

An Evaluation of The Functioning of Solid Waste Reclaimers in Mogale City, South Africa

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Abstract: This study aims to evaluate the functioning of solid waste reclaimers in the Mogale City, West of Johannesburg, South Africa. Previous studies have been conducted with integration gaps unbridged and in this study, the Mogale City Local municipality in liaison with Gauteng Provincial governments may consider establishing laws and by-laws to integrate waste reclaimers into solid waste management system. This study employed mixed methods of quantitative, qualitative and observations for data collection. A pilot study was conducted in waste reclaimers functioning from the inner city of Johannesburg Metropolitan municipality, collected data was not used for analysis but was to test the reliability of questions. Collected data were analyzed by using SPSS version 25.0, different themes were analyzed separately. Results revealed that the demand for recyclables remains high and yet there were no laws and regulations that support the functioning of solid waste reclaimers. They functioned under stigma and harassment by residents in the study areas. Collection of recyclable items put their health at risk of contracting infectious diseases from infected waste items and injuries from sharp objects. Infectious diseases include hepatitis A and B while injuries often occur on hands because they have no gloves to protect their hands while functioning. Since they did not wear shoes with hard sole, they also sustained injuries on their feet. They receive small cash from recycling companies which does not cover their personal needs to buying food for their families and going for medical assistance when they are sick. In some incidences, landfill operators do not allow them into the landfill to collect recyclable items. The nature of work of waste reclaimers does not allow them to work consistently in groups. Most of them prefer to work individually and this is a big problem for the Mogale City Local Municipality. Working in groups would enable the municipality to allocate them in different areas to pick up the waste and get a fixed salary for the job done which most importantly would assist them to buy food and other personal items that they need. The municipality would further provide them with protective clothing to use against injuries and infectious diseases. Waste reclaimers are not team players and as such, it will take time before their economic and social problems get resolved. This study concludes that the demand for recyclables is high in Mogale City, however, lack of support from Gauteng provincial government remains a problem because people do not accept them as people who care for the environment and waste companies do not pay them enough money.

Keywords: Functioning, Mogale City local Municipality, Solid Waste, Waste Reclaimers.

Introduction

Reclaimers play an important role in the waste management sector, particularly recycling. On a global scale, the context within which reclaimers function, their challenges include social stigma followed by poor working conditions and social harassment, reclaimers make profit based on what recycling companies are prepared to pay [1]. Previous studies indicate that the functioning of reclaimers is challenged by none-recognition by municipalities and relevant national departments such as the Department of Environmental Affairs in the case of South Africa [2]. Reclaimers contribute positively towards solid waste minimization, and they contribute as extra eyes if training is conducted for them to look out for illegal dumping activities and criminal behaviour [3]. The third question that this study will attempt to answer is about the current policies and legislative framework as enablers and regulators of the functioning of waste reclaimers. According to [1], the national government of the Republic of South Africa does not support the functioning of the waste reclaimers. However, in the interim, the government has mandated the

municipalities to implement the guidelines as set out in the minimum requirements for municipalities and owners of the landfill sites to formalize and control solid waste reclaimers to safeguard their health and safety. In a study that [4] conducted in Kenya, there is clear evidence that there is a legislative framework pertaining to solid waste management the content of which is not clear and how these laws relate to the functioning of reclaimers. [4] also postulates that Ethiopia does not have a waste management policy in which waste activities are codified. In contrast to Kenya and Ethiopia, [4] further shows that Nigeria has relevant laws that are not clear on whether waste management policy at local level addresses the engagement of reclaimers in the waste industry or not. Studies about Polokwane municipality show there was an informal settlement, which was developed closer to the landfill site. Waste reclaimers collected recyclable items such as plastics, cans, bricks, steel, and card boxes. Any person who is a waste reclaimer is harassed, stigmatized, and treated with disrespect, the global people may, however, not be blamed for this as reclaimers unofficially started the recycling projects through identifying and separating valuable materials from the waste [5]. Waste reclaimers live on informal economy by picking up the waste from the streets, this is common in most developing countries with South Africa included [6]. Regardless of the interaction between formal and informal waste system, a structural gap between the formal and informal waste economy remains a problem which needs to be bridged [7].

Material and methods

It was mandatory for this study to receive ethical clearance from the University of Johannesburg (UJ) and permission to conduct the study from the Mogale City Local municipality (MCLM). Quantitative (Questionnaires), qualitative (Interviews) and observation methods were employed to collect data. Descriptive method was used to interpret collected data. Structured questionnaires were administered to respondents to complete; respondents were interviewed on spot while performing their solid waste activities; they were also directly observed because it was appropriate to watch them collecting waste recyclables in open public settings. The waste reclaimers were accessed in the landfill site and along the road. Direct observation research design assisted the researcher to 'bridge the gaps in understanding research problems, to interconnect with participants in their natural inhabited space; to gather additional data that support literature of the topic and to realize new perspectives that take exception to the existing theory. STATKON at the University of Johannesburg assisted with analyzing data with International Business Management Statistical Package for Social Science (SPSS) version 25.0. To communicate the findings of the study a percentage was used. SPSS was used to check the missing data was checked; outliers were removed. Data validation, data editing and data coding were considered to transform raw data into significant and understandable information. One-on-one interviews were transcribed, and a thematic analysis method was employed to achieve qualitative analysis. Study themes were identified and reviewed after coding data. To gain an understanding of waste reclaimers' opinions, themes were examined separately. The coding and analysis of interviews and observation notes were done separately because they were different kinds of data. Data were interpreted qualitatively.

Findings

There were 74 respondents, fifty-one were males and twenty-three were females. They were asked if they had good relationships with the landfill operators, 65.4% said yes and 34.6% said no. When they were asked if the landfill operators had accused them of wrongdoing, 13% said yes and 87% said no. They were also asked if they believed that people appreciated what they did, 53.7% said yes and 46.3% said no. Another question was if some people called them names due to the nature of their work, 18.5% said yes and 81.5% said no.

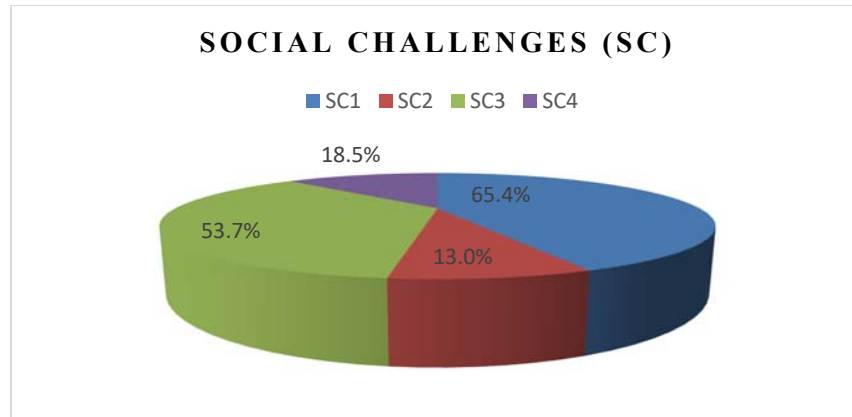


Figure 1: Social challenges experienced by waste reclaimers.

Legend

- SC1=Relationship with landfill operators
- SC2= Accusations by landfill operators
- SC3=Appreciation by people
- SC4= Nature of my work and names

Additional questions were whether sharp objects in the reclaiming process often injure them, 53.8% said yes and 46.2% said no. On the question of whether they were covered by health insurance, 7.4% said yes and 92.6% said no. They were further asked if they believed that they breathe harmful gases in the landfill site where they were picking recyclables, 75.9% said yes and 24.1% said no. When they were asked if they wore adequate protective clothing such as face masks and gloves when doing their work, 29.6% said yes and 70.4% said no; when they were asked if their work exposed them to various health risks, 76.9% said yes and 23.1% said no.

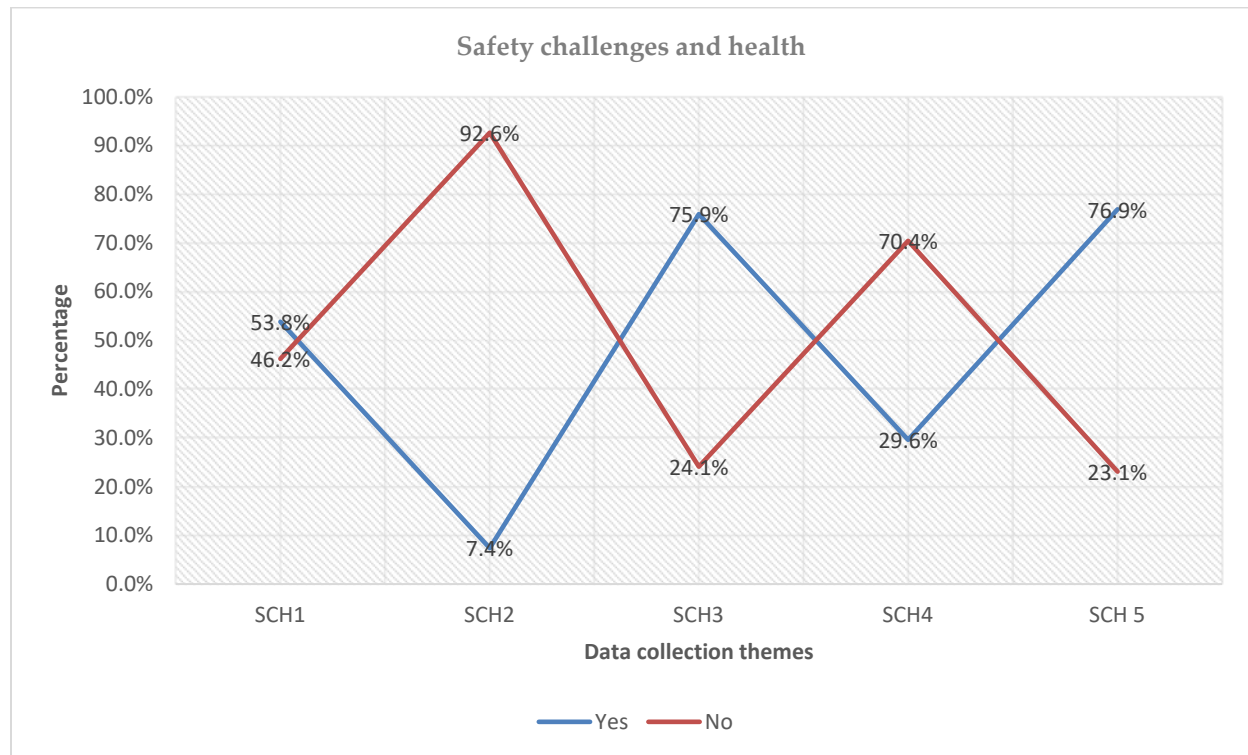


Figure 2: Safety challenges and the health of waste reclaimers

Legend

SCH1=Sharp objects

SCH2=Health insurance

SCH3=Harmful gases

SCH4=Protective clothing

SCH5=Health risks

There were further questions which included whether they got recyclable material free of charge and 31.5% said yes and it was a no of 68.5%. When they were asked if they got recyclables free from shop owners, 31.5% said yes and it was a no of 68.5%. They were also asked if they sold recyclables to formal businesses, 37% said yes and 63% said no, 24.1% indicated that they get enough money from waste reclaiming and 75.9% said no. 66.5% said they worked every day even when they had money while 33.3% said they did not work when they had money. Another question was whether they had an opportunity to borrow money from small financing companies, 8% said yes and 94.2 said no. They were also asked if they determined the price for selling their reclaimed waste items, none of the respondents said yes but all (100%) of them said they did not. 35.2% said they allowed their buyers to negotiate better prices for their reclaimed items while 64.8% said they did not allow for any negotiations. They were asked if they had an organized waste reclaimers organized society, 57.4% said yes and 42.6% said they did not have. The last question was whether they were members of an organized waste reclaiming society, 9.3% said they were members and 90.7% said they were not members.

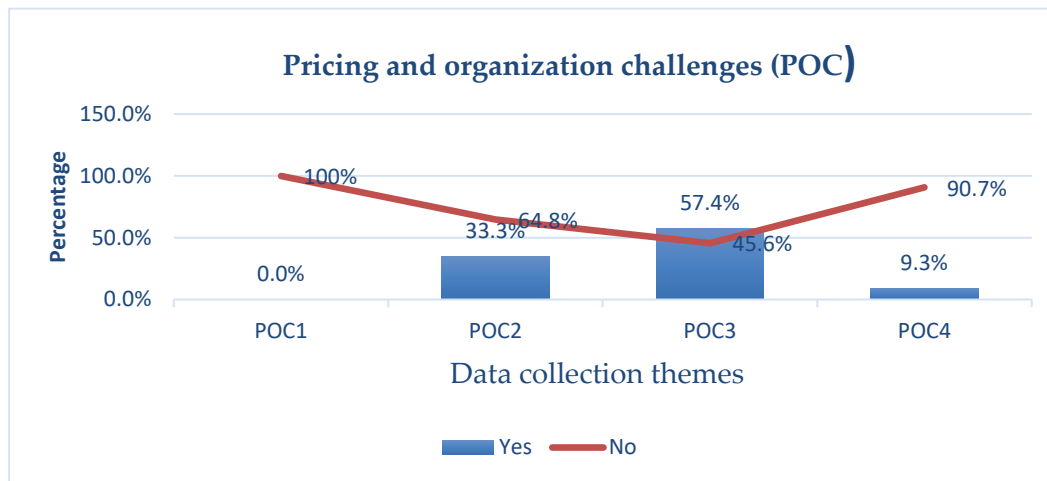


Figure3: Pricing and organization challenges

Legend

POC 1=Price determination

POC 2=Price negotiation

POC 3=Society

POC 4=Society membership

Discussion and conclusions

Findings from the waste reclaimers are a clear indication that they were accepted by some communities while others did not accept them. Findings show that if they received abusive and discriminating words from some members of the community, they would temporarily choose to go to other local areas to earn a living through waste items. Waste reclaimers were aware that the type of work they did exposed them to various infectious diseases. While they were attempting to keep the environment free from sharp objects and harmful gases, they were at the same time exposing themselves to high risk of contracting diseases in the absence of protective face masks and hand gloves. It is concluded that if waste generators did not segregate waste from point of generation, waste reclaimers were not safe because they were exposed to various types of solid waste some of which were infectious while others were hazardous and sharp objects like broken glasses. It might have appeared to be a waste of time for waste reclaimers to visit health centers once a month to check their health status, but it was very important for them to consider going for regular check-ups for detection of diseases at their early stage of occurrences, those related to respiratory system like lung diseases.

There was a high competition amongst waste reclaimers and sometimes it was possible that they knocked off without selling anything. This paper concludes that the work of waste reclaimers affected their physical, social, and mental wellbeing negatively. Physically, they sustained injuries because they did not have protective clothing to use when they perform their duties, socially, they did not generate enough money to support their families, they did not have time to socialize with friends and families and, mentally, they were called names, harassed, and discriminated against. Buyers determine their own prices and to some waste reclaimers, this can be very traumatic. This paper argues that waste reclaimers were not discriminated against by community members only, but also by recycling companies who made decision to buy recyclable items for money that they felt comfortable with. This paper argues that what recycling companies paid waste reclaimers for recyclables collected was not enough considering that a loaf of bread in Gauteng at the time of this study cost R19.00 –R22.00. This means that in the event where there were no sales, the probability was that such waste reclaimer went to bed in empty stomach. It would be fair enough for owners of recycling companies to consider the ever-increasing prices of food and life in general when determining the price for recyclables. Fair prices would be a solution to combating criminal activities committed by waste reclaimers as claimed by some of the community members against waste reclaimers. The researcher believes that waste reclaimers contribute to the local economy, environmental sustainability, and high rates of recycling; this alone is a clear message to MCLM and should consider including them in the MCLM waste management system. The most crucial aspect for this study is the micro-financing of waste claimers, waste reclaimers cannot be expected to buy food on small cash that they generate every day and at the same time purchase protective clothing from that little amount of money. MCLM may within its budget structures include micro-financing for waste reclaimers to enable them to do their work. This paper recommends that MCLM incorporates waste reclaimers into their formal waste management system so they can have a permanent job and have fixed salaries. With this being recommended, it may be very difficult for MCLM to implement this because waste reclaimers do not work in groups but individually and in different areas, in this way, MCLM may have a challenge in managing the clocking register for them and worse challenge would be when it comes to paying them because even those who did not work according to agreement between MCLM and them, would still want to get paid. It was interesting to find out that waste reclaimers had access to some landfill sites as this is one of the strategies of combating crime that could be associated with anyone who is not earning cash for a living. In conclusion, not everyone can be in a formal employment; thus, it is important that those who are engaged in informal employment should receive support in a form of appreciation for the work that they do; they should be trained and educated on how to handle solid waste particularly one that is not segregated from point of generation, they should be encouraged to visit health care facilities at least once every six months to check their health status with the aim of detecting infectious diseases before they reach serious stages. MCLM should not focus on waste reclaimers only but to members of the community within the municipality who should be made aware of the important role played by waste reclaimers in collecting recyclable items in the area. There were no laws that protected waste reclaimers when they were harassed, stigmatized, embarrassed, and treated unfairly. It is through this paper that Gauteng provincial government realizes and understands that there is a need to establish the laws and regulations that will protect waste reclaimers the same way as everyone in Gauteng province whose business is informal, example being informal street vendors who sell food, vegetables, and clothes. The MCLM may contribute towards this initiation and establish and implement municipal bylaws to protect the waste reclaimers.

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Institutional Review Board Statement: This study was conducted according to the guidelines of the declaration of Helsinki and approved by Higher degree committee and Research ethics committee of the University of Johannesburg, ethical clearance number REC-267-2020.

Informed consent statement: Informed consent was obtained from all participants involved in the research.

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Conflict of interest: I declare no conflict of interest.

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