



## RESEARCH ARTICLE

### STUDY OF MORBIDITY PATTERN AMONG MIGRANT WORKERS IN A COASTAL CITY OF KARNATAKA

\*Dr. K. G. Kiran, Dr. Nanjesh Kumar, S., Dr. N. Uday Kiran, Dr. Sanjeev Badiger and Dr. Swathi, H. N.

Department of Community Medicine, K.S. Hegde Medical Academy, Nitte University, Mangalore. India

#### ARTICLE INFO

##### Article History:

Received 25<sup>th</sup> March, 2016  
Received in revised form  
27<sup>th</sup> April, 2016  
Accepted 08<sup>th</sup> May, 2016  
Published online 15<sup>th</sup> June, 2016

##### Key words:

Migrant workers,  
Socio-demographic profile,  
Morbidity.

#### ABSTRACT

**Background:** Knowledge about the health status of migrants is often limited due to lack of data. This is because migrants are often excluded from surveys. Immigrants from disease-endemic areas settle in urban slums with highly vector-receptive and unprotected housing, introducing new and drug-resistant strains.

**Aims and objectives:** 1. Study of Morbidity Pattern among Migrant Workers

**Material & Methods:** Migrant population in coastal city was the study population. Study duration: From December 2015 to April 2016. **Study design:** Cross sectional study. Subjects of this study included migrant population located in 3 different areas of coastal city. Clinical examination was done at the site of camp. Pretested questionnaire was used to collect data by interview method.

**Results and discussion:** A total 300 migrant workers were included in the study, of this 75.33% were male workers and 24.67% were female workers. 39.33% of the workers belonged to the age group of 21-30 years. Amongst the migrants workers, musculoskeletal symptoms ranked 1<sup>st</sup> in 43.33% subjects. 22.66% migrants had skin problem followed by fever which was seen in 20.66% migrants. Other important illness seen in the migrants were gastrointestinal problems (9%) respiratory problems (8%) and urinary tract infections (6.66%). Only 6% of the migrants had complained of having malaria. Injuries were seen in 3.3% migrants.

**Conclusion:** This study has shown the pattern of health problems amongst migrant workers, which can contribute to further development of health promotion strategies for migrant workers

Copyright©2016, Kiran et al. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Citation: Dr. K. G. Kiran, Dr. Nanjesh Kumar, S., Dr. N. Uday Kiran, Dr. Sanjeev Badiger and Dr. Swathi, H. N. 2016. "Study of morbidity pattern among migrant workers in a coastal city of Karnataka", *International Journal of Current Research*, 8, (06), 32738-32740.

## INTRODUCTION

Migration is a process of social change during which a person moves from one cultural setting to another in order to settle for a longer period of time or permanently (Syed and Vangen, 2003). Reasons for migration can be divided into push factors (driving the individual out of the country of origin) and pull factors (attracting the individual towards the recipient country). Push factors include war, poverty, hunger etc., while pull factors include employment opportunities and political and religious freedom (Mygind et al., 2006; Carta et al., 2005). These factors affect both the nature of the migration and the migrants health (Bhugra, 2004). Knowledge about the health status of migrants is often limited due to lack of data. This is because migrants are often excluded from surveys. There may be several reasons for this, including insufficient knowledge of the language, lack of professional interpreters, and greater costs

when conducting surveys and interviews among migrants. In addition, there are difficulties in engaging migrants in these surveys. This may be due to the migrants' feelings of less trust with the surrounding society and its institutions. Migrants often live in a social context where new social, political and language realities result in great demands on their coping skills and adaptability (Mygind et al., 2006; Hjelde, 2004). The workers' living conditions are poor with denial of basic amenities to maintain the standard of living, making them prone to health problems. The construction sites create breeding grounds for various vectors and the unprotected labourers act as potential baits. In addition, immigrants from disease-endemic areas settle in urban slums with highly vector-receptive and unprotected housing, introducing new and drug-resistant strains. (Maria Kristiansen et al., 2007)

In this quest, a cross-sectional study was planned in the construction sites in the city of Mangalore to study the baseline socio-demographic profile and morbidity pattern of migrant workers.

\*Corresponding author: Dr. K. G. Kiran,  
Department of Community Medicine, K.S. Hegde Medical Academy,  
Nitte University, Mangalore. India.

## MATERIALS AND METHODS

**Source of data:** Study population: Migrant population in Mangalore City limits in different places. 1. Shaktinagar 2. Bhengre 3. MRPL construction site. Study duration: From December 2015 to April 2016. Study design: Cross sectional study. Sample size: 300. Inclusion criteria: Migrant workers of Mangalore city not residing for more than 3 years were included. Exclusion criteria: Resident labourers of Mangalore city.

**Method of collection of data:** Informed written consent was obtained by explaining the study subjects about the method of study, outcome and possible intervention. Assurance to the subject about confidentiality of the subject's data was ensured. A pre-tested semi structured questionnaire was used for collection of data. Data was collected by interview cum clinical examination at the work site.

## RESULTS

**Table 1: Socio- Demographic Distribution**

In the below table, out of the total 300 migrant workers, 226(75.33%) were male workers and 74 (24.67%) were female workers. Majority of the migrant workers 160 (53.33%) were Hindus by religion, followed by Muslims 104 (34.67%). 170 (56.67%) were married and 130 (43.33%) of them were unmarried. Majority of the workers had completed primary education (46.67%)

**Table 1. Sociodemographic distribution among study subjects**

Socio-demographic factors	Number (N=300)	Percentage %
<b>1. Sex</b>		
Male	226	75.33
Female	74	24.67
<b>2. Religion</b>		
Hindu	160	53.33
Muslim	104	34.67
Christian	20	06.67
Others	16	05.33
<b>3. Marital status</b>		
Married	170	56.67
Unmarried	130	43.33
<b>4. Education</b>		
Illiterate	90	30
Primary	140	46.67
Secondary	38	12.67
Higher Secondary	22	07.33
Graduate	10	3.33

**Table 2. Age group distribution of the study subjects (N=300)**

Age group	Number	Percentage
10- 20	34	11.33
21- 30	118	39.33
31- 40	92	30.67
41- 50	46	15.33
More than 50	10	03.33
<b>Total</b>	<b>300</b>	<b>100</b>

**Table 2:** Out of 300 migrants examined, 188 (39.33%) workers belonged to the age group of 21-30 years and 92 (30.67%) workers belonged to the age group of 31-40 years.

The youngest migrant worker was 10 years of age and the oldest was 68 years in age.

**Table 3. Morbidity pattern of the Study population (N=300)**

Morbidity pattern	Number	Percentage
Fever	62	20.67
Skin problem	68	22.67
Musculoskeletal problem	130	43.33
Gastrointestinal problem	27	09.0
Respiratory problem	24	08.0
Urinary tract infection	20	06.6
Malaria	18	06.0
Injury	10	03.3
Others	14	08.0

Note: Few subjects had more than one morbidity.

In morbidity amongst the migrants, musculoskeletal symptoms ranked first, 130 (43.33%) of 300 study population. 68 (22.66%) migrants had skin problem followed by fever which was seen in 62 (20.66%) migrants. Other important illness seen in the migrants were gastrointestinal problem (9%), respiratory problem (8%) and urinary tract infection (6.66%). Only 18 (6%) of the 300 migrants had malaria. Injuries were seen in 10(3.3%) migrants. Other morbidities included Eye problems, Hypertension, Menstrual problems and Headache.

## DISCUSSION

A total 300 migrant workers were included in the present study. Of this, 226(75.33%) were male workers & 74(24.67%) were female workers. 170 (56.67%) of the migrant workers were married. Majority of the migrant workers 160(53.33%) were Hindus by religion followed by Muslims 104 (34.67%). 188 (39.33%) of the workers belonged to the age group of 21-30 years, the youngest migrant worker was 10 years of age and the oldest was 68 years in age. Regarding morbidity pattern in this study, 43.33% subjects had musculoskeletal problems like aches, pulls, tendinitis, etc. This is probably due to improper physical activity during manual labour and un-ergonomic practices at the work place. Similar study done by Mohopatra (2002), also reported that 40% of the migrant workers suffered from musculoskeletal disorders affecting various joints and muscles ranging from neck to foot. In the present study 62 (20.33%) out of 300 migrants had fever. Study done by Adsul *et al.* (2011) also showed that the highest morbidity (23.11%) at the construction site was due to acute febrile illness. Out of these, 20.71% workers had suspected malaria. In the present study 6% workers had malaria. Reason for malaria at construction sites may be due to favourable conditions for mosquito breeding sites offered by construction site environment and the unprotected workers acting as baits.

In this study, Skin problems such as fungal infection, contact dermatitis, and eczematous rash were found in 22.66 % of the workers. Contact with cement and lime may have led to irritant dermatitis. Inadequate bathing besides handling of various construction related materials like paints, corrosives, and detergents, waste at construction site may have also attributed to these skin conditions amongst these labourers. Unhygienic cooking and eating practices could have contributed to gastrointestinal problem such as loose motions, abdominal pain, constipation, and loss of appetite which was found in

09% of the migrant workers in the present study. Study done by Adsul (2011) also showed that 4.41% worker had gastrointestinal problems as workers were exposed to chemical agents, parasitic agents, or infective agents at the work place and at the place of their residence. In this study, 8 % of workers had various respiratory infections. Gurav *et al.* (2005) have reported respiratory problems in 4.86% of workers. The respiratory problem in this study may be due to higher exposure to dust during the working hours and post-working hours as most of the workers living accommodations were located within the construction site. In the present study 6.6% of them complained of a urinary tract infection. This raises the suspicion of sexually transmitted infections in them; which requires further study.

It was found that 3.3 % migrant workers were having some form of injury while working at the construction site. Construction industry is known for high incidence of accidents. According to Ramsay (1983) the risk of accidents increases with extremes of temperature. Age, sex, personal habits (such as working under the influence of alcohol), personality traits (risk-taking behaviour), and physical and mental state of the worker play an important role in the occurrence of accidents. (Gupta *et al.*, 2003) In a study by Shah and Mehta, (Shah and Mehta, 2009) the prevalence of injuries was 25.42%, and the reason for the low prevalence in this study can be attributed due to more of mechanization at work place and on-site periodic safety induction training given by the construction company employing them. Other important illness seen in the migrant workers was eye problem in 8 (2.6%) of the labourers. Eye conditions were mainly related to conjunctivitis with a potential risk to spread and foreign bodies due to dusty working conditions. Hypertension was diagnosed in 3 of the migrant workers. Mean number of days lost due to illness among the migrant workers were 2 to 3 days. This is important in considering the fact that their daily wages would be deducted if they did not work. It was found that to avoid financial loss, the migrant workers get back to their work without recovering fully from their illness, prolonging their sickness & spreading it to co-workers. This further predisposes them for increasing their morbidity status in future.

## Conclusion

This study has shown the pattern of health problems amongst migrant workers, which can contribute to further development of health promotion strategies for migrant workers. The benefits to the construction company are to have a healthy workforce to achieve its targets and goals of the project as well as opting for the Occupational Health and Safety Assessment Series certification. Public-private partnership can act as a model to decrease morbidity and mortality at construction site among migrant workers.

## REFERENCES

- Adsul, B.B., Laad, P.S., Howal, P.V. and Chaturvedi, R.M. 2011. Health problems among migrant construction workers: A unique public-private partnership project. *Indian J Occup Environ Med.*, 15:29-32.
- Bhugra, D. 2004. Migration and mental health. *Acta Psychiatr Scand.*, 109:243-58.
- Carta, M.G., Bernal, M., Hardoy, M.C. and Haro-Abad, J.M. 2005. Migration and mental health in Europe. The state of the Mental Health in Europe Working Group: appendix 1. *Clin Part Epidemiol Ment Health*, 1(13).
- Gupta, M.C. and Mahajan, B.K. 2003. editors. Textbook of Preventive and Social Medicine. 3rd Ed. New Delhi: Jaypee Brothers Medical Publishers Pvt. Ltd; Physical Environment: Place of Work or Occupation (Occupational Health) pp. 66-80.
- Gurav, R.B., Kartikeyan, S., Wayal, R. and Joshi, S.D. 2005. Assessment of health profile of daily wage labourers. *Indian J Occup Environ Med.*, 2005; 9:115-7.
- Hjelde, K.H. 2004. Kritiske perspektiv på antropologiske metoder og teorier i studier av sensitive og eksistensielle spørsmål ved migrasjon og flykntingtilværelse [Critical perspectives on anthropological methods and theories in studies of sensitive and existential issues in migration and refugees' existence] Oslo: NAKMI, 2004.
- Maria Kristiansen, Anna Mygind, Allan Krasnik, 2007. Health effects of migration. *Dan Med Bull*, 54:46-7.
- Mohopatra, R. 2002. editor. Occupational Health Hazards and Remedies. 1st ed. New Delhi: Jaypee Brothers Medical Publishers Pvt Ltd; Occupational Health Hazards in Small Scale and Other Industries; pp. 54-5. (203-4).
- Mygind, A., Kristiansen, M., Krasnik, A. 2006. Nørredam, M. Ensile minoriteters opfattelse af sygdomsrisici - betydningen af etnicitet og migration [Risk perception among ethnic minorities - the influence of ethnicity and migration]. Copenhagen: The National Board of Health.
- Ramsay, J.D. 1983. Effect of workplace thermal conditions on safe work behaviour. *J Safety Res.* 14:105-14.
- Shah, C.K. and Mehta, H. 2009. Study of injuries among construction workers in Ahmadabad city, Gujarat. *Indian J Practising Doctor*, 5:4-8.
- Syed, H.R. and Vangen, S. 2003. Health and migration: a review. Oslo: NAKMI, 2003.

\*\*\*\*\*