



DEMOGRAPHIC PROFILE OF MUNICIPAL SANITARY WORKERS OF VARANASI CITY, INDIA

Social Science

Manish Singh

Project Officer, National Family Health Survey (NFHS-5), International Institute for Population Sciences, Govandi Station Road, Deonar, Mumbai, 400088, India

ABSTRACT

The study is an attempt to know the socio-economic and demographic profile of municipal sanitary workers of Varanasi city, India. The total sample size comes out to be 316 in which 224 waste collector, 51 sewage worker, and 41 drivers were interviewed. Majority of the workers were married (81%) in which most of them were married before the age of 21 years (58%). Most of the workers were Hindu (96%) and belonged to scheduled caste (91%) category. On average, each family had four working members and the average monthly household income was Rs. 20,500.

KEYWORDS

Varanasi, Municipal sanitary workers, Municipal Solid Waste, Census ward

1. INTRODUCTION

Census 2011 reported India's population to be 1.21 billion 31 percent of which lives in cities. By 2050, it is projected, India's urban population will be half of the country's total. Thus, management of increasing quantities of Municipal Solid Waste (MSW) will remain a constant challenge from both environmental and aesthetic concerns. According to India's Central Pollution Control Board, about 127,486 TPD (Tons per day) of Municipal Solid Waste was generated during 2011-12, an average waste generation of 0.11 kg/ Capita/day. Of the total waste generated, approximately 89,334 TPD (70%) of MSW was collected and only 15,881 TPD (12.45% of total collected) was processed or treated.^{1,2,3}

There are about 1.2 million sanitary workers in India who are involved the collection, transportation and processing of waste. Uttar Pradesh has the highest number of sanitary workers (0.02 million). These workers are engaged in the informal sector and their occupation is regarded as the lowest in the hierarchy. A sanitary worker can be a person who is employed by the Municipal Corporation or any private company for the collection and disposal of garbage. Besides the social stigma and frequent atrocities, these workers are exposed to several health problems by virtue of their occupation.^{4,5}

Indian cities of more than one million populations are administered by a Municipal Corporation, City Corporation, Mahanagar Palika, Mahanagar Nigam or Nagar Nigam. A major responsibility of these bodies is to maintain cleanliness in the city through various services like door-to-door collection of solid waste, its storage, transfer and transport, processing and finally its disposal. The waste includes household garbage and rubbish, street sweepings, sanitation residues, etc.^{6,7}

Although the municipal sanitary worker's job is a dirty one, most communities cannot live without his/her services. Sanitary workers perform a valuable service to their communities by collecting garbage and removing it to proper disposal areas, such as dumps or landfills. A sanitation worker must be physically fit, so that he can quickly climb in and out of large trucks and lift heavy trash containers. The job is physically demanding. Sanitation workers routinely lift heavy objects and work in all kinds of weather conditions. There is also a significant injury risk associated with the job. During natural and manmade disasters, sanitation workers also participate in emergency response and clean-up.⁸

The study begins with a presentation of officially compiled statistics on the numbers of persons practicing the various forms of scavenging as an occupation and a description of the different caste groups engaged in this occupation in Andhra Pradesh, their work conditions, and the occupational hazards faced by them. This is followed by a brief discussion of government schemes for the elimination of scavenging and the rehabilitation of scavengers, as well as a description of the activities of some of the more prominent NGOs working in this area.^{9,10}

One of the important findings of the study is that although many sweepers, mostly from northern India, have abandoned the Hindu religion and converted to other faiths, no significant change has come

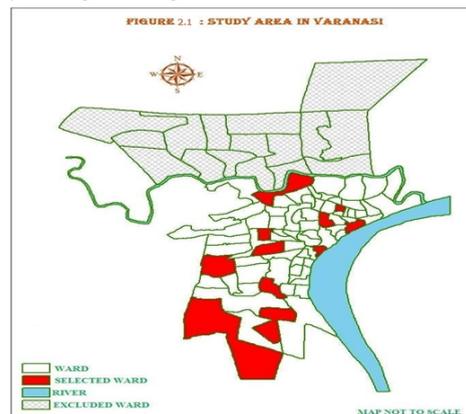
about in their occupation or social status.¹¹

Chatterjee (1981)¹², studied the sweeper community of Varanasi, investigating how sweepers organize their lives and what it is that holds them together as a group distinct from the larger society, and the methods they use to try and improve the conditions in which they live and work. The study also probes the relationship between men and women and the varying forms that these take in different areas of their social organization. The findings of the study indicate that the pattern of sweepers' lives is not changing greatly though the style of behaviors is in some ways moving closer to that of the larger society. Social mobility remains low and there is rigid segregation of the group from other castes and classes. The study also shows that despite attempts by government to raise sweepers from their traditional subservience, occupational mobility is minimal. On the role and status of women in the community, although it was found that the women are articulate and free in some domains, they do not experience same freedom as men do in all aspects.

2. METHODS AND MATERIALS

2.1 The Study Area The ancient city of Varanasi lies on the banks of the holy river Ganga. It is believed to be in existence since at least a millennium before the birth of Christ. Varanasi is known throughout the world for its Ghats, temples, saris and the Banarasi paan (betel leaf). There are about 84 ghats spread over a length of 6.8 km and 2000 temples which attract 4,000,000 foreign tourists and 20,000,000 domestic tourists annually.^{13,14}

The total area under Varanasi Nagar Nigam (Municipal Corporation) is 82.10 Sq. Kms with an estimated population of 1,198,491 persons (635,140 males and 563,351 females, Census 2011). The locations in the study area is given in Figure 2.1.



2.2 Period of data collection

The data collection was completed in the period November–February 2015-16 in eleven selected census wards: Chaukaghat (11), Tulsipur (12), Newada (28), Naria (32), Kamaeshwar Mahadev (41), Khojawa (43), Daranagar (51), Luxa (60), Lallapurakala (73), Dashashwamedh (74), Basania (85). After complete enumeration of the eleven census

ward, the final sample size was 316 as shown in Table 2.1

Ward Name/Number	Waste Collector	Sewage Worker	Driver	Total
Chaukaghat (11)	20	5	4	29
Tulsipur (12)	21	6	5	32
Newada (28)	25	6	5	36
Naria (32)	23	7	6	36
Kamaeshwar mahadev (41)	18	4	3	25
Khojawa (43)	21	4	3	28
Daranagar (51)	22	4	3	29
Luxa (60)	18	4	3	25
Lallapurakala (73)	17	3	3	23
Dashashwamedh (74)	20	4	3	27
Basania (85)	19	4	3	26
Total	224	51	41	316

3. RESULTS AND DISCUSSION

3.1 Demographic profile of the respondent

Table 3.1 presents the distribution (by percentage) of the socio-economic and demographic characteristics of Varanasi's municipal sanitary workers. As mentioned earlier, the sample size was 316. Mean age of the respondent was 37.1 years. The workers were placed in three age categories: ≤ 30 years (comprising 32.3% of the sample), 31–44 years (38%) and ≥ 45 years (29.7%). Males were the dominant gender in the sample (85.8%). A high proportion of the workers were engaged as waste collectors (70.9%), the remaining as sewage workers (16.1%) and drivers (13%).

Most (81.3%) of the respondents were married with over half (57.6%) marrying before completing 21 years. The mean age of the respondents at marriage was 19.2 years. Illiteracy levels were high (44 percent of the workers were illiterate). Around 33.5 percent of the workers were educated to the primary level (Grades 1–7), and 22.5 percent of municipal sanitary workers had the higher level of educational degree (8 and above). Mean years of schooling was 6.7 years.

Most workers (95.6%) were Hindus. Scheduled Castes were the dominant group (90.8%) among the respondents. A large proportion of the municipal sanitary workers (84.8%) were living in Varanasi since birth. The rest had migrated to the city from other places. Eighty-two percent of the respondent workers were residing in urban areas, the others came from rural places.

Table 3.1: Percentage distribution of municipal sanitary workers by selected background characteristics in Varanasi City, India, 2015-16

Background Characteristic	Percent	Number
Age of Workers		
≤ 30 Years	32.3	102
31-44	38	120
≥ 45 Years	29.7	94
(Mean\pmS.D)	(37.1\pm11.67)	
Sex of Worker		
Male	85.8	271
Female	14.2	45
Type of worker		
Waste Collector	70.9	224
Sewage Worker	16.1	51
Driver	13	41
Marital status		
Never Married	13.9	44
Currently Married	81.3	257
Widowed	4.7	15
Age at marriage		
< 21 Years	57.6	148
≥ 21 Years	42.4	109
(Mean\pmS.D)	(19.92\pm2.98)	
Education		
Illiterate	44	139
Primary	33.5	106
Higher	22.5	71
(Mean\pmS.D)	(6.69\pm3.53)	
Religion		
Hindu	95.6	302

Muslim	4.4	14
Caste		
Scheduled Caste	90.8	287
Other Backward Class	5.1	16
Others	4.1	13
Place of origin		
Varanasi	84.8	268
Elsewhere	15.2	48
Place of residence		
Rural	17.7	56
Urban	82.3	260
Total	100	316

Note: Illiterate: 0 years, Primary: 1-7 Years, Higher: 8 \geq Years

3.2 Household characteristics

Table 3.2 shows the percentage distribution of household characteristics of the municipal sanitary workers of Varanasi city. Most of the respondent workers (44.9%) had large families (6–10 members in a household). In 34.5 percent of the workers, the mean family size was 9.1. Fifty seven percent of the families had more than three working members. On average, each family had four working members with a standard deviation of 2.58. Average monthly household income was Rs. 20,500. About 47.5 percent of the municipal sanitary workers had a family income of more than 20,000 rupees per month. However, the families of 26.9 percent had incomes in the range 10,001-20,000. It was even less in the rest. One positive observation is that 86.7 percent of the municipal sanitary workers had ration cards.

Table 3.2: Percentage distribution of household characteristic of municipal sanitary workers in Varanasi City, India, 2015-16

Household Characteristic	Percent	Number
Family Size		
≤ 5	20.6	65
6-10.	44.9	142
> 10	34.5	109
(Mean\pmS.D)	(9.10\pm3.79)	
Working Member		
≤ 3	42.7	135
> 3	57.3	181
(Mean\pmS.D)	(3.85\pm2.58)	
Household Income		
≤ 5000	6.6	21
5000-10000	19	60
10001-20000	26.9	85
> 20000	47.5	150
(Mean\pmS.D)	(20500\pm10650)	
Ration card		
Yes	86.7	274
No	13.3	42
Total	100	316

REFERENCES

- Sophia, N. S., & Pavithra, S. (2017). A study on sanitation workers at Tiruchirappalli. IJAR, 3(4), 168-170.
- Singh, R. K. (2009). Manual scavenging as social exclusion: A Case study. Economic and Political Weekly, 521-523.
- Prasad, B. D. (2007). Scavengers and Scavenging in Andhra Pradesh. Indian Journal of Social Work, 68(2), 189-203.
- Srivastava, B. N. (1997). Manual scavenging in India: A disgrace to the country. Concept Publishing Company.
- Searle-Chatterjee, M. (1981). Reversible sex roles: the special case of Benares sweepers (Vol. 2). Pergamon.
- Chandramouli, C., & General, R. (2011). Census of India 2011. Provisional Population Totals. New Delhi: Government of India.
- Palanichamy, C. (2015). A sustainable energy option to the expanding Chennai metropolitan area. Indian Journal of Science and Technology, 8(22).
- Vaish, B., Singh, P., Srivastava, V., Singh, P. K., & Singh, R. P. (2016). Municipal solid waste management in India: present status and energy conversion opportunities. Book: Emerging Energy Alternatives for Sustainable Environment. Eds. DP Singh, Richa Kothari and VV Tyagi. ISBN: 9788179934111.
- Tiwari, R. R. (2008). Occupational health hazards in sewage and sanitary workers. Indian journal of occupational and environmental medicine, 12(3), 112.
- Kundu, A., & Basu, S. (1999). Words and concepts in urban development and planning in India: an analysis in the context of regional variation and changing policy perspectives. MOST City Words Project. Inde du Nord/Northern India.
- Tahir, M. (2002). Urban Basic Services: Availability and Utilization by Urban Poora Case Study of Aligarh City (Doctoral dissertation, Aligarh Muslim University).
- Katiyar, S. P. (2014). Manual Scavenging: Retrograding Policy and Sustained Discrimination. Indian Journal of Human Development, 8(1), 111-146.
- Singh, R. P., Dar, V., & Rana, P. S. (2001). Rationales for including Varanasi as heritage city in the UNESCO World Heritage List. National Geographical Journal of India, 47, 177-200.
- Singh, V. V. (2015). Swachh Bharat Abhiyaan: Cleaning up India is a serious business. International Journal of Engineering and Management Research (IJEMR), 5(6), 713-717.