

Morbidity profile of migrant workers attending health camps in Bangalore urban during the Covid-19 pandemic

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ABSTRACT

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Introduction: Global pandemic of COVID-19 resulted in a nationwide lockdown which affected the migrants in terms of healthcare service accessibility. This led to an increase in the prevalence of various morbidity. Objective of this study was to assess the morbidity profile of camp attendees in Bangalore urban conducted during the lockdown period of the COVID-19 pandemic.

Methods: During the pandemic lockdown, health camps were conducted in selected urban under-privileged areas of Bangalore city targeting the migrant workers and these records were reviewed and relevant data were analyzed. Variables included age, gender, residential address, occupation and morbidity.

Results: Among the 484 participants who had attended the medical camp, the youngest patient was 1 year old and the oldest was 75 years with a median age of 27 years (IQR: 20 – 35). The majority of the camp attendees were males (78%) and migrants (77%). Common morbidities noted were hypertension (5%) followed by musculoskeletal pain (4%). The other illnesses were anemia (3%), gastritis (2.5%), pre-diabetes (1.7%) and combined diabetes and hypertension (1.5%). There was no significant relationship between migrant status and the presence of any morbidity.

Conclusion: Hypertension and musculoskeletal pain are the most common morbidity among the camp attendees.

Keywords: Health camp, lockdown, migrants, urban underprivileged area

Introduction

A nationwide lockdown was announced on 24th March 2020 for the first time in India as a preventive step against the COVID-19 pandemic. All the essential services were made available including the health care services. The overall response to the lockdown was positive.¹ But due to the fear of contracting the infection and strict lockdown measures that were implemented, people who needed medical attention either for their chronic noncommunicable diseases or for any acute onset illness, preferred to skip their routine

hospital visits.² This was evident with a drop in outpatient cases seen in every department of a hospital setting. There are no estimates as yet to know the non-COVID health-related morbidity and mortality. The community is expected to experience a surge in non-communicable diseases (NCD), lack of antenatal and postnatal care, mental illnesses, substance abuse, and domestic violence and in the long run the pandemic might have an impact on health-seeking behavior.^{3,4,5,6,7}

Due to fear, stigma and lack of awareness, the healthcare-seeking behavior during the pandemic decreased leading to the reduced footfall of outpatients in hospitals.^{8,9} These 'missing patients' who failed to visit a health care center were encountered in the camp. The most affected were the migrant population facing difficulty in accessing health services.

NCDs are estimated to account for 63% of all deaths in India and Karnataka has a big burden of ischemic heart disease, diabetes and hypertension.^{10,11} NCDs were one of the neglected entities during the lockdown.³ Reviewing the records that capture the morbidity profile of the camp attendees is a reflection of the health needs of the population during a lockdown particularly due to an outbreak. This information will help us plan and deliver health care services (emergency and non-emergency) on time ultimately reducing mortality other than the unfortunate COVID-19 losses. The primary objective of the study was to assess the morbidity profile of camp attendees in Bangalore urban conducted during the first lockdown period of the COVID-19 pandemic.

Methods

A medical health camp was conducted by the Department of Community Health to cater to the health needs of the urban communities, especially the migrants in Bangalore. As a part of the outreach activity of the Division of Occupational Health Services, Department of Community Health, St. John's Medical College Hospital health camps were conducted in partnership with the company, Enquero Global (India) under their Corporate Social Responsibility (CSR) activity, Poorna Swasta Mitra. The target population examined during the camp was mainly migrant workers. Migrant workers were identified to be the most vulnerable in terms of making ends meet or having adequate meals which also meant that their health care needs had also taken a back foot.¹²

A record was maintained capturing the socio-demographic and medical details of the camp attendees which were recorded manually in the field. According to World Health Organization

guidelines, all participants above the age of 30 were screened for diabetes (using Accu-chek Instant glucometer) and hypertension (using Omron HEM 7121 digital Blood Pressure monitor).¹³ Migrants with random blood sugar levels of 200 mg/dL or more were considered to have diabetes. Blood pressures were monitored using the standard protocol and those with consistently high readings even on the third reading (systole > 140 mm of Hg and diastole > 90 mm of Hg) were considered to have hypertension.

After obtaining clearance from the Institutional Ethical Committee, these records were reviewed, and data were extracted using a structured instrument that included age, gender, residential address, occupation and morbidity. All the 484 patients enlisted in the record were included. The data was then extracted to Microsoft Excel for data entry and 10% of the data was verified for accuracy and reliability by the second investigator. Data analysis was done using percentages, mean and median wherever necessary. The Chi-square test was used to find associations between migrant status with existing morbidities.

Results

This was a retrospective study, with records of 484 people who had attended the medical camp. The youngest patient was 1 year old and the oldest was 75 years with a median age of 27 years (IQR: 20 – 35). The majority of the camp attendees were males (78%) and had migrated to Bangalore (77%).

Most of the male participants were employed in the construction and garment sectors while a majority of the females were homemakers (Figure – 1). The migrants were involved in different activities on construction sites (Figure – 2). The non-migrants were farmers, having their own small businesses and/or delivery executives. Almost all the non-migrants were from Bangalore urban areas whereas the majority of the migrants hailed from Bihar (19%) and Jharkhand (19%) followed by Orissa (11%) and West Bengal (8%).

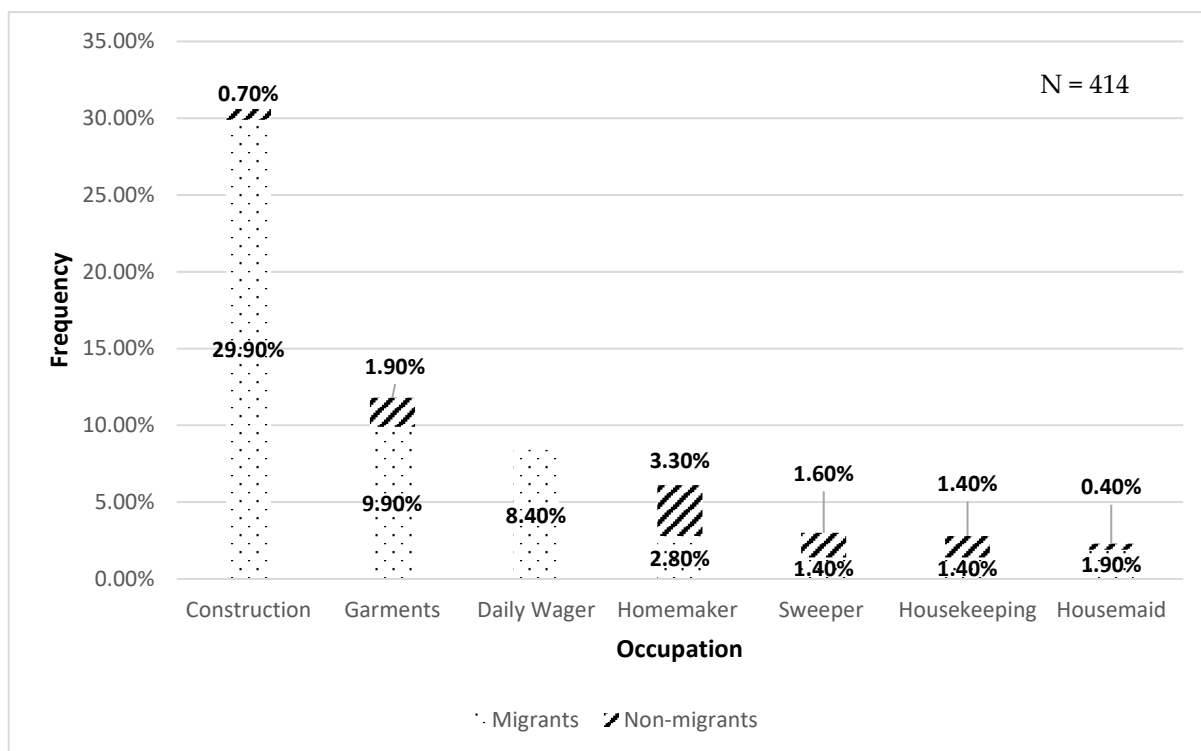


Figure 1: Occupation of Camp attendees – 1

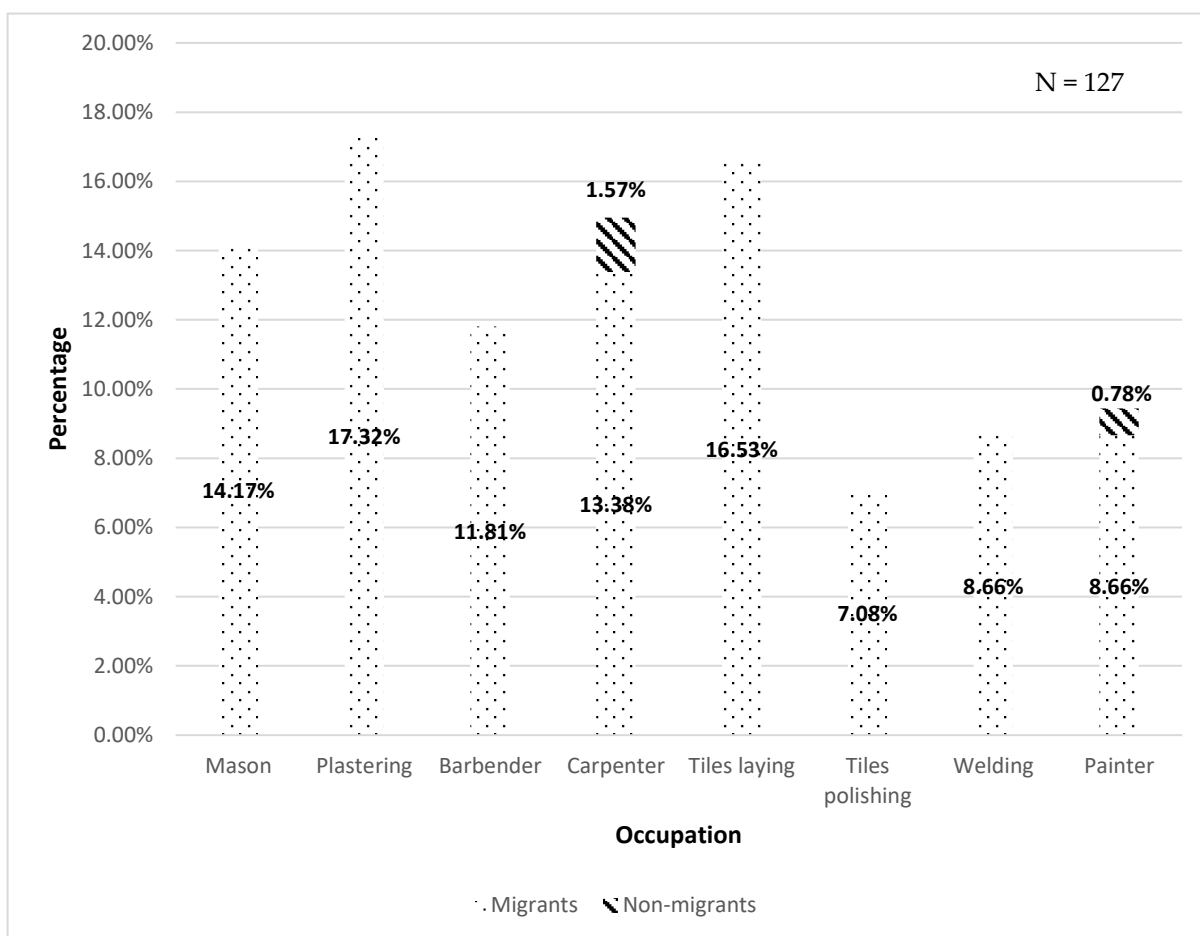


Figure 2: Occupation in Construction of Camp Attendees – 2

Almost three-fourths of the camp attendees (72%) did not have any known morbidities. Among those with co-morbidity, the majority were diagnosed with hypertension (5%) followed by musculoskeletal pain (4%) (Figure – 3). The other illnesses were pallor (3%), gastritis (2.5%), pre-

diabetes (1.7%) and a combination of diabetes and hypertension (1.5%). Other conditions like tinea, urticaria, dry eyes, allergic rhinitis and dysmenorrhoea were also managed during the camp including the provision of antenatal care (1%).

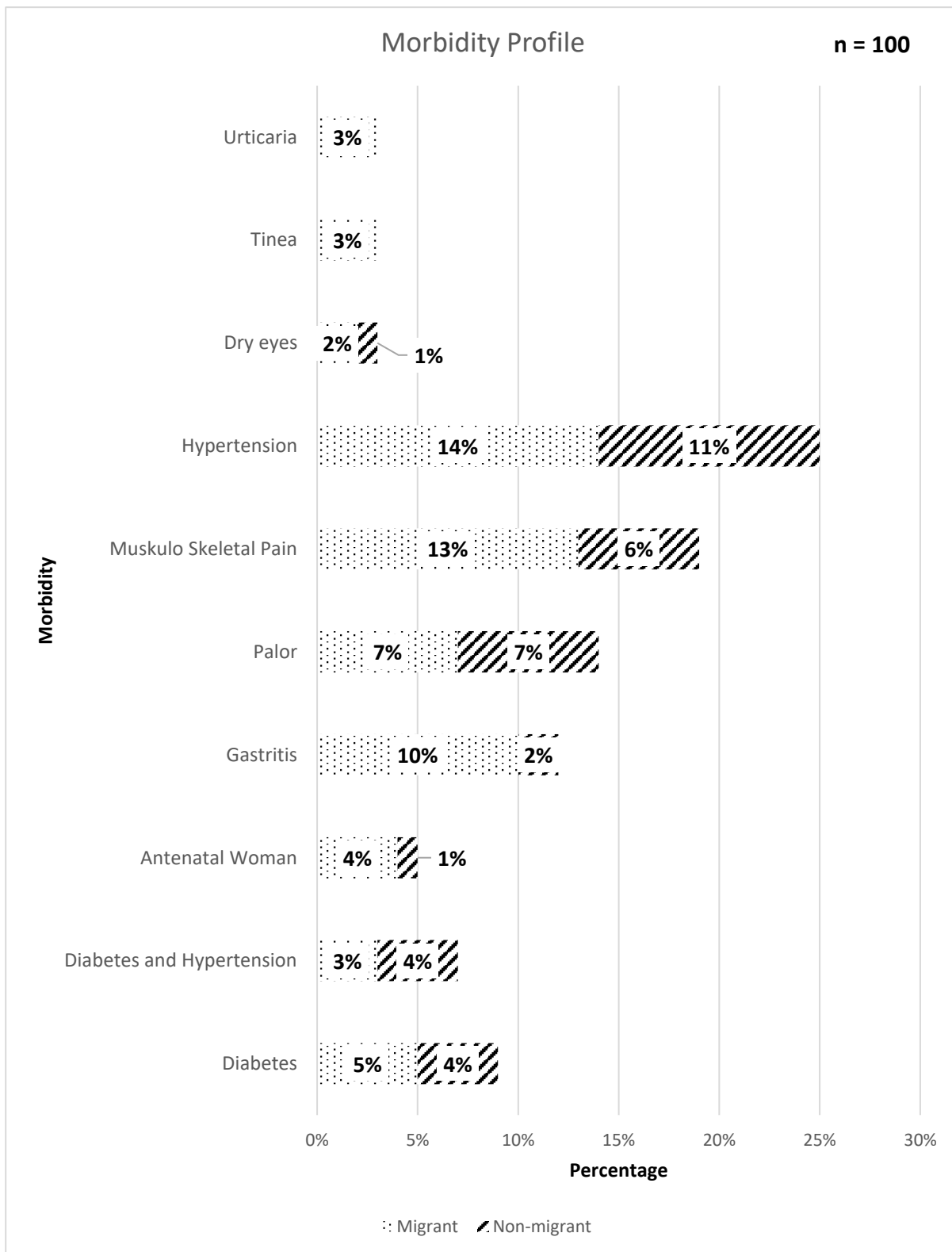


Figure – 3: Morbidity Profile of the Camp Attendees

All the camp attendees who were above the age of 30 years were screened for diabetes and hypertension and we found that 3.5% had elevated sugar levels and 16% had elevated blood pressure. The prevalence of the common diseases among the non-migrants and migrants is depicted in Table – 1.

Gastritis was more prevalent among migrants

whereas hypertension and anemia are more common among the non-migrants. There was no significant difference in the mean age between males and females or between migrants and non-migrants in the independent samples t-test. On doing the chi-square test, there was no significant association between elevated sugar and blood pressure levels with the migrant status (Table – 2).

Table 1: Prevalence of common diseases between natives and migrants

Disease	Non-Migrants	Migrants (372)
	(112) N (%)	N (%)
Hypertension	11 (9.5%)	14 (3.79%)
Musculoskeletal Pain	6 (5.2%)	13 (3.52%)
Gastritis	2 (1.7%)	10 (2.7%)
Anaemia	7 (6.08%)	7 (1.89%)

Table 2: Association between Migrant status and elevated Blood pressures and sugar levels.

Variable	Elevated Blood Sugar levels		p value
	Yes	No	
Migrant Status	Yes	10 (2.7%)	p = 0.141*
	No	359 (97.3%)	
Migrant Status	Yes	7 (6.1%)	p = 0.147*
	No	108 (93.9%)	

Elevated Blood Pressure levels

Variable	Elevated Blood Pressure levels		p value
	Yes	No	
Migrant Status	Yes	53 (14.4%)	p = 0.147*
	No	316 (85.6%)	
Migrant Status	Yes	23 (20%)	p = 0.147*
	No	92 (80%)	

*chi-square test

Discussion

The median age of the migrant population was 27 years and the majority were males which is similar to other studies on migrants.¹⁴⁻¹⁶ This is because the 20 – 30 years age group is the ripe age for a demographic dividend, and they travel in search of a job. Also, this is the younger generation who realised the plight of the failed farming in their hometowns and shift with their families for better life and opportunities for their children.

Migration is gendered and categorized. According to Census 2001, among all the migrants, females are twice the number of males probably because when a family migrates, the women also shift places.¹⁷ The data shows that 14.7% migrated for work/employment among which 37.6% were men and 3.2% were women. Among the 43.8% who migrated for marriage, almost 65% were women. The trends are almost the same as with the 2011 census which also shows that the highest out-migrants are from Uttar Pradesh and Bihar.¹⁸ The top states for in-migration are Delhi and Maharashtra. The proportion of interstate migration in India was 55% before the 2001 census which came down to 33% in the 2011 census.

A report shows that 47% of the migrants work in the construction sector whereas our study shows 33.6% in different sectors of construction.¹⁹ This is because the metropolitan cities provide ample opportunities for the construction of newer buildings which creates demand for workers. The uneven growth and development of cities lead to urbanization, expansion and infrastructure development. Even though many native workers are also in construction, most are in technical roles whereas the migrants take up different roles under them. In many families, the women either were homemakers and took care of children or were employed as housemaids in the nearby apartments.

A study done among migrants in Mangalore showed that two-thirds are men and the rest are women which is similar to our study.¹⁵ The major illnesses in previous studies were musculoskeletal pain and skin issues among migrants.^{14,16} Our camp results show that the prevalence was high for

elevated blood pressure and sugar levels followed by musculoskeletal pain. The main reason for this pain is because of increased work hours, inadequate training in handling heavy objects and also uncomfortable living/ sleeping conditions. Gastritis which was prevalent may be due to the source of food and cooking environment or the cheap spicy food which is easily available.

Mortality in 60%-90% of the Covid-19 cases is attributed to either one or more comorbidities like diabetes mellitus, hypertension, respiratory and heart disease, particularly among the elderly.^{20,21} Temporary closure of outpatient health facilities in some of the secondary and tertiary care hospitals has deprived millions of NCD patients of their regular medication and diagnostic health needs. Due to the lack of robust primary healthcare facilities and ineffective public health interventions, socioeconomically vulnerable patients are more likely to become non-adherent to their routine medications thereby increasing their risk of disease complications.²²

Patients living with obesity and NCDs are at increased risk of health impacts of emergencies such as COVID-19. NCD health-care staff and associated workers and volunteers should be centrally involved in the planning of COVID-19 response strategies to ensure that the needs of patients and caregivers are addressed. A streamlined response to COVID-19 in the context of NCDs is important to optimize public health outcomes and reduce the impacts of this pandemic on individuals, vulnerable groups, key workers, and society. Loss of job coupled with fear of contracting COVID on visiting a healthcare facility may have led to decreased adherence to medications and elevated blood pressure and sugar levels. It is advised to prioritize and ensure continued community-level services in a safe way to cater to NCD patients' needs.²³

The global pandemic of COVID-19 and the resultant lockdown put a dent in the job opportunities and income of these migrant workers. Combined with being displaced from home, reduced options to visit the hospital, and the

inability to go back home strained the mental health of the migrant families.²⁴ The main stressors of COVID-19 with increased IES-R score were not staying with family members, and influence of social media.²⁵ They burnt through their savings and are on the verge of poverty in different parts of the country.²⁶ Even though lockdown was implemented successfully which slowed down the disease transmissions, it hurt the economy of the country and especially migrant workers who are dependent on weekly wages for their livelihood.²⁷ These factors not only impacted the physical health but strained the mental health of the migrant population.

Migrant workers were scared and anxious about the pandemic and their ability to go home. In this dire circumstance, health took a backseat and regular medications are a luxury that they can skip. Despite all these, migrants turned up in good numbers at the medical camp even if it is to check their temperature, blood pressure and oxygen saturation. Migration is always associated with marginalization, fragmentation, vulnerabilities, lack of social support, exploitation and exclusion.²⁸ Many a time, the onus is on their employers to provide support financially, providing groceries, or even organizing travel services.

Conclusion

The most prevalent morbidities among the migrant population were elevated blood pressure, elevated sugar levels, musculoskeletal pain and gastritis. Migrant populations are facing many challenges among which the most pressing issue is food and travel. Health is in the backseat mainly because of the access to healthcare coupled with the fear of contracting the disease on visiting a healthcare facility. Priority measures should be concentrated on providing basic amenities like groceries, drinking water, and shelter for these people until they can travel back to their hometowns.

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