

## ANALYSIS OF THE OUTCOMES OF WASTE SCAVENGING AS A MEANS OF LIVELIHOOD COPING STRATEGY AMONG SCAVENGERS IN SOUTHWESTERN NIGERIA

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### ABSTRACT

This study examines economic benefits and the health implications associated with the scavenging in Ekiti and Osun States, Nigeria. The research is based on data collected through multistage sampling procedures from 120 waste scavengers drawn equally from the four solid waste dumpsites in the study areas using interview schedule and focus group discussion. These interview elicited information about scavenger's activities, experiences, opinions and feelings concerning their operations, economic benefits and health challenges. The data used for the study were generated from primary and secondary sources. The Data obtained was analyzed using descriptive statistics on SPSS software. The mean age of the research participants was 27years and majority did not attended school or stopped at primary school level. Waste scavenging was dominated by males (77%). The research also revealed that most of the scavengers were youths from the community and migrants from surrounding villages. The reasons for their involvement in waste scavenging business such as picking of recyclable products like plastics, metals and glass bottles include joblessness and economic consideration. The study further reveals that majority of scavengers are exposed daily to a numerous life threatening health problems which might result to death as they sort through the waste for recyclable products. The paper concluded that most of the scavengers were exposed to environmental hazards which could lead to health problems in the cause of their daily activities. Given the health hazards that scavengers were been exposed to in this enterprise, policy measures that would enhance the health status of the scavengers need to be adopted by Government and Non-Governmental Organisation.

**Keywords:** Dumpsites, Health, Scavenger, Waste, Wealth

### INTRODUCTION

Migration of rural dwellers to urban cities has led to population explosion which in turn resulted into increases in waste generation and also creates a large pool of unemployed and underemployed in the society. In the past few decades, the process of urbanization has accelerated mainly in cities coping with informal hyper, most of which are located in sub-Saharan Africa (UN-Habitat, 2010). These cities are characterized by an economy heavily dependent on the informal sector and very extensive poverty (Owusu-Sekyere, 2014). The high concentration of people in the emerging urban centres in the developing world has two implications: it leads to increases in waste generation and also creates a large pool of unemployed and underemployed residents with few alternative means of earning a living. In response to the unemployment growth led some youths in rural and urban areas to engage in waste scavenging as a mean of survival strategies. Wikipedia (2012) describes a waste picker (scavenger) as a person who salvages reusable or recyclable materials thrown away by others to sell or for personal consumption. Genemo (2010) stated that, some families cannot survive without the contribution of every member of the family as some parents cannot meet their basic needs, these forces their children to go to waste dumping sites to scavenge with the aim of increasing family income and maintaining their standard of living. Scavenging from the waste stream is an important economic activity that provides income for over 15 million people

worldwide, most of whom are in cities in developing countries, and it has a financial impact of several billions of US dollars every year (Medina, 2010).

Waste scavenging is a popular informal activity which depends on the quantity and quality of waste generated by the population. The proliferation of waste scavengers on the streets and waste dumpsites in Nigeria since the early 1990s represents one of the most visible consequences of the deep economic crisis the country has been suffering. These scavengers play an important role in the process of waste recycling. Muktar (2011) stated that in Nigeria, like other developing countries, scavenging among youths begins with the collection of plastic bottles and cans, and it mostly takes place in the informal sector. However, people involved sort out the useful materials like paper, aluminium, glass, bottles, plastic etc. and sell them to the recycling industries. These serve as their source of income.

Literature as shown that scavengers working under unhygienic condition which exposed them to health related problems. Ray *et al* (2002) was of opinion that scavengers working in the area of fleas and offensive odours in the waste disposal sites along with the lack of proper protective devices which have adverse effect on the life. Furthermore, Eric (2007) in study conducted in Buenos Aires Argentina find out that scavenger were exposed to health hazards which comprise of infection, chemical hazards, musculoskeletal damage, mechanical trauma, and emotional distress.

Most of the scholars worked on waste scavenging examined its economic significance as an efficient livelihood strategy (Reynals, 2002; Schamber and Suárez, 2002). Despite a lot of studies on scavenging as economic activities, much attention has not been paid to the health risks associated with it in the study area in view of the fact that scavengers live and work in unhygienic conditions and the nature of their occupation exposes them to hazards that may lead to the spread of various health challenges. Hence the study examined waste scavenging as a source of wealth or death?

The specific objectives of the study are to:

- i. describe the socioeconomic characteristics of scavengers;
- ii. examine the economic benefits of waste scavenging; and to
- iii. assess the health implications associated with waste scavenging.

#### METHODOLOGY

To achieve the objectives of the study, four solid waste dumpsites were randomly selected in Ikole-Ekiti and Ado-Ekiti in Ekiti State and Osogbo and Ile-Ife in Osun state.



**Figure 1: Photograph of dumpsites at Ado-Ekiti, Ekiti State and Ile-Ife, Osun State**

Purposive sampling was employed in identifying those who were directly involved in the process. The research is based on data collected through multistage sampling procedures from 120

waste scavengers drawn equally from the four solid waste dumpsites in the study areas using interview schedule. Focus group discussion was used to measure quantitative data.

The data from the questionnaire survey was analysed using SPSS analytical programme. Waste scavengers' demographic characteristics that were examined in the study include religion, age, ethnicity, income, marital status, educational qualification and working hours. Scavengers were asked to mention reason for entry into a job and some of the risks they had suffered repeatedly in the last twelve months preceding the study in their daily job. Lastly, three focus group discussions were held at the three dumpsites where scavenging takes place.

Reason for entry into the scavenging job was measured using a 5 point Likert – type scale comprising of strongly agreed (5 point), agreed (4 point), neutral (3 point), disagreed (2 point), and strongly disagreed (1 point). The index was the sum on the scores of all 7 questions which the scavengers were asked with minimum score being 7 and maximum score being 35. Mean was used to rank the reasons for entry into the scavenging job in descending order of importance. Perceived Health related problems were measured using 3 point scale comprising always occurred (2) occasionally occurred (1) and not occurred (0). The index was the sum on the scores of all 8 questions which the scavengers were asked with minimum score being 0 and maximum score being 16. Mean was used to rank perceived health related problems the descending order of occurrence.

## RESULTS AND DISCUSSION

### Socioeconomic characteristics

The results from the table show that above average numbers of scavengers (54.4%) were observed in the age group 21 to 30 years and 14.5 % of scavengers were in the age group 20 year and below. The findings imply that youths of school age were into scavenging business despite the risks involved in the job.

One of the participants from Osogbo in focus group discussion said that *“My parents died when I was young. There was no one to sponsor me and I wanted to go to school. I used the income from*

*scavenging to fund myself through school, feeding, buying books and clothing.* The above disclose the reasons for working in the dumpsite at such a young age as a means for survival. Male (76.7%) dominated the business of scavenging. In this study, 48.3% of scavengers were married, The rest were either single who have never been married, separated, divorced and widowed( 51.7%) (Table 1). This is supported by the following statement from a woman at Ado-Ekiti: *“Most women working here are either divorced or separated with no husband to support us. We struggle on our own to pay house rent, feed the children and send them to school form the money we made from this business.*

Nigeria has earlier been identified to comprise of three main ethnic groups which include Hausa, Yoruba and Igbo. The ethnic group of waste workers is important most especially to waste pickers/scavengers since they have in the past been identified to be migrants who are out to make a living in the city (Benson and Vanqa-Mgijima, 2010; Hayami *et al.* 2006).

In this study, the Hausas who are migrants from the northern part of Nigeria have the largest representation among scavengers in the study area. This findings is in line with Obadina (2015) findings that majority of scavengers in Lagos State were Hausas.

In this study 48.7% of waste scavengers have no education. Despite the fact almost half were not educated we found out that some are highly educated up to higher institutions. One of the identified young scavengers stated that *“I suffered with verbal abuse from my friends which made me drop out from school and faced my work squarely.”*The mean number of scavengers on the job working experience was 8.5years. Table1 also revealed that, 71.8 % scavengers have been working for between 5 to 10 years. Majority of the scavengers had average income of 16,000 monthly. Despite the fact the income realized was low they claimed that they were able to take care of their needs to certain extent.

**Table 1: Socioeconomic characteristics of scavengers**

Variables	Frequency	percentage	Mean/STD
<b>Age</b>			
≤ 30	82	68.4	27.4(5.8)
31-60	24	20.0	
≥ 60	14	11.6	
<b>Sex</b>			
Male	92	76.7	
Female	28	23.3	
<b>Marital status</b>			
Married	58	48.3	
Single	40	30.3	
Widowed	7	5.8	
Separated	9	7.5	



Variables	Frequency	percentage	Mean/STD
Divorced	6	5.0	
<b>Ethnicity</b>			
Scavengers			
Hausa	68	56.7	
Yoruba	31	25.8	
Igbo	14	11.7	
Others	7	5.8	
<b>Educational level</b>			
Never	58	48.3	
1-6(primary school)	34	28.3	
7-12(Secondary school)	21	17.5	
13 and above	7	5.8	
<b>Income</b>			
≤ 10,000	34	28.3	16,000(4,003)
11,000-20,000	61	50.8	
≥21,000	25	20.8	

### Reason for entry into a job at the dumpsite

This section examines the reasons for entry into scavenging. The primary reasons are to get out of poverty (92.6%) and unemployment (87.1%). This necessitated their need to seek for ways of making a living through waste scavenging. In addition to unemployed migrants, there are also waste workers who had been employed but due to loss of employment had to look for a way of getting a job. The finding indicated that some of the scavengers were into it for economic reason so

that they could satisfy their basic needs. The implication of this is that majority were into scavenging business not because of the interest in the job but due the joblessness. It is also being used as a means of getting out of poverty. These findings corroborated Owusu-Sekyere (2014) and Obadina (2015) their study in Ghana and Lagos that the scavengers are in the occupation, not by choice, but due to increased levels of unemployment and poverty.

**Table 2: Reasons for Entry into a Job of scavenging**

Reasons for scavenging	Percent	Rank
To get out of poverty	92.6	1 <sup>st</sup>
I cannot get job in my place or state	87.1	2 <sup>nd</sup>
Ability to take care of my family	85.2	3 <sup>rd</sup>
No certificate to do other job	73.5	4 <sup>th</sup>
Loss of job due to retrenchment	58.3	5 <sup>th</sup>
Inadequate access to credit facilities	56.3	6 <sup>th</sup>
I can be on my own	40.6	7 <sup>th</sup>

### Perceived Health related problems

The study further reveals that majority (80.2%) of scavengers are exposed daily to a numerous life threatening health problems which might result to death as they sort through the waste for recyclable products. Scavenging has some detrimental effects on the health of the scavengers in descending order of their severity. The most prevalence was the headaches which occurred as a result of working in the sun (95.8%). This was followed by minor injuries from stepping on broken bottles or sharp objects in the refuse (90.5%), eye irritation (89.6%); respiratory diseases which include coughing and sneezing (87.4%) etc and backaches from bending down most of the time.

Other infections that might associated with waste scavenging includes skin and blood infections resulting from direct contact with waste

and from infected wounds,( 67.2%). These an indication that scavengers were exposed to various environmental hazards arising from their daily activities such as respiratory diseases which occurred as a result of exposure to dust and hazardous compounds, accidental injuries that include skeletal disorders resulting from the handling of heavy containers, infected wounds from contact with sharp items, poisoning and chemical burns resulting from contact with hazardous chemical waste mixed with general waste; burns and other injuries from job-related accidents at waste disposal sites. This assertion is inline Chalin *et al.*, (2003) who claimed that scavengers are usually exposed to accidents and injuries at dumpsite. Despite the seriousness of the health hazards outline, most of the scavengers at times over look them. This might be as a result of



inadequate knowledge of the health related information or cost of securing medical attention. As waste scavengers in the study areas make a

living, they are also exposed to health problems that have impending danger on their economic activity.

**Table 3: Perceived health related problems among waste scavengers**

Health problems	%	Rank
Headaches from working in the sun	95.8	1 <sup>st</sup>
Minor injuries	90.5	2 <sup>nd</sup>
Eye irritation	89.6	3 <sup>rd</sup>
Respiratory diseases	87.4	4 <sup>th</sup>
Minor injuries from stepping on broken bottles or sharp objects in the refuse	83.4	5 <sup>th</sup>
Backaches from bending down	78.3	6 <sup>th</sup>
Skin disease and blood infections	67.2	7 <sup>th</sup>
Poisoning and chemical burns	49.1	8 <sup>th</sup>

Mean percentage= 80.2%

**CONCLUSION AND RECOMMENDATIONS**

Waste scavenging arises mainly due to the existence of waste dumps and recycling enterprises on one hand, and the income earned as well as poverty on the other hand. Scavenging as an informal activity has employed a number of unemployed people. The reality from this study is that as waste scavengers scavenged for wealth in order to get out of poverty but at same time they are also exposed to a countless number of health related problems which might lead to death. Exposure to environmental hazards could be attributed to low level of education and inadequate safety measures. This situation needs to be of concerned to every shareholder in the areas of occupational safety.

The paper recommends that given the environmental hazards associated with the enterprise, policy measures that would enhance the health status of the scavengers such as provision of necessary working equipment like hand gloves and boots needs to be adopted by Government. Training needs to be organised by government agency and Non-Governmental Organisation on the safety measures. Furthermore, they need to be targeted in federal government social intervention programmes.

**REFERENCES**

Benson and Vanqa-Mgijima (2010). The streets of Cape Town. International Labour Research and Information Group (ILRIG), WIEGO Organising Series. Available at:[http://www.Inclusivcities.org/toolbox/Organising\\_on\\_the\\_Streets\\_web.Pdf](http://www.Inclusivcities.org/toolbox/Organising_on_the_Streets_web.Pdf). [Accessed25/04/2012]

Eric Norman Olaf Binion (2007) The perception of health with informal Recyclers in Buenos Aires, Argentina Unpublished Master of Arts Thesis in the Department of Geography

Chalin, C. G., Nguyen, H. T. L. and Nguyen, H., (2003). Issues related to the health of women and children waste pickers in Vietnam. Gender and the waste economy: Vietnamese and International experiences. Waste Econ program

Genemo, E. (2010). Worst forms of child Labour: A psychosocial study of children scavenging on the main waste dumpsite of Addis Ababa.

Hayami, Y., Dikshit, A. And Mishra, S., (2006). Waste pickers and collectors in Delhi: poverty and environment in an urban informal sector. *The Journal of Development Studies*, vol. 42, no. 1, pp. 41-69.

Medina, M., (2007). The world's scavengers: salvaging for sustainable consumption and production. Rowman Altamira. <https://rowman.com/ISBN/9780759113800/The-World's-Scavengers-Salvaging-for-Sustainable-Consumption-and-Production> . Accessed on 23/08/2018.

Muktar, M. (2011). The Youth and Waste Scavenging in Nigeria: Implications For Socioeconomic and Health Hazards. PHD, Department of Economics Bayero University. Kano Nigeria. Accessed on [www.ganji.com/article 8000/news 871.htm](http://www.ganji.com/article/8000/news871.htm)

Obadina, A. A. (2015). Solid waste management livelihood on Lagos dumpsite: Analysis of gender and social difference. Unpublished Doctoral Thesis. Submitted in partial fulfilment of the requirements for the award of Doctor of Philosophy of Loughborough University. <https://dspace.lboro.ac.uk/2134/21827> accessed on 14/09/2018

Owusu-Sekyere, E. (2014). Scavenging for wealth or death? Exploring the health risk associated with waste scavenging in



- Kumasi, Ghana. Ghana. *Journal of Geography*, Vol. 6, 2014 Pages 63 – 80
- Ray, M. R., Mukherjee, G., Roychowdhury S., Lahiri T. (2004). Respiratory and General Health Impairments of Rag Pickers in India: a Study in Delhi. *Int Arch Occup Environ Health*. 2004; 77:595–598
- Reynals, B. T. (2002). ‘De Cartoneros a Recuperadores Urbanos’ Presented at Respuestas de la Sociedad Civil a la Emergencia Social: Brasil y Argentina comparten experiencias, Master’s Thesis, Universidad Nacional.
- Schamber, P. and Suárez, F. (2002). Actores sociales y Cirujero y gestión de residuos una mirada sobre circuito informal del reciclaje en el conurbano bonaerense. *Revista Realidad Económica Buenos Aires*. 190, 29-37
- United Nations Human Settlements Programme, UN-HABITAT (2010). *Collection of Municipal Solid Waste in Developing Countries*. United Nations Human Settlements Programme, Gutenberg Press Malta ISBN 978-92-1-132254-5.
- Wikipedia, the free Encyclopaedia (2012) Waste picker retrieved from [https://en.wikipedia.org/wiki/Waste\\_picker](https://en.wikipedia.org/wiki/Waste_picker) on 9/12/2018