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Study of Public Space from A Gender Perspective; Case Study: Sundar Estate Industrial Site, Lahore, Pakistan

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ABSTRACT

Unequal participation and exclusion of women as legitimate stakeholders within public spaces limit women's prosperity within our societies. This study highlights the problems of gender exclusion in public spaces concerning women's needs within the built environment in Pakistan. The aim is to improve public space design regarding women's requirements. Sundar Estate industrial site in Lahore was selected as the case study ' to address above mentioned issue. The parameters for evaluating the case study are the site's accessibility and circulation flow, the building program, space utilization, and safety and security. Based on the parameters, further, the data was collected through observation, questionnaire surveys, and interviews with stakeholders.220 participants from selected areas filled out the questionnaire, and Descriptive statistics were used to evaluate the questionnaires. The article's findings indicate that the study area's settings generally overlooked the demands of female users, and solutions are offered as a result.

Keywords: building program, circulation, public space, safety, security, and women's need.

INTRODUCTION

In 2020 Pakistan ranked 151 of 153 countries on the Global Gender index report (World Economic Forum, 2019). This concern makes Women's Empowerment one of the most significant developing concerns in our urban environment. Although women make up 48% of the population, extremist players limit women's involvement and movement, clearly harming their social position and impeding their ability to enjoy economic success, social status, opportunities, and a decent quality of life (Raza & Murad, 2010). Gender discrimination affects our country from social and economic standpoints. The way our cities are expanding by rapid urbanization and the disparity between women's needs and concerns regarding safety and mobility have been constantly overlooked, further limiting their progress in society.

Understanding these factors coupled with the concern of traditional cultural burden on women, lack of facilities, and lack of awareness when designing and overlooking concepts of gender-sensitive planning can highly impact women participating in the built environment. These facts account for why women cannot successfully enter the workforce, leaving a gap of unrealized potential (Raza & Murad, 2010). Therefore, introducing interventions in terms of safety, mobility, access to education, training facilities, proper child care centers, and mix-use urban space is essential.

Since 'Without gender-inclusive practices, there cannot be a gender-inclusive city'(Terraza et al., 2020), this study aims to install design interventions from a gender-sensitive lens, from site selection to the program function. Planning and design processes are directly related to the structures and behaviors that construct our society. The goal is to enhance and reintroduce the role and participation of women as occupiers, citizens, and worthy inhabitants who can exercise their full rights to the city. The study suggests how design strategies and principles can facilitate women accessing public space by recognizing the design in actively generating gender-inclusive spaces. It attempts to establish design strategies that can bridge the social gap and reconstruct social norms that have been a significant player in the marginalization, obstruction of performance, and lack of presence of women in our socioeconomic sphere.

LITERATURE REVIEW

In a broader socio-cultural framework, which also includes class, race, poverty level, ethnic group, and age, the term "gender" refers to the social attributes and benefits of being male or female (OSAGI & United Nations, 2001). When entering the public space workforce, women's issues are part of the public realm. Citizens' access to space is intimately tied to the existing social structure (Favro & Weisman, 1994). Therefore, it is essential to understand the socio-spatial implications of the transition from private to public. Gender as a term in its abstracted form is a social construct transcending biological limitations. Lefebvre (1991) states, 'We create the social frameworks that govern every element of our life in space, and we constantly replicate them.'

There is great scholarship on women suffering and unfair dealing in the workplace (Mountz, 2016; Sztainbok, 2016; Reyes et al, 2014). Women deal with more severe and damaging bullying, exclusion, and harassment based on gender, race, and sexual orientation (Valentine 1998; Chouinard 2010; Sue 2010). In addition, lack of accommodation and embarrassment of breastfeeding in the workspace is a big challenge for lactating mothers in the working environment (Murtagh & Moulton, 2011; Haviland et al., 2018; Dunn et al.,2015). Recently, the World Health Organization recommended that women breastfeed for two years to improve breastfeeding duration and initiation rates (Bernardo et al., 2013). However, studies revealed that only 49% of women breastfeed for six months and that working or wanting to work impacted breastfeeding (Mirkovic et al., 2014; Fein & Roe, 1998; Hawkins et al., 2007). Therefore, working outside for women is considered negative (Fein & Roe, 1998; Hawkins et al., 2007). Most women prefer not to join post-delivery for a year or so for this genuine reason, or they have to start bottle feeding due to a lack of proper spaces to accommodate women according to their specific needs. This bottle feed, in turn, causes severe problems in newborns. Above mentioned issues of women suffering and unfair dealings at the workplace lead to Unequal participation and exclusion of women as legitimate stakeholders within our country. The situation continues perpetuating, adding to the demotivating forces normalizing inequitable practices. Our spaces overlook the concerns of women entering the public sphere.

Hayden (1985) states that the gender divide aggressively segregates our population and cities. It creates suburban homes that view women as fixated, child-bearing creatures, isolating them and relegating them to a life cycle of inactive unpaid labor. Studies have shown gender inequality and that men and women are more distressed while working in fields where one sex predominates. According to research, women are much more distressed than men when there is a conflict between their roles at work and in their families (Goldberg & Perry-Jenkins, 2004; Cooke & Rousseau, 1984). Similarly, it is found that Infrastructure has been unable to accommodate the social norms that govern the attitudes of populations at large toward women. Although, cultural and environmental aspects are more critical for women's health when working outside (Peterson, 2004).

METHODOLOGY

The four main parameters are the site's accessibility and circulation flow, the building programme, space utilization, and safety and security. Based on the given parameters, further, the data on the case study was collected through observation, interviews with stakeholders and questionnaire surveys. After analyzing the data and cross-checking the information, existing problems concerning the research question were diagnosed, and design solutions for the case study were proposed accordingly. To assess the above-mentioned key factors, analyzing the perspective of the labor force working within the Sundar estate was essential. It was necessary to follow the restrictions they faced and what facilities they needed, along with understanding their socio-cultural background.

Further data on the users and the case study is formulated in the following stages

Factory Visits: Several factory visits focused on those employing female labour within different departments. To observe the layout of the work structure, analyze whether departments are gender oriented. A collection of images were taken wherever possible.

Interviews: Multiple face-to-face interviews were conducted with the Sundar Board of Management, different factory owners, human resource members, multiple employees, and most importantly, the female labour staff.

Layout Study: A comparison between different factory layouts was conducted related to their operational ability and segregation regarding purdah restrictions (defining this in the footnote). These factors determined the constraints when hiring females in different departments.

Questionnaire survey: A google form was circulated through the Sundar board and personal reference emails. This method was applied in collecting data on the number of female employees within each factory in terms of percentages to males and the number of skills required for hiring along with services and amenities provided within the company. It also questioned the need and feasibility of daycare and technical training institutes within the Estate.

Due to the nature of the project and the various policies adopted over time when it comes to gender-inclusive design, the approach taken for this research was pragmatic; taking Sundar Estate into context with a gendered lens is the fundamental strategic theme. Understanding the women's needs is a top priority regarding their working conditions, and the supporting facilities provided by the built -environment and their accessibility were taken into account. The critical questions for analysis are

Is the estate's built-environment gender-inclusive regarding its public spaces?

Does the Estate provide spatial facilities, including childcare support to its female-labor force to accommodate their needs?

Does the Estate provide equal access to women in circulation and accessibility?

This research attempts to explore the above questions through the onsite analysis

CASE STUDY

At first, several prospective case study areas were shortlisted, though the Sundar Estate industrial area was selected. Sundar Estate industrial site in Lahore was chosen, due to having a large number of female labour workers, among other public spaces. Moreover, its location, land uses and functions within the site qualify it well as a public domain within the boundaries of Lahore city. Sundar Estate is located in the southern corner of the expanding city of Lahore. Approximately 45 km from the city center, it is allocated over 1750 acres of land (Figure 1). It is an ever-growing estate with the largest growing sector in the pharmaceutical industry. Currently, it has over 400 industries that are operational with a capacity of 748 industries total. It is a vastly increasing economically viable project commissioned in 2007 and currently provides employment to approximately 80 thousand strong forces.


Figure 1: Macro Analysis of Sundar Estate

Its success is highly based on its location, accessibility, and the wide range of amenities it provides. The main Sundar Road is connected on the eastern end to Raiwind Road via the Rohi Nala Bypass and Sharif Medical Road. On the northern end the Sundar Road is linked with the N5 Highway which connects the major economic routes to Sindh and Gwadar Port, dealing with most of the international exports (Figure 2).
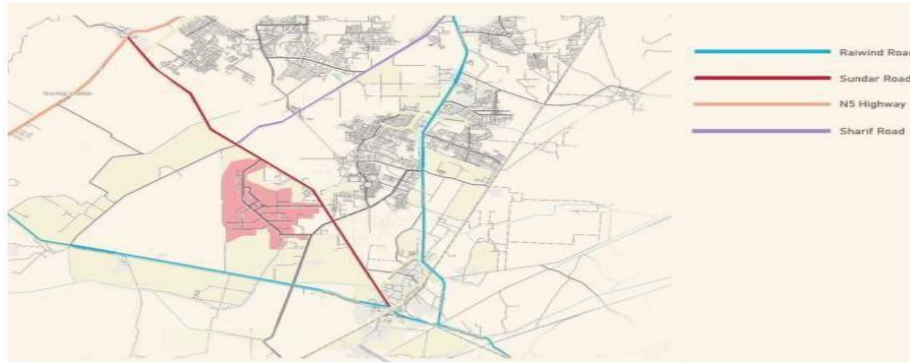
Figure 2: Road networks linking to the estate, analyzing its connectivity to the city.

The road connectivity within the area allows for the significant growth of unplanned urban settlements along the main road routes (Figure3). The largest settlements within a 12 km radius of the Estate include Raiwind City, Kot Araiyan and Sundar Town (Figure 4).
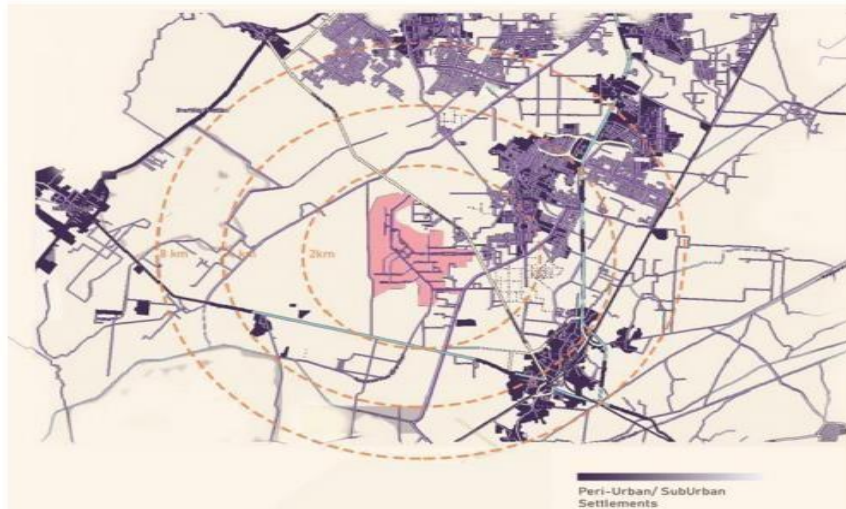
Figure 3: Looking at the Peri Urban settlements organically growing due to the influx of labor migrating to cater to the estate.


Figure 4: The main entry points branching out from the Sundar road, mapping the water bodies and the small rural settlements growing on the borders of the estate; Nahla, Islampura, Bhaikot and Mull.

A case study by Hajra Zafar (2012) revealed that most of the skilled labour working within the industry was not coming from nearby areas, instead, they were commuting from the centre of Lahore or South Punjab. According to Zafar (2012), the lack of skilled labor presented quite a conundrum; however, his building of a designated TEVTA training facility within Sundar has changed the dynamics. Currently, the training facility is only for males and the only facility for female counterparts is nearly 24 km away, which presents itself as quite a problem.

The labour working within Sundar is temporarily or permanently settled within the nearby areas. With predictions of the Estate's growth, the nearby regions faced increasing rent and lack of security, healthcare and childcare facilities. Accessibility also presents itself as an issue as there is no designated transport facility or bus service provided by the Estate (Zafar, 2012). The larger corporations provide their company transport, and the smaller companies cope by paying conveyance increments. Currently, there are 748 plots within the Sundar Estate, and over 400 of them are occupied by various industries. The main categories operating are; Pharmaceutical, Food Processing, Textile, Garments, Plastics, Chemicals, Auto Parts, Packaging, Wood Products and Miscellaneous. There are dedicated plots to each industry. However, there are no designated zones for each industrial type.

DISCUSSION AND ANALYSIS

Lately, there is no exact data on the total number of female labor operating within the entire Sundar Estate, however, an approximate figure of around 8,000 to 10,000 is brushed roughly, out of the total 80,000 labor force by the managing authorities. Figure 5 shows the Mapping of the female labor force in sunder estate after an person survey.
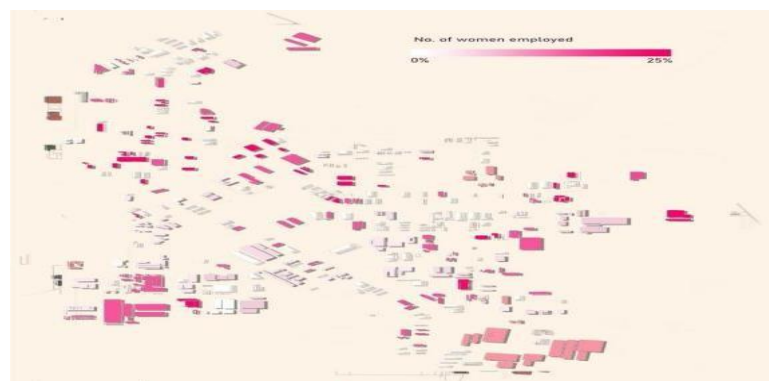
Figure5: Mapping the Ratio of Female Labor to Nature of Production the maximum ratio is 25% which is within the Pharmaceutical and Chemical Industries

While interviewing the Head of the Board of Management of Sundar, Major Arif, he showed concern about the female force being over-burdened and how some factories take advantage of the younger women in terms of long working hours and low pay. Another problem he stated and repeated by various other human resource members within factories was the reluctance of companies to share data on their labor force to avoid government taxes. This became a restraint in data collection. However, collecting data was fairly easier when visits and site observations were conducted through personal references.

Accessibility and Circulation Flow

In the case of accessibility, almost all the female workers commute via vehicular transportation to the site. Big factories provide transport to their employees, mainly used by women. However, the women working within the smaller companies usually rely on a private mode of vehicular transport, such as being dropped off by a family member or a rented rickshaw service. This results in the mobility of females being restricted to their workspaces. During pick and drop timings, they barely ever walk on the ever so advertised-street lit pedestrian sidewalks of the Estate.

Generally, the majority of the female labour force in industrial sectors of Pakistan is known to be employed within the Chemical, Pharmaceutical, and Textile industries (Junaid et al., 2019). However, according to the site observations of Sundar estate, when visiting the principal office of the board and other relevant offices, no females were in sight. Similarly, the public areas of the Estate, such as lawns, parks, and pedestrian pathways, were highly male-oriented. Our interviews with female workers verified the observation as they stated that they did not use any public space within the Estate (Figure 6). In response to above-stated observation, the dominance of men and the social unacceptability of their presence was revealed as the main reasons. However, the above observation was not related to safety issues of public spaces of Sundar Estate, since there has not been any record of such incidents.

Figure 6: Context and infrastructure analysis of the public areas within Sundar Estate through a gendered lens.

Due to the location of Sundar Estate being in the south most of the city, unavailability of public transportation, and lack of independent vehicular ownership by the female, the skilled females from the city do not opt for jobs as far as the Estate. The labour available in nearby areas is unskilled. As per the information from interviewing the Head of Management at Vision Foods Packaging, some companies did make several attempts to include women in their workforce, but their limited literacy caused a lot of manufacturing concerns.

Building Program

As per data, there is a general lack of female facilities in the Sundar Estate. Most factories provide lunch to their employees; hence the working women never step outside their work zones, even for basic needs. Similarly, childcare facilities are missing in almost all factories. During the interviews with female workers, overall support was received when suggestions for introducing an operational daycare facility within the estate were floated about. Within the individual factories providing childcare services

seemed to be a rather tricky task, especially in the pharmaceutical industries. These industries have many restrictions in terms of layout plans and operations. Their licenses to sell their products are based upon particular international standards, which restrict the addition of kitchen services within the building. Therefore, providing a daycare facility within the factory deemed """""""""is out of the question"" """""".

Space Utilization

Our further investigation revealed that most women working within the pharmaceutical and chemical industries were hired within low intensity jobs, such as packing or labeling. Depending upon the management some factories hired women from different phases of life. Around 20% were above the age of 45, 30% were unmarried, and the majority (50%) were mothers with offspring with different marital statuses.

The lack of daycare facilities seems severe with these statistics. The Head Management of the Route 2 Health Pharmaceutical Company stated, during interview, that """""""""We do not hire married women""""""""". In response to further inquiry, he stated that """""""""We have had a bad experience, you see they are problematic workers" "" """"". He responded with a positive attitude when it was suggested if a daycare facility would make the situation any different.

It is essential to mention that, in some rare cases, companies such as Pesico FritoLays, that their layout was built on international standards, provided a social block within their industry that had daycare facilities used by all departments. They also had divisions within the daycare according to child development needs. The relation Manager, Ms Amber Ch, briefed upon the services. However, she explained how spatially they were pretty limited and all children could not be catered to and how the daycare had been closed for a year due to covid restrictions. This had resulted in many women resigning their occupations. Regarding their skill training, Pepsico is in partnership with TEVTA in providing apprentices and machine operators. However, due to the facility being 25 away and lack of onsite experience, the TEVTA facility cannot fully meet its requirements. They have multiple openings, but there are no adequately trained workers available.

Safety and Security

As mentioned earlier, the presence of females in the public domain of Sundar Estate was sporadic, and their functioning was limited to the factory areas. The research investigated the reasons and whether this was related to the safety and security factor. Out of 220 interviewees, all female workers, only 18% mentioned security concerns as the reason, and the majority stated socio-cultural issues and the daily routine of being picked and dropped at the gate as the main reason. According to the investigation from the police station of the area and the security office of the Estate, there was no recent report of any incident in the public places where females were involved or victims. In response to the question from the female interviewees about whether they felt safe while appearing in the Estate's public spaces; for instance, walking in the pathways or sitting in the green areas, the majority of 89% stated that they are safe. However, they feel uncomfortable. Further, the same majority showed a positive attitude in response to proposing a female-oriented public space for socializing within the area.

CONCLUSION & RECOMENDATION

After reviewing all the results and content analysis of the data received, the following recommendations are made to improve the spatial facility for female workers in the Sundar Estate:

Exploring the feasibility of a daycare and women's technical training recentres as viable place-making intervention

When analyzing Sundar Estate, we must remember the spatial divisions of public and private. Currently, women have no role in the public space and do not have a visible presence or any participation; within the factories; their roles are also predetermined. As women within the labour force are not empowered in terms of spatial inclusion, they are limited to private zones; the power dynamic within those zones encapsulates them into an endless work cycle. To change these practices, a designated space shall be included for women within the public realm. This space not only performs functionally but rather pulls women into visibility and spatial occupation. It must be designed to cater to the needs of women specifically to change the current domination by the one end of the spectrum and allow for gender inclusivity while at the same time enabling them.

The finding of the research dictates a usable space that is public, that interjects and places a large number of women in space. It must provide them with a means of improving their economic viability. It must generate a pulling force driving them out of mediocrity. A technical training center fills a significant part of the typology required by analyzing the characteristics as mentioned above' " '"" "required. It operates as a place-maker and is public enough to reinstate the role of women within Sundar Estate. The spatial characteristics of the facility must keep in mind the user, a working female observing the limitations of the purdah within a public space. The implications of which differ massively outside the factory "'"'"'s private space, as they must create their spatial significance rather than the one that receives or is designated within the workspace. The aspects of visibility and control of space must be restored and reintroduced. Women within this space must recognize themselves as the main stakeholders, and they have the primary authority. The space must be open enough for them to claim as public bodies; however, it must not be so open as not to dispute the practices of the purdah.

Sundar Estate is currently viewed as a productive and economy-generating segment of the city, accommodating a considerable number of the female workforce. It suggests an intervention such as a daycare in the estate curbing the traditional and cultural norms of the domestic burden placed upon women. It reinstates that woman with children belong to the workforce and are an essential part of it. The daycare, however, is not specifically gender-oriented in this placement; its presence also significantly redefines male roles in childcare responsibility. The daycare will be essential in reinstating children, men and women' "s roles in an industrial landscape. In terms of space, it will need to be spatially profound in aspects of safety, and child development and be interactive.

Interventions in the public realm for women empowerment: community space, market space, healthcare center, security station, and a social welfare office

Adding supporting programs within the space defined by the gender user group will provide buffers for the blending of users. Women must be considered essential public space stakeholders by improving their participation and willingness to consent to occupy and socialize. These programs will be supplementary. However, all are aiding in defining women's role within the industrial scape. The skills they learn through the training center will not only be applied in the factories but will be exhibited, displayed, and celebrated. This space will be economically driven, providing a new platform for exchanging services. More programs will be the additional social welfare space and healthcare access.

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