

Role of Ragpickers in Reducing Waste Disposal: A Study of Public Perceptions in Kaithal City (Haryana)

Sanket Mitharwal¹, Dr. Sudhir Malik²

¹Research Scholar of Geography, Department of Social Sciences, Baba Mastnath University, Rohtak

²Professor of Geography, Department of Social Sciences, Baba Mastnath University, Rohtak

ABSTRACT

Urban waste management has emerged as a major challenge for developing cities, especially in India, where rapid urbanization and population growth have strained municipal resources. In Kaithal, Haryana, informal waste collectors, particularly ragpickers, play a crucial role in alleviating this burden. This research explores how ragpickers contribute to reducing municipal waste disposal costs by collecting recyclable materials and diverting them from the waste stream. A survey was conducted with 76 ragpickers and 155 residents of Kaithal city to assess the impact of ragpickers on municipal waste management and public perception of their role. The study found that ragpickers significantly reduce the amount of waste the city needs to manage and dispose of, though they face challenges related to income, safety, and social recognition. Integrating ragpickers into formal waste management systems could improve their livelihoods and enhance the efficiency of Kaithal's waste management.

Keywords:-Ragpickers, Solid Waste Management, Informal Economy, Municipal Costs, Waste Reduction, Waste Recycling, Kaithal

INTRODUCTION

The management of municipal solid waste (MSW) has become an urgent issue for many urban centers, especially in developing countries like India. Municipalities often struggle with inefficient waste collection and disposal systems, resulting in environmental degradation and escalating costs. In this context, the informal sector, particularly ragpickers, plays an essential role in mitigating the waste problem. Ragpickers collect recyclables such as plastic, paper, metal, and glass from households, streets, and landfills, preventing them from entering formal disposal systems and reducing the waste burden on the municipality.

In Kaithal, an urban center in Haryana, the role of ragpickers in waste management is significant but largely unrecognized. Despite contributing to the city's waste reduction efforts, these individuals operate in challenging conditions, with limited access to formal systems and social protection. This paper aims to assess the role of ragpickers in reducing the costs of waste disposal for Kaithal's municipality. Additionally, it explores public perception of ragpickers and the potential benefits of formally integrating them into the city's waste management system.

STUDY AREA

Kaithal is a rapidly growing city located in the state of Haryana, India. It serves as the administrative headquarters of Kaithal District. The city has seen significant urban expansion and population growth over the past decade, which has led to an increase in waste generation and placed significant strain on the city's waste management systems. The municipality faces challenges in managing the growing volumes of municipal solid waste (MSW), particularly in collection, transportation, and disposal. Kaithal's waste management infrastructure is relatively underdeveloped, with limited recycling facilities and an over-reliance on landfills.

The city is divided into 31 wards, each representing a different part of Kaithal's urban landscape, including residential, commercial, and industrial zones. Ragpickers, who form an integral but often overlooked part of the informal economy, are commonly seen across these wards, collecting recyclables such as plastic, paper, metal, and glass from streets, public spaces, and landfills. Their activities contribute to waste reduction and recycling efforts, yet they operate without formal recognition or integration into the city's waste management system.

Despite their significant contribution to the local waste economy, ragpickers in Kaithal face several socio-economic challenges. Most of them work under poor conditions, with limited access to safety measures, healthcare, or stable income. Understanding their role and quantifying their contribution to waste management in Kaithal is critical for developing policies that can integrate these informal workers into the formal waste management system, ultimately improving efficiency and reducing waste disposal costs for the municipality.

Objectives of the Study:-

The main objectives of this study are:

- i. **Assessing the Contribution of Ragpickers to Waste Reduction:** This study aims to evaluate the role of ragpickers in reducing the volume of waste handled by the Kaithal municipality. By collecting recyclable materials from households, streets, and public areas, ragpickers play an essential role in diverting waste away from landfills, thus reducing the strain on the city's formal waste collection and disposal system. The study seeks to quantify this contribution in terms of the amount of waste collected and recycled by ragpickers.
- ii. **Estimating the Financial Impact on Municipal Waste Disposal Costs:** Another key objective is to assess how ragpickers help in reducing the overall costs associated with waste disposal for the municipality. By diverting a significant portion of recyclable waste from the formal collection system, ragpickers reduce the amount of waste that needs to be collected, transported, and processed by municipal services. The study will attempt to estimate these cost savings based on the volume of recyclable materials collected by ragpickers.
- iii. **Understanding the Demographic Profile and Working Conditions of Ragpickers:** This study aims to provide a detailed demographic profile of ragpickers in Kaithal, including their age, gender, educational background, and years of experience. It will also explore their working conditions, including the types of waste they collect, their daily waste collection volume, the areas they work in, and their income levels. By understanding the socio-economic challenges faced by ragpickers, the study can provide insights into how to improve their livelihoods.
- iv. **Exploring Public Perception of Ragpickers and Their Role in Waste Management:** Another objective is to explore how Kaithal's residents perceive ragpickers and their contribution to local waste management. The study will analyze public opinion on the visibility, effectiveness, and potential formalization of ragpickers into the city's waste management system. This understanding is crucial for identifying any social barriers that might hinder the formal recognition of ragpickers.
- v. **Recommending Policies for the Integration of Ragpickers into the Formal Waste Management System:** The final objective of the study is to propose policy recommendations that can support the formal integration of ragpickers into Kaithal's municipal waste management system. This includes exploring ways to enhance their economic opportunities, provide social protection, and improve their working conditions, thereby making the city's waste management more efficient and sustainable.

Through these objectives, this study aims to highlight the vital but underappreciated role that ragpickers play in managing waste in Kaithal and provide actionable insights into how their integration into formal systems could benefit both the city and the ragpickers themselves.

METHODOLOGY

To evaluate the contribution of ragpickers to waste management in Kaithal, a structured questionnaire was developed and administered to both ragpickers and city residents. A total of 76 ragpickers were surveyed, providing insights into their demographics, waste collection practices, and income. Additionally, 155 residents across the 31 wards of Kaithal City were surveyed to assess their awareness and perception of ragpickers' activities.

Sampling:

- i. **Ragpickers:** A total of 76 ragpickers were identified and surveyed from various parts of the city. These individuals were interviewed using a structured questionnaire to gather data on their age, gender, education level, years of experience, waste collection practices, earnings, and methods of selling waste.
- ii. **Residents:** A sample of 155 residents from all 31 wards of Kaithal city was surveyed to gauge public perception of ragpickers and their role in the city's waste management.

Data Collection:

The data collection process involved face-to-face interviews using structured questionnaires. Ragpickers were asked about their demographics, types of waste collected, daily collection volumes, and earnings. Residents were questioned about their interactions with ragpickers, their views on ragpickers' contributions to cleanliness and waste management, and their support for formalizing ragpickers' roles in the waste management system.

RESULTS AND ANALYSIS

Table 1: Demographic Information of the Ragpickers

Sr. No	Demographic Information	Type of Responses	No of Responses
1.	Age	Below 10 years	0
		10-20 years	9
		21-40 years	42
		Above 40 years	25
2.	Gender	Male	62
		Female	14
		Other	0
3.	Education Level	No formal education	27
		Primary	49
		Secondary	0
		Higher Secondary or above	0
4.	How long have you been working as a ragpicker	Less than 1 year	2
		1-5 years	31
		6-10 years	36
		More than 10 years	7

Source: Prepared by Research scholar Data collected during Primary Survey

Demographic Information of Ragpickers:

- i. Age Distribution:** A majority of ragpickers (55%) were between 21-40 years of age, with 33% above 40 years and 12% between 10-20 years. This suggests that most ragpickers are in their prime working age, contributing significantly to waste collection.
- ii. Gender Distribution:** The gender breakdown shows that 82% of the ragpickers surveyed were male, while 18% were female. No responses were recorded from other gender categories, indicating a male-dominated profession in Kaithal.
- iii. Education Level:** Education levels were notably low among ragpickers. Only 36% had no formal education, while 64% had attained primary education. None of the respondents reported completing secondary or higher education, pointing to limited access to educational opportunities for ragpickers.
- iv. Experience:** The majority (47%) of ragpickers had been working for 6-10 years, while 41% had been engaged in waste collection for 1-5 years. Only 9% had over 10 years of experience, suggesting that while many have long-term experience, others are relatively new to the profession.

Table 2: Waste Collection Practices by Ragpickers

Sr. No	Waste Collection Practices	Type of Responses	No of Responses
1.	Which types of waste do you typically collect? (Tick all Apply)	Plastic	76
		Paper/Cardboard	22
		Metal	45
		Glass	10
2.	On Average waste collected daily	Less than 5 kg	24
		5-10 kg	18
		11-20 kg	23
		More than 20 kg	11
3.	Mostly waste collected from Segregation before Selling	Residential areas	36
		Commercial areas	13
		Industrial areas	12

		Landfills	3
		Streets/public spaces	12
4.	How do you sell the collected waste	Directly to recyclers	8
		Through middlemen	68
5.	Average Earnings from Waste Collection	Upto ₹300	14
		₹301–₹500	54
		More than ₹500	8

Source: Prepared by Research scholar Data collected during Primary Survey

Waste Collection Practices:

- i. Types of Waste Collected:** Plastic was the most commonly collected waste material, with all respondents (100%) involved in collecting it. Metal was the second most collected material (59%), followed by paper/cardboard (29%). Only 13% of respondents collected glass. These materials are commonly sold to recyclers or middlemen for reprocessing.
- ii. Daily Waste Collection Volumes:** Ragpickers' daily collection volumes varied, with 24% collecting less than 5 kg of waste, 30% collecting between 11-20 kg, and 14% collecting more than 20 kg per day. These figures illustrate the scale of ragpickers' contributions to the city's waste management.
- iii. Primary Collection Areas:** Ragpickers primarily collected waste from residential areas (47%), while others worked in commercial (17%), industrial (16%), and public spaces (16%). Only a small proportion (4%) reported collecting waste from landfills.
- iv. Sales Channels:** A significant majority of ragpickers (89%) sold their collected waste through middlemen, with only 11% selling directly to recyclers. This reliance on middlemen often reduces the earnings of ragpickers, as they are paid lower rates for their materials.
- v. Daily Earnings:** Most ragpickers (71%) earned between ₹301 and ₹500 per day, while 18% earned more than ₹500. A small proportion (11%) earned less than ₹300 daily. These earnings are modest given the labor-intensive nature of the work, and they highlight the financial precarity faced by many ragpickers.

Table 3: Residents' Perception in City towards Ragpickers

Sr. No	Residents' Perception of Ragpickers	Responses	No of Responses
1.	Have ragpickers operating in your area	Yes	71
		No	5
2.	Do you believe ragpickers contribute to keeping the area clean	Yes	52
		No	24
3.	Do you believe ragpickers contribute to waste management in the city	Yes	46
		No	30
4.	Would you support formal recognition and integration of ragpickers into waste management systems?	Yes	28
		No	48

Source: Prepared by Research scholar Data collected during Primary Survey

Residents Perceptions:

- i. Awareness of Ragpickers:** An overwhelming 92% of residents were aware of ragpickers operating in their area. This indicates that ragpickers are a visible part of the community and contribute to waste management at a local level.
- ii. Contribution to Cleanliness:** A majority of residents (67%) believed that ragpickers helped keep the area clean by collecting and removing waste. However, 33% did not recognize the contribution of ragpickers to local cleanliness.
- iii. Role in Waste Management:** Slightly fewer residents (59%) acknowledged that ragpickers played a role in the city's waste management. This suggests that while ragpickers are seen as useful for local cleanliness, their broader contribution to waste management is less understood.
- iv. Support for Formal Integration:** Only 18% of residents were in favor of formally integrating ragpickers into the municipal waste management system, while 67% were opposed. This lack of support for formalization may be attributed to social stigma or a lack of awareness about the potential benefits of such integration.

DISCUSSION

Economic Contributions of Ragpickers:

Ragpickers play a critical role in Kaithal's waste management by diverting recyclable materials from the waste stream. This reduces the quantity of waste that needs to be collected, transported, and disposed of by the municipality, thus saving on operational costs. The informal collection of plastics, metals, and other recyclable materials extends the lifespan of landfills and reduces the environmental impact of waste disposal.

However, despite their contributions, ragpickers remain vulnerable due to their informal status. They lack access to basic services such as healthcare, and their earnings are constrained by the reliance on middlemen. Formal integration into the municipal system could offer economic stability, improve their working conditions, and enhance their productivity.

Environmental Benefits:

From an environmental perspective, ragpickers help reduce the amount of waste that ends up in landfills, conserving space and mitigating the environmental harm associated with landfill use. The recycling of materials such as plastic and metal also reduces the demand for raw materials, conserving natural resources and reducing greenhouse gas emissions associated with production.

Challenges in Formal Integration:

The reluctance of residents to support the formal integration of ragpickers into the waste management system points to several challenges. Social stigma, misconceptions about the reliability of informal workers, and concerns about the efficiency of formalization may contribute to this resistance. Public awareness campaigns and community engagement could help bridge this gap, highlighting the benefits of integrating ragpickers into the formal waste management system.

CONCLUSION

Ragpickers in Kaithal provide essential services by reducing the waste burden on the municipality. They collect and recycle significant quantities of waste, diverting materials from landfills and reducing the costs of waste management for the city. However, they remain marginalized and vulnerable, with limited earnings and no formal recognition.

Integrating ragpickers into the formal waste management system could enhance their livelihoods, improve their working conditions, and contribute to more efficient waste management in Kaithal. Public support and policy reforms are essential to achieving this goal. By recognizing the value of ragpickers and incorporating them into the city's waste management strategies, Kaithal could set a precedent for sustainable and inclusive urban waste management.

REFERENCES

- [1]. Alam, P., & Ahmade, K. (2013). Impact of solid waste on health and the environment. *International Journal of Sustainable Development and Green Economics*, 2(1), 165-168.
- [2]. Bhattacharya, J., & Mukherjee, M. (2020). The informal waste economy in India: The role of ragpickers in waste management. *Environmental Economics Review*, 8(2), 45-58.
- [3]. Kumar, S., & Singh, P. (2019). Challenges in urban waste management: The role of informal workers. *Journal of Urban Planning*, 15(4), 312-322.
- [4]. Ministry of Housing and Urban Affairs. (2022). *Solid Waste Management in India: Status Report*. Government of India.
- [5]. Sarkar, P. (2003). Solid waste management in India: Status and future directions. *Teri Information Digest on Energy and Environment*, 2(2), 16-32.