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Physical and Psychosocial Occupational Hazards among Solid Waste Collectors in Swali Yenagoa, Bayelsa State

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Abstract **Review Article**

Waste refers to any material discarded after use or considered no longer useful. Proper solid waste disposal is vital for public and environmental health, and waste collectors play a central role in maintaining community sanitation. The aim of this study was to assess the physical and psychosocial occupational hazards among waste collectors in Swali Community, Yenagoa, Bayelsa State. This research adopted a cross-sectional survey design. The target population comprised of all formal waste collectors in the Swali community who were exposed to physical and psychosocial occupational hazards. A total of 125 waste collectors were selected using a simple random sampling technique. Data was collected through structured questionnaire and observational checklist and analyzed using descriptive statistics, and inferential analysis was conducted using a chi-square tests, a one- sample t test and a one-sample z-test at a significance of level of 0.05 with the aid of SPSS version 25. Findings revealed that the most frequently reported physical occupational hazard was cuts or puncture wounds with 44.8% of respondents agreeing and 24.0% strongly agreeing, yielding the highest mean score of 3.67 ± 1.18. Regarding psychosocial hazards, 52% reported experiencing stress due to your job, while 51% reported verbal abuse while working. In conclusion, the study found that waste collectors in Swali, Yenagoa, experience significant physical and psychosocial hazards. It is recommended that PPE compliance policies should be enforced and provision of safe work technique.

Keywords: Solid waste management, Occupational hazards, Physical hazards, Psychosocial hazards, Waste collectors.

1.0 Introduction

The management of solid waste remains a critical component of environmental health and public safety, with solid waste collectors serving as a vital workforce in the collection, transportation, and disposal of municipal waste. These individuals operate at the frontlines of waste management, routinely exposed to various physical and psychosocial hazards during their daily activities (Kretchy et al., 2020). Their occupational setting often involves strenuous physical labor, direct contact with hazardous materials, irregular work hours, and minimal protection against environmental hazards, all of which pose significant threats to their health and well-being. As of 2018, the World Bank reported that over 2 billion tons of solid waste are generated annually, a figure expected to increase significantly by 2050 due to urban expansion, particularly in low- and middle-income countries (Kaza et al., 2018).

Solid waste collectors often work in unsanitary and hazardous conditions, facing both physical and

psychosocial occupational hazards that make their work one of the most dangerous and least recognized in many societies. Open dumpsites, particularly in low-income countries, are breeding grounds for disease, filled with hazardous materials, including industrial waste, medical waste, and household trash (Nzeadibe and Ajaero, 2015). In developing nations like Nigeria, where waste management systems are underfunded and poorly regulated, waste collectors frequently lack the necessary tools, safety precautions, and training.

Physical hazards include frequent exposure to sharp objects, biological waste, toxic chemicals, and airborne contaminants, which can result in injuries, infections, respiratory problems, and long-term musculoskeletal disorders (Adedoyin et al., 2022). Their tasks often require repetitive bending, lifting, and prolonged standing or walking, which contribute to chronic pain and fatigue (Mohammadi et al., 2019). The lack of adequate personal protective equipment (PPE), poor enforcement of safety regulations, and insufficient training further exacerbate their vulnerability (Abdu et al., 2021).

In addition to physical hazards, waste collectors face psychosocial hazards that harm their mental health and quality of life, such as stress, stigmatization, job dissatisfaction, and emotional exhaustion. Many faces societal discrimination and negative public perceptions due to the nature of their work, leading to depression and anxiety (Gyasi-Sarpong et al., 2022). The irregular and insecure nature of employment, coupled with low income and limited access to occupational health services, further compounds the psychological strain experienced by these workers (Iheanacho et al., 2023).

In Nigeria, waste collection and disposal systems in many parts of the country remain inefficient and underfunded. The burden of managing this growing volume of waste falls disproportionately on solid waste collectors, many of whom operate under poor working conditions and lack formal protection or recognition within the national labor system (Omoleke et al., 2021). A study in Lagos found that over 70% of waste collectors experienced work-related injuries or illnesses within a year, mainly due to the handling of unsegregated waste and lack of safety training (Ezeah & Roberts, 2020).

In Swali, solid waste collectors are often engaged through private contractors, operating under precarious employment terms and routinely exposed to occupational hazards with limited protection or medical support. The area lacks sufficient waste treatment facilities, and dumpsites are unsanitary and poorly managed, leading to indiscriminate dumping in public spaces and waterways. Waste segregation is rarely practiced, increasing the likelihood of injuries such as cuts, needle pricks, burns, and contact with infectious materials (Ekpe et al., 2022).

Psychosocial occupational hazards are equally concerning in the Swali community. Solid waste collectors are frequently stigmatized by community members, who perceive their work as dirty or demeaning. Many reports being verbally abused, avoided in public spaces, or socially excluded due to the nature of their work, leading to low self-worth and mental health challenges such as anxiety and depressive symptoms (Ibaba and Eremie, 2023). Most collectors in Swali work without formal contracts, health insurance, or access to psychosocial support services. These conditions place considerable emotional and psychological strain on workers who are already struggling with the physical demands of the job.

2.0 Methodology

2.1 Study Design

The study adopted a descriptive cross-sectional research design to assess the physical and psychosocial occupational hazards among solid waste collectors in Swali Community, Yenagoa, Bayelsa State. The research design was considered appropriate as it allows for the collection of data on exposures and experiences at a single point in time among the target population.

2.2 Study Population and Sampling Technique

The study population consisted of all registered and active solid waste collectors employed by the private waste management contractor (Brikari Limited) operating in Swali Community. Inclusion criteria

included being actively engaged in waste collection for at least six months, while those on leave or with less than six months' experience were excluded.
A single-stage sampling technique was adopted for this study. A simple random sampling method was used to select 125 respondents from the list of solid waste collectors obtained from the contractors. This approach ensured that every member of the population had an equal chance of being selected, reducing selection bias.

2.3 Study Instruments

Data collection instruments comprised a structured questionnaire and an observational checklist. The questionnaire included sections on socio-demographic characteristics, exposure to physical and psychosocial hazards. The observational checklist was used to assess working conditions, the availability and use of PPE, and ergonomic factors in real-time.

2.4 Validity and Reliability of the Instrument

Validity of the instruments was ensured through content, face, and construct validity. Experts in occupational and environmental health reviewed the instruments to ensure coverage of relevant hazards, clarity of items, and alignment with study objectives. Reliability was assessed using a pre-test conducted among 10% of the population in a similar nearby community, yielding a Cronbach's alpha of 0.82 for internal consistency.

2.5 Data Collection Method

Data collection method involved administering the questionnaire in-person with assistance from trained research assistants. Observations were conducted at various collection points and along the collection routes to capture real-time exposures and work practices. Data were collected over a five-week period.

2.6 Method of Data Analysis

Data analysis was performed using descriptive statistics such as frequency counts, percentages, means, and standard deviations to summarize demographic characteristics and occupational hazards. Data from the observational checklist were analyzed qualitatively to identify patterns of exposure and compliance with safety practices.

2.6 Ethical Consideration

Ethical considerations included obtaining approval from the Rivers State University Ethical Review Board and informed consent from each participant. Confidentiality and anonymity were ensured, and respondents were informed of their right to withdraw at any stage without consequence.

3.0 Results

3.1 Analysis of the Questionnaire

A total of 125 questionnaires were administered to solid waste collectors in Swali Community, Yenagoa, Bayelsa State. All the questionnaires were properly completed and returned, giving a 100 % response rate.

The completed questionnaires were carefully checked for accuracy, coded, and analyzed using IBM SPSS Statistics Version 25.0. Descriptive statistics such as *frequencies, percentages, means,* and *standard deviations* were employed to summarize responses obtained from the questionnaire on socio-demographic characteristics, physical occupational hazards and risk factors, and psychosocial occupational hazards.

The reliability of the questionnaire was confirmed through a pilot study conducted among waste collectors outside the study area. The pilot analysis produced a Cronbach's Alpha coefficient of 0.82, indicating satisfactory internal consistency of the instrument.

Data from the questionnaire were analyzed at a 95 % confidence level, and results are presented using tables, bar charts, and pie charts for clarity and concise interpretation.

3.2 Socio-Demographic Characteristics of Respondents

A total of 125 respondents participated in the study. The age distribution showed that 13 respondents (10.4%) were below 20 years, 39 (31.2%) were

within 20–30 years, 45 (36.0%) were within 31–40 years, while 28 (22.4%) were above 40 years.

In terms of gender, 92 respondents (73.6%) were male while 33 (26.4%) were female. Marital status analysis revealed that 40 respondents (32.0%) were single, 68 (54.4%) were married, 9 (7.2%) were divorced, and 8 (6.4%) were widowed.

With respect to educational level, 24 respondents (19.2%) had no formal education, 32 (25.6%) had primary education, 47 (37.6%) had secondary education, and 22 (17.6%) had tertiary education.

Regarding years of experience, 21 respondents (16.8%) had less than one year of experience, 41 (32.8%) had between 1–5 years, 34 (27.2%) had between 6–10 years, while 29 (23.2%) had above 10 years.

Employment type showed that 38 respondents (30.4%) were permanent workers, 44 (35.2%) were on contract or casual employment, 32 (25.6%) were informal or self-employed, and 11 (8.8%) were volunteers.

Religious affiliation indicated that 94 respondents (75.2%) were Christians, 21 (16.8%) were Muslims, 7 (5.6%) were traditionalists, and 3 (2.4%) belonged to other faiths. In terms of tribe, 58 respondents (46.4%) were Ijaw, 31 (24.8%) were Ogbia, 21 (16.8%) were Epie–Atissa, while 15 (12.0%) belonged to other ethnic groups.

The summary of socio-demographic characteristics of respondents is presented in Table 4.1

Table 4.1: Socio-Demographic Characteristics of Respondents (n = 125)

Variable	Category	Frequency (n)	Percentage (%)
Age (years)	Below 20	13	10.4
	20–30	39	31.2
	31–40	45	36.0
	Above 40	28	22.4
Gender	Male	92	73.6
	Female	33	26.4
Marital Status	Single	40	32.0
	Married	68	54.4
	Divorced	9	7.2
	Widowed	8	6.4

Educational Level	No formal education	24	19.2
	Primary education	32	25.6
	Secondary education	47	37.6
	Tertiary education	22	17.6
Years of Experience	< 1 year	21	16.8
	1–5 years	41	32.8
	6–10 years	34	27.2
	Above 10 years	29	23.2
Employment Type	Permanent	38	30.4
	Contract/Casual	44	35.2
	Informal (Self-employed)	32	25.6
	Volunteer	11	8.8
Religion	Christian	94	75.2
	Muslim	21	16.8
	Traditionalist	7	5.6
	Others	3	2.4
Tribe	Ijaw	58	46.4
	Ogbia	31	24.8
	Epie–Atissa	21	16.8
	Others	15	12.0

3.3 Physical Occupational Hazards

Responses from the participants on physical occupational hazards revealed that 12 (9.6%) strongly disagreed and 22 (17.6%) disagreed that they had received injuries due to lifting heavy loads, while 62 (49.6%) agreed and 29 (23.2%) strongly agreed, with a mean ± SD of 3.59 ± 1.12. For the item *"I experience fatigue and dehydration due to working under the sun,"* 14 (11.2%) strongly disagreed, 23 (18.4%) disagreed, 16 (12.8%) were neutral, 54 (43.2%) agreed, and 18 (14.4%) strongly agreed (3.31 ± 1.21). On *"I experience muscle and joint pain after lifting waste,"* 9 (7.2%) strongly disagreed, 20 (16.0%) disagreed, 16 (12.8%) were neutral, 60 (48.0%) agreed, and 20 (16.0%) strongly agreed (3.50 ± 1.12).

Regarding exposure to sunlight and heat, 36 (28.8%) strongly disagreed, 42 (33.6%) disagreed, 20 (16.0%) were neutral, and 27 (21.6%) agreed that they are frequently exposed to direct sunlight and extreme heat while working, yielding 2.31 ± 1.03. For exposure to unpleasant odours and dust during waste handling, 45 (36.0%) strongly disagreed, 39 (31.2%) disagreed, 14 (11.2%) were neutral, 18 (14.4%) agreed, and 9 (7.2%) strongly agreed (2.26 ± 1.18). When asked whether they suffer from long-term back pain, 20 (16.0%) strongly disagreed, 44 (35.2%) disagreed, 45 (36.0%) agreed, and 16 (12.8%) strongly agreed (2.94 ± 1.21).

Responses to *"I often feel physically exhausted due to long working hours and limited rest periods"* showed that 48 (38.4%) strongly disagreed, 40 (32.0%) disagreed, 15 (12.0%) were neutral, 17 (13.6%) agreed, and 5 (4.0%) strongly agreed (2.12 ± 1.03). On *"I have experienced heat exhaustion/dehydration,"* 15 (12.0%) strongly disagreed, 23 (18.4%) disagreed, 15 (12.0%) were neutral, 53 (42.4%) agreed, and 19 (15.2%) strongly agreed (3.30 ± 1.20). For the statement *"I experience regular back, shoulder, or joint pain due to repetitive bending or poor posture while working,"* 40 (32.0%) strongly disagreed, 28 (22.4%) disagreed, 24 (19.2%) were neutral, and 33 (26.4%) agreed (2.40 ± 1.08). Finally, with regard to sustaining cuts or puncture wounds, 10 (8.0%) strongly disagreed, 12 (9.6%) disagreed, 17 (13.6%) were neutral, 56 (44.8%) agreed, and 30 (24.0%) strongly agreed (3.67 ± 1.18).

The observation revealed the presence of several physical hazards such as manual lifting of heavy loads, unsafe bending postures, exposure to sharp objects, extreme weather conditions, and poor protective equipment usage among the waste collectors in the study area. The details of these observations are presented in Table 4.2b.

Table 4.2a: Physical Occupational Hazards among Respondents by Questionnaire (n = 125)

Item	SD n (%)	D n (%)	N n (%)	A n (%)	SA n (%)	Mean ± SD
I have received injuries due to lifting heavy loads	12 (9.6)	22 (17.6)	0 (0.0)	62 (49.6)	29 (23.2)	3.59 ± 1.12
	14 (11.2)	23 (18.4)	16 (12.8)	54 (43.2)	18 (14.4)	3.31 ± 1.21

I experience fatigue and dehydration due to working under the sun.						
I experience muscle and joint pain after lifting waste	9 (7.2)	20 (16.0)	16 (12.8)	60 (48.0)	20 (16.0)	3.50 ± 1.12
I am frequently exposed to direct sunlight and extreme heat while performing my job.	36 (28.8)	42 (33.6)	20 (16.0)	27 (21.6)	0 (0.0)	2.31 ± 1.03
I am exposed to unpleasant odors and dust during waste handling.	45 (36.0)	39 (31.2)	14 (11.2)	18 (14.4)	9 (7.2)	2.26 ± 1.18
I suffer from long-term back pain	20 (16.0)	44 (35.2)	0 (0.0)	45 (36.0)	16 (12.8)	2.94 ± 1.21
I often feel physically exhausted due to long working hours and limited rest periods.	48 (38.4)	40 (32.0)	15 (12.0)	17 (13.6)	5 (4.0)	2.12 ± 1.03
I have experienced heat exhaustion/dehydration	15 (12.0)	23 (18.4)	15 (12.0)	53 (42.4)	19 (15.2)	3.30 ± 1.20
I experience regular back, shoulder, or joint pain due to repetitive bending or poor posture while working.	40 (32.0)	28 (22.4)	24 (19.2)	33 (26.4)	0 (0.0)	2.40 ± 1.08
I have sustained cuts or puncture wounds	10 (8.0)	12 (9.6)	17 (13.6)	56 (44.8)	30 (24.0)	3.67 ± 1.18

Where SD – Strongly Disagree; D – Disagree; N – Neutral; A – Agree; and SA – Strongly Agree

Table 4.2b: Observation Checklist Results on Physical Hazards (n = 125)

Observation Item	Observed n (%)	Not Observed n (%)	Notes/Comments
Manual lifting of heavy waste containers	110 (88.0)	15 (12.0)	Carried waste bins and bags by hand
Frequent bending or twisting during lifting	96 (76.8)	29 (23.2)	Unsafe posture observed while lifting
Use of mechanical aids (e.g., carts, trolleys)	21 (16.8)	104 (83.2)	Wheelbarrows used only by few workers
Exposure to sharp objects (glass, metal, needles)	85 (68.0)	40 (32.0)	Broken bottles and needles seen in waste
Handling of liquid or chemical waste	38 (30.4)	87 (69.6)	Some liquid waste mixed with refuse
Signs of musculoskeletal strain (limping, fatigue)	44 (35.2)	81 (64.8)	Some workers showed signs of pain
Working in extreme weather (heat, rain)	95 (76.0)	30 (24.0)	No rest breaks or shelter provided
Collector works near moving vehicles or traffic	72 (57.6)	53 (42.4)	Observed along major roads
Presence of pests or vermin in waste	69 (55.2)	56 (44.8)	Rats, flies, and cockroaches present
Collector works in poorly lit or hazardous areas	52 (41.6)	73 (58.4)	Narrow alleys and dumpsites at dusk

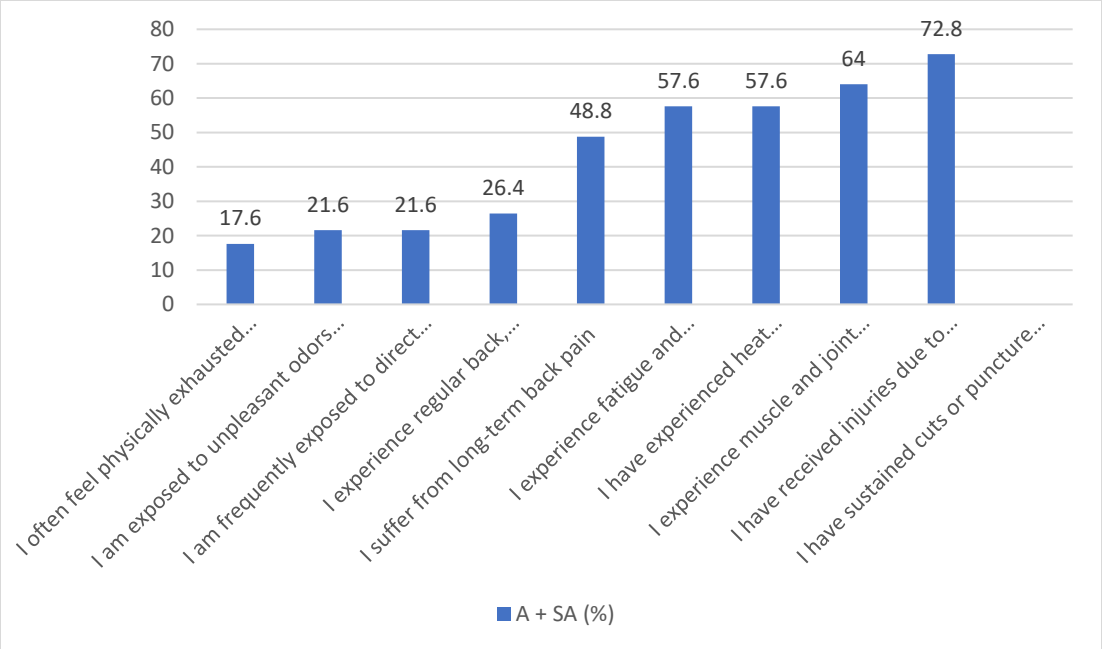

Fig. 4.1 : Distribution of Respondents Who Agreed or Strongly Agreed to Experiencing Physical Occupational Hazards

3.4 Psychosocial Occupational Hazards by Questionnaire

Responses on psychosocial occupational hazards among waste collectors showed that 51 (40.8%) reported experiencing verbal abuse frequently while working, 40 (32.0%) experienced it sometimes, 25 (20.0%) had never experienced it, and 9 (7.2%) were not sure.
Regarding physical attacks while working, 15 (12.0%) indicated they had been attacked multiple times, 36 (28.8%) once or twice, 62 (49.6%) had not been attacked, and 12 (9.6%) were not sure.

On job satisfaction, 53 (42.4%) reported being very dissatisfied, 23 (18.4%) somewhat dissatisfied, 27 (21.6%) somewhat satisfied, and 22 (17.6%) satisfied with their job as waste collectors. When asked whether they worried about losing their job or not being retained, 18 (14.4%) stated "yes, consistently," 46 (36.8%) said sometimes, 42 (33.6%) also responded "yes, consistently," while 19 (15.2%) indicated "no, never."

In relation to stress due to work, 26 (20.8%) respondents reported feeling stressed always, 52 (41.6%) often, 34 (27.2%) sometimes, and 13 (10.4%) never felt stressed.
The main causes of stress identified were long working hours (45; 36.0%), low wages (40; 32.0%), exposure to hazardous waste (25; 20.0%), and lack of job security (15; 12.0%).

On experiences of anxiety, depression, or sleep disorders, 49 (39.2%) reported frequent experiences, 38 (30.4%) experienced them occasionally, 28 (22.4%) reported no such experiences, and 10 (8.0%) were not sure.
With respect to feeling overwhelmed by workload or long working hours, 20 (16.0%) indicated sometimes, 35 (28.0%) often, 55 (44.0%) always, and 15 (12.0%) were not sure.

Finally, on whether respondents felt disrespected or looked down upon because of their job, 16 (12.8%) said no, 39 (31.2%) said yes occasionally, 50 (40.0%) said yes frequently, and 20 (16.0%) were not sure.

Field observations also revealed psychosocial challenges among waste collectors. These included visible work-related stress, poor supervision, lack of welfare support, and frequent confrontations with members of the public during waste collection. In many cases, workers appeared fatigued and demoralized, with little or no organizational protection from abuse.

Table 4.3a: Psychosocial Occupational Hazards by Questionnaire (n = 125)

Item	Response Category	Frequency (n)	Percentage (%)
Experienced verbal abuse while working	Yes, frequently	51	40.8
	Yes, sometimes	40	32.0
	No, never	25	20.0
	Not sure	9	7.2
Physically attacked while working	Yes, multiple times	15	12.0
	Yes, once or twice	36	28.8

	No	62	49.6
	Not sure	12	9.6
Do you feel satisfied with your job as a waste collector?	Very dissatisfied	53	42.4
	Somewhat dissatisfied	23	18.4
	Somewhat satisfied	27	21.6
	Satisfied	22	17.6
Do you worry about losing your job or not being retained?	Yes, consistently	18	14.4
	Sometimes	46	36.8
	Yes, consistently	42	33.6
	No, never	19	15.2
How often do you feel stressed due to your job	Always	26	20.8
	Often	52	41.6
	Sometimes	34	27.2
	Never	13	10.4
Main causes of stress	Long working hours	45	36.0
	Low wages	40	32.0
	Exposure to hazardous waste	25	20.0
	Lack of job security	15	12.0
Experienced anxiety, depression, or sleep disorders	Yes, frequently	49	39.2
	Yes, occasionally	38	30.4
	No	28	22.4
	Not sure	10	8.0
Do you feel overwhelmed because of the workload or long working hours.	Sometimes	20	16.0
	Often	35	28.0

	Always	55	44.0
	Not sure	15	12.0
I feel disrespected or looked down upon because of my job	No	16	12.8
	Yes, Occasionally	39	31.2
	Yes, frequently	50	40.0
	Not sure	20	16.0

Table 4.3b: Psychosocial Occupational Hazards by Observation Checklist (n = 125)

Observation Item	Observed n (%)	Not Observed n (%)	Notes/Comments
Verbal abuse or stigma from community members	61 (48.8)	64 (51.2)	Observed mainly in markets and residential areas during collection
Collector expresses frustration or fatigue verbally	70 (56.0)	55 (44.0)	Frequent complaints about workload and conditions
Signs of emotional distress (withdrawn, anxious, irritable)	54 (43.2)	71 (56.8)	Some collectors showed visible anxiety or irritability
Lack of social interaction with peers	46 (36.8)	79 (63.2)	More common among casual and contract workers
Collector works alone without team support	38 (30.4)	87 (69.6)	Solo work common in certain routes
Absence of rest breaks or long working hours	82 (65.6)	43 (34.4)	Most collectors worked long hours without scheduled breaks
Collector is rushed or pressured to complete tasks	59 (47.2)	66 (52.8)	Pressure often from supervisors and time constraints
Collector shows signs of boredom or disengagement	41 (32.8)	84 (67.2)	Noted among younger workers
No visible support or supervision from management	79 (63.2)	46 (36.8)	Field supervision was irregular and minimal

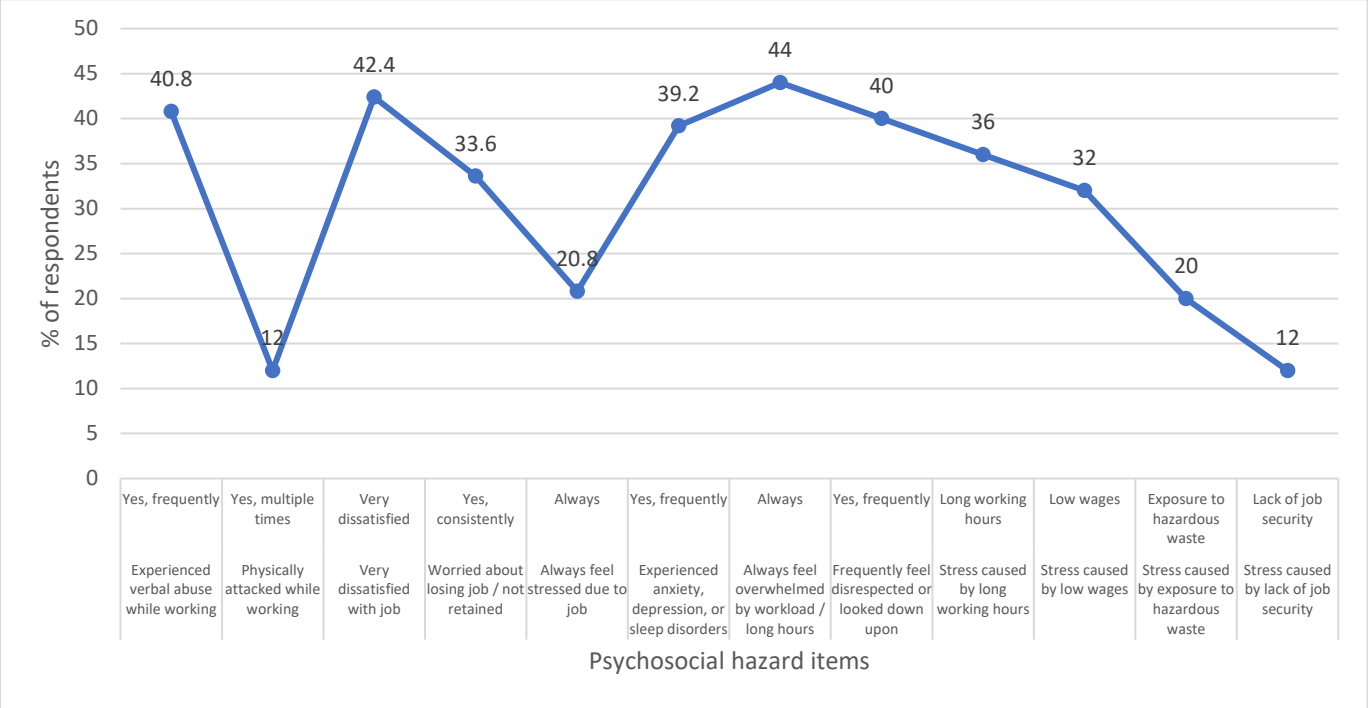

Figure 4.2: ***Line Graph Showing Percentage of Respondents Who Frequently Experienced Psychosocial Occupational Hazards***

4.0 DISCUSSION and CONCLUSIONS

4.1 Physical Occupational Hazards

The study revealed that waste collectors in Swali community face multiple physical hazards in their daily work. Commonly reported risks included cuts from sharp waste materials, slips and falls, musculoskeletal pain from lifting heavy loads, and exposure to extreme weather. Prolonged standing and bending also contributed to chronic back and joint pain. These findings align with previous studies documenting that manual waste handling without ergonomic tools or mechanization increases the risk of injury and fatigue (El-Sharaby et al., 2022; Solomon et al., 2023).

El-Sharaby and colleagues (2022) found that musculoskeletal disorders were prevalent among 74% of waste collectors in Egypt, primarily due to repetitive heavy lifting and poor postural ergonomics. Similarly, Solomon et al. (2023) in Ethiopia reported that street cleaners experienced a high burden of musculoskeletal pain, dehydration, and falls, directly linked to physical exertion and lack of mechanical aids. In Nigeria, Nkere and Iwunze (2024) observed that waste collectors in Port Harcourt faced frequent injuries from sharp waste and road accidents, aggravated by inadequate PPE and absence of safety training.

These findings confirm that extended exposure without adequate training or protective measures compounds physical risks. From a systems perspective, the lack of mechanization, ergonomic equipment, and institutional enforcement produces unsafe outcomes. The Occupational Risk Theory supports this conclusion, emphasizing that high-risk environments without preventive systems inevitably result in occupational injuries.

In contrast, research in developed countries shows how advanced technologies and strict regulations mitigate physical hazards. Schenck et al. (2020)

found that German waste collectors had minimal musculoskeletal disorders due to mechanized lifting systems and scheduled rest breaks. The disparities suggest that persistent physical hazards in low-resource settings arise primarily from systemic neglect rather than ignorance. In Swali, structural interventions such as mechanised waste trucks, mandatory PPE distribution, and ergonomic training are essential to reduce the physical burden of waste collection work.

4.2 Psychosocial Occupational Hazards

The study further revealed that waste collectors in Swali community experience multiple psychosocial challenges associated with their work environment. Many respondents reported frequent verbal abuse while working, as well as occasional incidents of physical assault. Feelings of job dissatisfaction and fear of losing employment were also commonly expressed. Several workers noted that they often felt stressed due to long working hours, low wages, and exposure to hazardous waste, while others reported experiencing anxiety, depression, or sleep disorders. A considerable proportion of respondents admitted to feeling overwhelmed by their workload or the long hours of physical labour, and some indicated that they felt disrespected or looked down upon because of their occupation.

These findings align with the Job Demand–Control Model, which postulates that stress arises when workers are subjected to high demands but have little control, support, or stability in their work environment. In the case of Swali's waste collectors, demanding physical tasks, low income, and social stigma combine to produce chronic emotional strain and diminished well-being.

Comparable outcomes have been documented in other developing contexts. In Ghana, Lissah et al. (2020) found that domestic waste collectors experienced significant work-related stress, humiliation, and low morale due to public disrespect and limited institutional support. Similarly, Xiong et al. (2025) synthesised findings across several developing countries and concluded that psychosocial work factors such as discrimination, job insecurity, and social exclusion have a profound impact on waste collectors' mental and emotional health. In Nigeria, Osibanjo et al. (2018) also reported that informal e-waste workers frequently experienced depression and anxiety due to unstable employment and poor working conditions.

By contrast, in countries with stronger labour protections and structured welfare systems, psychosocial stress levels tend to be lower. Le et al. (2024) observed that supportive work environments, equitable wages, and access to regular mental health services significantly reduced occupational stress and improved psychological well-being among waste management workers.

In conclusion, the psychosocial hazards faced by waste collectors in Swali community are rooted in systemic and social factors, including economic instability, limited support structures, and societal stigma. Addressing these challenges requires comprehensive interventions such as social protection programs, fair remuneration, counselling services, and public awareness campaigns aimed at improving respect for sanitation workers. Strengthening both psychological and institutional support systems will enhance workers' well-being, morale, and overall productivity.

5.0 Conclusion

This study has established that solid waste collectors in Swali Community, Yenagoa, face substantial physical and psychosocial occupational hazards resulting from the nature of their work environment, inadequate safety provisions, and poor institutional support. The findings revealed that although most workers were aware of the importance of personal protective equipment (PPE), their consistent use was low due to discomfort, insufficient supply, and weak enforcement by employers.

The most prevalent physical hazards identified were heat exhaustion or dehydration, musculoskeletal pain, and injuries caused by sharp objects and hazardous waste. Similarly, psychosocial hazards

such as long working hours, verbal abuse, social stigma, and emotional exhaustion were widely reported, reflecting the stressful and undervalued nature of their occupation.

Overall, the study concludes that waste collectors in Swali perform essential environmental health functions under conditions that pose significant threats to their safety, mental well-being, and overall quality of life. The persistence of these hazards reflects systemic weaknesses in occupational health governance and the absence of effective policy enforcement within the waste management sector.

Addressing these issues requires a multifaceted approach that includes stronger institutional commitment, continuous training, adequate PPE provision, and psychosocial support for waste collectors. Ensuring safer and more dignified working conditions for these workers is not only a public health imperative but also a necessary step toward achieving the Sustainable Development Goals on decent work, health, and environmental sustainability.

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