Vulnerability of Informal Workers: A Case Study of Waste Pickers in Vellore Town of Tamil Nadu

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Abstract

This study presents socio-economic conditions of waster pickers in Vellore town of Tamil Nadu. This study based on primary data collection of 105 waste pickers in Vellore. This study examine the literacy, caste, religion, marital status, age, nature of employment, income, environment and health problem, utilization of health care and household amities.

Key Word; Urban poor-Waste pickers, urban informal workers.

Introduction

The labour markets in developing countries are functioned at dualistic such as modern and traditional. This dualistic model grows due to unequal distribution of technical progress. In the modern labour market in developed economy is to high level of labour productivity and it lead to high level of employment and income. On the other hand traditional labour market in developing economy is to low level of productivity, mass level of unemployment and underemployment and low level of income. But, the modern sector in developing countries has low percentage of employment and low level of labour productivity. This is the common phenomenon in developing countries. This type of economic dualism has been expressed in formal and informal in developing countries. The majority of labour are reside in the informal sectors. Labour worked in the informal sectors is describes informal labour. There is no unique definition for formal and informal labour in the universe. The definition had change nation to nation. In the context, this study examine the function of informal labour market in developing economy and it particularly observant to waste pickers.

The waste pickers are indispensable in urban economy and particularly in the solid waste management in urban environmental problems. They collected urban solid waste such as paper and plastic. This two items of paper and plastic contributed major urban environment problems and these waste are detached by waste pickers However, the society not valued the waste pickers and their occupation is not reorganized. In the circumstance this study examine five main objectives as: (i) the socio-economic condition of waste pickers, (ii) pattern of

employment and working conditions, (iii) labour mobility, working hours and income (iv) health status and health access of the waste pickers and (v) household amenities. This paper divided into six section followed by introduction, second section provided methodology, third section provided socio-economic condition, fourth section deals on employment and labour mobility, fifth section provided health status and health access and sixth section provided conclusion.

Section - II

Methodology

This study is based on primary data with simple random sampling of method. The total numbers of waster pickers in the study were 105 respondents. This interview scheduled was prepared on the basis of pilot study. This pilot study completed through personal interview scheduled and group discussion among 15 waste pickers in Vellore town. The interview scheduled was prepared to collect information on socio-economic background of the waste pickers, nature of employment, labour mobility and different social security measures.

Study Areas and Methodology

This study was completed in Vellore town of Tamil Nadu, Inida. Vellore city is the headquarters of this district. The Vellore city Municipal Corporation was established as early as 1866, this municipality was upgraded to first grade in 1947 and to selection grade in 1970. It was then upgraded to a special grade in 1979. Further, it was upgraded as corporation in 1.8-2008. The corporation of Vellore consists of 60 wards and this corporation is divided into 4 Zones with 15 wards each. Katpadi (Tharapadavedu) has 1 to 15 wards, Sathuvachari has 16 to 30 wards, Old Corporation has 31 to 45 wards, and Shenbakkam has 46 to 60 wards. The below map show Vellore location and its urban agglomeration (see Map 1). It had a population of 3,477,317 as of 2011. It is 37.62 per cent urbanized. The district has a literacy of 73.06 per cent, slightly below the state average. The Vellore city has been short listed by Ministry of Urban development as one of the 98 smart cities in India.

For data collection, mixed method of sampling was used. In the mixed method accidental sampling and snow ball technique was used to identify the waste pickers in Vellore town. On the basis the study areas were Bagayam, fort back side, Alangar Theatre back side, Sathiya Nagar, Old Town, Shenbagam, Virupachipuram and Konavattam in Vellore Corporation. The total number of waste pickers was 105 and this study was under taken October to December 2017. The structure interview scheduled was used to collect information on socio-economic profile, employment, income and utilization of health care and their health status.

Section - III

Socio-Economic Profile

The gender wise distribution of the respondents indicated that the 71.4 percent were female and 28.6 percent were males (Table 1). The age wise classification of the waste pickers were classified in to five categories: (i) 20 to 30 age (ii) 31 to 40 age (iii) 41 to 50 age (iv) 51 to 60 age and (vi) above 61 age. Out of 105 respondents, the 28.6 percent were in the age group of 41-50 years and followed by 27.6 percent were in the age group of 51-60, 19 percent in 31–40 years and 16.2 percent were in age group of 20 – 30 years and only 8.6 percent were above 61 years of age. Among these waste pickers, 61.9 percent were married and 31.4 percent were widows and 6.7 percent were unmarried. This clearly indicated that generally married women entered in the occupation and unmarried are negligible. In the religion and caste composition indicated that 87.6 per cent were Hindus, 6.7 per cent were Christian and 5.7 per cent were Muslim. In the caste composition obviously shows that lower caste groups were engaged in the waste picking occupation. The Scheduled Castes (SCs) and Most Backward Castes (MBCs) groups were represented in the sample. For the SC¹s were 68.6 per cent, M.B.C²s were 25.7 and 5.7 per cent were Backward Caste (B.Cs)³

¹ SCs were Adi Drivadar

 $^{^2\,\}mathrm{MBC}$ were Boyar and Vanniyar. The Boyar are Telegu has the mother tang

³ The Labai category of Muslim were come under Backward Caste.

Table 1: Social Background

Gender of the Respondents				
Gender	Number of Respondents	Percent		
Male	30	28.6		
Female	75	71.4		
	Age of the Respondents			
Age	Number of Respondents	Percent		
20–30	17	16.2		
31–40	20	19.0		
41–50	30	28.6		
51–60	29	27.6		
Above 61	9	8.6		
Ma	Marital Status of the Respondents			
Marital Status	Number of Respondents	Percent		
Married	65	61.9		
Unmarried	7	6.7		
Widow	33	31.4		
	Religion of the Respondent	S		
Religion	Number of Respondents	Percent		
Hindu	92	87.6		
Muslim	6	5.7		
Christian	7	6.7		
Caste of the Respondents				
Caste	Number of Respondents	Percent		
SCs	72	68.6		
M.B.Cs	27	25.7		
B.Cs	6	5.7		

Section - IV

Education and Nature of Employment of the Waste Pickers

Generally, educational status determined the level of skill. The skill determined the level of earnings. The waste pickers in Vellore town indicted low levels of skill due to majority of waste pickers were illiterate (see table 2). Among the sample respondents, 79 per cent were illiterate and 21 per cent were literate. Among literate, 9.5 per cent were in the class of 1st to 5th standard, 10.5 per cent were in the class 6th to 10th standard and 1.0 per cent were in 9^{th} to 10^{th} standards. The researcher explored the nature of migration and the result found that the migration of waste pickers reported that 90.5 per cent were not migrated and only 9.5 per cent were migrated from other areas. The migrated were from Chittor district of Andhra Pradesh and the neighboring district of Thiruvanamalai. The sample respondents reported that the reasons for choosing the present occupation due to not capable to find other jobs (9.5 per cent), lack of skill to do other work (64.8 per cent), and family occupation (25.7 per cent). Further, 75.2 per cent of waste pickers reported that the main occupation was waste picking and they were not engaged (part time or seasonal) in other occupation. The 25.8 per cent of waste pickers reported that they also occupied with other occupation such as clearing work at marriage or any other function, paid domestic workers, stone cutting, etc.., .The researcher explored the age of waste pickers at the time of enter in the labour market. The result revealed that the 46.7 per cent of workers reported that they entered in the labour market at the age of below 15 years, 31.4 per cent of workers reported at the age of 16 to 20 years, 14.3 per cent of workers entered at the age of 21 to 25 years and 7.6 per cent of workers reported that above the age of 26. There is a corroborative evidence that the level of education and to enter in the labour market. The low level of education was the main reason to enter at the early age of labour market. Year of experience of waste picker shows that 27.6 per cent of respondents reported that they engaged in the occupation more than 25 years, 24.8 per cent of respondents reported that they have the work 16 to 20 years, 23.8 per cent of respondents reported that they work less than 10 years, 12.4 per cent reported that they work 11 to 15 years and 11.4 per cent reported that they work as 21-25 years.

Table 2: Education and Nature of Employment

Literacy Status of the Respondents			
Level of Literacy	Number of Respondents	Percent	
Illiterate	83	79.0	
Primary School (1-5)	10	9.5	
Pre-Secondary School (6-8)	11	10.5	
Secondary School (9-10)	1	1.0	
Reason for	choose this job		
Reasons	Number of Respondents	Percent	
No other Employment	6110	5.7	
Don't know other work	68	64.8	
Family Situation	27	25.7	
No education	4	3.8	
Age at time of	of enter the Work		
Age	Number of Respondents	Percent	
Below 15 years	49	46.7	
16–20	33	31.4	
21–25	15	14.3	
Above 26	8	7.6	
Yea	ar of Experience		
Work Experience	Number of Respondents	Percent	
Less than 10 years	25	23.8	
11–15	13	12.4	
16–20	26	24.8	
21–25	12	11.4	
Above 25 years	29	27.6	

Occupational Mobility

Table 3 show an occupational mobility of waste pickers. For the occupational mobility of the waste pickers reported that 69.5 per cent of workers reported that the first occupation and present occupation of waste picking were same. 12.4 per cent of workers

reported agricultural labour as the first occupation, 10.5 per cent of workers reported that construction work was the first occupation, 2.9 per cent were reported vegetable vending as the first occupation and home workers respectively and 1.9 per cent reported as worked in shoe factory. The horizontal and vertical mobility of the waste pickers were completely absent due to low level of education.

For inter general mobility of waste pickers as follows; 31.0 per cent of the waste pickers reported that their father occupation also waste picking, 20.8 per cent reported that the father occupation was beed making, 18.2 per cent were reported that the father occupation was rickshaw pulling, 8 per cent of workers reported that the father occupation was bullock cat driver, 10 per cent of workers reported that the father occupation was agricultural workers. For mother occupation, among the 105 sample respondents, 63.8 per cent were worked and 36.2 per cent were not engaged in any occupation. Among the worked mothers, 56.7 per cent of waster picker's mother also the same occupation in the previous generation. 23.8 per cent of workers reported that the mother occupation was agricultural labourer, 16.4 per cent of workers mother were worked as stone cutting and 14.9 per cent of workers reported that the mother occupation was domestic workers.

Husband occupation of the women workers indicated that 33 worker were widow out of 75 women workers and remaining 42 women respondents reported that load man in the market or bus stand (19.5 per cent), earth digging work or soil work (219 per cent), goat/sheep shepherd (19.5 per cent), drama worker (14.6 per cent), stone cutter (17.1 per cent) and auto driver (9.8 per cent). Among the male respondents wife were identified 4 major work; same wastage picker (37.5 per cent), daily wage worker (29.1 per cent), domestic workers (16.7 per cent) and stone cutter (16.7 per cent).

Table 3: Occupational Mobility

Nature of e	enter in the First Work		
Enter the first work	Number of Respondents	Percent	
Collect Garbage	73	69.5	
Agriculture labour	13	12.4	
Vegetable seller	3	2.9	
Construction labour	11	10.5	
Home worker	3	2.9	
Shoe company	2	1.9	
Occupa	ntion of the Father		
Father Occupation	Number of Respondents	Percent	
Stone cutter	16	20.8	
Beedi Worker	9	12.0	
Bullock Cart Driver	6	8.0	
Rickshaw Driver	14	18.2	
Garbage Collection	24	31.0	
Agriculture labour	8	10.0	
Оссир	oation of Mother		
Mother Occupation	Number of Respondents	Percent	
Garbage Collection	38	56.7	
Agriculture labour	10	14.9	
Domestic Worker	8	11.9	
Stone cutter	11	16.5	
Occupation of Husband			
Load Man in the Market	8	19.5	
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Soil Worker	9	21.9
Goat/Sheep Shepherd	8	19.5

Stage/Drama worker	6	14.6
Stone Cutter	7	17.1
Auto Driver	4	9.8
Occı	ipation of Wife	
Wife's Occupation	Number of Respondents	Percent
Taking garbage	9	37.5
Daily Coolie	7	29.1
Domestic Worker	4	16.7
Stone Cutter	4	16.7
Total	24	100.0

Working Hours and Income of the Waste Pickers

The working hours of the male and female had different in waste picking. Generally male waste pickers started their work at the time of morning to after noon. But the female workers were started their work afternoon to evening. The male workers were out of their residence to 7 a.m or 8 a.m and female workers were out to residence 11. a.m or 12. p.m and to return 5 p.m or 6 p.m. The working hours were different person to person. Although, the researcher explored the working hours of the waste pickers as follows. The minimum working hours of waste pickers were 5 hours and maximum 10 hours per day. Out of 105 respondents, 19.0 per cent waste pickers reported that they worked 5 hours per day, 23.8 per cent reported 7 hours per day, 17.1 per cent reported 8 hours per day, 21.0 per cent reported 9 hours per day and 19.0 per cent reported 10 hours per day.

The working hours determined the quantity of garbage likes paper and plastic collection. As per the respondents reported (at the time of interview date) that the minimum weight of waste collection per day was 3 k.gs and maximum was 8 k.gs. (see table 4). Out of 105 respondents, 14.3 per cent of respondents reported that the collection of paper and plastic per day was 3 k.gs, 22.9 per cent of waste pickers reported that the collection was 4 k.gs per day, 35.2 per cent reported that 5k.gs per day, 12.4 per cent reported that 6 k.gs per day, 5.7 per cent reported that 7 k.gs per day, 9.5 per cent reported that 8 k.gs per day.

This collection of quantity of waste determined the level of income of the waste pickers. During at the time of interview period, the waste paper price was differing from Rs. 5 to Rs. 15 and the plastic price was differing from Rs. 8 to Rs.25. These prices depend upon the quality of paper and plastic. Therefore, working hours, collection of garbage, price of

paper and plastic determined the income of the respondents. As per income were classified into four categories; majority of the respondents (60 per cent) were under the income category of Rs.300 to Rs.399, followed by 21 per cent of respondents reported that they earned per day of Rs.200 to Rs.299, 10.5 per cent of respondents reported that Rs.400 to Rs.499 and 8.5 per cent of respondents reported that above Rs.500 (see table 4).

Table 4: Working Hours and Income

Working Hours of the Respondents		
Working Hours	Number of Respondents	Percent
5	20	19.0
7	25	23.8
8	18	17.1
9	22	21.0
10	20	19.0
Collection of p	paper & plastic po	er day
Quantity in Kilograms	Number of Respondents	Percent
3 Kgs	15	14.3
4 Kgs	24	22.9
5 Kgs	37	35.2
6 Kgs	13	12.4
7 Kgs	6	5.7
8 Kgs	10	9.5

Income	Number of Respondents	Percent
Rs. 200 – Rs.299	22	21.0
Rs. 300 – Rs.399	63	60.0
Rs. 400 – Rs.499	11	10.5
Rs. 500 and Above	9	8.5

Source: Field Survey

Section - V

Health Status and Health Access

Socio-economic conditions and nature of employment determined the health status of the waste pickers. Out of 105 respondents, 89.5 per cent (94 respondents) of respondents reported some of health problems. The details of health problem reported by workers shown in the below table 5 and found 21 different kind of health problems. Majority of respondents reported that (29.3 per cent) hand/leg/and joint pain was the main health problems. Body pain, cold and cough, malaria, tuberculosis, asthma, breathing problems, skin dieses were common among the waste pickers.

Table 5: Diseases Affected by the Respondents

Name of the diseases	Number of Respondents	Percent
Cholera	8	7.6
Diarrhea	8	7.6
Typhoid	2	1.9
Jaundice	5	4.8
Hand/Leg/Joint pain	67	63.8
Skin Diseases	5	4.8
Eye Irritation	8	7.6

Malaria	16	15.2
Tuberculosis	18	17.1
Menstrual Problem	3	2.8
Embryo	6	5.7
Headache	3	2.8
Cold and Cough	16	15.2
Body Pain	23	21.9
Stomach Pain	8	7.6
Hair Falling	4	3.8

Asthma	7	6.7
Chest Pain	5	4.8
Breathing Problem	9	8.6
Allergic	2	1.9
Blood Pressure	4	3.8

For sources of taking treatment revealed that the out of 94 health problems waste pickers, 77.6 per cent reported to take treatment and 22.4 per cent reported that not taking any treatment for their health (see table 6). Out of 73 respondents 67 per cent of respondents to take treatment in Christian Medical College (CMC) rural health centre, 21.9 per cent of respondents were to take treatment in private doctors/clinic and 10.9 per cent of respondents reported in Government health centers/hospital. This is obviously pointed that people faith in the quality of health care in government hospitals were deteriorated. The researcher asked the question on illness of the respondents to admit in hospital during the last one year (at the time of interview). Out of the 73 respondents, 19.2 per cent reported that to admit hospital for taking treatment.

Table 6: Utilization of Health Care

Taking Treatment	Number of Respondents	Per Cent	
Not Taking Treatment	21	22.4	
Taking Treatment	73	77.6	
Different Source	ces of Seeking Treatment		
CMC Rural Health Centre	49	67.2	
Private Doctors/Clinic	16	21.9	
Government Hospitals	8	10.9	
Illness of Respondents Admitted in Hospitals			
Different Sources	Number of Respondents	Per Cent	
Yes	14	19.2	
No	59	80.8	
How long take Treatment in Hospital			
No. of Days	Number of Respondents	Percent	
3	3	21.4	
5	7	50.0	

6	2	14.3	
7	2	14.3	
Health Expenditure			
Amount	Number of Respondents	Per Cent	
Less than Rs.3000	14	19.2	
Rs.3001 to Rs.4000	23	31.5	
Rs.4001 to Rs.5000	27	37.0	
Above Rs. 5001	9	12.3	

Related to the above admitted respondents, the researcher explored how long to admit in hospitals for taking treatment. The answer was minimum 3 days and maximum seven days. Out of 14 respondents, 21.4 per cent (3 respondents) reported to admit in 3 days, 50.0 per cent of respondents reported 5 days (7 respondents), and 14.3 per cent of respondents were admitted in 6 days and 7 days respectively. In addition to this, researcher explored the medical expenditure of the respondents in the last one year. This includes consulting fees, medical examination such as blood test, X ray, ECG cost etc., and cost of drugs. Out of 73 respondents

, 19.2 per cent reported that they incurred the amount of less than Rs. 3000, 31.5 per cent of respondents were reported to spend on Rs. 3001 to Rs. 4000, 37.0 per cent of respondents reported Rs. 4001 to Rs. 5000 and 12.3 per cent of respondents reported above Rs. 5001.

Section - VI

The public provision such as ration eard, housing condition, bath room and toilet facilities, sources of drinking water, electricity, sources of cooking, etc. indicated the economic conditions. In the context, this study found that out of 105 respondents 81.9 per cent of respondents reported to have ration card. In the ration card is exceptionally helpful to purchase of free rice, subsidized price of wheat, sugar, dhal, cooking oil, etc., For housing, all the respondents having house, 69.5 per cent reported owned houses and 30.5 per cent were rented houses. All the respondents having owned houses have pucca houses. For bath room facilities, 76.2 per cent owned bath room and toilet facilities 28.6 per cent. All the household have electricity. For different sources of drinking water facilities, 96.2 per cent used corporation water (public tap water as the sources), 1.9 per cent were used bore well and 1.9 per cent used can water (paid water) for drinking purposes. For different sources of cooking fuels, 54.3 per cent used firewood as the sources of cooking, 36.2 per cent used LPG as the sources and 9.5 per cent used Kerosene as the sources. Finally, the household amenities likes cycle, two wheelers, fan, television, refrigerators and mobile phone. Out of 105 respondents, 24.8 per cent reported to have cycle, 30.5

per cent reported to have two wheeler, 89.5 per cent reported to have fan and television, 10.5 per cent have refrigerators and 80 per cent have the mobile phone.

Conclusion

This paper examined the health status of waste pickers in Vellore town of Tamil Nadu. This paper found the life of urban waste picker in Vellore and it based on primary data on collected from different urban localities. This obviously evidence that non-economic factors such as illiteracy and caste play a dominant role to determine the occupation. Educational level is one of the major determination to engage the waste picking. Health sector in India has developed in recent year. But the proportion of private health care developed rapidly than public sectors. The public health sectors in Tamil Nadu much inclusive for informal workers than other states. The number of primary health centre, easily access to drugs, Chief Minister Health Insurance Schemes, and various institutional agencies supported to ensure the better health access for informal workers in Tamil Nadu. Therefore, the access of overall health care both public and private health care is better in Tamil Nadu. Nevertheless, Governments should recognize the existence of the occupation and the important environmental, social, technical and economic role played by waste pickers. Governments should also invest in resource recovery/ protection programs and laws/policies that ensure stability in the occupation and decent livelihoods for waste pickers at the bottom of the recycling chain. They should promote policies that improve workers' conditions in the recycling industry—and not adopt technologies that displace large numbers of workers. Most importantly, local governments should adopt a holistic approach to solid waste management that recognizes the economic and environmental benefits of including informal waste pickers in waste management and planning.

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