Article

Intersecting Systems of Power Shaping Health and Wellbeing of Urban Waste Workers in the Context of COVID-19 in Vijayawada and Guntur, Andhra Pradesh, India

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Abstract: Background: Waste work in India is an undervalued role relegated to historically marginalised communities. The informal nature of their work coupled with lack of state regulation keeps waste workers trapped in poverty. This study aims to understand how intersecting systems and relations of power impact the agency of waste workers to shape their health and wellbeing. Methods: We used in-depth interviews, key informant interviews, and focus group discussions to collect primary data from waste worker communities in Vijayawada and Guntur in India. Thematic analysis was used to analyse data using conceptual frameworks relating to wellbeing and power. Results: Inter-generational poverty and lack of access to social determinants of health keeps waste workers trapped in a cycle of debt and poverty. They experience negative wellbeing owing to material and relational deprivations that are sustained by a nexus of power relations, explained using the themes of "power over", "power to", "power with", and "power-within". Conclusions: The ability of communities to exercise agency is constrained by the power exercised on their lives by the state and society. NGOs play a supportive role for the realisation of rights, but the ability of waste workers to organize and effect change is limited to coping strategies.

Keywords: power; intersectionality; waste workers; health; wellbeing; India

1. Introduction

India is home to between 1.5 to 4 million waste pickers and 5 million sanitation workers who mainly work in the informal economy, which contributes to about two thirds of the gross domestic product of the country and comprises over 90 per cent of all employment and livelihoods (National Commission on Enterprises in the Unorganised Sector 2007). Waste workers are an umbrella category and include sanitation workers (contractual and secure tenure workers), contracted door-to-door garbage collectors, and waste pickers (Josyula et al. 2022). Waste pickers is the term used to describe those who pick and collect recyclable waste from the streets, garbage dump yards and bins, and places where garbage accumulates.

While anxieties around the environment, climate, sustainability, and waste management are central to discourses about waste from different standpoints, waste pickers and sanitation workers are rarely part of these registers. There is a general recognition that these communities contribute to recycling and keeping cities/spaces clean and in turn are affected by their work with waste, including their health and wellbeing. For example, in response to their environmental impact, waste pickers have been described as the "green brigade" and "front-line workers". However, they remain among the most disadvantaged in society in India (Joshi 2017; Hasiru Dala 2021).

Across the world, waste workers typically belong to the most marginalised and disadvantaged segments of society. In India, waste picking has been and is still associated with caste groups at the lower end of the caste hierarchy, who are economically disadvantaged and remain on the margins of the society and the economy. These categories are further complicated when they intersect with gender, religion, and urban poverty, adding dynamism to what is understood as the "marginal" and how it impacts health and wellbeing. The occupation of handling waste in India has historically fallen on "Dalit" communities. Dalits are considered at the bottom of the socially constructed caste hierarchy and are often derogatorily referred to as "untouchables" (Srinivasan et al. 2016). To this day waste work remains a function of caste (Gidwani and Maringanti 2016; Gidwani 1992; Gidwani and Baviskar 2011). Consequently, many Dalits are forced into waste picking through exclusion from other livelihoods. Likewise, many are forced to remain in waste picking as they rely on daily income to survive and earn too little to acquire savings. Other sites of inequity operate together with caste; for example, poor working-class people who migrate to cities in search of other work are often absorbed into waste-picking work (Gidwani and Maringanti 2016; Gidwani 1992; Gidwani and Baviskar 2011; Kornberg 2019; Shankar and Sahni 2017).

In the context of COVID-19, there is growing interest in and a consensus that the pandemic has unequally impacted different groups in societies, through differential vulnerabilities that are shaped by histories of exclusion. During the COVID-19 pandemic, waste workers employed with government institutions continued to provide essential public health services. Others working in the informal sector suffered loss of livelihood. Those who continued to work worked without adequate protective equipment despite handling contaminated and medical waste (Chakravorty 2020; Raghunandan 2021). The history of exclusion of waste workers in government systems is evident from a review of policy. In India, waste pickers were recognised in policy documents only as recently as 2016 through the Solid Waste Management Rules, 2016 (The Gazette of India 2016), which defines them as:

"a person or groups of persons informally engaged in collection and recovery of reusable and recyclable solid waste from the source of waste generation: the streets, bins, material recovery facilities, processing and waste disposal facilities for sale to recyclers directly or through intermediaries to earn their livelihood." (p. 55)

Although the definition of who is a waste picker in India is recent, different committees set up by the successive governments in India following its independence mention waste pickers in the context of solid waste management. Early committees on labour like the Bajaj Committee of 1995 (Bajaj 1995) and later the National Commission on Labour (NCL) of 2002 (Varma 2002) used different terminologies interchangeably, including rag pickers, waste pickers, waste collectors, and scrap collectors. There is also no explicit focus on them and their concerns in key social and health policies. For example, National Urban Health Mission policy (Ministry of Health & Family Welfare 2013) fails to acknowledge the presence of these categories of workers, making it that much harder for waste picking communities to avail themselves of health services. A convergence document, the Swachh Bharat Mission–National Urban Livelihood Mission (SBM-NULM), was needed to establish the connection of NULM policy and make it applicable to waste pickers (Ministry of Housing and Urban Affairs 2018). Since the policies do not mention this category explicitly, questions have been raised in Parliament as to whether a specific policy is applicable to these communities or not, to which the answers have also been vague. For instance, in 2011, a question was posed in the lower house of Parliament that asked whether "*'rag pickers' are covered by any substantial labour laws in the country*". The response to this was, "*'rag pickers' are covered by such labour laws as are applicable to them.*" Additionally, the language used is stigmatising; for example, the National Commission on Labour refers to waste pickers as '*illiterate*' and '*illegal aliens*' (Varma 2002).

In recent years there has been an increase in research on waste pickers, particularly from the lens of waste management. Research into the health of waste pickers has often focused on specific health issues, particularly occupational health risks associated with

waste work (Emmatty and Panicker 2019). Studies have repeatedly found the health status of waste workers to be worse than that of the general population (Salve et al. 2017, 2019), and have reported low levels of income, education, and inadequate living conditions (Schenck et al. 2019). Discussions of the wellbeing of waste workers have been lacking, although there are notable exceptions such as the Wittmer et al. (2020) study of the wellbeing of female waste pickers in Ahmedabad.

This paper aims to contribute towards addressing the gap in the literature with regards to a wellbeing approach towards the lives of waste workers, with a focus on drawing out the underlying power relations at all levels, from state to individual, that underpin their lived experiences. These power relations and their effects on wellbeing were illuminated during the crisis of the COVID-19 pandemic. We do so in order to identify strategic approaches to future research and development work with and for waste pickers.

Conceptual Framework

The conceptual framework for this paper combines White's (2010) dimensions of wellbeing with several approaches to understanding the power relations shaping wellbeing, including Rowlands's (1995) concepts of power as well as concepts of the intersectionality of power systems (Crenshaw 2017).

Wellbeing is a complex and contested concept, but is generally agreed to be a human-centred approach to development outcomes that includes not only material and objectively measurable aspects but also personal, relational, and subjective dimensions. Wellbeing situates health within the social context considering material, relational, and subjective factors, as described by White (2010).

White's (2010) wellbeing framework identifies three dimensions: material, relational, and subjective. The objective material dimensions consist of practical things like level of income, assets, and standard of living, and the subjective material dimension includes the level of satisfaction one feels with regard to the material aspects of their life. The relational dimension is broken into two portions: the human and the social. The objective human aspects are concerned with a person's capabilities, attitudes to life, and personal relationships, and the subjective human aspects are concerned with a person's satisfaction with their life, personal beliefs like religion, and their personality.

The objective social aspects concern one's relationship/positioning with the state and community, while the subjective social aspects are concerned with people's perception and satisfaction of their relationship/positioning with the state and community. The subjective dimensions of wellbeing can be understood in terms of people's own perceptions of their material, social, and human positions, as well as their cultural values, ideologies, and beliefs; these connect across the other dimensions of wellbeing. It is important to note that the dimensions of wellbeing are interconnected and inter-related with each other and with the larger socio-cultural context. For example, individual aspirations and wants with regards to the material or social are derived from hierarchical social structures and cultural norms. What flows from this is that attaining a state of wellbeing is a social process in which the individual, community, systems, and governance structures are interconnected (White 2010).

As such, analysis of wellbeing should not only focus on the personal aspects of wellbeing but also include relational aspects and the power structures that exist within them. White (2010) explains how the use of wellbeing as a central concept allows research to focus on "stigmatising dynamics" rather than simply markers of disadvantage such as poverty or social exclusion. Therefore, the conceptualisation of wellbeing requires further discussion on power.

Wellbeing approaches to development are broadly aligned with capabilities approaches to human development, pioneered by Sen and Nussbaum (Sen 1985, 1992, 1993), who see a "good life" as "a life of genuine choice." Capabilities are understood as the real, or substantive, freedoms that people have to achieve certain "beings" (the kinds of persons they are able to be) and doings (activities they are able to undertake). This approach is concerned with expanding human agency, which is defined as the individual ability to act to pursue what one values and has reason to value. Values and opportunities to pursue

them are strongly shaped by power relations with others, including the state and societal institutions. Drydyk (2013) argues that the ability of an individual and/or group to pursue and realise their "wellbeing" freedom is dependent not only on the expansion of their agency but on their degree of empowerment, which involves removing the barriers that restrict exercise of agency to shape one's life for the better. Expanding agency includes being able to have an active role in deciding, prioritising, and pursuing goals at an individual or group level. Furthermore, the ability of an individual or a group to exercise power depends on the relational agency of other, more dominant groups/structures and the power they hold and exercise. Power is asymmetrical and hence the choices and decisions made by the dominant group shape the choices and decisions the less dominant group can make. Similarly, the agency of the less dominant group may be restricted by the exercise of agency of the dominant group.

This means that power is relational and can be seen as both a negative and a positive force (VeneKlasen and Miller 2002). Rowlands (1995) influentially posited that these may be grouped into "power-over", "power-to", "power-with" and "power-within". "Power-over" captures the asymmetrical nature of power wherein the exercise of agency (actively or passively) by one group inhibits the exercise of agency of another group. "Power-to" determines the ability of a group to exercise agency and achieve desired outcomes. "Power-with" determines the interactions among group members that could be repressive towards some members of the group while also being transformative for some or all members of a group. "Power-within" operates at an individual level and determines the ability of a person to make certain decisions. The ability of the outcomes of exercise of agency to be transformative for less dominant groups thus remain relational to the exercise of agency by the more dominant groups. "Power-over" and "power-with" deal with the relational aspects of power vertically and horizontally, respectively.

To understand the relational aspects of power, intersectionality is a useful framework to describe how power is constructed and how it operates. Intersectionality is also useful to understand the location of power within a group or an individual—"power-to" and "power-within". An intersectional lens allows us to make sense of how different markers of a person's identity (social/economic/race/caste/gender) and associated underlying systems of power (shaped by the larger socio-political context) influence each other to shape the power of an individual or a group (Crenshaw 2017). McCall (2005) proposes three different approaches to categorical analysis using intersectionality. The anti-categorical approach rejects the use of social categories and relates to capturing life in its truly complex form. The intra-categorical approach identifies the "neglected points of intersection" with categories. For example, in the context of waste pickers, waste pickers who are women or are disabled. The inter-categorical approach uses existing categories to describe the unequal relations amongst social groups, using entry points and pre-existing social categories that are used to analyse power relations.

To achieve individual wellbeing, it must be sought collectively at the community and systems level. Relations among and between the different levels—individual, community and systems—are based on hierarchical markers of intersecting identities and socio-cultural norms, which create and are in turn governed by relations of power. The understanding of the process of advocating for wellbeing must be situated in said power relations. Thus, wellbeing must be located between structural arrangements and relations, and needs to be understood from the perspective of power. A gap remains between writing and thinking about how power becomes embodied and operates at the intersections of marginality and wellbeing and the real-world fallout for marginalised communities like waste pickers (who are the focus of this paper). We share findings from our ongoing work with waste pickers in Vijayawada and Guntur in India in the ARISE (Accountability for Urban Informal Equity) project in this paper.

In the following sections, we detail the methods used for analysis followed by the results section that outlines the themes generated. The paper concludes with a discussion

on the findings and suggestions for necessary streams of research that are needed to better understand wellbeing among waste workers in India.

2. Materials and Methods

2.1. Data Collection

In-depth interviews and focus group discussions were conducted with waste workers in the cities of Vijayawada and Guntur in Andhra Pradesh, India in 2020 and 2021 at the beginning of the COVID-19 pandemic. In our study, waste workers is an umbrella term that we are using in our study to refer to two categories of workers: "contractual waste workers" and "waste pickers". "Contractual waste worker" refers to sanitation workers and door-to-door garbage collectors who are contracted by the municipal corporation either directly or through an NGO. Sanitation workers perform tasks such as the sweeping of roads and drains and door-to-door garbage collectors collect waste from houses. We use the term "waste picker" to refer to individuals who pick waste off the streets and sell recyclables to scrap dealers to earn a livelihood.

The focus of the interviews and focus group discussions was to understand the experiences of the participants during the COVID-19 pandemic and explore resilience and coping strategies. Ethical clearance to collect the data was obtained from the George Institute Ethics Committee and the Liverpool School of Tropical Medicine Research Governance and Ethics Office.

The interviews took place over the phone considering the pandemic, but the focus group discussions were conducted face-to-face and all COVID-19 protocols were followed. In total, fifty participants were included: seven waste workers and two key informants were interviewed, and forty-one waste workers took part in five focus group discussions. The details of the participants are given in Appendix A.

The ARISE team has been working with waste workers since 2019 and has built a relationship of trust with them. The engagement with them is ongoing, because of which we were able to reach out to the participants in a purposive manner and were able to conduct the interviews and focus group discussions. Oral consent was obtained from participants for conducting interviews over the phone. Written consent was later obtained from participants interviewed. Written consent was also obtained from participants for conducting the focus group discussions.

During the pandemic, the ARISE team was involved in raising funds to purchase and provide relief material such as food for waste picking communities. While this may have strengthened relationships, power differences remained. We acknowledge that the research team held power over the waste pickers. This was illustrated by participants referring to the researchers as "sir" or "madam". This is not to say that the waste workers did not exercise power. Power was exercised mainly through either not agreeing to participate in the interviews or stalling during interviews. Participants also exercised power by helping the ARISE team connect with other participants who would be interested in speaking to us.

Our experience in conducting phone interviews was the lack of control that we could exert on the environment in which participants were sitting and being interviewed. It was much harder to ensure that private spaces were available for these conversations. Some of the ways we dealt with participants' distress when it came up involved stopping the interview but keeping an informal conversation going to acknowledge and empathise with their distress.

2.2. Data Analysis

The audio files of the interviews and focus group discussions were transcribed and the transcripts used for analysis. Thematic analysis was the most appropriate analytical framework because it provided a structure that allowed for creative freedom but also left a clear audit trail, thus increasing the trustworthiness of the study (Reynolds et al. 2011). A coding framework was developed that was both deductive and inductive and covered

the probes we used during the interviews and focus group discussions, as well as the researchers' learnings and reflections in our ongoing work with the waste workers.

NVivo software was used to manage the data. The transcripts were uploaded and read through multiple times with notes documented on the software. Each transcript was then read and coded line by line to analyse all aspects of the interviews. Analysis was conducted with intention to understand the underlying power structures. Similar sentences or themes were then grouped under the same node and new themes resulted in a new node. Once all the interviews were coded, the various nodes were grouped into descriptive themes. This provided an initial coding framework. Analytical themes were drawn from the descriptive themes, which then formed the final coding framework. The final coding framework was then used once more on each transcript to check its dependability. This approach allowed for a structured yet inductive analysis.

Care was taken to ground our analysis with an intersectional lens, and the researchers analysed the way in which relational identities such as caste, class, employment status, and gender were embodied in wellbeing narratives shared by the waste workers. Furthermore, an inter-categorical approach allowed analysis of the power relations between categories such as "waste workers", government officials, society and "NGOs". In addition, an intra-categorical approach was used to analyse sub-groups within the waste picking community. This included contracted waste pickers and waste pickers who collected waste and sold it to earn a living.

The transcripts were coded line by line to produce 33 codes and 155 sub-codes, which were grouped into 33 themes. Analytical themes were then drawn from these with relation to power structures and grouped into 5 analytical themes: lived realities, power over, power with, power within and power to.

3. Results

Our results are divided into three sections. First, we report the material dimensions of the lived realities of the waste workers, expressed as limited power to access stable livelihoods and decent living and working conditions despite aspirations to escape the cycle of poverty, and the exacerbation of these vulnerabilities during the COVID-19 pandemic. Second, we discuss the human dimensions of waste workers' wellbeing related to health and capabilities. Third, we analyse how the material and human dimensions of waste work reflect and intersect with social relations of power, the state, and other members of society, using Rowlands's (1995) framework of power dimensions. Power-over relations are presented to locate waste pickers in the socio-political context. Power-with relations are explored addressing how these mitigate power-over relations. Finally, "power within" and "power-to" themes explore how power over and power with shape the agency, capacity, and ability of waste workers to advocate for their rights to health and wellbeing.

3.1. Material Dimensions

It is important to understand the material conditions and environments in which waste workers live their lives, as they shape and influence wellbeing. Referred to as "social determinants of health" in public health discourse, the lived realities of people's lives pertaining to food insecurity and access to housing, water, sanitation, education, and employment shape the health and wellbeing of people (World Health Organisation 2008).

3.1.1. Precarious Livelihoods, Exacerbated during COVID-19 Crisis

Before we elaborate on precarious livelihoods, we lay out the context in which participants live and work and their relationships with NGOs, which are crucial in understanding the mitigating forces in the lives of waste workers. The participants with whom we interacted were either waste workers employed with the municipal corporation as workers contracted to sweep roads and drainages and collect garbage door-to-door, or

waste pickers who collected recyclable waste and sold it to scrap dealers. The outsourcing of sanitation work and door-to-door garbage collection and associated tenuous contractual arrangements have increasingly become the norm in the sanitation sector. Waste pickers have always been living and working informally and are completely dependent on the market to sell the recyclables they collect. Some of the contractual workers that we interviewed were hired through an NGO that was contracted to hire and pay these workers. This NGO was an organisation that supported waste picking communities to access their entitlements and be able to meet basic needs like food, water, shelter, employment, and dignity. Thus, these waste picking communities were dependent on this NGO to meet their material needs and fight for their rights and entitlements (power-with). At the same time, the NGO, on account of being an employer, had "power over"—influence over—these waste picking communities.

Employment status is significant in shaping levels of livelihood security, which is a key determinant of material wellbeing. While there were many commonalities in the lives of the study participants, the levels of insecurity in employment differed between the waste pickers and contractual waste workers. For example, workers employed by the municipal corporation are paid a monthly salary, while waste pickers' earnings are dependent on the recyclable waste they can pick and sell, normally on the same day and mainly to a network of scrap dealers with whom they have developed a relationship over time. Earnings by waste pickers through picking and selling waste are unpredictable, sometimes very meagre, and depend on the rate being offered on the given day.

There are significant differences between waste pickers and contractual workers employed by the municipal corporation, since the former are dependent on the composition of recyclables that they can collect in a day. Daily earnings are not always sufficient to meet basic family needs, with consequences for food insecurity whereas the salaried workers are afforded some money on a regular basis.

"The contractual waste workers are managing their families without a problem, even if sometimes they must borrow money from others. But for us, if we don't have work, it is not possible for us to eat and feed our families."

- WW 3, Guntur, male, waste picker

Waste pickers often must work multiple jobs to make ends meet. They often leave as early as 3 a.m. to collect waste and take on additional work to supplement their earnings, such as domestic work or construction work, or sometimes working as dish washers in roadside eateries. Participants spoke of how their caste defined the employment opportunities available to them both pre- and post-lockdown and how they struggled with finding alternative work. Some participants also described having to rely on begging to make ends meet.

"Participant (Female): All of us mainly dependent on waste picking. Sometimes we ask for alms if we don't have any work."

- FGD 2, Vijayawada

A regular salary affords access to fulfil some basic needs such as food; however, contractual waste workers still struggle to be able to afford expenses related to children's education and save money. In addition, among the contractual waste workers there were disparities in earnings in comparison to the tenured workers employed by the municipal corporation. The salaries of the contractual waste workers were almost one-third less compared to the waste workers employed directly by the municipal corporation.

"The tenured municipal corporation employees get 18,000 rupees and we get only Rs. 12,000. Getting a monthly salary is very useful. Right now, we don't have any savings but at least we eat one or two times a day. If we get proper salary, I will use it for my children's' education."

- WW 2, Guntur, male, contractual waste worker

As part of the COVID-19 containment measures, there was a national lockdown imposed in India during the first COVID-19 wave. This was followed by localised lockdowns

and restrictions imposed by the state government during subsequent COVID waves. During these times, while contractual workers did not face disruptions in employment, waste pickers were unable to collect or sell waste as they did not have the freedom to move around on the streets and scrap shops had been forced shut. Participants spoke of the police harassing scrap dealers and threatening to file charges against them if they opened their shops. Even after the lockdown was lifted, opportunities for work remained limited as other COVID-19 restrictions continued to be brutally enforced by the police. Not being able to earn meant severe food shortages for the family. Alternative employment opportunities were not easily or widely available to all during and post the lockdown. Before COVID-19, many women waste pickers would work in roadside eateries, many of which could not survive the losses suffered during the lockdown and thus remained closed even after COVID-19 restrictions were eased.

"Participant (Female): We people can survive only if we work daily outside but we were not allowed to move around on the roads due to COVID-19. So, we faced many issues for money and food. Most of the days, we ate only one meal in a day."

- FGD 5, Vijayawada

The work of waste workers and sanitation workers were essential and central to maintaining public health, hygiene, and safety during the COVID-19 pandemic. Since they came in direct contact with several kind of contaminants in waste, they were also at high risk of contracting COVID-19 during the pandemic. However, among frontline workers, they remained the least supported by the government in terms of being provided protective equipment or hazard pay during the pandemic. Participants reported not receiving adequate protective equipment like masks and gloves from the municipal corporation or the government. Some efforts were made by government volunteers to distribute masks in communities, but these too were not adequate, and waste pickers had to largely rely on NGOs for receiving protective gear. Ultimately, contractual waste workers were forced to continue their duties in what they felt were unsafe and exploitative conditions.

"Now in this lockdown they (contractual waste workers) are facing many problems. The municipal corporation officers are asking them to work for longer hours, but they won't get extra salary. The workers are afraid of coming into contact with the deadly virus while cleaning dustbins. The government has also not distributed any masks and gloves."

- WW 3, Guntur, male, waste picker

Participants also reported not receiving their salaries on time. As a result, despite having a salaried job, they were forced to borrow money to pay for their daily living expenses.

"We were getting our salary every three or five months. So, we had to borrow money from our colleagues and friends."

- WW 2, Guntur, male, contractual waste worker

It is clear from the waste workers' experience that their lives are characterised by financial insecurity. Both groups of waste workers needed to take loans from local money lenders or borrow money from friends and family to meet basic needs such as food, education, and healthcare.

"Participant (Female): With the high interest rates, and very small amounts of income we are sometimes unable to pay the loans, and this means we must pay double interest rates. We end up being in this loop for years.

Participant (Female): We end up taking loans for repaying the earlier loans and then again, the same cycle repeats. In this process, we are not able to care of our children's needs like good food, education, and health. We can't buy any new item or assets. We live in the same small house by doing the same work collecting waste, with no bright future."

- FGD 5, Vijayawada

Due to reduced earnings and delayed salary payments during the COVID-19 pandemic, dependence on loans and borrowings increased. Insufficient and unpredictable earnings often created challenges repaying loans, which increased the amount of interest,

and put waste workers at risk of physical violence at the hands of money lenders. Many found themselves in a vicious cycle of debt and inability to repay, incurring further interest and severely constraining their opportunities to invest in their futures.

3.1.2. Food Insecurity

In response to what is important for achieving "wellbeing", one of the themes the participants spoke about was not being able to afford food and a nutritious diet. Participants had knowledge of the importance of and requirements for a healthy diet, but said that they were often unable to afford food and had to either stay hungry or eat food procured from begging. In addition to the physical impacts of lack of food on health, the subjective aspects of a sense of abandonment by society resulting from poor living conditions and limited food security were clearly expressed by participants.

"Participant (Male): We eat only during the days when food is available. We are ignored by the society. When we can't afford food, we go for begging and feed our children. We want our children to be healthy and happy. But we need money to feed our children healthy food."

- FGD 2, Vijayawada

"Participant (Female): Sometimes, we slept with an empty stomach as we didn't have enough food to eat."

- FGD 5, Vijayawada

Food shortages became more acute during the COVID-19 pandemic, due to reduced earnings and movement restrictions that impaired the ability of waste workers to feed themselves. Participants reported that there were some efforts by the government to provide food rations, but the distribution was not consistent and the amount of ration provided was not enough. Waste workers thus became reliant on the goodwill and charity of NGOs and society. However, the rations provided by them too were not adequate. Many participants narrated experiencing hunger during the pandemic due to being unable to eat more than one meal a day, as well as the emotional suffering of being unable to provide sufficient food for their children.

3.1.3. Access to Housing, Water, and Sanitation

Owing to myriad forms of distress, including social and financial distress mainly caused by low earnings, waste pickers and contractual waste workers alike found themselves unable to meet basic needs such as safe housing and access to water and sanitation facilities. Depending on what waste workers chose to prioritise in terms of needs, some waste workers were able to live in rental housing, while others lived on streets and footpaths. For those able to afford rental housing, this too was most often in informal settings with poor living conditions, such as a lack of access to toilets or running and potable water. Thus, regardless of the nature of their employment, waste pickers and contractual workers ended up living in the same settlements. At the time of writing this paper, some waste workers were provided housing by the government through rehabilitation schemes. However, the provision of housing was not linked to employment or work contracts. Thus, being employed by the municipal corporation still did not guarantee access to proper housing.

Many participants reported living in temporary shelters made with mud or plastic sheets, which left them vulnerable to health risks. Participants reported living among flies, mosquitoes, snakes, pigs, rats, and sewage, which posed health risks to them and their children, and that their housing was inadequate to protect them against the extreme weather conditions faced throughout the year, including heat, cold, and rain.

"Participant (Female): We face many issues during different seasons, especially rainy season. We stay among flies and mosquitoes. Our house tents leak and we can't stay in that, and children shiver due to the cold weather."

- FGD 2, Vijayawada

"We are staying at the roadside. Our shelters are made of plastic sheets. During the summer months they become very hot due to high temperatures."

- WW 5, Vijayawada, male, waste picker

Very few participants, whether contractual workers or waste pickers, had access to water connections, with many relying on hand pumps, water tankers, or public taps to access water. Even among the few participants who had a water connection at their homes or at their neighbours' homes that they were able to use, accessing clean drinking water was always an issue. Participants said that they had to store water for many days and ration its use.

"Every day we will get water from municipal pipeline. But it is not at my home, we are getting it from another house as they have a water pipeline. We have one drum and buckets in which we fill water for use. Sometimes we must use the same water for three days."

- WW 2, Guntur, male, contractual waste worker

Similarly, access to toilets was a challenge for all participants.

"We have common toilets for all, but we do not use that bathroom. We have a separate room for bathing. Some people don't have access to common toilets and so they must go in the open spaces."

- WW 2, Guntur, male, contractual waste worker

Participants faced challenges using public bathrooms (toilets and washing facilities) as they could not afford to pay fees to use them. Women in particular expressed concerns about their safety due to lack of access to toilets and washing facilities and also brought up the issue that public toilets were not always located where they stayed.

"Participant (Female): As we don't have any toilets here, we bathe in the open spaces by pouring water on our body without removing our clothes. We cannot use public toilets as we will have to pay to use them. Those too are far away from here."

- FGD 2, Vijayawada

3.2. Human Dimensions

3.2.1. Constrained Aspirations: Generational Transfer of a Precarious Occupation

Waste pickers aspire for better jobs, but due to their caste status they do not have many alternative livelihood opportunities available to them, keeping them trapped in waste work. Most waste workers "inherit" their occupation from their family. It is only recently that a few waste pickers were integrated into employment on a contractual basis by the municipal corporation.

"Since my forefather's days we are mainly dependent on waste collection."

- WW 3, Guntur, male, waste picker

Some expressed a sense of resignation to the "fate" of being limited to this precarious and stigmatised occupation and the harassment they faced due to their occupation.

"Participant (Female): There are days we earn nothing despite walking long distances to search for waste. We get harassed by different people on roads for collecting waste. We feel very bad on such days. We console each other by saying that we don't have any other option for earning. We should accept our fate and move on."

- FGD 2, Vijayawada

Most waste pickers with whom we spoke had no or limited schooling. Some never attended school, whilst others were withdrawn from primary education as their parents could not afford school fees, in some cases due to prioritising other siblings or due to the death of a parent. Others were married off early, or financial distress at home forced them to join work as waste pickers to contribute to making ends meet for the family.

"Participant (Female): I haven't studied at all. My mother died in my childhood itself. My father was a rickshaw puller. So, we didn't get a chance to study.

Participant (Female): My parents paid me fees by earning money from collecting waste. They made me study till 5th class. My education had to be stopped as my parents

were unable to make ends meet at home and I entered the workforce collecting waste. I have ten siblings. All our siblings and family are into waste picking only."

- FGD 5, Vijayawada

3.2.2. Assertion of Capacity, Capabilities, and Aspirations

Waste workers recognise the hard work that they put in and assert that they deserve better working and living conditions as well as access to better job opportunities. Despite the daily hardships faced by waste workers, they understand and acknowledge their own capabilities and express demands for their work to be absorbed into government jobs so as to better the living conditions of themselves and their families. Contractual waste workers recognise that their salaries must be at par with the tenured workers of the municipal corporation as they work just as hard as them.

"The tenured municipal corporation employees get 18,000 rupees and we get only Rs. 12,000. We are also working hard compared to municipal corporation workers."

- WW 3, Guntur, male, waste picker

Some waste picker workers aspire to be absorbed as municipal corporation workers or to obtain government jobs, which afford job security and better pay.

"Participant (Female): We just want a house and our children to lead a good life. We are hoping for government support to educate our children and get a government job in the municipal corporation."

- FGD 2, Vijayawada

Participants expressed a determination to enable their children to be educated, in order to provide them with opportunities for alternative work, such as government jobs. They wished to break the intergenerational cycle of poverty through both improved material prospects and opportunities for their children to lead a life of dignity and respect.

"I have shown my children what I do for a living. And I have said to them, I am doing this work for your life. You have to study well so you don't have to become a waste picker too."

- WW 1, Guntur, female, contractual waste worker

"Participant (Male): I want my daughter to study well. I don't care of my own concerns, but my daughter should be educated well, earn respect and a good name in the society and she should have a bright future."

- FGD 2, Vijayawada

Many participants spoke of education as a prerequisite for respect in society. Some were prepared to endure many hardships such as taking loans or sending their children to residential schools to ensure that their children were able to attend school. Their children attended either free government schools or a residential school run by an NGO that worked with waste workers. However, some of them aspired to send their children to fee-paying private schools where the medium of teaching was in English, and they felt that English was necessary to obtain government jobs.

"Earlier they went to government schools, now I am sending them to a private school.—If they go to a government school, they will not learn English as that is not the medium of teaching there. Without English it is not possible to get a government job."

- WW 1, Guntur, female, contractual waste worker

Despite recognising education as important for their children, many waste pickers were unable to send their children to school due to schools not being available close by, on top of not being able to afford costs related to education and a lack of identity documents.

"Participant (Female): Mainly children need jobs, good education. We don't have the capacity to educate our children."

- FGD 3, Guntur

Participant (Male): No, we don't have a school nearby. Education of my children is very much required and brings a lot of confidence and strength to us."

- FGD 2, Vijayawada

Participants reported feeling stressed because of job insecurities and worrying about how to provide for their children's present and future. Participants also reported feeling "irritated" and "very lonely" in their struggles.

"Participant (Female): Mainly we have found sadness. Most of the time people become psychologically weak."

- FGD 3, Guntur

Human dimensions of wellbeing shape people's "power within" and ultimately impact their "power to" effect change in their own lives. While the participants struggled to make ends meet, they still held out hope for the future of their children to be able to break the cycle of poverty. Participants holding out expectations from the government for support for better employment and other forms of socio-economic support shows a desire and hope that the state will perform its duties towards them. The disproportionate influence of the state and society on the lives of waste pickers and the complicity of the state in keeping waste pickers at the margins of society is detailed in the next section.

3.3. Social Relations

3.3.1. POWER OVER: Relations with the State in Daily Lives

Waste pickers' accounts reveal the state as both present and absent in their daily lives, with its agencies simultaneously neglecting to provide for and creating bureaucratic obstacles to their access to their rights and basic needs. Whilst in policy waste workers are eligible for state commitments to fulfil basic needs, in practice bureaucratic processes deny these rights, and no avenues exist for waste workers to negotiate or demand accountability from the state.

Difficulty in accessing documentation necessary for availing schemes and services (like housing, education, healthcare, electricity, and rations) from the state was expressed by many participants. Participants were then left reliant on civil society organisations and charity to meet needs that were basic rights every citizen should receive from the state.

"Government officials are asking for identity proof which we do not have. Without such documentation it is not possible to get children admitted in school, apply for a house, or get electricity in our dwellings."

- WW 3, Guntur, male, waste picker

Access to documentation, however, still does not guarantee access to government schemes and relief measures, as the government often overlooks waste picking communities when designing relief measures for vulnerable groups, leaving them out of the list of eligible beneficiaries.

"The chief minister announced financial relief for each family. Those who drive autorickshaws or work as daily wage labourers received financial help, but we did not receive anything. Government officials told us that as we are waste pickers, we are not eligible for that help."

- WW 5, Vijayawada, male, waste picker

While designing welfare measures, the compulsions, uncertainties, and vulnerabilities that characterise waste workers' lives are overlooked by the state. Instead, the onus of meeting the exclusionary conditions put forth by the state is put on waste pickers, who already live on the threshold of vulnerability.

"We don't have a fixed address and keep shifting so we have multiple addresses. The government volunteers tell us that they cannot do much for us if we are scattered like this. They say we should collect ourselves and have a permanent address and only then they can do something to help us."

-　　WW 6, Vijayawada, female, waste picker

Implementation of welfare schemes by the government is often not uniform and is dependent on the exercise of discretionary powers by government officials. However, participants narrated instances when officials did not exercise their discretion to relocate waste pickers even when their homes were flooded.

"Participant (Female): Recently, when it rained heavily, the temporary huts of the waste pickers were filled with water, and they couldn't sit or sleep. Government officers have the authority to move them to government constructed houses. We expected the officers to shift these people to the government constructed houses. But they said they can only look at this the next morning."

-　　FGD 2, Vijayawada

While governments come up with schemes purported to benefit marginalised communities, including waste picking communities, increasingly complex pathways are also put in place for the poor to be able to access these schemes. Not being literate remains a big barrier among the waste picking communities in relation to their ability to understand the requirements that they need to fulfil to access these schemes. Their dependence on volunteers to explain the schemes and their benefits is also fraught with misinterpretation and a feeling was reported among the waste pickers that they did not really know everything about the schemes. This meant that the community was increasingly relying on civil society organisations and other such groups to help them access these schemes.

"Participant (Male): Government volunteers or officials do not take care of us or help us in any way. The NGO workers help us always."

-　　FGD 2, Vijayawada

Even when waste pickers are included as beneficiaries in welfare measures, their access to the measures are dependent on interpersonal relationships with grassroot government workers responsible for implementation of schemes.

"Participant (Female): The government volunteers in the villages are partial to those people who are close to them. Those who do not maintain good relations with them don't get access to the schemes. The volunteers are also not aware about eligibility under the schemes."

-　　FGD 3, Guntur

Efforts of the waste pickers to reach out to government officials to seek help or accountability were hindered by them not having complete information to support their demands. Government officials, with some exceptions, mainly remained unresponsive and passive towards addressing their concerns in a certain and effective manner, and in turn did not provide the clarity and complete information sought by the waste pickers. The waste pickers perceived that the lack of active engagement on the part of government officials towards them was because they were poor and involved in work that carries stigma.

"Long ago, we applied for housing, but we did not receive proper information from anyone including the District Collector's office. We went to the District Collector twice, but they did not respond properly. We don't have detailed information to ask for anything."

-　　WW 5, Vijayawada, male, waste picker

"Power over" is exercised by the government not only passively but also through direct acts of harassment and violence. Despite not being able to provide alternative housing even when required by government policies, the state employs police machinery to forcefully evict and dislocate waste pickers from their place of stay. Waste picking communities are also looked at with suspicion by the public and the police.

"Participant (Female): Government officials asked us to evacuate from the place we were living at earlier as someone purchased that land. We pleaded with them not to evacuate us as we had been living there for a long time. But they threatened us that they we will call the police and other higher officials to remove us.

Participant (Male): People come here for walking. They complain about us because we are living in a public place. They come and shout at our women for staying here in temporary tents. The policemen also come around and scold us for staying in a public place."

- FGD 2, Vijayawada

Another consequence of waste pickers being eyed with suspicion by the police machinery is that their complaints are not registered by the police and instead, the line of questioning is turned onto them.

"Participant (Female): If the waste pickers will go to the police station for giving complaint, the police people will not respond to us. Instead, they will ask us only questions. They do not support waste pickers who approach them for help."

- FGD 4, Guntur

During the lockdown imposed by the government during the COVID-19 pandemic, waste pickers struggling to earn a living faced physical brutality and excesses at the hands of the police force. Participants spoke of being beaten by the police when going out to search for work. The excesses by the police force were in turn portrayed by the police as measures for the protection of waste workers.

"Ever since corona has come, we are not being allowed to work… Police beat us when we go out… We only pick waste… We're waste pickers… There's nothing else we can do. But they did not allow us to go outside."

- WW 6, Vijayawada, female, waste picker

3.3.2. POWER OVER: Discrimination and Disrespect in Societal Interactions

Waste workers face discrimination at the hands of the public who hold stigmatising attitudes towards waste workers. Participants spoke of people speaking to them with disgust and not employing them to work in their homes on account of being "unclean" since they engage in waste work. Waste pickers face discrimination from people who try to prevent them from using public taps to access water or taking common lanes in the neighbourhood, as well as discrimination from people who are unwelcoming of the children of waste pickers in schools. Waste pickers are also perceived to be criminals and are accused of selling drugs, which leads to increased harassment from the police.

"Participant (Female): We need good jobs. But no one is willing to give us some job. Though we try to maintain hygiene, they try to treat us as poor and unclean people. We want them to consider us as fellow human beings in the society."

- FGD 2, Vijayawada

"Even before coronavirus had come, they used to say, 'chi chi' (expression that conveys disgust) and chase us away, madam. They never used to allow us or our children in their lanes. They say to us, "'You are people who pick waste… You go around begging. You should not touch or do anything here. You should go'."

- WW 6, Vijayawada, female, waste picker

The COVID-19 pandemic exacerbated the discrimination being faced by waste workers as they were blamed for the spread of the disease. Participants said that they were locked into their settlements, preventing them from even being able to go out and purchase groceries.

"They have asked us not to come in the lanes. "If you roam here, you'll get coronavirus and give it to us. Don't come here and don't touch us" … they said."

- WW 6, Vijayawada, female, waste picker

During the COVID-19 pandemic, when communities had lost their livelihoods and faced huge financial crunches and food shortages, the discrimination against waste pickers was aggravated. At a time when they were most vulnerable and in need of support from the government, they felt abandoned. They faced social and physical exclusion from the public in a way that was stigmatising. During this time, they had to rely on charity and hand-outs from the public. This highlights how "othering" and marginalisation were

intensified during the pandemic, contributing to the poor psychological, social and material wellbeing of waste pickers.

3.3.3. POWER WITH: Agency Limited to Coping Strategies

Limited state support, along with being stigmatised and marginalised by society, means that waste workers find themselves isolated and their voices remain unheard. At most, they can look for support from civil society organisations and rely on their own communities for social, financial, and emotional support.

Community

The waste picking community members have divided areas and geographical boundaries among themselves for picking waste. This is to ensure that everyone has an opportunity to earn a living, and it is rare that they transgress on each other's jurisdictions.

"Interviewer: Do you have a chance to do collect waste material in another place?

Participant: It's not possible, the waste picker community are shared areas for collect waste material, where they are belonging to them the nearest places for that community."

- WW 7, Vijayawada, male, waste picker

Among the contractual workers, the participants reported that they could borrow money from colleagues to tide over financial distress and that this was loaned to them free of interest. These are small but important ways in which they supported each other and felt a sense of belonging and comfort.

"I have borrowed money from my colleagues, who are getting salary on every month. I have told them when I get salary will return to them. In this condition they gave money."

- WW 1, Guntur, female, contractual waste worker

Participants also said they derived emotional support and companionship from their friends and articulated this as a marker of good health and wellbeing. This was expressed as "I laugh when I am happy" and "we find happiness when speaking to friends and close relations" (FGD 5, Vijayawada). Community members supported each other by sharing information on diseases and health risks during COVID-19 and discussing strategies to limit the spread of COVID-19 among each other.

"When I went outside, I got information and I shared to all the people within the community. In this pandemic we are not able to go outside but some people had a chance to go to work. Those who are getting information from their friends, relatives, and co-workers, all share this information within the community people. Mainly we share information about how to stay safe and stop Corona within the community."

- WW 4, Vijayawada, female, waste picker

Participants also expressed distress in relation to the struggles of others. Personal wellbeing and communal wellbeing are intrinsically linked and, as a result, the challenges experienced by the community are felt by all.

"In this lock down, we are facing lot of problems for survival. In our community, some families had suffered a lot more than us, they unable to feed their children every day and we were not able to help them because we are also having same problems. Literally we are crying about our fate. We can't live or die."

- WW 5, Vijayawada, male, waste picker

However, relations among community members are sometimes filled with tension. Scarcity of resources and limited avenues for obtaining resources give rise to conflicts between community members, even when they act in bona fide manners to support their family members. For example, one of the participants took extra rations for her brother-in-law's family who did not have a ration card. This strained her relationship with other community members who felt that her actions were incorrect.

"There are fights happening here. Everyone here blames me. Like that, I've faced many difficulties, madam. I've been in a lot of fights… Many people speak to me very

badly/rudely, madam. At least, I pray for everyone, but they speak ill of me. They speak of me in all kinds of ways; however, they want."

-　　　WW 6, Vijayawada, female, waste picker

Women workers face additional harassment and violence from family members and have to shoulder the responsibility of their children alone or with support of their natal families. Conflict among family members occurs from frustrations arising out of difficulties in finding livelihoods and not being able to provide for the family.

"Yes sir, in my family, some conflict has happened between my wife and me, the reason is we don't have a permanent house, we don't have work, we are not able to manage all basic needs, due to this lockdown we have faced this problem."

-　　　WW 7, Vijayawada, male, waste picker

Female participants spoke of facing domestic violence due to their husbands' dependence on alcohol. One of the participants narrated that her husband would squander his daily earnings on alcohol and also take money from her to purchase alcohol. The pressure to provide for her children fell on her and was a source of mental distress.

"I have 3 girls…. my brother in law's kids… my husband drinks… I don't know how to live. I keep crying whatever we would earn, he would take that away, hit me, and drink (laagesi, kottesi, taagessi vaadu)."

-　　　WW 6, Vijayawada, female, waste picker

What is missing from the articulations of the community members are experiences and instances of collectivising to advocate for their rights. Considering the distance that exists between the waste picking communities from the government, as well as their daily struggle for survival, NGOs have emerged as brokers between the communities and the government.

Civil Society

Community members described their dependence on NGOs to provide them services and advocate for their interests. Communities were dependent on NGO partners for accessing personal protective equipment (PPE), food, water, employment, documentation, and other forms of support such as education for their children. Participants repeatedly expressed gratitude to NGOs and felt they would not have survived the pandemic without the support from NGOs.

"They are the only ones who are looking after us, we would not have been alive, had it not been for them, my kids and I could not have made it."

-　　　WW 6, Vijayawada, female, waste picker

In the face of oppression and violence from the government, community members reach out to NGOs to step in and limit the detrimental impact of government actions.

"Participant (Female): Government officials asked us to evacuate from the earlier place as someone purchased that land and asked us to leave immediately. We pleaded them not to evacuate us as we have been living here long time. But they threatened us that they we call police and other higher officials. We called NGO workers for sharing our problem. They responded immediately and spoke to government officials on behalf of us. They asked us to move to the nearby place and promised us water connection and construction of toilets and ensured that we got water connection in this new place. We are still waiting for construction of toilets. In that manner, we came here and living here for 3 years."

-　　　FGD 2, Vijayawada

Key informants discussed how they trained volunteers to become leaders of their community. One key informant, an NGO worker, discussed how sustainability was a core goal of their NGO, to which end they aimed to share knowledge and skills with members of the community in the hopes of increasing their capacity to self-advocate.

"Now we are giving training within the community… Because of our training they are now more aware and most of the time they go to government officials themselves and ask for what they need."

- KI 1, Guntur

One key informant explained that their NGO became a contractor so they could provide consistent and safe employment of waste pickers and pay them properly. They also allowed waste pickers to bypass the controlling power held by other contractors. However, the key informant described how relations between the NGO and government officials complicated issues. Corruption at the state level and a lack of political interest resulted in delayed payment verification. The informant, therefore, had to depend on good relations with the commissioner to verify payments. The waste pickers' incomes thus still depended on the will of politicians.

"What happens is, getting the legislation passed is also a big problem. Our people must go there every time, you know, and then get the money and then come to pass the bill. But if it's not working, I'll call the commissioner and tell her. She will thrash them and then get the bill passed."

- KI 2, Guntur

Building relationships within and across waste picking communities remains at a very rudimentary level due to time poverty, survival pressures, their geographically scattered existence and lack of spaces to interact with structures. Waste pickers expressed their sense of powerlessness during the interviews and FGDs by asking the researchers to raise their issues to the government, saying they were unable to do so themselves. Communities rely on NGOs and CSOs to provide space for them to articulate their demands and aspirations to the government, as well as mitigate conflict and the discrimination they face from the public. The ability to exercise "power to" and "power within" is very limited for these communities due to the degree of marginalisation and precarity that suffuses their lives, limiting their agency to define and pursue what they value to act towards enhancing their wellbeing.

4. Discussion and Conclusions

What emerges from the conversations with waste pickers is the precarity of the lives of people engaged in waste work, whether employed as contractual waste workers by the municipal corporation or waste pickers who collect recyclables and sell them to scrap dealers. While there are marginal differences between the lives of contractual waste workers and waste pickers, both groups of workers share similarities with regards to socio-economic distress. Our findings regarding contractual waste workers are echoed in the literature. While they benefit from regular salaries and some levels of job security (Harriss-White 2017), they are not afforded safety and sanitation (Harriss-White 2020) as they were forced to continue working during the COVID-19 pandemic without adequate PPE. Figure 1 depicts the operation of power on the interplay of socio-economic, cultural and political factors and their impact on wellbeing.
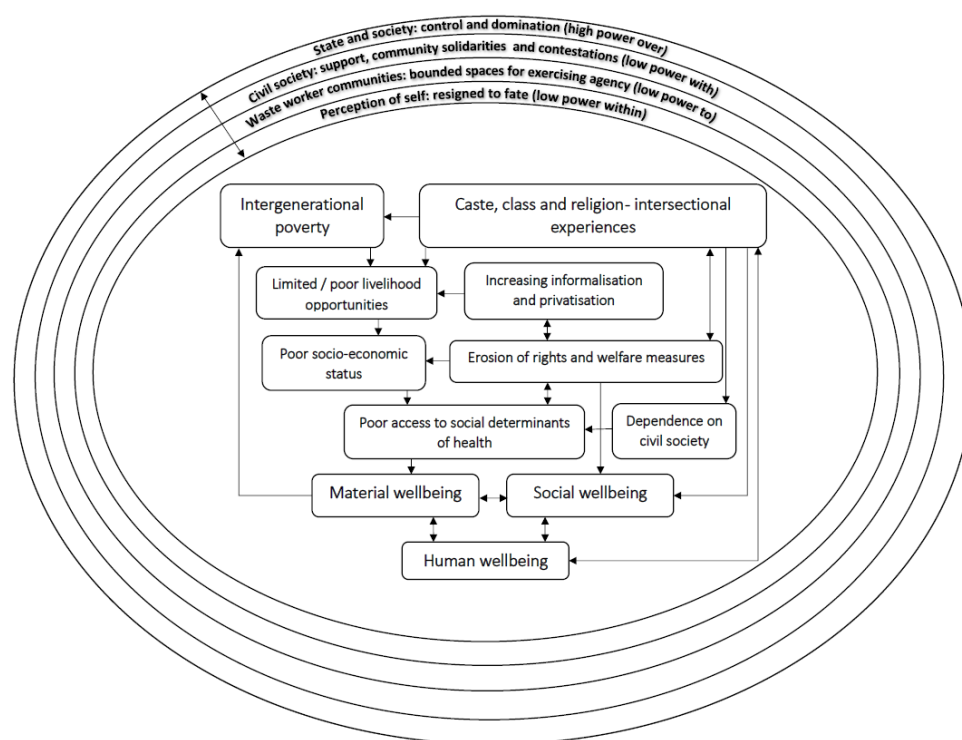
Figure 1. Synthesis of findings and conceptual framework.

Inter-generational poverty combined with a lack of access to sources of employment, education, sanitation, water, health, healthcare, welfare schemes and housing keep waste workers trapped in a cycle of debt that perpetuates poverty and poor health and wellbeing. Waste pickers live in a state of day-to-day survival with little to no access to social or financial security measures from the state. The precarity and marginalisation characteristic of waste pickers' lives are birthed at the intersections of *caste*, *class* and *gender* (Gill 2009; Reddy 2017) and are influenced by the processes of economic liberalisation and urbanisation, which contribute to increasing *informalisation* and *privatisation* of waste work (Butt 2019).

Participants narrated their life experiences as the *material* and *relational* deprivations that underlined their lives and their aspirations to be able to overcome these deprivations. Rather than speaking in a positive way about what constitutes wellbeing, waste workers spoke about the absence of wellbeing in their lives. They emphasized their *lack of access to material aspects* such as food, housing, water, sanitation, education and dignified livelihoods. These material deprivations are situated in *relational* dynamics that negatively affect their wellbeing and are sustained by a nexus of power relations of occupation/caste/informality. The precarious daily livelihoods of previous generations limit the opportunities for their children to be educated to access alternative livelihoods, pushing younger generations into waste work and continuing the cycle *of intergenerational poverty*. Thus, waste workers remain among the most marginalised and stigmatised communities (Kornberg 2019; Shankar and Sahni 2017).

Waste workers experience negative *social wellbeing* as a result of discrimination and isolation from society that arises from the stigma associated with waste work as caste-based occupation. Societal discrimination is also reflected in discriminatory attitudes among state actors, further entrenching the relative powerlessness and subjective wellbeing of waste workers. These material and social deprivations have a negative impact on the *human dimension* of waste workers' wellbeing. Waste workers remain caught in the cycle of poverty and face huge constraints on their agency and "power to" build secure livelihoods that would enable them to access housing and basic services, as well as pursue alternative futures for their children.

The lives of waste workers are equally constrained by the discrimination they face at the hands of the society and state (Shankar and Sahni 2017), and participants articulated that the state was not adequately fulfilling its constitutional duties to uphold their rights. The role of the state is central to waste workers being able to move towards a better life through positive structural/system-level changes that are inclusive of and sensitive towards their work, dignity, and wellbeing. While participants hoped that the state would do good by them, they found it difficult to demand the same from the state. This is in part because their time and energy are completely taken up by the daily struggle to survive and because they remain at the margins of both government and society with very few pathways to actively engage with the state. The participant narratives show that "*power within*" is very much contingent and constrained by this distance. This distance is itself shaped by how society and policy spaces, including the government, view waste work and its embodiment of caste anxieties. The absence of the state as a welfare agent and presence as an oppressive entity can be understood using Puar's (2017) concept of "debility". She argues that keeping some population groups in a state of deprivation and marginalisation allows the state to maintain its control over people and use them for its end goals. The lives of the waste workers remain stuck at the level of threadbare survival, echoed in Puar's articulation of debility as "durational death" where "people's bodies are not supported to live a healthy and dignified life, nor are they allowed to perish" (Garimella et al. 2021). What emerges from the lived realities shared by the participants is that sustained and institutionalised efforts are required to mitigate their sources of vulnerability as the *privatisation* and mechanisation of waste work threaten to dispossess waste workers of their livelihoods and further marginalise them from society (Gidwani and Corwin 2017).

Whilst the state in principle commits to fulfilling all people's access to basic rights, it exercises *power over* through creating bureaucratic hurdles that limit waste workers' access to social welfare schemes while simultaneously harassing them. In the communities where participants lived, there were government volunteers in place to ensure that schemes reached the intended beneficiaries. However, the system did not seem to be working for the communities as participants felt that they were either partial to those whom they knew or did not possess adequate knowledge of the provisions of the schemes.

The distance between the state and waste workers is bridged by NGOs, with whom the relations of waste workers are complex. Waste workers are dependent on NGOs to provide material support, mitigate the harassment they face at the hands of society, and push the system to provide waste workers with their rights and entitlements. While NGOs provide necessary support to waste workers, they remain in a position of *power over* them due to this material and relational dependence.

Waste workers articulated a sense of helplessness regarding their capacity to be able to advocate for a change in their circumstances. As highlighted in Drydyk (2013), the ability of an individual or group to assert power depends on the relational agency of other dominant groups. In the case of waste workers, their "*power to*" exercise agency is heavily constrained by the "*power over*" exercised on their lives by the state and society. While NGOs actively play a "*power with*" role for the realisation of waste workers' rights, the "*power within*" and "power to" of waste workers are limited to coping strategies.

The COVID-19 crisis exacerbated the hardships and intensified the marginalisation faced by waste worker communities and revealed their very limited opportunities to experience *power within* and *power with* due to the multiple layers of material and human capability constraints they face, as well as a sense of limited agency. Individual and collective coping strategies of waste workers are situated within the structural (political, economic, social and environmental) and historical forces (colonial, capitalist and patriarchal) that marginalise and invisibilise waste worker communities (Wittmer 2021). Research with waste workers needs to pay attention to the structural and historical forces while building capacities and opportunities to increase the "*power with*" and "*power within*"

experienced by communities to bring about empowerment ("power to") that is transformational and balances out the "*power over*" impacts experienced by the community.

A limitation of this paper is that we were not able to adequately capture and explore gendered experiences, but this research is ongoing, and we will look at this more closely as we continue to work with the community.

Appendix A

Table A1. Participant Demographics.

InterviewType	Participant Code	City	Gender	Occupation
WW*	WW 1	Guntur	Female	Contractual waste worker
	WW 2	Guntur	Male	Contractual waste worker
	WW 3	Guntur	Male	Waste picker
	WW 4	Vijayawada	Female	Waste picker
	WW 5	Vijayawada	Male	Waste picker
	WW 6	Vijayawada	Female	Waste picker
	WW 7	Vijayawada	Male	Waste picker
KII	KI 1	Guntur	-	-
	KI 2	Guntur	-	NGO program coordinator
FGD 1	FGD 1-P1	Guntur	Female	Waste picker
	FGD 1-P2	Guntur	Female	Waste picker
	FGD 1-P3	Guntur	Female	Waste picker
	FGD 1-P4	Guntur	Female	Waste picker
	FGD 1-P5	Guntur	Female	Waste picker
	FGD 1-P6	Guntur	Female	Waste picker
	FGD 1-P7	Guntur	Female	Waste picker
	FGD 1-P8	Guntur	Female	Waste picker

	FGD 2-P1	Vijayawada	Female	Waste picker
	FGD 2-P2	Vijayawada	Female	Waste picker
	FGD 2-P3	Vijayawada	Female	Waste picker
FGD 2	FGD 2-P4	Vijayawada	Male	Waste picker
	FGD 2-P5	Vijayawada	Male	Waste picker
	FGD 2-P6	Vijayawada	Female	Waste picker
	FGD 2-P7	Vijayawada	Female	Waste picker
	FGD 2-P8	Vijayawada	Female	Waste picker
	FGD 3-P1	Guntur	Female	Contractual waste worker
	FGD 3-P2	Guntur	Female	Contractual waste worker
	FGD 3-P3	Guntur	Female	Contractual waste worker
FGD 3	FGD 3-P4	Guntur	Female	Contractual waste worker
	FGD 3-P5	Guntur	Female	Contractual waste worker
	FGD 3-P6	Guntur	Female	Contractual waste worker
	FGD 3-P7	Guntur	Female	Contractual waste worker
	FGD 3-P8	Guntur	Female	Contractual waste worker
	FGD 4-P1	Guntur	Female	Waste picker
	FGD 4-P2	Guntur	Female	Waste picker
	FGD 4-P3	Guntur	Female	Waste picker
FGD 4	FGD 4-P4	Guntur	Female	Waste picker
	FGD 4-P5	Guntur	Female	Waste picker
	FGD 4-P6	Guntur	Female	Waste picker
	FGD 4-P7	Guntur	Female	Waste picker
	FGD 4-P8	Guntur	Female	Waste picker
	FGD 5-P1	Vijayawada	Female	Waste picker
	FGD 5-P2	Vijayawada	Female	Waste picker
	FGD 5-P3	Vijayawada	Male	Waste picker
	FGD 5-P4	Vijayawada	Female	Waste picker
FGD 5	FGD 5-P5	Vijayawada	Female	Waste picker
	FGD 5-P6	Vijayawada	Female	Waste picker
	FGD 5-P7	Vijayawada	Female	Waste picker
	FGD 5-P8	Vijayawada	Female	Waste picker
	FGD 5-P9	Vijayawada	Female	Waste picker

Abbreviations: WW: waste worker, KI: key informant, FGD: focus group discussion. *Waste worker is the umbrella term used in the study to describe contractual waste workers and waste pickers.

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