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Understanding the Impacts of the Produced Public Space in Women's Housing Acceptability within Consolidating Informal Settlements

Case Study Villas de Guadalupe, Jalisco; México

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Summary

Housing is more than houses, contemporary approaches advocate for an integral concept of adequate housing, turning outside of domestic boundaries and physical qualities; and into the financial, social and environmental opportunities the housing sector provides. This study focuses on how physical and social housing acceptability are attained through the adequate production of effective environments in the form of public spaces in vulnerable settings, such as consolidating informal settlements. Public spaces provide the field where human interactions happen in urban contexts and knowledge about their benefits and the opportunities they provide for urban residents is constantly increasing. Nevertheless, most of the literature around this is centered in conventional urban settings, even when trying to address the developing world where informality is largely involved in the functioning of cities and human settlements. This generates a gap between the statutory understanding of public spaces and its proper implementation and effectiveness in informal contexts. The study utilizes the spatial production theory to approach the term of public spaces, which advocates that space is constructed individually based on associations of experiences, perceptions and repeated use. It provides the definition of 'potential environments' and 'effective environments' for publicness to thrive and deliver the benefits of actively participating in public life.

Different groups perceive and utilize available spaces differently, stablishing social relations, boundaries or conflicts that shape different demographics roles in space, and thus, the production of space is different between demographics. In informal contexts, women are among the most vulnerable groups, due to unequal domestic labor and responsibility distribution and reduced mobility. Additionally, gender and space share a socio-cultural construction process based on expectative, roles and repeated use that is worth exploring to understand how they can be harnessed to achieve spatial and gender justice.

Through qualitative methods, this research analyzes how consolidation efforts are implemented in neighborhoods of informal origin, which kind of perceptions these offer to women and how these ultimately impact their use and establishment as effective environments. Then, the study identifies common patterns resulting from the women's process of spatial production and will discuss their impacts on physical and social housing acceptability. Finally, it will conclude with the answer to how the production of public spaces impact women's physical and social housing acceptability in consolidating informal settlements, point at general findings relevant to improving housing acceptability from gender perspective and recommend relevant research to conduct to build upon the concepts discussed within this study.

Keywords

Acknowledgements

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I. INTRODUCTION

In actuality, one of Latin American cities biggest challenges is to successfully address the multiple issues surrounding the formation of informal settlements, with the growing urbanization taking place mostly in the developing world, it stands as one of the world's regions where large percentages of people live in informal settlements (Fernandes, 2011; Gelder, 2013). These settlements struggle as they enter constant and unsupported consolidation processes, where some cases with more than 30 years from formation still face social issues (Gómez-Villanueva; et al., 2020; IMEPLAN, 2021). Between 40 and 78% of the population in Latin American countries find housing this way. This causes that cities cannot provide the same opportunities for its inhabitants and decreases the social value of urban space (IMEPLAN, 2021; Jiménez & Cruz, 2015; Melchor, 2019; Riva de Monti, 2022).Settlements originated through informal processes tend to be located in remote locations, live in poverty, marginalization, social exclusion and lack of infrastructure, services and mobility. Despite this, it's not uncommon for cities to accommodate more than half of their inhabitants in these kinds of settlements (Gelder, 2013). This study aims to understand how physical and social housing acceptability are attained through the adequate production of effective environments in the form of public spaces in vulnerable settings, such as consolidating informal settlements.

The Metropolitan Area of Guadalajara (AMG) is one of the biggest metropolitan areas in México, where informal settlements take around 26% of urban territory. Villas de Guadalupe is a marginalized neighborhood located within the AMG that originated as an informal settlement in ejido land (social land), where women struggle to access basic needs, safety, recreation and in general, the benefits of urban development. Consolidation efforts fail to stablish adequate public spaces and ignore socio-cultural challenges, obscuring existing social issues that hinder physical environments' performance when contributing to women's physical and social housing acceptability.

1.1 Problem Statement

Due to scarcity of resources and inaccessibility to formal social benefits, informal settlements may develop non-conventional relationships with their settlements' public space, extending domestic or social practices into outdoor or collective spaces (Hincapie & Castiblanco, 2017). These dynamics and social practices are not taken into consideration and are often ignored when coming with coping strategies to consolidate informal settlements because they're in conflict with conventional statutory housing strategies (Gómez-Villanueva; et al., 2020; Jiménez & Cruz, 2015). Women are among the most vulnerable groups in informal contexts due to unequal domestic labor and responsibility distributions, reduced mobility and access to public spaces. These often make it harder for them to navigate through violent and exclusive environments to perform housekeeping and care activities on top of their personal objectives. Existing environments contribute to unequal gender norms and spatial practices, exacerbating their vulnerable condition and hindering the achievement of physical and social housing objectives (Páramo & Arroyo, 2011; Rodó-De-Zárate et al., 2019).

The failure to prevent, legislate and consolidate informal settlements into the urban whole to achieve housing adequacy for vulnerable groups evidence the gap between the city as envisioned by the formal law, which assumes dynamics and spaces based on standardized theoretical models; and the empirical reality on ground (Banerjee, 2023; Gelder, 2013; SIL, 2019). Ultimately this obscures the relation between the formal and informal city, to the point that regulations provide solutions strictly for a limited part of urban reality, perceiving informality as mere deviations from the law, failing to acknowledge that these deviations have become the norm on the ground (Gelder, 2013; Schlack, 2011). Efforts to address this problem often focus on encouraging housing provision or mass regularization schemes (Gelder, 2013; Mendo, A. in El Informador

MX, 2019), but this still does not address the causes for informality nor the social issues these families face due to marginalization and segregation. Recent research advocates that adequate housing is more than physical assets (Ayala et al., 2019), and should also account for social dimensions. In order to achieve consolidation, there is more needed than provision of physical assets, but to also understand the social dimension to protect informal communities' dwellers rights, safety and wellbeing in the process of consolidation; especially vulnerable groups (Gómez-Villanueva; et al., 2020; Jiménez & Cruz, 2015; UN Habitat, 2014).

1.2 Academic Relevance

Even with the existence of specialized data collection institutes in México, it has proven difficult to describe and measure informal settlements, let alone to understand the social reality and how they relate to their physical environments (IMEPLAN, 2021). The relevance of the study lies in contributing to better understand the connectivity between domestic spaces and effective public spaces in informal settlements, how it affects daily routines of a particular demographic and to better define what constitutes physical and social housing acceptability in contexts of informality, marginalization and vulnerability (Bonilla, 2013; Hincapie & Castiblanco, 2017; Páramo & Arroyo, 2011; Schlack, 2011, 2019). Considering public space ubiquity and capability to articulate interaction, facilitate accessibility, shape local identity, connect and consolidate everyday social practices and interactions (Bonilla, 2013; Woolley et al., 2004), and the fact that informal settlements share common traits such as the lack of adequate public spaces, insecurity and marginalization (Jiménez & Cruz, 2015); it is important to assess its impact on the consolidation of housing acceptability and potential integration of informal settlements into the formal city. Thus, this research proposes analyzing public space in informal settlements through the production of space theory. Spatial production literature (Adams, 2009; Lefebvre, 1991; McCann, 1999) analyzes physical and social dimensions simultaneously, providing the framework to analyze public space in specific contexts where positionality is the priority. Lastly, this research contributes to advance public space into a necessary component for the consolidation of informal settlements that harnesses context-specific dwelling practices and socio-spatial experiences, giving way to a more inclusive and social way to theorize space (Banerjee, 2023).

1.3 Research Objectives

In an effort to understand context-specific dwelling practices, spatial and social experiences within informal contexts, this research's aims to better understand how production of public space takes place in them and it's impacts on the housing acceptability of resident women. The research objectives are to determine how the physical qualities of existing public spaces shape the way these spaces are perceived by women; what kind of activities and uses take place in diverse public spaces within the site based on these perceptions and finally how the conjunction of these spaces and practices, i.e., produced public space, affect physical and social dimensions of women's housing acceptability.

1.4 Research Question and Sub Questions

RQ. To what extent does the production of public space impacts physical and social housing acceptability of women in consolidating informal settlements?

1. What are the physical and spatial characteristics of existing public spaces within the site?
2. How are the existing public spaces perceived by the site's women?
3. Which spaces take the role of 'public spaces' for women within the site and what practices are associated to them?

II. LITERATURE REVIEW

Even after decades of existence, the definition of terms like informality and public space are still imprecise and elusive (Fernandes, 2011; Gómez-Villanueva et al., 2021). In order to properly study these settlements, there is need define them according to the specific context and what's being studied. This chapter provides the definitions for the study's main concepts based on existing literature regarding the phenomenon of informality, contextualized impacts of it, public space, social production of space and gender.

2.1 Illegality, informal or irregular settlements, and slums

According to Huchzermeyer (1999), 'illegal' settlement refers to those outside the legislation requirements due to the absence of any or multiple of (a) land tenure, (b) infrastructure requirements or (c) building standards. When any given settlement does not comply with established normative, it impedes the government's capacity and interest to address their issues. The condition of illegality does not in any way mean that people living in such case have no rights, but is often a reflection of legal systems that favor socioeconomic groups that have resources to access mechanisms to defend their rights (Fernandes, 2011). Irregular and informal settlements refer in principle to the same phenomenon. This being settlements with problems of illegality, to some extent recognized by the government even when they still present legal or physical conditions that difficult development and often need to be 'regularized' first (Fernandes, 2011; Gómez-Villanueva et al., 2021). Informal settlements can be derived from a mixture between physical, socioeconomic and legal aspects. These include tenure situation, services available, income levels or remoteness; and helps to explain the degree to which governments are capable or willing to provide development. Informal settlements are inadequate means to inhabit and to meet sustainable development of communities (Fernandes, 2011; Gómez-Villanueva et al., 2021).

This can, and most often does, lead to the eventual appearance of precarious physical and social traits common within informal settlements, bringing us to the last term: slums. This is a multidimensional term that includes precariousness, overcrowding, lack of services and tenure security, among others (Jiménez & Cruz, 2015). Following this, UN Habitat (2012) defines them basically as 'sub-standard' neighborhoods in some respect. Slums can either be initially legally built but that with time have become dilapidated; or squatter invasions, illegal or semi-legal urbanization and land sub-divisions on the urban periphery. Thus, slums do not necessarily need to be illegal nor informal, but rather the term refers to the material and social conditions that characterize these settlements. While the material conditions are often evident, there is less attention being paid to social or cultural traits that can be found in slums (Fernandes, 2011; Huchzermeyer, 1999), which often contain significant differences existing between apparently similar slums, thus, it is important not to homogenize them, as this can lead to failing to recognize each case's possibilities for improvement, which must be made to the particular needs that the situation calls for (Gómez-Villanueva et al., 2021). Moreover in the Global South, where contexts of urban poverty, marginalization and informality play a substantial role on the dynamics of cities (Castillo et al., 2018; Gelder, 2013).

With all these overlapping qualities, it is possible to come at the idea that slums and informal settlements can be treated as different stages of the same phenomenon, which is the physical manifestation of the mismatch between the legal and the illegal city. Neither legal or illegal is inherently 'correct' or 'superior' than the other but work as alternatives that can coexist productively, as informal settlers devise their own ways to face hardships where the government is unable to do so due to several reasons depending on the context (Gelder, 2013; Mehta, 2022). It is important to avoid pejorative meanings that could be mistakenly associated with the settlement's inhabitants (Jiménez & Cruz, 2015) or with already consolidated informal settlements. An attempt to define informal settlements within the framework of this study is:

A kind of settlement that can be, but not necessarily; illegal or legally irregular, whose combination of legal, physical or social conditions led to developing shared traits of precariousness such as: inadequate construction processes, progressive consolidation, constant exposure to social or environmental risks, incapacity for the normative to enact or be effective and problems regarding services and urban equipment.

Additionally, informality hinders the delivery of social justice, as defined by Soja (2015b), as the opportunity to access the benefits of urban areas like services, open spaces, mobility and any other space that allows the interaction with the city. Derelict neighborhoods and inadequate settlements are by themselves a manifestation of housing injustice. Injustice can be produced through decisions made at the neighborhood level that influence the spatial distribution of services and opportunities (Soja, 2015a).

2.2 Informal settlements in context

For the past 50 years, Mexican cities have been struggling with issues of remoteness, dispersity and connectivity (Kim & Zangerling, 2016). The housing sector contributes enormously to urban sprawl through low-density and large housing developments in peripheral areas. Over time, these developments have converted some cities into metropolitan areas, such is the case of the Metropolitan Area of Guadalajara (AMG), one of the largest metropolitan areas of the country (Castillo et al., 2018), which in composed by ten municipalities. Informal settlements have become a part of development (Castillo et al., 2018; Jiménez & Cruz, 2015), as AMG struggles to control this phenomenon, with informally occupied urban areas rising in the last years up to 26% in 2019 (Castillo et al., 2018; IMEPLAN, 2021). The municipalities with the highest percentage of informal settlements are Tlaquepaque (20.6%), Tonalá (22.4%) and Zapopan (35.5%). The magnitude of the phenomenon out scales the government's capacity to consolidate and provide opportunities to integrate these neighborhoods into the formal city (Castillo et al., 2018; IMEPLAN, 2021).

Historically, a common approach to this problem is through strong regularization schemes that expropriate social land to deliver property titles to individual owners, but this mass legalization of illegal actions violates existing property rights while simultaneously incentivizes further informal occupation and growth, attracts privatization, speculation, gentrification and indirectly displaces poor residents (Gelder, 2013; Huchzermeyer, 1999). Van Gelder (2013) states that developing countries formalistic and bureaucratic legal approaches to these problems contribute to the growth of the illegal city, instead, consolidation needs to be done through appropriate mechanisms to ensure that residents stay in their settlements to avoid further informal development elsewhere (Huchzermeyer, 1999). Solutions involving the provision of more land and housing units should be critically reflected upon, as recent literature states that the focus in physical assets is not enough to achieve adequate provision of housing (Ayala et al., 2019; Gómez-Villanueva et al., 2021). Some argue that there's the need for more multi-dimensional approaches to consolidate peripheral lagging settlements into the larger social fabric and adequately integrate them to the formal city (Gómez-Villanueva et al., 2021), the challenge lies in building an inclusive and legitimate legal order that respects informal processes of justice found in the daily practices of informal settlements (Fernandes, 2011).

With time, informal settlements are consolidated and physically integrated into the urban tissue, apparently having solved their urban issues, where in reality most of these still struggle with their precarious nature (Gelder, 2013; Jiménez & Cruz, 2015). It is necessary to question apparent integration in older settlements, where durable construction materials, partial service distribution and minimum equipment induce the assumption of wellbeing and social cohesion (Jiménez & Cruz, 2015).
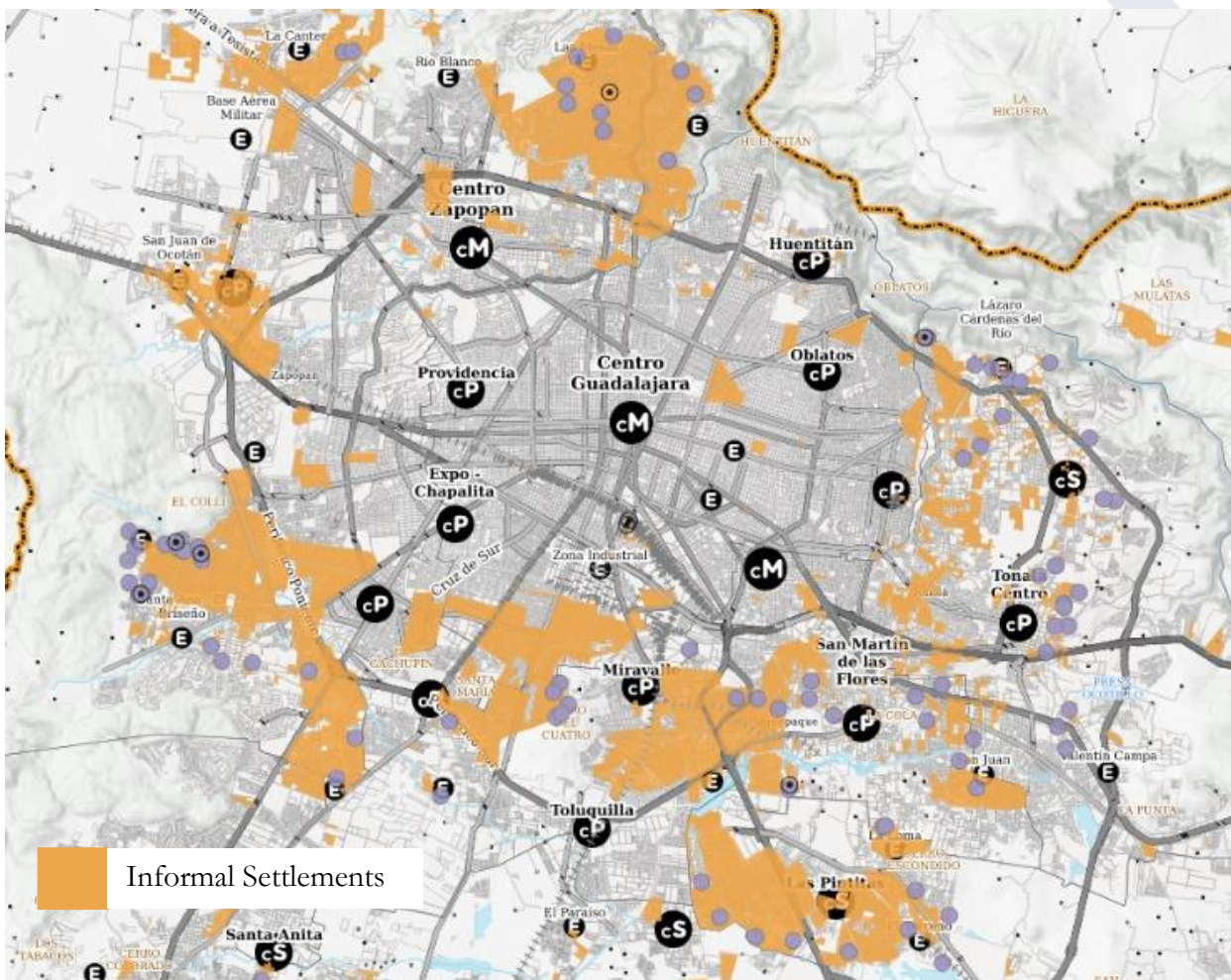
Figure 1. Informal settlements within the Metropolitan Area of Guadalajara. Source: IMEPLAN SIGMetro, 2019.

2.3 Impact of Informality in Housing Acceptability

The housing paradigm is slowly shifting towards recognizing it as a human right ("International Covenant on Economic, Social, and Cultural Rights," 1977; UN Habitat, n.d.; Wilson, 2020). The challenge of housing provision is understood as more than just shelter or tenure, rather to include economic, social and environmental dimensions along it. The five principles of adequate housing (Ayala et al., 2019) state that housing adequacy and justice is concerned with delivering five dimensions in an equitable, inclusive and sustainable way, among the five this research focuses on the principle of acceptability. As defined by Ayala et al. (2019), housing acceptability encompasses not only physical objectives but includes economic, social, financial and cultural ones; including among others, people's perceptions of belonging, identity and cultural adequacy. These objectives extend well beyond the boundaries of domestic space and into the characteristics of the neighborhood. Acceptability standards are based on basic and higher human needs, and despite the subjectivity and individuality of the matter, literature (Carmona, 2021; Hopper, 2020) points that human needs can be roughly poured into an overarching hierarchy:

(a) Physiological needs.
(b) Safety and security needs.
(c) Affiliation needs.
(d) Esteem needs.
(e) Self-actualization.

The five principles recognize the need for more sensitive approach regarding people's broader housing needs, one that is closer to their social practices and organization models (Ayala et al., 2019). Residents of informal settlements face several challenges including lack of infrastructure, inadequate construction methods, absence of public spaces for leisure or culture development, physical accessibility issues, limited connectivity to public transport systems, among others (Fernandes, 2011; Gómez-Villanueva et al., 2021; IMEPLAN, 2021; Kim & Zangerling, 2016). The burdens of informality go beyond physical or legal issues and permeate the social dimension. These issues commonly include difficulties to claim basic citizen rights, being excluded from the benefits of urban development and formal labor markets. Furthermore, remote locations' consequently isolate the population from public services and laboral dimensions; leading to delictive behavior that the settlements tend to live with, and to certain extent accept, which encourages rejection from the nearby neighborhood's part and are even walled off from the rest of the city. These individuals carry a stigma that identifies them as such and make the more vulnerable to social issues. (Fernandes, 2011; Gómez-Villanueva et al., 2021).

Social capital is also affected by informality. Defined as any relation or resource that inheres in relationships between individuals that provides the means of achieving some goal (Coleman, 1988). Expanding on this definition, Woolcock and Sweetser (2002) establish three types of social capital: bonding, bridging and linking. Bonding social capital refers to close connections to demographically similar individuals, it is important to achieve meaningful daily routines. Bridging refers to connections to people who are demographically different, these are important for professional realization. Linking social capital is constituted by connections with people or institutions outside someone's daily life, often possessing political or financial influence. People's wellbeing is largely shaped by their capacity to call upon different types of social capital, and the lack of it can impact individuals' physical and social wellbeing dimensions.

2.4 Public space and housing acceptability

Space necessarily houses social content, human agency and social influences that affect space in a two-way process: people create spaces while at the same time being influenced by the results. Social environments can be constituted, constrained and mediated by space; public space is the physical manifestation of the public realm (Carmona, 2021), this includes spaces and settings – independently of its ownership status – that facilitate public life and interactions. Regardless, physical factors are neither the exclusive nor the dominant influencers of social relations. Focusing on the physical dimension over social ignores the role of human choice and aspirations and neglects their processes of modifying environments, these activities constitute the other half of the public realm, or the 'sociocultural' public realm (Carmona, 2021). Such is the nature for 'publicness' in space, which constitutes the main trait when trying to define public space. Meanings and definitions differ from field to another, and throughout the years several authors have associated different 'fundamental' traits to public space in attempts to properly define it. These include accessibility, agency, ownership, control, use, freedom, temporal claims and intersubjectivity (Carmona, 2021; Francis et al., 2012; Mehta, 2014, 2022). Oldenburg's (1999) defines them as the places that exist outside home and workplaces accessible by the public and provide opportunities for interaction, contact and proximity. Mehta's (2022) contributions summarize where all of the attempts to define it intersect: (a) equity of access and inclusion, (b) feeling of a sense of ownership; mainly through agency, use and interest towards them, and (c) opportunities for diverse individuals to passively or actively interact with them. This study therefore defines public spaces as:

"Any place that exists outside home and workplaces that provides equity and inclusive access, sense of ownership and temporal claim and opportunities for diverse interactions, contact and proximity between individuals (Mehta, 2022; Oldenburg, 1999)".

Housing acceptability is related to the availability of spaces of opportunity for all citizens, where individuals can improve their situations through the interaction with their environment (Harvey, 1973; Lefebvre, 1991). Literature agrees that public space can be a driving force in upgrading precarious residential areas (Acioly, 2021; Carmona, 2015; Francis et al., 2012; Quintana, 2022; Woolley et al., 2004), it contributes to making the services, facilities and infrastructure available and more accessible; to provide informal settlements with means to interact with the city and enjoy human rights of safe and social environments; and to respect and take into account the expression of cultural identity within the settlements (Acioly, 2021; Banerjee et al., 2012; Chiodelli, 2016; Gómez-Villanueva et al., 2021). Streets and open spaces not only serve to deliver services and infrastructure, but are a common good where social and cultural activities can be enacted. Improvement strategies involving public spaces are considered part of urban regeneration schemes because they don't look to increase utilized land to address issues and focus on multidimensional approaches to solve problems in marginal or dilapidated areas (Acioly, 2021; Gómez-Villanueva, 2021). Informality and public space are often intertwined, according to Jenson and Mehta (1998; 2022), public space harnesses informality to become a platform of belonging, inclusion, participation, recognition and legitimacy for those otherwise excluded and segregated due to socio economic background. It can create reasons and opportunities to interact, claim spaces for multiple community or individual purposes and allows for marginalized groups to participate in society and express their belonging (Mehta, 2022).

2.5 Gender, Housing Acceptability and Public Spaces

Public space is occupied in particular ways by distinct demographic groups, and these patterns directly relate with the way space is perceived and used by women (Páramo & Arroyo, 2011). The relation of women with public spaces is conditioned by socio-cultural factors, and thus, there is need for a more gendered and localized understanding of how women use and transform their public spaces (Gómez-Villanueva et al., 2021; Rodó-De-Zárate et al., 2019). Historically, women have been associated with private spaces, while public spaces were associated with men, this differentiation contributes to hindering women's mobility in public spaces and their participation as workers and citizens. Women being assigned to domestic spaces contributes to breeding isolation, hindering social autonomy and to the unequal opportunities they have to access material and social resources. Lack of access to resources due to limited spaces available for them to claim determine an impediment towards adequate jobs, social protection and housing (CEPAL & UNIFEM, 2004).

Women tend to struggle the most with marginalization issues, they face challenges that include discrimination, exclusion from secure tenure schemes, disadvantage claiming their legal rights, gender-based violence, less income across jobs and lack of economic power (UN Habitat, 2012). They are segregated from public spaces through inappropriate behavior like invasion of privacy through unconsented proximity, contact, verbal or physical violence (Páramo & Arroyo, 2011; Villagrán & Dorantes, 2022). Resulting insecurity issues limit their independence in public spaces and access to the city, hindering physical and social objectives of housing acceptability (Páramo & Arroyo, 2011; Rodó-De-Zárate et al., 2019). All of this added to the fact that they're often responsible for household sustenance, maintenance and care duties, make it harder for them to aspire to better living conditions (Jiménez & Cruz, 2015). Women-led households are among the poorest living in informal settlements (UN Habitat, 2012), and increased vulnerability forces them to stay at home, limits their livelihood strategies, reinforces unequal gender practices, diminishes mobility, disrupts social ties and breeds unsafe living conditions in the settlement (Peter, 2017).

Formal conception of public spaces consists in creating rules, regulations, and frameworks for temporary and cautiously 'manufactured' spontaneity (Mehta, 2022), which tend to be as ineffective as exclusionary, because they are based on a standardized patriarchal conception of what's adequate urban and social space. Additionally, efforts to support female-led households are scarce, and indirectly hinder their

legitimacy by still promoting the ideal family model as one led by a male figure (Chant, 1997). Gender perspective broadens the conceptualization of poverty. CEPAL (2004) states that without a gender perspective, the elements to comprehend vulnerability are plainly insufficient, this helps deepen the definition of housing acceptability objectives in order to go beyond physical dimensions focused exclusively on monetary or materials aspects and instead expand into the social, symbolic and cultural aspects that dictate the accessibility to resources available to individuals. This can reveal less visible dimensions of poverty, which influence the condition of the urban poor and are simultaneously easy to miss and hard to measure in standardized indicators (CEPAL & UNIFEM, 2004; CHANT, 1997; Villagrán & Dorantes, 2022).From an inclusion approach, acceptability is not achieved if there are exclusionary processes keeping individuals from participation or accessing opportunities and resources. Capacity-wise, acceptability demands that individuals have the capacity to live a life that allows them to cultivate and realize its capacities through social interactions, freedom of expression and movement, or by sharing culture (CEPAL & UNIFEM, 2004).

2.6 The production of public space

While the definitions and benefits of public space are widely agreed upon (Acioly, 2021; Carmona, 2015; Francis et al., 2012; Quintana, 2022; Woolley et al., 2004), the existence and quantity of public spaces does not guarantee its use, and thus, to define why and how people use these spaces is equally important (Bonilla, 2013; Gehl, 2011). As social constructs, public spaces and gender reflect the values behind society, and dictate behavior and attitudes through which we relate with spaces (Páramo & Arroyo, 2011). It is common to think of public space as something that is external to everyone and that exists independently of human experience. But alternative approaches advocate that this 'public reality' is socially constructed and reconstructed through the user's experience (Carmona, 2021; Lata, 2022; Lefebvre, 1991; McCann, 1999). Aligned to this, literature regarding informality (P. Banerjee, 2023; Hincapie & Castiblanco, 2017) discusses how poor urban dwellers domesticate their cities' public spaces, especially in informality contexts, where public and private notions are often blurry, being common for domestic space to 'extend' into collective spaces or outdoor areas. Informal settlements do not only face constant physical change during the consolidation process, but also social ones that are crucial for them to achieve adequacy, often accompanied by uncertainty and insecurity (Gómez-Villanueva et al., 2021; Riva de Monti, 2022). The process of production of space lies behind these unconventional transformations and domestications of space.

Some authors approach cities as networks of social interactions that inevitably take place in space, where space exists relatively as a product of social the phenomena around it, effectively determining its potential uses; where public spaces are the physical manifestation of the networks' qualities. Space is fundamentally bound to social reality, so this process reproduces the values of the society it belongs to, including the roles that men and women play in it (Adams, 2009; Lata, 2022; Lefebvre, 1991; Netto, 2016; Páramo & Arroyo, 2011). The production of space perspective integrates spatial and social phenomena and allows exploring the existing incentives and barriers that exist for specific groups' local decisions regarding the use and appropriation of spaces, along with the opportunities these offer, attributing them a level of publicness. Additionally, it allows to identify the perceptions of existing spaces provided by government and the practices associated to them in order to understand their relation with people and to the achievement of physical and social housing acceptability. Resulting social spaces in settlements are not neutral, because they're experienced differently among its inhabitants and therefore is influenced by cultural, historical and social factors (CEPAL & UNIFEM, 2004; Villagrán & Dorantes, 2022) that affect individual groups differently. It is central to explore the different experiences of vulnerable demographic groups in informal settlements, as space produced in formal urban contexts differs from space produced in informal or non-conventional urban scenarios, and because men and women have different responsibilities and experiences in space, their interests and needs about it are different (CEPAL & UNIFEM, 2004; Lefebvre, 1991; Páramo & Arroyo, 2011).

Space is produced through three processes, also called 'moments of production', namely; 'spatial practice' or 'perceived space', 'representation of space' or 'conceived space' and 'spaces of representation' or 'lived space'. These are referred to as the 'spatial triad' (McCann, 1999, Lefebvre, 1991). According to this theory, space can be analyzed in relation to these three dimensions.

2.6.1 Conceived space.

Conceived space is first created through thought, it brings a totality that is considered as space by knowledge and mental processes (Adams, 2009; Lefebvre, 1991). It always remains abstract and it is only encountered through abstractions contained in plans and designs. Even then, it is the dominant form and what normally is understood as production of space (McCann, 1999). Conceived space is space as imposed by planners, architects, designers, bureaucrats, engineers and generally external actors; it is normal for governments to seek to reinforce their control over planning through formalization and standardization, and among the advantages of it is that they provide frameworks to evaluate and categorize performance (Lefebvre, 1991). Conceived space tries to mold space based on standard values but as consequence, lived spaces where daily activities take place become disrupted and fragmented (Lata, 2018). Soltanian and Mohammadi (2015) advanced the definition of 'successful public space' as those that address the values of:

    (a) *Accessibility.*
    (b) *Activity and use.*
    (c) *Comfort and image.*
    (d) *Sociability.*

Urban planners and politicians often struggle to achieve these attributes because their conceptualizations are too abstract and ignore the existing meaning and practices in space (Lata, 2018). Conceived space reflects what Carmona (2021) defined as potential environments, or the creation or modification of physical settings which can only ultimately provide opportunities regarding what people can or can't do.

2.6.2 Perceived space.

While conceived space can be aimed towards certain uses, people's perceptions can prompt individuals to use them in distinct ways, determining the lived spaces in a given neighborhood (McCann, 1999). *Perceived space* is grasped by senses and largely shapes social practices. It mediates between conceived and lived spaces by linking conceived physical spaces and shaping individuals' practices in space. It refers to how the material condition of a given place link to daily activities, private life and leisure (Lata, 2018). Those responsible for design, development and management of public space often deal with the manifestation of certain critiques born from perceptions in space (Carmona, 2015). These categories provide a framework to analyze common perceptions in relation to different aspects of urban life, and understand to what extent the public realm is an inclusive stage for social interaction, political action and cultural exchange. Successful public spaces tend to transmit adequate perceptions to attract more users into a greater range of activities (Gehl, 2006).

(a) Neglected space	Both physically and socially.
(b) Invaded space	Sacrificing public space for needs and purposes other than social ones.
(c) Exclusionary space	Allowing physical and psychological barriers to dominate space.
(d) Consumption space	Commodification of public space.
(e) Privatized space	Allowing public space to be privatized, bringing social exclusion.
(f) Segregated space	Separating groups of society from the rest.
(g) Insular space	The retreat of public space into domestic and virtual realms.
(h) Invented space	The spread of a placeless, formula-driven entertainment space.
(i) Scary space	Where crime, or fear of crime, are allowed to dominate design and use of space.
(j) Homogenized space	Failing to halt the forces of globalization and over-regulation in the use of spaces.

Table 1. The critiques of public space. Source: Carmona, 2015.

2.6.3 Lived space.

Lived space is the experience of space, it relates to the concept of 'everydayness' and denotes space as it is experienced by human beings (Lefebvre, 1991), contrary to conceived and potential environments, lived space is an analog to Carmona's (2021) effective spaces. They refer to what people actually do within space and what choices they make with the opportunities given. It is not capable of being analyzed through theoretical approaches (Adams, 2009) and it produces meanings by drawing on physical qualities found in space. Analyzing existing spatial practices makes it possible to think differently about space, being taken for the public's domain and away from planners and designers and allows to go beyond standard practices into more flexible or inclusive ones, to inhabit in unique, unexpected and adequate ways (McCann, 1999; Mehta, 2022).

On the other hand, if the surrounding social environment is an exclusionary, violent or segregated one, this production moment can consolidate in equally exclusionary, violent and segregated spaces. Informal settlements are also vulnerable in this regard, as they often face social struggles that are often sidelined by consolidation strategies. It reflects the practices of its inhabitants rather than the designers' assumptions of them. There's usually a gap between the developers' and the inhabitants' understanding of what public space should look like and used for (Lata, 2018), and this is accentuated in resettlement and informal contexts where the 'traditional' typologies of form, function and ownership of public space are not necessarily effective (P. Banerjee, 2023).

2.7 Conceptual Framework

Conceptual framework breaks down the concepts from the study's research question through smaller ones found in literature and shows the relations between them in order to answer the research question. For that matter, in an informal settlement context, the research will look at the relation between the production of public spaces, our independent variable, and women's housing acceptability, our dependent variable.

The production of public space is divided according to the different moments of production, or spatial triad (McCann, 1999; Lefebvre, 1991); where each moment contributes with different perspectives to analyze the residents' relation with their environments. In this sense, conceived space are the observable potential environments that conform the neighborhood's public spaces, perceived space how these physical environments are perceived by a specific demographic group; and lived space is constituted by the experiences and practical solutions found in the neighborhood's public spaces, i.e., it's effective environments. The study will analyze each moment's impact on women's housing acceptability objectives, likewise divided in physical and social dimensions, according to literature.
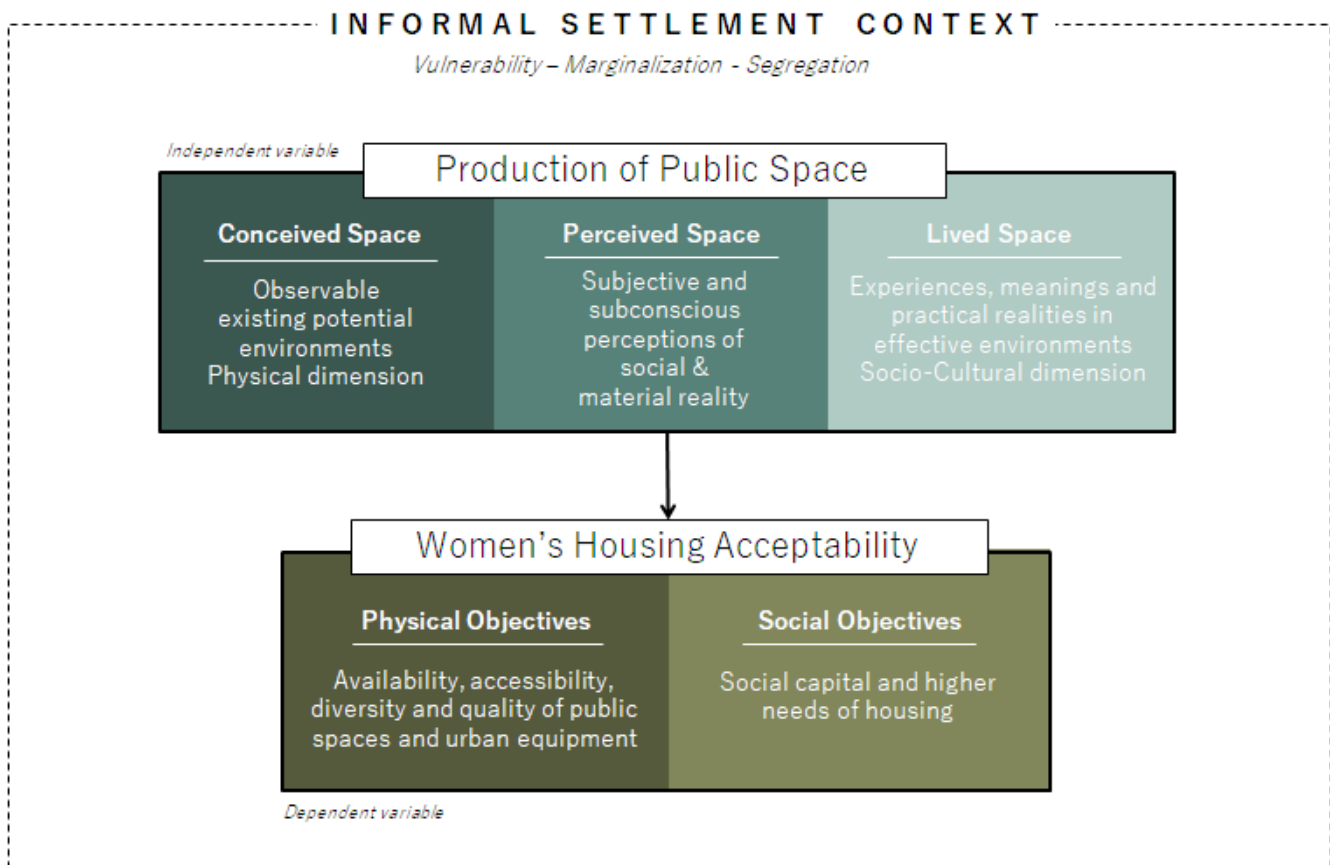

Figure 2. Conceptual framework

III. METHODOLOGY

This chapter presents the study's research strategy chosen to approach the research questions. Through operationalization, it breaks down the main concepts from conceptual framework into variables and indicators that can be gathered through corresponding data collection methods. It explains the collection method's sampling process and conduction, and how the obtained qualitative data was analyzed. Additionally, it anticipates challenges regarding its scope, limitations, validity and reliability; along with the decisions made to mitigate them. For the implementation of research strategy, we counted with support from a community center within one of the informally originated marginalized neighborhoods of the Metropolitan Area of Guadalajara.

3.1 Research Strategy

Research strategy consists in a qualitative approach based on van Thiel's (2014) qualitative collection and analysis methods. Data collection methods consist in semi-structured interviews and direct observation through the neighborhood. These aim to identify the resident women's public spaces by looking at existing physical spaces available to the neighborhood. Then, get some insights about their perception of those spaces and finally how these are utilized by women. Finally, crossing findings to identify whether these impacts play a role on improving or hindering housing acceptability's physical and social objectives of female groups in the neighborhood.

Interviews were conducted to collect qualitative data regarding the neighborhood women's experiences and daily routines involving public spaces (effective environments) and their particular take on these spaces' effects on their housing's social and physical objectives. Data collected from interviews constitute women's subjective connections between physical and socio-cultural realities, and are a source of primary data to contextualize spatial patterns and interactions (Filep et al., 2014). Lastly, direct observation provided data about the physical condition of the neighborhood, allowing discussion around the effective environments they ultimately constitute through the process of production of space, according to the use categories proposed by Schlack (2011).

3.2 Research Collection Methods

3.2.1 Direct observation

Due to the capacity to collect data independently of people's willingness and ability to answer, and for being as unobtrusive as possible to not alter the observed environment (Taylor-Powell & Steele, 1996; Trochim, 2023), direct observation is the first instrument to approach the study area physical environment. Observation guides were designed to gather this data, which includes characteristics of individuals in public spaces, interactions, nonverbal behavior, physical and social environment (infrastructure, accessibility and linkages, activities and uses, comfort and image, sociability, visual acceptability, adaptability to emergent needs, connectivity and general accessibility to diverse services and activities). Additionally, the conduction of the observations will help the interviewer familiarize with the context and bring larger insights when conducting the interviews.

3.2.2 Semi-structured interviews

Semi-structured interviews were conducted with the neighborhood's women to get data related to their subjective housing needs and aspirations in relation to their available public spaces. To identify their practices, experiences and routines in public space and how these relate to their routines and patterns of behavior and interaction with them. Ultimately to find out their impacts regarding women's housing conditions in terms of physical and social housing acceptability objectives.

3.3 Operationalization Table

Concept	Dimension			Variable	Indicator	Type of data	Source of data
Housing Acceptability	Social Objectives	Woolcock & Sweetser, 2002; Coleman, 1988		**Bonding social capital** *Close bonds to demographically silimar individuals.*	Perceived reach of acquaintances	Qualitative	Interviews
					Notion of superficial or meaningful interactions		
				Linking social capital *Connections with people or institutions outside somene's daily life*	Access to laboral opportunities		
					Access to information		
					External ties		
				Bridging social capital *Support between acquaintances independently of their demographic similarity*	Monetary support		
					Instrumental support		
		Carmona, 2021; Hopper, 2020		**Affiliation needs** *To belong and be accepted by a community / social circle*	Feeling of belonging to the neighborhood		
					Feeling of acceptance from the neighbors		
				Security Needs *To be and feel safe from harm*	Personal notion of safety		
					General safety issues		
				Esteem needs *Feeling valued by others and one self*	Academic fulfilment		
					Laboral fulfilment		
					Ownership fulfilment		
				Self-Actualization needs *Personal realization and fulfilment*	Leisure opportunites		
					Expressive opportunities		
	Physical Objectives	Ayala et al., 2019		**Neighborhood qualities**	Access to infrastructure		Active observation
					Visual acceptability		
					Adaptability to emergent needs		
					Connectivity with the city		
				Access to services and opportunities	Education		
					Socialization		
					Health services		
					Administrative services		
					Daily sustenance		
					Transit		
					Recreation		
					Work		
					Outdoor enjoyment		

Produced Public Space	Space	Author	Category	Indicator	Approach	Method
Produced Public Space	**Perceived Space** (*Lata, 2018; Lefebvre, 1991*). People's perceptions of space grasped by senses and linking physical and social realms by mediating conceived physical spaces with subjective choices that shape individuals' practices in space.	Carmona, 2015	**Neglected** *Both physically and socially*	Intensity of usage		Interviews
				Maintenance		
			Invaded *Sacrificing public spaces to purposes other than social ones*	Invaded by vehicles		
				Invaded by waste		
				Other		
			Exclusionary *Existence of barriers dominating space*	Physical barriers		
				Psychological barriers		
			Consumption *Commodification of space*	Restricted commodification		
				Relentless commodification		
			Privatized	True public		
				Private-public		
			Segregated	No. Of groups present		
			Insular *Domestication of spaces*	Associated to domestic		
				Associated to public		
			Invented *Formula-driven interventions*	Meaningfulness to people		
				Existence or lack of identity		
			Scary *Where fear allows control of design and use of space*	Fear of crime / violence		
				Feelings of safety		
				Marginalized		
			Homogenized	Over-regulated		
	Conceived Space (*Lefebvre, 1991; McCann, 1999*). Space understood and imposed by external actors. Provides frameworks to evaluate and categorize performance and tries to mold space based on standard values.	Soltanian & Mohammadi, 2015	**Accessibility & Linkages** *Physical ease of access and connectedness*	Physical accesibility	Qualitative	Active observation
				Pedestrian activity		
				Vehicle and pedestrian relations		
				Transit usage		
			Activity & use *Diversity of activities for a variety of users*	Variety of activities		
				Variety of uses		
			Comfort & Image *Safe, clean, attractive and adequate urban spaces for all*	Safety		
				Cleanliness		
				Attractiveness		
				Adequate equipment		
			Sociability *Spaces promote equal opportunities for social interaction*	Intensity of interaction		
				Diversity of interaction		
				Passive / Active interaction		
	Lived Space (*Carmona, 2021; Lefebvre, 1991*) Space as it is experienced by human beings, what people actually do within space and what choices they make with the opportunities given.	Schlack, 2011	**Destination space.** *Activities held in those attractive to users due to proximity with essential services like education or health. Ex: green areas next to a school or clinic*			Interviews
			Circulation space. *Those that need to be navigated through in order to get to other places. May or may not allow permanence. Ex: Streets*			
			Neighborhood space. *Those attractive to users due to the potential to hold leisure, symbolic or meaningful activities aligned to a community's interests or traditions. Ex: a park where certain festival is held*			
			Hiatus space. *Those whose physical or social qualities allow for brief stops. They help to articulate public spaces and connect a diversity of uses to it. Ex: a bus stop, a small green pocket, a group of benches.*			
			Marginal space. *Those that are generally unutilized by physical or social motives.*			

3.4 Sampling

3.4.1 Direct observation

In order to efficiently define and sample the relevant spaces within time constraints, spaces within the neighborhood were categorized according to Schlack's (2011) division based on the purposes, activities and users they serve, independently of their ownership or legal status. Two approaches of direct observation were defined, one constituted by walking routes and other by static observation in specific points of interest. The former would cover most of the neighborhood's streets; aiming to explore the circulation and hiatus spaces within the study area. The latter one to observe and detect destination, neighborhood and marginalized spaces.

The observations' routes were captured in pictures and recorded for further analysis, and field notes were taken for particular events. For the walking routes, observation was conducted walking through the determined streets, filming the path and filling an observation matrix to gather the relevant indicators about physical and social elements in space. Static observation routes consisted in determined points of interest, defined by the uses and purposes people interact with them for. Destination spaces naturally attract the target population to them, creating their own windows for interaction. While neighborhood and marginalized spaces hold qualities attractive or repulsive to the whole target population, and their use is solely determined through the resident's willingness, interest and opportunity to use them.

3.4.2 Semi-structured Interviews

Targeted sampling was used as the main sampling method, looking for representatives of distinct age ranges of women that frequent the study area's spaces. Community center San Juan Bosco provided contact with the initial participants. From there, snowball sampling allowed to reach representatives of younger and elder groups who were not as frequently involved in the community center's activities, or prefer to spend time in their houses, having less presence in public spaces. These respondents were found knocking on doors accompanied by a volunteer from the community center.

Respondent categories were defined based on their age, mainly because it determines the activities and responsibilities the respondents perform during the day, and thus, allows to get insights on the different kinds of needs and relations between women and their public spaces. For each group, a target of eight interviews was stablished to reach data saturation.

(A) Young group. Between 25 and 35 years old
(B) Middle group. Between 36 and 55 years old
(C) Elderly group. Over 56 years old

3.5 Analytical Framework

Qualitative analysis from interview's results is the main analysis method, according to Filep (2014), narratives collected from individuals are fundamental to understand socio-cultural contexts and integrate them into new physical and social dynamics. Women's subjective narratives illustrate their relation between built environments and socio-cultural contexts (Filep et al., 2014), or in the research's concepts, between potential and effective environments (Carmona, 2021). The analytical framework presents the study's main concepts and variables and how they can be naturally aligned to show the relation between the process of production of space and housing acceptability objectives. Operationalization's indicators were analyzed qualitatively according to those relations. Axial coding was developed based on the interview's transcripts and, together with qualitative analysis of the interviewee's personal narratives, allowed to link collected qualitative data to the various indicators. Collected data was managed, processed and coded through the software Atlas.ti. Following analysis, discussion aims to answer research sub-questions before drawing final conclusions about the main research question.

For direct observation, observation matrixes were designed to capture data and allow the creation of graphics of the presence of women and activities taking place in their potential environments that, along with pictures taken, illustrate the physical and social reality that women in the neighborhood need to cope with.
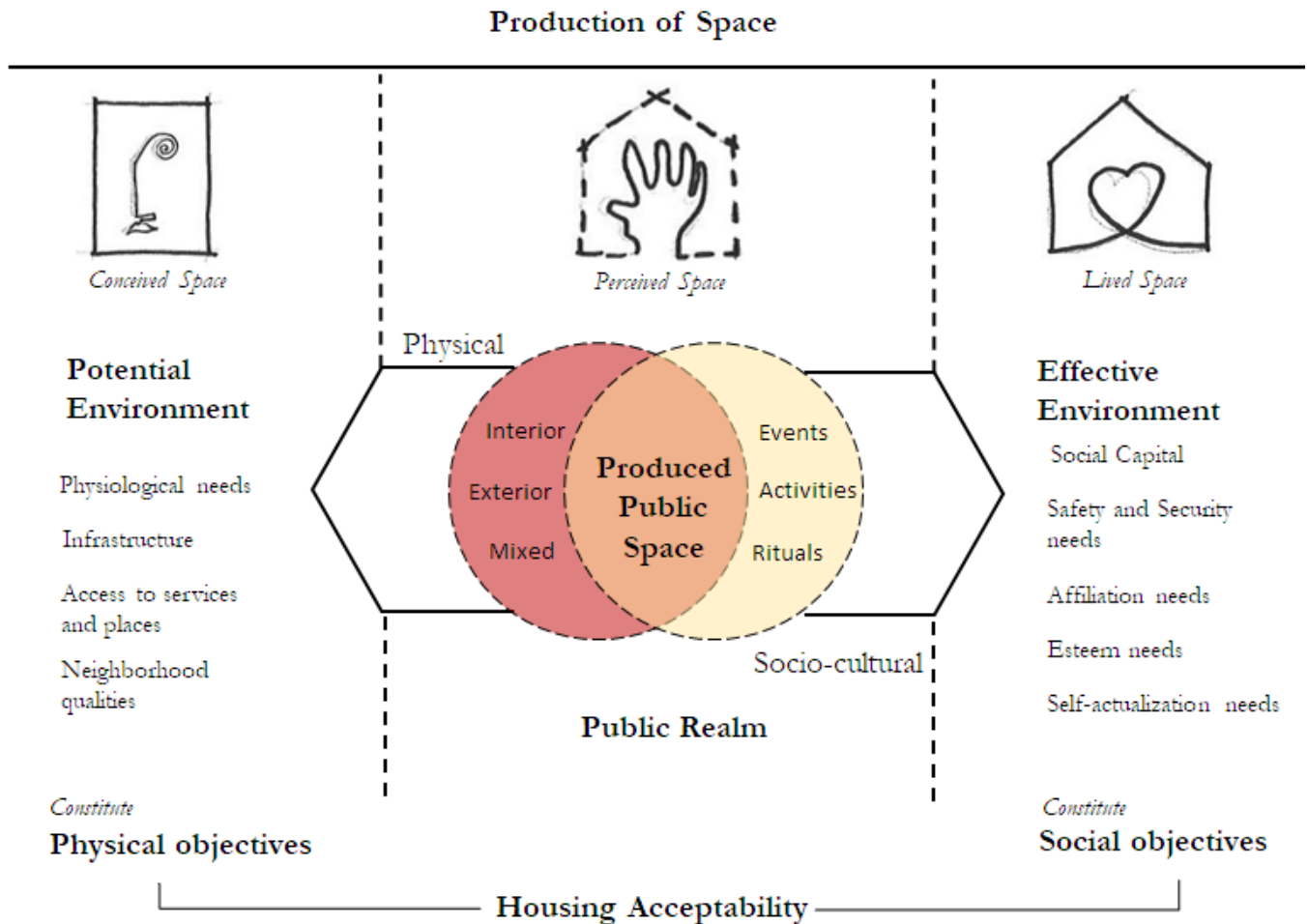
Figure 3. Analytical Framework

3.6 Scope and limitations

The scope of the study is limited to adult women's production of public spaces, which leaves out this process in case of many other demographic groups that are also important to study in the context of informality. Additionally, informal neighborhoods are usually sprawling and segregated individuals are forced to traverse long distances to fulfil their urban needs, in consequence, perceptions of public spaces within a limited physical area might not represent the whole individuals' experience.

Conducting the research remotely presented challenges that needed to be accounted for. Both the community center and an experienced assistant provided support to reach the target population and conducting the data collection. Conducting observations made the assistant grew aware of the neighborhood's condition and daily dynamics, added to the collaboration of a female field work assistant contributed to

connect with the experiences of the respondents, build rapport and gain trust, which encouraged them to share more about certain subjective experiences. Still, interview recordings were the main source for the researcher to analyze, which added an extra layer of interpretation between the interviewee and the researcher. This was mitigated by constantly discussing the results and interview process with the assistant. This discussion process provided further insights into the collected data by encouraging the assistant to relate the interviews' results with the neighborhood observations made during the fieldwork.

The marginalized condition of the informal settlement presents a large limitation too, physical access and remoteness influenced the delimitation of the study area, and added additional efforts in the data collection instruments' design and execution processes. For safety, it was not possible to schedule direct observation samples past certain hour, so the research relies on the interviewees experiences to get data on activities taking place at night.

3.6.1 Validity and reliability

Direct observation presented the challenge to sample a significant amount of the study area's places at different moments while dealing with the dangerous situation the neighborhood presented. For that purpose, measures were taken in each of the observation route types. For the walking routes, fourteen streets within the neighborhood were selected to be part of these routes based on their connectivity and location within the neighborhood. While for the static ones, there were five places identified: a health center, a supermarket, and three kindergartens as a starting point of observation. The rest would be identified through the conduction of the other observation routes and the data collected in interviews. Every circuit was sampled once during a weekday and once during weekend, both during the morning and in the afternoon. Determined points of interest were planned to be sampled in 30-minute lapses each.

According to van Thiel (2007), semi-structured interviews' flexibility can compromise reliability and validity of collected data. To mitigate this, the study tried to reach the largest possible sample size in different age groups within the target population. Additionally, snowball sampling allowed to reach women not usually present in public spaces or community activities to further diversity the interview's respondents.

3.6.2 Additional limitations encountered during fieldwork

Several limitations rose from the marginalized condition of the neighborhood. Conducting the walking circuits revealed that the social dynamics in public spaces were almost inexistent, making it questionable if the static circuits would contribute to the research. Interviews done in parallel to this confirmed that, even when there are some services and places people need to go to, there are rarely any interactions happening in those places among the target population. Furthermore, one of the respondents informed us that young gangs in the neighborhood were already aware of the fieldwork assistant, and she even got confronted once while conducting a walking circuit. To avoid risks and due to the lack of activities in static observation points of interest, we decided not to conduct them. Additionally, the walking circuits were finished by private vehicle to ensure safety. The second limitation involves the conduction of interviews and recorded consent. The community center helped us gather most of the women willing to participate in the interviews, to which a general informative gathering was done and they'd agree to conduct the interviews and record them. To complete each target group samples it was necessary to conduct some interviews outside the houses of some interviewees, often in precarious segments of the neighborhood. These resulted in overall shorter interviews, with less rapport built and missing recorded consents.

IV. RESULTS, ANALYSIS AND DISCUSSION

4.1 Introduction to the Case Study

Villas de Guadalupe is a neighborhood located in the northern portion of the municipality of Zapopan, which constitutes the west section of the Metropolitan Area of Guadalajara (AMG), México. It was originally formed in an informal way, through the squatting in undeveloped social land (IMEPLAN, 2021) and since then slowly became a more consolidated neighborhood, through the resident's self-help efforts and the government's progressive provision of basic services, public transport and tenure security. It was included in 2019's marginalized neighborhoods characterization document by the Metropolitan Institute of Planning (IMEPLAN) of the AMG, in order to better understand its social challenges. Where it is identified as part of the 'development strategy', although one of the furthest from its effective center (IMEPLAN, 2021). It has approximately 50 hectares of surface and a population of 5248 habitants, from which 2604 are women, and distributed in 1404 households (INEGI, 2020). Most of which count with electricity, drainage and sanitary services. Scholarity averages 9 years among men and women, meaning inhabitants mostly have access only to basic education.

Villas de Guadalupe is divided in the middle by a regional highway that disjoints the neighborhood on ground level and mixes high intensity transit with neighborhood level activities without a proper buffer. Additionally, irregular topography complicates accessibility into some of its areas and makes it especially adverse for pedestrians to navigate the neighborhood. This creates a physically fragmented urban tissue; many streets turn into dead ends and those bordering the accidented topology have minimum infrastructure and house dangerous marginal zones.

The study focuses on the east half of the neighborhood due to the more apparent precarious physical conditions and lack of services compared to the west half. An area of study was delimited inside this portion of Villas de Guadalupe and delimited by municipal boundaries and topographical continuity in order for field work to be efficiently conducted and finished in the established time frames. Many community centers can be found in both halves of Villas de Guadalupe, these are important places that provide a large portion of the population diverse activities and a sense of community. Centro Comunitario San Juan Bosco is one of the community centers located within the study area, it provided a platform to reach the target population and support during fieldwork. Community center San Juan Bosco is a community-led center supported by donators like nearby churches and ran by volunteers that offers education to kids and adults alike, recreation in form of workshops where everyone is allowed to participate and religious activities. It an entry point for study to reach its target population, due to its role within the neighborhood as a place that women frequent and where they can find support in.

Figure 4. Satellite view of Villas de Guadalupe. Divisor topographical lines and highway are visible. Source: Google Maps.
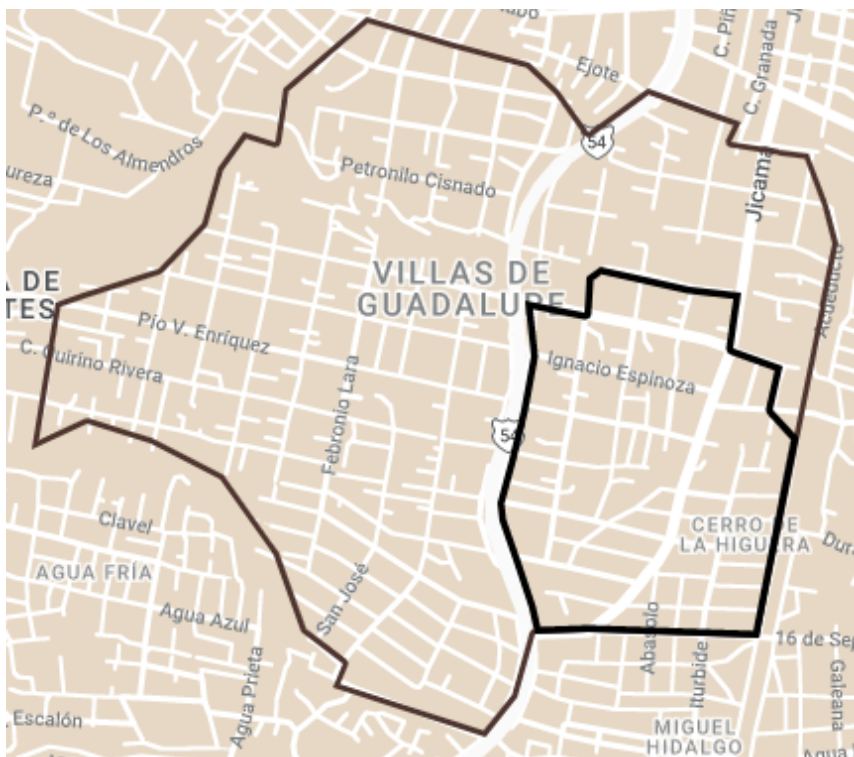

Figure 5. Villas de Guadalupe and Study Area within it.

Consolidation efforts in within the study area were based on the expropriation of social land (ejido land) to hand property rights to the inhabitants, along with provision of infrastructure and street paving so that public transport, garbage collection, water and drainage services could permeate the area. Nevertheless, education, recreation, administrative or health services are scarce. Meanwhile, resident's efforts focus on expanding and enhancing the material condition of their domestic spaces. There are no clear spaces dedicated as 'public' like parks or governmental buildings, so it was expected to find the particular solutions the community uses to achieve social objectives.

National Institute of Geography and Information (INEGI, 2020) collects socio-economic and physical data in its national database. It shows the overall state of infrastructure and services within the study area and helps to present the physical qualities of the neighborhood on ground and the availability of services in Villas de Guadalupe. These illustrate the physical environment the target population interacts with, evidencing deficits on public services and some spatial patterns caused by them. In short, one public transport line crosses the study area, street lights range from lacking to non-existing in some areas, street paving and trees are scarce and in case of the trees, they often invade already narrow sidewalks. Wheelchair accessibility is nonexistent.

🟥 No street of the block counts with service
🟨 At least one street of the block counts with service
🟩 All street of the block count with service
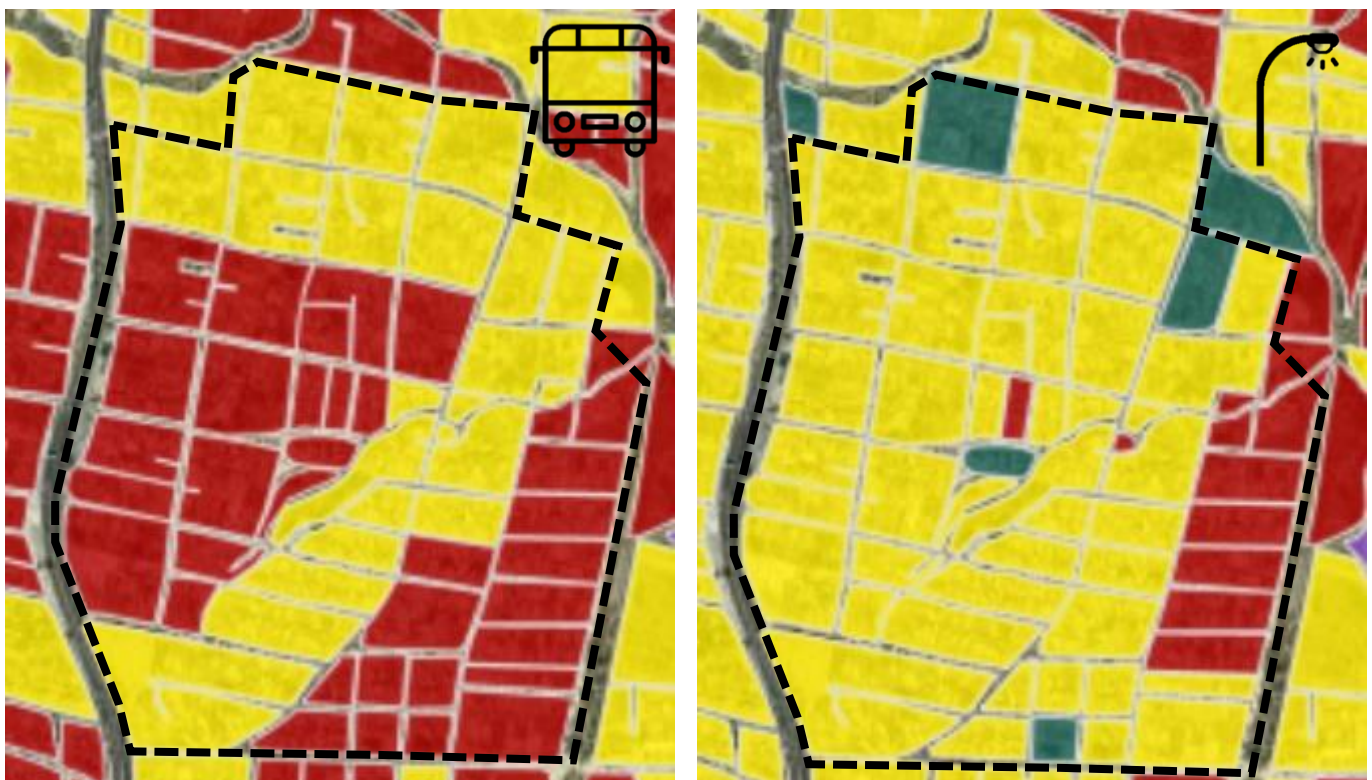
Figure 6. Public transport and street light within the neighborhood. Source: INEGI, 2020. https://www.inegi.org.mx/app/mapa/espacioydatos/default.aspx
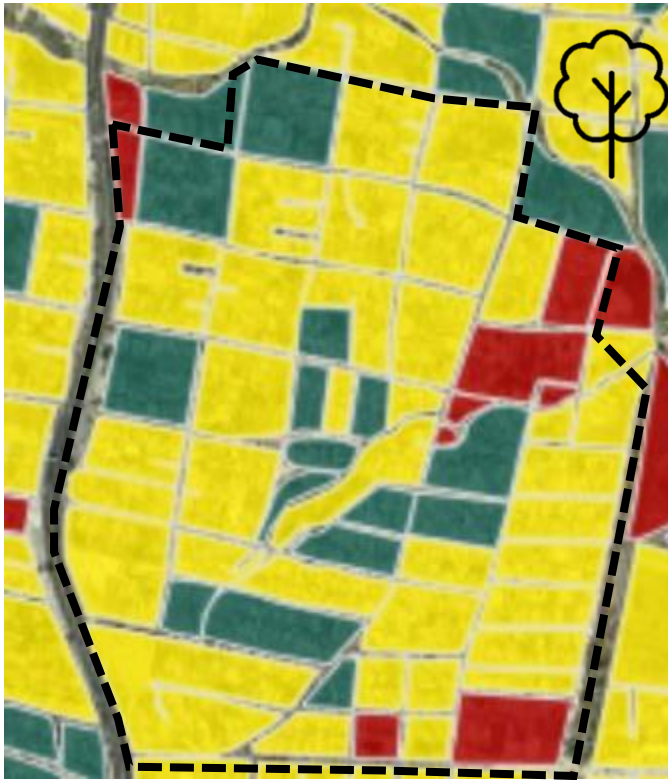
Figure 7. Presence of trees and sidewalks within the neighborhood. Source: INEGI, 2020. https://www.inegi.org.mx/app/mapa/espacioydatos/default.aspx

Figure 8. Street paving and wheelchair accessibility within the neighborhood. Source: INEGI, 2020.
https://www.inegi.org.mx/app/mapa/espacioydatos/default.aspx

4.2 Data collection results and analysis

Analysis of collected results will follow the sequence of research sub-questions. After describing the qualities found in the different study groups, it'll look at the existing physical spaces, product of the conception of space by consolidation efforts, to determine the potential environments that available public spaces provide and its relation to physical housing acceptability objectives (*SQ1*). Then it'll look at the common perceptions that women have regarding different types of spaces in their neighborhoods and how these end up being used by them (*SQ2 and 3*). Finally, it'll analyze how the whole process affects the achievement of social housing acceptability objectives. The analysis concludes with a discussion regarding common patterns and relevant findings regarding how the production of space impacts physical and social housing acceptability.

Description of the study groups.

Common traits of the three groups include being married, having children to their care, in some cases their own or in some cases grandchildren; and prioritizing children over their own social or personal objectives.

SG1. Young group (25 to 35 y/o). Mainly full-time employees, there are no women running their own business or voluntaries. They usually share responsibilities with other older women in their houses. In general, this group comes up as the most isolated from the rest of the study area's women, and with least interest in participating in community, appropriating or using space or identifying with their neighbors. We cannot attribute all of this to the access of public spaces and social opportunities, other reasons for this behavior can include the access to technologies and a more individualistic approach to self-realization. This group contains the only cases where women do not have people to their care or are single and the most cases of women that consider that they spend the majority of their time locked inside home.

SG2. Middle group (36 to 55 y/o). Mainly full-time employees or running their own business. Everyone in this group combines work with household duties. They have more responsibilities and therefore less time to dedicate to non-instrumental activities, in most cases considering them unnecessary. Women in this group prioritize their children's needs and opportunities before their own. Their approach to public space is often related to ways in which they can ease their caring labors and focus on economic activities. This group's answer and experiences are largely homogeneous. It is also the most integrated with their neighbors.

SG3. Elderly group (over 56 y/o). This group has the most variety regarding women's occupations, dedicated housewives and volunteers are more common. There are three cases of widows: two of which dedicate to housewife activities and the last one is a 71-year-old full time employee. This group is the one most affected by inaccessibility and the one with the most bonding social capital, they know most of their neighbors, motive to which they attribute their strong feeling of safety in the neighborhood. Most of them are aware of the historical development of the neighborhood. The contributed with interesting insight about practices and initiatives that took place in the past, along with important reflections regarding the neighborhood's women needs and main challenges.

4.2.1 SQ1. Existing public spaces within the site. Conceived space and physical housing acceptability objectives.

Financial constraints often force governments to formulate strategic approaches to consolidation efforts. The resulting conception of space from developers reflect values behind their priorities and provides the potential environments for the neighborhood. Consolidation efforts in Villas de Guadalupe and its neighboring areas have improved its urban services, connectivity to the larger city and tenure security. These are analyzed through the resulting neighborhood's physical environment to determine how the physical qualities of public spaces constitute adequate potential environments stablished by Soltanian & Mohammadi (2015).

Accessibility & Linkages. The first indicator contains information regarding walkability, pedestrian activity, parking use patterns and transit usage within the study area. Villas de Guadalupe has many substantial upward slopes, making every journey more difficult and disincentivizing. Residents often commute to their daily activities outside the study area, so a lot of car presence can be found. Vehicles and pedestrians share streets and, in some segments, they obstruct walkability and can create dangerous or inaccessible situations. Most of streets don't have paving and are dirt roads, which also hinder walkability. According to interviews, rainy season exacerbates this quite substantially. Pedestrian found on streets are mainly men, while women can be found often walking with companions. Transit is accessed through bus stops located in the main road, and they provide a small window for women to interact. Overall accessibility for wheelchairs, elders or physically impaired is not addressed. The study area has access to public transport, but its frequency and capacity is quite limited, the remoteness of it makes it hard to access many places but it allows them to connect with the municipalities' center, which most of the respondents actually travel to when trying to fulfill their social needs. In most cases they prefer to do so than to spend time in the places available in the study area or their neighborhoods.

Image 1. Steep slopes and sidewalks

Image 2. Dirt roads and arid segments disincentivize use

Image 3. Parked cars and transit patterns further hinder the use of space

Activity & Use. Activities happening in public spaces are minimal. Most spaces are just used to circulate from one point to the other. Most individuals were limited to walking through space with occasional interactions on the street, but rarely ever someone stops on public to do anything but walk or enter a shop. Unfortunately, most the non-conventional activities are related to problematic behavior such as drug dealing, homeless people converging in marginalized spaces and gatherings of youth groups which repel women from public spaces, according to interviews. There is no recreation, socializing, educative or commercial uses in public space and there is no space appropriation from the women's part to perform these activities.

Image 4. Ample and deserted spaces

Image 5. Ample deserted streets

Image 6. Constructions and abandoned spaces are used for problematic activities like drug dealing and criminal activities

Comfort & Image. Streets are overall bordering marginal, many do not have continuity or are dead ends, hindering visual connection and ease of access, only those with paving are transited and somewhat clean, but often there's garbage invading empty lots or obstructing sidewalks. There are no street lights, benches, trashcans, green lights or street signals, making it difficult to traverse the study area and discouraging attempts to enjoy outdoor spaces or interest in appropriation. Physical upgrades favored vehicle usage providing paving while sidewalks are left narrow or not protected from traffic. There are no equipped bus stop and even trees can be an obstacle when not correctly integrated, in some cases obstructing sidewalks or street light and impeding visual connection. Dirty, isolated and dangerous streets, no trees, sun-burning streets and hot paving diminishes attractiveness and drive out resident's interest in claiming public spaces as such. Almost no respondent considered the study area to be visually acceptable and most coincided that green spaces would largely improve their aesthetic and comfort qualities.

Image 7.Garbage piles found in streets
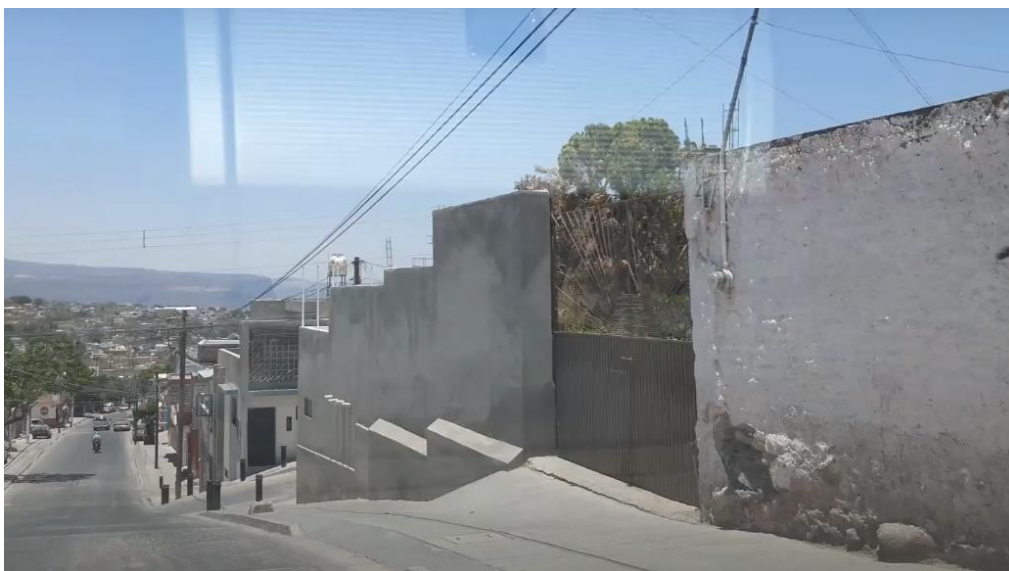
Image 8. Even 'consolidated' streets do not provide comfort for human usage

Image 9. There are many empty plots, but mostly contribute to bad image and cumulation of dirt or garbage

Sociability. Determined by the interactions taking place in the study area. Interaction intensity is low, there's only occasional and superficial exchanges while walking, more meaningful ones can happen within small stores or businesses. Interaction is mostly passive; people share space and acknowledge the presence of others acquiring a civility posture; but rarely go for the purpose of social interactions to happen. Instrumental purposes like purchasing goods or a particular service provide less willingness for interaction, on the other hand, it was not possible to find non-instrumental purposed activities among the study area's women. Interactions are made between similar groups, women mostly interact with other women of their age, if at all.

Image 10. Streets provide different opportunities for men and women. Women walk through them (left) while men can temporally appropriate spaces for personal interests (right).

Image 11. Women are mostly found in groups in public spaces.

Image 12. Multiple women on their way in a consolidated street

Image 13. Moving through space together.

4.2.2 SQ2. Women's perception of their neighborhood's public spaces. Perceived space

Collected interviews and imagery shed some light in the study area's women public spaces perceptions of their available spaces. This section will analyze different spaces within the neighborhood based on Schlack's (2011) categorization depending on their use: destination, neighborhood, hiatus, circulation, marginalized; in relation to Carmona's (2015) common critiques of space derived from perception and physical qualities. The analysis aims to provide insights regarding common perceptions of each type of space within the neighborhood while looking through positionality and subjective choices. The impact of such perceptions in the formation of effective public spaces will be analyzed in the next subheadings corresponding to lived space and the achievement of social housing acceptability objectives within the area.

(a) **Destination** spaces within the neighborhood. Relation with *neglected*, *privatized*, *segregated* and *homogenized* spaces.

> According to respondents, destination places within the neighborhood such as the schools, health center and supermarkets are used mostly for the services they provide, but maintenance and interventions around them are not constant. Residents do not actively interact or seem interested in claiming such spaces outside compulsory activities and services not provide adjacent spaces that appeal to the resident's interests or needs and encourage the utilization of women. Other services not available in the neighborhood through public institutions are provided through private owners, like sport centers or gathering indoor places, or in domestic settings such as women's households and community centers. Though private alternatives for public gathering places can deliver some of the social benefits of public spaces, in these settings individuals have less agency to adapt or modify them for their needs, as ownership is not collective. Aside from these instrumental places, many respondents said that they do not usually engage with the neighborhood available spaces. They pointed out that there are no opportunities near their houses to acquire new skills, socialize, or recreate; and rather prefer to 'lock' themselves in their houses.
>
> The perception of 'publicness' within the study area is scarce. Consolidation efforts have been limited to minimum physical solutions, and while they have provided services to the neighborhood, standardized spaces drop the potential that destination places could bring to provide opportunities to harness public spaces' social benefits.

> *"Not many people take care of things. They build a park, but people go and mess it up. What do the other people who do care do?"*
>
> *-SG2-8. 39.*

> *"Where I live women almost never go out, most of us do not interact with each other."*
>
> *-SG2-6. 37.*

(b) **Circulation** and **hiatus** spaces within the neighborhood. Relation with *invaded*, *exclusionary*, *scary* and *segregated* spaces.

> The lack of dedicated public spaces within the neighborhood means that most of the spaces where publicness can be developed are streets and small spaces next to empty plots, businesses or topographically irregular places. Spaces where it can be expected for people to navigate through or that could provide an opportunity to pause any given pedestrian journey. Unfortunately, in Villas de

Guadalupe most of these spaces are perceived as invaded either by thrash, adverse vegetation elements, undesired and dangerous situations and vehicles. All of the respondents mentioned the need to deal with feelings of insecurity in the study area, some shown themselves particularly distressed about it. Some pointed out that they cannot ignore their responsibilities or needs even when being constantly exposed to delictive activities, pedestrian unfriendly streets and marginalized zones.

Invaded and scary perceptions constitute the respondents' main physical and social barriers to interact with circulation or hiatus spaces. Others include the highway separating them from the other half of the neighborhood, the poor conditions of some streets and the remoteness of their neighborhood, the fact that housekeeping duties left them with little time for leisure or family activities and the low willingness or interest to interact with others. These constitute exclusionary perceptions of space.

Segregation within the neighborhood is exacerbated by all the previous, limiting the lack of appropriation from different groups and making spaces exclusively taken over by specific groups which in turn further excludes women from them.

"I cannot say I'll be safe anywhere I go; someone can always come and do something to you. Wherever you are."
-SG2-5. 36.

"Young people are forbidden certain areas. That's how they mark it among themselves, because you belong to this side"
-SG3-6. 56.

"It scares me. They can do something to you without fear or favor. Wherever you go they'll find you no matter what."
SG1-5. 25.

These perceptions characterize the neighborhood's **marginalized** spaces, resulting from neglected and privatized spatial solutions; and physically and socially exclusionary streets and environments. Appropriated by conflictive behavior, largely unutilized, invaded by precariousness, lack of maintenance, perceptions of danger and unable to hold well-crafted spatial solutions and initiatives that actually address the physical and social challenges that women face routinely.

(c) **Neighborhood** spaces within the neighborhood. Relation with *insular* and *invented* spaces.

While most of the neighborhoods' spaces are considered lacking or dangerous, when possible, women still see their potential environments as social opportunities and actively look for ways to get close and would like to have more similar opportunities. They look to fulfill social objectives by transporting public functions into domestic spaces and most consider their neighbors to be supporting. Additionally, most women also identified the community centers, churches and temporal markets as the places where they can successfully do so. By means of use and identification from women, these become their neighborhood spaces for women in this context.

Despite any other notions or perceptions, these places are recognized by respondents as the most meaningful places for everyone within their neighborhood. Even though people often need to commute for long times to get to them, they remain meaningful for them because they can interact with others and feel community belonging. As scarce as they are, women talked fondly of these places where they can spend time together and take care of their children outside home. Where it doesn't matter precisely where these activities happen, but are concerned with the experiences they offer.

Whether they're inherently public places or not is out of the women's care as long as they have the opportunities and choice to engage with their neighbors.

"We are lacking, but I don't know what. Places where many moms can go, so we can be together."

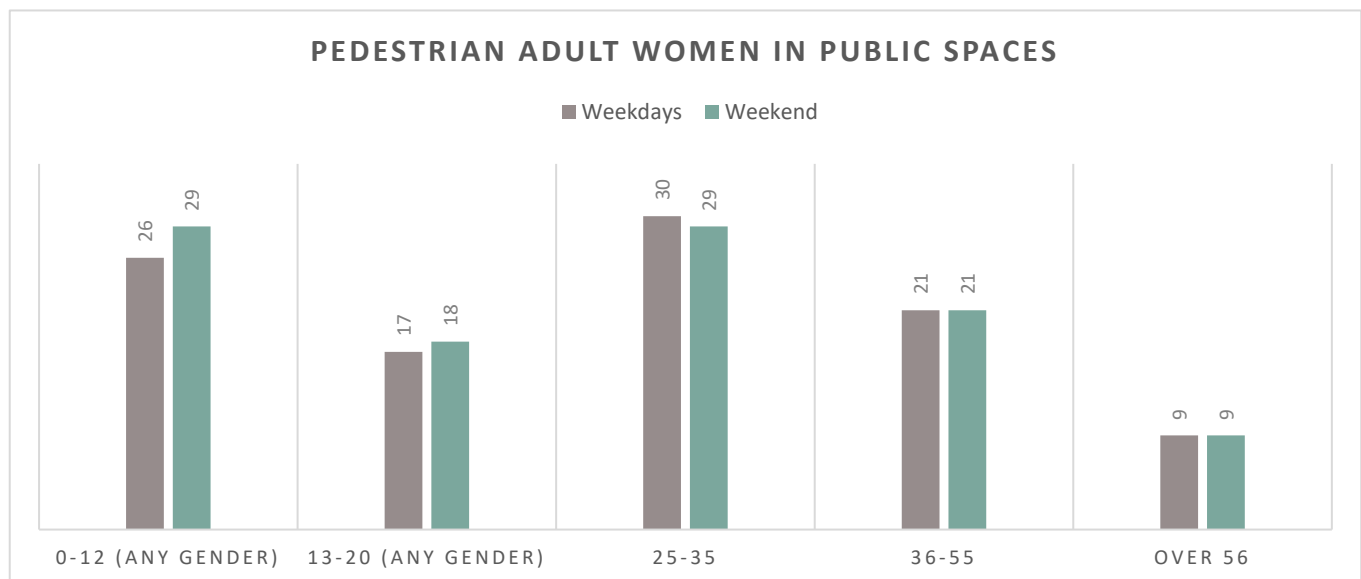<div align="right">

-SG2-7. 36.

</div>

"I come [to the community center] to do what I like, and I convivialize. It is my happy moment of the day. Because here I share with my classmates, right now we have a beautiful class that I like, I like this place. I interact with them. And then I get home and I say: "Well, I've had a good time, I'll start doing my homework". I am alone, I just became a widow. I make my space here, here I feel them more like my family."

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-SG3-7. 61.

</div>

4.2.3 SQ3. Public life in consolidating informal settlements. Lived space.

This section presents the overall presence of women in public spaces within the settlement, accounting for under age persons accompanied by them; the main activities taking place in public spaces; the streets with more presence of women and the distribution of women in public spaces by age. Additionally, this section's graphics reflect the analyzed women's perceptions of space, for example the lack of outdoor places where people gather and that streets are not utilized by most age groups or are only used to walk towards transit.

Generally, the most common age group in public space are adult women from 25 to 35 years old, closely followed by children under their care. The least group observed was elderly women over 56 years old *(Graph 1)*. Within the study area, three streets are relatively better maintained and consolidated. These are Casiano Torres (A), Pablo H. Hernández (5) and 16 de Septiembre (G), all of which count with street paving, sidewalks, public light, public transport and are cleaner. During weekdays, these remain the most utilized spaces by women. Ignacio Espinoza (B), while not having equally good physical qualities is among the most utilized street during weekdays probably to its continuity outside the study area *(Figure 9 & Graph 2)*.

PEDESTRIAN ADULT WOMEN IN PUBLIC SPACES

■ Weekdays ■ Weekend

Age group	Weekdays	Weekend
0-12 (ANY GENDER)	26	29
13-20 (ANY GENDER)	17	18
25-35	30	29
36-55	21	21
OVER 56	9	9

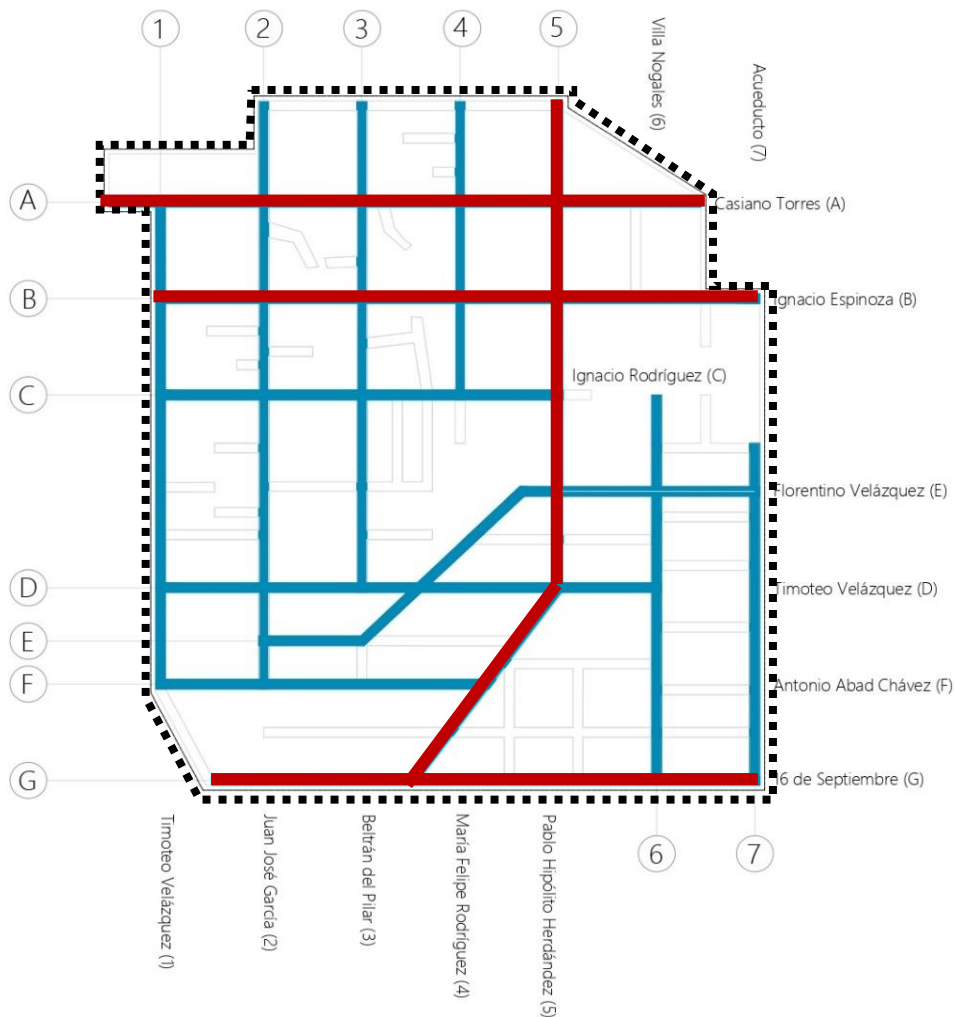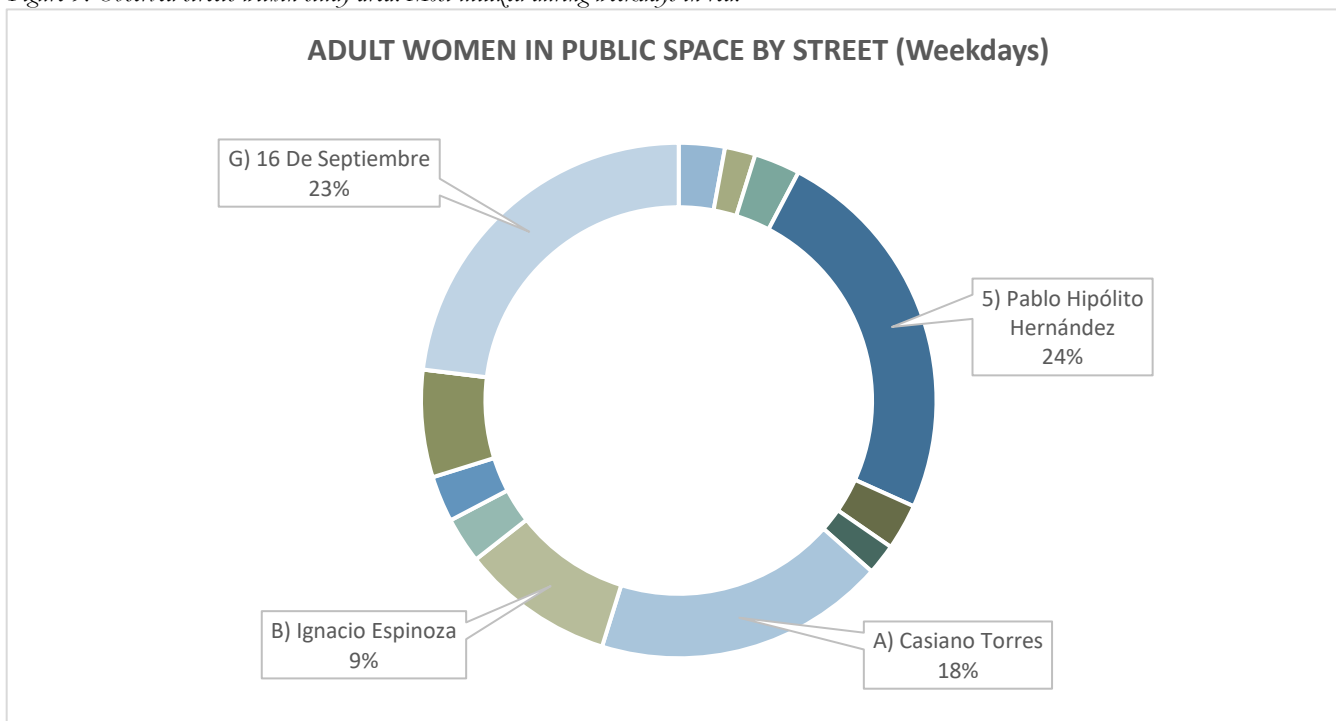*Graph 1. Pedestrian adult women in public spaces and underage companions*

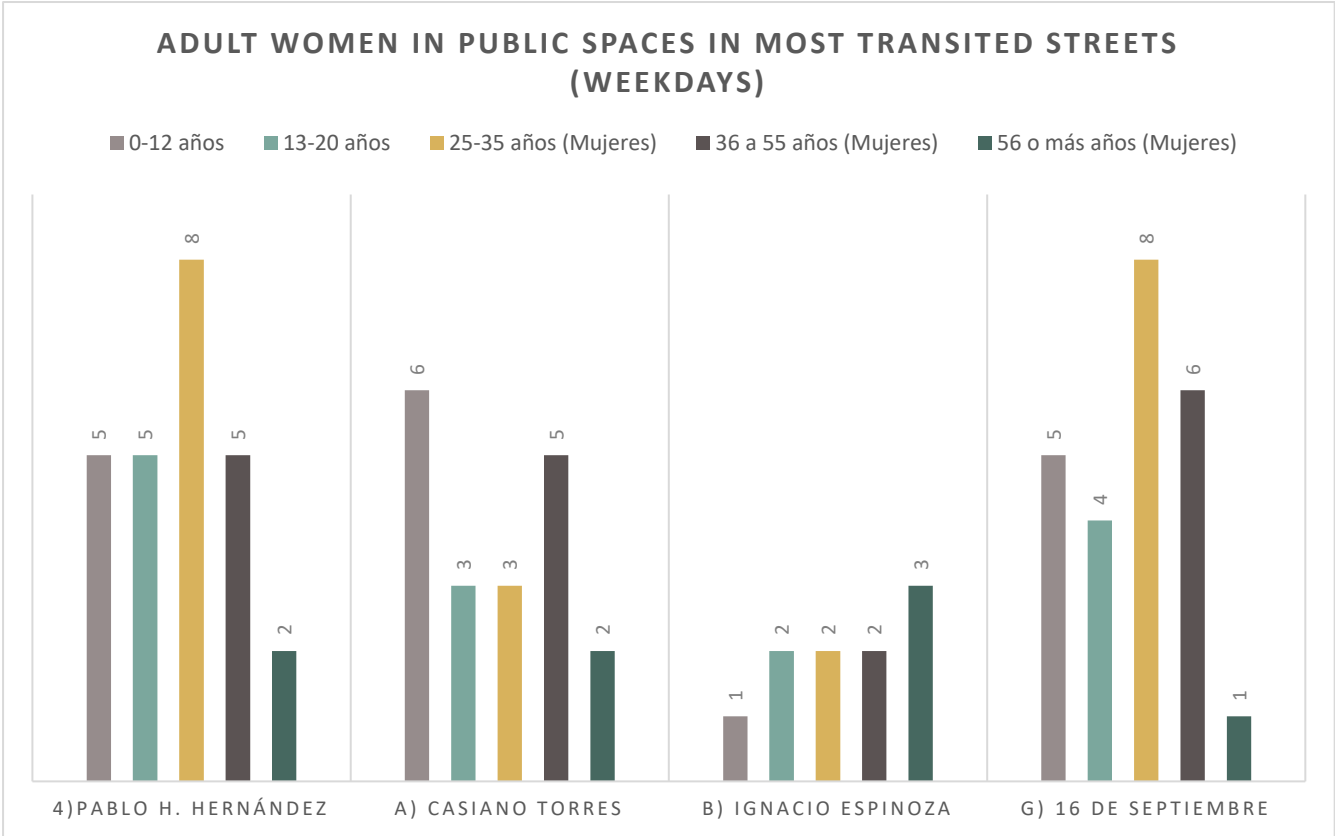*Figure 9. Observed streets within study area. Most utilized during weekdays in red.*

Graph 2. Distribution of adult women in study area's streets (Weekdays)

Among these, 5 and G have the best connectivity due to physical continuity and public transport, the most common group present in them are women from 25 to 35 years. Meanwhile A, which has less traffic intensity and several commerce, is mostly frequented by adult women from 36 to 55 years old and children under their care. Similarly, women over 56 years are more common in B, which has less traffic intensity *(Graph 3)*.

During weekends, the most used streets within the study area shift. G becomes vastly more used, and while 5 remains one of the most utilized, A is no longer as active, and smaller, more physically precarious streets become more used, in this case Ma. Felipa Rodríguez (3) and Antonio Abad Chávez (F) *(Figure 10 & Graph 4)*. In both of these, the most common group are children playing in dirt roads and often women taking care of them. While there's significantly more presence of elders, young women are now the least present in public space. These streets with more presence of women during weekends are not consolidated, most of them have dirt roads and a precarious physical state, so the higher use is not likely related to the physical aspect but to dynamics that allows these streets to come to life. The larger presence of elderly women and less young groups possibly means that younger groups seem to be more interested in transit usage to access their workplaces while elder groups are less mobile and prefer to interact with their immediate environments *(Graph 5)*.

Independently of these variations, women's activities happening in space are limited to moving through space and occasionally stopping in small commerce or street stall *(Graph 6)*. Some streets are actively avoided. During weekdays, activities include children playing on streets avoiding vehicles, garbage collection for the municipal service to retrieve and cleaning outside of households.

Graph 3. Age distribution of women in public space in most utilized streets (Weekdays)

Unfortunately, the most appropriation present on the study area is conflictive. Vehicle oriented design on streets endangers pedestrians and invades their already short open spaces, problematic gangs or groups of men become predominant in streets or pedestrian bridges, raising perceptions of insecurity, making it difficult for women to traverse through and further discouraging appropriation efforts from the neighborhood's women.
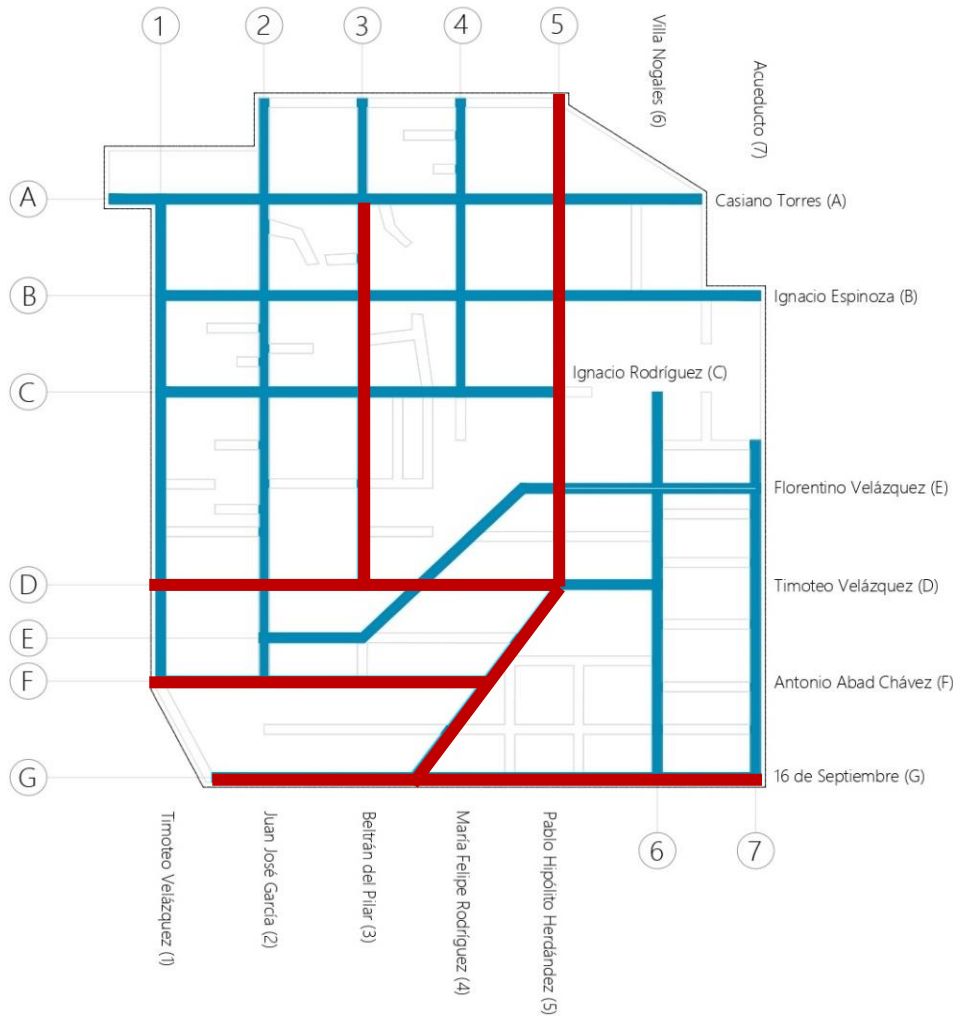
Figure 10. Observed streets within study area. Most utilized during weekends in red.

ADULT WOMEN IN PUBLIC SPACE BY STREET (Weekends)

G) 16 De Septiembre
39%

3)Ma Felipe Rodríguez
8%

4)Pablo H. Hernández
17%

D) Timoteo Velázquez
9%

F) Antonio Abad Chávez
12%
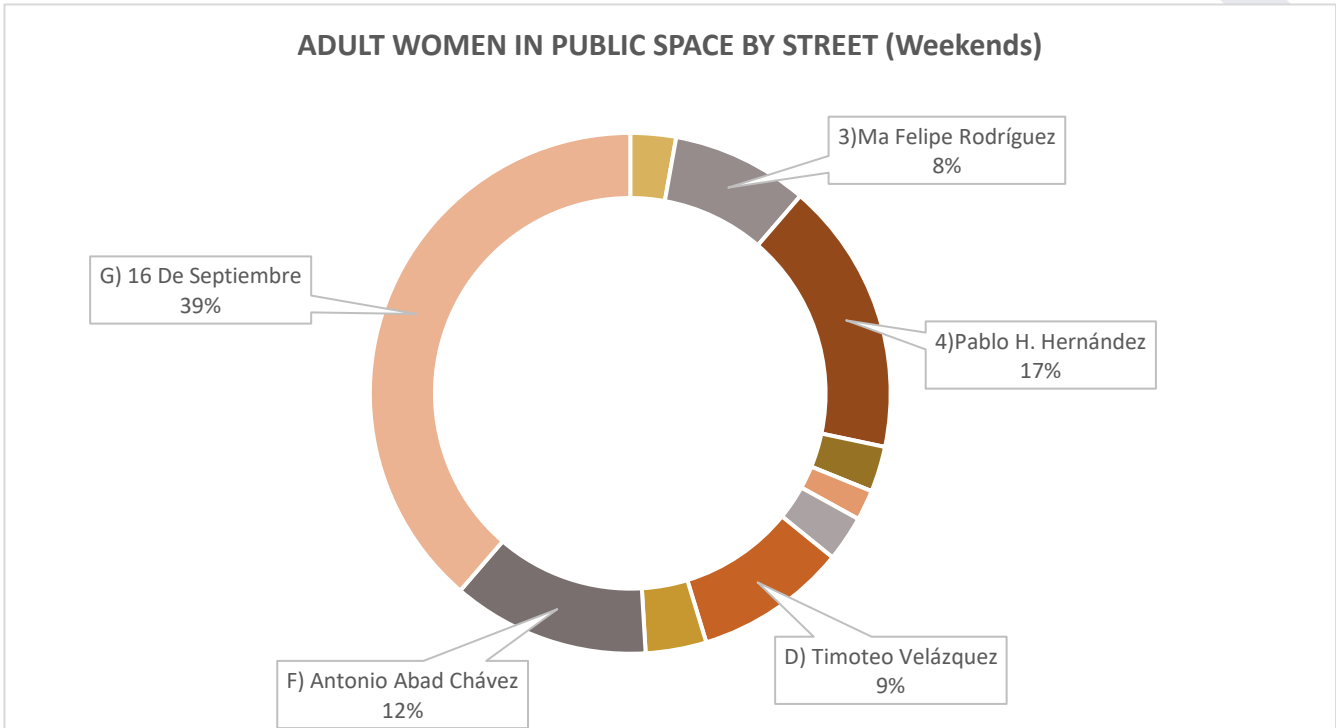
Graph 4. Distribution of adult women in public space by street (Weekends)

ADULT WOMEN IN PUBLIC SPACES IN MOST TRANSITED STREETS (WEEKENDS)

■ 0-12 años   ■ 13-20 años   ■ 25-35 años (Mujeres)   ■ 36 a 55 años (Mujeres)   ■ 56 o más años (Mujeres)

Street	0-12 años	13-20 años	25-35 años (Mujeres)	36 a 55 años (Mujeres)	56 o más años (Mujeres)
4) PABLO H. HERNÁNDEZ	6	4	6	1	1
D) TIMOTEO VELÁZQUEZ	3	1	2	3	1
F) ANTONIO ABAD CHÁVEZ	5		4	2	2
G) 16 DE SEPTIEMBRE	8	6	12	11	4
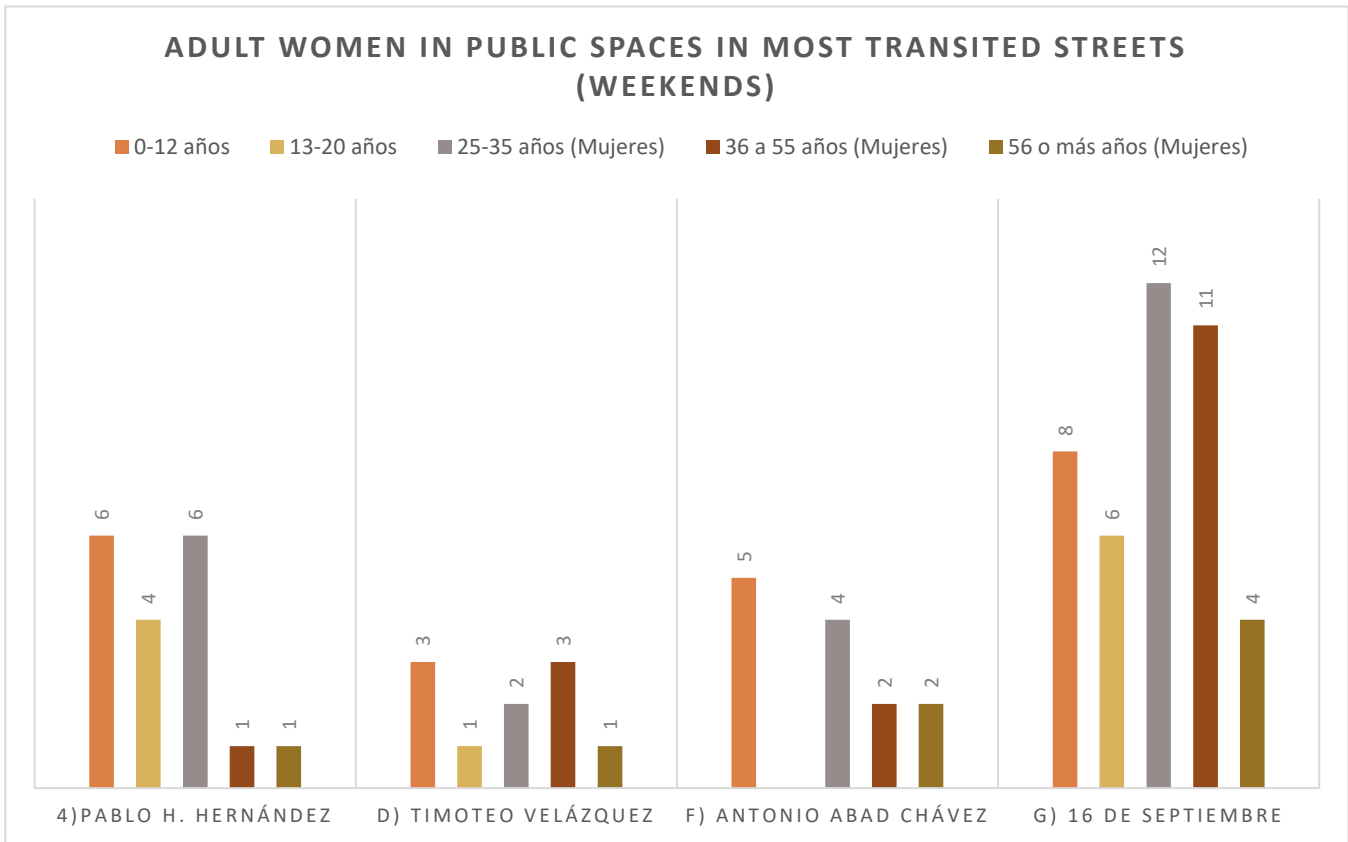
Graph 5. Age distribution of women in public space in most utilized streets (Weekends)

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WOMEN'S ACTIVITIES IN PUBLIC SPACES (BY NUMBER OF SPACES)
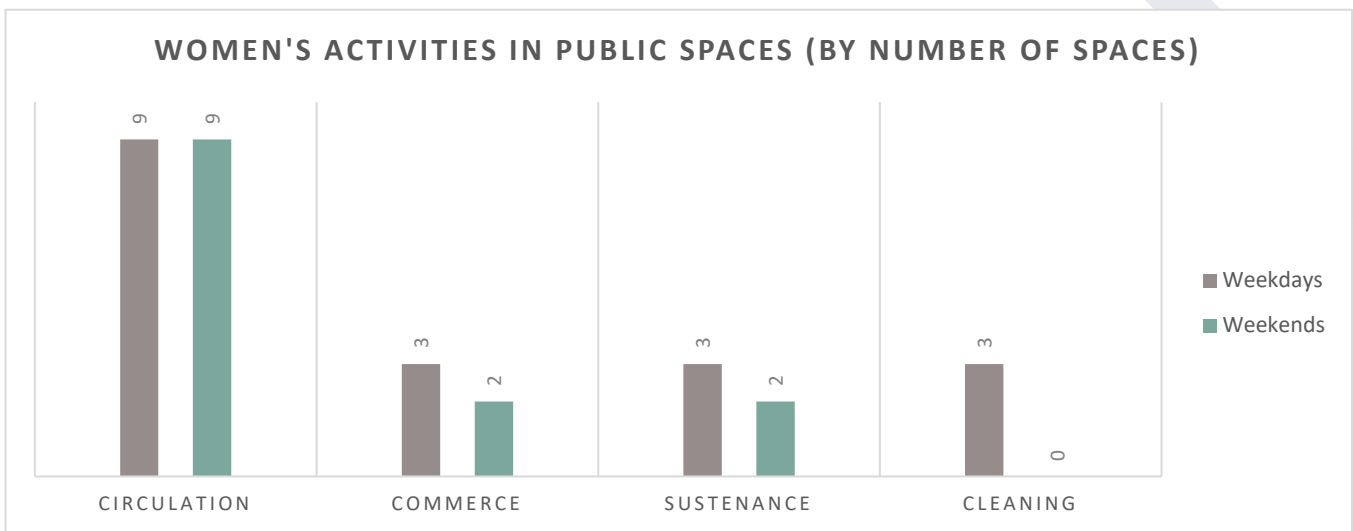
Graph 6. Activities in public spaces on weekdays/ weekends.

It is uncommon to see women walking alone. Main destinations for women to traverse public space are necessary for their children's health or education, so they tend to encourage passive interaction. Hiatus spaces are mainly little businesses where people can enter to purchase goods and potentially interact with their workers, these provide a pause from the weather, inaccessible streets or undesired interactions with strangers.

Most women acknowledge that there are no proper outdoor places to gather and socialize and that they need to go out of the neighborhood if they want to access those kinds of opportunities. From the ones available to them, the most recognized as significative and with the most potential for interaction and gathering are the community centers, the street markets, churches outside the neighborhood and the health center, which does not provide enough medical services according to them but it serves as a safe place where sometimes they can attend health related informative sessions or just meet people outside. The elderly group added the neighbor's houses as places where the neighborhood can gather. They agree that the streets could be used for many other things if people could agree on it and they weren't as dangerous. Sometimes streets fulfill this role when there are larger scale gatherings because of the lack of general ample spaces to gather.
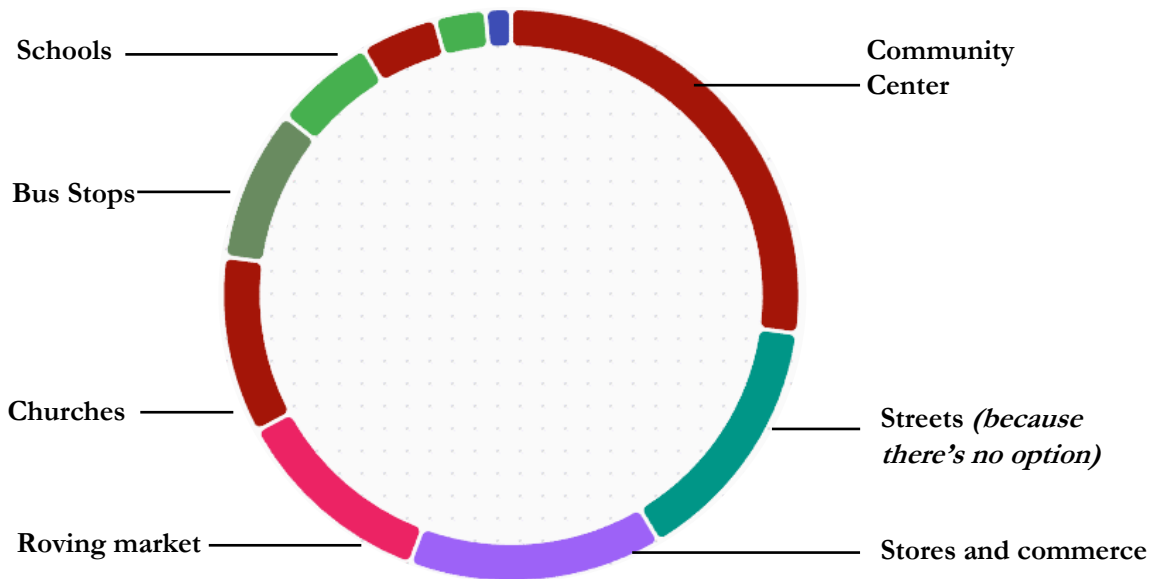
Graph 7. Places identified by women as their main gathering places

4.2.4 Produced public spaces and social housing acceptability objectives.

This section analyzes how the process of production of space, resulting in effective environments, affects the social housing acceptability objectives of the site's women. Based on the interview's results the analysis will go through social capital and higher needs of housing that include affiliation, security, esteem and self-realization needs.

Social Capital

"Between neighbors we do not socialize. We always end up fighting."   *-SG1-7. 30.*

Interviewed women usually traverse from their households to far away locations in order to access social interactions and services, looking to compensate when their immediate environment cannot provide. Graphics 8 & 9 show the most common answers regarding women's relations with their neighbors, which are described as follows. According to all of them, interactions with other neighbors are mostly limited to a brief greeting, independently of the other's gender, most point out that having no access to proper spaces to interact or try new activities hinder their opportunities to create more personal encounters. Women in site claim that they only know people from the same street they live in, so bonding social capital only reaches to immediate proximity. Women had to attend multiple domestic responsibilities, which left them less time to involve themselves in community centers or socialize in general. This is particularly present in the middle group, where women overlap housekeeping activities with full time employment, and whose goals were more aligned to household maintenance, caring activities and economic sustenance more than personal higher needs. Elder women had more flexibility regarding their time, and thus, had more free time to think of personal interests or to take part as voluntaries for community centers. The younger group presents the most affiliation issues, as shown in graphics 9 & 10, which impacts their social capital due to them preferring not to interact with their neighbors.

On the other hand, older women seem to use their social capital for their benefit and others', specifically bridging social capital. They're acquainted with more diverse people throughout the neighborhood and surrounding areas, and can facilitate providing instrumental support among other neighbors. Instrumental support in this case includes: helping each other when sick, taking care among themselves around certain unsafe places, actively approaching neighbors that might seem distressed, taking care of children, elders, providing company, or practical domestic support. Some even provide services for acquaintances like learning opportunities or medical assistance, and according to them they can quickly react to emergencies if any should arise.

Linking social capital is less common. Women remain segregated from opportunities due to the lack of educative, recreative and informative facilities, the remoteness of the neighborhood and the challenges that rise from delictive activities in their neighborhood. This limits their laboral opportunities, time and options available for recreation, leisure or learning, making it harder for them to create situations to overcome local social circles and create liking social capital. Women said they do organize to appeal to the government or candidates to request support during election campaigns, for example, with the implementation of infrastructure that ensures most of the neighborhood has uninterrupted access to water. In this sense, as a group, they have linking social capital with political candidates or religious institutions. Interviewed women acknowledged that there's little organization among themselves to appropriate or adapt their environment for their needs or interests.

Elderly dedicated housewives or half-time employees are the groups which remarked appreciating encounters with their neighbors, probably because they have more free time and due to having lived there for longer, they count with more bonding and bridging social capital. The following quote from one of the elderly women illustrates how this group is more self-conscious about the common non-willingness to interact with others, but also point out that it's because adults had no opportunities to learn to interact with others.

"The children. They should be taught to live together. We adults do not know how to live together. We can be really cynical here; we don't like to interact with people."

-SG3-1. 67.
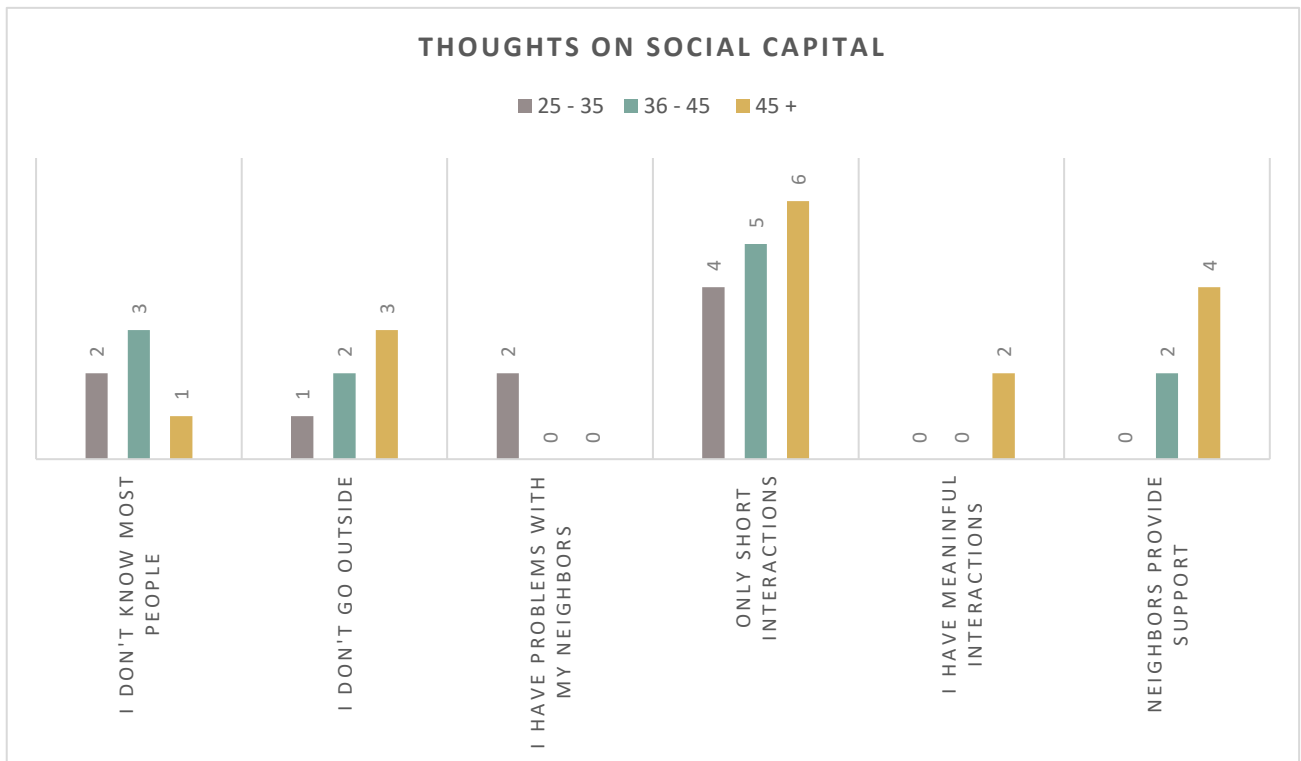
Graph 8. Women's thoughts on social capital
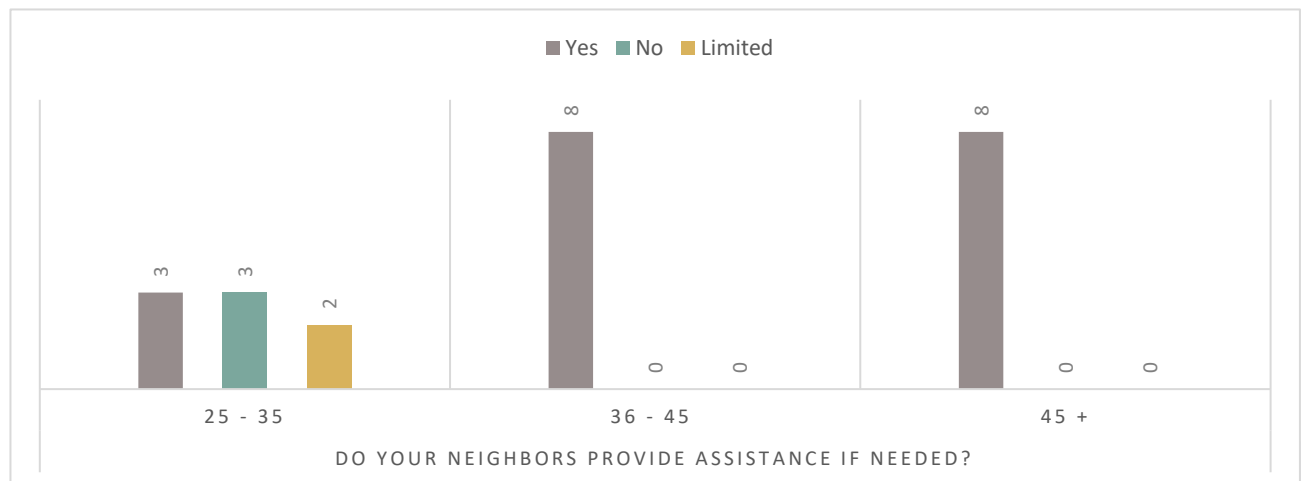
Graph 9. Bridging social capital

Higher Needs of Housing.

Affiliation needs.

Captured through belonging and acceptance with their communities. Individuals' notion of 'neighborhood' or 'belonging' usually transcends political delimitations and physical boundaries. Affiliation is present in most of the respondents, as even with the adversities they face or the few opportunities they have to interact with their environment or neighbors, they claimed to feel identified and accepted by the neighborhood. The youngest group presents the most problems with identification or acceptation within the neighborhood *(Graph 10).* Other groups responded to feel accepted and identified even if they don't interact much with everyone. They also mentioned that there's need to take care of the public spaces as if they were one's own, and the general lack of appropriation and temporal ownership of spaces in the neighborhood. Additionally, some respondents said that there's need of opportunities for kids and adults to learn how to live together comfortably in public spaces, which could encourage feelings of belonging and acceptance.

Graph 10. Affiliation needs by age group and common challenges.

Security needs.

"They are details you start noticing and you slowly become afraid of it all."

-SG3-7. 61.

It is a common perception among all groups that there is need to improve security in the neighborhood, being the single most remarked need throughout the interviews. Graph 11 presents the most common things women had to say regarding their safety needs in their neighborhood public spaces. Despite most being negative, when asked directly, most women respond that they feel safe living in their neighborhood. Some respondents said that even when they don't feel safe, they need to fulfill their housekeeping responsibilities and ensure their children's wellbeing.

While a large number of respondents showed indifference about it, some showed real distress about it, opening to the interviewer about how it affects day to day enjoyment of their spaces. Respondents mentioned that violence is not uncommon in their neighborhoods, sadly, news about muggings or missing people are frequent. Still, some remain feeling safe because they have never been victims to anything, because their families live nearby, or because they have lived there for several years and thus, know most of the people within the neighborhood. Women point out that community centers or places where people gather are the safest places they can think of, which suggests a perception of being safer around socializing environments.
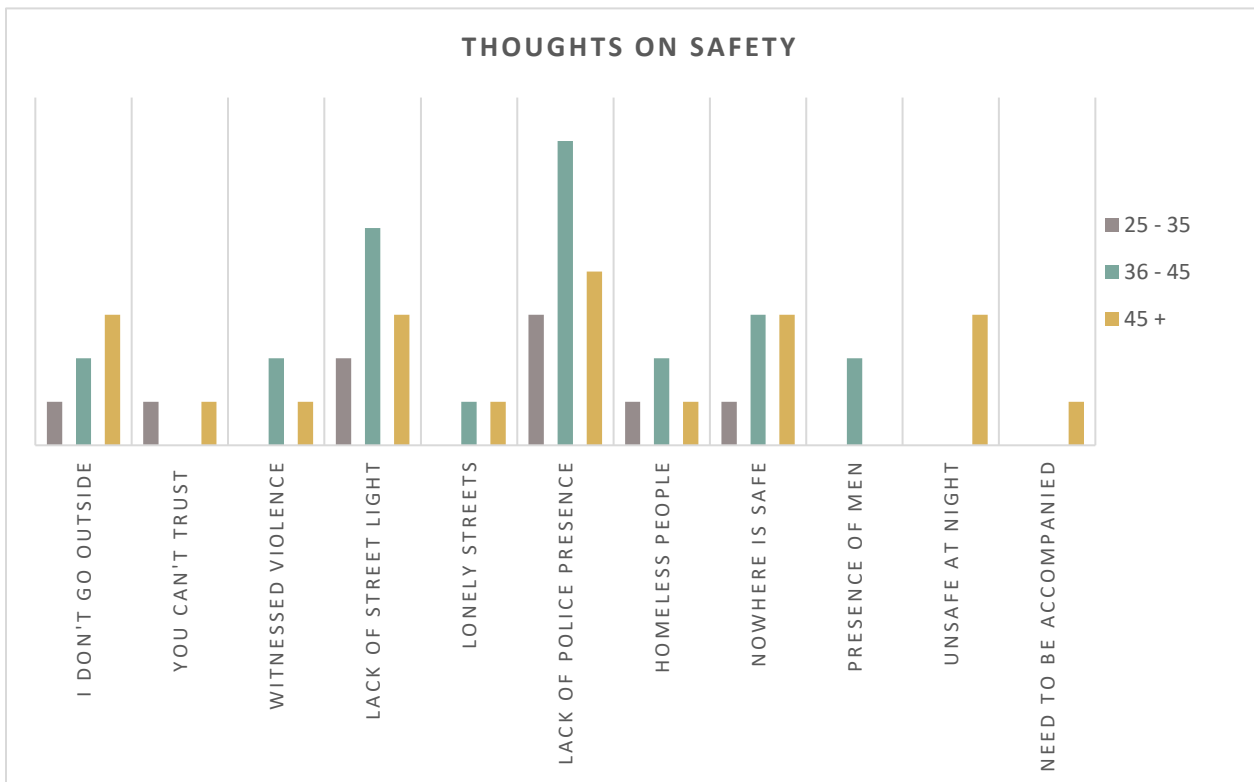
Graph 11. Women thoughts on safety

Esteem needs.

"There is a lot of disorder, there is a lot of lack of help. That's why they call us vulnerable."

<div align="right">

-SG3-1. 67.

</div>

Esteem needs include academic and laboral fulfillment, self-esteem and the feeling of being valued by others. Like in acceptance, most respondents affirmed to being valued by the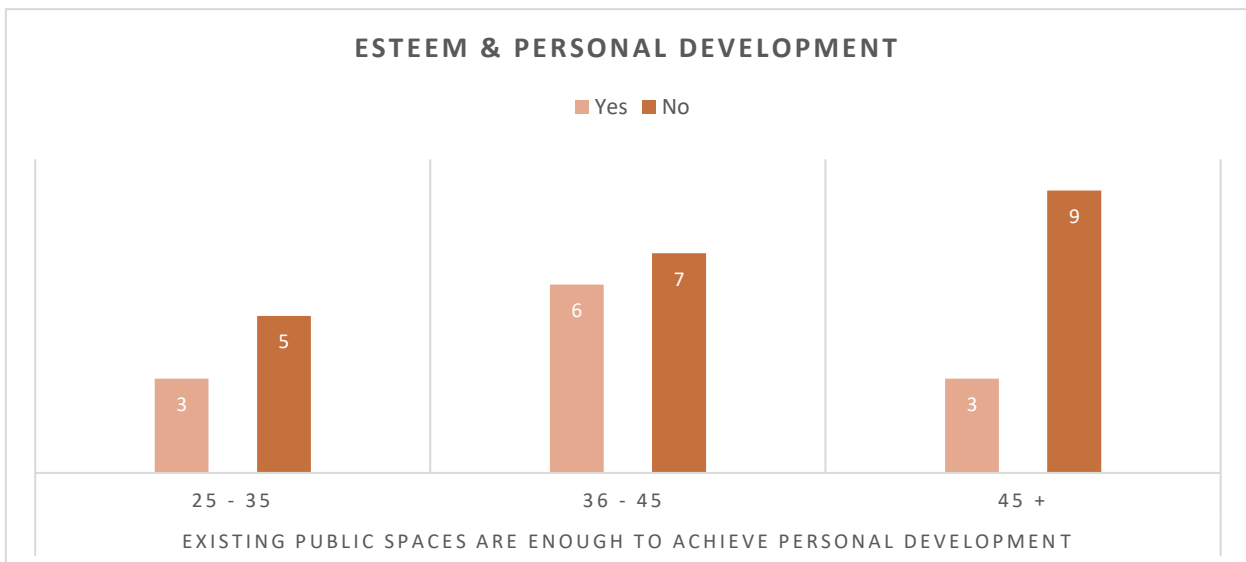ir acquaintances. Respondents' consensus was that while there are some opportunities in the neighborhood, these are limited to low-income jobs and activities offered by community centers. It's common for the elder groups to be maintained by their families, while the younger groups need to commute for large amounts of time to get to better job opportunities. Most interviewees said that the existing spaces and opportunities within the neighborhood are enough to achieve personal development (*Graph 12*), while other answers clearly show they lack many opportunities and places to do so.

"We need recreation, something to keep you moving. We are sedentary. At home you just sit. Since I feel very lonely, I like to turn on the TV and listen to something so I don't feel so lonely. If I had handicrafts, artisanry classes, jewelry making… mostly for socializing with people."

<div align="right">

-SG3-7. 61.

</div>

All groups affirm that there's need of physical or dynamic assets to achieve not only their personal development (*Graph 13*), but also their children's and mentioned the need for them to have something to keep them from getting involved in problematic activities common in the neighborhood like gangs or drug dealing. Most had a hard time answering what would they need for their personal development but acknowledges that they lack opportunities. It was common for interviewees to suggest the need of physical spaces, mostly a park, to fulfill their development. The most answered activities are recreation, exercising, psychological wellbeing activities for parents and raising education, activities for people to know each other, capacity building activities to profit, like bakery, crafts, dancing, convivence opportunities, creating commercial networks, child care services and jobs.

ESTEEM & PERSONAL DEVELOPMENT

Yes No

25 - 35: 3, 5
36 - 45: 6, 7
45 +: 3, 9

EXISTING PUBLIC SPACES ARE ENOUGH TO ACHIEVE PERSONAL DEVELOPMENT

Graph 12. Satisfaction towards self-esteem and fulfillment

Self-actualization needs.

The opportunities people have to dedicate time to personal interests, leisure and expression activities. Respondents have low opportunities for these types of activities, to the point they do not consider them as important or needed for them, and mostly associated them as needs exclusively for children. The middle group seemed particularly lacking interest in these activities, while the elderly or young groups showed more interest towards the prospect of spending more time in leisure or expressive activities, such as art or dancing lessons, or crafting like knitting or sculpting *(Graph 13)*. According to them, their motivations are more social than expressive: more than a personal need to become realized through these activities, they'd like to interact more with other individuals in a casual and safe environment.

Women agreed that the community centers are the only places within the study area that they can possibly find these activities. Outside of it, there's a football court that provides chances for leisure, but most women say it is a big effort to get there, due to it being located across the highway and the distance to get there. The elderly group added that the difficult access hinders their interest in attending those places. They also suggested that leisure needs could be addressed through community organization by appropriating spaces, but it is never done because tension between neighbors makes it difficult to organize themselves for these types of dynamics.
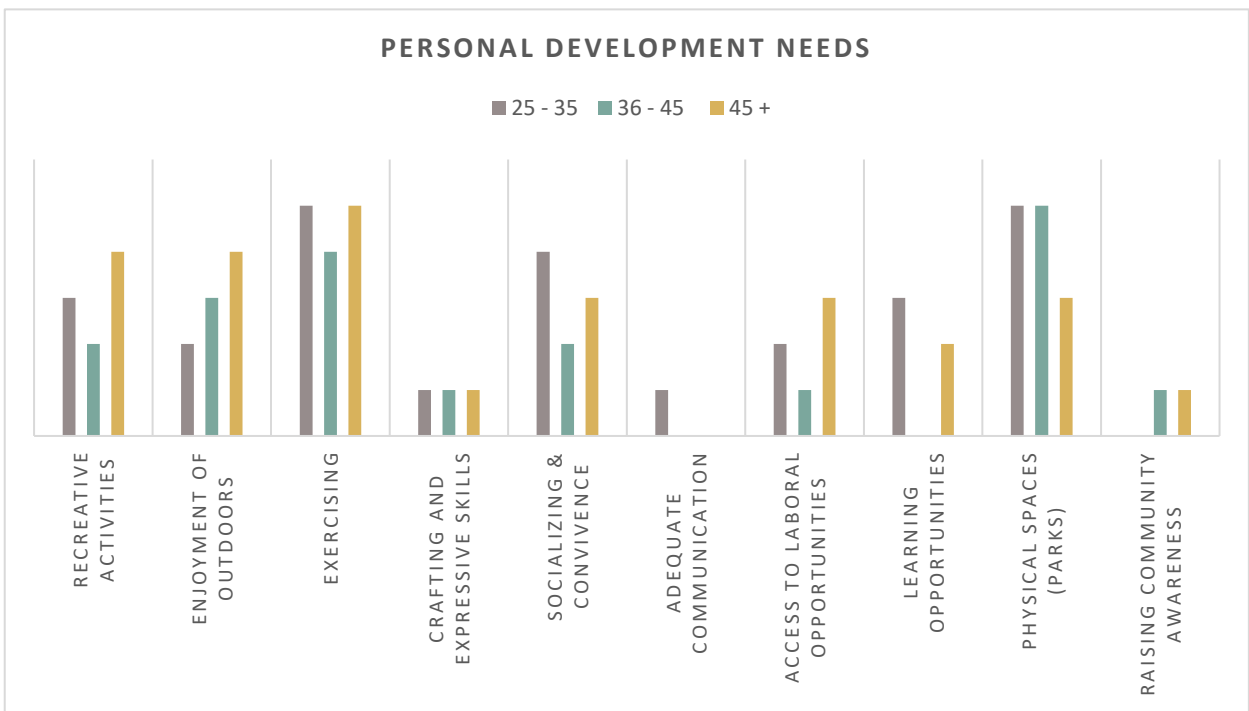
Graph 13. Women's personal development needs

4.3 Discussion

The following section summarizes the findings on available spaces, the perceptions these arise and the resulting usage patterns of space reveal some issues and phenomena surrounding the way women perceive and claim their spatial environments to fulfill social and physical housing objectives. These will be discussed following the structure given by the research sub-questions, aiming to answer them before drawing conclusions.

4.3.1 What are the physical and spatial characteristics of existing public spaces within the site?

Spaces available for women in Villas de Guadalupe fail to provide adequate potential environments for the users'; there are no dedicated spaces for recreation, interaction or socialization. While consolidation process has achieved the provision of services and physical assets that allow for people to access basic needs and some degree of development, it still struggles with marginalization, lack of capacity and segregation. Upgrading efforts have focused almost exclusively on physical environment's vehicular transit capacity and permeability, but does little for pedestrian usage and social interaction. Streets with better physical conditions favor vehicle usage and leave pedestrians exposed to inaccessible slopes, invaded sidewalks, reduced walking space and even dangerous situations due to problematic integration of vehicular and pedestrian use. Aside from these streets, the rest are in precarious conditions and overall marginalized and unutilized. Public spaces are reduced to lonely and dangerous streets that are only navigated through to access transit or necessary daily duties, making it so women in Villas de Guadalupe don't have access to public space's benefits. In order to access them, they need to commute for more than an hour to the city center or pay to access private recreative or educative spaces as sports centers or schools, which exacerbates their condition as financially vulnerable.

Developers' and resident women's common conception is that adequate environments should provide physical assets that delineate space clearly and reflect the values of vehicle-driven development, where we could argue that there are other spatial alternatives or design choices that could address more grounded needs and challenges. Provision of physical assets does not necessarily imply an enhancement in quality of life, because it is not guaranteed that these will be used as expected and can in some cases mask the social challenges present in resident's daily life. Literature suggests that in developing contexts, poverty, vulnerability, violence and exclusion permeate from public realms and spaces into the domestic; thus, conditions from outside the boundaries of a house can largely contribute to precariousness inside those boundaries, sometimes even more than the qualities of the household itself (CEPAL & UNIFEM, 2004; Chant, 1997). Improvements are needed not only to housing or physical private realms but also the public one, accounting for enhancements in social processes that can consequently bring such physical transformations to create their own opportunities and shape their surroundings to what is not only physically, but socially and culturally acceptable (Chiodelli, 2016; Gómez-Villanueva et al., 2021; Habitat, 2014). Efforts aiming to fully consolidate these settlements and achieve housing acceptability should look beyond the physical and welcome participation and people's experiences, in an effort to bridge the gap between legal instruments and the reality of these settlements and with focus on allowing adequate transformations and improving quality of life (Castillo et al., 2018; Gómez-Villanueva et al., 2021).

4.3.2 How are the existing public spaces perceived by the site's women?

According to resident women in Villas de Guadalupe, the notion of publicness as defined by Mehta (2022) is hardly achieved, and with it the presumed inherent benefits of public space. Available spaces are often exclusionary and inaccessible, there's no interest or efforts for claiming them making them marginalized and they hinder the opportunities for safe interaction between neighbors. Perceptions of danger, segregation, discomfort and distrust within the neighborhood are common and seemingly naturalized. Respondent women affirm that they need to cope with these and they cannot interrupt their daily responsibilities due to them. These reduce women's motivations and tools to appropriate and produce public spaces as shown in women struggle producing the sense of publicness or common use.

In Villas de Guadalupe, perceptions of public spaces come in two groups. Streets and existing outdoor spaces are perceived by women as neglected, scary, exclusionary, invaded and segregated. Carmona (2015) recognizes that experiences in public space creation and use will never be universal and need to be interpreted in local circumstance. Perceptions of space can be interpreted as part of larger processes or systems that need to be understood as necessary, it is part of public space's functions to hold and show us a multitude of stimuli that can be perceived diversely. Villas de Guadalupe's neglected spaces should be criticized, so a process of evolution can lead to their eventual renewal. Invaded spaces speak of an unbalance between users, and these could share space with mutual benefits, as long as appropriate measures are taken. Spaces can and should appeal to different demographics differently, encouraging diversity in space rather than exclusion or segregation, recognizing diversity of users and avoiding lowest-common-denominator design. Finally, public spaces should confront scary perceptions by meeting the specific needs in terms of safety according to the context to enable enjoyment in a comfortable manner. The domestication of public spaces might be a first step into creating comfortable environments for women to gather.

On the other hand, neighborhood spaces like churches, community centers, temporary street markets, or even other women houses are perceived by adult and elder women as social, meaningful, safer and better delineated; turning them into the effective public spaces within the neighborhood's women. This perception is not present in younger groups, who'd rather not interact with their neighborhoods. No matter their ownership status or creation process, these places still represent the platforms that women have to encounter, communicate, collectively experience and enrich each other social lives, which users are commonly most concerned about (Carmona, 2015). Still, displacing effective environments and public functions from public spaces into domestic or private spaces might interfere with proper domestic functioning, given that most residents already struggle to fulfill their own household's spatial needs, limit women's opportunities to socialize with diverse groups and interact with the built environment, make it easier for conflictive groups to appropriate spaces breeding undesired behaviors, hide social tensions from the public's eyes making it difficult to identify or address them and minimize their presence in public, hindering their agency to claim neighborhoods for themselves and shape their environments according to their needs and aspirations.

4.3.3 Which spaces take the role of 'public spaces' for women within the site and what practices are associated to them?

In Villas de Guadalupe, physical and socio-cultural challenges result in particular perceptions and uses of public space among women, limiting their tools to produce adequate public spaces. Women do not commonly appropriate or adapt spaces for their necessities in the study area, they do not spend much time in public, most of their activities take place in their households and activities are limited to moving between stores for basic housing sustenance needs or to access public transport. Still, certain places within the neighborhood are used by women as gathering and meaningful places, these range change depending on the

respondent's age group. Young women prefer to either stay at home or commute outside the neighborhood to access public spaces, rather than interacting with their environment. Adult and elder women share common spaces, specifically community centers, women's own households, churches and street markets. According to respondent women, these offer the qualities of public space established by Mehta (2022): inclusive access, temporal sense of ownership and potential to interact. The only difference between these two groups is the fact that adult women have less available time for recreative or socializing activities, while elders participate more actively with the community.

The street market's case taking place in the neighborhood streets results particularly interesting for the study, it is recognized by many as a meaningful place to meet their neighbors and perform their household responsibilities. Such an appropriation transforms the limited activities already happening in public space of walking and purchasing household items from an individual task to a group dynamic that primes proximity and interaction. It results contrasting how it highlights the importance of socio-cultural public realm in the consolidation of effective environments. A temporary manifestation of publicness defined not physically but by the dynamics and activities happening within it and, ultimately, a temporal and common appropriation of available spaces where accessibility and interaction among diverse groups is possible. This takes us into authors looking at public spaces beyond their physical features and into their capacity to act not only as corridors for vehicles and pedestrian transit, but as places of proximity and integration, capable of collective and inclusive practices for human-scaled experiences to thrive and for meaningful encounters to happen (Jiménez & Cruz, 2015; Martinelli, 2022).

Lastly, worth of mentioning is that several women from the elderly group shared that in the past, residents of Villas de Guadalupe would organize among themselves and other stakeholders like private owners and institutions to temporarily claim and maintain available plots or streets to provide recreation, learning, socialization, fund raising and community building events. Aiming to consolidate these neighborhoods, the government implemented strategies that included expropriation of social land (ejido land), privatization of open spaces and statutory regulation; which stopped these initiatives while trying to regularize the settlement and enhance living conditions. Authors point out that dismantling existing dynamics is not a desirable option, instead to embrace them towards a more enduring and dynamic public realm (Gelder, 2013; Mehta, 2022), even if unwillingly, the government's actions hindered the resident's agency and willingness to appropriate spaces outside their houses, and with that, their efforts to draw the community together to provide better physical environments and higher needs by themselves. Some of these plots remain unoccupied and unmanaged, now converted in barriers inaccessible for pedestrians, invaded by thrash and providing conflictive behavior a place to thrive within the neighborhood.

V. CONCLUSION

This research contributes to identify the gap between developers' conceptions and the inhabitants' social realities found in consolidating neighborhoods (Lata, 2018), especially in informal contexts where the 'traditional' typologies of form, function and ownership of public space are not necessarily effective (P. Banerjee, 2023), and to understand how this affect women's housing acceptability. The production of space literature contributes in understanding how different groups perceive and utilize available public spaces differently and simultaneously, stablishing social relations, boundaries or conflicts. At this point the study will directly address its main research question.

5.1 To what extent does the production of public space impacts physical and social housing acceptability of women in consolidating informal settlements?

While physical environments can be built or transformed for public purposes, the perception and effectiveness of publicness in spaces needs to be produced individually. Through an individual's subjective perceptions and experiences in relation to given physical environments, the spatial production process transforms potential environments into effective environments. In the case of public spaces, the production process can largely impact inclusive public usage and positive impacts. If properly achieved, these can provide means to fulfill physical housing objectives, like accessing services, activities or opportunities; and social objectives, like the achievement of affiliation, esteem, security and self-realization needs. Likewise, in contexts of poverty and marginalization, such as consolidating informal contexts, the production of space can perpetuate a hindered achievement of the same housing acceptability objectives by shaping exclusionary behavior in space.

Consolidating informal settlements like Villas de Guadalupe in México share physical qualities and precariousness that are naturally perceived negatively by their users. Furthermore, there are often underlying social challenges and dynamics that hinder the production of adequate public spaces for specific demographic groups, especially vulnerable ones. The study showed that women face several challenges when producing adequate effective environments within their public spaces. These include precarious physical environments, lack of recreation and laboral opportunities, limited social capital, unequal distribution of housekeeping responsibilities, perceptions of danger and affiliation issues with their neighborhoods. Additionally, they need to attend to societies' expectations regarding their role in neighborhoods, which forces more responsibilities to them and leaves less opportunities to interact with and claim the public realm than men.

All of these particularities from informal contexts influence the resulting produced space, creating unexpected spatial dynamics to compensate for the lack of spaces and opportunities, like seen in the domestication of public functions in Villas de Guadalupe. And while these alternatives can help to cover physical and social housing objectives, providing safe places for women to gather and support each other or access to services otherwise inexistent like recreation or education, it is necessary to ensure that alternatives are not perpetuating exclusionary social practices; as well as accounting that women from different age ranges have different interests and responsibilities, and alternate uses of public spaces should also offer something for every group. If not addressed monitored, alternate uses result of spatial production can negatively impact physical and social housing acceptability. Physically, an exclusionary production of space makes it harder for physical interventions to connect with their users and purposes, limiting their effectiveness or contributing to another problem, such as delictive appropriation. Socially, it can limit social opportunities between diverse demographics, restrain women from increasing social capital, and hinder the achievement of higher needs of housing. The study showed that women across all age groups struggle achieving security and self-actualization needs, while impacts on esteem and affiliation needs seem to be more dependent on individuals age, interests and aspirations.

The study also concludes in favor of literature's arguments that acceptability is not achieved if there are exclusionary processes keeping individuals from participation or accessing opportunities and resources, in this case public spaces and its benefits. Public spaces can contribute to meeting the demands of housing acceptability for individuals to be able to live a life that allows them to cultivate and realize their capacities through social interaction, freedom of expression and movement, and by sharing culture. It is central to explore the different experiences of vulnerable demographic groups in informal settlements, as space produced in formal urban contexts differs from space produced in informal or non-conventional urban scenarios, and because men and women have different responsibilities and experiences in space, their interests and needs about it are different (CEPAL & UNIFEM, 2004; Lefebvre, 1991; Páramo & Arroyo, 2011).

5.2 Implications for existing literature.

Historically, women have been relegated to domestic spaces while men have claimed public spheres (Páramo & Arroyo, 2011). Instead of ensuring the production of equal public spaces for women to appropriate and harness the benefits of public life for their housing acceptability; the study shows that precarious physical and social environments pressure women into also accommodating public realm's functions into their domestic spaces, adding another layer of difficulty to their personal development and perpetuating the cycle of exclusionary and conflictive appropriation. If the spatial production is left to an exclusive group, it limits the other's capacity to do so, diminishing their presence in public, making their struggles and aspirations invisible, and ultimately shaping their role and agency in public spaces which can be transmitted through repetition and everyday life. Literature pointed out that individuals produce and appropriate public spaces based on experiences, perceptions and uses associated to them, which in turn shapes the role of men and women in public spaces and the ways they interact with it (McCann, 1999; Khalid et al., 2020; Páramo & Arroyo, 2011). The study brings the discussion regarding how both gender and publicness are social constructs (Páramo & Arroyo, 2011; McCann, 1999) that are produced by individuals and society through similar processes engraved in daily life.

Looking at the process of production of public spaces helps determine which neighborhood elements can be maintained and which should be modified or incorporated to welcome transformations in socio-cultural identity, diversity, participation and safety to neighborhoods. It could be a right step into enabling public spaces' capacity to provide a platform of belonging, inclusion and participation for those otherwise excluded and segregated and contribute to physical and social housing acceptability (Hincapie & Castiblanco, 2017; Mehta, 2022; Schlack, 2019). The study reflects authors Mehta (2022) argument that the burdens of informality go beyond physical or legal issues and permeate the social dimension, which encourages planners to explore strategies based on local knowledge, trust, shared usage and openness in order to go beyond stablished and exclusionary practices, and to hand the making of the environment into the inhabitants' instead of being exclusive to planners and designers (Andri Yatmo & Atmodiwirjo, 2022; Gelder, 2013; Martinelli, 2022). Understanding public space as a product of its socio-cultural context presents an opportunity to understand how the informal city can harness people's ways to interact with existing spaces and socio-cultural challenges and opportunities to effectively address the adversities of the developing world, and how these can complement conventional formal strategies to face the challenges of informality and consolidation.

5.3 Recommendations for further research.

Researching the relation between domestic spaces and women's labor responsibilities in the achievement of housing acceptability in diverse contexts, along with studying the production of public spaces in the case of men in similar contexts and how it affects their housing physical and social acceptability would complement the findings in this study. Additionally, similar research utilizing more graphical methodologies could allow the production of neighborhood's maps according to different groups within it, based on gender, age and occupation. These would illustrate which spaces are actively used or possess meaning within the area, which are marginalized and the spatial relations between them and existing services and land uses. Such a product could be useful for the design process of consolidation strategies and give the communities a way to participate in enriching researchers' efforts to understand their positionality in relation to daily challenges.

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VII. ANNEXES

Annex 1. *Direct observation A. Suggested walking routes for fieldwork.*
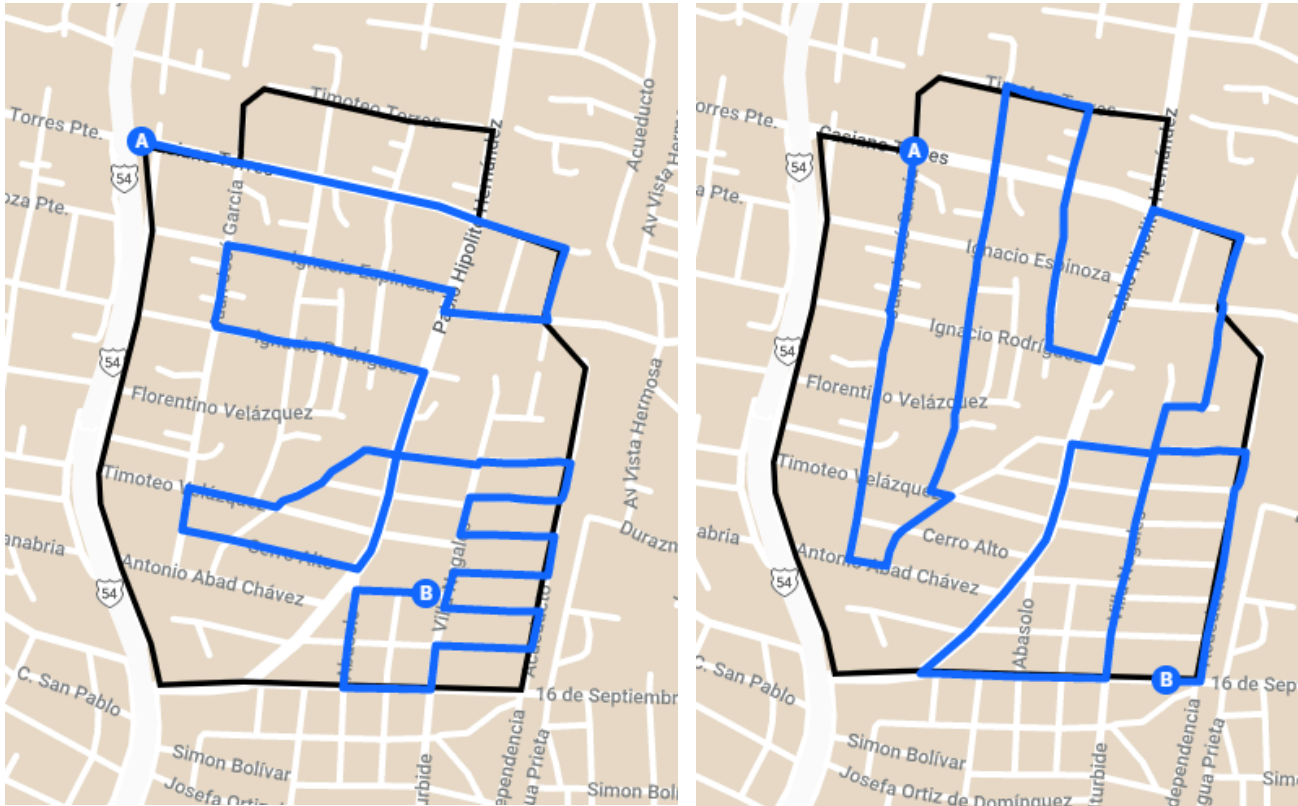
Walking routes I & II. Circulation spaces.

50 min per route (100 total)

2 ime slots (Morning / Afternoon)

2 Days of sample (Weekdays / Weekends)

400 min of observation

6 hrs. 40 min total
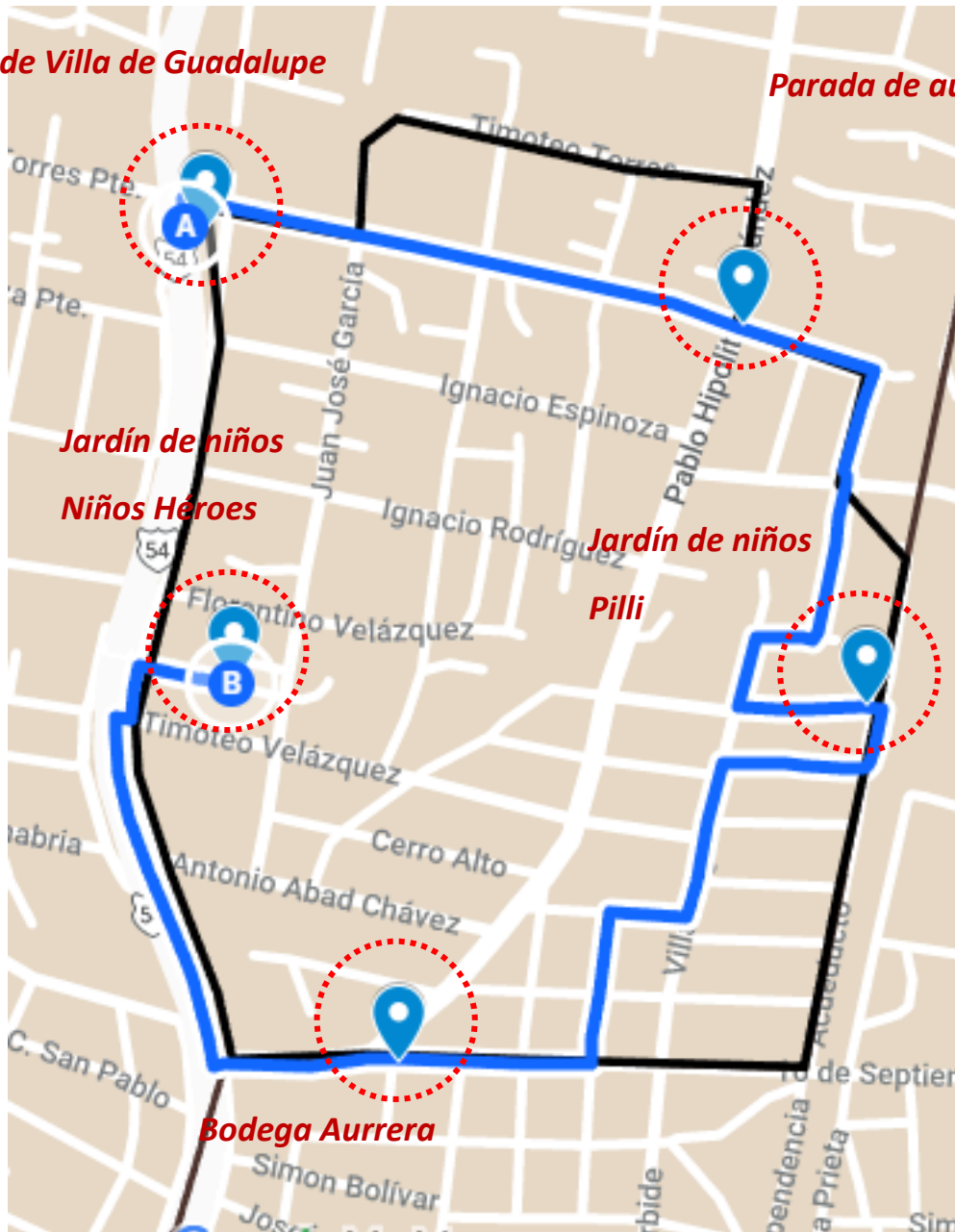
Static routes. Destination places.

30 min per interest point

5 Points of interest identified

2 Time slots (Morning / Afternoon)

300 min of observation

5 hrs. + time in between sample points

*These routes were not conducted due to safety reasons for the fieldwork assistant and the severe lack of activities around them.

Annex 3. *Direct observation guide*

Códigos de actividades

1	Salud	4	Trabajo	7	Recreación	
2	Abasto	5	Comercio	8	Circulación	
3	Educación	6	Deporte	9	Otro	

Reporte de observaciones   **Hora** _____

Vialidad o punto de interés	Diversidad de Peatones					Intrínsecas (Del 1 al 10)																Extrínsecas				
	0-12 años	13-18 años	18-25 años (Mujeres)	26 o más años (Mujeres)	60 o más años (Mujeres)	Iluminación	Limpieza	Banqueta amplia	Basureros	Bancas	Árboles	Arbustos	Mantenimiento	Recubrimiento	Rampas	Señalética	Presencia policial	Información de emergencia	Pasos peatonales	Intensidad tránsito	Presencia bicicletas	Código de Actividades	Notas (adaptaciones, remarcaciones, observaciones)	Interacción pasiva/activa	Recurrente	Estancia prolongada
Casiano Torres																										
Ignacio Espinoza																										
Ignacio Rodríguez																										
Timoteo Velázquez																										
Antonio Chávez																										
Florentino Vzq																										
16 de Septiembre																										

INTRODUCCIÓN.

¡Hola! Buen día, mi nombre es _____. Muchas gracias por encontrar el tiempo de participar en esta entrevista.

(Objetivo y establecer el tono para comodidad del entrevistado. A discreción del entrevistador) Me gustaría saber más sobre cómo los espacios públicos afectan el día a día de las personas en Villas de Guadalupe. Las preguntas serán abiertas por lo que no hay respuestas correctas o incorrectas, me interesa tu experiencia particular, tu perspectiva y tu situación.

(Confidencialidad y afirmación para ser grabado. A discreción del entrevistador) Toda la información recolectada será completamente confidencial, anónima y será únicamente utilizada para la investigación con fines académicos. ¿Puedo tener su consentimiento informado para proseguir con la entrevista y grabarla?

I. RAPPORT

Preguntas personales que permiten entrar en tema y darle importancia a su percepción.

1. Para comenzar, cuéntame, ¿normalmente todas las vecinas se conocen?, o ¿se conocen por cuadra, por manzana?
    a. ¿Sueles pasar tiempo con estas personas en espacios públicos?

2. ¿Qué espacios públicos utilizan las mujeres en la colonia?
    a. A estos lugares, ¿qué mujeres van (edades, estado civil, hijos) ?, ¿a qué van (¿Usos y actividades?, ¿cada cuánto van?, ¿en qué horarios van?, ¿cuánto tiempo pasan ahí?

    b. ¿Cómo son estos lugares?

3. ¿Existen espacios que eviten las mujeres de tu colonia?
    d. ¿Estos lugares son visitados solo por las vecinas de Villas de Guadalupe o de otras colonias?

    e. ¿Qué tanto se presta a que conozcas personas nuevas en estos lugares?
        - ¿Ves personas nuevas con frecuencia en espacios públicos?

    f. Si pudieras mejorarle algo a estos espacios, ¿qué sería?

USOS Y NECESIDADES FÍSICAS CUBIERTAS O NO CUBIERTAS

Preguntas sobre el impacto del vecindario en la calidad de vida en el día a día.

4. ¿Dirías que las vecinas de Villas de Guadalupe pasan más tiempo fuera de la colonia que dentro? ¿Normalmente a que salen de su colonia?

5. En los espacios públicos de Villas de Guadalupe, ¿las vecinas tienen acceso a oportunidades laborales, actividades de esparcimiento, socialización, capacitación, aprendizajes o servicios médicos?

6. Junto con tus vecinas, ¿cómo intentan cubrir estas necesidades que no se cubren con lo que se tiene?, ¿alguien hace esta labor?, ¿cómo es?

7. ¿Qué otras actividades consideras necesarias para el desarrollo pleno de las mujeres dentro de la colonia y sus familias?

NECESIDADES SUBJETIVAS

8. ¿Hay algún lugar en la colonia que sea importante y muy visitado para las vecinas de Villas de Guadalupe?

9. ¿En cuáles lugares las vecinas suelen ponerse de acuerdo para hacer alguna actividad importante para ellos o para su comunidad?

10. ¿Las vecinas de Villas de Guadalupe se sienten libres de utilizar los lugares públicos para usarlos o adecuarlos a sus intereses y necesidades?

11. ¿Hay lugares en la colonia que la comunidad quiera o haya transformado o adaptado para otro uso del original?, ¿para qué se adaptaron?, ¿para qué les gustaría adaptarlas?

12. ¿Te sientes identificada y aceptada por el vecindario y su comunidad?
- ¿Te sientes segura viviendo aquí?
- ¿En caso de emergencia, cuentas con personas que te apoyen?

13. Lo que ofrece hoy en día tu colonia, ¿es suficiente para tu desarrollo personal y profesional?

14. ¿Dirías que tu colonia y sus espacios públicos dan oportunidades de esparcimiento y expresión artística a sus habitantes?

Annex 5.*Extracts from interviews*

Young group. SG1-1 – SG1-8

"Haría falta para convivir más, porque cada quien está en su casa. / It would be necessary to spend more time together, because everyone stays at home."

SG1-3. 34.

"Me da miedo. Te pueden hacer algo sin deberla ni temerla. Donde andes te encuentran porque te encuentran. / It scares me. They can do something to you without fear or favor. Wherever you go they'll find you no matter what."

SG1-5. 25.

Entre vecinas casi no nos tratamos tanto. Terminamos peleando. / Between neighbors we do not socialize. We always end up fighting."

SG1-7. 30.

"Hay espacios iluminados, pero es una zona insegura. / There are places with street lights, but it's still an unsafe zone."

SG1-7. 30.

Middle group. SG2-1 – SG2-8

"Yo siento que ningún sitio es seguro. Donde sea está la robadera y la secuestradera. / I feel that no place is safe. Everywhere there is robbery or even kidnapping." (SG2-5. 36.)

"No puedo decir voy a estar segura en cualquier lugar, siempre puede llegar alguien y hacerte algo. Donde sea que estés. / I cannot say I'll be safe anywhere I go; someone can always come and do something to you. Wherever you are." (SG2-5. 36.)

"Que haya parques y juegos. Muchas veces la gente no se acerca, pero por ahí puede ir uno a llorar o a reír aunque sea solo. / I'd like for it to be parks. Many times people don't use them, but you can always go there and cry or laugh even by yourself." (SG2-5. 36.)

"Donde vivo casi no salen, la mayoría no convivimos. / Where I live women almost never go out, most of us do not interact with each other." (SG2-6. 37.)

"Si nos falta, pero no sé qué. Lugares donde vayan muchas mamás, y así convivir juntas. / We are lacking, but I don't know what. Places where many moms can go, so we can be together." (SG2-7. 36.)

"No mucha gente cuida las cosas. Ponen un parque, pero va la gente y los desbarata. ¿Qué hacen los demás que sí respetan? / Not many people take care of things. They build a park, but people go and mess it up. What do the other people who do care do?" (SG2-8. 39.)

"Hace falta poquito de todo. Pero no mucha gente cuida las cosas. Ponen un parque pero va la gente y los desbarata. ¿Qué hacen los demás que sí respetan? / We lack a bit of everything. But not many people take care of what they have. They build a park and then people go and tear it down. What is left for us that do respect to do?" (SG2-8. 39.)

Elderly group. SG3-1 – SG3-9

"Hay mucho desorden, hay mucha falta de ayuda. Por eso nos dicen vulnerables. / There is a lot of disorder, there is a lot of lack of help. That's why they call us vulnerable." (SG3-1. 67.)

"Los niños. Que los enseñen a convivir. Los adultos no sabemos convivir. Aquí la convivencia... habemos mucha gente payasa, que no nos gusta convivir con la gente. / The children. They should be taught to live together. We adults do not know how to live together. We can be really cynical here; we don't like to interact with people." (SG3-1. 67.)

"Ya no puedo hacer muchas actividades porque me dejaron nietos. / I can no longer do many activities because I was left with grandchildren." (SG3-3. 51.)

"Los jóvenes tienen prohibidas ciertas zonas. Así lo marcan entre ellos, porque tú perteneces a éste lado. / Young people are forbidden certain areas. That's how they mark it among themselves, because you belong to this side". (SG3-6. 56.)

"Vengo a lo que me gusta, y convivo. Es el momento para mí feliz del día. Porque aquí convivo con mis compañeras, ahorita tenemos una clase hermosa que me gusta, este lugar me gusta. O sea, convivo. Y ya llego a la casa y digo bueno ya conviví, me pongo a hacer mis deberes. Yo estoy sola, acabo de enviudar. Mi espacio lo hago aquí, aquí las siento más de mi familia. / I come to do what I like, and I convivialize. It is my happy moment of the day. Because here I share with my classmates, right now we have a beautiful class that I like, I like this place. In other words, I interact with them. And then I get home and I say: 'Well,

I've had a good time, I'll start doing my homework'. I am alone, I just became a widow. I make my space here, here I feel them more like my family." (SG3-7. 61.)

"Que la gente se sintiera con la confianza de seguir yendo, tener un área donde ir a platicar. A hacer deporte, aunque esté pequeño. Algo, donde los niños salgan a jugar, es puro estar encerrados con sus celulares. Me da una tristeza… / I'd to have an area where people can go to talk, or to play sports, even if it is small. Where people could feel comfortable to return to. Something where the children can go out to play, because they're just locked up with their cell phones. It makes me so sad…". (SG3-7. 61.)

"Son detalles que uno va viendo y uno va agarrando miedo. / There are details you start noticing and you slowly become afraid." (SG3-7. 61.)

"Necesitamos recreación, algo que te mantenga en movimiento. Somos sedentarias. En tu casa solo estás sentada. Como me siento muy sola, me gusta prender la tele y estar oyendo algo para no sentirme tan sola. Si tuviera uno manualidades, clases de artesanía, bisutería. Más que todo socializando con la gente. / We need recreation, something to keep you moving. We are sedentary. At home you just sit. Since I feel very lonely, I like to turn on the TV and listen to something so I don't feel so lonely. If I had handicrafts, artisanry classes, jewelry making... mostly for socializing with people." (SG3-7. 61.)

"A veces te da miedo platicar con la gente porque a veces hay gente que se arrima a robarte. Es mucha inseguridad y no te da confianza. / Sometimes you are afraid to talk to people because there are some who only come up to steal from you. There's a lot of insecurity and you can't trust." (SG3-8. 46.)

"Teníamos ahí un campo y hacíamos eso. Pero empiezan a dejar basura y el gobierno presiona a los dueños para que los cerquen. Hace mucho tiempo se limpiaban calles y se arreglaba todo eso, aparte se hacían torneos de fútbol y nos dejaban hacerlo ahí en el campo. A hora al dueño le exigieron que pusiera la cerca. / We had an empty field and used to do that. But people start littering and the government pressures the owners to fence the plots. A long time ago we organized to clean the streets and we would take care of that; we'd even do football tournaments and they'd let us do them in those fields. Now they've demanded for the owner to fence it too." (SG3-8. 46.)

"Yo vivo en la calle principal, y pasa mucho carro. [Las calles] No son seguras para estar afuera, pero es lo normal, ¿no? / I live in the main Street, there's a loto f cars passing by. It's not safe to be outside, but that's the normal thing, isn't it?" (SG3-9. 56.)

Appendix 1: Information on plagiarism

(From the Examination Regulations 2022-2023 document, Annex 8: Fraud and plagiarism procedure.)

The purpose of this document is to briefly explain the fraud/plagiarism procedure at the Institute for Housing and Urban Development Studies (IHS), Erasmus University Rotterdam. It provides the definition of fraud and plagiarism and defines the steps that are followed if student is suspected of fraud or plagiarism.

Definition of fraud and plagiarism

Fraud and plagiarism involve acts as the result of which the assessment of student's performance, knowledge or skill is partially or totally hindered.

Fraud might be in many different forms such as ghost-writing, cheating during an exam, plagiarism, etc. The following acts are considered to be fraud:

1. Obtaining knowledge concerning the questions or tasks in an examination in advance;
2. Assuming another person's identity or having another person assume one's identity during a test;
3. Consulting sources of information or having them at hand (such as books, syllabi, notes written on paper or the student's skin or clothing, programmable calculators, mobile telephones, smartphones, and all other electronic devices that might contain information), the use of which is not explicitly permitted. Mobile telephones, smartphones, etc. Must be switched off and remain off during tests;
4. Copying other students' answers or exchanging any information whatsoever with them inside or outside the examination room during the test. Providing other students with the opportunity to commit fraud is also deemed to be fraud;
5. Changing the issued question forms and/or examination papers or exchanging them with other students and/or taking question forms and/or examination papers away with them and/or copying them without permission;
6. Making any changes to previously submitted examination answers during a subsequent inspection;
7. Committing plagiarism, which means the copying of a passage containing more than one or a few words from one's own or someone else's work, either literally or in translation, for an individual or group assignment, project, thesis or any other type of text that is part of an examination, without indicating this by quotation marks or similar unequivocal typographical means, even if a bibliographically traceable and correct source reference is included. Providing other students with the opportunity to commit plagiarism is also deemed to be fraud;
8. Making it partially or completely impossible to form an accurate opinion of the student's acquired knowledge, insight and skills by actions or omissions in any other way;
9. Assuming a different identity during compulsory educational meetings;
10. Being represented by a third party during compulsory educational meetings;
11. Collaborating on the report for an individual assignment without permission;
12. All other forms of misconduct.
13. The following are likewise prohibited:
14. Taking part in a test without being entitled to do so;
15. Making it partially or completely impossible in any other way to form an accurate opinion of the student's knowledge, insight and skills through deceitful actions or omissions.

Plagiarism is a specific form of fraud and involves the use of other's work with no proper referencing and acknowledgement.

For detailed information on steps to follow regarding cases of fraud/plagiarism, sanctions and fraud involved in online examination please refer to the Examination regulations 2021-2022, Annex 8.

Appendix 2: Privacy regulations: addressing the GDPR

It is important that students ensure they are using GDPR-safe options for their research:

1) When collecting data using a survey, avoid asking for personal data if that is not directly relevant for your research.
2) If you need to include the name and personal information from the interviewee, inform him/her about the inclusion of their name in the thesis and make sure they give their consent. This can be done with, e.g., a separate tick-box to consent to this ('yes, my name can be included in the thesis').
3) Inform the interviewee what will happen with their personal information.
4) We recommend using the Qualtrics software for surveys as it is GDPR compliant. Further, Qualtrics is covered by a campus-license and free for students.

Appendix 3: IHS copyright form

In order to allow the IHS Research Committee to select and publish the best UMD theses, students need to sign and hand in this copyright form to the course bureau together with their final thesis.

By signing this form, you agree that you are the sole author(s) of the work and that you have the right to transfer copyright to IHS, except for those items clearly cited or quoted in your work.

Criteria for publishing:

1.   A summary of 400 words must be included in the thesis.
2.   The number of pages for the thesis does not exceed the maximum word count.
3.   The thesis is edited for English.

Please consider the length restrictions for the thesis. The Research Committee may elect not to publish very long and/or poorly written theses.

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