Quality of Life and Healthcare Seeking Behavior among Internal Migrant Laborers in Coimbatore, India: A Community-based Analytical Cross-sectional Study

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Abstract

Background: Globalization and urbanization have increased international and internal migration. However, migrants are still not absorbed into the local communities and remain vulnerable groups. Hence, the present study aimed to determine the quality of life (QoL) and healthcare-seeking behavior (HCSB) of internal migrant laborers in Coimbatore, Tamil Nadu. **Methodology:** An analytical cross-sectional study was conducted in the year 2023 among 321 migrant laborers residing for a minimum duration of 6 months in Coimbatore. A pre-tested questionnaire was used to collect data on socio-demography, QoL (using the WHO BREF scale), HCSB, and healthcare expenses. Ethical clearance was obtained from the institutional ethical committee. Informed written consent was obtained from the participants. Data were analyzed using SPSS version 27. Mann–Whitney U test and Kruskal–Wallis test were used to compare QoL across socio-demographics and HCSB. **Results:** The overall QoL score was 61, and those in social and environmental domains were also above 60. The QoL was higher in the environmental and social domains than in the physical and psychological domains. Females, married people, those currently living with their family, those working in the organized sector, and those in higher socio-economic status had better QoL than their counterparts. Per capita income had a positive correlation with physical, psychological, and environmental aspects of life. About 68% of those who used private sector healthcare services had catastrophic health expenditures (CHEs). **Conclusion:** The overall QoL among migrant laborers was moderate. Migrants preferring formal healthcare enjoyed better QoL. Major CHE was for delivery, and hence, the barriers to accessing free government services are to be explored.

Keywords: Healthcare expenditure, healthcare seeking behavior, migrant labor, migrants, OOPE, quality of life

INTRODUCTION

Migration is a global phenomenon where workers not only contribute to growth and development in their destination but also the place of origin gains remittances, skills, and knowledge transfer for their workforce. In 2022, it was estimated that more than 280 million people migrated outside their countries of birth, and another 750 million migrated within their countries.[1] The International Labour Organisation (ILO) documents that about 4% of the labor force in many countries including India was estimated to be migrants.[2] From its very inception, the ILO has resolved to protect migrant workers and has set standards for the governance and protection of migrant workers. Despite the efforts of ILO, it is a challenge to obtain collaboration in governing, protecting, and delivering social security and healthcare services to the migrants. As per the 2019 International migrant stock reports of the United Nations (UN), India, despite being a developing nation, hosts about 4% of the global migrant workforce.[3]

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India is a land of rich diversity in geography, language, culture, socio-economic development, literacy, governance, dietary practices, agriculture, and major occupations. Hence, internal migration contributes to significant mobilization in India. As per Census 2011, Tamil Nadu harbors nearly 35 lakh migrants.

Migrant workers are commonly employed in the 3-D jobs "Dirty, Dangerous and Demanding or Demeaning," which is characterized by lesser wages and longer work duration.[4] Though mandated, there is a neglect of pre-placement health screening for a majority of the migrants. These can be threats to public health as instigating a disease outbreak, an increase in the burden of occupational diseases, and reduced productivity by human resources. Being new entrants, migrants are not readily accepted in the native community and face social discrimination. In addition, they also need to adapt to new dietary and lifestyle habits. Migrant workers and their families face a lack of accessible and quality services for preventive and promotive health services and healthcare information. These in total affect the quality of life (QoL) among migrants, which was only shown to deteriorate with time.[5] The poor social support for migrants was also seen to affect their work ability index.[6]

While digitalization has improved the provision of social security and healthcare services to migrant workers, the QoL, especially for those in the unorganized sector, remains under-researched and challenging. To address this, the Indian government is taking significant steps, through nationally accessible services like the Employee's State Insurance Corporation (ESIC),[7] Ayushman Bharat Insurance,[8] Pradhan Mantri Shram Yogi Maandhan (PM-SYM),[9] Unique Identification numbers (Aadhaar), One Nation One Ration Card (ONORC) with Aadhaar Seeding, and RCHID. Furthermore, the Rashtriya Swasthya Bima Yojana (RSBY) was initiated to protect workers in the unorganized sector, which employs a substantial number of internal migrant laborers. Tamil Nadu (the study state) also provides maternity benefits including nutritional kits and two cash instalments to internal migrants.[10] Despite these efforts, migrant workers' ability to access and utilize healthcare services is still not optimal. The life of migrant laborers and their ability to access and utilize healthcare services is still an under-researched topic. Hence, the present study aimed to determine the QoL and healthcare-seeking behavior of internal migrant laborers in Coimbatore, Tamil Nadu.

Materials and Methods

This was an analytical cross-sectional study conducted in the Rural Field Practice Area (RHTC; Vagarayampalayam) of the Department of Community Medicine of a private medical college in Coimbatore, Tamil Nadu, in 2023. The Coimbatore district, referred to as the 'Manchester of South India,' is a manufacturing hub with numerous micro, small, and medium enterprises (MSMEs), one of the top districts harboring migrant laborers in the state. The migrants in the study site were majorly employed in construction, powerloom, and hospitality jobs. The study was approved by the Institute Human Ethics Committee (IHEC) (IHEC/17/2020). The study included all migrant laborers (operationally defined as Indian citizens who originated from states other than Tamil Nadu and were in Coimbatore for the past 6 months before the date of the survey) in the study setting, who were ≥ 14 years of age and were currently employed in non-professional jobs. After providing a Participant Information Sheet in the language of understanding, written informed consent was obtained from all above 18 years of age and assent from those 14–18 years of age (n = 8) in addition to consent from an eligible family member/LAR (for two not living with family currently). Because of limited available data on the QoL of migrants in this region, it was assumed to be 75% and the sample size was calculated accordingly using the $Z_{(\alpha/2)}{}^2pq/l^2$ formula with a power of 80%, an error of 5%, and a non-response rate of 10%. The estimated sample size was 316, and the current analysis includes 321 participants. Through house-to-house visits, in the pre-defined field practice area, only one eligible participant from each migrant household (per prespecified inclusion criteria) was selected using the Kish Grid method until the required sample size was met.

A purpose, pre-designed, pre-tested questionnaire was used to capture data on socio-demography (socio-economic status was assessed using a modified BG Prasad scale updated for April 2023), current employment, and healthcare-seeking behavior (HCSB) and costs. The primary outcome of the study, QoL in its physical (7 items), psychological (6 items), social relationships (3 items), and environmental (8 items) domains, was assessed using the validated World Health Organization Quality of Life (WHOQOL-BREF) tool after obtaining necessary permission from the WHO. In this instrument, questions were dispersed and not arranged domain-wise. The responses to items were recorded on a five-point Likert scale. Domain scores were scaled in a positive direction (higher scores denote better QoL), with a transformed score range of 0–100 according to the standard procedure defined in the WHOQOL user manual. Operationally, formal health care was defined as those provided by a Registered Practioner of Allopathy/AYUSH or by any establishment registered under the Clinic Establishment Act and Catastrophic health expenditure (CHE) was defined by WHO as health expense of more than 10% of total household expenditure or annual income.[11] For the study purpose, we have considered the annual income as the denominator for CHE.

The data were analyzed using SPSS version 27. Shapiro–Wilk non-parametric tests were used as all the quantitative variables were not normally distributed, and hence, the median and IQR were considered for analysis. The categorical and quantitative variables in the socio-demographic and HCSB domains were compared with QoL using the Mann–Whitney U test or Kruskal–Wallis test and Spearman correlation, respectively. Linear regression was performed for overall QoL by adjusting for the socio-demographic variables including,

gender, education, job category, marital status, family member category, currently living with family, socio-economic class, HCSB (preferred sector of healthcare, system of medicine, private/public sector), chronic illness, and health insurance.

RESULTS

The present study was conducted on a total of 321 participants with a median (IQR) age of 25 (21.5–30) years. There were participants from 14 years of age, and only two people were in the geriatric age group (≥60 years of age). Nearly 80% (39/49) of females and about two-third of the married (66.4%, 113/170) people were living with their families in the migrated place. The the medain and IQR are 3 and 2 to 4, and about 18% had five or more family members. The median (IQR) total family income was INR 15,000 (10,000 to 18,000) per month, and the monthly expenditure was INR 5000 (3000 to 8000). More than two-thirds (36.4%) were in socio-economic class II as per the modified BG Prasad scale, followed by another quarter in Class III. The migrant workers were staying in Coimbatore district for about 12 (6 to 24) months (median (IQR)). Nearly one-fifth (19.3%) were illiterate, and another two-fifths (42.1%) had completed up to primary school. Less than 5% (2.8%) had completed graduation. The majority (98.1%) did not have any chronic illness. Chronic ailments like diabetes mellitus, hypertension, and wheezing were present in 0.6%, 0.9%, and 0.3%, respectively. A slightly lesser proportion of people used formal (145, 45.2%) than informal (176, 54.8%) services for healthcare. Among those who sought formal healthcare services (n = 145), the majority (n = 117) preferred the allopathic system of medicine. More than one-third of the migrants (116, 36.1%) preferred public healthcare services. Among them, nearly half (59, 50.9%) opted for these services due to their affordability, while 23.3% chose them because of the convenience and ease of access they offer. Nearly half (14, 48.8%) of those who preferred the private sector said it was because of the better quality of care. More than 3/4th (76.9%) overall and 78.2% of those employed in the organized sector did not have health insurance. Among those who had health insurance, only 41.9% had government-supported (including ESIC) insurance. Although a significant proportion and one-fifth of the study population met the eligibility criteria for ESI and were a part of the organized workforce, they still reported not having health insurance or having private health insurance.

The median (IQR) overall QoL was 61 (50–68.75). The QoL was higher in environmental and social domains than in physical and psychological domains. Females, married people, those currently living with their family, those working in the organized sector, and those in higher socio-economic status had better QoL than their counterparts [Table 1]. Regarding HCSB, those who preferred a formal system of medicine and allopathy had a better QoL than their counterparts. Those who did not have health insurance reported a better QoL in all domains except the psychological aspect [Table 2]. The overall QoL was positively correlated with age, per capita income, and duration of stay in this place. There was a positive correlation of age with

social and environmental domains of QoL. Per capita income also had a positive correlation with physical, psychological, and environmental aspects of life. Work experience was significantly negatively correlated with all domains of QoL except the social domain [Table 3]. On linear regression, being married and preferring formal healthcare services were statistically related to QoL [Tables 1 and 2]. Older people had a better QoL, though the finding was not significant in the physical and psychological domains [Table 4].

Fifteen people (4.6%) fell ill in the last 1 month before the interview and more than a quarter of them (4/15) experienced OOPE for the same. About 14% (45/321) had out of out-of-pocket expenses (OOPE) for hospitalization in the previous year. The QoL in any domain did not statistically differ based on if the expenditure was done in a public or private sector. Health spending in the public sector did not exceed 10% of annual income. More than two-thirds (15/22, 68%) of those who spent in the private sector had CHE with an average spending of 33% of the annual income. In the public sector, the median expenses for delivery and non-delivery were both INR 1000. Though the median hospital expense excluding delivery was only slightly higher in the private than the public sector, the variation (or dispersion) was very high in the private sector.

DISCUSSION

For man is a social animal, living in a community that provides a sense of belonging and support in times of need is crucial for a mentally stable life with a good QoL. On migrating within or outside a country, people lose the social support built and enjoyed in their community over the years. In a diverse, developing country like India, substantial numbers migrate internally toward industrialized regions and Coimbatore is one such area that attracts migrants. In the current study, the overall and domain-specific QoL were slightly higher (61) compared to a similar study by Zabeer S *et al*.,[12] on internal migrants in a nearby state using the same study tool. This may be attributed to better QoL scores in Coimbatore, ranked among top cities in Quality of Life Index survey 2017 and Ease of Living Index 2020. Notably, Zabeer S *et al*.[12] exclusively studied construction workers. Following the current findings, Zabeer S *et al*.[12] found higher scores in social followed by environment domains than the others. QoL among the elderly in Faridabad[13] and Chennai,[14] India, showed similar domain-specific scores and patterns of increasing QoL with age. The findings also corroborate with the studies by Zhong *et al*.,[15] among migrant industrial workers in China and Takeuchi DT *et al*.,[16] on international migrants. The results showed that mental depressive disorders (MDDs) were more prevalent among younger people. As per UN reports, female migration has always had its social challenges concerning harassment, environmental support for personal hygiene, and child-rearing.[17] Though it appeared that females had an overall better QoL, on adjusting for other variables, it did not stand true. The majority of women were married, and hence, marriage might have been a confounding factor. Similarly, a

Variables	Frequency (%)	Quality of Life Median (IQR)					
		Physical health	Psychological	Social relationship	Environment	Overall QoL	Regression Overall QoL
Median (IQR) (*n*=321)		56 (50-63)	56 (50 – 69)	69 (50-75)	63 (50 – 75)	61 (50 – 68.75)	
Gender							
Male	272 (84.7)	56 (50 – 63)	56 (50 – 69)	56 (50 – 75)	63 (50 – 75)	59 (50 – 67.43)	
Female	49 (15.3)	56 (56 – 63)	63 (56 – 75)	75 (53 – 81)	69 (50 – 78)	65.75 (54.75 – 73.5)	
P*		0.005	0.007	0.008	0.04	0.003	0.16
Education category							
Up to middle school completed	279 (86.9)	56 (50 – 63)	56 (50 – 69)	69 (50 – 75)	63 (50 – 75)	61 (50 – 68.75)	
High school and above	42 (13.1)	56 (44 – 63)	56 (50 – 69)	69 (50 – 75)	63 (50 – 75)	61.75 (54.3 – 70.3)	
P*		0.71	0.92	0.44	0.49	0.48	0.46
Job Sector							
Organized	91 (28.3)	56 (50 –63)	63 (56 – 75)	69 (50 – 75)	69 (56 – 81)	64.25 (53 – 72)	
Unorganized	230 (71.7)	56 (50 – 63)	56 (50 – 69)	56 (50 – 75)	63 (50 – 69)	58.12 (50 – 67.2)	
P*		0.04	0.02	0.09	<0.01	0.003	0.18
Marital status							
Unmarried	151 (47)	50 (44 – 56)	56 (50 – 69)	50 (44 – 69)	56 (44 – 69)	54.7 (48.5 – 64.25)	
Married	170 (53)	56 (50 – 63)	63 (54.5 – 69)	69 (50 – 75)	69 (50 – 75)	64.2 (53 – 70.8)	
P*		<0.01	0.002	<0.01	<0.01	<0.01	0.01
Family member category							
≤4 family members	263 (81.9)	56 (50 – 63)	56 (50 – 69)	69 (50 – 75)	63 (50 – 75)	61 (50 – 68.75)	
>5 family members	58 (18.1)	56 (50 – 63)	56 (50 – 70)	69 (50 – 75)	63 (50 – 76.5)	61 (50 – 70.5)	
P*		0.81	0.99	0.21	0.17	0.43	0.03
Currently living with family							
No	181 (56.4)	50 (44 – 56)	56 (50 – 69)	50 (50 – 75)	56 (47 – 69)	54.75 (48.5 – 65.75)	
Yes	40 (43.6)	56 (56 – 63)	63 (56 – 75)	75 (56 – 81)	69 (56 – 75)	65.7 (56.6 – 72)	
P*		<0.01	<0.01	<0.01	<0.01	<0.01	0.38
Socio-Economic Class (Modified BG Prasad)							
I	48 (15)	56 (50-63)	69 (56 – 75)	69 (45.5 – 75)	69 (50 – 81)	65.75 (50.7 – 71.43)	
II	117 (36.4)	56 (50 – 63)	56 (56 – 69)	69 (50 – 75)	63 (50 – 75)	61 (51.5 – 68.8)	
III	82 (25.5)	56 (44 – 63)	56 (50 – 69)	69 (50 – 75)	63 (50 – 75)	61 (51.5 – 68.8)	
IV	52 (16.2)	56 (50 – 63)	56 (50 – 75)	62.5 (50 – 75)	59.5 (50 – 69)	61 (50 – 67.8)	
V	22 (6.9)	44 (44 – 56)	44 (38 – 56)	37.5 (19 – 59.25)	34.5 (25 – 59.25)	42.25 (31.12 – 58.18)	
P**		0.001	<0.01	0.002	0.001	<0.01	0.29

*Mann-Whitney U test, ** Kruskal-Walli's test. Linear regression was done by adjusting for sociodemographic variables and HCSB

study exclusively on married women in West Bengal whose capital is one among the cities with high QoL[18] also reported high QoL among women.[19] The level of education did not influence the QoL among migrants. But in contrast, literature reported lower QoL among those with lower literacy[12] and with MDD.[15] Overall, the level of education was low, and more than 60% had not gone beyond primary class, and this pattern was observed in others studies among migrants.[12,20]

The economic status assessed by income showed that QoL was higher in better financial conditions [Tables 1 and 3]. In accordance with the results, Zhong *et al.*[15] reported that low monthly income among migrant workers was associated with MDD. However, Zabeer S *et al.*,[12] showed that economic status was significantly related only to QoL in the environmental

domain. Though living with family and being married individually improved the QoL in all domains, on adjusting for various factors, only marriage was significantly related. This might be because of the technology in current days that allows people to be connected. Unlike current findings, Zhong *et al.*,[15] were able to show this positive effect of marriage only in the environmental domain of QoL. The current findings were supported by Zhong *et al.*[15] and Ismayilova L *et al.*,[21] who said that low family support/contact was related to mental problems among migrants. Robinson GJ *et al.*[22] had also shown a relation between satisfaction in personal relationships and QoL.

In contrast to the current findings, Zabeer S *et al.*[12] did not find any relation between physical QoL and socio-demographic variables and the difference might be like work they are

Table 2: Showing the relation of QoL with Healthcare Seeking Behaviour (HCSB)

Variables	Frequency (%)	Quality of Life					Regression Overall QoL
		Physical health	Psychological health	Social relationship	Environment	Overall QoL	
Median (IQR) (*n*=321)		56 (50 – 63)	56 (50 – 69)	69 (50-75)	63 (50 – 75)	61 (50 – 68.75)	
Preferred sector of healthcare (*n*=321)							
Formal	145 (45.2)	56 (56 – 63)	69 (56 – 75)	69 (56 – 75)	69 (63-75)	67.25 (59.5 – 72.2)	
Informal	176 (54.8)	50 (44 – 56)	56 (50 – 56)	50 (50 – 75)	50 (44 – 63)	53 (48.5 – 62.6)	
*P**		<0.01	<0.01	<0.01	<0.01	<0.01	0.01
System of medicine (*n*=145)							
Allopathy	117 (80.6)	56 (56 – 63)	69 (56 – 75)	75 (69 – 81)	75 (63 – 81)	67.5 (61 – 73.5)	
AYUSH	28 (8.7)	56 (44 – 63)	59.5 (51.5 – 69)	56 (50 – 75)	69 (57.8 – 75)	61 (56.2 – 66.7)	
*P**		0.01	0.11	0.003	0.17	0.005	0.45
Private/Public sector (*n*=145)							
Private	29 (20)	56 (50 – 63)	63 (56 – 75)	69 (53 – 75)	63 (63 – 81)	64.25 (57 – 71.12)	
Public	116 (80)	56 (56 – 63)	69 (56 – 75)	75 (56 – 79.5)	75 (63 – 75)	67.25 (61 – 73)	
*P**		0.50	0.94	0.98	0.66	0.67	0.16
Chronic illness (*n*=321)							
No	315 (98.1)	56 (50 – 63)	56 (50 – 69)	69 (50 – 75)	63 (50 – 75)	61 (50 – 68.75)	
Yes	6 (1.9)	62.5 (54.5 – 69)	68.5 (54.5 – 89.5)	78 (64.2 – 100)	69 (56.75 – 100)	66.5 (61.25 – 89.62)	
*P**		0.97	0.06	0.28	0.32	0.22	0.12
Health insurance status (*n*=321)							
No	247 (76.9)	56 (50 – 63)	56 (50 – 69)	69 (50 – 75)	63 (50 – 75)	62.5 (50 – 69)	
Yes	74 (23.1)	50 (44 – 56)	56 (50 – 69)	50 (50 – 69)	50 (44-69)	53.12 (48.5 – 64)	
*P**		0.001	0.10	0.003	0.002	0.001	0.59

*MannWhitney U test. Linear regression was done by adjusting for sociodemographic variables and HCSB

Table 3: Correlation of QoL with sociodemographic variables (*n*=321)

Variables	Quality of Life				
	Physical health	Psychological health	Social relationship	Environment	Overall QoL
	Spearman Correlation (r_s) *P*				
Age	0.09	0.05	0.19**	0.11*	0.14*
	0.09	0.39	<0.01	0.04	0.01
Per capita income	0.11*	0.17**	0.08	0.13*	0.13*
	0.04	<0.01	0.16	0.01	0.02
Total Family members	-0.07	-0.1	0.03	-0.05	-0.05
	0.20	0.07	0.59	0.31	0.35
Months of stay in current (migrated) place	0.19**	0.18**	0.22**	0.12*	0.19**
	<0.01	<0.01	<0.01	0.03	<0.01
Months of experience	-0.17**	-0.18**	-0.10	-0.24**	-0.21
	<0.01	<0.01	0.06	<0.01	<0.01

**Correlation is significant at the 0.01 level *Correlation is significant at the 0.05 level

employed in. In our study, longer duration in the migrated place was linked to better QoL across all domains, including psychological well-being. This is in contrast to Zhong *et al.*[15] study, which found that extended periods of migration were associated with MDD. Though both the studies included internal migrants, notably, unlike the latter, over two-thirds of participants in the current study lived with their families.

QoL was better in migrants employed in the organized sector. Zabeer S *et al.*[12] showed that a higher proportion of migrant laborers in construction work had poor QoL than non-laborers.

Though the cost factor attracted migrants toward public healthcare services, they preferred private for its quality over the public. Santalahti M *et al.*,[23] in their study on healthcare

Table 4: Health expenditure of the migrant workers

Hospital expenditure	*n*	Median (IQR) of health expenditure INR
Public sector		
Expense excluding delivery	25	1000 (500-3000)
Delivery	22	1000 (500-2250)
Private sector		
Expense excluding delivery	22	1750 (1000-22500)
Delivery	20	20000 (1625-30000)

access barriers (HCAB) among migrant construction workers, had similarly reported that the public sector had notably poor quality and the cost was HCAB. Though India has improvised health care delivery (uniform RCH identification number, Nikshay registry) and social security measures (e.g. One Nation One ration card) to reduce the exclusion of vulnerable internal migrants, the awareness and utilization of these services are to be explored. Even though public healthcare is free of cost throughout the nation, less than half availed of formal healthcare services and half of those requiring care used public sector. Less than 10% preferred public healthcare services for accessibility reasons. The grassroot level healthcare planning is majorly focused on its residents, making migrants universally vulnerable. In accordance, literature on migrants from 13 Indian cities[24] reported that only a very small proportion were contacted by field-level workers. Low access to public health services among the migrant population is a global challenge.[25,26]

The proportion covered with any health insurance (13.1%) was similar to the national health insurance coverage (15%).[27] The OOPE contributing to 26% of the current healthcare expenditure was in contrast to various national surveys that show OOPE is the major mode of healthcare payment in India.[28,29] The difference might be because of the difference in the source of data wherein the current reports were for 1 month, whereas the national data were for one full financial year. The finding that QoL was not influenced by health insurance may be because the majority were young and only had lower healthcare OOPE. Though the overall incidence of CHE was only 4.6%, more than two-thirds of those who availed private services had CHE. Though a nationally represented survey on CHE in 2014–18 showed an increasing trend with higher incidence (16.5%, 2018) than our report, the mean overshoot expenditure was in a declining trend.[30] Consistent with our findings, the National CHE survey[30] also noted higher rates when private healthcare was used. Nearly 4/5th of eligible beneficiaries for ESIC have reported that they do not have publicly funded health insurance. Lack of awareness, despite being a beneficiary, is not expected as previous literature shows otherwise.[31] Hence, further research into awareness and the possibility of technicalities with hiring through external agencies is mandated.

The findings of the study, however, shall be generalized with caution as the study setting has a relatively higher QoL, literacy rates, and industries that harbored many migrants for decades. We also understand that sample size could have been estimated for each category of migrants (e.g., construction workers, agricultural laborers, household workers) for precise QoL estimates. Other potential limitations include selection bias (certain households or individuals may be more likely to be included or excluded based on accessibility or willingness to participate), information bias (especially in sensitive topics such as income, healthcare expenditures, and health status, leading to underreporting or overestimation), and social desirability bias (influence responses related to healthcare seeking behavior, QoL, and health insurance status, as participants may provide answers they perceive as more socially acceptable).

CONCLUSION

In conclusion, our study sheds light on the QoL, healthcare-seeking behavior, and financial implications among internal migrant laborers in Coimbatore, Tamil Nadu. The findings underscore the complex interplay of socio-economic factors, healthcare access, and QoL outcomes in this vulnerable population segment. We observed that while the overall QoL among migrant laborers was moderate, there were notable variations across different domains, with higher scores in environmental and social aspects compared to physical and psychological well-being. Factors such as marital status, living arrangements, employment sector, socio-economic status, healthcare preferences, and health insurance coverage were associated with variations in QoL outcomes. Healthcare-seeking behavior revealed a preference for informal healthcare services despite the availability of formal options. This choice was influenced by factors such as perceived affordability, accessibility, and perceived quality of care. Lack of health insurance coverage and reliance on out-of-pocket expenditures, especially in the private sector, posed significant financial burdens, leading to catastrophic health expenditure for a substantial proportion of participants.

Our study highlights the need for targeted interventions and policy initiatives to improve healthcare access, promote formal healthcare utilization, enhance financial protection through health insurance schemes, and address the multifaceted determinants impacting the QoL of migrant laborers. Collaborative efforts involving healthcare providers, policymakers, community organizations, and migrant laborer representatives are crucial in designing and implementing culturally sensitive and sustainable interventions.

Future research endeavors should focus on longitudinal studies, qualitative explorations of contextual factors influencing healthcare choices, deeper assessments of healthcare barriers, and evaluations of intervention effectiveness in improving the overall well-being and health outcomes of internal migrant laborers in diverse settings. By addressing these gaps, we can strive toward equitable healthcare access and improved QoL for all segments of society, including vulnerable migrant populations.

Ethical clearance

The study was approved by Institute Ethics Committee, Kovai

Medical Center and Hospital, Institute of Health Science and Research, Coimbatore.

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