

The Role of Gender in the Waste Sector A Case Study of Hyderabad

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Abstract

This study focuses on the perceptions of gender segregation within different stakeholders of waste sector in Hyderabad, and how the women engaged deal with such discrimination. It is an attempt to understand the role of gender in the waste sector, and how it influences different components like wages, working hours, flexibility, etc. There are theories on gender and informal labor market discrimination, but they merely focus on the major informal sectors like construction, manufacturing, etc. In the run, the waste sector contributes marginally to the GDP but it significantly contributes to the surrounding and the environment. It is also a livelihood option for various socially marginalized households and communities. Based on field work to understand the perceptions of gender segregation in the waste sector, the article seeks to highlight different forms of gender segregation, and the factors that contribute to it. It also highlights the gender hierarchy in the waste sector, and the perception of women about such discrimination and its associated barriers.

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Introduction

During the COVID-19 pandemic, several countries adopted lockdown as an intervention to contain widespread transmission of the virus. The Indian government also imposed a sudden nationwide lockdown in March 2020. As a result, all the economic activities followed a complete shutdown and badly impacted the lives of many, especially the daily wage earners in informal sectors. The adverse effects of lockdown on the informal sector workers was very evident when the exodus of migrant workers traveled back to their villages due to a lack of employment opportunities in the urban and industrial areas. But this effect was not homogenous across different types of informal work.

During the lockdown when we all were working from home, did we stop generating waste? No, instead the volume of waste increased drastically. India generates nearly 62 million tonnes of waste annually, with the growing population the waste is also growing (Dandapani, 2017). It was one of the essential sectors for the economy, the workers were recognized as frontline workers because given the threat of the virus these workers continued working, collecting and segregating waste in cities for their livelihood, and cleanliness of the urban areas.

But their lives were significantly impacted, as the lockdown resulted in the restriction in public life and reduction in consumerism. As a result, the collection of dry waste was almost impossible, and due to the non-availability of local transport, most of the waste workers struggled for their livelihood, as they could not travel long distances to sell the scraps or to collect it. Further, most of the scrap businesses were in the hands of migrants, and they left for their hometowns during the outbreak of the virus, it became difficult for waste workers to sell their waste (Singh, 2021). The waste workers, who were working under an entity, also faced difficulties in terms of receiving payment on time, and some of them also lost their jobs. As they were working in the frontline, they were more prone to diseases. Most of the workers were working bare handed, without any protective gear.

The collection of waste is dominantly a municipal function, and it's either conducted by the municipality sanitation workers or the private contractors appointed by the municipality. Waste sector is a mix of both formal and informal sectors, due to limited infrastructure, there is heavy reliance on the informal sector for collection and segregation of waste. As it involves collection and segregation of waste, therefore it employs a vast number of workers with poor working conditions and inadequate social safety and security measures. Within the waste sector, there's hierarchy, as there are different stakeholders who are engaged in the collection, treatment and disposal of waste. We often find the engagement of women at the base level, like we see them working as door-to-door waste collectors, waste pickers, street sweepers, etc. But as we move forward in the pyramid, like the recyclers, or the large scale aggregators, processors, they are

often men. Like every other sector, the waste sector also has patriarchal dominance as we see women are often engaged in the low-paid jobs.

Apart from this marginalization due to gender, there's also a hint of caste, as waste picking or any association with waste leads to ritual, and symbolic pollution in the Indian society, it gives a sense of untouchability. So, the women engaged in this sector, face "double discrimination". First, due to identities of gender, and second due to their caste and association with waste. Therefore, this thesis examines the role of gender in the waste sector. It questions the forms that gender segregation takes place within the waste sectors, the factors that contribute to this segregation, reasons why women are engaged in the waste sector, how gender plays a role in different types of work within the waste sector. It also attempts to understand the perception of women within the waste sector and its associated barriers.

This thesis focused on understanding the role of gender in the waste sector, because it is evident that gender segregation exists in other informal sectors like construction, and there's vast literature about it, explaining how women get poor remuneration and are discriminated against in terms of payment, working conditions and hours, social securities, etc. However, there is not much literature exploring the gender dimension within the waste sector. Also, there is not much data or empirical evidence highlighting gender segregation in the waste sector in India.

In order to understand the gender dimension in the waste sector, a primary convenient based fieldwork was conducted in Hyderabad, Telangana. The next section is a literature review followed by the section on theories of gender segregation, research statement, methodology, a brief discussion about informal sector, waste sector and construction sector in the Indian context. The seventh section, describes the results based on the field survey and answers the central research questions of this thesis. The last section is conclusion, it also discusses the limitations of this project.

Literature Review

The dearth of existing literature highlights that inequality is rising rapidly with the wealthiest 1% capturing an increased share of the national income (Ehrhart, 2009). The income gap persists between the lowest and the highest paid workers, it also exists between the men and women across occupations, and this gap is growing at a steady rate. Women's income is comparatively lower than the men's income across occupations, industries, and sectors (Tyson-Parker, 2019).

The difference in terms of wages is more significant in the informal sector, as it is characterized as small-scale, labor-intensive, low-paid, unorganized, unskilled sectors. The individuals and families involved in this sector do not pay taxes, do not possess trading licenses, and are not a part of the government's insurance, social welfare or funding schemes (ILO, 2020). The sector

plays an important role by contributing nearly 50% to the GDP (Maitra, 2020) in India. It is also considered as the “backbone” of the Indian economy. But it is a male-dominated sector in India, as only 23% of women are engaged in the informal economy (Singh, 2021). Apart from the low engagement of women in the sector, the women also face different challenges like differences in wages, they owe different experiences in their workplaces as compared to their coworkers.

Among the informal sector the waste sector is one of the most vulnerable ones. It faces social stigma due to its association with “impure waste”. Though the workers work in the “front-line”, and serve a larger section of the society, massively contributing to the informal waste sector, the workers face severe challenges with their lives daily, as they pick mostly recyclable and sometimes hazardous waste unhygienically. Moreover, as these waste workers belong to the economically disadvantaged part of the society and the informal sector, it becomes difficult for them to afford protection gear and other equipment, therefore, they face various serious health outcomes. Health outcomes include “communicable disease outcomes, epidermal outcomes, gastrointestinal outcomes, musculoskeletal outcomes, non-communicable disease outcomes, respiratory outcomes, and social outcomes” (Zolnikov, et al, 2021).

This scenario of the waste sector is even more critical for the women workers. Women engaged in this sector, especially in the waste picking, segregating, and cleaning activities typically earn less than men and often face other forms of inequality (WIEGO, 2022). The persistence of gender segregation in the Indian waste sector is very critical as it is an important livelihood opportunity for women workers with little or no formal education, and no capital to invest (Wittmer, 2020).

The study published by International Research Journal of Environment Sciences (2014) highlights that “the marginalization of waste workers due to their skill, class, and caste contributes to lack of recognition of their work”. The study also adds that waste picking activities is considered lowest in the hierarchy of urban informal occupations, as women and children contribute largely to this occupation. Further, women engaged in this sector are vulnerable not only due to identities of gender, but also due to other variables like their caste and class, their association with waste, and the ritual and symbolic pollution of untouchability (Wittmer, 2020). The bottom tier activities in the waste sector are predominated by women, because it allows them flexible working hours so that women can perform their household chores and caring work, and also earn a livelihood.

Additionally, the Ocean Conservancy (2019) report highlighted that “much of the female participation is limited to informal and unregulated employment within the waste sector”. As the women are mainly engaged in the segregating and cleaning activities, irrespective of their type of employment. If they are working for a waste processing plant or they are working beside their male family members in the family waste business, they do the same tasks. The report also

highlighted that “the formal waste collection process is dominated by men”. Men in the family waste business are often seen collecting and selling the waste, and the earning stays with them. Men engaged in the private firms also have higher wages than women as they help in loading and unloading of waste, operating the waste processing machines, driving the waste collection vehicles, etc.

In the waste sector, “there are also indications that women waste pickers face harassment from police as well as male municipal workers” (Singh, R. 2021). As the waste picking activities occur in an informal environment, the victims often struggle to raise a voice against it as there are no anti-harassment policies or penalization. This makes women waste workers even more vulnerable, as they lack social protection, they earn low wages, they work for more hours, they are more exposed to the hazardous waste as they go through the waste in order to sort and clean it. They are also exploited by scrap traders, as they are unaware of the price the trader resells, and as women they also lack bargaining power. This way, they earn less compared to the men.

There is vast literature highlighting the informal economy in India, different issues within the economy, and gender segregation within the informal sector, and the reasons responsible for such segregation. However, they mainly focus on the major informal sectors like agriculture, construction and manufacturing. In the context of the waste sector, there is literature describing the nature of work, type of people employed, marginalization faced by workers as compared to the workers employed in other informal sectors. But to the best of my knowledge, there is not much literature explaining the participation of women in the upper spectrum of the sector. Though some papers highlight gender segregation in the waste sector, they do not mention the forms of it, and there is no data or empirical papers highlighting the subject. Therefore, this thesis aims to explore the forms gender segregation takes within the waste sector and factors responsible for it. The thesis aims to understand the perceptions of women within the waste sector about gender segregation and its barriers by providing empirical evidence from the primary fieldwork.

Theories of Gender Segregation

Three distinct theoretical frameworks: neoclassical, feminist and social identity theory. These theories can be used to review the labor market, and different barriers to women’s labor force participation like gender-based segregation in the labor market.

Neoclassical theory approaches “individual decision making from a rational choice perspective and provides one paradigm through which one can analyze gender differences in the workplace” (Kercheval, 2012, p.11). The theory also assumes that constrained optimization by individual workers and employers governs the labor market, and people act rationally and in their self interest (Kercheval, 2012). It further proposes that firms will hire those who will maximize the

profits, by minimizing the cost of production. There will be bargaining power between the employees and the employers, and the profit maximizing firm will provide compensations like bonuses, benefits, and workplace amenities that will give workers reasons to continue employment (Kercheval, 2012).

The presence of gender based discrimination poses a critical challenge for the neoclassical theory. According to the neoclassical literature, firms in order to maximize their profits “will hire and compensate based on an individual’s attributes as a prospective employee” (Kercheval, 2012, p.12). The theory states that there will be a higher cost of hiring women as compared to men, because of aspects like maternity leave, menstrual leave, and considering the strength in order to perform physical tasks, therefore, men are preferred over women (Kercheval, 2012).

However, the feminist approach arose as a criticism of the neoclassical theory, as the latter do not emphasize on social institutions and pre-labour force discrimination. The feminist approach highlights the interaction of economic, social, political, and cultural institutions that influences pay, employment, and status in both workplace and family (Kercheval, 2012).

The feminist theory emphasizes that the allocation of domestic labour, especially child-care is unreasonably assigned to women, because of the gender construction of society. Apart from child-care, other domestic chores invade more into women’s work lives compared to that of men’s. Feminist theories also conclude that, as a result of these stereotypes women end up committing more time to their domestic responsibilities as compared to their employment (Beneria, 1979). Further, the feminist approach also suggests to marketize the women’s domestic responsibilities. They suggest allocating it to the labor market because that will shift the women from their traditional roles, to paid jobs in the market (Folbre-Nelson, 2000).

The feminist theory also emphasizes that “patriarchy was the root cause of discriminatory factors working against the women in the labour market” (Kercheval, 2012, p.16). According to Matthaei (1999), the labor involved in household production is unpaid, and is assigned to female members of the household, and it is the means through which men control access to the greater labor market. As, often women workers prioritize their household responsibilities over their employment due to societal norms, therefore, the employers in order to maximize their profits employ more men over women, and this is how men control access to the labor market (Kercheval, 2012).

The third theoretical framework of social identity theory understands the gender based discrimination in the labour market by understanding group relations, and individuals relations within a group from a psychological perspective. It extensively examines the threat associated with being a woman in the labor market in a male-dominated society (Kercheval, 2012). They have hypothesized that “social-identity”, is the identity that the person assumes as a part of the

labor market (Turner, 1987). They propose that people understand themselves as a part of the “distinct social category” rather than a personal level (Kercheval, 2012, p.18). The theory also adds that as people consider themselves a part of the distinct social category, they also follow the stereotypical norms and attributes of that category (Kercheval, 2012).

This theory is applicable in all social interactions, however it is particularly relevant to the workplace, because groups play a crucial role in the workplace. “The act of individuals categorizing themselves as group members itself leads to in-group favoritism” (Haslam, 2001, p.30). Haslam further defined group favoritism as “a tendency to be more generous with a reward to the members of the same group” (Haslam, 2001, p.30).

In the context of gender discrimination, Kercheval (2012) hypothesized that favouritism could cause increase in differences between men and women in the work place. First, in terms of “groups perception of other groups”, second, in terms of allocation of wages by the employers (Kercheval, 2012). Further explaining group favoritism, Kercheval added that men would consider themselves more productive and successful in the workplace as compared to women, this would further create gender-based discrimination within the workplace (Kercheval, 2012).

As the paper is trying to understand occupational segregation within the informal waste sector, largely in terms of gender. In India, there are several factors that influence gender segregation, like caste, religion, family background, etc. Further, in the context of the waste sector, the workers lack recognition in the society because of their association with waste, and it is considered lowest in the spectrum of employment. It is also believed that people from a certain caste should only be associated with waste collection activities. Further, as women and children contribute significantly to the lower spectrum of the waste sector employment, therefore it is considered lowest in the hierarchy of urban informal occupations. Thus, this paper will attempt to understand the role of gender and how these trends in terms of various components like caste, income, religion, types of activities, influences segregation within the sector. This thesis has adopted feminist approach to understand the role of gender in the waste sector.

Research Questions

To understand the role of gender in the waste sector, a primary fieldwork was conducted in the Somajiguda region, Hyderabad, Telangana. In the waste sector, as much of the female participation is limited to informal and unregulated employment, and the formal waste collection process is dominated by men. Therefore, this thesis examines two central research questions. First, what forms does gender segregation take place within the waste sector and what factors lead to such segregation. To answer this question, it was essential to understand why women choose to work in the waste sector for their livelihood. It was also essential to understand whether this segregation varies depending on the type of stakeholders in the waste sector. The

thesis examines both labor supply and labor demand side factors responsible for such segregation. Further, as the waste sector is an important livelihood opportunity for women workers with little or no formal education, and no capital to invest, due to gender segregation within the sector women are more vulnerable. Women engaged in this sector, especially in the waste picking, segregating, and cleaning activities typically earn less than men and often face other forms of inequality. There are also indications of harassment at the workplace. Therefore, the second central question is, what are the perceptions of women within the waste sector about gender segregation and its associated barriers. In order to answer this question, it was essential to understand if women in the waste sector are aware of segregation, and why they still continue to work in the sector.

Methodology

This study is based on field work to understand the perceptions of gender segregation within different stakeholders in Hyderabad. The methodology section includes descriptions about research designing, data collection, sampling, data analysis and procedures.

To understand the perception of gender within the waste sector, we have conducted a qualitative study, an in depth interview, based on convenience sampling in the Somajiguda region in Hyderabad, Telangana. Convenience sampling refers to the sampling methods that involve the sample being drawn from the part of the population that is close to hand and easily accessible. The interviews were conducted in Hyderabad because in 2021, it was ranked as the “best sustainable mega city” in the country and its municipality was also awarded for performing better than other municipalities in other metropolitan cities (The Hindu, 2021). Further, it was conducted in the Somajiguda region, because of Hussain sagar lake and two botanical gardens, the area is very crowded, so the generation of waste is higher there. Therefore, a lot of waste workers are engaged in cleaning the area. Due to higher generation of waste, there are three waste processing plants managed by the contractors hired by Greater Hyderabad Municipal Corporation (GHMC). Further, a lot of informal waste pickers collect waste and sit around the lake to segregate it.

The interviews were conducted for different stakeholders within the waste sector: Waste Pickers, Itinerant Waste Buyers, Scrap Dealers, and municipal authorities. We have interviewed employers like the scrap shop owners, managers of waste processing units to understand how they decide wages for different genders, and what type of work they prefer the genders to do. We have also interviewed the other stakeholders who are engaged in the lower spectrum of the hierarchy, like the waste pickers, door-to-door waste collectors, itinerant waste buyers, and scrap vendors. The interview was conducted for 36 waste workers, engaged in different types of work within the waste sector. 21 of them were women, and 15 of them were men.

From a sample of 36 men and women waste workers in Hyderabad were interviewed in order to understand their views on equal wages, activities, and tasks, and the persistence of gender segregation. A sample of 5 door-to-door waste collectors, 5 scrap dealers, 1 scrap shop helper, 10 waste pickers (engaged in different types of waste picking), 2 waste processing plant operators, 3 municipality sanitation workers, 3 waste collection vehicle drivers, 2 employers/contractors of waste processing plant, and 5 women waste workers in the processing plants. The workers were selected from Somajiguda, Tank Bund, and Necklace road dumpsites, processing plants, scrap shops and street dustbins. The total sample size is 35 (21 women and 15 men). Table 1, maps the distribution of different stakeholders for interview by their gender.

Table 1: Variations in type of work by gender

Type of Work	Male	Female
GHMC Operators	2	0
Waste Segregators (in waste processing plants)	1	3
Door-to-door Waste Collectors	0	5
Street Sweepers	0	3
Waste Collection Vehicle Drivers	3	0
Waste Segregators (in waste vehicles)	0	4
Waste Pickers/Collectors	3	5
Scrap Shop Owners	4	0
Scrap Shop Helper	0	1

Managers	2	0
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The interviews were conducted using questionnaires that had qualitative and quantitative components. The questionnaire had 37 questions. 1-13 questions are related to the general information about the workers, which helped in understanding the reasons why the women or the workers in the waste sector chose for this occupation. 14-22 questions are related to the work experiences of the workers within the waste sector. 23-26 questions are framed to understand the persistence of gender segregation within the waste sector, and to understand the perception of the workers about the same. 27-37 questions are framed to understand the discrimination the workers associated with the waste sector face in the society, again, if the workers have access to the protective gears, etc. The variables important for measurement were gender, caste, type of work, occupation of spouse, marital status, number of children and type of family, education level, number of working hours per day, type of income, etc.

Further, this thesis used National Sample Survey Organization (NSSO) data and Periodic Labor Force Survey (PLFS) data to get a better understanding of informal sectors, specifically waste and construction sector in the Indian context. The secondary data from the NSS 68th round, features the survey on employment and unemployment in India, and collects data on indicators of labor force participation at National and State levels. From the NSSO 68th round, we used variables that indicate caste, religion, income, age, education, proportion of female and male workers, etc across the waste sector and construction sector. From the PLFS data, we also look at the same or similar variables across major informal sectors like the agriculture sector, manufacturing, construction, etc. To understand the stature of the waste sector in the context of other informal sectors, and the participation of workers.

Indian Context

1. Informal sector

A major fraction of the Indian workers are engaged in the informal sector. Nealy 92.4 percent of workers are in the informal sector. Table 2 shows the distribution of the workforce in the formal and informal sector. In terms of employment share, 83 percent of workers fall under the unorganized sector, where there is no written contract, no paid leaves, and no other social benefits. The rest 17 percent of workers are under the organized sector. Further, nearly 90 percent of the total women workforce is engaged in the informal economy (National Perspective Plan for Women, 2000). These women workers often work for lower wages in unsafe and risky environments, “without any protection of labor laws, social benefits such as pension, health insurance or paid sick leaves” (National Perspective Plan for Women, 2000).

Table 2: Distribution of Total Employment (in percentages)

Worker	Industry Sector		
	Unorganized	Organized	Total
Informal	82.6	9.8	92.4
Formal	0.4	7.2	7.6
Total	83	17	100

Source: Periodic Labor Force Survey, 2017-18

The worst is the scenario in the informal unregulated waste sector, because the sector itself faces stigma in terms of economic deprivation, and its association with waste. The women engaged in this sector often face challenges in terms of their association with the waste, and due to their identities of gender.

2. Gender and Waste Sector

With the growing population, waste generation in India is also growing (Dandapani, 2017). The collection of waste is dominantly a municipal function, and it's either conducted by the municipality sanitation workers or the private contractors appointed by the municipality. This sector involves collection and segregation of waste, therefore it employs a vast number of workers with poor working conditions and inadequate social safety and security measures. Within the waste sector, there's hierarchy, as there are different stakeholders who are engaged in the collection, treatment and disposal of waste. Within different stakeholders, the most vulnerable are waste pickers, who move around the city in search of recyclable materials which they can further sell to the scrap dealers. Other waste workers include door-to-door waste collectors and itinerant waste buyers; they are either appointed by the private contractors or the municipalities, or they work independently to collect waste directly from the households.

The next stage of stakeholders includes scrap dealers, recyclers, and private vendors. Most of the recyclable waste collected by stage one waste workers are sold to stage two waste workers, who further recycle the waste. The third stage of waste workers are: large scale private aggregators and processors. They often own the processing waste plants, and within that there are again waste workers who are engaged in different activities like collecting and sorting waste, loading and unloading of waste, handling the waste processing machines, and cleaning the waste.

The waste sector is vulnerable to the majority of the women employed. As within different stakeholders, women primarily work in sorting and separating the waste, whether it be working alongside the men in the family or working in waste processing companies (Ocean Conservancy,

2019). For collecting waste, they often go out with their husbands or other male family members, but the segregation work largely remains their responsibility (Banerjee, 2021). They are mainly unpaid for their contribution, as they owe no agency in the process of selling the segregated materials and have no right over the income that comes from it. This relates to one of the theories in feminist economics, where the women often are undervalued, and considered unproductive, because they perform the household activities for free. These activities if performed outside the household, the women would receive wages for it, however, as they are helping their family, it is not valued.

Further, the nature of participation at recycling factories is also unregulated and women are engaged primarily as daily wage workers. Women predominantly work in the lower end of the informal waste economy. However, the men in the waste sector are engaged in collection of waste, they are often appointed by the municipalities or the private vendors, they are also seen as scrap dealers, or recyclers. The men working in the waste processing plant are often seen working as collection drivers, or in loading and unloading the waste, or operating the waste processing machines.

In the recycling factories, the women also face gender based segregation as they are often paid less than their male counterparts for the same work and for the same number of hours, as factory owners usually believe that men work faster and help in loading and unloading (Banerjee, 2021). This indicates the informal nature of the waste sector that engages women and men in different tasks, they owe different experiences, they work in different workplace environments to earn their livelihoods.

The pandemic further worsened the position of women in the workforce. Similar was the case of women in the waste sector. Due to restrictions in transportation, they were unable to travel to the different waste stations. As a result they had less access to recyclable waste, followed by less income. It was also difficult for them to travel to the scrap shops, to sell their collected waste. As a result, for many such tasks, they were dependent on “men of the family”. Further, when the educational institutions were shut, the women had an extra burden of taking care of the children during their working hours, it reduced their efficiency. As they mostly belong to the low income stature of the society, their children were eligible for a mid-day meal. Due to closure of school, the children were dependent for food on the family especially the women as they are responsible for care and cooking activities. This created a further burden of extra income to feed their children for women. The position of informal women workers was further worsened by the pandemic.

3. Waste Sector and Construction Sector

As we know there is a vast literature exploring gender in informal sectors especially the construction sector. However, this is not the case for the waste sector. Therefore, to understand

the dynamics of gender in the broader Indian context, this study used data from the NSSO 68th round for both construction and waste sectors, so that we can draw correlation or differences between these two sectors. Some of the variables we used for measurement here are: enterprise type, eligibility for paid leaves, type of job contract, and method of payment.

In table 3 and 4, we see that only 185 workers from the waste sector were surveyed for the NSSO 68th round, 2011-12. However, for the construction sector, 4638 workers were interviewed. This data itself showcases the informality of the waste sector, where the national survey could only collect data for 185 workers. Further, from the data about the waste sector, we could say that 14.05 percent of the workers were women, and 85.95 percent of the workers were men. In terms of the construction sector, 89.41 percent of workers were men, and 10.59 percent of the workers were women. Both these sectors' data shows that the participation of women is significantly low.

Table 3: Gender and Labor Force Participation in Waste Sector

	Male	Female
No. of workers	159	26
Percentage	85.95 %	14.05 %

Source: NSSO 68th Round, 2011-12

Table 4: Gender and Labor Force Participation in Construction Sector

	Male	Female
No. of workers	4147	491
Percentage	89.41 %	10.59 %

Source: NSSO 68th Round, 2011-12

Additionally, in the construction sector, nearly 69.81 percent of the workers are working under a male proprietary, and 10.16 percent workers are under the government or public sector. However, in the waste sector nearly 44.02 percent workers are under a male proprietary and 34.78 percent of the workers are under the government or public sector. This shows that in the waste sector, the formalization of work is better as compared to the construction sector.

In terms of eligibility for paid leaves, nearly 4.3 percent workers are eligible for paid leaves in the construction sector and the other 95.7 percent workers are not eligible for paid leaves. Nearly 99.7 percent of the female workers in the construction sector are not eligible for paid leaves, whereas 95.5 percent of the male workers are not eligible. In the waste sector, 60 percent of female workers are not eligible for paid leave, whereas 52.52 percent of male workers are not

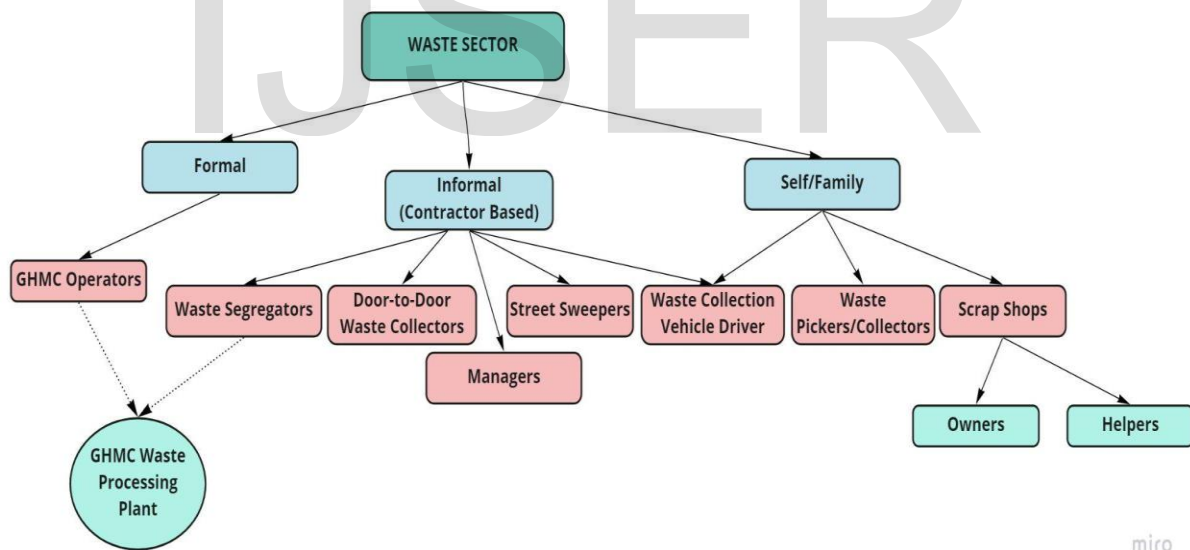
eligible for paid leave. This also shows that formalization of the waste sector is better as compared to the construction sector.

In terms of method of payments, 84.8 percent of the workers are employed under regular monthly payments, 10.9 percent of the workers are employed under regular weekly payment, and 4.2 percent and 5 percent of the workers are employed under daily payment and piece rate payment respectively. However, in the context of the construction sector, 9.4 percent of the workers are under regular monthly payments, 22.6 percent of the workers are under regular weekly payments, and 60 percent of the workers are under daily wages, and 8.7 percent of the workers are under piece rate payment. This also shows that the construction sector is more vulnerable to the waste sector. Therefore, I think there have been more studies done to understand the gender within the construction sector.

4. Structure of Waste Sector

From my primary field work in Hyderabad, Telangana, I understood the structure of the waste sector in the Indian context. Figure 1 represents the same.

Figure1: Structure of waste sector



From figure 1, we can see that the waste sector is broadly divided into three sub sectors: formal, informal (i.e. contractor based), and self/ family managed. The GHMC workers that I interviewed fall under the category of formal, they work in the waste processing plant. Under the informal sector, the workers are waste segregators (who also work in the waste processing plants), the door-to-door waste collectors, the managers of waste processing plants, street sweepers, and the waste collection vehicle drivers. These waste collection vehicle drives also fall

under the category of self/family, as after collecting the waste, they segregate the recyclables with the help of their families (especially wives) and further sell these recyclables. There are also waste pickers and scrap shop owners and helpers who work under family or work as self.

Results from Primary Data Collection

1. Data Analysis

The primary data was collected from interviewing 36 waste workers in Hyderabad Telangana. 21 of the workers were women, and 15 workers were men. From the 21 women workers, 21 of them stated that after their working hours, they are engaged in household chores. However, from 15 men, not a single worker reported doing any tasks after their job. This clearly shows that the women are “double burdened”, they perform the household and care tasks post their job. This double burden, or the idea of it always hampers the participation of women in the labor force.

The patriarchal system, in every possible way, attempts to control women's labor. It is a circular process, where it is assumed that the women are meant for specific activities like child bearing, care, domestic chores, etc. It proposes the idea that “unconventional work”, or “non-traditional work” will be difficult for women to accept and perform, therefore, women are restricted from doing such works. For example, during my interviews, all the women were engaged in either waste collecting/picking, cleaning, sorting, and segregating. However, the men were engaged in varieties of work like waste picking/collecting with an extra facility of vehicles, operators at waste processing plants, managers at the plants, scrap shop owners, etc. The notion of “women can do particular activities”, pushed them towards those particular activities only. This way, occupational segregation has increased not only in specific to the waste sector, this is true across all the informal and formal sectors. The legal and public systems also equally contribute to such segregation.

When the women were asked “why did you choose to work in this particular sector?”, many answered that some (at least one) of their family members were also engaged in this sector. From the respondents who answered yes, 12 of them were women and 4 of them were men. From the 4 men, who responded yes, their wives or daughters were working under them. This reflects the extension of gender segregation from the household level to the workforce level. When asked about the wages, the women working under their husbands or fathers replied “this is our family income”. When further asked, who keeps this income, they replied their husbands or their

fathers. It clearly shows the extent to which gender segregation persists in this sector. The women who help/support their husbands/fathers work, receive no income or recognition. It is considered as their extended care activities.

Some of the reasons for choosing the occupation under the waste sector, the women highlighted that they have no education or other skills, no other job opportunities. Women from the lower caste, with little or no education and skills, struggle to find an opportunity for work, as they cannot engage in jobs like domestic help, street vendors, agricultural workers. So, in order to earn a livelihood they are engaged in the waste sector particularly in the segregating and cleaning activities, as it requires no education, or skills. As the work environment is informal, and they have flexible working hours (like the women in the bottom tier activities, they can get children to their workplace. So, they can take care of the children, and simultaneously work and earn. There were also other reasons like they can manage their family easily with this task, some of them help their family in this occupation, some of their family members are also engaged in this occupation. There's also flexibility, they can get their children to the workplace, cleaning and sorting waste is similar to the household tasks, etc. However, when the same question was asked to the men, they responded that there's not much opportunity in the market, they have less education or skills. So, the women are engaged in this sector because either of their family's association with the occupation, or there's flexibility to work and simultaneously take care of the children. This reflects that the family and the women's association with household chores plays an important role for them to decide their occupation.

The women workers, in various instances, were hesitant to speak in presence of the manager/employer, however, this was not the case for the men workers. Though they were not giving out much information, they were able to speak regardless of the presence of the employer. This shows that women are often oppressed not only in the household, but also in the workplace. They always are under the assumption that they might speak something wrong, surprising one of the male respondents who highlighted this point. He stated that "why are you speaking to the women, they might not be aware of many things that you are going to ask". The segregation also persists in the form of expressions. In the same worksite, the men who were engaged in loading-unloading of waste, processing unit operators, the managers, all of them had protective gear. However, the women who were directly in contact with the waste, lacked the gears. The segregation also persists in the context of access to safety equipment.

2. Forms of gender segregation

Within the waste sector, different tasks and activities are performed by men and women. The women predominantly are engaged in the bottom tier activities like cleaning and segregating waste. However, the men are seen working as segregators, they also load and unload waste,

waste collection vehicle drivers, operators, and they are also self-employed as scrap shop dealers, etc.

Further, there is wage difference between men and women, for example, in the waste processing plant, both men and women were engaged as segregators, but men earned more as a bonus, because they were helping with loading and unloading of waste. However, women were only cleaning and segregating waste. During the interview, I spoke to Asha (name changed) about the wage difference between her and her co-workers Sameer (name changed), she was not aware about this wage difference at the first place, and when further she justified that he does extra work in terms of taking the waste to the plant for processing, and she can't do that because she has to go home early as her children will be back after school. This reminds me of a theory in feminist economics, which states that women often are restricted to better work opportunities, because of their care responsibilities.

There's also difference in terms of salary types, some receive regular monthly wages (especially men), and women receive daily wages, because of their care responsibilities they may or may not be able to go to work the next day. There's also differences in terms of fixed vs flexible working hours. Nisha (name changed) mentioned that they do not have fixed hours of work, but rather they get a pile of waste to clean and segregate, and they have minimum working hours but not fixed. So, often these women work overtime.

Further, in terms of the nature of employment, in my sample nearly 55.6 % workers were contract based, 22.2 % were temporary workers (i.e. they were working under the municipality but their work was not permanent). 11.1% workers were permanent, and 11.1 % were self employed. Among the contract based workers, 44.4 % were only women, and under temporary workers. The nature of contract shows the informality of the sector, and women are more vulnerable as from my sample size, no women were either self-employed or had a permanent job under the municipality.

Table 5: Variations in Nature of Employment by Gender (in %)

	Male	Female	Total
Contract Based	11.11	44.44	55.55
Temporary	8.33	13.8	22.13
Self Employed	11.11	0	11.11
Permanent	11.11	0	11.11
Total	44.45	55.55	100

2. Factors that leads to gender segregation

Two types of factors lead to gender segregation in the waste sector: labor supply factors, and labor demand factors. Labor supply factors refers to the factors that contributed to gender segregation from the worker's side. However, labor demand factors refers to the factors that contributed to gender segregation from the employer's side.

Under Labor Supply Factors, there is education and skills. So, due to low education or skills, women end up in low paid jobs, or the bottom tier activities. This relates to the idea that women lack access to education and skills as compared to men. Marital status also plays a crucial role as more married women responded that they are engaged in this sector because their husbands are, and many responded they started working in this sector after their marriage. Caste also plays a major role, as due to the caste, they lack access to education or skills, and in the labor market they are also discriminated against. It is a circular process, they lack access to education due to the caste system, and throughout their life they are stuck to this, and marginalization. Number of children and type of family also influences the employment of a woman, as they are expected to perform their household chores and caring work, apart from doing a job.

In terms of labor demand factors, there's some underline perception of employers, that women can't do certain things like loading or unloading of waste and or operating machinery, though the men with the same education and skills can do such tasks, and earn more. This relates to the idea that women often are seen doing household chores for free of cost, and therefore, the employers think, if these women can work for free, then why do they need to pay them much. This is basically, gender stereotyping. Employers also believe that there are productive differences (women have family, children, less physically capable) so they cannot do certain tasks. However, there is no evidence, whether the claims are true or not.

3. Gender and type of stakeholders

Women engaged in the low end tasks, they have low wages, poor working conditions, and no social benefits. Due to the poor working environment they often are victims of harassment. During the interviews, four women mentioned that they are not paid for their work, and they are just helping their husbands or father with their work. So, some women work for their husband/family without any income, i.e. basically "unpaid labor". This relates to the idea that women are often forced to work under their family or for their family, and they often can't say anything against it, because they are emotionally attached to their family. Further, as you can see from table 1, there were no women in the upper spectrum of the hierarchy, they were mainly engaged in bottom tier jobs of cleaning, segregating waste. This reminds how women are often seen doing the cleaning tasks in the household, and therefore, they fall in the same loop of doing similar activities for paid work. Another example of this could be domestic workers, who do the same tasks within their household for free, and do it again for other households, and receive

payment on that behalf.

4. Perception of women workers and associated barriers

Within the sector, the women also face discrimination, whether it be in terms of allotment of work, or wages. For example, as certain tasks in the waste sector require physical strength like loading or unloading of waste, men are preferred over women to perform these tasks, and they also receive higher wages for such tasks. Apart from the social stigma, physical strength, health and safety issues are a major concern for the women engaged in this sector, as they often are victims of sexual harassment in the workplace. Additionally, as they are not aware of their basic rights, like access to health, etc, they are exploited, and due to lack of awareness, they cannot raise a voice against it. The majority of the workforce engaged in the waste sector haven't joined the workforce with their willingness to, rather they have joined due to lack of other livelihood opportunities, or lack of appropriate skills like education that would be essential for jobs in other sectors.

However, apart from these complexities, women in the waste sector workforce experience advantages in terms of flexible working hours. For example, women who are engaged in the waste picking activities, often have advantages of flexible time, like they can finish their household work and then go to work, as they will be collecting and selling waste on their own, and there is no one to impose any restrictions on them, they can work at their own time.

Additionally, as the society stigmatizes women with reproduction and household tasks, working in the waste sector with flexible working hours, gives them the allowance to be a part of the working force. For example, if women are engaged in any other working activities without flexible time, then the family may not allow them to undertake that job. Moreover, this sector also works as a source of income to various women-headed households, as many of them lack education and skills to acquire a job in any other sector, and this sector often doesn't require any work experience, skills, or education. This also gives women an opportunity to work as a side business/job, for better financial stability.

Further, the choices and preferences of women are often not their own, it is determined by various factors like social norms, childcare, participation is influenced by others, etc. There were also certain instances where women did not keep their income, instead it was with their husbands. So, in such cases they lack autonomy, they lack bargaining power within the household. It has other implications like domestic violence, and it also impacts their own wellbeing, their children's wellbeing, their education. However, to conclude some of the barriers to women's participation in the labor force are education, skills, caste, family care, etc.

Conclusion

The patriarchal system, in every possible way, attempts to control women's labor. It is a circular process, where it is assumed that the women are meant for specific activities like child bearing, care, domestic chores, etc. It proposes the idea that “unconventional work”, or “non-traditional work” will be difficult for women to accept and perform, therefore, women are restricted from doing such works. Similar is the case in the waste sector, where women are restricted to do various tasks, or lack options to do many tasks, due to the structure of the society. This study will contribute to the literature in the waste sector, by defining gender segregation. The study will reach to a conclusion that women earn lower wages as compared to men in informal waste sector employment in the urban areas in India, in the influence of several factors like caste, education, age, etc. Second, in the waste sector the type of work offered to an individual is based on their gender. The employers prefer a particular gender for certain tasks. There are differences in working hours between men and women employed in the waste sector, based on their gender, as women also take responsibilities of household and care work, and therefore employers prefer men over women. I have done a comparison between construction and the waste sector to understand the stature of the waste sector in the Indian context.

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