | *Pregunta abierta si la respuesta a la pregunta 21 es **a** ó **b**.* |
|---|---|
| a. Si<br>b. No<br>c. No sabe / no desea responder | 22. Por qué Si/No?<br>*Responder en la hoja para respuestas abiertas.*<br><br>a. No sabe / no desea responder |

3

| 23. Alguna vez ha sido victima o ha visto a alguien haciendo algo de las siguientes actividades en su colonia o localidad?<br><br>*a.* Más de una vez *(especificar # veces)*<br>b. Una vez<br>c. Nunca<br>d. No aplica<br>e. No sabe / no desea responder | | *Si la respuesta en la pregunta 23 fue **a** ó **b**.*<br>24. Ante esta situación…<br><br>a. los vecinos o colonos le llamaron la atención<br>b. los vecinos o colonos se organizaron para hablarlo<br>c. los vecinos o colonos se organizaron para resolverlo<br>d. la policía intervino<br>e. no se hizo nada<br>f. no aplica<br>g. no sabe / no desea responder |
|---|---|---|
| 1. haciendo ruido (música a alto volumen, fiestas, reparando o realizando alguna actividad doméstica) | | |
| 2. grafiteando paredes o rayando autos? | | |
| 3. rompiendo ventanas de casas, negocios o autos, u otros objetos? | | |
| 4. jugando arrancones? | | |
| 5. tomando alcohol en la calle? | | |
| 6. vendiendo productos pirata? | | |
| 7. vendiendo drogas? | | |
| 8. consumiendo drogas? | | |
| 9. bloqueando la calle? | | |
| 10. peleando entre pandillas? | | |
| 11. discutiendo o peleando entre vecinos? | | |
| 12. prostituyéndose? | | |
| 13. asaltando o robando casas, negocios o vehículos? | | |
| 14. asaltando o robando a personas en la calle? | | |
| 15. amenazando o extorsionando? | | |
| 16. disparando algún tipo de arma de fuego? | | |

| 25. ¿Alguno de estos incidentes afectó su comportamiento?<br><br>a. Si<br>b. No *(pasar a pregunta 27)* | 26. ¿Cómo afectó este incidente a su comportamiento? *(Opción múltiple)*<br><br>a. Casi no sale de casa<br>b. Evita salir de noche<br>c. Sale, pero tiene que estar muy alerta<br>d. Sale, pero carga con algo para protegerse de los demás (palos, navajas, cuchillos, pistola)<br>e. Se unió o formó una pandilla para que se haga respetar con la fuerza<br>f. No cambió sus hábitos<br>g. No sabe / no desea responder<br>*h.* Otro *(especificar)* |
|---|---|

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## Sección III. Violencia de género contra la mujer en el espacio público / nivel comunidad

Ahora quisiera preguntarle sobre algunas situaciones que vivimos las mujeres en los espacios o lugares públicos de nuestra comunidad (colonia, localidad, municipio), como la calle, transporte público, mercados, parques, espacios deportivos, iglesias, lugares de diversión como bares, restaurantes, antros, salones o lugares de baile y fiestas, ferias, asambleas o juntas de vecinos o religiosas.

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| *Recordarle a las participantes si los eventos sucedieron en la calle.* | 27. En la calle en su colonia, localidad o municipio, alguna vez… a. Sí b. No *Pase a las siguientes preguntas si la respuesta es "Si"* | 28. ¿Cuántas veces pasó el último año? a. Más de 5 veces b. De 2 a 5 veces c. Una vez d. Hace más de un año | 29. La ves más reciente, ¿recuerda dónde sucedió? a. Si b. Vagamente c. No *Si la respuesta es Si, escriba la ubicación o ubique en el mapa.* *Si la respuesta es Vagamente pase a las siguiente pregunta.* | 30. Esto pasó en… *Escribir ubicación (área) si la recuerda.* a. Un parque b. Una plaza c. En el mercado / centro comercial d. Transporte público e. En un taxi f. En una iglesia / capilla g. En un bar, antro, club h. En una feria, fiesta o junta de la colonia, asamblea i. Otro espacio (especificar) | 31. ¿Recuerda la hora en que esto pasó? a. Mañana b. Mediodía c. Tarde d. Noche e. Medianoche f. Madrugada g. 6-10am h. 11-2pm i. 3-4pm j. 5-7pm k. 8-11pm l. 12-2am m. 3-5am n. No sabe / no desea responder | 32. ¿De esta lista, quién le hizo lo que menciona? *Escribir edad y género (Femenino/Masculino)* a. Familiar b. Conocido c. Amigx d. Vecinx e. Agente de seguridad o policía f. Militar o marino g. Sacerdote o ministro de culto h. Conductor de transporte público i. Desconocido j. Otro (especificar) | 33. ¿Estaba sola cuando esto pasó? a. Si b. No *(pasar a pregunta 35)* | 34. ¿Quién la acompañaba? a. Un familiar b. Un conocidx c. Un amigx d. Un vecinx e. Un compañerx de trabajo f. Un miembro de la familia g. Otro (especificar) |
|---|---|---|---|---|---|---|---|---|
| 1. le han chiflado, o dicho piropos groseros u ofensivos de tipo sexual sobre su cuerpo? | | | | | | | | |
| 2. la han vigilado o seguido? | | | | | | | | |
| 3. la han ofendido o humillado por el hecho de ser mujer (la hicieron sentir menos o mal)? | | | | | | | | |
| 4. la han ignorado o no la han tomando en cuenta por ser mujer en la calle? | | | | | | | | |
| 5. la han pellizcado, jalado el cabello, empujado, jaloneado, abofeteado o aventado algún objeto? | | | | | | | | |
| 6. le han levantado la falda, el vestido o le han jaloneado la ropa para | | | | | | | | |

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| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| | ver sus partes íntimas o su ropa interior? | | | | | | | |
| 7. | la han manoseado, tocado, besado o se la han arrimado, recargado o encimado sin su consentimiento? | | | | | | | |
| 8. | la han hecho sentir miedo de ser atacada o abusada sexualmente? | | | | | | | |
| 9. | alguna persona le mostró sus partes íntimas o se tocó enfrente de usted? | | | | | | | |
| 10. | la han obligado a mirar escenas o actos sexuales o pornográficos (fotos, revistas, videos o películas pornográficas)? | | | | | | | |
| 11. | la han pateado o golpeado? | | | | | | | |
| 12. | han tratado de obligarla a tener relaciones sexuales en contra de su voluntad? | | | | | | | |
| 13. | la han obligado a tener relaciones sexuales en contra de su voluntad? | | | | | | | |

------------------------*Pregunta 27: Si responde "No" a todas las preguntas: pase a pregunta 35 y <u>termine la encuesta</u>* -----------------------

| 35. ¿Qué piensa que pudo haber prevenido las situaciones anteriores? *(Pregunta abierta)*<br><br>*Responder en la hoja para respuestas abiertas.* | 36. ¿Qué piensa que otras personas pudieron haber hecho para prevenir las situaciones anteriores? *(Pregunta abierta)*<br><br>*Responder en la hoja para respuestas abiertas.* |
|---|---|

| 37. Hasta antes del día de hoy, ¿le contó a alguien sobre eso que le ocurrió?<br><br>a. Si<br>b. No *(pase a la pregunta 39)* | 38. Le contó lo ocurrido a… *(Opción múltiple)*<br><br>a. su pareja<br>b. algún familiar<br>c. amigx o compañerx<br>d. psicologx o trabajadxr social<br>e. abogadx<br>f. sacerdote, religiosx o ministro<br>g. otra persona (especificar) | 39. ¿Por que no le contó a nadie? *(Opción múltiple)*<br><br>a. Por vergüenza<br>b. Pensó que no le iban a creer o que le iban a decir que era su culpa<br>c. Por miedo a las consecuencias o a las amenazas<br>d. Porque no quería que su familia se enterara<br>e. Porque la convencieron de no hacerlo<br>f. Porque se trató de algo sin importancia que no le afectó<br>g. Porque esas eran/son las costumbres<br>h. Porque no sabe si lo ocurrido es ilegal<br>i. No sabía cómo y dónde denunciar<br>j. Porque es una pérdida de tiempo o porque no tenía tiempo<br>k. No confía en las autoridades del gobierno<br>l. Otra (especificar)<br>_____ |
|---|---|---|

**Sección IV. Confianza y desempeño de las autoridades de seguridad pública.**

40. ¿Pidió apoyo, información o servicios en alguna dependencia pública de gobierno, a un grupo o asociación o a una institución privada?
  - a. Si
  - b. No *(pasar a pregunta 44)*

| 41. Pidió apoyo, información o servicios a…<br><br>a. Si<br>b. No<br><br>*Si todas las respuestas fueron "No", pase a la pregunta 44.* | | 42. En este lugar, ¿usted solicitó… *(Opción múltiple)*<br><br>a. orientación e información?<br>b. apoyo legal?<br>c. apoyo psicológico?<br>d. atención médica?<br>e. otro (especificar) | 43. ¿Cómo fue tratada cuando visitó la institución?<br><br>a. La trataron bien y con respeto<br>b. La trataron mal, la humillaron<br>c. No hicieron nada para ayudarla<br>d. No había nadie que la atendiera<br>e. Otro (especificar) |
|---|---|---|---|
| 1. Instituto Nacional de las Mujeres? | | | |
| 2. Instituto de las Mujeres del estado o municipio? | | | |
| 3. alguna línea de atención telefónica? | | | |
| 4. alguna asociación civil? | | | |
| 5. Centro de Justicia para las Mujeres? | | | |
| 6. Defensoría Pública? | | | |

| | | | |
|---|---|---|---|
| 7. clínica, centro de salud u hospital médico( ISSSTE, IMSS, Servicios de salud del estado)? | | 219 | |
| 8. consultorio médico, clínica u hospital privado? | | | |
| 9. DIF? | | | |
| 10. Otra institución pública? (especificar) | | | |

| 44. Usted o alguien de su familia presentó una queja o denuncia ante… <br><br> a. Si <br> b. No <br><br> *En caso de no haber presentado denuncia, terminar encuesta.* | 45. ¿Cuando presentó la queja o denuncia… <br><br> a. recibieron su queja o denuncia e iniciaron una investigación o averiguación? <br> b. recibieron su queja o denuncia pero **NO** iniciaron la investigación o averiguación? <br> c. no recibieron su queja o denuncia (pasar a pregunta 47) | 46. Como resultado de su queja o denuncia… <br><br> a. se consignó al responsable ante el juez? <br> b. sancionaron al agresor? <br> c. no pasó nada porque usted no ratificó la denuncia? <br> d. no hicieron nada <br> e. no sabe qué pasó | 47. No recibieron su queja o denuncia porque… <br><br> a. le dijeron que no procedía? <br> b. le ofrecieron conciliación? <br> c. no le creyeron y no hicieron caso de su queja o denuncia? <br> d. la convencieron de no poner su queja o denuncia? <br> e. no hicieron nada para ayudarle? <br> f. le dijeron que era algo sin importancia? <br> g. la trataron mal, la humillaron? <br> h. otro (especificar) |
|---|---|---|---|
| 1. la policía? | | | |
| 2. las autoridades municipales? | | | |
| 3. el Ministerio Público? | | | |

Finalizar encuesta [5-10 minutos]

- *Reiterar anonimato y confidencialidad*
- *Proporcionar hoja de servicios*
- *Agradecer a la participante por su tiempo*

# F SES level description

Table 2 shows a brief description of what each level represents, but for a more thorough description of each socioeconomic level refer to NSE AMAI (2018).

*Table 2 – Points per socioeconomic level. Table with data from Comité de Nivel Socioeconómico AMAI (2017).*

| Socioeconomic level | Points | Characteristics (NSE AMAI, 2018) |
|---|---|---|
| A/B | >205 | Household heads have higher education levels as it is the socioeconomic level that invests the most in education and least in food. |
| C+ | 166-204 | Increased car ownership, households have high access to internet and allocate about a third of their income to food. |
| C | 136-165 | Most household heads have education higher than primary school, most housholds have internet access, a third of the income is spent on food and less that a tenth of the income is spent on education. |
| C- | 112-135 | About 3 out of 4 household heads have education higher than primary school, about half of the households have internet access, over a third of the income is spend on food and a sixth of the income allocated to transport and communication. |
| D+ | 90-111 | About two thirds of the household heads have education higher than primary school, less than a quarter of households have internet access, a bit less than half of the income is spent on food and less that a tenth of the income allocated to education. |
| D | 48-89 | Less than two thirds of the household heads have education higher than primary school, internet access is very limited, almost half of the income is spent on food and a sixth of the income allocated to transport and communication. |
| E | 0-47 | The majority of the household heads only have primary school education, internet access is practically null, over half of the household expenditure is spent on food and a tenth of the income allocated to transport and communication, similar percentage to that destined to housing. |

# G  More information about sampling for household surveys

The number of blocks selected from each locality was calculated considering the proportion of female population contained in each locality in relation to the total target female population (see table 3). The selection of blocks was carried out in R[2], with the *set.seed()* function, which generates a random sequence of numbers that yields the same results every time if given the same seed number. In this case, 1826[3] was selected as the initial seed number. The function was useful for selecting a specific amount of random blocks for each locality from shapefiles containing GIS data of the localities (see table 3 for the selected number of blocks). The first run of the seed was ignored, and the blocks for each locality were selected in the following order: (1) El Pueblito; (2) La Negreta; (3) Los Olvera; (4) Venceremos; and (5) San José de los Olvera.

*Table 3 – Breakdown of population, blocks and sample numbers for each locality.*

|  | El Pueblito 0001 | La Negreta 0017 | Los Olvera 0044 | San José de los Olvera 0142 | Venceremos 0019 | Total |
|---|---|---|---|---|---|---|
| Population 2010 | 25,326 | 8,100 | 3,539 | 18,406 | 15,538 | 70,909 |
| Projected population 2018 | 36,115 | 11,551 | 5,047 | 26,247 | 22,157 | 101,116 |
| Population percentage | 36% | 11% | 5% | 26% | 22% | 100% |
| Female population over 12yo 2010 | 10,623 | 3,036 | 1,367 | 7,485 | 5,875 | 28,386 |
| Female population over 20yo 2018 | 15,153 | 4,330 | 1,950 | 10,674 | 8,378 | 40,485 |
| Percentage of female population in relation to total female population | 37% | 11% | 5% | 26% | 21% | 100% |
| Total number blocks | 993 | 202 | 64 | 238 | 248 | 1745 |
| Total number of inhabited blocks | 760 | 158 | 46 | 208 | 211 | 1383 |
| Number of inhabited blocks for sampling (subselection of El Pueblito) | 205 | 158 | 46 | 208 | 211 | 828 |
| Percentage of blocks in relation to total | 37% | 11% | 5% | 26% | 21% | 100% |
| Number of blocks to survey | 111 | 33 | 15 | 78 | 63 | 300 |

**Disclaimer**  Due to anonymity and confidentiality agreements, the maps of the selected blocks will not be included in this thesis, as there are concerns that the identity of the participants may be compromised.

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[2]R is a programming language and software environment for statistical computing and graphics. See more about R here: https://www.r-project.org

[3]Year when UCL was established: https://www.ucl.ac.uk/about/

**Selection of AGEBs within the locality of El Pueblito**

For the initial sample, a sub selection of AGEBs for the locality of El Pueblito was carried out, which adjusted the number of blocks—-1,425 blocks for the 5 urban areas considered in this study—-to be sampled to 828, as initially only 9 Agebs from the locality of El Pueblito were considered.

*Table 4 – Number of Agebs and blocks with inhabited dwellings per locality (INEGI, 2016b).*

| Locality | Total AGEBS | Total blocks with inhabited dwellings (2016) | Blocks considered for sampling |
|---|---|---|---|
| El Pueblito | 1 | 760 | 205 |
| La Negreta | 9 | 158 | 158 |
| Los Olvera | 8 | 46 | 46 |
| San Jose de los Olvera | 5 | 208 | 208 |
| Venceremos | 34 | 211 | 211 |
| Total | 57 | 1,383 | 828 |

This sub selection was carried out as El Pueblito counts with 3.7 times the amount of Agebs than the locality with the second most Agebs (locality Venceremos, with 9 Agebs; see figure 1). The female population of 12 years of age and over of the census tracks of 2010 was considered for the selection of the Agebs, on the basis that those females would be over 20 years of age in 2018. The Ageb with the least reported female population is Ageb 763, with the latest census of 2010 reporting an estimated 7 females, and the Ageb with the largest female population is Ageb 002A, with an estimated 3,794 females (INEGI, 2010). Due to the difference between the Ageb with the lowest number of female population and the highest number of female population, the median (1,045 females) of the 31 Agebs that report female population over 12 years of age was used as a basis for selection.
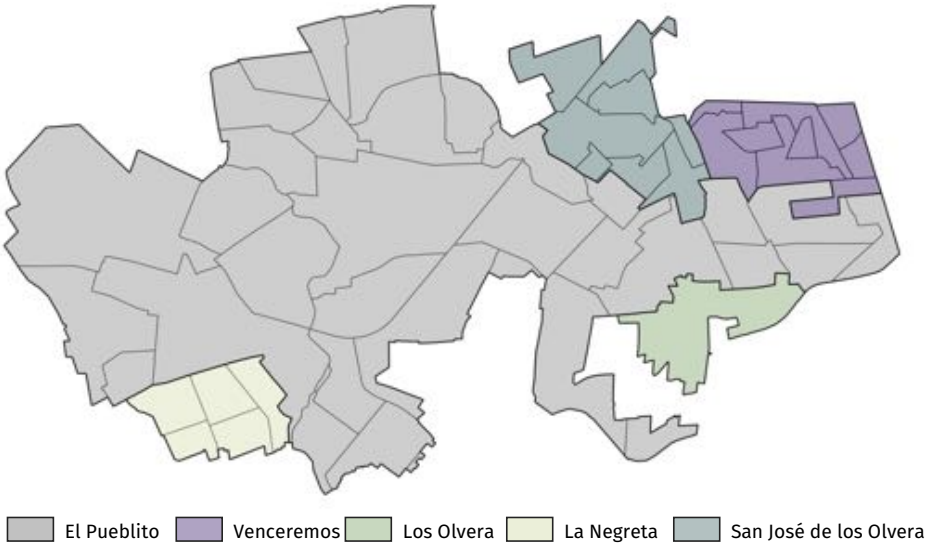


*Figure 1 – Agebs within localities. Maps by the author with data from INEGI (2015b).*

The selected areas comprise 9 Agebs: 3 Agebs with low female population; 3 Agebs with median female population; and 3 Agebs with high female population (see table 5).

*Table 5 – Agebs of locality El Pueblito and estimated population per Ageb, highlighting the selected areas for sampling (INEGI, 2010).*

| AGEB Number | Female population over 12y.o. (2010) | Est. Female population over 20yo (2018) | Considered for sampling |
|---|---|---|---|
| 0246 | -6 | 0 | No |
| 0725 | -6 | 0 | No |
| 0655 | 0 | 0 | No |
| 0763 | 7 | 10 | No |
| 0104 | 16 | 23 | No |
| 0265 | 21 | 30 | No |
| 0833 | 74 | 106 | Yes |
| 0250 | 75 | 107 | Yes |
| 0621 | 111 | 158 | Yes |
| 0513 | 161 | 230 | No |
| 0674 | 217 | 309 | No |
| 066A | 235 | 335 | No |
| 0759 | 347 | 495 | No |
| 0640 | 483 | 689 | No |
| 0636 | 567 | 809 | No |
| 0778 | 594 | 847 | No |
| 0157 | 601 | 857 | Yes |
| 0212 | 610 | 870 | Yes |
| 0585 | 733 | 1045 | No |
| 0710 | 818 | 166 | Yes |
| 0161 | 885 | 1262 | No |
| 073A | 957 | 1365 | No |
| 0744 | 1116 | 1591 | No |
| 0320 | 1226 | 1748 | No |
| 0208 | 1231 | 1755 | No |
| 0195 | 1402 | 1999 | No |
| 0142 | 1404 | 2002 | No |
| 0034 | 1423 | 2029 | No |
| 0087 | 1674 | 2387 | No |
| 0091 | 1909 | 2722 | No |
| 0689 | 2026 | 2889 | No |
| 0138 | 2135 | 3045 | Yes |
| 0693 | 2405 | 3430 | Yes |
| 002A | 3794 | 5410 | Yes |

The adjustments that were carried out for the selection of the Agebs are as follows:

1. For the lower density range of female population:

   (a) Ageb 763 is reported as having the lowest female population, however it only accounted for an estimated 10 females as of 2018, assuming a constant population growth and considering growth rate estimates – 27% from 2010 to 2015, and 5.2% annually from 2015 to 2018 (INEGI, 2015c). Thus it was excluded from the selection, but considered to

calculate the median of the total population of the locality.

(b) Ageb 104 was disregarded due to the low count of dwellings within the area.

(c) Ageb 265, the third locality with the least female population was also disregarded due to the smaller planimetric size of the area in comparison with the areas in the same category (see table 6 for the areas of the Agebs with the lowest densities of female population within the locality of El Pueblito).

2. For the median range of female population:

(a) Ageb 585 was excluded from the selection as it was disclosed in an informal conversation with a member of IMPLASCO (regarding sampling areas) that the area would not be suitable for selection, as there had been previous unsuccessful attempts by the local government to gain access to the area to conduct research.

(b) The two Agebs with the lowest difference to the median were chosen. For selecting the third Ageb, the Ageb closest to the average of blocks—for that locality the average is 23 blocks per Ageb—from the set of Agebs that have the second lowest difference to the median was chosen (see table 7).

*Table 6 – Areas of the 4 Agebs with the lowest densities of female population within the locality of El Pueblito.*

| Ageb | Planimetric area |
|------|------------------|
| 265  | 13,921.97        |
| 833  | 224,021.99       |
| 250  | 436,412.90       |
| 621  | 322,674.02       |

*Table 7 – Agebs with median female population.*

| Ageb | Female population over 12y.o. (2010) | Difference with median of 2010 | Est. Female population over 20yo (2018) | Difference with median of 2018 | Blocks with inhabited dwellings (2016) | Considered for sampling |
|------|------|------|------|------|------|------|
| 157  | 601  | 132 pts | 857  | 188 pts | 20 | Yes |
| 212  | 610  | 123 pts | 870  | 175 pts | 16 | Yes |
| 585  | 733  | 0 pts   | 1045 | 0 pts   | 32 | No  |
| 710  | 818  | 85 pts  | 1166 | 121 pts | 31 | Yes |
| 161  | 885  | 152 pts | 1262 | 217 pts | 34 | No  |

Note: The median is 733 and 1,045 for 2010 and 2018 respectively, and the average number of blocks with inhabited dwellings per Ageb is 22 dwellings (INEGI, 2010, 2016b)

## Re-sampling 20% of the initial sample: replacing gated/private neighbourhoods

During data collection, it was encountered that 20% of the sample consisted of gated/private neighbourhoods. Access was sought within these areas, however, all attempts were unsuccessful in doing so. It was therefore considered to resample the areas and exclude all other previously identified

gated communities.

An initial sample of 60 blocks was drawn from the Agebs from El Pueblito that were initially not considered. Agebs 104, 246, 265, 655, 725 and 763 were not considered however as the projections of population were very low. Other blocks previously identified by IMPLASCO as areas with either private neighbourhoods or factories/warehouse were removed[4].

It was verified manually with Google Maps Satellite if the selected blocks appeared to have a gate at the entrance of the road to verify that the blocks were not private. This was done by observing whether a line seemed to be situated across the road leading to the houses, as this could be a sign of an entry arch or a gate[5], as well as by the design layout of the neighbourhood. See figures 2 and 3 for an example.



*Figure 2 – Layout of neighbourhoods within of Ageb 0778. Figure by the author with a map from Google Maps.*

The Agebs of the blocks that appeared private were removed from the initial list for sampling, in order to ensure access to the area. The Agebs that appeared to have gated or private blocks were Agebs 0636, 0640, 0674, 0744 and 0778.

The sample code was run again to select another 60 blocks from the rest of the Agebs. However, another three blocks that appeared to have either private neighbourhoods or be comprised of warehouses where removed from the sample:

- Block 014 from Ageb 066A: appeared to be private property
- Block 014 from Ageb 0034 and block 025 from Ageb 0195: appeared to have gated/private neighbourhoods and warehouses

The remaining 57 blocks of the sample were kept and visited. The differences between the sampled blocks and the visited households can be found in table 8.

---

[4]This data is not publicly available, therefore it is not included in this thesis.

[5]This issue was first noticed on ground, while searching for the areas in the map to take the data collection team for surveying. It was noted that the streets or neighbourhoods that showed these signs on the virtual map had indeed a gate or a guard stand at the entrance of the road.

*Figure 3 – Main entry gate of Ageb 0778. Figure by the author with a map from Google Maps.*

*Table 8 – Differences between sampling and visited households.*

|  | Pueblito 0001 | Negreta 0017 | SJO 0044 | Venceremos 0142 | Olvera 0019 | Total |
|---|---|---|---|---|---|---|
| Number of blocks sampled | 111 | 33 | 78 | 63 | 15 | 300 |
| Percentage of blocks in relation to total sampled | 37% | 11% | 26% | 21% | 5% | |
| Re-sampled blocks / gated communities[6] | 43 | 0 | 10 | 5 | 0 | 58 |
| Number of blocks visited (after resampling) | 129 | 33 | 71 | 57 | 15 | 305 |
| Percentage of total visited | 42% | 11% | 23% | 19% | 5% | |
| Difference visited/sampled | 18 | 0 | -7 | -6 | 0 | |
| Total completed surveys | 114 | 32 | 62 | 51 | 13 | 272 |
| Difference completed/sampled | 3 | -1 | -16 | -12 | -2 | -28 |

# H  Observations and visual checklist

**Observations and visual data**

Area:
Date:
Filename:
Pictures of areas that might flag concern (write below):




Tick if available/applicable:                                    <u>Comments</u>

Area of concern
   ☐  Street / road / highway
   ☐  Sidewalk
   ☐  Bus stop
   ☐  Park or public square
   ☐  Commercial area (outside of market/shopping centre/bank/bar)
   ☐  Area outside a school/university
   ☐  Residential area
   ☐  Construction area
   ☐  High density area
   ☐  Other, specify in comments (eg. public toilets, water point)

<u>Street / road / highway</u>

Road type
   ☐  Side road
   ☐  Secondary road
   ☐  Primary road
   ☐  Highway

Material
   ☐  Dirt road
   ☐  Brick or rock road
   ☐  Paved
   ☐  Concrete road

Other features:
   ☐  Very busy
   ☐  Vegetation
   ☐  Drains
   ☐  Sewerage
   ☐  Bad conditions:
      ☐  Cracked surface
      ☐  Pot holes

<u>Sidewalks</u>
   ☐  Non existent
   ☐  Narrow
   ☐  Blocked
   ☐  No lighting / bad lighting
   ☐  Vegetation
   ☐  Other, specify in comments

Bus stop                                                                                           <u>Comments</u>
- ☐ No marker
- ☐ No space, specify in comments
- ☐ In bad conditions, specify in comments
- ☐ No lighting / bad lighting
- ☐ Other, specify in comments

Park or public square
- ☐ Use:
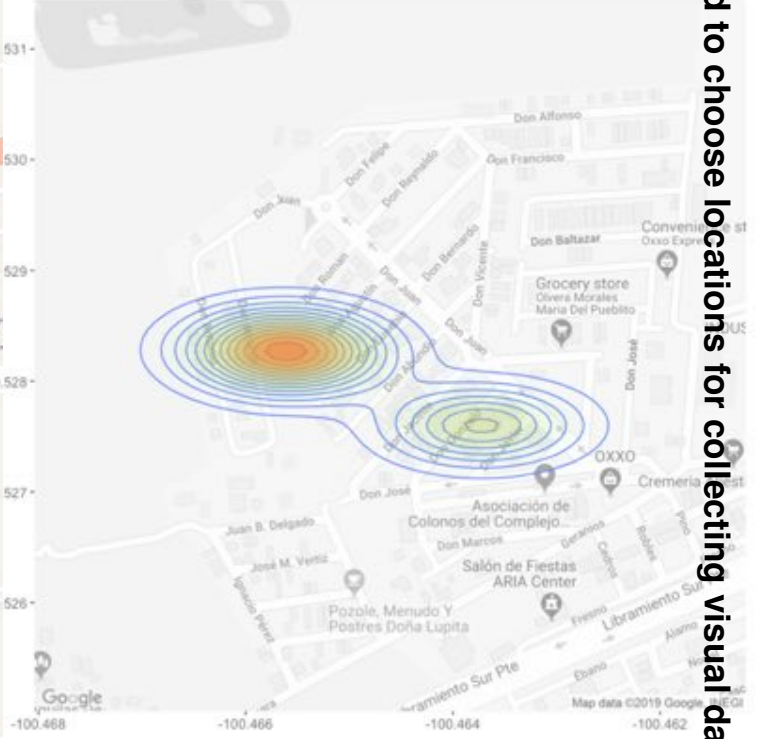- ☐ Floor type:
- ☐ Equipment:
- ☐ Condition:
- ☐ Boundary walls
- ☐ Trash bins
- ☐ Lights

Residential area
- ☐ High density
- ☐ Low density
- ☐ Formal
- ☐ Informal
- ☐ Construction happening
- ☐ Near commercial area
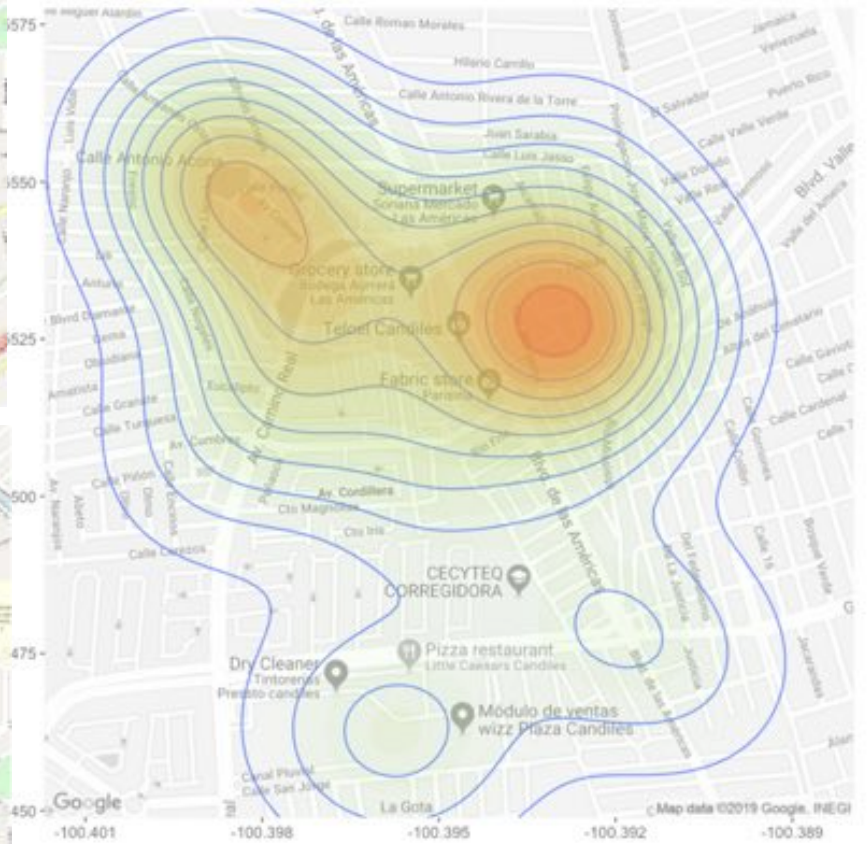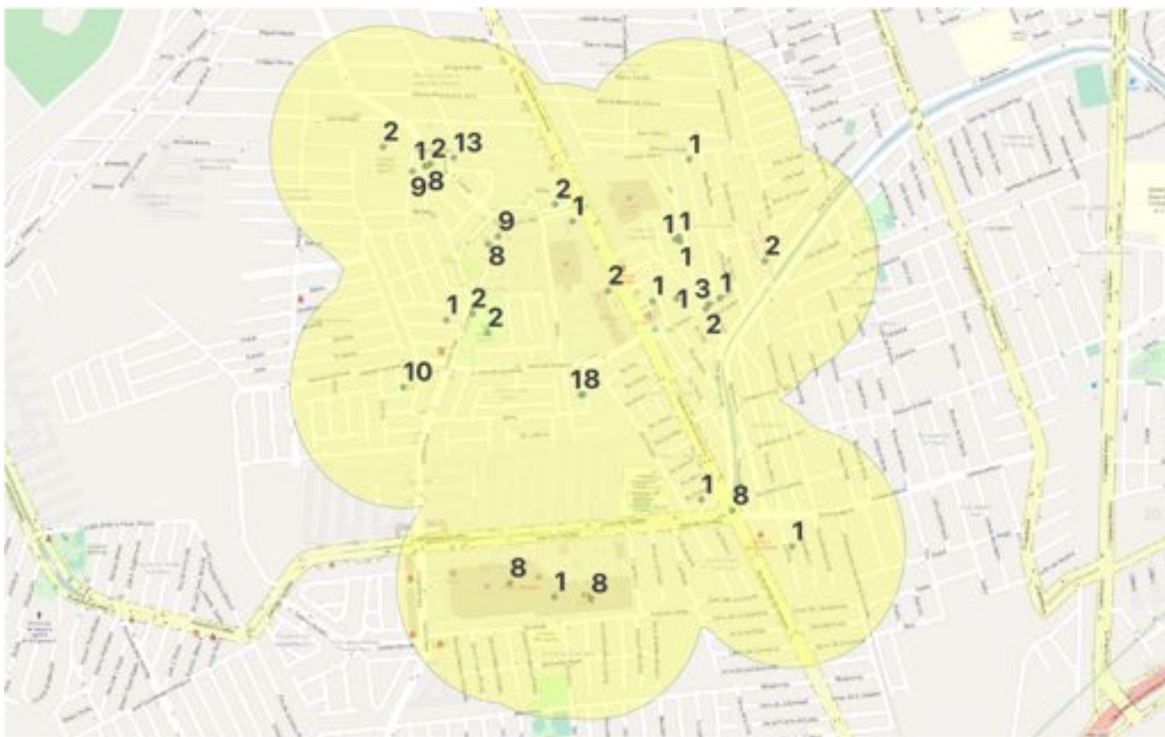
More comments:
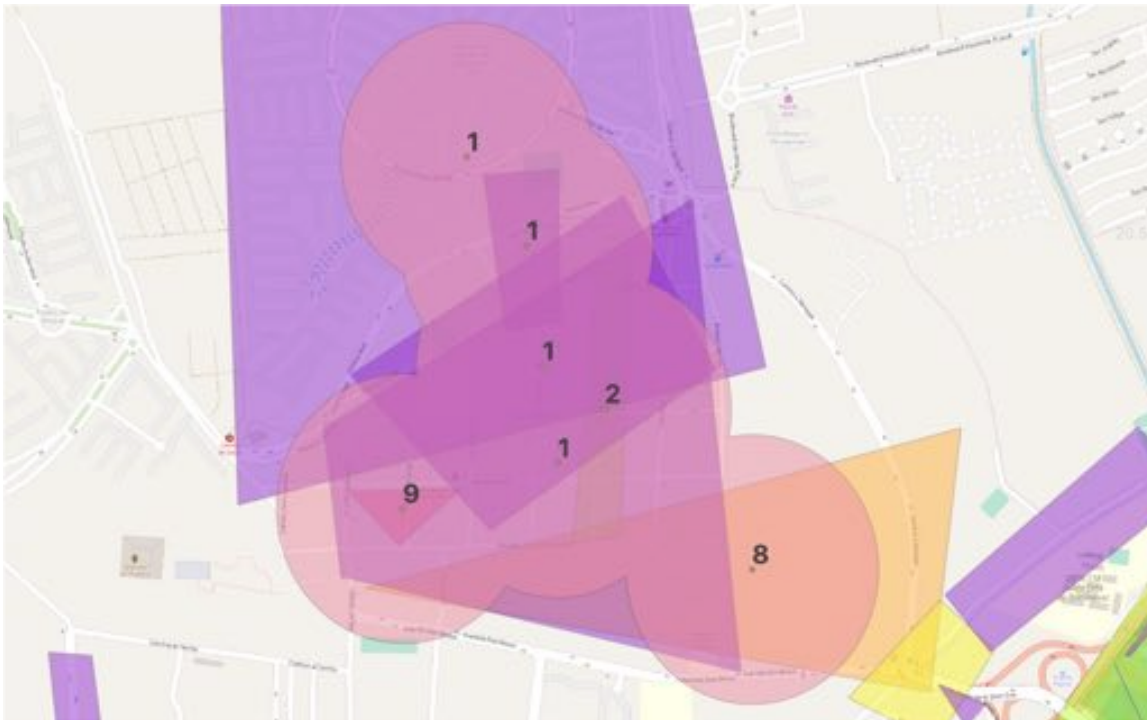
I Maps used to choose locations for collecting visual data

Cluster 1
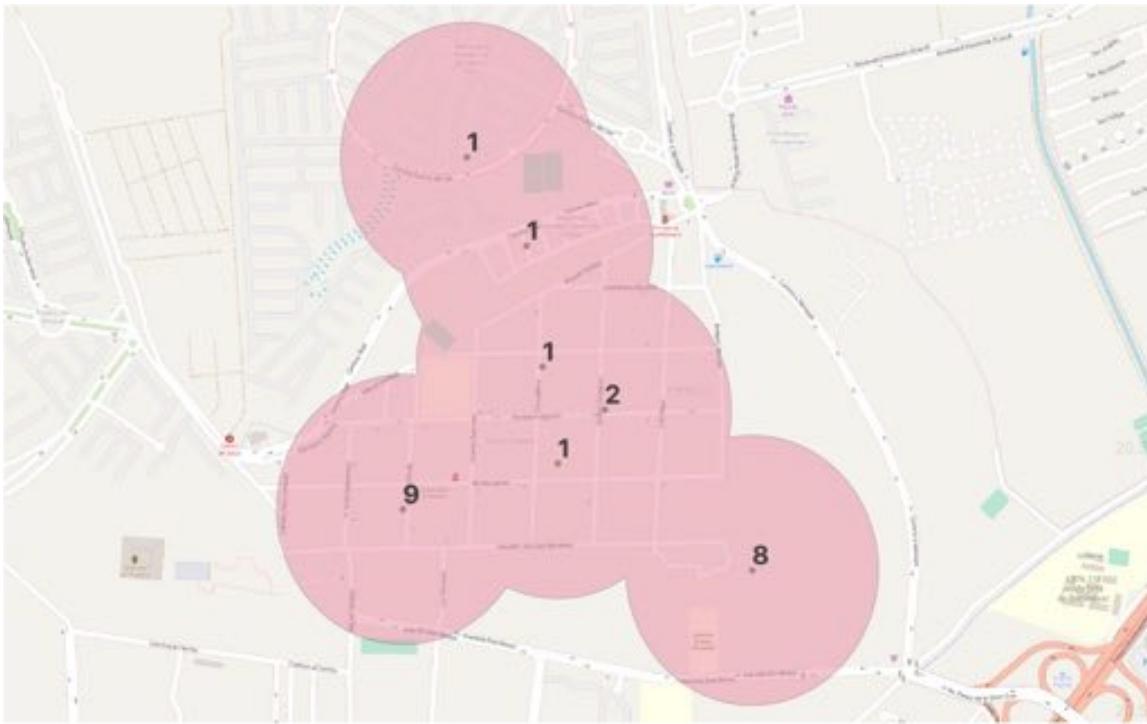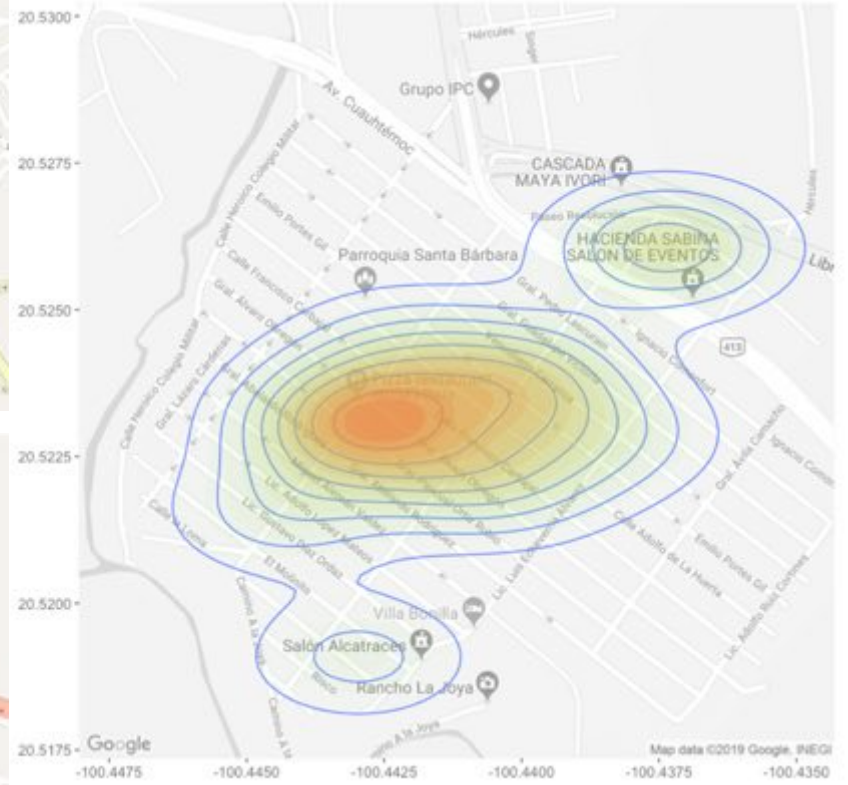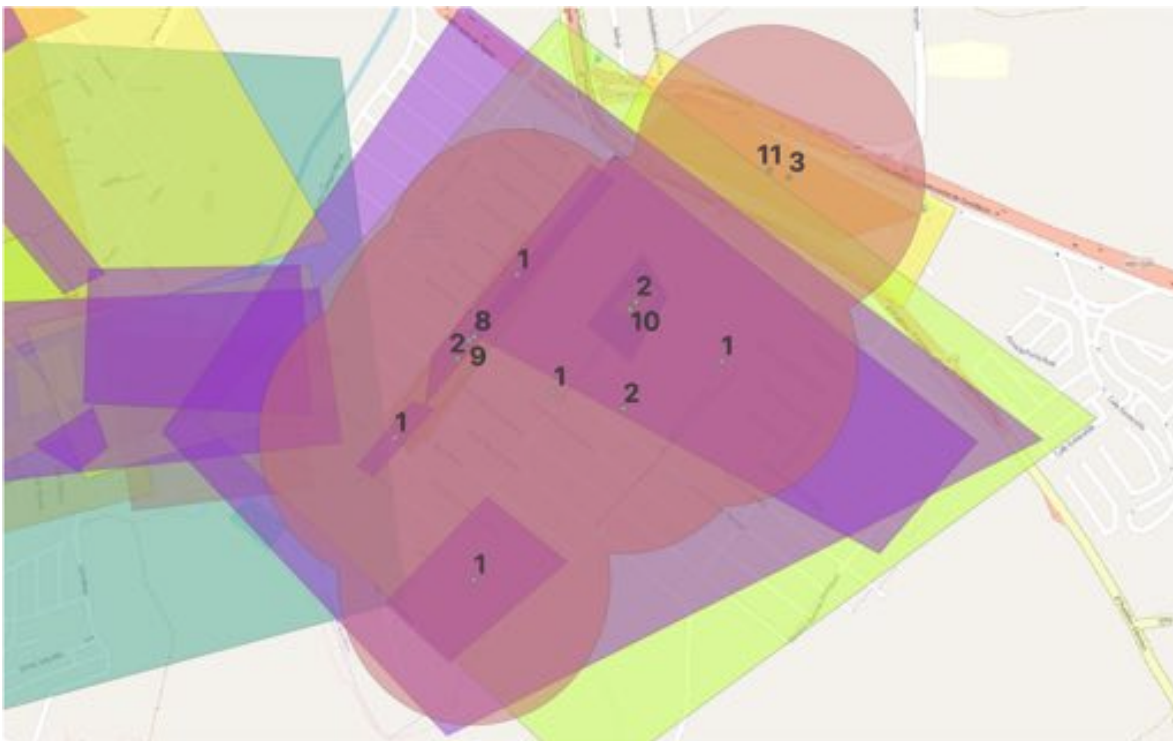
Cluster 2

Cluster 3
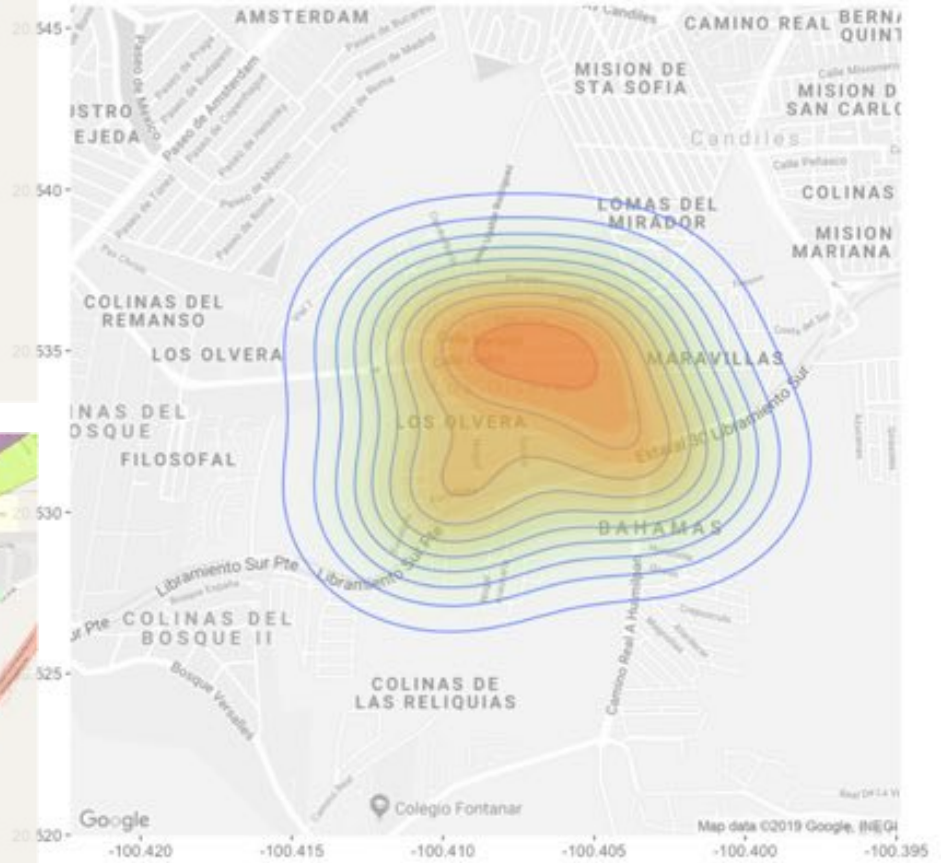
Cluster 4

Cluster 5
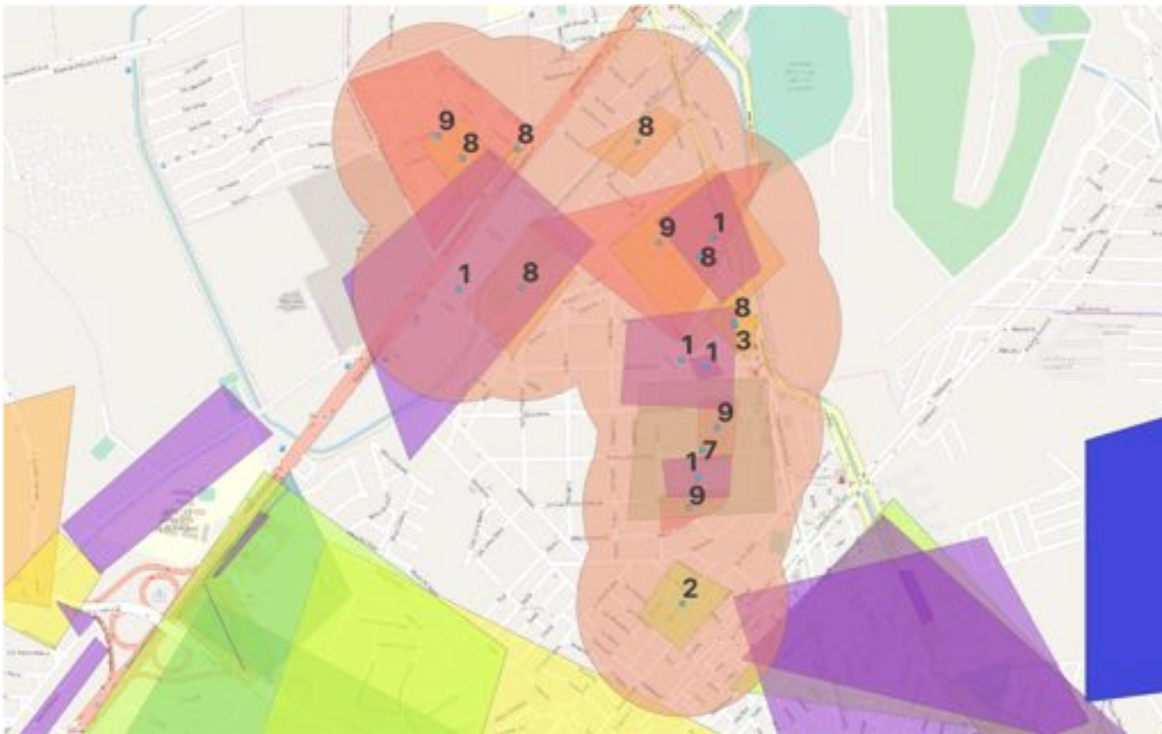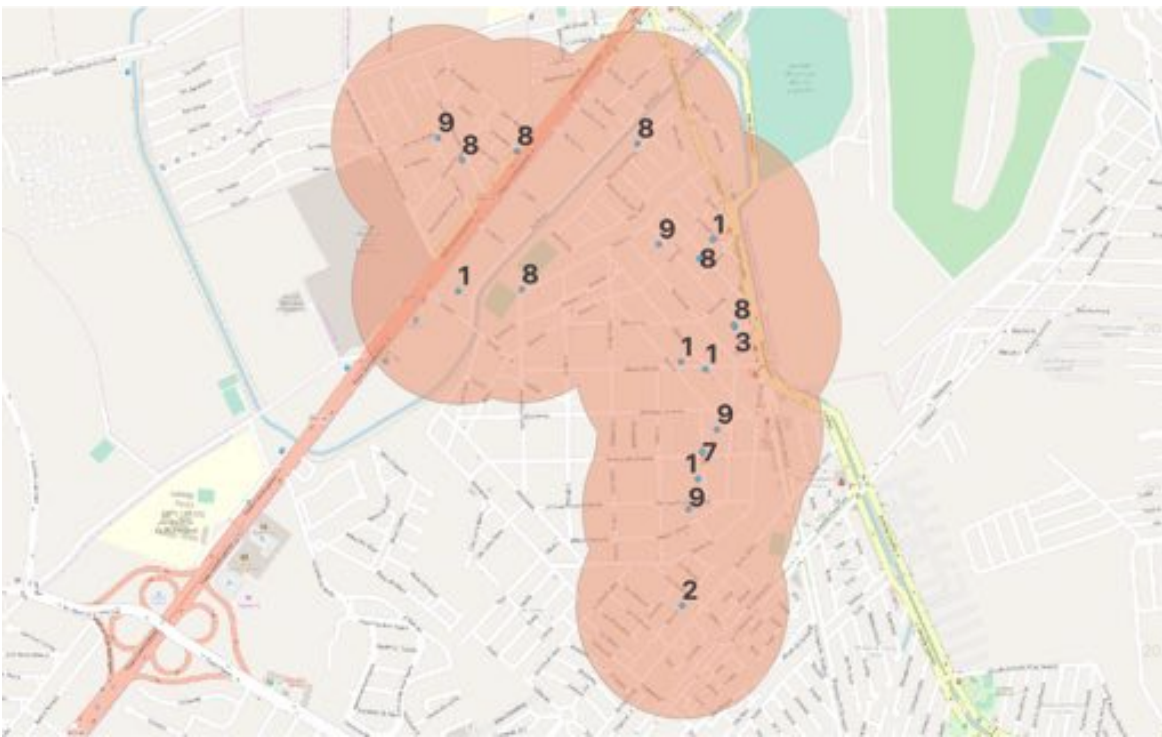
Cluster 6
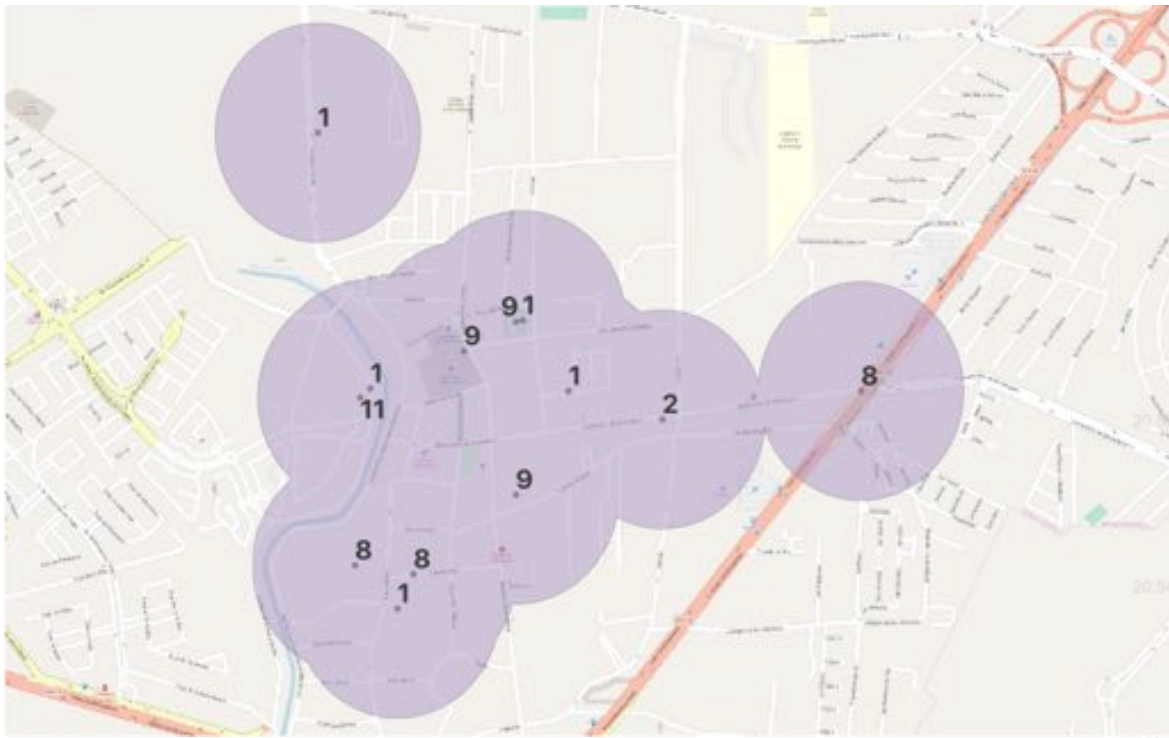
Cluster 7
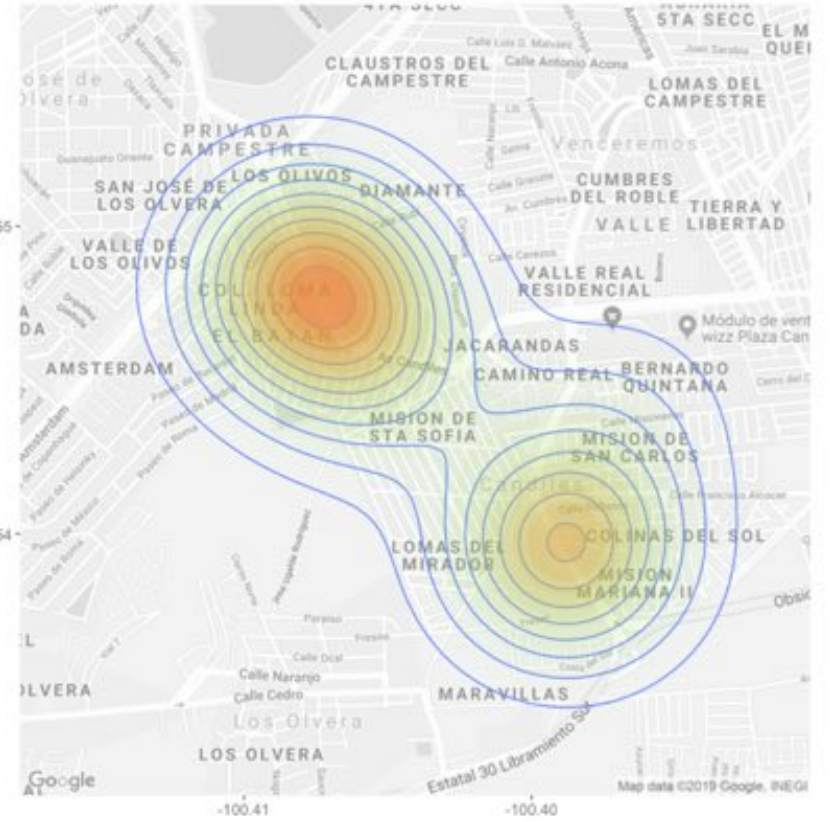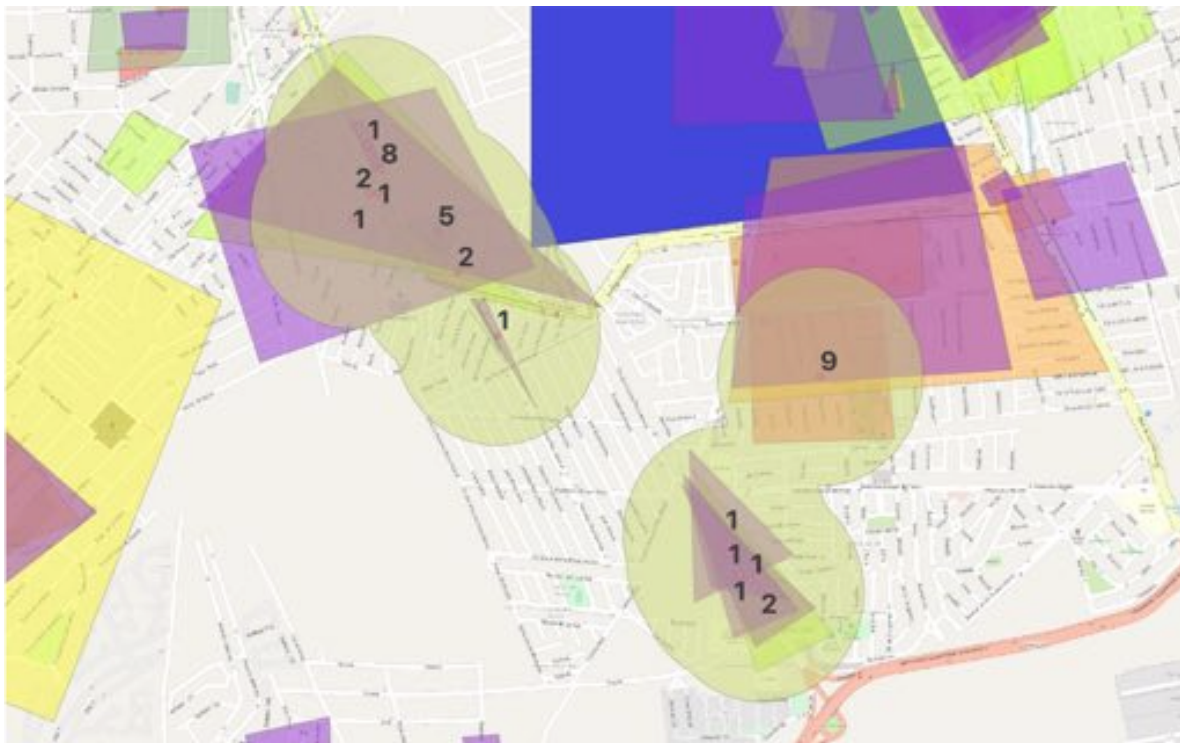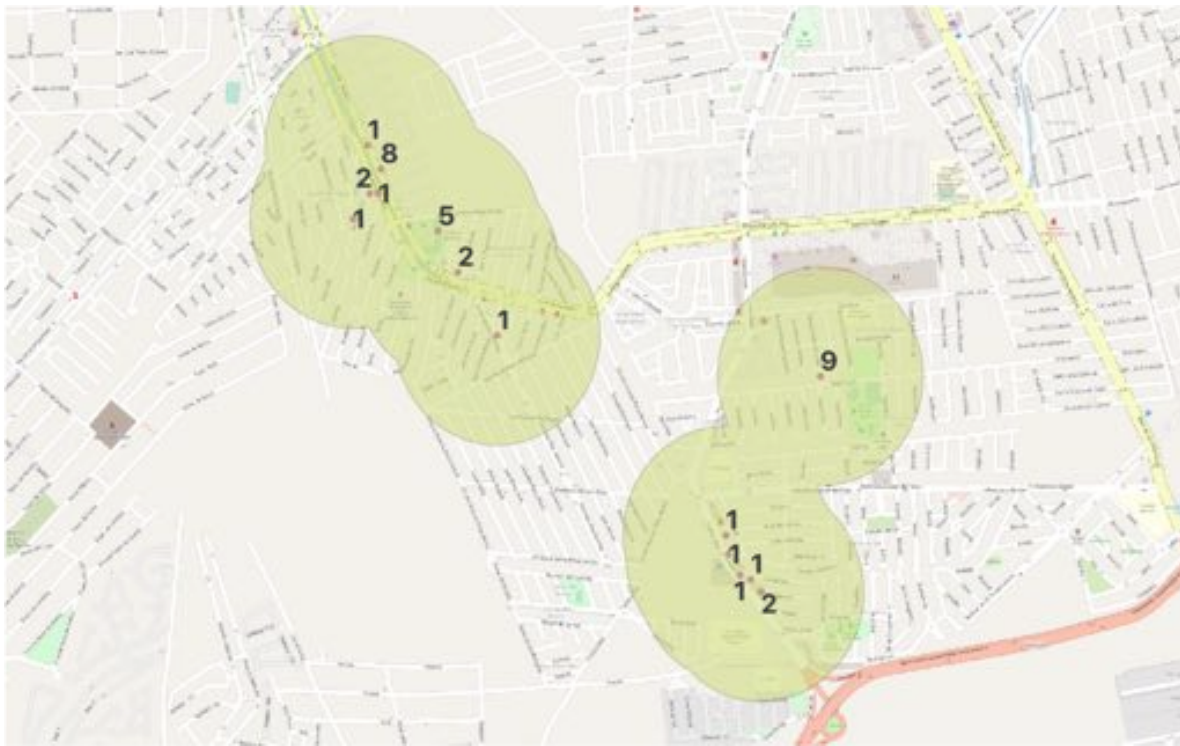
Cluster 8
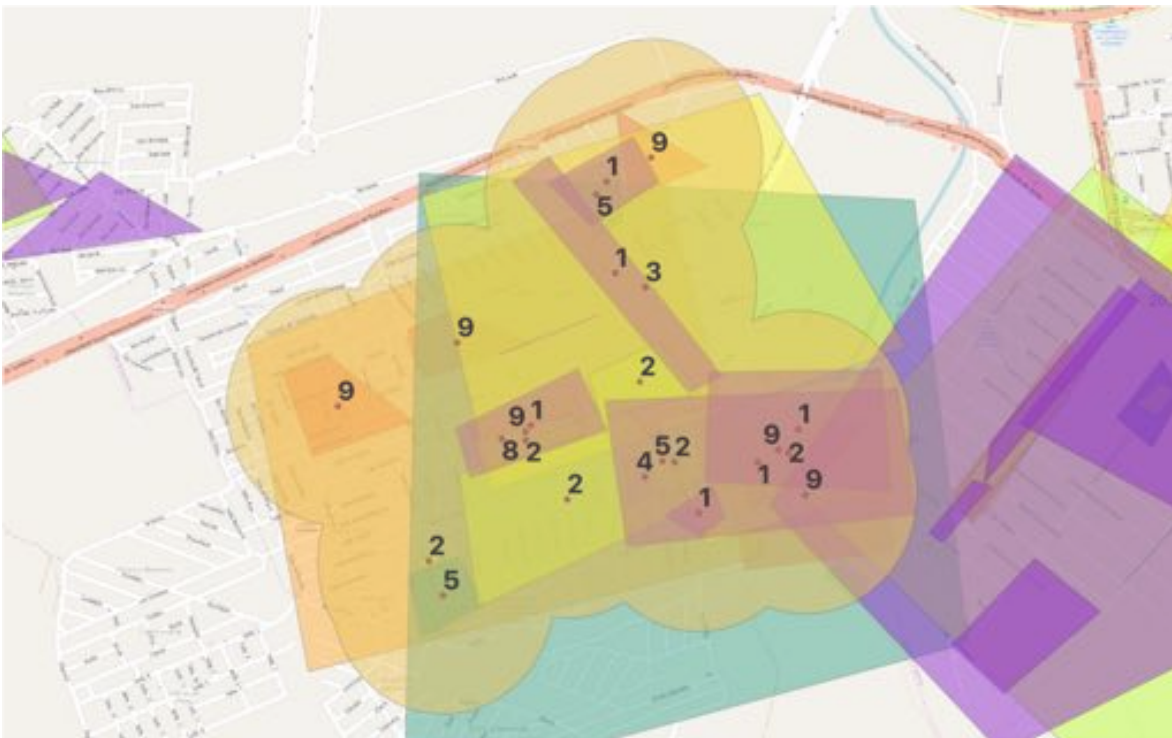
Cluster 9

Cluster 10

# J Focus group discussions programme in English and Spanish

**Focus Group Discussions**

*Programme*

Introduction and ground rules [5 minutes]

- Explain research
- Consent form
- Instructions
    o Reassure confidentiality and anonymity
        ▪ Everything said in the discussion will remain anonymous and confidential
        ▪ We will not ask for names or personal details when sharing stories, however if any are mentioned, we assure you that we will remove all personal references from the data.
    o Reassure consent
    o Ground rules:
        ▪ Everyone should respect everyone else by listening to what they say, not interrupting and waiting for their turn to speak.
        ▪ Reassure that it is a safe space for everyone to share their views, by agreeing to keep everything said in the discussion anonymous and confidential.

Small ice breaker activity [5 minutes]

This activity can vary from group to group. The facilitator should judge at their own discretion which type of breaker is needed with the specific discussion group. Possible ice breaker topics include:
- Each participant to introduce herself and say something interesting about herself and try to connect with the other women in the group and facilitator.
- Turn that introduction into a game: say your name and something interesting about you; then the next participant, in addition about that, must repeat the name of the last 2 participants plus that something they mentioned was interesting about them.
- Have a small discussion about a trivial topic—avoiding strong personal opinions—such as any national holidays that may take place soon to the date, whether they are watching any telenovela or TV show and what they think of it, any other relevant pop culture topic, etc.

Questions

1. Where do you feel safer: inside or outside/outdoors your home? Why?

    a. If outside your home, which places do you mean?

    b. What are public spaces? (Provide examples: streets, sidewalks, parks, public squares, bus stops, shopping malls; **list the spaces that are mentioned on cardboard so all participants can see it**.)

2. Do you think your neighbourhood is safe? Why?

    a. Do you take any precautions when you go out? Such as … **List them.**

b. Are there any spaces in your neighbourhood that people know to be unsafe?
    i. Which are they?
    ii. Why are they seen as unsafe?

3. What do you consider as harassment in public? (Such as unwanted contact – verbal or physical)

    a. Do you know anyone that has experienced it?
        i. If so, would you mind sharing what you know of the experience? **Let participant narrate the story. Complement story with the following questions:**
            • What happened?
            • When and where did it happen?
            • Who did it? Did you or the person you are talking about know the person?
            • Did you or the person you are talking about react in any way to this event?
            • Did you or the person you are talking about tell anyone about this?
                - If yes – who did you tell?
                - If no – why?
            • Did your routine change? How so? (Prompt for: going out at different hours, using other routes, getting a car, taking a taxi, making anyone pick them up?)
            • Did your security measures/precautions change after this incident? What do you do now?
            • Why do you think this happened or what allowed this person to behave in the way they did?

    b. Do you ever fear this may happen to you when you go out?
        i. If yes, in which situations?

    c. Are there any particular circumstances which increase vulnerability? (Prompt for age, time of day, location, locality, employment, etc)

4. Discussion about safety and the built environment:

    a. Are there any particular locations or features of public spaces that make women more vulnerable? What causes some public places to be more dangerous or be perceived as being more dangerous than others? (Refer to list of Q1)

    b. How can public spaces be made safer? (Prompt for infrastructure measures when possible: lighting, more bus stops, recreation areas like parks or public squares, highways / roads / sidewalks)
        i. By women for themselves
        ii. By the neighbourhood
        iii. By the government/municipality

Wrap up session
    - Any further stories to share (own story or something she has heard)
    - Re-iterate anonymity and confidentiality
    - Provide referral services
    - Thank participants for their time

# Grupos de Discusión Focal

## *Programa*

### Introducción y reglas del juego [5 minutos]

- Explicar investigación
- Firma de formularios de consentimiento
- Instrucciones
  - Reiterar confidencialidad y anonimato
    - Todo lo que se discuta en la entrevista será estrictamente confidencial y anónimo
    - No se preguntará nombres ni datos personales, sin embargo, en caso de ser mencionados puede quedar asegurada que se eliminarán de los datos.
  - Reiterar consentimiento
  - Reglas:
    - Se respetará a todas las participantes escuchando lo que dicen, no interrumpiendo y esperando su turno para hablar.
    - Este es un espacio seguro para compartir sus puntos de vista y opiniones, y se espera que todas las participantes mantengan lo discutido en esta sesión anónimo y confidencial.

### Actividad para romper el hielo [5 minutos]

Esta actividad puede variar de grupo en grupo. Queda a la discreción de las facilitadoras qué tipo de actividad para romper el hielo se deberá de llevar a cabo con cada grupo. Algunas opciones incluyen:
- Cada participante se presenta y dice algo interesante sobre sí misma y trata de conectarse con las otras mujeres en el grupo y la facilitadora.
- Convertir esa introducción en un juego: que la participante diga su nombre y algo interesante sobre ella; luego, la siguiente participante, además de eso, deberá repetir el nombre de las últimas 2 participantes, además de lo que mencionaron sobre ellas.
- Una pequeña discusión sobre algún tema trivial, evitando opiniones personales fuertes, como lo que harán en semana santa, si están viendo una telenovela o un programa de televisión y lo que piensan de él, cualquier otro tema de cultura popular relevante.

### Repartir encuesta de estatus socioeconómico [5 minutos]

### Preguntas [45 minutos]

1. ¿Dónde se sienten más seguras: dentro o fuera de sus casas? ¿Por qué?

   a. Fuera de la casa: ¿a qué lugares se refieren?

   b. ¿Qué es un espacio público? [Por ejemplo, calles, banquetas, parques, plazas públicas, paradas de autobús; **hacer una lista con estos sitios en una cartulina para que todas las participantes lo puedan ver.**]

2. ¿En qué colonia viven? ¿Creen que su colonia es segura? ¿Por qué? **[Tomar nota de las colonias; mapearlo en KoboCollect]**

   a. ¿Toman alguna precaución cuando salen? ¿Cómo cuál(es)? **Hacer una lista.**

   b. ¿Hay algún espacio o lugar o espacios o lugares en tu colonia que la gente sabe que es inseguro? ¿Cuál(es)? **[Tomar nota de los espacios; mapearlo en KoboCollect]**

      i. ¿Por qué dicen o creen que son inseguros?

3. ¿Qué consideran que es el acoso callejero? (como contacto físico o verbal no solicitado)

   a. ¿Conocen a alguien que lo haya experimentado aquí en el municipio?
      i. En caso de que si, podrían compartirnos lo que saben de la experiencia? **[Dejar que la participante narre la historia. Complementar con las siguientes preguntas:]**
         - ¿Qué pasó?
         - ¿Cuándo y dónde pasó?
         - ¿Quién lo hizo? Saben si conocía a la persona?
         - ¿La persona reaccionó de alguna manera?
         - ¿La persona le contó a alguien?
            a. Si sí – ¿a quién?
            b. Si no – ¿por qué?
         - ¿Sabes si la persona cambió su rutina? ¿Cómo? [ejemplos: sale a diferentes horas, usa otra ruta, se compró un coche, agarra taxi, le pidió a alguien que la recogiera, etc.]
         - ¿Cambiaron sus medidas de seguridad las precauciones que ahora toma? ¿Qué hace ahora?
         - ¿Por qué crees que esto pasó? O ¿qué hizo que la persona se comportara de tal manera?

   b. ¿Te da miedo que esto te pase a ti cuando sales?
      i. Si sí, ¿en qué situaciones?

   c. ¿Creen que hay situaciones en particular que incrementan la vulnerabilidad de las mujeres? [Por ejemplo, la edad, hora del día, lugar, colonia, tipo de empleo y/o estatus socioeconómico, etc.]

4. Discusión sobre seguridad y el espacio público:

   **a.** ¿Existe algún lugar en particular o características específicas de los espacios públicos que hacen a las mujeres más vulnerables? ¿Qué creen que cause que los espacios públicos sean más peligrosos o se perciban más peligrosos que otros? **[Ver lista de la pregunta 1]**

   b. ¿Cómo creen que se puedan crear espacios públicos más seguros? [Dar ejemplos sobre medidas de infraestructura: iluminación, más paradas de autobús, áreas de recreación como parques o plazas públicas, carreteras / caminos / banquetas]

      i. De parte de las mujeres.
      ii. De parte de la colonia.
      iii. De parte del gobierno/municipio.

Finalizar discusión [5-10 minutos]

   - ¿Cualquier otra historia que quieran compartir? (Propia, de alguien más o algo que haya oído)
   - Reiterar anonimato y confidencialidad
   - Proporcionar hoja de servicios
   - Agradecer a las participantes por su tiempo

# K Heat map code

The following code was applied to the spatial data to create the heat maps. To apply the code at different levels, the central coordinate and the zoom number were changed.

```
# Get maps
corregidora = c(lon = -100.431799, lat = 20.540845)
map = get_googlemap(center = corregidora, zoom = 13, maptype = "roadmap", color
    ↪ = "bw")


# Corregidora
c.map <- ggmap(map, extent = "panel", maprange=FALSE)
c <- geom_point(data = clusters, aes(x = xcoord, y = ycoord, colour = factor(
    ↪ Cluster_ID)))


# Plot maps
c.map +
      geom_density2d(data = centroids, aes(x = xcoord, y = ycoord), colour = "
          ↪ #4e4e4f") +
      stat_density2d(data = centroids, aes(x = xcoord, y = ycoord, fill = ..
          ↪ level.., alpha = ..level..), size = 0.01, bins = 16, geom = '
          ↪ polygon') +
      scale_fill_gradient(low = "white", high = "#3a0e66") +
      scale_alpha(range = c(0.00, 0.25), guide = FALSE) +
      theme(legend.position = "none", axis.title = element_blank(), text =
          ↪ element_text(size = 12)) +
      c + scale_color_grey(start=0.7, end=0.2)
```

# L  Ethical clearance and other relevant documentation[7]

**UCL RESEARCH ETHICS COMMITTEE**
**OFFICE FOR THE VICE PROVOST RESEARCH**

1st October 2018

Dr Priti Parikh
Department of Civil, Environmental and Geomatic Engineering
UCL

Dear Dr Parikh

**Notification of Ethics Approval with Provisos**
**Project ID/Title: 9277/003: Gender-based violence against women and the built environment**

Further to your satisfactory responses to the Committee's comments, I am pleased to confirm in my capacity as Joint Chair of the UCL Research Ethics Committee (REC) that your study has been ethically approved by the UCL REC until **1st October 2020.**  Ethical approval is granted on condition that recruitment does not commence until you have provided written evidence of ethical approval from the partner university, UAQ, for our records.

Ethical approval is also subject to the following conditions:

**Notification of Amendments to the Research**
You must seek Chair's approval for proposed amendments (to include extensions to the duration of the project) to the research for which this approval has been given.  Each research project is reviewed separately and if there are significant changes to the research protocol you should seek confirmation of continued ethical approval by completing an 'Amendment Approval Request Form'
http://ethics.grad.ucl.ac.uk/responsibilities.php

**Adverse Event Reporting – Serious and Non-Serious**
It is your responsibility to report to the Committee any unanticipated problems or adverse events involving risks to participants or others. The Ethics Committee should be notified of all serious adverse events via the Ethics Committee Administrator (ethics@ucl.ac.uk) immediately the incident occurs. Where the adverse incident is unexpected and serious, the Joint Chairs will decide whether the study should be terminated pending the opinion of an independent expert. For non-serious adverse events the Joint Chairs of the Ethics Committee should again be notified via the Ethics Committee Administrator within ten days of the incident occurring and provide a full written report that should include any amendments to the participant information sheet and study protocol. The Joint Chairs will confirm that the incident is non-serious and report to the Committee at the next meeting. The final view of the Committee will be communicated to you.

**Final Report**
At the end of the data collection element of your research we ask that you submit a very brief report (1-2 paragraphs will suffice) which includes in particular issues relating to the ethical implications of the research i.e. issues obtaining consent, participants withdrawing from the research, confidentiality, protection of participants from physical and mental harm etc.

---

[7]All the signatures in the documents in this appendix have been removed.

In addition, please:

- ensure that you follow all relevant guidance as laid out in UCL's Code of Conduct for Research: http://www.ucl.ac.uk/srs/governance-and-committees/resgov/code-of-conduct-research
- note that you are required to adhere to all research data/records management and storage procedures agreed as part of your application.  This will be expected even after completion of the study.

With best wishes for the research.

Yours sincerely

**Dr Lynn Ang**
**Joint Chair, UCL Research Ethics Committee**

Cc: Ana Margarita Garfias Royo
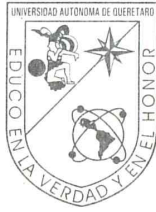
C.U., October 8, 2018
DIP/573-18

MS Ana Margarita Garfias Royo
University College London

At the meeting held at the Directorate of Research and Postgraduate Studies to evaluate research proposals, the Research Ethics Committee determined that the protocol presented by you under the title "Gender-based violence against women and public space" was: Ethically Approved.

It should be noted that in observance of the federal law, the policies of the Autonomous University of Querétaro, and the obligation of this Ethics Committee, the projects developed must respect the rights and well-being of the participants, humans or non-humans, as individuals and as communities, the biosecurity and the environment. Therefore, the methodology envisioned for each project must explain how are the participants to be treated and the expected and possible benefits, their informed consent and/or agreement, and the handling of sensitive data.

The members of the Committee issued their decision on October 8, 2018, at the Directorate of Research and Postgraduate Studies of the Autonomous University of Querétaro. These members were: Dr. Bernardo García Camino, President, Dr. Hilda Romero Zepeda, Representative to the Faculty of Language and Literature, Dr. Pamela Garbus, Representative to the Faculty of Psychology, R. Michael Jeziorski, Representative of the Institute of Neurobiology of UNAM at Juriquilla, Dr. María de la Luz Reyes Vega, Coordinator, and Ms. Mariana Pérez Espinosa.

"Educo en la verdad y en el honor"

_____
Dr. Bernardo García Camino
President

UNIVERSIDAD AUTÓNOMA DE QUERÉTARO
Cerro de las Campanas s/n, Col. Las Campanas C.P. 76010 Querétaro, Qro.
Tels. 01 (442) 192 12 52, 192 13 12, 192 12 00 Exts. 3240, 3242 y 3243

**SOMOS** UAQ
EDUCAR CRECER **CONSOLIDAR**

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**Dear Ms Ana Margarita Garfias Royo**

Your **request for a collaborative work agreement** with respect to your research aiming to **identify vulnerable locations for gender-based violence against women** has been considered. We are pleased to inform you that **we are able to accept your offer** and are willing to **collaborate with your research**. We hope this collaboration can generate a background for future joint work and that the results of your study are useful and beneficial for the population of the municipality of Corregidora.

Looking forward to our successful collaboration

**Yours sincerely**

_____

**L.E.F. Osiel Antonio Montoya Val**
**Director**
**Instituto Municipal de Planeación y Sustentabilidad de Corregidora**

Ccp.
Archivo/JSAM

**LEF Osiel Antonio Montoya Vallejo,**
**Municipal Institute of Planning and Sustainability of Corregidora (IMPLASCO),**
**Subject: Letter of agreement**

Through this letter, I, Ana Margarita Garfias Royo, PhD student of the Department of Civil, Environmental and Geomatic Engineering of University College London in the United Kingdom, request an agreement for collaboration in my doctoral research, that includes access to information.

My research aims to carry out an exploratory work to identify risk factors in the built environment and urban infrastructure that influence gender-based violence against women in the public sphere in the urban localities of Corregidora Municipality. The purpose is to broaden the understanding of this relationship by identifying vulnerable locations for gender-based violence against women in order to investigate the physical and sociocultural context in these areas. The objectives this research sets to address are the following:

(a) Identify the types of gender-based violence women experience in the public space and the prevalence and proportion among them.
(b) Identify locations in the public space where women have faced gender-based violence and georeference where these incidents have taken place.
(c) Analyse the key drivers for gender-based violence against women in those locations by identifying patterns in the elements of the urban environment at two different levels: street and areas.

This research will be carried out with women over 18 years of age residents of the municipality of Corregidora, whom will be asked about their experiences of violence undergone in the public sphere. Additionally, it will be sought to interview relevant actors to enquire about the planning processes. It is expected that the results of this research will generate local statistics about the experiences of gender-based violence that women above legal age of the municipality experience in the public sphere. These statistics will be useful for analysing preventive measures and public work needs of the municipality; as well as to generate grounded proposals for infrastructure delivery.

It is expected that IMPLASCO will collaborate by granting access to information of the municipality, specifically to georeferenced maps, that include the location of streets, neighbourhoods and services; help in requesting access to information regarding anonymised police complaints of gender-based violence events undergone in the public sphere; as well as support in the sample design of this study.

It is expected that this study, and therefore this agreement, will be finalised by the second half of the year 2020. It is furthermore expected that the results of this study will generate an initial diagnosis on urban equipment related to the facilitation of gender-based violence against women in the public sphere of the municipality. The results will be shared with IMPLASCO in the form of georeferenced maps, in which the identified areas will be highlighted, as well as with a summary of the findings. Additionally, the methodology of the study will be shared in the form of a toolkit for the local government to replicate the investigation in the future. It is also expected that the results of the study will be useful to assess preventive measures and provide informed and tailored recommendations of infrastructure needs and public work for the municipality to tackle the identified issues.

⫯⬚⫰ implasco

Sincerely,

**Ms Ana Margarita Garfias Royo**

**2 5 JUN. 2018**

Instituto Municipal de
Planeación y Sustentabilidad
de Corregidora

Corregidora Qro. a 26 de junio de 2018
CONVENIO DE TRABAJO
**IMP/CT/O/0001A/2018**
ASUNTO: Respuesta Solicitud

**Mtra. Ana Margarita Garfias Royo**
**P R E S E N T E**

Por medio de la presente envío un cordial saludo y en relación a la **solicitud de convenio de trabajo** colaborativo con respecto a su investigación con el propósito de **"Identificar Factores de Riesgo en el Equipamiento e Infraestructura Urbana que Influyen en la Violencia Contra las Mujeres en la Esfera Pública"**, al **Instituto Municipal de Planeación y Sustentabilidad de Corregidora** le es grato **brindarle el apoyo** que Ud. solicita, buscando poder trabajar en conjunto y de manera colaborativa con el objetivo de poder generar un antecedente y que en un futuro los resultados de su investigación puedan ser de utilidad y beneficio de los habitantes del Municipio de Corregidora.

Sin más por el momento quedo de usted.

**Atentamente**

2 6 JUN. 2018

implasco

**L.E.F. Osiel Antonio Montoya Vallejo**
**Director**
**Instituto Municipal de Planeación y Sustentabilidad de Corregidora**

Ccp.
Archivo/JSAM

**L.E.F. Osiel Antonio Montoya Vallejo,**
**Instituto Municipal de Planeación y Sustentabilidad de Corregidora (IMPLASCO),**
**Asunto: Carta convenio**

Por medio de la presente me pongo en contacto con ustedes, yo, Ana Margarita Garfias Royo, estudiante de doctorado del Departamento de Ingeniería Civil, Ambiental y Geomática (Civil, Environmental and Geomatic Engineering) de University College London en Reino Unido, solicito un convenio de colaboración para un proyecto de investigación doctoral y solicitar acceso a información.

El proyecto de investigación tiene como propósito identificar factores de riesgo en el equipamiento e infraestructura urbana que influyen en la violencia contra las mujeres en la esfera pública. El objetivo final es ampliar el conocimiento de esta relación mediante la identificación de lugares que funjan como facilitadores de violencia contra las mujeres, para así poder investigar el contexto físico y sociocultural en estas áreas. Los siguientes objetivos serán abordados:

(a) Identificar tipos de violencia que experimentan las mujeres en el espacio público y la prevalencia y proporción entre estos tipos.
(b) Identificar y georreferenciar las locaciones en el espacio público donde esta violencia es recurrente.
(c) Analizar los factores que facilitan la violencia contra las mujeres en esos lugares mediante la identificación de patrones en elementos del entorno urbano en dos niveles: calles y zonas.

Esta investigación será llevada a cabo con mujeres mayores de 18 años del Municipio de Corregidora, a las cuales se les preguntará sobre sus experiencias de violencia en la esfera pública. Adicionalmente, se buscará entrevistar a actores relevantes en los procesos de planeación para indagar sobre los mismos. Se espera también que los resultados de esta investigación generen estadísticas locales sobre las experiencias de violencia de las mujeres mayores de edad del Municipio en el espacio público y sean de ayuda en el análisis de medidas preventivas y necesidades de obra pública del Municipio, así como para crear propuestas fundamentadas de necesidades de infraestructura y obra pública.

Por parte del IMPLASCO, se espera su colaboración en el acceso a información del Municipio, en específico a mapas georreferenciados con localización de calles, colonias y servicios; ayuda en la solicitud d acceso a información de denuncias anonimizadas sobre eventos de violencia de género contra mujeres llevadas a cabo en el espacio público; y apoyo en el diseño muestral del estudio.

Se espera que esta investigación, y por ende este convenio, finalice en la segunda mitad del año 2020. Se espera también que los resultados del proyecto generen un diagnóstico inicial sobre equipamiento urbano que se relacione con la facilitación de violencia de género contra las mujeres en el espacio público del Municipio de Corregidora. Los resultados serán compartidos con el IMPLASCO en forma de mapas georreferenciados con las zonas identificadas, así como en un resumen de los hallazgos. Asimismo, la metodología del estudio será compartida con el IMPLASCO para poder replicar el estudio en un futuro en caso necesario. Se espera también poder usar los resultados del estudio para evaluar medidas preventivas y proporcionar recomendaciones informadas sobre necesidades de infraestructura y obra pública que sirvan como primera aproximación para generar seguridad, particularmente para las mujeres, a través del entorno urbano construido.

⭐ implasco

**Atentamente**

**Mtra. Ana Margarit Garfias Royo**

2 5 JUN. 2018

Instituto Municipal de
Planeación y Sustentabilidad
de Corregidora

# FIELD / LOCATION WORK

*The Approved Code of Practice – Management of Fieldwork should be referred to when completing this form*
http://www.ucl.ac.uk/estates/safetynet/guidance/fieldwork/acop.pdf

**DEPARTMENT/SECTION**

**LOCATION(S)**

**PERSONS COVERED BY THE RISK ASSESSMENT**

NOTE: The PhD Fieldwork has been approved by the UCL Ethics Committee, project 9277/003.

Ana Margarita Garfias Royo

**BRIEF DESCRIPTION OF FIELDWORK**
PhD Fieldwork in Corregidora Municipality, Querétaro State, Mexico - Data collection: application of surveys, semi-structured interviews and site observations

Consider, in turn, each hazard (white on black). If **NO** hazard exists select **NO** and move to next hazard section.
If a hazard does exist select **YES** and assess the risks that could arise from that hazard in the risk assessment box.
**Where risks are identified that are not adequately controlled they must be brought to the attention of your Departmental Management who should put temporary control measures in place or stop the work. Detail such risks in the final section.**

| ENVIRONMENT | The environment always represents a safety hazard. Use space below to identify and assess any risks associated with this hazard |
|---|---|
| e.g. location, climate, terrain, neighbourhood, in outside organizations, pollution, animals. | Examples of risk: adverse weather, illness, hypothermia, assault, getting lost. Is the risk high / medium / low ? |

Low: Heavy rains, adverse weather, illness. The weather will be checked on a daily basis; if there is possibility of heavy rains, fieldwork will not be conducted that day. There may be insects that could bite, appropriate clothing as well as repellent will be used.

Medium: Assault, getting lost, disturbing a neighbour. Data collection method includes household interviews. A security protocol that includes working in pairs, informing of whereabouts of the data collectors on a regular basis, having GPS turned on on phones at all times, only trusting the privately hired driver and informing the police (if necessary) about the location of data collection, will be put in place and will be shared with all the data collectors.

| CONTROL MEASURES | Indicate which procedures are in place to control the identified risk |
|---|---|

- ☑ work abroad incorporates Foreign Office advice
- ☑ participants have been trained and given all necessary information
- ☐ only accredited centres are used for rural field work
- ☑ participants will wear appropriate clothing and footwear for the specified environment
- ☐ trained leaders accompany the trip
- ☑ refuge is available
- ☑ work in outside organisations is subject to their having satisfactory H&S procedures in place
- ☑ OTHER CONTROL MEASURES: please specify any other control measures you have implemented.

Data collection will be carried out in collaboration with a local governmental organisation, who will overview security measures.

| EMERGENCIES | Where emergencies may arise use space below to identify and assess any risks |
|---|---|
| e.g. fire, accidents | Examples of risk: loss of property, loss of life |

Accidents may occur while conducting fieldwork due to uneven surfaces or lacking infrastructure. Data collectors will be instructed to watch their step and be aware of their surroundings at all times.
Loss of property may occur. Data collectors will be instructed to be aware of their belongings.

| CONTROL MEASURES | Indicate which procedures are in place to control the identified risk |
|---|---|

- ☑ participants have registered with LOCATE at http://www.fco.gov.uk/en/travel-and-living-abroad/
- ☐ fire fighting equipment is carried on the trip and participants know how to use it
- ☑ contact numbers for emergency services are known to all participants
- ☑ participants have means of contacting emergency services
- ☑ participants have been trained and given all necessary information
- ☑ a plan for rescue has been formulated, all parties understand the procedure
- ☐ the plan for rescue /emergency has a reciprocal element
- ☑ OTHER CONTROL MEASURES: please specify any other control measures you have implemented.

The supervisors of the research as well as chosen emergency contacts of the data collectors will be informed of the location of the data collectors at all times. Data collectors will be carrying their travel insurance documents at all times.

FIELDWORK 1 May 2010

e.g. clothing, outboard motors.

Examples of risk: inappropriate, failure, insufficient training to use or repair, injury. Is the risk high / medium / low?

| CONTROL MEASURES | Indicate which procedures are in place to control the identified risk |
|---|---|

- ☐ the departmental written Arrangement for equipment is followed
- ☐ participants have been provided with any necessary equipment appropriate for the work
- ☐ all equipment has been inspected, before issue, by a competent person
- ☐ all users have been advised of correct use
- ☐ special equipment is only issued to persons trained in its use by a competent person
- ☐ OTHER CONTROL MEASURES: please specify any other control measures you have implemented:

| LONE WORKING | Is lone working a possibility? | No | If 'No' move to next hazard. If 'Yes' use space below to identify and assess any risks |
|---|---|---|---|

e.g. alone or in isolation lone interviews.

Examples of risk: difficult to summon help. Is the risk high / medium / low?

Medium. Lone work will not be carried out, but the collectors will be applying household interviews. This could pose a risk for their safety, especially when enquiring about sensitive issues. If one of the data collectors is not available to collect data on any given day, data collection will not be carried out that day. Data collectors are expected to provide regular updates to the supervisors and their emergency contacts on their locations. Furthermore, a private driver will be hired to take the data collectors to and from the locations of data collection and they will have strict instructions to only make use of this service. Breaks from data collection will also be flexible.

| CONTROL MEASURES | Indicate which procedures are in place to control the identified risk |
|---|---|

- ☐ the departmental written Arrangement for lone/out of hours working for field work is followed
- ☑ lone or isolated working is not allowed
- ☑ location, route and expected time of return of lone workers is logged daily before work commences
- ☑ all workers have the means of raising an alarm in the event of an emergency, e.g. phone, flare, whistle
- ☑ all workers are fully familiar with emergency procedures
- ☑ OTHER CONTROL MEASURES: please specify any other control measures you have implemented:

Data collectors will carry fully charged phones with GPS turned on at all times to be easily contacted.

identify and assess any risks associated with this Hazard.

e.g. accident, illness, personal attack, special personal considerations or vulnerabilities.

Examples of risk: injury, asthma, allergies. Is the risk high / medium / low?

Low: injury, asthma, allergies.

Medium: personal attack. The research deals with a sensitive topic; it is possible for the participants (or their family or community members) to become distressed and pose a threat to the data collectors.

## CONTROL MEASURES | Indicate which procedures are in place to control the identified risk

- [ ] an appropriate number of trained first-aiders and first aid kits are present on the field trip
- [x] all participants have had the necessary inoculations/ carry appropriate prophylactics
- [x] participants have been advised of the physical demands of the trip and are deemed to be physically suited
- [x] participants have been adequate advice on harmful plants, animals and substances they may encounter
- [x] participants who require medication have advised the leader of this and carry sufficient medication for their needs
- [x] OTHER CONTROL MEASURES: please specify any other control measures you have implemented:

Given the sensitive issues the research deals with, it is possible for the data collectors to become distressed. In such cases, private counselling will be sought while in-country, as well as accessing the UCL mental health resources once the data collector is back in the UK.

| TRANSPORT | Will transport be required | NO | | Move to next hazard |
|---|---|---|---|---|
| | | YES | ✓ | Use space below to identify and assess any risks |

e.g. hired vehicles

Examples of risk: accidents arising from lack of maintenance, suitability or training Is the risk high / medium / low?

Low: A trustworthy, local private driver will be hired to take the data collectors to and from the locations for data collection.

## CONTROL MEASURES | Indicate which procedures are in place to control the identified risk

- [ ] only public transport will be used
- [x] the vehicle will be hired from a reputable supplier
- [ ] transport must be properly maintained in compliance with relevant national regulations
- [ ] drivers comply with UCL Policy on Drivers http://www.ucl.ac.uk/hr/docs/college_drivers.php
- [x] drivers have been trained and hold the appropriate licence
- [ ] there will be more than one driver to prevent driver/operator fatigue, and there will be adequate rest periods
- [x] sufficient spare parts carried to meet foreseeable emergencies
- [ ] OTHER CONTROL MEASURES: please specify any other control measures you have implemented:

| DEALING WITH THE PUBLIC | Will people be dealing with public | Yes | If 'No' move to next hazard |
|---|---|---|---|
| | | | If 'Yes' use space below to identify and assess any risks |

e.g. interviews, observing

Examples of risk: personal attack, causing offence, being misinterpreted. Is the risk high / medium / low?

Medium: personal attack, causing offence, being misinterpreted.

## CONTROL MEASURES | Indicate which procedures are in place to control the identified risk

- [x] all participants are trained in interviewing techniques
- [ ] interviews are contracted out to a third party
- [x] advice and support from local groups has been sought
- [x] participants do not wear clothes that might cause offence or attract unwanted attention
- [ ] interviews are conducted at neutral locations or where neither party could be at risk
- [x] OTHER CONTROL MEASURES: please specify any other control measures you have implemented:

UCL Ethics, as well as an in-country ethics panel, will assess the instruments used for collecting data, to ensure the most sensitive approach is being followed, as well as the appropriateness of the language being used. The research will be thoroughly explained to the participants, and only those that provide full consent will be interviewed. The interviews can be stopped at any time. Information about the data collectors will not be provided to the participants, and data collection will be carried out in pairs.

FIELDWORK         3                                                                              May 2010

**NEAR WATER**

or near water?  [ ... ]  If 'Yes' use space below to identify and assess any risks

*e.g. rivers, marshland, sea.*    Examples of risk: drowning, malaria, hepatitis A, parasites.  Is the risk high / medium / low?

| CONTROL MEASURES | Indicate which procedures are in place to control the identified risk |

- ☐ lone working on or near water will not be allowed
- ☐ coastguard information is understood; all work takes place outside those times when tides could prove a threat
- ☐ all participants are competent swimmers
- ☐ participants always wear adequate protective equipment, e.g. buoyancy aids, wellingtons
- ☐ boat is operated by a competent person
- ☐ all boats are equipped with an alternative means of propulsion e.g. oars
- ☐ participants have received any appropriate inoculations
- ☐ OTHER CONTROL MEASURES: please specify any other control measures you have implemented:

**MANUAL HANDLING (MH)**

Do MH activities take place?  [ No ]  If 'No' move to next hazard
If 'Yes' use space below to identify and assess any risks

*e.g. lifting, carrying, moving large or heavy equipment, physical unsuitability for the task.*    Examples of risk: strain, cuts, broken bones.  Is the risk high / medium / low?

| CONTROL MEASURES | Indicate which procedures are in place to control the identified risk |

- ☐ the departmental written Arrangement for MH is followed
- ☐ the supervisor has attended a MH risk assessment course
- ☐ all tasks are within reasonable limits, persons physically unsuited to the MH task are prohibited from such activities
- ☐ all persons performing MH tasks are adequately trained
- ☐ equipment components will be assembled on site
- ☐ any MH task outside the competence of staff will be done by contractors
- ☐ OTHER CONTROL MEASURES: please specify any other control measures you have implemented:

| SUBSTANCES | Will participants work with substances | No | If 'No' move to next hazard. If 'Yes' use space below to identify and assess any risks |
| --- | --- | --- | --- |
| e.g. plants, chemical, biohazard, waste | Examples of risk: ill health - poisoning, infection, illness, burns, cuts. Is the risk high / medium / low? | | |

**CONTROL MEASURES** Indicate which procedures are in place to control the identified risk.

- ☐ the departmental written Arrangements for dealing with hazardous substances and waste are followed
- ☐ all participants are given information, training and protective equipment for hazardous substances they may encounter
- ☐ participants who have allergies have advised the leader of this and carry sufficient medication for their needs
- ☐ waste is disposed of in a responsible manner
- ☐ suitable containers are provided for hazardous waste
- ☐ OTHER CONTROL MEASURES: please specify any other control measures you have implemented

| OTHER HAZARDS | Have you identified any other hazards? | No | If 'No' move to next section. If 'Yes' use space below to identify and assess any risks |
| --- | --- | --- | --- |
| i.e. any other hazards must be noted and assessed here. | Hazard: | | |
| | Risk: is the risk | | |

**CONTROL MEASURES** Give details of control measures in place to control the identified risks

| Have you identified any risks that are not adequately controlled? | NO ☑ | Move to Declaration |
| --- | --- | --- |
| | YES ☐ | Use space below to identify the risk and what action was taken |

| Is this project subject to the UCL requirements on the ethics of Non-NHS Human Research? | No |
| --- | --- |

If yes, please state your Project ID Number [        ]

For more information, please refer to: http://ethics.grad.ucl.ac.uk/

| DECLARATION | The work will be reassessed whenever there is a significant change and at least annually. Those participating in the work have read the assessment. |
| --- | --- |

Select the appropriate statement:

- ☑ I the undersigned have assessed the activity and associated risks and declare that there is no significant residual risk
- ☑ I the undersigned have assessed the activity and associated risks and declare that the risk will be controlled by the method(s) listed above

# e-LfH

**NHS** Health Education England

## Data security awareness

**NHS** Digital

This is to certify that

# Ana Margarita Garfias Royo

completed the programme

## Data Security Awareness (NHSD)

On

## 09 October 2018

This document is a record of completion of the e-learning material and, where applicable, successful completion of any associated summative assessments. It does not constitute certification or a formal qualification.

Certficate Generated On 09 October 2018

# M Security measures

Given the sensitivity of this research, security measures were thoroughly considered for data collection. The following table presents the most crucial risks that were envisioned to be encountered during data collection, as well as the actions to mitigate them:

*Table 9 – Identified risks and their mitigating actions.*

| Risk | Mitigating actions |
| --- | --- |
| Household interview language | The household interview as well as the semi-structured interview questions will be revised by the UCL the Ethics committee as well as by an in-country ethical panel, which will ensure the language used is appropriate for the context in which it will be applied. |
| Participant's consent | Only the participants who agree and provide full consent to participate in the research will be surveyed/interviewed. |
| Participant's safety | (1) Participants were asked whether they felt comfortable/safe conducting the household/semi-structured interview at their homes. In case they did not feel comfortable/safe at their home, but still want to participate, they were asked for a public location in which they felt safe meeting up (café, restaurant, public plaza/garden, local library). <br> (2) Conducting the survey and interview was done in strict privacy. If that is not possible in the house of the participant, they will be asked to meet up in a public location. In case the participant does not agree to that, the survey/interview will not be conducted with that person. |
| Participant's distress | All participants will be provided with information of centres, organisations, support groups and agencies that they contact in case they need further help/support, whether psychological, legal or for health. |
| Surveyor's safety and lone working | (1) Members of IMPLASCO will inform the local police that the survey is being conducted and where it will take place. <br> (2) Furthermore, data collectors must inform the data collection leader about the locations where they are conducting the household interviews. They will be instructed to inform when they arrive to the location; when they start and finish each interview; and their following location. <br> (3) A trustworthy private driver will be hired to take the data collectors to and from the selected locations. <br> (4) Data collectors must work in pairs at all times. <br> (5) No information on the data collectors will be provided to the participants. <br> (6) There is a high risk for the data collectors to conduct surveys/interviews in the participants homes. The data collectors will be instructed to trust their instincts, and to not conduct a survey/interview or to finish it early and leave if they do not feel comfortable at any point during the data collection process. |

# N  Heat map comparisons

Figures 4, 5 and 6 show a side-by-side comparison of the heat map generated without using line data and the ones which were generated including this data.
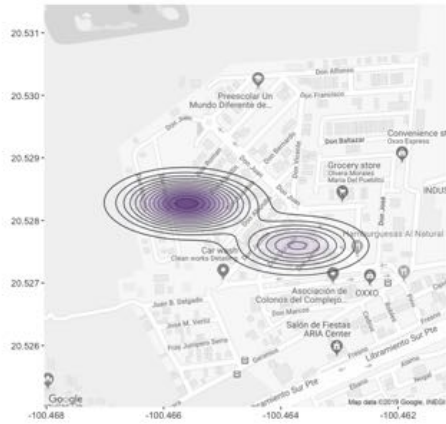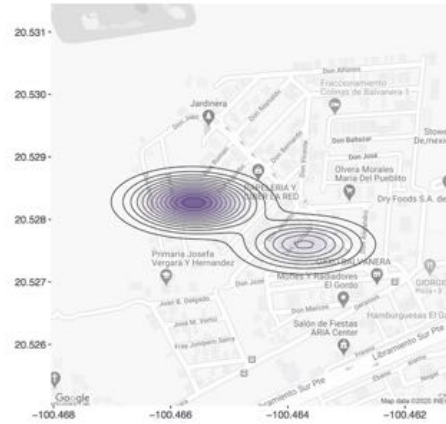


*(a) Cluster 1.*　　　　　　　　　*(b) Cluster 1 with line features.*
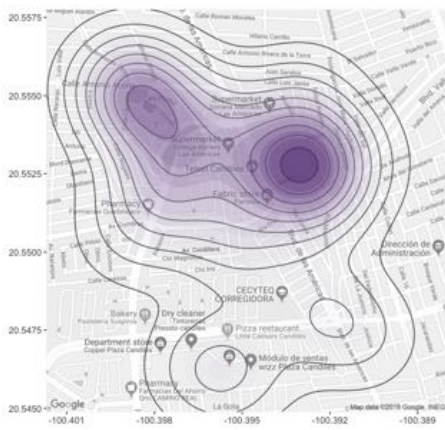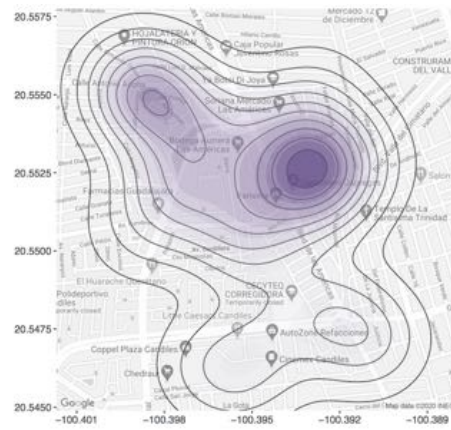
*(c) Cluster 2.*　　　　　　　　　*(d) Cluster 2 with line features.*
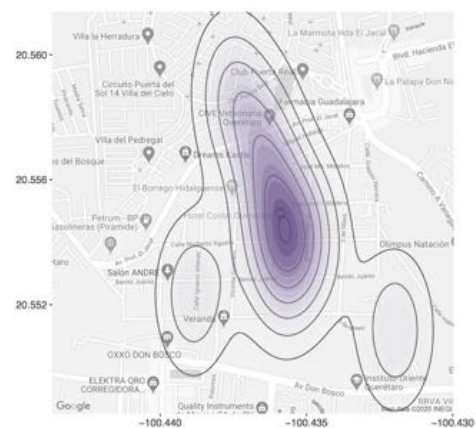
*(e) Cluster 3.*　　　　　　　　　*(f) Cluster 3 with line features.*

*Figure 4 – Comparison of density plots including line features, clusters 1 to 3. Figures by the researcher.*
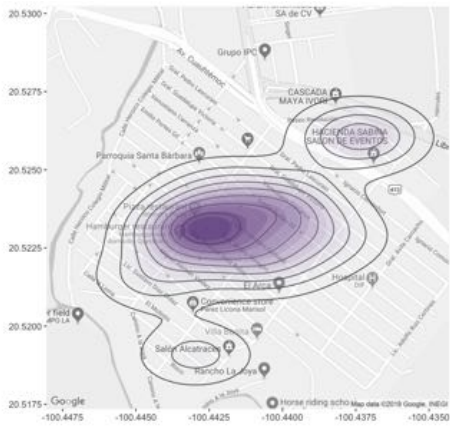
*(a) Cluster 5.*
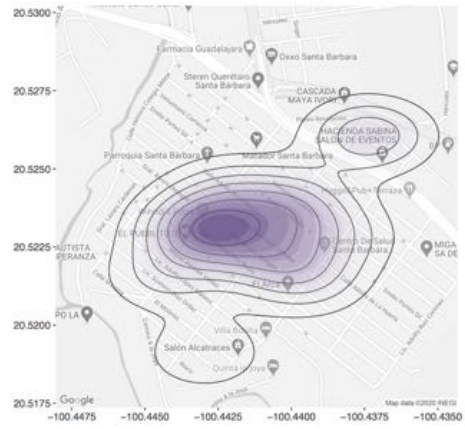
*(b) Cluster 5 with line features.*
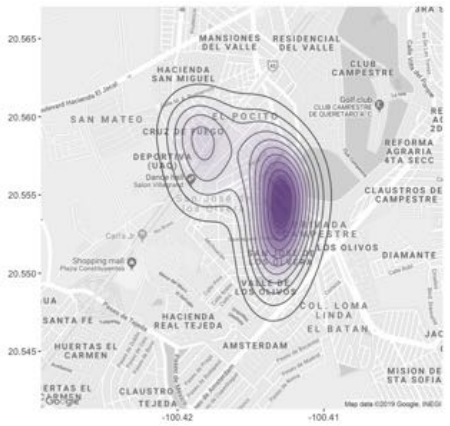
*(c) Cluster 6.*
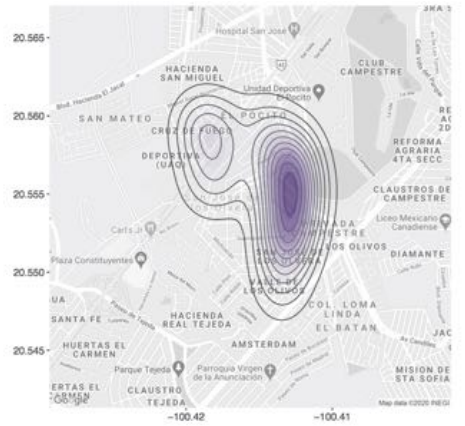
*(d) Cluster 6 with line features.*

*(e) Cluster 8.*

*(f) Cluster 8 with line features.*

*Figure 5 – Comparison of density plots including line features, clusters 5, 6 and 8. Figures by the researcher.*
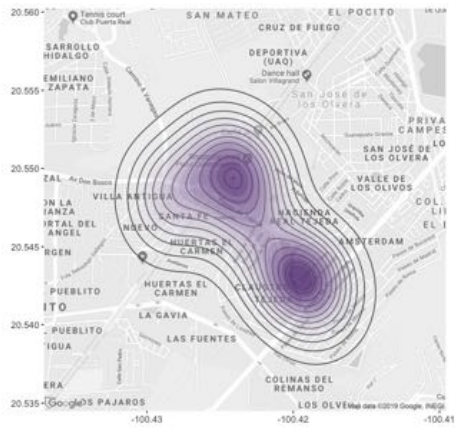
*(a) Cluster 9.*
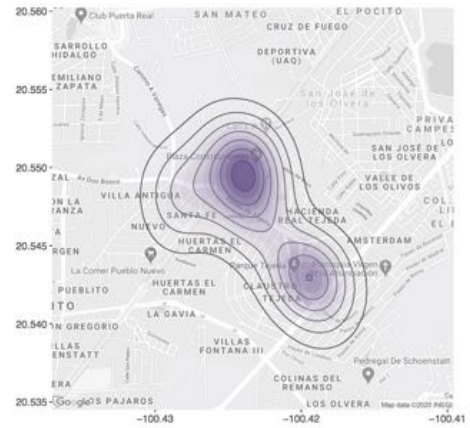

*(b) Cluster 9 with line features.*


*(c) Cluster 10.*
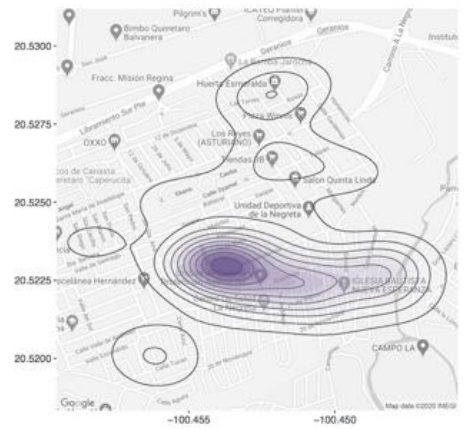

*(d) Cluster 10 with line features.*

*Figure 6 – Comparison of density plots including line features, clusters 9 and 10. Figures by the researcher.*

## Cluster 1 - Location 1
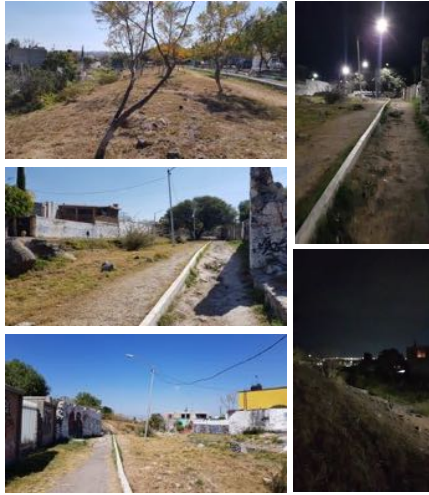


## Cluster 2 - Location 1



## Cluster 2 - Location 2



**O Photographs of locations**
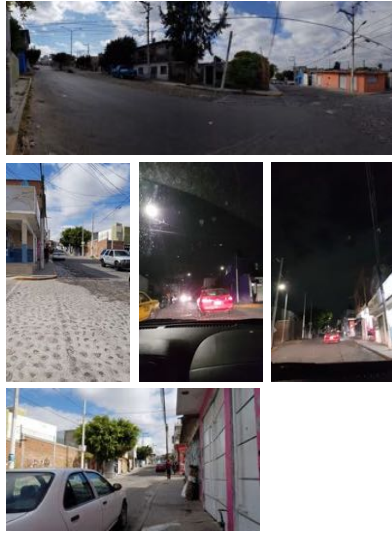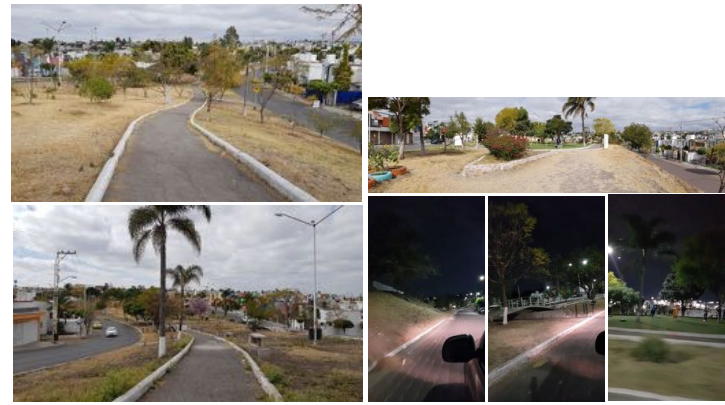
## Cluster 2 - Location 3
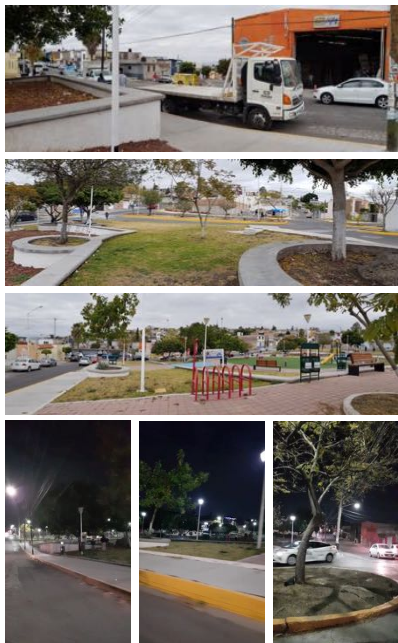


## Cluster 3 - Location 1



## Cluster 4 - Location 1
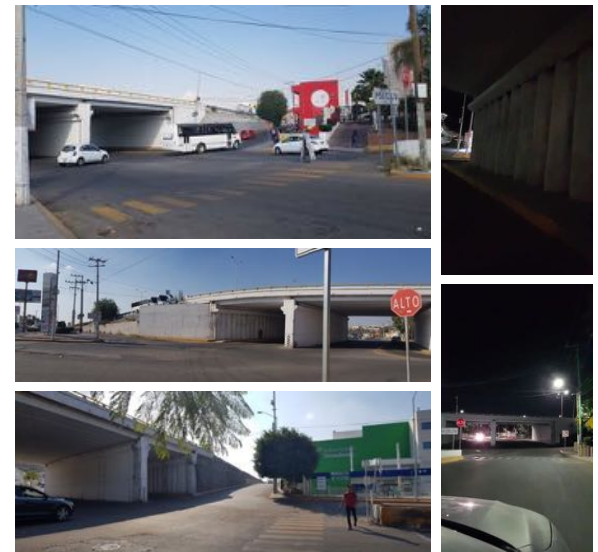
Cluster 5 - Location 1



Cluster 5 - Location 2



Cluster 5 - Location 3
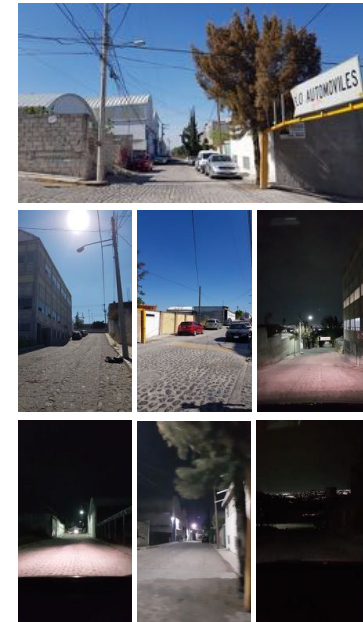
Cluster 6 - Location 1



Cluster 6 - Location 2
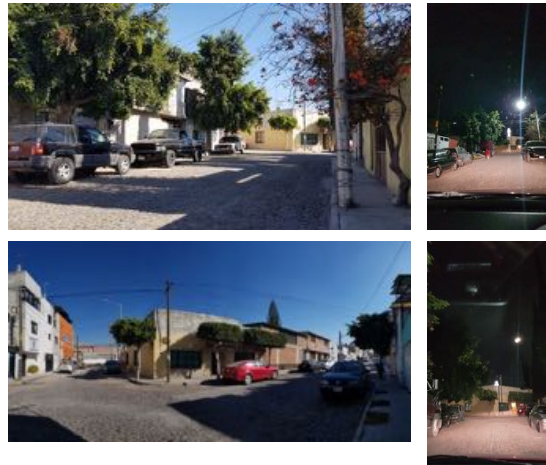


Cluster 3 - Location 3
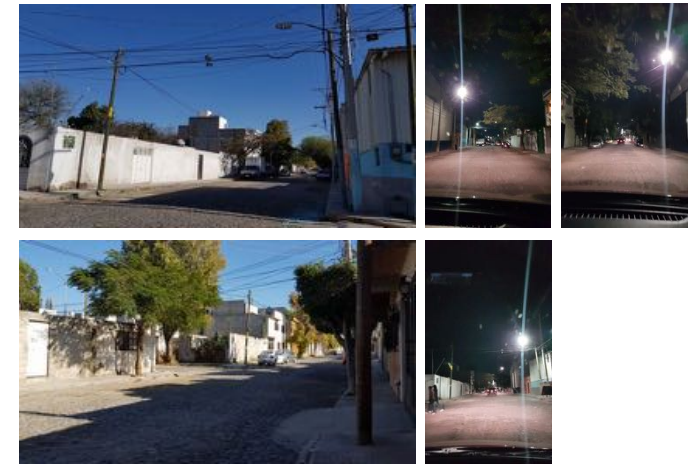
## Cluster 7 - Location 1



## Cluster 7 - Location 2
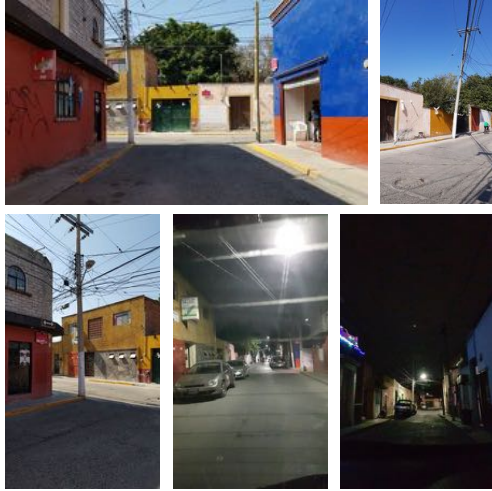


## Cluster 8 - Location 1



## Cluster 8 - Location 2
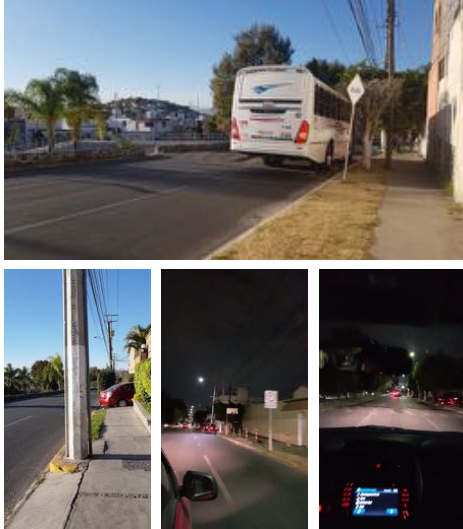


## Cluster 8 - Location 3



## Cluster 9 - Location 1

Cluster 9 - Location 2
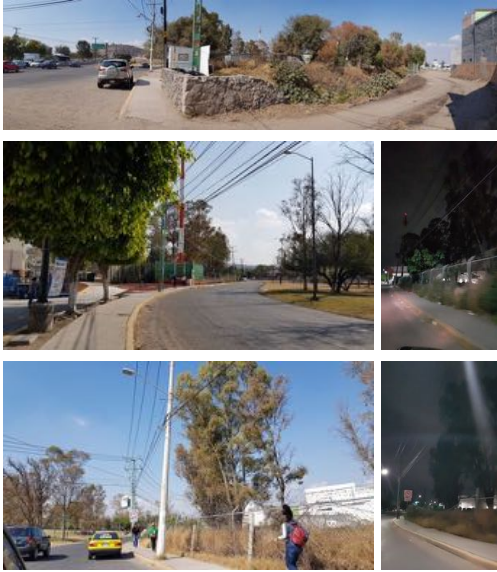


Cluster 10 - Location 1
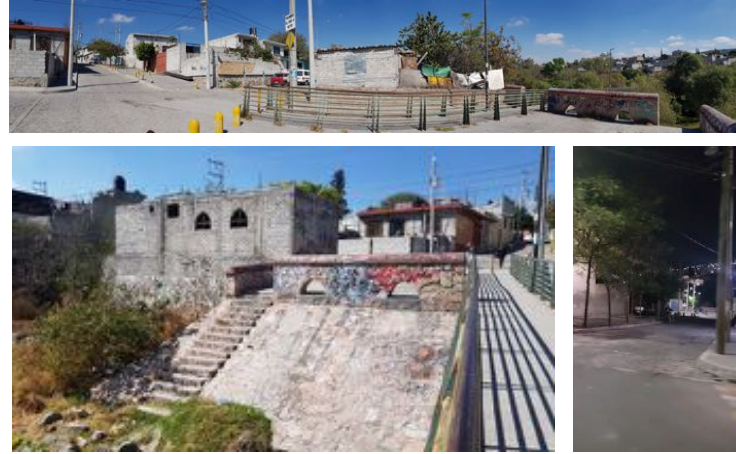


Cluster 10 - Location 2
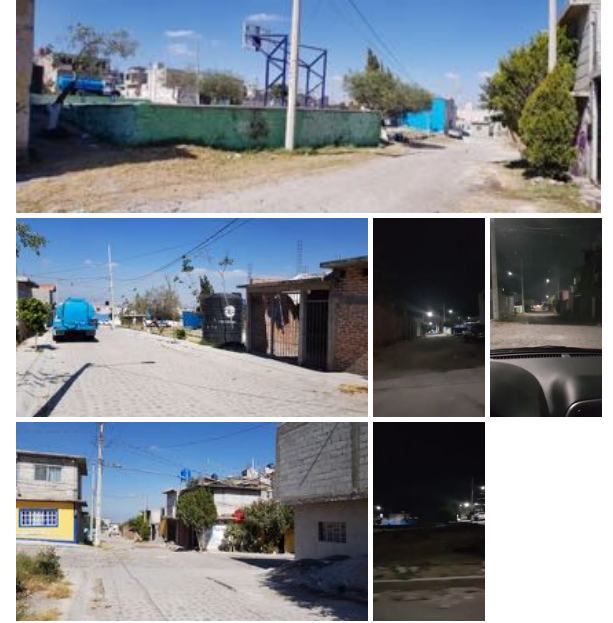


Cluster 10 - Location 3

| Cluster | | 1 | 2 | 2 | 2 | 3 | 4 | 5 | 5 | 5 | 6 | 6 | 6 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Location** | | 1 | 1 | 2 | 3 | 1 | 1 | 1 | 2 | 3 | 1 | 2 | 3 |
| **Type of area** | | Park | Street segment | Park | Park | Intersection | Bridge | Street segment | Street segment | Intersection | Street segment | Intersection | Street segment |
| **Area of concern** | Street / Road / Highway | | 1 | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | Sidewalk | 1 | 1 | 1 | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | Bus stop | | | | | | 1 | | | | | | |
| | Park / Public square | 1 | | 1 | 1 | | | | | | | | |
| | Commercial area (in or | | 1 | | 1 | | 1 | 1 | | | | 1 | |
| | Area outside a school / | | | | | | | | | | | | |
| | Residential area | 1 | 1 | | | | | 1 | 1 | | | | |
| | Construction area | | | | | | | | | | | | |
| | High density area | | | | | | | | | | | | |
| | Other | 1 | | | | | 1 | 1 | | 1 | | | |
| | Other — Specify | | | | | | | High street | | Warehouse area | | | |
| **Street / Road / Highway** | Very busy | | Very empty | | | | 1 | 1 | | Very empty | | | |
| | Vegetation | | | | | | | 1 | | | 1 | | 1 |
| | Drains / Sewerage | | | | | | | | | | | | |
| | Bad conditions — Bad | | | | | 1 | | | | | | | |
| | Bad conditions — Cracked surface | | | | | 1 | | | | | | | |
| | Bad conditions — Potholes | | | | | | | 1 | | | | | |
| **Sidewalks** | Non existent | 1 | | 1 | | | 1 | | | | | | |
| | Narrow | 1 | 1 | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | 1 |
| | Blocked | 1 | | | | 1 | | 1 | 1 | | 1 | 1 | 1 |
| | Bad lighting | 1 | 1 | | | 1 | 1 | 1 | 1 | 1 | 1 | 1 | |
| | No lighting | | | | | | | | | | | | |
| | Vegetation | 1 | | | | | | | | | 1 | 1 | 1 |
| **Bus stop** | No marker | | | | | | Small marker | | | | | | |
| | No space | | | | | | 1 | | | | | | |
| | In bad conditions | | | | | | | | | | | | |
| | No lighting / Bad lighting | | | | | | | | | | | | |
| **Residential area** | High density | | | | | | | | | | | | |
| | Low density | 1 | 1 | 1 | 1 | | | 1 | | | 1 | 1 | |
| | Formal | 1 | 1 | 1 | 1 | 1 | 1 | 1 | | | 1 | 1 | |
| | Informal | | 1 | | 1 | 1 | 1 | | | | | | |
| | Construccion happening | | | | 1 | | | | | | 1 | | |
| | Near commercial area | | | | | | | | | | | 1 | |
| | Other | Periurban | | | Border of municipality | | Periurban | | | Periurban | | | |

| | Cluster | 7 | | 8 | | | 9 | | 10 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Location | 1 | 2 | 1 | 2 | 3 | 1 | 2 | 1 | 2 | 3 |
| | Type of area | Plaza | Intersection | Park | Street segment | Street segment | Park | Street segment | Bridge | Park | Street segment |
| **Area of concern** | Street / Road / Highway | | 1 | | 1 | 1 | | 1 | 1 | 1 | 1 |
| | Sidewalk | | 1 | | 1 | 1 | | 1 | 1 | 1 | 1 |
| | Bus stop | | | 1 | 1 | | | | | | |
| | Park / Public square | 1 | | 1 | | | 1 | | | 1 | |
| | Commercial area (in or | 1 | | | | 1 | | 1 | | | |
| | Area outside a school / | | | | | | | | | | |
| | Residential area | | 1 | | 1 | | | | | 1 | |
| | Construction area | | | | | 1 | | | | 1 | |
| | High density area | | | | | | | | | | |
| | Other | | | | | 1 | | | 1 | | |
| | Other — Specify | | | | | On the edge of residential area | | | Joining neighbourhoods | | |
| **Street / Road / Highway** | Very busy | | | | | 1 | | 1 | | | |
| | Vegetation | | | | | | | 1 | | 1 | 1 |
| | Drains / Sewerage | | | | | | | | | | 1 |
| | Bad conditions — Cracked surface | | 1 | | 1 | 1 | | | | 1 | |
| | Potholes | | | | | 1 | | | | 1 | |
| **Sidewalks** | Non existent | | | | | | | | | | 1 |
| | Narrow | | 1 | | 1 | 1 | | 1 | 1 | 1 | |
| | Blocked | | 1 | | 1 | 1 | | | | 1 | |
| | Bad lighting | | 1 | | | 1 | | 1 | 1 | | 1 |
| | No lighting | | | | | | | | | | |
| | Vegetation | | | | | | | 1 | | | 1 |
| **Bus stop** | No marker | | | | 1 | 1 | | | | | |
| | No space | | | | 1 | | | | | | |
| | In bad conditions | | | | | | | | | | |
| | No lighting / Bad lighting | | | 1 | 1 | | | | | | |
| **Residential area** | High density | | | | | | | | | | |
| | Low density | | 1 | | | | | | | 1 | 1 |
| | Formal | | 1 | | | | | | | 1 | 1 |
| | Informal | | | | | | | | | 1 | 1 |
| | Construccion happening | | | | | | | | 1 | 1 | 1 |
| | Near commercial area | | | | | | | | | | |
| | Other | | | | | Periurban | | | Periurban | Periurban | Periurban |

| | Cluster | 1 | 2 | | | 3 | 4 | 5 | | | 6 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Location | 1 | 1 | 2 | 3 | 1 | 1 | 1 | 2 | 3 | 1 | 2 | 3 |
| | Type of area | Park | St seg | Park | Park | Intersection | Bridge | St seg | St seg | Intersection | St seg | Intersection | St seg |
| Street / Road / Highway | Other features | | | | | | Road crossing faded away | | | | | | |
| Sidewalks | Narrow comments | | Narrow on one side, slighlty wider on other side | | | | | | | Very narrow, people were walking in the middle of the road | Sidewalks are very narrow & trees and vegetation block the view; very uneven surface | Sidewalks very narrow and blocked by trees | |
| | Lighting comments | | Light posts only on one side of the road | | | Only 1 light post in one of the corners | There are only 2 light posts, both on the same side of the roda, and one of them has a big tree under it | One side of the road has light posts and the other side does not | Lights only on one side of the road | There are not many light posts and are only on one side of the road | Only on one side of the road | Only one light post in one of the corners | |
| | Other | Path connects to a bridge to cross to the other side of neighbourhood | | No sidewalk on park boundary | | Bad condition | There are no sidewalks in some of the side of the underpass, and the ones that exist are very narrow (only one person at a time can use them) | Businesses block the sidewalk with products they are selling; trees block the view | Did not seem very transited | | | | Sidewalks were blocked by trees |
| Bus stop | | | | | | | People wait in a parking spot where the stop is located: there is a small marker but is very small and barely visible; no roof on the waiting area; near a commercial area | | | | | | |
| Park / Public square | Use | Recreation park & green area | | Recreation park & green area; neighbourhood garden | Green space | | | | | | | | |
| | Floor type | | | Grass and dirt paths; running track along border of park | | | | | | | | | |
| | Equipment | Playground; open exercise equipment | | Children's playground: fake grass; Open air exercise equipment, covered up with tent like material | Grass & Brick; children's playground in middle [of the park]: fake grass | | | | | | | | |
| | Condition | Park: recently renovated; path: very uneven and in bad condition | | Playground equipment wirh graffit tags; fence on playground area, in steep part; part of park seems abandoned cause of runoff | Good; Recently renovated | | | | | | | | |
| | Boundary walls | No | | No | No | | | | | | | | |
| | Trash bins | Yes | | Few trashbins; there were more trashbins but were taken away [stolen] | Yes | | | | | | | | |
| | Lights | In park: good; in path: none | | Barely any light posts - 5 light posts distributed along park; benches with no lighting | Good | | | | | | | | |

| | | Cluster | 7 | | 8 | | | 9 | | 10 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Location | 1 | 2 | 1 | 2 | 3 | 1 | 2 | 1 | 2 | 3 |
| | | Type of area | Plaza | Intersection | Park | St seg | St seg | Park | St seg | Bridge | Park | St seg |
| Street / Road / Highway | Other features | | | | | | | | | Road leading to bridge in good conditions | | |
| Sidewalks | Narrow comments | | | Very narrow sidewalks, blocked at the corner with electricity and light posts | | | | | Sidewalk is very narrow which poses a problem when 2 people are walking in oposite directions; path passes next to the back area of a supermarket which is not gated or protected | Narrow on one side, wide on the other | | |
| | Lighting comments | | | Only one light post | | | | | Only fully lighted near to the entrance of the neighbourhood | One light post facing adjacent road; no lights within road leading to bridge; one light post at the end of road | | |
| | Other | | | | | Uneven surfaces | Uneven surfaces | | Passing by next to empty plots, which are fenced but the fence is broken | | | |
| Bus stop | | | At the edge of the plaza | | No lights in bus stop | Bus stop in the middle of the road, in front of a cross to pass over a bridge to the other side (over an open channel) | | | | | | |
| Park / Public square | Use | | Central plaza with kiosk & fountains | | Recreation park | | | Green area of neighbourhood | | | Green space & basketball court | |
| | Floor type | | Quarry stone | | Grass, brick | | | Grass, dirt, cement | | | Dirt & grass; Court: cement | |
| | Equipment | | Benches to sit down all around & green areas with grass that is not allowed to trespass | | Open air exercise equipment; running paths; skate park; playground; basketball court | | | Exercise equipment; basketball court; playground; running track; bycicle track | | | Basketball rings | |
| | Condition | | | | Good, recently renovated, clean apart from tree debris | | | Kept in some areas, unkept in others | | | Uncared for | |
| | Boundary walls | | No | | No | | | No | | | Car tires as boundary wall on one side | |
| | Trash bins | | Yes | | Yes | | | In some parts | | | No | |
| | Lights | | Well lit | | Well lit | | | Some parts of the park are well lit and some others are not | | | | |

| Cluster | 1 | 2 | | | 3 | 4 | 5 | | | 6 | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Location | 1 | 1 | 2 | 3 | 1 | 1 | 1 | 2 | 3 | 1 | 2 | 3 |
| Type of area | Park | St seg | Park | Park | Intersection | Bridge | St seg | St seg | Intersection | St seg | Intersection | St seg |
| Other comments | Park located on a raised hill over an open channel; Path in the middle of the park (with overgrown grass) that goes down to the channel; Unprotected channel with overgrown vegetation & an informal path plus a formal path in bad condition; The path connects to a bridge to cross to the other side of neighbourhood; The path connecting to the bridge passes next to a primary school's boundary wall -- that seemed like an empty plot and was in bad condition; some wall missing in a corner; A lady walking through the path had difficulties walking in it with her market trolley | Intersection of roads; one (Rio Tamesis) that leads to main avenue; Corner with main avenue: gas station in one corner, second hand car selling business on opposite corner, water point a block into neighbourhood; Calle Azucenas: leads to river; Informal house in corner of intersection; Many bus routes go/pass through road; Some walls had graffiti tags; In intersecion there were no CCTV cameras on businesses; A person kept on looking at what we were doing; Small mall opposite gas station, on main avenue | It is next to another park that seemed recently renovated; Park in middle of neighbourhood; kids day care places on opposite corner, water point a block into neighbourhood; No crossing on road leading to park, only barely visible speed bumps; No CCTV cameras; Two bridges with empty space under them; crossing over an uncovered channel; Empty food, alcohol & beverage containers found in and near channel; Plants were planted by neighbours 3 years ago -- young people used to race with bikes in the park so neighbours planted cactus (info provided by neighbour); Very empty park; some people use it to transit from and to main avenue; Many dry trees because they are cut incorrectly -- people [municipal workers] are not trained and trees not planted in boxes (info provided by neighbour) | There is an ant problem near playground; Many men sitting in park seemingly doing nothing; Boundary between many neighbourhoods, some of them low SES [confirm]; Construction materials' store opposite corner of park; Construction site opposite corner of pak; No bus stop markers: many kids waiting alone in bus stop; Very busy on low SES neighbourhood part, every empty on opposite part; Barely any lights in area neighbouring park; Unprotected & uncovered channel in front of park; School nearby -- next to park | Speed bump in one of the corners of the intersection; Men sitting outside on the door of businesses up the road; Abandoned plot, half constructed with 2 cars inside; Junction that leads up a steep hill; No CCTV cameras; Transited street | No lights to stop traffic coming from all directions; Traffic (cars) are very fast; Even during the day, it is very dangerous to cross the road; Cars will not stop to let you pass (if walking); CCTV cameras on the same side as the light posts; There is an emergency button with CCTV cameras but it is located in front of a private university & another one near the shopping area; There is a bar in the shopping area & another store selling alcohol; There is a sidewalk in the underpass but it is extremely narrow and there is no lighting; Very badly lit area | Busy road with many businesses | Wood workshop on corner of road & another warehouse/workshop in front of it; Some shops in the street segment; Sidewalks were very narrow & blocked in some parts | Crossroad is located behind a "salon de fiestas" & warehouses; Men standing on the street seemingly doing nothing; Many empty plots surrounding the area; Downhill from the crossroad there are few houses & a highway | Slight hill; There is a primary school in on the of the 2 blocks of the street segment; Many abandoned cars with missing parts parked on the road; A couple of houses are in construction; The primary school has chicken wire instead of boundary wall & everything inside the school premises can be seen from the outside/street; Some tags along the street segment were tagged with graffiti; A pornographic card was found on the floor near the entrance of the primary school | There was a store in the corner that sold beer; Abandoned cars in junction; Seemed very empty; One of the houses had CCTV cameras; A lady was on the door of her house to stare at us; The junction is very near a main avenue that has many car-related and tools-realted stores, as well as food businesses | Big warehouse on street segment; Street seemed very emptu, except for when men were passing by; Car & industry related businesses in the surrounding area; An abandoned construction site on a nearby corner; Two men stared at me while I passed by |
| Night observations | Park path well lit. Dirt path behind school well lit, the other side of the river channel is not lit. Men smoking weed on other side of channel/park, behind houses, where it is not lit.; Seems like a calm neighbourhood, there is almost no people in the street. | Area near the main avenue well lit, particularly near the water point. Trees blocking light. Street seemed very busy, there was a party venue and a party happening at the time of visit.; There was a shop that sold alcohol, and people were observed to be sitting outside the shop and standing outside the party venue. | Park relatively well lit, although lighting surrounding park was pointing towards the road. Area near main avenue (near Soriana — big supermarket) well lit. Area that connects this park with park in C2L3, not so well lit.; Playground area not so well lit, many men in playground area, some of them playing football. | Park well lit, although lighting seems dim. Surrounding streets are very lonely and adjacent area with channel is very dark.; Park has many young people hanging out. | Very lonely, not so well lit. Many men hanging out in the street in the neighbouring area.; Abandoned construction area without lighting. | Very lonely area. Well lit, except under the bridge, where it is quite dark as there is no lighting under the bridge. | The broad street is well lit, but the sidewalks are badly lit as the lighting is pointing towards the street and the vegetation blocks the light.; Many food businesses so there is flow of people and people drinking in the street. However, at some point, the street becomes very empty as the businesses close. | Very lonely, no movement of people and not so well lit. | Very lonely, well lit in certain areas, but very dark in other areas. Many empty plots which are very dark. Parallel street had men standing on the street.; Very dark on the side of the highway. | Very lonely and quite dark.; Two young men standing in a corner. | | Not very well lit, people seemed to be walking around passing by. (Locations 2 & 3 were nearby and visited on the same journey); Men outside repairing cars and also standing in corners. (Locations 2 & 3 were nearby and visited on the same journey) |

| Cluster | 7 | | 8 | | | 9 | | 10 | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Location | 1 | 2 | 1 | 2 | 3 | 1 | 2 | 1 | 2 | 3 |
| Type of area | Plaza | Intersection | Park | Street segment | Street segment | Park | Street segment | Bridge | Park | Street segment |
| **Other comments** | People seemed to drink on the plaza; Many empty botles of alcoholoci beverages found on the ground | **Very** empty road | Shop next to park sells alcohol | Sidewalk intermitently blocked by cars | No crossroads anywhere, people cross in the middle of the street and run whenever they see a gap between cars | Few walking paths in the middle of the park crossing from one side to the other; running track going around the park in good condition | Very transited | Police officers questioned what we were doing in the area | The area is surrounded by construction sites and empty plots | Segment of road |
| | There are only CCTV cameras pointing at the street; No CCTV cameras elsewhere | The road sometimes gets blocked if there is a neighbourhood event | Open channel in front of park in main avenue with no boundary or protection wall -- probable risk in rainy season | The light posts point towards the street, not the sidewalk | Many businesses along the avenue; food stalls, furniture, petrol station | Park is in residential area: surrounding houses are partially visible from the middle of the park: many trees blocking view from the outside | The road is windy so it is difficult to see what is ahead | Bridge: Lights pointing at area under bridge & path | Community area that seems uncared for / abandoned | Many empty plots with overgrown vegetation |
| | Quite an open space | | Empty bottles of alcohol beverages found | Cars pass very close by to the sidewalk | Many empty plots and construction sites | Public park: anyone can go in anytime | Empty bottles of alcohol beverages were found along path | Very narrow path on bridge [only two people fit, if walking with anyone, people have to move] | Barely any lights | Semi-constructed houses & empty or abandoned houses |
| | There are public toilets in the aplza | | Police station in corner of park, opposite to the shop | Trees block the space above the path, some come very low and block road visibility | Cars go very fast & the road curves, therefore visibility is not great | Outer perimeter of the park has no lights; light posts face the road | Path has uneven surfaces which is difficult to walk in for people with mobility issues | Stairs leading down under the bridge on side | Green area with no equipment apart from basketball court | Did not sem to have much lighting |
| | The entrance of the public toilets is facing the middle of the plaza and can be used for a fee | | Entry to park through main avenue and side road | Dangerous crossing path towards the bridge, especially at night, even if there is a speed bump a few meters away from the cross/bus stop | Many men just standing still either on the road, businesses or construction sites | Big open basketball court in the middle of the park | Path crosses an uncovered channel | Exit of bridge blocked by railing: once the bridge ends, you can only continue walking straight | Water tank on edge of basketball court | No sidewalks & uneven dirt road |
| | The windows of the toilets are broken | | Wall in one of the edges of the park, with dry grass and many trees; blind spot behind trees | Uneven srufaces in the sidewalk path with many entrances to gated residential areas | The lights are lighting the street not the sidewalk path | | There is empty land in front of the path -- unused green space for a butterfly turn from the nearby highway | Green area under bridge with paths and benches but no lighting | Empty houses surrounding green area | Construction materials left on road |
| | Free Wifi | | Bus stop in edge of park, on same side where the wall is; dark corner behind the bus stop | | | | There is only one crossing from the sidewalk path to the other side of the road, but the crossing sign is faded, it is not lighted and is very dangerous (the cross is right before a curve), and it leads to an even narrower path that goes alongside the butterfly turn and it is not lighted | | | Street on a slight slope |
| | There are many food businesses surrounding the plaza & some informal food stalls on the edge of the plaza | | Very accessible during the day, all parts of the park can be seen from anywhere | | | | Cars pass very quickly next to the path | | | |
| | Big alleyway between the edge of the plaza & where the houses begin where cars are parked -- some seem abandoned | | No light in sidewalk at the edge of park; lights pointing to the road, not the path | | | | | | | |
| | There is a state clinic across the plaza -- people may use the plaza to wait for their appointment | | | | | | | | | |
| **Night observations** | Well lit, adjacent streets are lonely but lit. Food stalls are open (although they do not open all night) . Not many people in the plaza, but families can be seen walking around. A couple of drunk men walking around the adjacent streets, not threatening, just stumbling. | Many men hanging out in the street and some of them are drinking. Corner is well lit, but street segments are not. There is a pub near the street corner. | Park is well lit and many young people are using it. | Location is not very well lit and the crossing towards the bridge to cross the channel is not lit and makes it very dangerous as the crossing is not marked on the road. | Well lit street, many food businesses and many cars transiting the street. But not many people walking in the street and those who are walking are men. | Park is very dark in areas, particularly the running track. But other areas are well lit. The lighting around the park is pointing at the street. | Segment is not vert well lit, there are some areas which are quite dark, but get brighter when cars pass by. | There is a shop in a nearby corner and the majority of the people outside are women. And women with bottles of alcohol can be seen sitting in their doorsteps drinking. | Basketball court is well lit, but the rest of the park is not and it is quite dark. | The road was well lit, but very lonely. |
| | There are many homeless people sleeping at the park at night | All the streets near the area are very empty/lonely. | Bus stop is well lit, however there is a big space behind it that is very dark. Also, the area near the bus stup is not very well lit. | The road has segments that are lit and other segments that are not lit, and in general, the lighting points towards the road, not the sidewalk. | Many empty plots which are very dark (inside the plot). And men inside construction sites looking after the site. | A lot of people using the park at 9pm | Area opposite where people walk (green space in the cloverleaf interchange of the motorway) is well lit. | Paved streets are well lit. Cobbled or dirt roads are not well lit. | A lot of movement can be seen. People are gathered outside their homes, and there was people in the park regardless of it being dark. | There were men drinking on the street on the parallel road, and there was a wine shop two streets from the location. |