

Original Research Article

Morbidity profile among housekeeping workers in a tertiary care hospital, South India

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Received: 06 February 2019

Revised: 30 March 2019

Accepted: 01 April 2019

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ABSTRACT

Background: Housekeeping staff play an important role in maintaining the health and hygiene in the hospitals. The International Labor Organization (ILO) estimates that more than 125 million workers are victims of occupational accidents and diseases in a single year. Each year an estimated 2.2 million men and women die from work related injuries and diseases and 160 million cases of new diseases arise globally. The objective of the study was to estimate the prevalence of existing morbidities among housekeeping workers at a tertiary care hospital in South India.

Methods: A cross-sectional descriptive study was undertaken in a private tertiary care hospital in south India for a period of one year (2017 September – 2018 September). Housekeeping workers who had work experience of more than one year in the current work place were enrolled in the study (n=168). The health of the workers was assessed to pick up the prevalence of various morbidities.

Results: In the study population majority 133 (79.2%) were females and most of them 117 (69.64%) were in the age group of 30-49 years. There was statistically significant difference between work tenure and hypertension and diabetes ($p < 0.05$). The common morbidities found among the study population was dental carries 111 (66.0%), pallor 24 (14.0%) and musculoskeletal disorders 20 (11.9%).

Conclusions: Periodic examination and immediate corrective measures are advisable to protect the health of employees at risk. Stress management principles can be implemented to enhance physical and mental health. There is need for safety training program for housekeeping workers in the hospital.

Keywords: Health personnel, Housekeeping workers, Morbidity profile, Musculoskeletal disorders

INTRODUCTION

The International Labor Organization (ILO) estimates show that more than 125 million workers fall prey to the occupational accidents that take place throughout a single year.¹ It is estimated that in a year 2.2 million men and women die from work related injuries and diseases and that there are nearly 160 million new cases that arise each year.²

The personnel of health service are its most valuable asset, so it is only sensible to make sure that everything possible is done to help them provide the highest quality

of care. If health care workers are troubled by their own ill-health, or other stressful circumstances, then they will not be able to give their full attention to this demanding task.³ In addition, apart from being good employment practice, no hospital can function effectively if there is high incidence of ill-health among health care workers.

The housekeeping staffs are essential in the health sector, as they maintain hygiene in and around the hospital environment. The housekeeping workers in any setting are liable in many ways to various ergonomic hazards due to the nature and long duration of their work pattern.⁴ The work environment makes the housekeeping staff

vulnerable to risk factors such as dust, bioaerosols, volatile organic matters, radiation, noise, vibrations, infectious diseases and mechanical stress.⁵ Due to such exposures, the morbid conditions detected in workers include the diseases of the respiratory system and cardiovascular system, visual problems, hearing loss, musculoskeletal diseases, cancers, accidents, wounds, animal bites and various communicable diseases.⁶

The World Health Organization (WHO) estimates that the global burden of disease from occupational exposure contribute to the 40% of the Hepatitis B and C infection and 2.5% of the HIV infections among housekeeping workers.⁷ Because of the environment in which they work, they are at an increased risk of accidental needle stick and sharp injuries.⁸ Hence, it is essential to provide a safe environment for the effective functioning of the health care staff. In this study our objective was to estimate the prevalence of existing morbidities among housekeeping workers at a tertiary care hospital in South India.

METHODS

A cross-sectional descriptive study was conducted in a private tertiary care hospital of south India for a period of one year (2017 September – 2018 September). Housekeeping workers who had completed one year of service in current work place at the time of recruitment were included in the study (sample size, n=168). The health status of the workers was assessed in the beginning of the study to assess the prevalence of various morbidities through three mechanisms. Personally meeting each employee and discussing about any health ailments/ accidents/ incidents related to health, review of medical records, general physical examination and blood investigations which were conducted for 168 workers and results were documented. All these sources of data were carefully cross – checked to ensure that no individual morbidity was duplicated or lost the statistical analysis was done using SPSS version 23.

RESULTS

In the study conducted the total number of housekeeping staffs were 168, of which 117 (69.6%) belonged to the age group of 30-49 years (Table 1). Among them Out of total 168 staffs 133 (79.2%) were females and 35 (20.8%) were males. In the study, 12 (7%) were educated up to lower primary and 55 (32%) studied up to upper primary. There were 19 (11%) workers who were educated till higher secondary and only one worker who was educated up to degree. There were 66 (39%) workers were illiterate out of the total.

Out of 56 housekeeping workers with normal BMI, 13 (23.2%) were males and 43 (76.7%) were females. In the study, 66 obese employees 8 (12.1%) were males and 58 (87.9%) were females and total of 30 overweight workers 9 (30%) were males and 21 (70%) were females. There

were a total of 16 workers who are underweight out of which 5 (31.2%) were males and 11 (68.8%) were females. No statistically significant association was found with gender and BMI (p=0.121) but there was statistically significant association with tenure and BMI (p=0.035).

Table 1: Relation between age and gender of study participants (n=168).

| Age (in years) | Male | Female | Total |
|----------------|------------------|-------------------|------------|
| | N (%) | N (%) | |
| <20 | 3 (75) | 1 (25) | 4 |
| 20-29 | 8 (42.1) | 11 (57.9) | 19 |
| 30-39 | 10 (16.9) | 49 (83.1) | 59 |
| 40-49 | 8 (13.8) | 50 (86.2) | 58 |
| 50-59 | 5 (18.5) | 22 (81.5) | 27 |
| ≥60 | 1 (100) | 0 | 1 |
| Total | 35 (20.8) | 133 (79.2) | 168 |

Table 2: Morbidity profile among housekeeping staffs (n=168).

| | Diseases | Number (%) |
|----------------------------------|-------------------------|------------|
| Medical issues | Diabetes mellitus | 14 (8.3) |
| | Hypertension | 13 (7.7) |
| | Coronary heart disease | 3 (1.8) |
| | Pallor | 24 (14) |
| | Hyperthyroidism | 8 (4.8) |
| Gynecologic problems | Breast lump | 1 (.6) |
| | Breast tenderness | 1 (.6) |
| | Urinary tract infection | 1 (.6) |
| | WDPV | 3 (1.8) |
| | Fibroid | 2 (1.2) |
| Ophthalmic problems | Myopia | 1 (0.005) |
| | Presbyopia | 9 (0.05) |
| | Pterygium | 2 (0.01) |
| | Cataract | 2 (0.01) |
| | Reduced | 7 (0.04) |
| Genitourinary problems | BMIC | 1 (0.005) |
| | UTI | 2 (0.01) |
| | WDPV | 4 (0.02) |
| Allergies | Dust | 16 (4.8) |
| | Gloves | 1 (0.6) |
| | Skin | 1 (0.6) |
| Musculoskeletal disorders | | 20 (11.9) |
| Dental | | 111 (66) |

In the study population 155 (92.3%) had normal blood pressure and 13 (7.7%) workers were reported to have hypertension. Table 2 shows morbidity profile among house keeping staff.

In our study it was found that 7 (30.4%) of all hypertensives had work tenure more than 25 years (Table

3). Significant association was found with hypertension and duration of service in hospital ($p=0.0001$).

Out of total 168 housekeeping workers diabetes mellitus was seen in 14 (8.3%) workers. As number of working years increases the numbers of diabetic patients are also

increasing in our study. There is statistically significant association for diabetes mellitus and duration of service in hospital ($p=0.001$). There is no statistically significant association with musculoskeletal disease and duration of service in hospital in our study ($p=0.805$) which has been explained in Table 4.

Table 3: Systemic hypertension among housekeeping staffs (n=168).

| Tenure (years) | Hypertension | | Total | P value (chi square) |
|----------------|--------------|----------|-------|----------------------|
| | No | Yes | | |
| | N (%) | N (%) | | |
| ≤5 | 51 (98) | 1 (1.9) | 52 | 0.0001 |
| 5-10 | 47 (100) | 0 | 47 | |
| 11-15 | 12 (80) | 3 (20) | 15 | |
| 16-20 | 13 (92.8) | 1 (7.1) | 14 | |
| 21-25 | 16 (94.1) | 1 (5.8) | 17 | |
| >25 | 16 (69.5) | 7 (30.4) | 23 | |
| Total | 155 | 13 | 168 | |

Table 4: The prevalence of diabetes mellitus among housekeeping staffs (n=168).

| Tenure (years) | DM | | Total | P value (chi square) |
|----------------|-----------|----------|-------|----------------------|
| | No | Yes | | |
| | N (%) | N (%) | | |
| ≤5 | 52 (100) | 0 | 52 | 0.001 |
| 5-10 | 45 (95.7) | 2 (4.3) | 47 | |
| 11-15 | 15 (100) | 0 | 15 | |
| 16-20 | 12 (85.7) | 2 (14.3) | 14 | |
| 21-25 | 16 (94.1) | 1 (5.9) | 17 | |
| >25 | 14 (60.9) | 9 (39.1) | 23 | |
| Total | 154 | 14 | 168 | |

DISCUSSION

In the study population 69.6% of them were in 30-49 year age group, of which 79.2% were females and 20.8% were males. A study conducted by Gore et al to assess working environment and occupational hazards in class IV sweepers in tertiary care hospital, Mumbai found that out of 320 sweepers 33.7% were females and 66.3% were males which is different from our study population.⁹ A study conducted by Nagaraj et al in Bangalore on street sweepers found that majority of the subjects belonged to age groups of 30 - 50 years and Sabde et al conducted study among street sweepers in Nagpur municipal corporation found that out of 149 employees 54.6% were males, the mean age of the street sweepers was 39.7 ± 7.15 years.^{4,10} In our study, 9% were educated up to secondary, 7% up to lower primary and 32% up to upper primary. There are 11% workers educated till higher secondary. Only 0.5% worker was educated till degree. Out of 168 housekeeping workers 66% were illiterate. Similarly, a study by Lal on 118 class IV employees found that 32.5% employees were illiterate employees.¹¹ In the study by Nagaraj also they found maximum sweepers to be illiterate.¹⁰

A study on morbidity pattern in hospital class IV employees by Gore et al found that out 320 class IV employees 50.9% had some or other health problem.⁹ Maximum 68.7% employees had musculoskeletal disorders, 45.3% had gastrointestinal problem, 38.6% had skin diseases, 28.2% had injuries, 23.9% had respiratory diseases, 20.2% had ophthalmic diseases. Out of 320 employees 8.4% were underweight, 23.8% were pre obese and 24.4% were obese. Out of 154 obese employees 8.4% had diabetic mellitus while out of 166 normal body mass index employees only 1.8% employees had diabetes mellitus.⁸ In the present study, the morbid conditions were hypertension 7.7%, eye disorders 13.1%, dental problems 66%, musculoskeletal diseases 11.9% and hypothyroidism 4.8%. Diabetes mellitus was present among 8.3% housekeeping workers and there were none with skin diseases. A study conducted by Nagaraj also showed that major ailments encountered were hypertension 18.9% respiratory ailments 7.7% and skin ailments 3.11%.¹⁰

CONCLUSION

The morbidity profile of the workers, 66 employees were obese of which 12.1% were males and 87.9% were

females and there was a total of 30 overweight workers of which 30% were males and 70% were females. There was statistically significant association with tenure and BMI ($p=0.035$). The workers with diabetes mellitus were 8.3% and there was statistically significant association for diabetes mellitus and duration of service in hospital ($p=0.001$). Other morbidities like musculoskeletal problems were seen in 11.9% of the workers and 66% of the workers had dental problems. The most common gynecological problem in the study population was white discharge per vagina in the female worker population which constituted 1.2%.

Housekeeping employees in hospitals are one of the important personnel of the health team. Their health, motivation, communication, training are important for high quality health care. Periodic examination is recommended annually and immediate corrective measures should be taken to protect the health of employees at risk. Stress management principles must be implemented to enhance physical and mental health. More studies among these workers must be encouraged to formulate strategies for their health. There is need for safety training programmes for all housekeeping workers.

Funding: No funding sources

Conflict of interest: None declared

Ethical approval: Not required

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Cite this article as: Jose F, Nisha C, Jerome K, Paul J. Morbidity profile among housekeeping workers in a tertiary care hospital, South India. *Int J Community Med Public Health* 2019;6:2052-5.