

## A Study of Status of Manual Scavengers in Thoothukudi Corporation of Tamil Nadu

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### Abstract

Sanitation falls under the precautionary type of public health. An estimated 1.2 million scavengers in the nation are complicated in the sanitation of our environments. The working conditions of these manual scavengers have remained practically unchanged for over a century. The paper discusses the status and health problems of manual scavengers in Thoothukudi Corporation of Tamilnadu.

The objectives of this study are:

1. To study the socio-economic outline of the sample manual scavengers.
2. To examine the nature of the job of the manual scavengers.
3. To analyse the facilities provided to manual scavengers.
4. To assess the health problems in manual scavengers after completion of work and.
5. To evaluate the working environment of manual scavengers.

The present study is carried out in Thoothukudi Corporation of Tamilnadu by using simple random sampling method. The averages, standard deviation, f-test and chi-square test used for the analysis. The secondary data collected from available literature in books, e-books, magazines, newspapers, research article, research journal, e-journals, and other published materials relating to the working in India mainly meant for the manual scavengers. The study shows that out of the total 150 sample manual scavengers, majority 39 respondents strongly agree that they have provided clothes safely for doing their work, 38 sample respondents agree that they have provided instruments for doing their work. In order to find out whether there is any correlation between the facilities provided to manual scavengers and their level of satisfaction, the chi-square test was applied. As the calculated value of Chi-square is higher than the table value at 5 per cent level of significance, there is a relationship between facilities provided to manual scavengers and their level of satisfaction in the study area.

**Keywords:** Manual scavengers; Ecological environment; Sustainable development; Gender discrimination; Health problems.

### Introduction

Manual scavengers have played an essential role in improving the urban and semi-urban ecological

environment and the modern urban civilisation, meeting the needs of people's desires for physical, spiritual, political, ecological civilisation and implementing the sustainable social development. Indian society is the prey of a cruel joke where more than half its 1.2 billion population has access to mobile phones, but the same cannot claim when it comes to owning individual household toilets (Kelkar Khambete, 2012).

While the communal of sanitation workers in India is repressed and abandoned, inter-state differences show differing degrees of discrimination based on rigid histories of gender discrimination (Mehrotra, 2006). Among 2002 and 2003, the Indian Ministry for Social Justice and Empowerment

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acknowledged to the existence of 676,000 scavengers [Kothandaraman P, Vishwanathan V. Sulabh, 2008].

However, these figures may have undervalued because scavenging is illegal. According to one survey by Bezwada Wilson of the Safai Karmachari Association, an assessed 12 lakh (1.2 million) scavengers are present in the country. [Zaidi A, 2006] This situation persists even though the Employment of Manual Scavengers and Construction of Dry Latrines (Prohibition) Act [The Employment of Manual Scavengers and Construction of Dry Latrines (Prohibition) Act, 1993]. Osteoarthritic changes and intervertebral disc herniation are the common spinal irregularities reported in these workers [ILO, 1970]. This research paper focuses on the working environment and health problems of manual scavengers in Thoothukudi Corporation of Tamilnadu.

### Objectives

The objectives of this study are:

1. To study the socio-economic outline of the sample manual scavengers.
2. To examine the nature of the job of the manual scavengers.
3. To analyse the facilities provided to manual scavengers.
4. To assess the health problem in manual scavengers after completion of work and.
5. To evaluate the working environment of manual scavengers.

### Methods & Materials

The present study is carried out in Thoothukudi Corporation of Tamil Nadu by using simple random sampling method. The primary data collected from the 150 manual scavengers working in the Thoothukudi Corporation. From the list of manual scavengers, it has been decided to select the sample to conduct an in-depth study randomly. The researcher chose the samples as per his guidelines. The research design of the present study is descriptive. The averages, standard deviation, f-test and chi-square test used for the analysis. The secondary data collected from available literature in books, e-books, magazines, newspapers, research article, research journal, e-journals, and other published materials about the working in India, mainly meant for the manual scavengers. The field survey was directed by personal interview

method during the period from September 2018 to December 2018.

### Review of Literature

International Labour Organization (2012) observed that the practice of manual scavenging prohibited under the legislation, but still it continues across the country. The continuance of such discriminatory practice is a violation of the ILO's convention on discrimination in employment and occupation. Social exclusion due to these practices requires urgent attention to promote decent work and better employment conditions with dignity. In order to improve the capacity of the trade unions and civil society organisations, etc.

Chellamma, P et al. (2015) conducted a cross-sectional morbidity study among all sanitation workers corporation area. They studied the morbidity profile of manual scavengers in Thrissur Corporation, Kerala and to study the treatment-seeking behaviour in these persons. It reveals that 53.9% of the workers provided with personal protective equipment and regular use seen in 18%. Acute illness had a significant association with male gender, low education status, large family size, the absence of the provision of personal protective equipment: chronic morbidities associated with males, and elderly group and daily wage workers.

Anbarasu J D and Narmadha S (2015) directed a study among manual scavengers in Trichy. The manual scavengers have no promotions and job improvement till their retirement. The study was to know the reasons. The main barrier was their satisfaction. They were happy with what they own. The municipal corporation has the policy to promote the lower level workers to the higher level jobs if the employees equipped with training and additional qualifications. However, the manual scavengers are not willing. On the other hand, they want to be skilled workers.

Sherin. et al. (2017) The sanitation workers at Sengulam Colony at Tiruchirappalli comprises the universe for the present study. The data collected from sixty respondents through purposive sampling technique. The findings revealed that their supervisors harassed 63 per cent. Providing special medical camps, safety measures and robust welfare schemes is the only source to improve their quality of life. Lack of sanitation workers in society, higher would be the level of diseases and mortality.

Rangamani S et al. (2015) carried out a study to recognise the nature of the health problems of

sanitation workers using a lay epidemiological process. Most workers continued to work without appropriate treatment as they ignored their illness, and did not want to miss their wages or lose their job. Self-medication was common. Intake of alcohol was prevalent to cope with the inhuman task of cleaning filthy sewage, and as a modality to forget their health problems. The pattern of illnesses reported during monthly monitoring also reported as long standing illnesses. Health and safety mechanisms at the workplace did not exist and not mandated by regulatory bodies.

France Ncube et al. (2016) the study found high mean exposure concentrations for total dust, Gram-negative bacteria (GNB), and fungi for personal samples collected from refuse bin loaders and for truck cabin samples. It suggests the priority for exposure assessment about total dust and bioaerosols should focus on waste loaders and the truck cabins. The study concludes that municipal stable waste workers exposed to various toxic, mechanical and infectious hazards requiring sound mitigation measures.

### Analysis

The present study seeks to examine the socioeconomic status of manual scavengers.

**Table 1:** Gender Wise Classification of Manual Scavengers

SI. No	Gender	Total	Percentage
1	Male	86	57.33
2	Female	64	42.67
	Total	150	100

Source: Primary data

The above table 1 explains the sex of the respondents. 57.33% of the respondents are male. 42.67% of the respondents are female respectively.

**Table 2:** Age Wise of the Respondents

SI. No	Age (years)	Total	Percentage
1	18-26	27	18.00
2	26-34	40	26.67
3	34-42	39	26.00
4	42-50	25	16.67
5	50-58	19	12.66
	Total	150	100

Source: Primary data

The above table 2 explains age wise sample wise respondents. Out of 150 sample respondents

18% of them belong to the age group 18-26 years, 26.67% of them belong to the age group 26-34 years, 26% of them belong to the age group 34-42 years, 16.67% of them belong to the age group 42-50, and 12.66% of them belong to the age group 50-58 years respectively.

**Table 3:** Educational Qualification of manual Scavengers

SI. No	Educational qualification	Total	Percentage
1	Illiterate	65	43.33
2	Primary Education	40	27.67
3	Middle school	23	15.33
4	High school	14	10.34
5	Higher secondary	8	5.33
	Total	150	100

Source: Primary data

It is evident from the table 3 educational levels of the respondents. 43.33% of the respondents are illiterate, 27.67% of the respondents are primary education, 15.33% of the respondents are middle school, 10.34% of the respondents are high school, 5.33% of the respondents are higher secondary respectively.

**Table 4:** Number of Years in the Present Occupation

SI. No	Number of years	Total	Percentage
1	Less than one years	32	21.33
2	2 years	39	26.00
3	3 years	26	17.33
4	4 years	25	17.67
5	Above five years	28	19.67
	Total	150	100

Source: Primary data

The above table 4 explains the present occupation of the sample respondents. 21.33% of the sample respondents are below one year, 26% of the respondents are 2 years, 17.33% of the respondents are 3 years, 17.67% of the sample respondents are 4 years, and 19.67% of the respondents are over 5 years respectively.

**Table 5:** Appointment of Manual Scavengers

SI. No	Appointment of manual scavengers	Total	Percentage
1	Municipality	100	66.67
2	Contractor	27	18.00
3	SHG/NGO	23	15.33
	Total	150	100

Source: Primary data

The above table 5 explains the appointment of manual scavengers. 66.67% of the sample respondents are working in under municipality, 18% of the sample respondents are working in under contractor, 15.33% of respondents are

working under the SHG/NGO respectively.

**Table 6:** Number of Hours Work in a Day

SI. No	Number of hours work in a day	Total	Percentage
1	7 - 8 hours	75	50.00
2	9 - 10 hours	52	34.67
3	More than 10 hours	23	15.33
	Total	150	100

Source: Primary data

The above table 6 explains working hours in a day. 50% of the sample respondents working in a day 7-8 hours, 34.67% of the sample respondents their working hour is 9-10 hours, 15.33% of the respondents working in a day above 10 hours respectively.

**Table 7:** Nature of work Performed by the Manual Scavengers

SI. No	Kind of Work	Average score	Rank
1.	Sewage Cleaning	54.98	IV
2.	Street Sweeping	66.94	I
3.	Waste Collection From door to door	56.29	III
4.	Septic tank cleaning	47.16	V
5.	Sewage removal	37.19	VI
6.	Disposal of dead animals	60.38	II

Source: Primary data

It is clear from the table 7 that majority of the manual scavengers have given the first rank to street sweeping, the second rank is given in the disposal of dead animals, the third rank given in the waste collection from door to door, fourth rank is given in the Sewage cleaning, fifth rank given in the septic tank cleaning and sixth rank was given in the sewage removal respectively.

**Table 8:** Income of the Manual Scavengers

SI. No	Income	No. of Respondents	Percentage
1.	Less than 10000	25	16.67
2.	10000-13000	53	35.33
3.	13000-15000	31	20.67
4.	15000-17000	22	14.66
5.	Above 17000	19	12.67
	Total	150	100

Source: Primary data

The table 8 shows that income of the manual scavengers. 16.67% of the sample respondents their income is less than 10000, 35.33% of the respondents their earning income is 10000-13000, 20.67% of the respondents their income is 13000-15000, 14.66% of the respondents their income is 15000-17000 and

12.67% of the respondents are earning income is above 17000 respectively.

**Table 9:** Kind of Facilities Provided to Manual Scavengers

(In percentage)

Facilities	Satisfied	Dissatisfied	Total
Uniform	19 (40.43)	28 (59.57)	47 (100)
Instruments	52 (92.86)	4 (7.14)	56 (100)
Safety gloves	44 (93.62)	3 (6.38)	47 (100)
Total	115 (76.67)	35 (23.33)	150 (100)

Computed from Primary data

The table 9 shows that out of the total 150 sample manual scavengers, 40.43 percent respondents satisfied that they have provided a uniform for doing their work, 92.86 percent respondents satisfied that they have provided instruments for doing their work and 93.62 percent sample respondents agree that they have provided cloths safely for doing their work.

In order to find out whether there is any correlation between the facilities provided to manual scavengers and their level of satisfaction, the chi-square test was applied. The results of the Chi-square test are furnished below.

$$\text{Calculated value of Chi-square} = 50.3$$

$$\text{Table value at 5 per cent level} = 5.991$$

$$\text{Degrees of freedom} = 2$$

As the calculated value of Chi-square is greater than the table value at 5 per cent level of significance, there is a relationship between facilities provided to manual scavengers and their level of satisfaction in the study area.

**Table 10:** Health Problems of manual Scavengers after Completion of Work

SI. No	Type of diseases	No of Respondents	Percentage
1.	A headache	25	16.67
2.	Allergies	20	13.33
3.	Stomach Pain	15	10.00
4.	Asthma	20	13.33
5.	Cough & Cold	25	16.67
6.	Vomiting	20	13.33
7.	Fever	15	10.00
8.	Typhoid	5	3.33
9.	Malaria	5	3.33
	Total	150	100

Source: Primary data

The above table 10 explains health problem affect the manual scavengers. 16.67% of the sample respondents are affected in a headache, 13.33% of

the respondents are affected in allergies, 10% of the respondents are affected in stomach pain, 13.33% of the respondents are affected in Asthma 16.67% of the respondents are affected in a cough & cold, 13.3% of the respondents are affected in vomiting, 10% of the respondents are affected in fever, 3.3% of the sample respondents are affected in typhoid, and also 3.3% of the respondents are affected in malaria respectively.

**Table 11:** Anova for Sex and Working Environment

Sex	Sum of squares	df	Mean square	F	Sig
Between Groups	19.637	2	3.824	14.905	0.072
Within Groups	12.374	140	0.961		
Total	32.011				

The above table 11 shows the calculated value (0.072) which is higher than the table value (0.05). Therefore the Null hypothesis (H<sub>0</sub>) is accepted, and the research hypothesis is rejected (H<sub>2</sub>). Therefore we can settle that there is no significant difference between the sex of the respondents and the working environment of manual scavengers.

### Conclusion

The findings reveal the nature of work done by the manual scavengers. The study also shows the working conditions of the manual scavengers. The findings revealed that sanitation workers suffer several problems both physically and mentally. The problems in the workplace can be solved by providing equal rights as other government employees. Uplifting the underprivileged regarding education, rights, power and employment will improve the status of the manual scavengers. Providing safety measures for sanitation workers, directing regular medical camps, prevention of manual scavenging, creating awareness about government schemes will improve the quality of life of the manual scavengers.

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