Original Article

Socio Demographic Profile and Awareness Among Sanitation Workers in Aligarh

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Abstract

The workers maintaining cleanliness in cities are popularly known as sanitation workers throughout India. Sanitation Worker refers to all sorts of workers engaged in cleaning jobs, who handle dry and wet waste, and those who sweep. They are exposed to a variety of chemicals which pose an occupational hazard by exposing them to a wide range of health problems. Therefore this study has been undertaken, to assess the sociodemographic profile and awareness among sanitation workers in Aligarh. Across-sectional study was conducted in Aligarh including Sanitation workers under Nagar Nigam**.** The study period was one year, i.e., from July 2018 to June 2019. A total of 450 Sanitation workers were studied in a cross sectional study using multistage sampling conducted on sanitation workers employed under Nagar Nigam, Aligarh using structured questionnaires. The Questionnaire used in the study included Socio-demographic characteristics, Standard of Living Index, Health Problems, Health Seeking Behaviour and Satisfaction from Health System, Quality of Life, Stigma and Discrimination, Occupational Health Hazards, Alcohol Consumption and General Awareness. Data was entered and analyzed in SPSS 20. Data entry and analysis were presented using descriptive statistics, which included percentages, means, and frequencies. In this study, males constituted most of the respondents, reflecting male dominance in urban municipal work. Urban residents accounted for 95.8%, likely due to employment-driven migration. Marital status was varied, with 80.9% married. As almost all of the Safai Karamchari were unaware of government schemes. The older age group of 41-50 years was found having higher health problems. On the analysis of health problems with the mean age of Sanitation workers, it was found to be significantly associated with a higher age. There is a need to acknowledge, improve and strengthen services, including improving the working environment and better health care to the sanitation workers.

Keywords: sanitation workers, awareness, health problems

Introduction

The workers maintaining cleanliness in cities are popularly known as ***Sanitation workers*** throughout India. **Sanitation Workers** refers to all sorts of workers engaged in cleaning jobs, who handle dry and wet waste, and those who sweep.

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There are different caste groups throughout India who are engaged in sanitary work. For instance, the Bhangi, Mehtar, Chohra/Chura castes in Gujarat, Maharashtra, Madhya Pradesh, Himachal Pradesh, Jammu and Kashmir and Rajasthan; the Chachati and Paky castes in Andhra Pradesh and Puducherry; and the Halalkhor, Lalbegi and Mehtar castes in Assam, Bihar, Uttar Pradesh, Odisha, West Bengal and Nagaland[1]. The Government of India had set up, National Commission for Sanitation workers, under the Ministry of Social Justice and Empowerment to protect and safeguard the interest of Sanitation workers/Scavengers. The NCSK was constituted on 12th August 1994 under the provision of National Commission for Sanitation workers Act, 1993.

In India, the traditional culture has stigmatized street sweeping as a filthy and lowly occupation. The medical problems of these workers are further compounded by various socioeconomic factors such as poverty, lack of education, poor housing conditions and poor diet [8-11].

Therefore this study has been undertaken, to assess the sociodemographic profile and awareness among Sanitation workers in Aligarh.

Material and Methods

The study, which was carried out in the wards under Nagar Nigam, Aligarh, was a cross-sectional study. A block under Nagar Nigam Aligarh was designated as the sampling unit, and the research population comprised Sanitation workers employed by Nagar Nigam. The Sanitation workers were the study's main focus, and a pre-tested semi-structured proforma was used as the study method to collect data. From July 2018 to June 2019, the study was conducted for a year. Ethical clearance was obtained from the Institutional Ethics Committee before conduction of the study (D. No. 1006/FM, dated 13.07.2018). Participants in the study were eligible if they met the following criteria: adults who were 18 years of age or older; had worked for at least six months and **who voluntarily gave informed consent**. The study's exclusion criteria encompassed sanitation workers who had not fulfilled their six-month labor commitment with Nagar Nigam, as well as those who did not fit into the specified age bracket, refused to provide consent, or exhibited uncooperative conduct**.** A total of 450 sanitation workers were studied in urban areas of Aligarh using structured questionnaires. Data were collected on socio demographic attributes, occupational characteristics, familial involvement, economic remuneration, living standards, and domestic animal engagement. It took 25 minutes to fill one questionnaire.

Results

The statistical package of social sciences, SPSS-20, was used for data entry and analysis. The study's findings were presented using descriptive statistics, which included percentages, means, and frequencies. The probability (p) at the 5% level of significance was computed in order to determine statistical significance. Additionally, the association between particular variables was analysed using statistical tests such as the Chi-square test.

Table 1. Distribution of the study population according to sociodemographic profile

Characteristic	Frequency (n=450)	Percentage (%)
AGE GROUPS (in years)		
18-30	211	46.9
31-40	157	34.9
41-50	72	16.0
51 and above	10	2.2
GENDER		
Male	415	92.2
Female	35	7.8
RESIDENCE		
Rural	9	2.0
Urban	431	95.8
Peri-Urban	10	2.2
MARITAL STATUS		
Unmarried	82	18.2
Married	364	80.9
Separated	1	0.2
Divorced	1	0.2
Widowed	2	0.4
RELIGION		
Hindu	442	98.2
Muslim	3	0.7
Christian	5	1.1

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CASTE		
Gen	5	1.1
OBC	3	0.7
SC	442	98.2
SUB CASTE		
Valmiki	443	98.4
Other	7	1.6
TYPE OF FAMILY		
Nuclear	312	69.3
Joint	138	30.7
EDUCATION		
Illiterate	139	30.9
Read &Write	13	2.9
Upto 5th std	87	19.3
Upto 8th std	142	31.6
Upto 10th std	44	9.8
Upto 12th std	24	5.3
Graduate &Above	1	0.2

As shown in table 1,the age distribution revealed that 46.9% of participants were aged 18-30, and 34.9% fell in the 31-40 range. The mean age was 33.03±8.56 years. In this study, males constituted 92.2% of respondents, reflecting male dominance in urban municipal work. Urban residents accounted for 95.8%, likely due to employment-driven migration. Marital status was varied, with 80.9% married. Hinduism dominated (98.2%), while family compositions shifted towards nuclear (69.3%) families. Education levels spanned from illiterate (30.9%) to graduates (0.2%). Most participants (98.4%) belonged to the SC community, primarily Valmiki.

Table 2. Awareness about government initiatives among Sanitation workers

Factors	Frequency (n=450)	Percentage (%)
Are the workers aware of Abolition of dry Latrine 1993		
Yes	22	4.9
No	428	95.1
Are the workers aware of the Manual Scavenging Act, 2013		
Yes	36	8.0
No	414	92.0
Are the Workers aware of SC ST Atrocities Act, 1989		
Yes	81	18.0
No	369	82.0
Is worker a member of		
Sanitation worker Andolan	19	4.2
Dalit Movement	13	2.9
Local Union of Sanitation worker	202	44.9
Not Associated with any	216	48.0

As shown in **table 2**, 95.1% of the workers are not aware of the Abolition of Dry Latrine Act 1993. 92.0% of the workers are not aware of the Manual Scavenging Bill. 92.0% of the Sanitation workers are not aware of the SC/ST Atrocities Act. 44.9% of the workers are members of the Local Sanitation workers Union while nearly half (48.0%) of them are not associated with any organization. 4.2% are associated with Sanitation worker Andolan, and 2.9% are associated with one or the other Dalit Movement Organisations.

Table 3. Association of Health problem with age of the Sanitation workers

Variable	Health Problem Present (n=250)	Health Problem absent (n=200)	Total (n=450)
Age (years)			
18-30	98 (46.4%)	113 (53.6%)	211 (100.0%)
31-40	95 (60.5%)	62 (39.5%)	157 (100.0%)
41-50	51 (70.8%)	21 (29.2%)	72 (100.0%)
51 and above	6 (60.0%)	4 (40.0%)	10 (100.0%)
	c^2= 15.539, df=3, p=0.001		

As shown in Table 3, Health Problems found to be equally distributed among the age group from 31-40 years and 51 years and above. However, the older age group of 41-50 years was found having higher health problems at 70.8% while in the younger age group 18-30 years, the percentage of health problems was found to be 46.4%.

Discussion

As shown in **table 1,** the age distribution revealed that 46.9% of participants were aged 18-30, and 34.9% fell in the 31-40 range. The mean age was 33.03±8.56 years. This aligns with a study in Nagpur[2], highlighting a dominant presence of 30-50-year-old Sanitation workers. Similarly, street sweepers averaged 39.70 years (S.D. = 7.15), as in another[3] study. A study[6] reported that a large number of the 128 (42.7%) participants were from the 49–58 years age group ,74.70% of participants were male and the majority of the participants were illiterate(62%)**.**

Another study[4] reported almost 82% of Sanitation workers belonged to the SCs as compared to the 18% of other castes.

In this study, males constituted 92.2% of respondents, reflecting male dominance in urban municipal work. Urban residents accounted for 95.8%, likely due to employment-driven migration. Marital status was varied, with 80.9% married, similar to another study[5]**.** In this study**,** Hinduism dominated (98.2%), while family compositions shifted towards nuclear (69.3%) families, mirroring a broader Indian trend. Education levels spanned from illiterate (30.9%) to graduates (0.2%). Most participants (98.7%) belonged to the SC community, primarily Valmiki. Another study reported (12) that 62% of sanitary workers were illiterate, and only 8% studied up to 10th and above.

In this study, 95.1% of the workers are not aware of the Abolition of Dry Latrine Act 1993. 92.0% of the workers are not aware of the Manual Scavenging Bill. 92.0% of the Sanitation workers are not aware of the SC/ST Atrocities Act. 44.9% of the workers are members of the Local Sanitation workers Union while nearly half (48.0%) of them are not associated with any organization. 4.2% are associated with Sanitation worker Andolan, and 2.9% are associated with one or the other Dalit Movement Organisations.

As shown in **Table 3,** Health Problems found to be equally distributed among the age group from 31-40 years and 51 years and above. However, the older age group of 41-50 years was found having higher health problems at 70.8% while in the younger age group 18-30 years, the percentage of health problems was found to be 46.4%. In statistical analysis, there was a significant association between health problems and age groups. On the analysis of health problems with the mean age of Sanitation workers, it was found to be significantly associated with a higher age.

A study in Ethiopia [7] found that as the age of solid waste collectors increased by one year, odds of occupational injury also increased by 3% (COR = 1.03, 95% CI: 1.01-1.04). Another study[12] reported that 39.3% of participants reported a history of chronic illness and injury and 61.3% respondents reported currently living with health problems. It was expected because they deal with several chemicals, poisons gasses, indisposed animal and human waste.

Sanitation workers have to deal with waste food items, tissue papers, used masks , baby diapers, dog shit, cow dung, dead animals, sewage fumes and dangerous gasses. As shown in Table 3, Health Problems found to be equally distributed among the age group from 31-40 years and 51 years and above. However, the older age group of 41-50 years was found having higher health problems at 70.8% while in the younger age group 18-30 years, the percentage of health problems was found to be 46.4%., dust, and several other waste products [13]**.**So while sweeping, dust collecting, loading and unloading they come in direct contact with waste products which contain so many dangerous viruses and infections.

A study [14] could not find any association of work-related respiratory disorders among street sweepers with the age of the workers. A study [15]on municipal solid waste collectors in Ethiopia found that as the age of solid waste collectors increased by one year, odds of occupational injury also increased by 3% (COR = 1.03, 95% CI: 1.01- 1.04).

There are certain limitations to the study. It used basic random sampling, which could have led to bias in the sample. Questionnaire self-reporting has the potential to introduce recollection bias. The limited generalizability of the results could be attributed

to the small sample size of 450 respondents. Only a snapshot was offered by the cross-sectional design, which did not account for changes over time. There was a potential social desirability bias among respondents, and little knowledge of government activities was present. Although correlations were found in the study, causality was not investigated. The validity of the questionnaire is not addressed, which can compromise the accuracy of the results. There is no statement of the response rate, which could introduce response bias. When analyzing the study's results and organizing future investigations in this field, these limitations should be taken into account.

Conclusion

There is a need to acknowledge, improve and strengthen services, including improving the working environment and better health care to the sanitation worker. We also observed that improving the quality of life might improve the health status of workers engaged in the profession of Sanitation worker. It is recommended that all the Sanitation worker should be provided with adequate safety equipment by the competent authorities on a regular basis. As almost all of the Sanitation worker were unaware of government schemes, there is a need to address this issue which would be beneficial in improving their social, economic and health status. As most of the Sanitation workers were working on contract basis (theka), and have economic and social problems. They have constant fear of losing their jobs and are being exploited by the contractors. The Government should take necessary steps to regularize them.

Ethical clearance: was obtained from the Institutional Ethics Committee before conduction of the study (D. No. 1006/FM, dated 13.07.2018).

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