



Life in the Dumps: Experiences of Garbage Collectors at Irisan Dumpsite, Baguio City

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Abstract

This qualitative case study delves into the daily routines, health hazards, and safety precautions of garbage collectors at Irisan Dumpsite to fully understand their experiences. Using a case study research design and qualitative approach, the study fills existing gaps in the literature about blue-collar workers' perspectives, particularly in the context of trash management. The daily routines of waste collectors at Irisan Dumpsite were revealed, depicting a difficult and frequently dangerous situation. The study examines the health risks linked with their profession, emphasizing the absence of insurance coverage, insufficient protective equipment, and exposure to harmful materials. Garbage collectors use safety precautions such as jackets, raincoats, facemasks, safety gloves, boots, headlamps, and personal hygiene routines to reduce dangers and protect their well-being. The case study methodology offers a contextual and in-depth insight into six garbage collectors' lives, providing light on the obstacles they face daily, their job performance, and their impact on their families. The paper recommends legislative measures to improve garbage collectors' working conditions and shift cultural perspectives, including full insurance coverage, equitable distribution of safety equipment, and public awareness initiatives. This study adds greatly to understanding the oftenoverlooked lives of garbage collectors in the waste management system by providing practical and context-specific information.

Introduction

The Irisan dumpsite, a pivotal area for Baguio City's waste disposal since 1972, holds a significant historical and ecological context. Originally owned by the Smith clan and later passed on to the Caguioa family, the land eventually became the primary dumping ground for the city's waste (Agoot, 2021; Environment Management Bureau-Cordillera

Administrative Region, 2021; Petley, 2011).

With approximately 150,000 kilos of waste discarded daily, the Irisan dumpsite has become emblematic of Baguio City's solid waste management challenges. The regular population of nearly 400,000, which triples during peak seasons, contributes to the mountainous heap of degrading waste emitting methane in the Irisan area (Kalpana, 2022). Open trucks, transporting



60% spoiled vegetables, deposit the entire city's waste at this site. Notably, the dumpsite has become a home and a source of livelihood for around 110 scavenger families who view solid waste as a resource to be recovered. A survey indicates that 73% of the community earns an average of P1,500 to P4,000 per month based on the volume and quality of recyclables retrieved (Delfin & Rodriguez, 2013).

Central to the management of this waste are garbage collectors. These individuals, employed by both private and public sectors, collect and transport waste from various sources. Often working in teams, they manually unload garbage into collection trucks. To properly manage waste, garbage collectors are tasked with picking up and transporting trash from residences, businesses, and other sites to designated disposal locations (CareerExplorer, n.d.).

Garbage collectors play a crucial role in preserving the cleanliness of homes and the environment. However, garbage collectors are frequently unnoticed and face conditions that put them in danger of the worst effects of poor sanitation, including fatal diseases, disfiguring injuries, social shame, and crippling infections. To protect health and labor rights and ensure acceptable working circumstances, it is necessary to recognize garbage collectors, provide employees with the tools they need to organize as a labor force, and gradually legalize their working conditions.

With the aforementioned scenario, this study aimed to learn more about the experiences of the blue-collar workers specifically the garbage collectors in Irisan Dumpsite. Specifically, it tried to answer the following questions: (1) What are the daily routines of the garbage collectors in Irisan, Dumpsite?; (2) What are the health risks associated with the tasks of garbage collectors?; and; (3) How do the garbage collectors practice safety or self-care interventions during garbage collection?

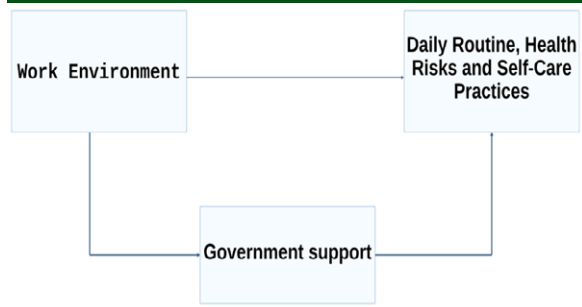
Conceptual Framework

Work Environment

The meaning of the phrase "Work Environment" (Figure 1) encompasses the overall setting in which garbage collectors carry out their responsibilities. Both the physical factors, such as the layout of the region and the weather

Figure 1

Paradigm of the Study



conditions, and the social dynamics, which include interactions with co-workers and the general public, are included in its scope. This is a holistic perspective that respects the influence that the environment has on the experiences that garbage collectors have daily.

Daily Routine

"Daily Routine" examines a garbage collector's many duties. This includes collecting and transporting waste, maintaining equipment, and interacting with coworkers and the public.

Health Risks

Waste collectors encounter physical and mental challenges in "Health Risks." It involves risky items, occupational stress, and emotional anguish. This description emphasizes job hazards and their practicality.

Self-Care Practices

Garbage collectors' "Self-Care Practices" include emotional and physical health care. Relaxing, exercising, and getting medical care are examples. Personal methods help garbage collectors manage stress and health.

Government Support

This includes waste collection policies, initiatives, and efforts. Funding for equipment, training, healthcare, and worker and environmental protection requirements. It stresses external support systems that alter garbage collectors' work surroundings.

Effective and responsible trash management by garbage collectors keeps communities clean



and safe. The complex interactions between garbage collectors' many factors are examined in this conceptual framework. "Garbage Collector's Work Environment," in particular, affects "Daily Routine," "Health Risks," and "Self-Care Practices." The timetable, route, and collecting method are crucial to garbage collection efficiency. In this paradigm, "Government Support" mediates garbage collectors' experiences and the workplace. Protective equipment, healthcare, mental health, safety protocols, and training and education are funded. All of these factors affect garbage collectors' daily routines, health hazards, and self-care. Health risks include physical injuries, exposure to harmful substances, and a variety of health issues. Trash collectors face these risks. Developing methods to protect and support garbage collectors in their hard employment requires a thorough understanding of these hazards. Self-care is also vital for garbage collectors. Maintaining physical and mental health involves good cleanliness, sleep, a balanced diet, and frequent exercise. These strategies improve garbage collection efficiency and garbage collector safety. This conceptual paradigm illuminates garbage collectors' dynamic interactions.

Methodology

Locale of the Study

Solid garbage has been a major issue in Baguio City's 128 barangays. Since October 2007, the city's "no-segregation, no-collection" policy addressed this issue. Despite the good intentions, problems arose immediately. The local government, armed with 20 garbage trucks, encountered operational challenges in adhering to the scheduled daily collection from the 128 barangays, as reported by (Palangchao, 2022). Amid this, a new strategy was proposed, outlining two weekly garbage collections—one for biodegradable and residual debris and another for non-biodegradable items. However, the effective implementation of this plan faced hurdles due to resource and knowledge limitations. This has prompted opposition and underscores the need for interim measures, such as clearly marked trash cans, to facilitate waste sorting among citizens.

Furthermore, the imposition of the waste segregation policy gained renewed emphasis in

anticipation of the impending closure of the city's dumpsite in Irisan. The transformation of the former dumpsite into an ecological park has been proposed, aiming to provide both environmental benefits and recreational opportunities for tourists. This proposed conversion, while contributing to sustainability goals and offering an aesthetically pleasing park, is not without challenges. Balancing the ecological aspirations with the practicalities of efficient waste management and potential community impact requires careful consideration.

Respondents of the Study

The informants of this study were the garbage collectors of the City of Baguio from Irisan Dumpsite. Six garbage collectors were purposively selected concerning the main criteria to provide further information and share their rich and meaningful experiences as garbage through a referral technique. One participant was selected according to defined criteria. After that, the same selected participant was asked to refer to other samples fulfilling the study's criteria. They were chosen based on their availability at the time of the study and their ability to give the necessary information. No consideration discrimination was given to the informants' age, sex, academic background, or financial situation.

Data Gathering Procedure

This study used in-depth interviews to capture garbage collectors' narratives for a more complete understanding. The goal was to gather extensive information on each waste collection study participant's unique perspectives, experiences, and feelings. The six informants were chosen via purposive sampling. Being available during the study and providing rich and relevant information were regarded. Referral was used to increase sample size and diversity. One informant who met the requirements was chosen. The same informant was then invited to suggest other study-eligible volunteers, increasing the sample size. The in-depth interviews were carefully planned to ensure consistency and relevancy. Open-ended questions explored garbage collectors' daily routines, obstacles, coping techniques, and how their job affects their personal and familial lives. Examples included questions about job milestones, emotions, and career reflections. The researcher prioritized open communication during interviews. Open-ended questions helped



informants bond and express themselves. The researcher examined garbage collectors' verbal, facial, and body language to capture their nuanced perspectives. The study followed informed consent and anonymity guidelines to handle subjects ethically. The study's goal, procedures, and potential implications were explained to participants, and their voluntary involvement was solicited. Additionally, informants were protected, and conclusions were reported under different names to ensure anonymity.

Ethical Considerations

Before data collection began, participants were informed of the study's objective, nature, and potential implications. Participant informed consent confirmed their voluntary involvement and comprehension of the research's goals. The ability to withdraw from the study without penalty was clearly communicated to participants. On confidentiality and anonymity, all data was anonymized and securely kept to protect participant privacy. The researcher carefully handled any data that could identify participants and only used aggregated, de-identified data for research and reporting. On transparency in reporting, this study attempted to communicate findings clearly and accurately. All efforts were made to convey the results truthfully and comprehensively without bias.

Results and Discussion

Waste collectors have two schedules. A garbage collector team collects rubbish from the central business district, public market, and other designated barangays in Baguio from 3AM-1PM during *pangbigat*, or day shift. Overnight garbage collectors, or *pangrabii*, collect from 3PM to 1AM. Informants say this schedule is not set because it depends on garbage truckloads.

Daily Routines of the Garbage Collectors

Panagrubwat (Preparation)

The Baguio City garbage collectors' routes are systematically organized for efficient and timely rubbish collection. Each city zone has its own rubbish collection squad. Collectors start their day at 3:00 AM and follow a route routine. The paths pass through parks, marketplaces, and

residential neighborhoods. Collectors collect rubbish from predetermined collection places from house to house. As they move along their routes, garbage collectors encounter different types of waste, from organic to recyclable to hazardous. They must sort the waste accordingly and ensure that it is properly disposed of or sent for recycling. While most people are fast asleep in the comfort of their homes, for the day shift garbage collectors, their work has just begun.

"Wakes up early, skips bathing if it was done the night before, has coffee, and logs in at the shop where the logbook is kept," response from Informants 5 & 6.

During Collection: Collects garbage along assigned routes, emphasizing the need for a complete team. Faces challenges if the team is incomplete, requiring backup assistance. Work can extend to 8-13 hours, and if there are remaining areas to collect, they return to complete the task. Follows a hygiene routine before entering the house."

To have a better understanding of the routines and difficulties encountered by garbage collectors, it is important to establish a connection between this study and the relevant literature on waste management and the occupational hazards that are associated with professions of this nature. Matthews (2019) found that urban sanitation requires efficient garbage collection systems. Tshivhase et al. (2022) also discuss waste management workers' occupational health and safety issues. With these findings, our study can better comprehend Baguio City waste collectors' experiences.

However, *pangrabii* or night shift workers start their day at 3PM by loading their garbage truck with gloves, sacks, and tools to collect heavier things. They then collected trash from city neighborhoods and businesses. The informants said this timeline depends on the number of garbage truckloads collected.

For safe and efficient trash disposal, the municipal government provides garbage pickup. In Baguio City, garbage collectors gather waste from the Central Business District (CBD), Hangar Market, and barangays.

CBD garbage collection routes are carefully designed for regular and effective pickup.



Shopping centers, offices, and other businesses in the CBD generate substantial amounts of rubbish daily. CBD garbage collectors navigate heavy traffic and pedestrian areas to collect waste from businesses.

As one of Baguio City's largest marketplaces, the Hangar Market requires dedicated collection routes. The market produces significant quantities of both organic and non-organic waste. Garbage collectors must traverse narrow passageways and crowded stalls to collect trash from vendors and store owners. Hangar Market garbage is transported to a dumpsite for proper disposal.

Baguio City garbage collectors service barangays and residential areas, which generate waste from homes and small businesses. These routes are vital for maintaining city sanitation. Garbage collectors collect both biodegradable and non-biodegradable waste, which is sorted before being transported to the dumpsite for disposal. Informants 5 and 6 highlighted Baguio City garbage collectors' difficult tasks. Their effort goes beyond the logistical factors that were stressed in the first description, although the routes have been properly planned. Informant 5's emphasis on the significance of a whole team for efficient work and the engagement of scavengers in processing dumped rubbish for prospective selling highlights the collaborative aspect of their labor as well as the economic ramifications of their employment.

Furthermore, the experiences of Informant 6 provide insights into the hygienic practices and prolonged work hours, while also highlighting the necessity of having a full awareness of the emotional and physical toll that is connected with garbage collecting. The passion and resiliency of garbage collectors in the face of hardship are demonstrated by the problems they face when the team is incomplete and their commitment to completing tasks long after the official work hours have ended.

When these findings are connected to the broader literature on waste management and occupational hazards, the study is in agreement with Matthews (2019) and Tshivhase et al. (2022) because it acknowledges the significance of garbage collection systems that are both effective and efficient, as well as the occupational health concerns that are present in the waste management industry. Through the incorporation

of different viewpoints, the research not only contributes to the comprehension of regional behaviors but also places such activities within the broader context of research conducted on a worldwide scale.

In addition to the procedures that are discussed for the day shift, it is essential to highlight the difficulties that are encountered by teams working the night shift. The dynamic character of their employment is shown by the fact that their schedule is different depending on the amount of waste that they have to deal with. The fact that this fluctuation may affect their work-life balance highlights the importance of employing flexible management strategies when managing night shift teams.

Minas Time

The team will start rubbish collection in their route after the preliminary. They saw the normal garbage bags, dumpsters, and loose debris on the streets as they started their journey. The garbage collectors quickly loaded bins and sacks of trash into the truck at the first stop, a calm residential area. Only plastic rustling and metal clanking were heard as they threw stuff into the vehicle. Garbage collectors discovered rotting food, furniture, and appliances as they proceeded from street to street. They hurriedly loaded bags onto the truck and emptied containers onto the curb. But some people always broke the rules, leaving their rubbish out late or putting hazardous materials in their bins. Garbage collectors stated they must handle rubbish safely and safeguard themselves in these circumstances. Before moving on, they worked hard to fill the vehicle as much as possible. However, day and night-shift garbage collectors faced obstacles in the calm and active metropolis. The darkness obscured hazards like shattered glass and sharp items, and the chilly air numb their fingers as they worked. The team kept moving to collect as much rubbish as possible despite the heat and smell. They worked hard because the city's cleanliness depended on them. They joked and spoke all day/night, lifting each other's spirits.

Collection workers lift and carry waste with tools during their shift. Protective gloves and *pankawit* (picker) for smaller things. Physical demands are substantial. Collectors manually lift and carry heavy items, often in cramped spaces. Tools like *pankawit* assist with smaller items,



but the majority of the work is labor-intensive. Repetitive strain injuries are common due to the physical nature of the job.

According to the informants, there are two (2) designated tasks in garbage collection. First is the *para-baba*. These are the garbage collectors who stay off the dump truck during garbage collection because they are designated to collect the garbage from the different staging areas wherein, they walk and carry every garbage sack they have collected and pass (*ipurwak*) it to their companion who is designated as *para-ngato*. *Para-ngato* are those garbage collectors who are designated inside the dump box to segregate. Once the garbage is collected and sorted, the garbage collectors would start to sort out the items that can still be recycled. They would separate plastic bottles, glass containers, and other recyclable materials from the rest of the trash. The recycled materials are called *minas* or *kalakal* such as boxes, papers, tin cans, plastic bottles, metal, wires, sacks, and other recyclables which can be sold. For biodegradable wastes, garbage collectors typically put it in separate bins or containers to keep them separate from non-biodegradable waste. Biodegradable waste such as food scraps and yard waste can be composted and turned into nutrient-rich soil, while non-biodegradable waste, such as plastics and metals, cannot. Composting biodegradable waste reduces the amount of waste that ends up in landfills and reduces the production of harmful methane gas. In some areas, local governments may provide separate collection services for biodegradable waste to ensure that it is disposed of properly. In Baguio City, biodegradables are being processed at the Environmental Recycling System (ERS) and are being turned into soil conditioners or compost for fertilizer.

Recyclables, or *minas*, include cardboard, paper, plastic bottles, metal, wires, bags, and others. Garbage collectors remove and lay aside recyclable goods. After that, the *minas* are collected and stored under the garbage truck dump box. They stay there until the collecting route ends, then are sold. Garbage collectors earn a lot from these sales. This boosts their revenue and helps them survive. The earnings from selling *minas* contribute to the income of garbage collectors, supplementing their livelihood. While the specific amount may vary based on factors such as market demand and the quantity of recyclables collected, it serves as an additional

source of income for the collectors. On average, garbage collectors can earn a modest yet significant amount from selling *minas*, ranging from approximately 500 to 1,000 pesos per collection cycle.

Also, during their segregation, there are instances that they found gold stuff because some people may accidentally throw away valuable items, including jewelry, in the garbage, which may be collected by garbage collectors. In such instances, the truck driver is liable for that valuable item to be reported to the relevant authorities, such as the local government or the police so that the rightful owner can be found. But there are also instances that they no longer tell their companions that they found one and just keep and sell it. One informant said that as he was picking up a bag of trash from a wealthy barangay, he noticed a glint of something shiny inside the bag. Curiosity got the best of him, and he decided to take a closer look. To his surprise, he found a small pouch containing a significant amount of money. Unsure of what to do, he decided to report his finding to his superior, which is the truck driver, who then contacted the local authorities. It turned out that the money was stolen from a nearby bank, and the thieves had attempted to dispose of the evidence by throwing it into the trash.

Then, the collected and segregated *minas* will now be put underneath the dump box which is now ready to be sold after their *ruta*. In addition, garbage collectors have 1st and 2nd trips. These trips pertain to the number of times they will be able to collect garbage and dump their truckloads. Afterward, their team will now have their breakfast or dinner just right after their first trip. Usually, 1st trip lasts 1 hour and 30 minutes. Again, some teams may have their 3rd trip because of the volume of the garbage they are collecting especially when the *ruta* is located in the Public Market and Central Business District (CBD) areas. During their break, the team would sit together and have a quick lunch, sharing stories about their personal lives and discussing their work. To avoid fatigue and dehydration, they hydrated and took short rests.

Tibbetts (2023) found work dangers for garbage collectors which match the informants' physical pressures. Garbage collectors risk infectious infections, bodily damage, and lifting of heavy goods. Worker dangers include ergonomic



injuries, cuts, microorganism exposure, and chemical and biological threats. Abubakar et al. (2022) examined recycling's economic benefits, supporting the study's focus on minas' revenue generating. The economic contributions of recycling operations are substantial, which lends support to the thesis of the study on the generation of income through more informal recycling. Through the reduction of disposal fees and the generation of revenue from the sale of recyclable materials, recycling not only results in the creation of jobs but also in the saving of money. The recycling business, for example, is responsible for hundreds of thousands of jobs in the United States, and it is responsible for providing billions of dollars in annual employee compensation, as stated (USA statistics, 2020). The recycling industry is a significant contributor to the economy of the state of New Jersey, since it provides employment opportunities for over 27,000 individuals and results in significant cost reductions for trash generators (Montecalvo, 2021).

Panaglalako (Selling Time)

As the hours ticked by, the sky slowly started to brighten with the dawn of a new day. The garbage collectors finished their final stop, and the truck was nearly overflowing with the waste they had collected. The garbage collector team will now put a net on the top of the garbage dump box so that the garbage sacks will not fall. Every garbage collector will now designate themselves to sit on top of the head of the truck while the others will seat beside the driver. Lastly, the team will now dump their loads at Marcos Highway Dumping Station wherein *taga-kawit* or the scavengers are now waiting for them. They are called *taga-kawit* because of the sharpened-metal they hold to search for *minas*. As the truck dumps the garbage, the *taga-kawit* will also now start to search for *minas* because there are instances when the garbage team is not complete, there weren't able to segregate the *minas* properly due to a lack of manpower. As for the *minas*, the members of the team will now sell it to the junkshop nearby. Then, the money they will be earning from the sold *minas* will be divided into the number of members of the team who were present on that day of their *ruta* including the driver.

"The segregated items are the recyclables that we sell to the junkshop, and that's where

we get our earnings called 'sideline'. We divide the sideline among ourselves, including the driver. Once the double sack is full, we place the collected recyclables or 'minas' on top or at the bottom of the truck's compartment. Then, we also place the remaining empty sacks with our colleagues on the ground. We sell the sacks or keep them for the next route," Informant 1.

One informant said a garbage collector stumbled upon a box containing exquisite porcelain figurines while on the job. Recognizing their value, he and his colleagues spent considerable time cleaning, restoring, and selling the items. They dedicated hours to market research, locating buyers, and negotiating prices. Ultimately, they sold the figurines for a significant amount.

After a long day of collecting and sorting waste, garbage collectors often shared stories about their work, including unusual discoveries and challenges faced. Despite the arduous nature of their jobs, they understood their crucial role in community well-being. And with a sense of pride in their hearts, they clocked out and headed home, ready for some well-deserved rest.

Lastly, both of the informants narrated that when they reached their home, they will not yet enter the house for safety purposes. What they are doing is they rest for 30 minutes outside their house as they are waiting for the water they will be using for taking a bath to get warmed. Afterward, they will take a bath. The clothes or their overall attire they've used from their *ruta* will now be separated from the usual laundry basket of the family. While most headed home to relax or spend time with family, some were tempted by after-work social gatherings with colleagues.

The findings are consistent with research conducted by Dias (2021) in Belo Horizonte, Brazil, where recycling activities focus on residential solid waste and construction debris, with municipal collection covering 95% of home garbage. Waste pickers in Belo Horizonte use the money they get from recycling to buy other items to sell, providing additional income for their family. Furthermore, Cruvinel et al., (2019) investigates the occupational dangers encountered by garbage collectors, providing context for the physical stresses indicated by informants. Waste workers' dangers include ergonomic injuries,



wounds, exposure to microorganisms, and potential exposure to chemical and biological threats.

Our findings align with Dias (2021), who examined recycling in Belo Horizonte, Brazil. Like our study, Dias found that recycling primarily targets residential waste and construction debris. Moreover, waste pickers in Belo Horizonte supplement their income by selling recycled materials, similar to our informants. Cruvinel et al. (2019) highlight the occupational hazards faced by waste collectors, which corroborate the physical and health risks described by our participants, including ergonomic injuries, infections, and exposure to harmful substances.

The narrative concludes with a vivid portrayal of the garbage collectors' post-collection routine, offering valuable insights into their daily lives. Their commitment to cleanliness is evident in meticulous tasks like securing the garbage bin with a net to prevent leaks during transport. The image of collectors riding on the truck's exterior underscores their mobility and camaraderie.

Recycling or *minas* is a major source of income for trash collectors. The crew, including the driver, shares the proceeds, demonstrating their combined effort and the importance of fair distribution. Informant 1's explanation of recycling and using empty sacks for following routes sheds light on the team's sustainability practices.

The discovery and sale of rare porcelain figurines introduce an unexpected element to the narrative, highlighting the garbage collectors' entrepreneurial spirit. By recognizing and capitalizing on an unplanned opportunity, they demonstrated resourcefulness and business acumen. This aligns with Dias' (2021) findings, where waste pickers also engage in entrepreneurial activities to supplement their income, showcasing a global trend of economic creativity among waste workers.

Upon returning to the depot, the collectors diligently sort and dispose of waste, demonstrating their commitment to effective waste management. Shared stories exchanged during truck rides foster camaraderie and support among the team. Their pride in contributing to community well-being underscores the job's significance.

Collectors prioritize safety and hygiene, exemplified by their pre-entry rest, careful handling of work attire, and separation of work and personal belongings. While most head home after work, social gatherings highlight the strong bonds formed among colleagues.

Health Risk Associated with the Tasks of Garbage Collectors

Garbage collectors handle a diverse range of waste, primarily categorized as non-hazardous, hazardous, and bulky. Non-hazardous waste includes biodegradable (food scraps, yard debris) and non-biodegradable (plastics, glass, metal) materials. Hazardous waste, such as batteries, chemicals, and medical waste, poses significant health risks if mishandled. Bulky items like furniture and appliances require specialized handling due to their size and weight.

Tshivhase et al. (2022) highlight the severe health and safety risks associated with hazardous waste handling. Exposure to chemicals can lead to various health issues, including cancer and birth defects (MLI Environmental, 2018). Physical injuries from ergonomic stress, cuts, and infectious diseases are also prevalent (Jerie, 2019). To mitigate these risks, waste management workers require proper personal protective equipment, training, and safe working conditions (Baral, 2019).

Hazardous Waste

According to the informants, there are a lot of hazards that they are experiencing as a garbage collectors. First when they encounter puncture wounds caused by barbecue sticks, broken glasses or bubog and syringes when not properly disposed of. They wear gloves for safety precautions when collection but still, they cannot really prevent it especially when the garbage is not properly segregated.

"We really need to wear gloves. It is necessary. Because gloves are a big help. The gloves, you see, if you tear the cellophane, you don't know if there are broken glass, cut blades, or syringes. We have encountered hazards as well. Of course, you can't expect anything since it's garbage... I was pierced by a barbecue stick there and my hand got numb and I couldn't work for a week," said Informant 2.



In addition, wirings of internet cables are also one of the struggles of the garbage collectors because there a lot of times the majority of the garbage collectors were tripped by those cables during their collection. The wires from the internet and other sources are often low-hanging, making them susceptible to getting entangled in garbage trucks and compactors. When the dump boxes of the trucks get filled with garbage, the weight can cause the wires to sag even more, increasing the risk of entanglement. Collectors need to be alert and careful when collecting garbage near these wires to avoid accidents or injuries. Collectors often have to work long hours, sometimes even overnight, to ensure that the garbage is collected and disposed of properly. As Informant 3 said:

“One of the problems we encounter is with the wiring, especially with internet cables because they are installed at a low level. When the dump box gets full, the wires get buried, so you need to be alert. It's stressful and tiring... It's difficult at night, especially with the wires. When we collect them, we may accidentally grab live wires and get electrocuted.”

Garbage collectors face numerous health and safety risks. While often overlooked, these hazards pose significant threats to their well-being. Frequent encounters with discarded needles and other sharp objects can lead to serious injuries, underscoring the importance of proper waste disposal. Moreover, the physical demands of the job contribute to a high incidence of musculoskeletal disorders, such as back pain and injuries to hands and feet. Collectors are also at increased risk of respiratory, gastrointestinal, and infectious diseases due to exposure to various pathogens.

In the course of their work, garbage collectors are subjected to a variety of occupational dangers, including injuries that are brought on by particular things that are frequently discovered in rubbish. These hazards contribute to a high rate of workplace injuries, including head trauma, crush injuries, and muscle strain (Garza, 2022; Macray, 2021). Barbeque sticks and other sharp items, on the other hand, can increase the likelihood of puncture wounds for the user (Macray, 2021). Each type of waste requires different handling and disposal procedures to prevent harm to the garbage collectors and the surrounding community. It is important to

properly dispose of waste to maintain a clean and healthy environment for everyone.

Sleep Deprivation and Body Pain

Sleep deprivation is also emphasized as one of the health risks of being a garbage collector. According to one of the informants, they are sleep deprived because of their schedule, *pangrabii ken pangbigat*. Research says that changes to the sleeping schedule, such as long-term sleep deprivation, can affect the levels of cortisol the body produces. Thoughts and feelings are directly impacted by lack of sleep. Feeling sleepy during the day will delay thinking, result to loss of energy, and an unpleasant attitude even after just one night without proper sleep. Although the short-term impacts are more noticeable, chronic sleep deprivation might increase the risk of physical and mental health problems in the long run. Body pain can also result from this. In their designation during garbage collection, the *para-baba* and *para-ngato* suffers muscle fatigue from prolonged standing which causes chronic body pain. Some accidents are caused by repetitively doing challenging tasks, such as getting in and out of garbage trucks and lifting cans that may weigh more than 100 pounds. Back pain and ankle sprains might result from the load and the frequently uncomfortable positions. Additionally, carrying large cans on rainy days can result to slipping and falling.

Garbage collectors often work long and irregular hours, which can lead to sleep deprivation and stress. These workers typically wake up very early in the morning to start their shifts and may work for many hours, depending on the amount of garbage they need to collect. Additionally, their work often involves physical labor, which can be exhausting.

Irregular work schedules, long shifts, and sleep deprivation disproportionately affect garbage collectors. Night shifts increase the risk of accidents, injuries, and psychological distress due to fatigue and harsh working conditions (Nguyen et al., 2021). Sleep deprivation impairs cognitive function and is linked to long-term health issues like dementia (Eugene & Masiak, 2020; Thomas et al., 2019).

Sleep-deprived garbage collectors are more prone to accidents, reduced productivity, and increased stress. Physical demands, exposure to



hazards, and performance pressure exacerbate these issues. Informants described erratic schedules, physical pain, and mental health challenges associated with sleep deprivation. Uneven schedules, called "*pangrabii ken pangbigat*" by one informant, cause sleep deprivation, which affects garbage collectors' physical and mental health. Sleep problems include cortisol fluctuations, delayed thinking, energy loss, and negative thoughts and moods.

Garbage collection is physically demanding, leading to chronic musculoskeletal pain. Both *para-baba* and *para-ngato* workers experience severe muscle fatigue from prolonged standing, causing back, waist, and hip pain. Handling heavy bins and navigating garbage trucks contribute to injuries like back pain, ankle sprains, and other musculoskeletal issues. One informant's account highlights the job's physical and psychological toll, emphasizing the need for self-care after demanding shifts. The constant exposure to unpleasant odors exacerbates these challenges. But for the collectors, they are already used to the smell of the garbage and it is already something tolerable. According to Informant 4, "*the smell doesn't bother me, it's just the physical strain. Of course, I have to bend down so my whole back and waist hurt. It also depends on your position. If you're standing on the truck, your hips and waist will hurt.*"

Research links irregular work hours, long shifts, and sleep deprivation to increased occupational risks, accidents, and psychological distress. Chronic sleep loss can even lead to dementia later in life. Addressing these issues requires improved work schedules, ergonomic interventions, and mental health support. Prioritizing garbage collectors' health and well-being is crucial for creating a more equitable and sustainable waste management system.

Exposure to Rain and Sun

Severe weather significantly impacts garbage collection services. During storms, residential roadside collection is often disrupted due to heavy rain and residents' reluctance to bring out their waste. Consequently, collection is rescheduled, leading to increased waste volumes on subsequent collection days. Garbage collectors are also at risk of illness from exposure to the rain.

Extreme heat presents another challenge. To protect workers from heat-related illnesses, waste collection often starts earlier than usual. However, this conflicts with residents' habit of placing bins out the night before, causing inconveniences for both parties.

"The garbage doubles...If it's raining, people expect that the garbage won't be collected. Then when the weather improves, that's when they bring out the garbage, so the amount really doubles. It's like a triple amount, they do it in one go. That's why sometimes we really can't avoid going home late," said Informant 3.

Not only man-made objects or activities can greatly affect garbage collectors but also because of inevitable natural phenomena. Extreme weather conditions pose significant challenges for garbage collectors. Exposure to rain and excessive heat increases the risk of illness and discomfort. Storms disrupt collection schedules, leading to increased waste volumes and potential contamination. Hot weather exacerbates waste management issues, including odors, pests, and fire hazards (Indiana University, 2020). Severe weather events generate massive amounts of debris, overwhelming waste management systems and causing contamination (Mihai et al., 2021). Climate change is expected to intensify these challenges through more frequent and severe natural disasters (United State Environmental Protection Agency, 2021).

Garbage collectors often face hazardous working conditions exacerbated by weather extremes. Storms, particularly heavy rain, disrupt residential collection routes due to road conditions and resident behavior. This leads to increased workloads and health risks for collectors. Exposure to rain and heat can cause illnesses and discomfort.

Adverse weather also impacts waste management systems. Hot temperatures contribute to odor, pest problems, and fire hazards. Extreme weather events generate excessive waste, overwhelming recycling and composting facilities. Climate change will intensify these challenges, necessitating adaptive waste management strategies.

To mitigate these issues, comprehensive planning and community engagement are crucial. Improving



worker safety, optimizing collection routes, and promoting public awareness can enhance waste management resilience to weather variability.

Other Problems Being Encountered by Garbage Collectors

Volunteer Garbage Collectors

In Baguio City, there are two types of garbage collectors. First, is the volunteer garbage collector and the second one is the regular garbage collector. As a garbage collector, there is a difference between these two. Volunteer garbage collectors are those workers who are merely volunteering to be a garbage collector and earns money from what they call 'sideline', who gets paid in daily basis because of the minas they had sold after their *ruta*. The other type are garbage collectors who are regular or permanent garbage collectors, who are being paid by the City of Baguio every after 15-30 days. Unlike the volunteer garbage collectors who rely on sideline per se, regular garbage collectors are also receiving health insurance and support from the government.

Volunteer garbage collectors face significant challenges, including a lack of benefits, safety equipment, and support during crises like the COVID-19 pandemic. They face significant health and financial risks due to a lack of insurance coverage and protective equipment. Unlike regular employees, they bear the full cost of medical expenses and lost wages in case of accidents or injuries. The absence of essential protective gear, such as gloves, boots, and masks, exacerbates these risks for volunteer collectors. A harrowing incident involving an injured volunteer who lacked support highlights the urgent need for comprehensive safety measures and insurance coverage for all garbage collectors, regardless of employment status.

Exposure to hazardous materials, including medical waste, heavy metals, and chemicals, increases the risk of illness and injury for both volunteer garbage collectors (Workplace Health Without Borders, 2019; Abrha et al., 2021).

Scavengers

Many people in developing countries make a living by gathering recyclable material that has been discarded by others, a practice called

scavenging or waste picking. Scavengers are important players with a very positive and important role in the waste management sector, but in the eye of the garbage collectors, they're a threat, especially for their day-to-day basis of source of income, their sideline. *"So one of our main problems is with the scavengers... They also take our recyclables and leave the garbage scattered. We only receive a little fragment. Meaning, the sideline is small,"* said Informant 4. Moreover, scavenging can significantly contribute to waste management by reducing landfill waste and recovering valuable resources (Igwe et al., 2018). However, scavengers often work in hazardous conditions and their actions can sometimes disrupt formal waste collection efforts (Nuripuh et al., 2022).

A complex relationship exists between scavengers and garbage collectors. While scavengers help divert waste from landfills, their practices can hinder the work of garbage collectors, who often rely on recyclable materials for supplemental income. Competition for these resources can create tensions between the two groups.

The complex interplay between scavengers and garbage collectors underscores the need for a comprehensive approach to waste management. While acknowledging the role of scavengers in resource recovery, their actions can hinder formal waste collection efforts. Disrupting the waste stream through scattering and removing recyclables increases the workload for garbage collectors and reduces the efficiency of the overall system.

This highlights the need for collaborative solutions that respect the livelihoods of both groups. By formalizing the role of scavengers and integrating them into the waste management system, it's possible to harness their potential while mitigating negative impacts. Such an approach requires a deeper understanding of the informal sector and the development of policies that support both scavengers and waste collectors.



Conclusions

This study examines the daily routines and challenges faced by garbage collectors at the Irisan Dumpsite. Findings reveal a critical need for improved working conditions, including increased insurance coverage and adequate safety equipment. Despite facing hazardous conditions, collectors demonstrate resilience through self-care and safety protocols.

This study illuminates the particular challenges faced by volunteer garbage collectors, adding to the literature and highlighting a neglected workforce. Through its concentration on the particular circumstances surrounding the Irisan Dumpsite, the study fills a gap in the existing body of research and offers useful insights into the occupational health and safety concerns that are frequent in informal waste management. It calls for a comprehensive approach to address the complex issues faced by garbage collectors, including policy reforms, increased support, and a shift in societal perception of their vital role. By advocating for increased insurance coverage, essential safety equipment, and a greater appreciation for their vital role, we can mobilize support for comprehensive reforms. Transforming societal perspectives on waste management is essential, recognizing the need for equitable working conditions and valuing the invaluable services provided by these workers. This research serves as a call to action, urging stakeholders to collaborate in creating safer and more supportive environments for those on the frontlines of waste disposal.

Recommendations

These findings shed light on the challenging lives of garbage collectors at Irisan Dumpsite and show how important it is for policy actions to improve their well-being and working conditions. First, it is essential to ensure that all individuals who collect rubbish, even those who are volunteers, are covered by comprehensive insurance. If they were to sustain an accident or injury, this would guarantee that they would receive adequate financial support, and their benefits would be comparable to those of regular municipal employees. Local governments and the

relevant authorities must collaborate to establish and implement such legislation, with a particular emphasis on occupational safety and social welfare for these essential workers. In addition, a policy change is necessary to rectify the inequities that exist in the provision of essential protective equipment. Regular and volunteer garbage collectors should be provided with appropriate clothing, including gloves, boots, facemasks, and raincoats, as a matter of course because this is the standard operating practice. Given the significance of these commodities in lowering the risks to public health that are associated with waste management, municipalities ought to commit resources to guarantee a consistent supply of these commodities. Governments may be able to assist garbage collectors in working in a workplace that is both safer and healthier if they standardize safety procedures. Public perception of garbage collectors is a critical factor hindering efforts to improve their working conditions and elevate their professional status. To address this, a comprehensive public awareness campaign is necessary to underscore the indispensable role of these workers in safeguarding public health and environmental sustainability. Such a campaign should incorporate community engagement, educational initiatives, and media strategies to enhance the public's understanding of and appreciation for the profession. Ultimately, fostering a positive public image is essential to securing the necessary political and social support for policy reforms and improved labor conditions

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