

The Socio-Economic and Health Profile of Migrant Labourers

Juberihan Shifa^{1*} and Dr. Joseph Mini²

¹M.Sc Home Science (Food and Nutrition), Government College for Women, Thiruvananthapuram, Kerala, India.

²Assistant Professor and Head of Department (Home Science), Government College for Women, Thiruvananthapuram, Kerala, India.

ABSTRACT A large population of migrants work in various sectors demanding heavy physical labour. Such exertion needs to be supplemented with good food, good hygiene, and rest. Since these factors are in short supply, migrant labourers are always under the shadow of health and nutritional problems in the long run. There is not enough research that focus on the nutritional aspects of the migrant workers. The main objective of this study was to assess the socioeconomic aspects, and the health profile of migrant labourers. The study was conducted amongst the migrant labourers in the Thiruvananthapuram district in the state of Kerala. For the study, four hundred respondents were selected using purposive random sampling. For the health profile assessment, hundred migrants were selected as sub-samples. The data was obtained using a standardised interview schedule. The study found out that about 96% of the migrant labourers participated in the study belonged to the upper lower socio-economic class. The nutrient intake of the respondents was recorded by following a three day 24-hour dietary recall method. The data was then analysed using SPSS Statistics. The data revealed that the intake of the macronutrients was above the respective Recommended Dietary Allowance (RDA) values.^[1] However, the percentage of calories contributed by these nutrients was satisfactory. Meanwhile, the micronutrients intake was below the respective RDA levels. By giving proper awareness on various nutritional aspects, positive changes could be brought up on the food consumption pattern, thereby improving their health.

Keywords: Migrant labourers, Socio-economic status, Macronutrients, Micronutrients, Nutrient intake

Address for correspondence: Juberihan Shifa, M.Sc Home Science (Food and Nutrition), Government College for Women, Thiruvananthapuram, Kerala, India.

Submitted: 09-Feb-2022

Accepted: 04-Jul-2022

Published: 29-Aug-2022

INTRODUCTION

By definition, migration implies a shift from one location to another, either temporary or permanent. The shift can either be an internal movement or an external one. The reasons for migration depend on the individuals involved. But the prime factor influencing the move would be to have a better life - by getting better education, a better job or improving the living conditions.

In India, people migrating in search of a livelihood is an unavoidable truth. Environmental hazards like floods and droughts, political and religious persecution, regional conflicts and shortage of local jobs force them to resort to migration as a means to survive. More than 120 million people are earning their livelihood from seasonal migration. As many options are now available for inter-state movement, migration has become a more long-distant one. The Indian states with

flourishing local economies attract a big number of workers from states with sluggish economies and abundance of labourers^[2].

For underprivileged internal migrants, a comparatively higher wage rates in unorganized sectors, continuous availability of jobs in the informal sector and relatively humane treatment of migrant workers by the host community makes Kerala one of the most promising destinations in India^[3].

A large population of migrants work in sectors demanding heavy physical labour. Such exertion needs to be supplemented with good food, good hygiene, and rest. Since these factors are in short supply, migrant labourers are always under the shadow of health and nutritional problems in the

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How to cite this article: Juberihan Shifa and Dr. Joseph Mini. The Socio-Economic and Health Profile of Migrant Labourers. *Int J Food Nutr Sci* 2022; 11:40-44.

Access this article online

Website: www.ijfans.org

DOI: 10.4103/ijfans_154_22

long run. There is not enough research that focus on the nutritional aspects and the nutritional problems faced by the migrant workers. The main objective of this study was to assess the objective of this study was to assess the socioeconomic aspects, and the health profile of migrant labourers.

MATERIALS AND METHODS

The study was conducted amongst the migrant labourers in the Thiruvananthapuram district situated on the southern end of the state of Kerala. Thiruvananthapuram stands at the second position in the number of migrant labourers in Kerala. For the study, four hundred respondents were selected using purposive random sampling, in equal proportion from each location which were identified as 'migrant pockets'. For profiling the health, hundred migrants were selected from the total four hundred samples. The inclusion criteria adopted were

- The subject should be from a state other than Kerala.
- The subject should be between the age of 18 years and 55 years.
- The subject should have been staying in the Thiruvananthapuram district for a minimum period of six months.
- The subject should be working in a sector demanding heavy physical labour.

The participants who were not willing to cooperate with the study were avoided.

To collect the data regarding the socio-economic aspects of the samples, structured schedules were created. The modified Kuppuswami scale was adopted to assess the socio-economic status^[4].

The nutrient intake of the respondents was obtained using a three day 24-hour dietary recall method. A 24-hour dietary recall is a structured dietary assessment interview tool that is used to capture detailed information about all the foods and the drinks consumed by the respondent in the previous 24 hours. The portion size of each food consumed was recorded using standardized utensils. The nutrient composition was computed using the database of 'Nutritive Value of Indian Foods' given by the National Institute of Nutrition^[5]. The mean nutrient intake for any three days in a week was computed and compared with the RDA values (2020).

To collect the data regarding the health aspects of the samples, structured schedules were created and bio-chemical examinations were conducted to assess the health profile. The different biochemical parameters analysed in the study

were the blood sugar level (fasting) using Hexokinase method, the haemoglobin level using Cyanmethemoglobin (Spectrophotometry) method, and the total cholesterol level using Enzymatic Rate method. The services of a Phlebotomist from a National Accreditation Board for Hospitals & Healthcare Providers (NABH) accredited lab in the geographical area selected for the study was availed.

The data was then analysed using SPSS Statistics. The descriptive analysis (mean and standard deviation) and inferential analysis (T-test) were performed, and the results were then interpreted.

The study adhered to the relevant ethical protocols approved by the University Level Ethics Committee on Research involving Human Subjects (University of Kerala).

RESULTS AND DISCUSSION

Socio-Economic and Demographic Aspects: The four hundred samples participated in the study belonged to one of these five states - Assam, Bihar, Jharkhand, Rajasthan, and West Bengal - in India. Majority of the migrant labourers (315) were from West Bengal, followed by Bihar (43), Jharkhand (31), Rajasthan (6), and Assam (5).

The Table 1 shows the socio-economic profile of the migrant labourers, which is discussed below. The respondents were between the age of 18 years and 55 years. Among them, majority (355) were between the age of 18 years and 37 years. Similar findings were observed in various studies conducted across migrant labourers in India, where the typical working age of migrant labourers was identified to be between 18 years and 35 years, and predominantly males^[6, 7]. For the present study, all the locations chosen for data collection had only male labourers.

Analysing the education level of the migrants, it was observed that the younger the migrants the more probable the chance of them having spent extra years in school. Among the migrant labourers surveyed, the illiteracy rate was lowest in the age group of 18 years to 27 years. On the other side, in the age group of 48 years to 57 years, even though the number of samples obtained for the study were low (5), only one among them had at least a primary-level education. It appeared that young migrants were relatively more educated compared to their older counterparts. A similar finding was made in the study by S Irudaya Rajan and team where it was observed that a large percentage of migrant workers have completed their primary level schooling. The number of workers who acquired education beyond the secondary level was very minimal^[8].

About 80% of the migrant labourers got daily wages between ₹400 and ₹800. Out of the four hundred samples, only five

Table 1: Socio-Economic Profile of the Migrant Labourers (N = 400)

		Level of Education			Total
		High School	Primary	Illiterate	
Age (years)	18 - 27	111 (45.3)	118 (48.2)	16 (6.5)	245
	28 - 37	34 (30.9)	42 (38.2)	34 (30.9)	110
	38 - 47	7 (17.5)	7 (17.5)	26 (65.0)	40
	48 - 57	0 (0.0)	1 (20.0)	4 (80.0)	5
Total		152 (38.0)	168 (42.0)	80 (20.0)	400
Daily Wage	No. of Migrants	Monthly Income	No. of Migrants	Socioeconomic Class *	No. of Migrants
400 - 599	131 (32.8)	> 20000	65 (16.3)	Upper (I)	0
600 - 799	187 (46.8)	10001 - 15000	182 (45.5)	Upper Middle (II)	0
800 - 999	77 (19.3)	15001 - 20000	152 (38)	Lower Middle (III)	4
1000 - 1199	5 (1.3)	5001 - 10000	1 (0.3)	Upper Lower (IV)	385
Total	400	Total	400	Lower (V)	11

Note: *Modified Kuppaswami scale (2021).

people got wages above ₹1000. Extrapolating the daily wages and assuming an average of six work-days a week, the total monthly income was calculated. As indicated in Table 1, about 83.80% of the migrant labourers were earning up to ₹20000 per month.

Based on the modified Kuppaswami scale (2021) the socio-economic status of the migrant labourers participated in the

study are as described in the Table 1. According to the scale, about 96% of the migrant labourers belonged to the 'Upper Lower (IV)' socio-economic class.

Nutrient Intake of the Respondents: To get a clear picture about the nutrient intake of the migrants, a 24-hour recall method was done. The nutrient composition of their diet was calculated. The Table 2 shows the mean intake with

Table 2: Mean Nutrient Intake of Migrants (n = 100, T test)

Nutrients	Mean Nutrient Intake ± SD	RDA [†]	Percent of RDA Met	T value	P value
Energy (Kcal/d) †	2642.05 ± 391.05	3470	76.14	-21.17	< 0.001**
Proteins (g/d)	99.09 ± 15.56	54	183.5	28.98	< 0.001**
Fat (gm/d) †	61.25 ± 15.4	40	153.13	13.8	< 0.001**
Carbohydrates (g/d)	422.5 ± 74.61	130	325	39.2	< 0.001**
Calcium (mg/d)	546.65 ± 200.61	1000	54.67	-22.6	< 0.001**
Zinc (mg/d)	10.44 ± 2.2	17	61.41	-29.89	< 0.001**
Thiamine (mg/d)	1.74 ± 0.32	2.3	75.65	-17.77	< 0.001**
Riboflavin (mg/d)	1.06 ± 0.19	3.2	33.13	-114.28	< 0.001**
Niacin (mg/d)	24.43 ± 5.72	23	106.22	2.5	0.014*
Vitamin C (mg/d)	38.45 ± 9.65	80	48.06	-43.06	< 0.001**
Iron (mg/d)	18.96 ± 3.05	19	99.79	-0.14	0.888
Magnesium (mg/d)	839.05 ± 179.27	385	217.94	25.33	< 0.001**

Note: †RDA ICMR 2020, †-Estimated Average Requirement (EAR), **denotes significant at 1% level, *denotes significant at 5% level.

standard deviation of nutrients, RDA and the percentage of the RDA met by the respondents.

The data indicated that the of daily energy requirement were not met. The intake of macronutrients – Protein, Fat and Carbohydrate—were above the respective RDA values – i.e., 15% from proteins, 20.860% from fats, 63.97% from carbohydrates. The percentage of calories contributed by these macronutrients were satisfactory. The micronutrients like Calcium, Vitamin C, Thiamine, Riboflavin and Zinc were below the relevant RDA values.

Since the P value is less than 0.01 in the case of Energy, Protein, Fat, Carbohydrates, Calcium, Zinc, Thiamine, Riboflavin, Vitamin C and Magnesium intake, it is significant at 1% level,

implying that the nutrient intake values do not match RDA. Based on the mean value score, the intake of Protein, Fat and Carbohydrates were above the RDA value. The Energy, Calcium, Zinc, Thiamine, Riboflavin, Vitamin C and Magnesium levels were below the RDA value. As the P value for Niacin is less than 0.05, it is significant at 5% level. Based on the mean value score, the intake was higher than the RDA value. For Iron (Fe), since the P value is greater than 0.05, there is no significant difference between the intake and the RDA values.

Biochemical Data: The results of the biochemical tests are given in Table 3. The mean and the standard deviation of haemoglobin, fasting blood sugar and total cholesterol were calculated.

Table 3: Biochemical Parameters of the Respondents (n = 100)

Biochemical Parameters	Mean ± Standard Deviation				Normal Values	
	Mean	SD	Mean	SD	t-value	p-value
Haemoglobin (g/dL)	14.7 ± 1.66				13 – 17 *	
Blood sugar – fasting (mg/dL)	86.97 ± 10.62				70 – 100 *	
Total Cholesterol (mg/dL)	170.8 ± 37.31				< 200 [¶]	
Biochemical Parameters	Smokers		Non-Smokers		Independent t-test	
	Mean	SD	Mean	SD	t-value	p-value
Haemoglobin (g/dL)	14.75	1.81	14.64	1.5	0.318	0.751
Blood sugar (fasting) (mg/dL)	86.38	7.65	87.6	13.26	0.569	0.571
Total Cholesterol (mg/dL)	168.71	36.41	173.06	38.9	0.578	0.565

Sources: * WHO^[9], NCEP (“ATP III Guidelines,” 2001)^[10].

Figure 1: District-Wise Distribution of Migrant Labourers (N = 400)

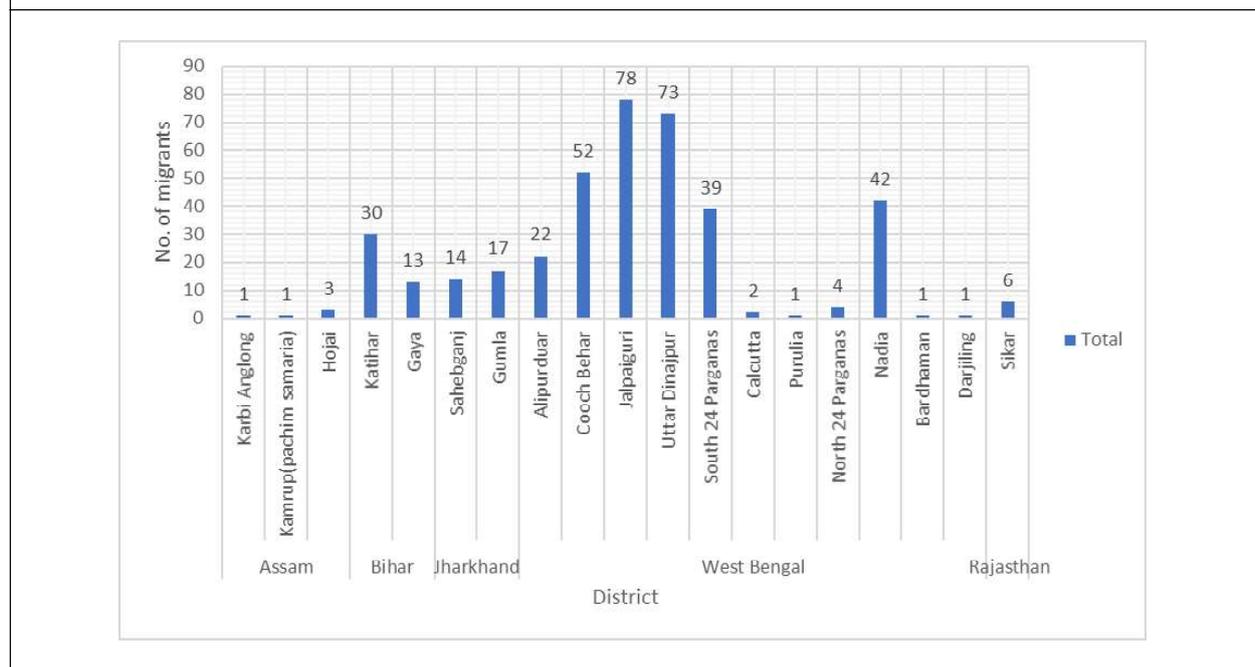


Table 3 indicates that the mean value of the biochemical parameters assessed during the study came under the respective normal ranges. However, based on the analysis of the dietary pattern and lifestyle of the migrant labourers, it is highly likely that they would fall out of the normal range and become susceptible to ill-health in the long run.

Table 3 also shows the independent sample t-test results for the biochemical parameters in smoking and non-smoking respondents. It revealed no significant difference in the biochemical parameters for both categories. According to WHO studies, the normal reference range for Haemoglobin cannot be applied in smokers and an adjustment needs to be applied when evaluating the same for smokers (WHO, 2011). This directive from WHO indicates that the Haemoglobin levels could appear elevated in smokers. In the present study, no such significance was observed. One possible reason could be that majority of the respondents were relatively young and the effect of smoking has not yet been reflected on their Haemoglobin levels.

CONCLUSION

Since migrant labourers are a significant economic force, their health and well-being would influence the local economy and people. By giving proper awareness on various nutritional aspects, positive changes could be brought up on the food consumption pattern, thereby improving their health. The recommendation of this study is that the stakeholders should take essential steps to provide nutritional awareness among the labourers, and monitor their health periodically. More in-depth studies should be conducted to understand more about the health and hygiene of the migrant labourers.

Conflict of Interest

This is to certify that Shifa Juberihan, Dr. Mini Joseph, the authors of the paper titled 'The socio-economic and health profile of migrant labourers' have no conflict of interest regarding the publication of this manuscript.

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