



A STUDY TO ASSESS THE HEALTH PROBLEMS OF SANITARY WORKERS WORKING IN SELECTED PANCHAYAT AT KANYAKUMARI DISTRICT

*¹H. Magilin Sheeba, ²Dr. Chandra T. and ³Dr. Arzta Sophiya

¹Ph.D. Scholar, Rani Meyyammai College of Nursing, Chitambaram, Annamalai University, Tamilnadu.

²Lecturer, Govt. College of Nursing, Cuddalore, The Tamil Nādu Dr.M.G. R Medical University, Chennai.

³Associate Professor, Christian College of Nursing, The Tamil Nādu Dr.M.G. R Medical University, Chennai.



*Corresponding Author: Prof. H. Magilin Sheeba

Ph.D. Scholar, Rani Meyyammai College of Nursing, Chitambaram, Annamalai University, Tamilnadu.

Article Received on 24/09/2023

Article Revised on 14/10/2023

Article Accepted on 04/11/2023

ABSTRACT

The study aimed at to assess the health problems of sanitary workers working in selected panchayat at Kanyakumari District. Methods is Qualitative research approach is used for this study. The sample consists of 100 sanitary workers working in Thiruvattar panchayat union. Check list was used to assess the health problems. Data are collected within the period of one month. 30 minutes spent for each sample. Totally 100 samples are taken to assess the health problems. **Results:** The collected data way statistically analysed. Among 100 samples 68(68%) of sanitary workers suffered with low back pain, 56(56%) of sanitary workers suffered with indigestion. 54(54%) of sanitary workers suffered with throat infection 41(41%) of sanitary workers suffered with dermatitis 44(44%) of sanitary workers suffered with fever, 52(52%) suffered with watery eyes and 55(55%) of sanitary workers suffered with symptoms of stress. **Conclusion:** This study concludes majority of them have musculoskeletal problems(back pain) followed by gastrointestinal, respiratory problems and ophthalmic problems.

KEYWORDS: The sample consists of 100 sanitary workers working in Thiruvattar panchayat union.

INTRODUCTION

A sanitation worker (or sanitary worker) is a person responsible for cleaning, maintaining opening or emptying the equipment or technology at any step of the sanitation chain. This is the definition used in the narrower sense within the WASH sector. More broadly speaking sanitation workers may also be involved in cleaning streets, park, spaces, sewers, storm water drains and public toilets. Another definition is "The moment an individual's waste is outsourced to another, it becomes sanitation work. Some organizations are the term specifically for municipal solid waste collectors, where as other exclude the workers involved in management of solid waste (rubbish, trash) sector from its definition. Sanitation work can be grouped into formal employment and informal employment. Sanitation workers face many challenges. The related to occupational safety and health issues related to contact with the excreta, injuries, the dangers to working in confined spaces, legal and institutional issues, as well as social and financial challenges, one of the main issues is the social stigma attached to sanitation work. Sanitation workers are at an increased risk of becoming ill from water borne disease. To reduce this risk and protect against illness such as

diarrhoea, safety measures should be put in place for worker and employers.

The working conditions legal status, social aspects etc are vastly different for sanitation workers in development countries versus those in high income countries. Much of the current literature on sanitation workers focuses on the conditions in developing countries.

Those workers who maintain and empty on-site sanitation systems (e.g. Pit latrines, septic tanks) contribute to functional sludge management system. Without sanitation workers, the sustainable Development Goal 6, Target 6.2 "(safe managed sanitation for all") can't be achieved. It is important to safe guard the dignity and health of sanitation workers.

Municipal solid waste, road dust, garbage and other solid/liquid waste are generated in a city. Sweepers, sanitary workers and solid waste collecting workers are engaged. These workers are continuously exposed to pollutants and occupational. Health hazards in Great Britain 13,000 death year due to work primarily to chemicals or dust 1.3 million worker's suffering from

work related musculoskeletal disorder and 12,000 lung disorders each year.

Nearly a century after Mahatma Gandhi first called for abolition of manual scavenging, the degrading practice countries between 2002/03, the Indian ministry for social justice and empowerment admitted to the existence of 676,000 scavengers. However, these figures may have been underestimated because scavenging is illegal. According to one survey by Bezwada Wilson of the Safai Karama Chari Association, an estimated 12 lakhs (1.2 million) scavengers are present in the country. According to Sulabh, four to five million people were working as scavengers in 2005 and were often employed by the local civil bodies clean in public places. This situation persists despite the fact that the Employment of Manual Scavengers and Construction of Dry Latrines (Prohibition) Act 1993, is in enforcement which provides for the prohibition of the employment of manual scavengers as well as construction or continuance of dry latrines and for the regulation of construction and maintenance of water-seal latrines for assuring the dignity of the individual.

The working conditions of the sanitary workers have remained virtually unchanged for over a century. Using only a stick broom and a small tin plate, the sanitary workers clear feces from public and private latrines into baskets or other containers, which they then carry on their dumping grounds and disposal sites. A few, however, are provided wheel barrows or carts by the municipal authorities.

Apart from the social atrocities that these workers are also exposed to certain health problems by virtue of their occupation. These health hazards include exposure to harmful gases, cardiovascular degeneration, musculoskeletal disorders, infections, skin problems and respiratory system problems.

Sanitation workers are the backbone of the civil cleaning system. In a developing country like India with limited resources, most of the cleaning process in urban localities is done manually with improper segregation of waste materials. Most of the source and all types of garbage being disposed on the streets, these workers are exposed to dirt, infective organisms, and other hazardous materials like chemicals, animal excreta and sharp objects. As a result of this, they suffer from various morbidities because of lack of knowledge and practices of safety devices. The health status should be reviewed on a regular basis and continued health education and counselling must be made available.

The break of the 19th century saw arguably one of the greatest evaluations in public health. "The great sanitary awakening". This was the direct consequence of the realization that filth is the basis for production and proliferation of disease. This stressed the society into embracing cleanliness. Sanitation amended peoples

outlook about health and disease changed the society's stance about every person's health as a social obligation with sanitation. Achieving societal health became a collective societal aspiration. Besides having a very pronounced public health dimension, sanitation also discernibly related to human rights and dignity. Sanitation technologies confer protection of humans from harmful pathogens and chemicals and acts as an instrument to improve public health.

A systematic review suggested that sanitary neighbourhood conditions and household conditions are both associated with reduced diarrhoeal burden. Lack of sanitation is understood to be a cause of 10% of the total morbidity. Pre-placement examination in sanitary workers, ideally can help in reducing at least little morbidity, if not all. But in the existing circumstance pre-placement examination in sanitary workers is considered almost too bizarre to be reality. A study done in Tamil Nadu revealed that only 62% of them used at least 1 personal protective equipment. At this point it is abundantly clear that the health of sanitary workers is expected to be subnormal and sometimes worse owing to their occupation. Hence this study was carried out with a view to look into the health issues in this historically neglected dealing with their health issues.

Sanitary workers are not concentrating their own health and nutritional status due to lack of awareness. There is a need to enrich the knowledge of protection from health issues and promotion of their health.

Sanitation workers are at risk for a range of diseases including asthma, cholera, typhoid, hepatitis, polio, plantar fasciitis and gastroenteritis. In urban areas, study found that musculoskeletal disorders, respiratory problems and skin diseases are health hazards that sanitation workers frequently face. Over exposure to intense weather conditions, chemicals and animal excreta contribute to extreme dermatological conditions in the face, hands, feet and hair. Over exposure to UV radiation results in skin cancer, harms the immune system, ages and produces pigmentation in youthful skin as well as vision problems. Photokeratitis and cataracts are examples of long-term vision impairments resulting from excessive UV exposure. Over exposure to cold weather produces severe frostbite and dermatitis. In Mumbai, India 2,721 sanitation workers died between 2004 – 2014 from health hazards. The ongoing exposure to difficult sanitation can produce extreme psychological distress for sanitation workers. For example, the potential of contracting COVID-19 at work pushes many sanitation workers to consume alcohol or drugs for comfort. This consumption can cause further health hazards in addition to what workers come into contact with at work.

Dr. Sanjay Sujitran Das conducted a cross-sectional survey study among 300 waste handlers of Surat Municipal Corporation. He has collected the data by using semi-structured interview schedules about the

morbidity level. The researcher authenticated that majority of the workers suffered with injuries (77.1%) musculoskeletal disorder (71%) respiratory infections (62.3%) ophthalmic problems (36.3%) and dermatological problems (30%). The researcher identified that the risk of health problems are more common among the workers who are new to the job, untrained workers, unhygienic waste handle and person. Who are not using personal protective equipment.

REVIEW OF LITERATURE

Amritha Lekha AK (2022) conducted study on Morbidity Profile of Sanitary Workers in Kancheepuram District, Tamilnadu: 420 sanitary workers involved in various types of sanitary work were enrolled in the study. Most of the study participants had multiple problems, of which the most common morbidity found among 420 sanitary workers were Musculoskeletal problem (58.09%), followed by NCD's (48.33%), ocular problems (47.14%), respiratory problems (28.57), oral problems (25.47%), skin problem (23.09%), gastrointestinal problems (16.66%), and injuries (28.80%). Whereas in a previous study, Greater zone of Chennai corporation, Tamilnadu 82.2% had musculoskeletal problems, 61.6% had respiratory problems, 53.4% had ocular problems 17.8% had NCD's like DM/ HTN/ CVD, 38.4% had skin problems and 11% had Injuries Higher prevalence of musculoskeletal in the later study can be attributed to the use of outdated.

Sangkham S, Thongtip S et al (2021) elicited study on Occupational health hazard exposure and health problems among solid waste collectors in Phayao Province, Northern Thailand This study was conducted on 107 solid waste collectors who had completed structured questionnaire interviews between October to December 2019. The majority (93.5%) of SWCs were employed temporarily. Among the total solid waste collectors, 72% of them had occupational health symptoms. This study showed that most SWCs suffered from different types of occupational health symptoms such as musculoskeletal pain and injuries (59.7%), respiratory symptoms (23.4%), head, eyes, and ears symptoms (7.8%), skin symptoms (5.2%), and gastrointestinal symptoms (3.9%). High level of health hazards exposure, shift hours were significantly associated with occupational health problems. Thus, providing occupational safety training and personal protective equipment support in the working environment, including giving knowledge about health hazards and awareness and promoting annual medical checkups, should be considered.

Joy Patricia Pushparani, Chitra A., Kalpana J.(2018) obtained study to assess the health profile of street sweepers and sanitary workers in a zone of Greater Chennai Corporation, Tamil Nadu, India. Study was conducted among 73 street sweepers and sanitary workers during November 2016 to December 2016 using a semi structured questionnaire. Among the respondents

67.1% were females, 2/3rd of them belonged to the age group of 30-40 years. Majority of them (82.2%) had reported to have musculoskeletal problems followed by respiratory problems (61.6%), ophthalmic problems (53.4%), skin problems (38.4%), mental health problems (39.7%). Most of the respondents had multiple problems. Musculoskeletal problems were more common among the female workers. Health problems like headache, fatigue, giddiness were more common among the workers who worked for >5 years. This study concludes majority of them have musculoskeletal problems followed by respiratory problems and ophthalmic problems. Usage of personal protective equipments and utilization of health services by the sweepers and sanitary workers were poor.

Somsiri Decharat (2017) conducted descriptive study to evaluate the prevalence of adverse health effects among 114 municipal solid waste workers of 5 sanitary landfill areas of Southern Thailand. The data was collected by using questionnaire. The study result shows that there were lot of health problems such as musculoskeletal problems (65.8%), respiratory problems (47.4%), skin problems (58.8%), nail problems (45.6%), eye problems (20.2%) and gastrointestinal problems (42.1%). This study concluded that there was a strong relationship between municipal solid waste work and adverse health effects of sanitary workers. The study insisted on education regarding good personal hygiene and use of personal protective equipment's to reduce adverse health effects among sanitary workers.

Priyanka. V. Patil and R.K. Kamble (2017) conducted a descriptive study to identify the occupational health hazards in sanitary workers in Chandrapur city, India. The data was collected by using structured questionnaire among 20 workers out of 198 sanitary workers. Duration of the study was from November 2015 to January 2016. The results of the study explored that 85% of the workers suffered with musculoskeletal disorders, 65% of the workers were exposed to harmful gases, 45% of the sample suffered with respiratory problems, 40% had head ache during the study, 35% had dermatological problems, 10% suffered with gastrointestinal disorders and 10% had leptospirosis.

Dr. Lourdes Poobala Rayan (2016) conducted a descriptive and analytical study to assess the problems among 460 sanitary workers of Tirunelveli Corporation. The data was collected by using structured interview schedule. The study result shows that majority of the respondents are getting insufficient salary, they are unable to meet out their children's education requirements, not able to meet hospital expenses, unable to take healthy foods and not able to meet basic needs.

Chellamma, P et al (2015) conducted morbidity study among all sanitation workers in corporation area. They studied the morbidity profile of sanitary workers in Thrissur Corporation, Kerala and to study the treatment

seeking behavior in these persons. They were interviewed using pre tested structured schedule. Workers were interviewed after obtaining informed consent. Among 601 workers 53.6% were males. 34.4% workers presented with one acute illness and only 79.2% sought medical help. 43.26% had chronic morbidities and 83.86% opted modern medicine. 53.9% of the workers were provided with personal protective equipments and regular use was seen in 18%. Acute illness had significant association with male gender, low education status, large family size, absence of provision of personal protective equipments. Chronic morbidities were associated with males, and elderly group and daily wage workers.

Dr. Sanjay Sujitrajan Das (2010) conducted a cross sectional survey study among 300 waste handlers of Surat Municipal Corporation. The data by using semi structured interview schedule and assessed the morbidity level. The researcher authenticated that majority of the workers suffered with injuries (77.7%), musculoskeletal disorders (71%), respiratory infections (62.3%) ophthalmic problems, (36.3%) and dermatological problems (30%). The researcher identified that the risk of health problems are more common among the workers who are new to the job, untrained workers, unhygienic waste handlers and persons who are not using personal protective equipment.

STATEMENT OF THE PROBLEM

A study to assess the health problems of sanitary workers working in selected panchayat at Kanyakumari District.

OBJECTIVES

- ❖ To assess the common occupation health problems of sanitary workers working in selected panchayat at Thiruvattar Panchayat Union.

ASSUMPTION

It is assumed that sanitary workers have some health problems such as gastro intestinal disorder, musculoskeletal disorder, respiratory disorder, dermatological disorder, ophthalmic disorder.

RESEARCH APPROACH

Qualitative approach will be used for this study.

RESEARCH DESIGN

Descriptive (cross-sectional survey) design will be used for this study.

SETTING OF THIS STUDY

The study will be conducted among sanitary workers working in Thiruvattar Panchayat Union at Kanyakumari district. In which Yettacode-7 sanitary workers, Aruvikarai-10 sanitary workers, Cheru kole -16 sanitary workers, Ayacode-14, kannanoor-12, kattathurai-28, kumarankudi-9, Pechiparai-14 sanitary workers. These panchayat were under Thiruvattar panchayat union, Kalkulam Thaluk.

POPULATION

The target population selected for this study will be all sanitary workers working in selected panchayat at Kanyakumari District.

SAMPLE

The sample selected for this study will be sanitary workers working in selected panchayat at Kanyakumari District.

SAMPLE SIZE

The sample size of this study will be 100 sanitary workers working in selected panchayat at Kanyakumari District.

SAMPLING TECHNIQUE

Purposive sampling technique will be used for this study.

CRITERIA FOR SAMPLE SELECTION

INCLUSIVE CRITERIA

- Those who are experienced in sanitary work.
- Who are having more than one year experience.
- Both male and female included.
- Those who are willing to participate in the study.

EXCLUSIVE CRITERIA

- Those who are not willing to participate.
- Those who are not available the day of data collection.
- Those who are chronically absent (more than 6 months).

RESEARCH TOOL

DEVELOPMENT AND DESCRIPTIVE OF THE TOOL

The tools developed by the investigator to collect data after intense review of literature internet search and guidance from expert in the field of Nursing 5minutes structured interviewer based questionnaire will be used for data collection.

The tool consist of two section;

Section A: Demographic variables

Section B: Check list to assess health problems.

Section A

It deals with the demographic characteristics of sanitation workers. It consist of demographic variables such as Age, sex, education, Income, socio-economic status, religion, service experience in year, marital status, personal habits, usage of personal protective equipment, vaccination against communicable disease.

Section B

Check list was prepared to assess the health problems of sanitary workers.

DATA COLLECTION PROCEDURE

The data will be collected within four week. Per day 3-4 samples will be selected and 30 minutes will be spent for

each sample. Totally 100 samples will be taken to assess health problem, among sanitary workers in selected panchayat at Kanyakumari District.

ETHICAL ISSUES

The study will be conducted after getting permission from principal of “White Memorial College of Nursing, Attoor” and dissertation committee and president of all

panchayats under Thiruvattar Panchayat Union at Kanyakumari District. A verbal consent will be obtained from 100 samples and assurance will be given to the subject that confidentiality will be maintained.

DATA ANALYSIS

The data will be statistically analyzed by using descriptive and inferential statistics.

Table 1: Frequency and percentage distribution of demographic variables.

Sl.No	Demographic Variables	Frequency	percentage
1.	Age		
	• 25-35 yrs	22	22%
	• 36-45 yrs	38	38%
2.	Sex		
	• Male	37	37%
	• Female	63	63%
3.	Education		
	• Below 5 th Std	31	31%
	• 5-10 th	47	47%
	• 11-12 th	19	19%
4.	Income		
	• Below 5000	11	11%
	• 6000-10000	63	63%
5.	Socio economic status		
	Low class	80	80%
	Middle class	20	20%
6.	Religion		
	• Christian	47	47%
	• Hindu	53	53%
	• Muslim	0	0
7.	Service experience in year:		
	1-5	48	48%
	6-10	37	37%
8.	Marital status		
	• Married	92	92%
	• Unmarried	8	8%
9.	Personal Habits		
	• Alcohol	40	40%
	• Smoking	25	25%
	• Drugs addiction	0	0
10.	Usage of personal protective equipment		
	• Yes	43	43%
	• No	57	57%
11.	Vaccinated against communicable diseases		
	• Yes	28	28%
	• No	72	72%

The data presented on table 1 shows 22(22%) were under the age group of 25-35 years, 38(38%) of samples were under the age group of 36-45 years and 40(40%) of

samples were in the age group of 46-55 years. In relation to sex 63(63%) were females and 37(37%) were males. in educational status 30(30%) were educated below 5th

std, 47(47%) Were educated 5-10th S.td 19(19%) were educated 11-12th S.td and 3(3%) of samples were educated till degree Considering the income 11(11%) were below Rs.5000, 63(63%) samples were between Rs.6000-11000 and 26(26%) were between R.s 11000-15000. In relation to socioeconomic status 80(80%) of samples belongs to low class and 20(20%) samples belongs to middle class. About religion 47 (47%) sanitary workers were Christian and about 53 (53%) sanitary workers were Hindu. According service experience 18(18%) works for about 1-5 years, 37(37%)

working experience is about 6-10 years and 15(15%) worked above 15 years. 92(92%) of sanitary workers were married and 8(8) of sanitary workers were un married. Relation to personal habits 40(40%) were using alcohol, 25(25%) were smokers, 27(27%) were using betel nut and 8(8%) sanitary workers had no personal habits. Regarding PPE usage 43(43%) were using PPE and 57(57%) were not using PPE. 28(28%) sanitary workers were vaccinated against communicable diseases and 72(72%) were not vaccinated.

Table 2.a. Health problems of sanitary workers Frequency and percentage distribution of musculoskeletal complaints.

Sl.No	Musculoskeletal complaints	Frequency	percentage
1.	Back pain	68	68%
2.	Wrist pain	10	10%
3.	Neck pain	21	21%
4.	Knee pain	32	42%
5.	Fatigue/weakness	18	18%

Data presented on table 2.a shows that according to musculoskeletal complaints 68(68%) of sanitary workers suffered with low back pain, 10(10%) suffered with wrist pain, 21(21%) of sanitary workers suffered with neck

pain, 42(42%) of sanitary workers suffered with knee pain, 18(18%) of sanitary workers suffered with fatigue and weakness.

Table 2.b. Frequency and percentage distribution of Gastrointestinal Complaints.

Sl.No	Gastrointestinal symptoms	Frequency	percentage
1.	Indigestion	56	56%
2.	Flatulence	42	42%
3.	Worm infestation	22	22%
4.	Nausea/vomiting	12	12%

Data presented on table 2.b shows that According to gastrointestinal complaints 56(56%) of sanitary workers suffered with indigestion, 42(42%) of sanitary workers

suffered with flatulence, 22(22%) of sanitary workers suffered with worm infestations, 12(12%) of sanitary workers suffered with nausea and vomiting.

Table 2.c: Frequency and percentage distribution of Respiratory complaints.

Sl.No	Respiratory complaints	Frequency	percentage
1.	Cough	32	32%
2.	Breathlessness	12	12%
3.	Throat infection	54	54%
4.	Any other	12	12%

Data presented on table 2.c shows that According to respiratory complaints 32(32%) of sanitary workers suffered with cough, 12(12%) of sanitary workers suffered with breathlessness, 54(54%) of sanitary

workers suffered with throat infection, and 12(12%) of sanitary workers suffered with other complaints like increased phlegm.

Table 2.d.: Frequency and percentage distribution of Dermatologic problems.

Sl.No	Dermatologic problems	Frequency	percentage
1.	Dermatitis	41	41%
2.	Rashes	11	11%
3.	Itching	28	28%

Data presented on table 2.d shows that According to dermatologic problems 41(41%) of sanitary workers suffered with dermatitis, 11(11%) of sanitary workers

suffered with rashes, 28(28%) of sanitary workers suffered with itching.

Table 2.e: Frequency and percentage distribution of Fever /infectious diseases.

Sl.No	Fever /infectious diseases	Frequency	percentage
1.	Fever	44	44%
2.	Hepatitis	11	11%
3.	Any other	13	13%

Data presented on table 2.e shows that According to infectious diseases 44(44%) of sanitary workers suffered with fever, 11(11%) of sanitary workers suffered with

hepatitis and 13(13%) of sanitary workers suffered with typhoid fever.

Table 2.f.: Frequency and percentage distribution of Ophthalmologic complaints.

Sl.No	Ophthalmologic complaints	Frequency	percentage
1.	Redness	22	22%
2.	Eye irritation	33	33%
3.	Watery eyes	52	52%
4.	Others	5	5%

Data presented on table 2.f shows that According to ophthalmologic complaints 22(22%) of sanitary workers suffered with redness in eyes, 33(33%) of sanitary

workers suffered with eye irritation and 52(52%) suffered with watery eyes and 5% suffered with other complaints like vision problem.

Table 2.g: Frequency and percentage distribution of Psychological symptoms.

Sl.No	Psychological symptoms	Frequency	percentage
1.	Symptoms of stress	55	55%
2.	Symptoms of anxiety	39	39%
3.	Any other	6	6%

Data presented on table 2.g shows that According to psychological symptoms 55(55%) suffered with symptoms of Stress, 39(39%) suffered with symptoms of Anxiety and 6(6%) suffered with complaints of depression.

DISCUSSION

This chapter deals with the discussion of the result of the data analyzed based on the objectives and hypothesis stated for the study.

A quantitative approach was used for the present study. The study population comprised of 100 sanitary workers working in Thiruvattar panchayat union. A purposive convenient sampling technique was used to select the samples. The data collection tools used was demographic variables and check list was used to assess the health problems among sanitary workers working in Thiruvattar panchayat union, Kanyakumari District.

Findings

- Majority 40(40%) sanitary workers were in the age of 46-55 years
- Regarding sex about 63 (63%) sanitary workers were male and 37(37%) were female.

- About the educational status 47(47%) sanitary workers were educated between 5-10th, and 30(30%) sanitary workers were educated below 5th std.
- In the family income majority 63 (63%) sanitary workers were in between 6000- 10000,
- In the socioeconomic status 80(80%) of sanitary workers belongs to low class family.
- About religion 53 (53%) sanitary workers were Hindu and about 47 (47%) sanitary workers were Christian.
- Related to service experience about 48(48%) sanitary workers worked 1-5years of experience and 37(37%) worked 6- 10 years.
- Related to marital status 92(92%) sanitary workers got married.
- Related to Personal Habits majority 40(40%) of sanitary workers have the habit of alcoholism, about 25 (25%) sanitary workers have the habit of smoking.
- Related to usage of PPE only 43(43%) sanitary workers were using PPE.
- Related to vaccination only 28(28) sanitary workers were vaccinated against diseases.
- Related to health problems Among 100 samples 68(68%) of sanitary workers suffered with low back pain, 56(56%) of sanitary workers suffered with indigestion. 54(54%) of sanitary workers suffered

with throat infection 41(41%) of sanitary workers suffered with dermatitis 44(44%) of sanitary workers suffered with fever, 52(52%) suffered with watery eyes and 55(55%) of sanitary workers suffered with symptoms of stress.

CONCLUSION

This study concludes majority of them have musculoskeletal problems(back pain) followed by gastrointestinal, respiratory problems and ophthalmic problems. Usage of personal protective equipments by the sanitary workers were poor. Hence steps have to be taken to improve the health status by subjecting them to periodic screening and sensitization programs on usage of PPE.

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