Factors associated with Health seeking behaviour and Self-reported morbidity pattern among the Interstate migrant labourers in Thiruvananthapuram district.

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Dissertation submitted in partial fulfillment of the requirement for the award of the degree of Master of Public Health

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October, 2012

Certificate

I hereby certify that the work embodied in this dissertation entitled *"Factors associated with Health seeking behaviour and Self-reported morbidity pattern among the Interstate migrant labourers in Thiruvananthapuram district"* is a bonafide record of original research work undertaken by Miss. Dr. Sreejini J, in partial fulfillment of the requirement for the award of the "Master of Public Health" degree under my guidance and supervision.

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Declaration

I declare that the work embodied in this dissertation entitled *"Factors associated with Health seeking behaviour and Self-reported morbidity pattern among the Interstate migrant labourers in Thiruvananthapuram district"* is the result of original research and has not been submitted for any degree in any other University or Institution.

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Dedication

Dedicated to my parents and my brother.

To my parents **Sambasivan** and **Jaya** for the value of education learning and motivation they instilled in me and made me grow all through these years.

To my, only sibling: my brother **Sreejith** for his support, patience and encouragement throughout my study period.

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LIST OF ABBREVIATIONS

IOM	International Organization for Migration
HIV	Human Immunodeficiency Virus
AIDS	Acquired Immune Deficiency Syndrome
NSSO	National Sample Survey Organization
ICCPR	International Covenant on Civil and Political Rights
CMW	Convention on Migrant Workers
ILO	International Labour Organization
PHC	Primary Health Centre
JHI	Junior Health Inspector
JPHN	Junior Public Health Nurse
ICMR	Indian Council of Medical Research
WHO	World Health Organization
STEPS	STEP wise approach to Surveillance
SPSS	Statistical Package for Social Sciences
IEC	Institutional Ethics Committee
KSCSTE	Kerala State Council for Science, Technology and Environment
SD	Standard Deviation
LR	Logistic Regression
ROC	Receiver Operating Characteristics

Abstract

Background: Recently a higher influx of labour migration to Kerala is seen; because of the increase in activities in the infrastructure and construction sectors, as well as due to shortage of local labour. People migrate to have more opportunities in life but when the poorest migrate, in the context of limited resources and choices they often face conditions of vulnerability. Migrant labourers have limited protection from labour laws and face problems of social integration in Kerala. This study was designed to assess the factors associated with the health seeking behaviour and the morbidity pattern and to bring out solutions in setting up a migrant friendly health system that can lead to a public health approach of in depth understanding of migrants' health.

Methods: This is a cross-sectional survey of 283 interstate migrant labourers in Thiruvananthapuram district; chosen by multistage cluster sampling method. Information was collected using Hindi translated structured interview schedule. Multiple logistic regressions were done to demonstrate the independent effects of predictor variables on Poor pattern of health care seeking.

Results: Poor pattern of health care seeking was seen among 43.5 percent with a 95% confidence interval [37.69 - 49.22 percent], of the migrants. Major self-reported morbidities include 43.8 % fever cases, 40.3 % cough cases and injuries accounting to 38.6%. Multiple logistic regression models indicate that the Poor pattern of health care seeking was significantly associated with younger age group, employer related factors and knowledge factors about health facility.

Conclusion: The study assessed the influence of socio-demographic, migration, employer based and knowledge factors on migrants' Poor pattern of health care seeking and could identify major occupational morbidities. Relevant policies for migrants should come forward from the state side to incorporate these 'second citizens'.

1. INTRODUCTION

"*The more I traveled, the more I realized that fear makes strangers of people who should be friends*." - Mother Teresa.

Migration means the movement from one place to another. Often when we hear the word 'migration' the one image that comes to our mind is of migratory birds; mostly seasonal. Let us shift our attention from bird migration to human migration. Human migration is the movement of people from one place to another. Migration is as old as our civilization where we had a nomadic life, shifting from one place to another in search of food, safety and for a better life.

The most important historic migration that leads to what we are today was the migration of *Homo sapiens* from their African home land to the rest of the world. Today we inhabit each and every corner of the world. Migration can be both voluntary and involuntary. Voluntary migration is mainly for gaining better opportunities in life according to one's will while involuntary migration can be of many kind like the human trafficking for sex trade, slavery etc. During the process of migration one is transforming from an emigrant to an immigrant status; both having its own significance.

Migration as a whole, affects both the individual as well as the family. Migrants are potentially a vulnerable population in relation to their health needs. Unplanned migration can cause stress on the public facilities, economic, social and environmental problems for the host region. The problems of poor pattern of healthcare seeking and self-reported morbidity of interstate migrant labourers required to be highlighted.

In an Indian context, we have seen a great number of skilled migrations to other countries, labour migration to gulf countries; but on the other hand India has been a destination site to migrants from Bangladesh and Nepal. Kerala which is considered

unique among the Indian states has its own history of migration with the dimensions of out-migration, in-migration and return migration. Migration had always been in the main stream of Indian growth, where we had seen the in-migration or the so called colonization of British in our country. The out-migration to economically stable countries from India contributed a major portion of remittance to our country.

Isabel Wilkerson in her book, "The warmth of Other Suns"; which is an epic story of America's great migration, quote that "*They left all they knew and took a leap of faith that they might find freedom under the Warmth of Other Suns and their living became known as the Great migration*". Thus migration is an integral part of each and every society, which has to be taken care to yield a healthy population in the coming years.

2. LITERATURE REVIEW

2.1 Definitions

2.1.1 Migration

According to International Organisation for Migration [IOM], migration is defined as a process of moving, either across an international border, or within a state. It's a population movement encompassing any kind of movement of people, whatever its length, composition and causes; it includes the migration of refugees, displaced persons, uprooted people and economic migrants.[1]

2.1.2 Migrant

No universally accepted definition of migrant exists; but the term 'migrant' applies to persons and family members, moving to another country or region to better their material or social conditions and improve the prospects for themselves or their family.[1]

2.1.3 Migrant worker

A person, who is to be engaged, is engaged or has been engaged in a remunerated activity in a state of which he or she is not a national.[2]

2.2 Types of migration

Migration basically is classified into international and internal migration. The migration across an international border is different from the movement across the administrative boundary within a country.[3] Based on duration of migration it can be termed long term or short term migration.

2.2.1 International migration

Movement of persons who leave their country of origin, or the country of habitual residence, to establish themselves either permanently or temporarily in another country.[1]

2.2.2 Internal migration

A movement of people from one area of a country to another for the purpose or with the effect of establishing a new residence.[1]Since my focus of interest is on internal migration; let us look at the subcategories of internal migration. Internal migration can be interstate either the migration from one state to another or intrastate migration, where the migration is within one state.

Paper by Lusome and Bhagat, on Trends and Patterns of Internal migration has described distribution of migrants by migration streams based on the place of last residence or birth and place of enumeration.[4] They classified internal migrants into three migration streams: intra-district, inter-district and interstate migrants. Interstate migrants are person with last residence in India but beyond the state of enumeration and based on the rural and urban setting internal migrants are further classified into rural-to-rural, rural-to-urban, urban-to-rural and urban-to-urban.[4]

2.2.3 Circular migration

Is defined as the fluid movement of people between countries including temporary or long term movement which may be beneficial to all involved, if occurring voluntarily and linked to the labour needs of countries of origin and destination.[5] Circular labour migration is emerging as a new form of labour migration where poor people migrate on a seasonal basis to better off areas to gain opportunities which prevents people from becoming more poorer.[6]

2.2.4 In-migration and Out-migration

The two main dimensions of migration are in-migration and out-migration; coexist together. Mueser and White in their paper on Explaining the association between rates of in-migration and out-migration put forward the fact that, areas that attract large number of migrant arrivals have population that are migration prone, thus increasing the potential for outmigration.[7] In India, we see a major flow of skilled migration to other countries, often called as the 'brain drain' as well as labour migration to other developed countries.[8] The 'Indian diaspora', which includes non-resident Indians and persons of Indian origin is estimated to be over 30 million indicates those who have migrated to other parts of the world from India.[9]

2.3 Reasons for Migration

A paper by Deshingkar identifies the fact that why people migrate is more complex; as there are several push and pull factors such as declining opportunities in agriculture, land fragmentation, drought, ground water scarcity, falling agricultural commodity prices and rise in the informal economy.[6] Migration happens due to compelling circumstances which push them out of place of origin or there are attractive pull factors in the new place.[10]

Sridhar, Reddy and Srinath in their paper titled 'Is it Push or Pull? Recent evidence from migration in India'; summarizes that reasons for migration from rural areas to cities include both push and pull factors.[11] Push factors include inadequate non-agricultural jobs at the state of origin, lack of adequate income, large size of household, poor public services etc. Pull factor are mainly the attraction of urban areas such as income earning opportunities including jobs and the existence of family and support networks to help find a job. The above said Bangalore based study brings out the fact that only a small part of the population is pushed out of villages compared to a major portion, which gets pulled.

Majority of the population is influenced both by push and pull factors while deciding to migrate from villages to cities.[11]

2.4 Magnitude of the phenomenon

Migration is a phenomenon of utmost importance and is a beneficial component of the economic and social life of all nations. People migrate to have more opportunities in life such as to have a long and healthy life, to have access to education, health care, to be protected from all hazards. Migration alone does not lead to have a better life; when the poorest migrate, in the context of limited resources and choices they often face conditions of vulnerability.[12] Migrants are vulnerable mainly when their health is concerned, as they are exposed to a number of health risks before, during and after migration.[13] Utilisation of health care services among migrants are poor and backs a major portion of migrant's access to healthcare.[13,14] Labour migrants are exposed to unsafe working condition, poor living conditions and often lack supportive family and societal structure.[14] Occupational health morbidities like stomach pain, hip pain, pain in the necks, swellings of limbs, skin diseases, injuries, chest pain, eye problems etc. are commonly reported.[14] There is a predominance of alcohol consumption, smoking and chewing tobacco among the migrants.

2.4.1 Global scenario

Human Development Report on Human Mobility and Development estimates the total global migrant population at 214 million people, which accounts for approximately 3% of world population.[15] Globally the above said 214 million are the total number of international migrants and the estimated count of internal migrants is 740 million, together there are about a billion people who are migrants in today's world.[12,16] In the year 1900, the urban population of the developed world was 30% and that of the

developing world was 9.1%. By the year 2000 the urban population has risen to 73.9% in the developed world and 40.5% in the developing world respectively.[3] Global pattern of migratory movement are influenced by demographic, social, environmental, political and economic reasons.[16]

The largest migration in the world today is one that does not cross any national border, the China migration. In China out of the 225 million total rural population there are roughly about 140 million rural to urban migrants, which forms the China's working urban class without any permanent residence rights or other access in the urban areas, often forced to live in poor quality and crowded housing with limited access to water and sanitation and unsafe work places with high occupational health risks and poor access to health care.[17]

2.4.2 Indian scenario

As per 2001 census 307.2 million people or about 30% of the 1028.6 million populations in India were migrants as reported by place of birth, of which 42.1 million were interstate migrants in India.[18] The internal migration in India is an important aspect in the process of economic development and social transformation.[19] India is one of the countries where internal migration is more important than the international migration, in terms of both the number of people involved as well as the volume of remittances. Internal migration has become the routine part of livelihood strategies for people living in marginal line.[6] Migration which is considered to be a universal phenomenon, in this era of modern times has become a part of urbanization and industrialization and thereby influencing the social, political and economic life of all people.[4]

Indian constitution provides basic freedom to move to any part of the country, right to reside and earn livelihood of their choice and therefore the migrants are not required to

register either at the place of origin or at the place of destination.[4] From 1971-2001 there is an increased percentage share of migrants from rural to urban areas in search of employment or work. When we combine all the patterns of migration the rural to urban male migration has increased over the period 1971-2001 and the main reason behind this are the creation of modern sector in large cities and the development of the urban informal sectors.[19] High productivity agricultural areas continue to be the important destination of migrants and many migrants choose to work in better paying industrial sector thus increasing the rural to urban migration.[20]

Rural people in many states of India have become more mobile in the past years, with deteriorating employment prospects locally and emerging opportunities elsewhere and have become upwardly mobile; graduating from farm work to work in varieties of industries where earnings are higher.[21] The choice of destination is strongly determined by social networks either people from a particular caste and village tend to go to the same destination and into similar occupations, irrespective of the distance and transport facilities. Migration and remittances have improved the standard of living and lead to improved food security. But the major risk is that migrants are not fully aware of their occupational health risks and often not in a position to demand protection.[21]There is an increase in the shift of the labour mobility in our country, in the form of temporary and seasonal migration.[22] Studies have reported that there is no form of social security, compensation for injuries, access to health care, and access to safe drinking water and more often the workplace is unsafe.[23]

2.4.3 Kerala scenario

From census 2001, of the 31.83 million population of Kerala, 1.3% of the populations were interstate migrants and the 2001 census data reveals a share of about 11.77% interstate migrants in Kerala is from Thiruvananthapuram district.[24] Kerala being principally an out-migrating state had large number of people emigrating from Kerala in search of jobs lead to the scarcity of labour within the state, mainly the physical labour. The scarcity of labour, recent boom in the construction sector which led to an increase in regions economy, coupled with high wage rate; today Kerala has the highest wage rate among other states in India; attracted migrants from other states in India, leading to a new era of replacement migration.[25,26]

Kerala is witnessing a large inflow of migrant labourers from Tamil Nadu, Karnataka, West Bengal, Orissa, Bihar, Assam, Manipur etc. and most of the migrant workers coming to Kerala were pushed out of their native places because of low wages, unemployment or underemployment in agriculture and other sectors.[27] Here they are engaged as construction workers, casual labourers, agricultural and plantation workers, road workers etc. and in Kerala there is a predominant trend in allocating more difficult and hazardous jobs to them.[27] Among the Interstate migrants in Kerala, long distance migration from states like West Bengal and Assam dominates the inflow of migrants. Informal information networks plays important role in migration of workers to Kerala.[26]

In literatures, it says that the well-integrated migrant is the one who has assimilated functionally into ways of speaking, thinking and behaving in the host society.[28]But even then vulnerabilities can arise. Vulnerability of migrant arise because of living in a place which is different in culture, language, social settings, legal protections, consumption habits from their native places and loss of traditional support system.[27] Movements of

people from one state to another can lead to loss of certain entitlements such as most of the central government schemes reach and benefit the people only through the state or local government. The public distribution system of Kerala is unlikely to benefit the migrant labourers and they depend more on the open market and are more vulnerable to price differences.[27]These replacement migrants are paid lower wages than those already exist in Kerala. Mainly working under inhospitable condition and living in crowded settlements poses a serious threat to the social and health environment of Kerala.[25] Social networks linking places of origin with places of destination play a key role in generating and sustaining population flow between the two places either the previous waves of migrants supply valuable information and encouragement to facilitate the move of the others. The labourers are often brought from outside the state through contractors or their agents operating from different parts of the country and many of them do not have access to the public distribution system or other governmental facilities in Kerala.[25]

2.4.4 Health seeking behaviour

Health seeking behaviour from a public health perspective explains the reasons behind the delay in receiving treatment and care, non-compliance with treatment or the non-utilization of preventive measures.[29] Migrants have a different disease profile compared to the host countries; along with the barriers to health services further reduces migrants access to health care.[13] Health seeking behaviour is mainly as a result of social, personal, economic, cultural, political and experimental factors.[30-32] The decision to take up a particular medical service depends upon sex, age, social status, type of illness, access to services, socio-economic variables, quality of health services and these factors enable or prevent people from making 'healthy choices' in either their lifestyle behaviours or their use of medical care.[32] Literature says that the availability, accessibility, affordability, adequacy and acceptability, influence an individual in the course of health seeking

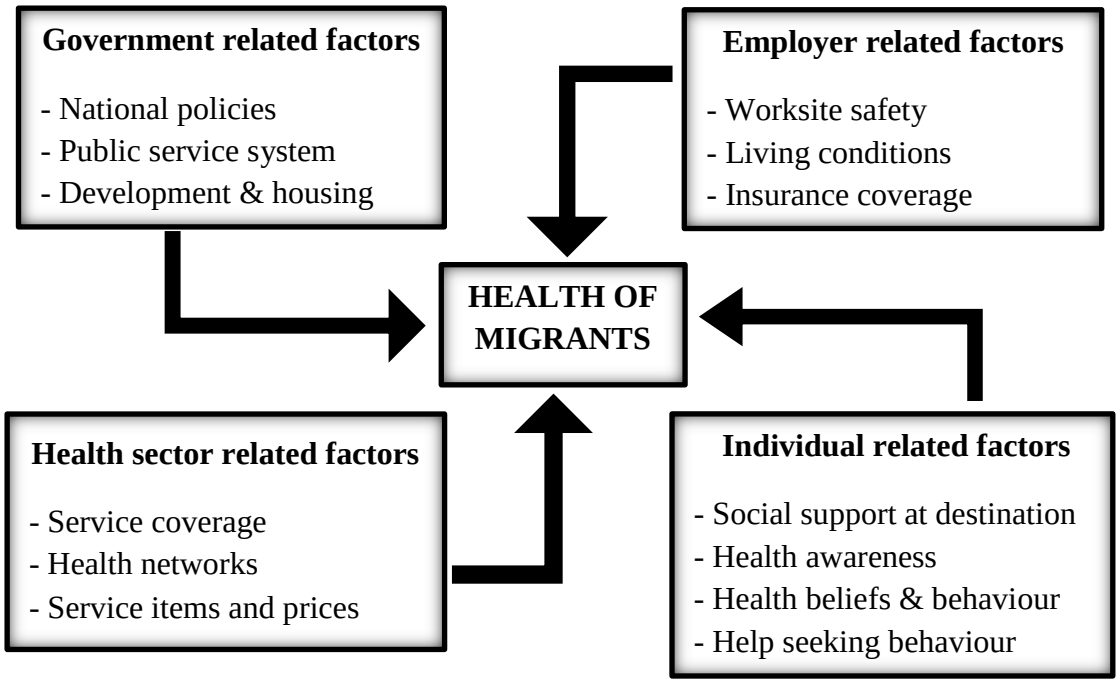
process.[33] Any limitations in accessing healthcare due to language barriers, lack of time, lack of knowledge about the public provisioning of healthcare etc. exacerbates their vulnerability in the host station.[27]

Migrants also have their own cultural beliefs about what is hygienic, healthy or unhealthy and approaches in general to death and disease.[34] Some of the factors that affect the health seeking behaviours and utilisation of health services are lack of health insurance, high cost of services, cultural differences in beliefs and values, language, communication difficulties and the lack of familiarity with the destination place health system.[31,34-36] A China based study points out that, uninsured low paid labourers mainly tend to utilize private clinics and most often pay out of pocket and often have lower levels of awareness.[35] Drug stores are identified in studies as the one and only source of health care outside home for majority of migrants.[30] Local bias against migrants may translate into health provider neglect which in turn leads to poor migrant health and often the National health care plans discriminate against temporary migrants.[37] Different backgrounds and perspectives of local health care providers and patients may also lead to difficulties in doctor-patient interaction.[38] Studies have shown that most of the migrant labourers are young, having only fewer chronic conditions; that leaves 'health seeking behaviour' as an important causative role in their health outcomes.[35]

In India there is no form of registration for the migrants in the destination site and as such there is no insurance coverage for these migrants. A study on Tamil Migrants in Kochi, the health seeking behaviour varies from seeking health care from private hospitals to medical shops to government hospitals to not taking any treatment.[24] They found out that linguistic difficulties and temporary nature of stay affects the health seeking behaviour and the public health system largely remains ignorant about the side effects of not addressing the health issues of migrant populations.[24] Studies have identified the health

risks of the migrant population are predetermined by certain factors at the destination sites[37] as shown in figure 2.1.

Figure 2.1: Factors influencing the health of migrant population at the destination site.



In one of the study, done in Delhi, the immunization coverage rates were lower among migrants than the general population and this is because of the migrant status leading to vulnerability context of alienation and livelihood insecurity.[33] Migrants underutilize their health services because of their new environment owing to problem of access, urban assimilation and continuation of rural practices.[39] The important factor determining the choices of health care are the belief and perceptions of illness causation and the management of health which are interlinked into the cultural context.[30] The major advantage of migrant labourers coming to Kerala, which has to be highlighted is that they are able to benefit from relatively better health system and healthcare seeking practices in the state compared with their native place.[27]

2.4.5 Self-reported morbidity pattern

Migrant populations health are determined by various factors like nutrition, housing, healthy environment, occupational conditions, access to health care, education.[40] Migrant workers are more in number in the lower income labour market with higher risks of exposure to unsafe working conditions.[37] Public health threats arise in migrant populations when diseases are communicable and infected persons move or migrate and the common determinants of health risk among migrants are the motivational factors including the reason for migration and occupational factors at the source of origin as well as at the destination and the environmental factors.[37] The main causal factors affecting the migrant's health are overcrowded living condition, poor nutritional status, poor environmental sanitation, inadequate shelter and poor quality water.[37]

A study in urban slum setting of migrants reported a prevalence of 37.5% of self-reported morbidity.[41] The self-reporting of diseases depends on the levels of awareness about the health problem arising from individual, household and community level factors.[42] Migrants carry along with them, their 'health prints' which is their own immune system often borne of their socioeconomic condition and their susceptibility to disease causing agents, they might be the major carriers of their vulnerabilities of their original communities.[37] Self-reported morbidity measures may introduce biases, since they reflect individual perceptions of health and measures something different to actual health.[43]

Among the migrant labourers, in the construction sector there exist a significant association between type of occupation and morbidity status.[44] The morbidity profile revealed fever, respiratory infections, malaria, musculoskeletal disorders, injuries, skin infections, gastro intestinal problems and hypertension: of which the highest morbidity was due to acute febrile illness.[40,45] The work force in construction sector is most

vulnerable, mainly because of the temporary work status and inherent risk to life and the health and safety is most neglected and the workers are prone to accidents and occupational diseases.[46] Cement has constituents that have irritant and corrosive effects which further leads to contact dermatitis.[47] Among the construction workers, occupational dermatosis such as contact dermatitis, eczema, fissures of the feet, leukoplakia, callosis, post inflammatory hypopigmentation etc. are seen along with itching and burning of hands and feet during work. High incidence of bacterial infections due to unhygienic working condition, trauma sustained during work are also prevalent among the workers.[48] Higher prevalence of malaria are reported, as construction sites creates breeding grounds for various vectors and majority of the immigrants are from disease endemic areas settle in poor settlement in the cities, leading to newer and drug resistant strains.[45]

A study done among migrant labourers in China has reported a phenomenon called the "healthy migrant effect", here the self-reported health status is better either they have low levels of self-reported morbidity and here there is a process of selection of healthier individuals for migration and in occasions when the migrants get ill, they return back home because of the inability to afford health care or inability to work.[17] One more fact that has to be kept in mind is that, migration leads to increase in population and shortage in basic amenities including medical and health services and therefore the destination places become vulnerable to health problems with increased risk of fatalities among the socially and economically backward.[49]

2.4.6 Adverse health habits

Unfavourable working conditions leads to serious occupational and other health problems along with habits, which can lead to poor health in the long run.[24] Isolation, loneliness, homesickness and emotional distress, make them particularly vulnerable to depression, diseases and other habits.[50] Migrant workers are more susceptible to Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome infection (HIV/AIDS); most of the workers have multiple partners and indulge in high risk behaviour with very low condom usage. Migration of youth in search of occupation leads to long separation from family predisposes to more risky behaviors and many are unaware of the risks of exposure to sexually transmitted diseases, HIV/AIDS.[21,51] Migration and general patterns of mobility in India indicates potential for HIV spread particularly in the northern and central states.[52]

Rapid mobility and relative instability of living and working condition leads to high level of stress that increases the use of tobacco products.[53] Migrant labourers use a wide variety of smokeless tobacco, since it does not cause any hindrance during work. Majority of people use bang/ganja, injecting drugs, toddy, foreign liquor or any forms of alcohol.[54] Higher rate of alcohol consumption is seen among the migrants and the reason behind it is quoted as the nature of work, peer group influences and lack of recreational activities.[54] A possible reason that leads to risky behaviour, such as alcohol abuse and illicit drug use is the movement away from the stable rural communities.[17] Studies reports that when these migrants gets extra wages they have drinks together, as part of recreation and use of Ghutka, a type of smokeless tobacco gives them the feel of enjoyment.[55]

2.5 Indian migration data

In India migration data are available from two sources: Indian census and National Sample Survey Organization [NSSO].

Census of India collects information both on temporal and spatial aspects: place of birth and place of last residence provide spatial aspects of movement and the duration of residence provides data on the temporal aspects of migration. Indian census started collecting migration data based on place of birth but after 1971 census collected migration data along with place of last residence and duration of migration. From 1981 the reasons for migration had been added up.[23]Until 1951, a person was considered migrant only if he or she has changed residence from district of birth to another district or a state. Since 1961 a person is considered as a migrant if birth place is different from place of enumeration and in 1971 census if the place of birth and place of last residence is different from the place of enumeration, a person is defined as a migrant.[56]

The National Sample Survey Organization (NSSO) of India defines migrant as a member of the sample household who had stayed continuously for at least six months or more in a place other than the place of enumeration.[56]National Sample Survey records migration based on place of last residence and from the 55th round gave information on migration by monthly per capita expenditure. From the migration data work or employment was the most important reason for migrating among males but in the case of females' marriage was the most important reason.[4]

2.6 Migrant rights

2.6.1 Migrant rights in India

Based on the Directive Principles of State Policy of the Indian Constitution, it is the duty of the state to secure for the citizens, both men and women to right to an adequate means of livelihood, equal pay for equal work for both men and women, protection against abuse and exploitation of worker's.[57]Migrant workers are unaware of their labour rights and are not organized under any trade unions, unprotected by both government and labour unions. Salwe in his paper points out the need to have a uniform labour standard in the context of unorganized sector workers including the migrant workers and it should be implemented and made mandatory in both urban and rural areas of India.[57] Migrants have now rights under two sets of international instruments: International Covenant on Civil and Political Rights (ICCPR), universally protects migrants and the new Convention on Migrant Workers (CMW) and the ILO conventions which specifically apply to migrants and in particular to the migrant workers.[37]

The Indian Constitution contains basic provision relating to the conditions of employment, non-discrimination, right to work etc. { Article 23(1), Article 39, Article 42, Article 43} which are applicable for all workers including migrant workers in the country.[37] Inter-State Migrant Workmen Act, 1979 is for the protection of surplus labourers who migrate to other regions for earning their livelihood.[37] This Act applies to all establishments, where more than five interstate migrant workers are employed. Act prohibits employment of migrant workers without registration. Building and Other Construction Workers Regulation of Employment and Conditions of Service Act, 1996 aimed to provide for a framework for the regulation of employment, conditions of service, the safety, health, welfare measures of the construction workers, in every

establishment which employed more than ten workers, in the previous year.[37] The Unorganised Sector Workers Bill, 2003 is to identify workers employed in the unorganized sector and to provide them with basic social security.[37]

2.6.2 Migrant rights in Kerala

In Kerala, the Kerala State AIDS control society has come up with a specific migrants' sexual health intervention project – the Migrant Sureksha Project, focused on construction workers, hotel workers, truckers, street vendors. The project offers Behavioural change communication, sexually transmitted infection management, condom distribution and usage.[37]Due to the well-known link between migration and spread of HIV/AIDS the Kerala state is implementing targeted intervention programmes among the migrant workers.[27] The Kerala state is extending the coverage of social security net to workers in the unorganized sectors and the state government had introduced an 'Inter State Migrant Workers Welfare Scheme' on May Day of 2010, a membership card is issued to those migrant workers who gets enrolled.[27]The response of Kerala health system in mapping the interstate migrants monthly wise should be appreciated. Migrant mapping is happening in all primary health centres of the state which report the number to the higher authority. I came across many migrants who felt that paying one rupees as admission fees and seeking care at government facility is their right.

2.7 Impact of migration

Impact of migration varies with context. In the context of interstate migrant labourers migration should be treated both as positive and negative. Migration brings a positive impact on income but on the other hand they are gifted with poor living and working conditions and social isolation. Migration in general leads to newer lifestyles which further lead to the emergence of different social networks. Migration can expose

individuals and groups in many settings at health risks and most of them remain excluded from the benefits of health and health care in the destination area. Health of migrant population is a growing public health concern as they represent the neediest group in the world and they are the most disadvantaged relative to the host population.[58] Migrants health passes through different phases such as the pre-entry phase, where a migrant's health reflects the disease profile of his or her country of origin, transitional phase where the process of migration can influence migrants health and the post-entry phase where the process of adapting in the host country influence a migrant's health.[59] Always there should be planned migration to upgrade the rural economy as well as stabilize the urban economy.

2.8 Rationale for the study

Migration is emerging as an important phenomenon from economic, political and public health point of view. Migrant workers being the workforce of our country has contributed in building India's economy but their contribution remain hidden because of the lack of data. Recently Kerala is seeing a tremendous inflow of migrants from different part of the country. Migration is a phenomenon that will any way continue in increasing numbers in the coming years. So how we can address their issues mainly concerning their health is a matter that affects both the state as well as the migrants. Studies relating to the migrants health are lacking in the state which need to be addressed at an alarming rate. The migrants' health needs should be integrated with the state health policy. If we are not considering their health needs, it can bring our state health statistics very low. Complete health profile of the migrant labourers should be addressed by the state, rather than the state focusing only on single disease control programme on these migrants.

There is urgency in setting up a migrant friendly health system that can lead to a public health approach of in depth understanding of migrants' health. A study that can bring out the factors associated with the health seeking behaviour and the morbidity pattern is essential to bring out policies regarding Migrants health as well as to raise awareness level among migrants and the state is the need of the hour.

With the above rationale I would like to explore into the topic with the given major and minor objectives:

2.9 Objectives

2.9.1 Major objectives

To study the factors associated with the Health seeking behaviour and Self-reported morbidity pattern among the Interstate migrant labourers in Thiruvananthapuram district.

2.9.2 Minor objectives

To document existing adverse habits like the use of tobacco and alcohol, that affects the health of the Interstate migrant labourers in Thiruvananthapuram district.

3. METHODOLOGY

3.1 Study design

Cross sectional survey among the Interstate migrant labourers in Thiruvananthapuram district using semi-structured Interview schedule.

3.2 Cross sectional study

3.2.1 Study setting

Kazhakuttam block panchayat of Thiruvananthapuram district. Of the 12 block Panchayats of Thiruvananthapuram district, Kazhakuttam block was selected, since it had the highest number of migrant labourers, either about 2060 as on January 2012.

3.2.2 Study population

Interstate migrant labourers migrated from states other than Kerala staying within the limits of Thiruvananthapuram district, continuously for a period of two months or more as on June 1st 2012, and who does not own a ration card.

3.2.3 Sample size

Sample size calculation was estimated using Statcalc of Epi Info 7 software. Taking 37.5 percent as prevalence of self-reported morbidity among migrants and the number of in-migrants in Thiruvananthapuram district (48575) from the Census of India 2001-D series, the anticipated prevalence was assumed between 29.5 and 45.5 percent with 95% confidence interval. Estimated sample size was 140. Sample size after adjusting for a design effect (2) was 280, since it's a cluster sampling. Expected a non-response rate of 20 percent, the final sample size was 336, which had been rounded of to 340.

3.2.4 Sample selection procedures

Sample selection had been done using Multi-stage cluster sampling method. Monthly wise data of the migrant labourers are usually recorded by the concerned Primary Health Centre (PHC) of that area. In the Kazhakuttam block panchayat the Veli Primary Health Centre (PHC) area had the maximum number of migrant labourers. Therefore Veli Primary Health Centre (PHC) was selected. Cluster is defined as assemblage of at least more than or equal to 10 Interstate migrant labourers at a work place as reported by the Junior Health Inspector (JHI) or the Junior Public Health Nurse (JPHN) of the Veli PHC. Veli PHC area covers five Sub centres - Pallithura, Kallingal, Attipra, Pounkadavu and Main centre Poundkadavu.

To acquire a sample size of 340, about 70 migrant labourers were needed from areas covered by each of the five sub centres, coming under the Veli PHC area. 14 clusters were to be selected from each of the five sub centre areas, thus a total of 70 clusters were to be selected. From each cluster, 5 migrant labourers was selected and interviewed. The migrant labourers were selected from the cluster on the basis of permission given by the employer or contractor. In the case of non-response from the migrant, the next migrant labourer was selected. In the case of non-availability of cluster in one place, that cluster was selected from another sub centre area within the Veli PHC area.

3.2.5 Inclusion criteria

Samples were selected based on the Inclusion criteria:

1. Migrant labourers migrating from states of India other than Kerala.

2. Staying continuously within the limits of Thiruvananthapuram district, for a period as on June 1st 2012 between two months and not exceeding 10 years.

3. Those who don't own a ration card.

4. Adult population of 18 years and above.

5. Willing to participate in the study.

6. Willing to provide written informed consent.

7. Those migrant labourers who can understand by themselves or with the help of an interpreter Hindi or Malayalam language.

3.3 Data management

3.3.1 Data collection

The period of data collection extended from 19th June to 14th August 2012. Data collection was done using semi-structured Interview schedule developed by the researcher based on the objectives. Data regarding migration such as the place of birth, place of last residence, reasons for migration and the duration of stay at the present place of residence was adapted from the Census schedule 2011. Some of the questions regarding healthcare access, responsiveness to health care and illness experience were adapted from the ICMR National Task Force Project on Migrants Healthcare. Some questions on Tobacco and Alcohol were adapted from the WHO STEPS Instrument.

Although both Hindi and Malayalam translated interview schedule was made available; data was collected purely using Hindi translated interview schedule. Principal investigator was responsible for determining the eligibility of the participants in the study. No documents were checked during the process of data collection and self-reporting by the participants was taken into account. Seventeen participants needed an interpreter to

understand the language; the interpreters in some cases were one among them and in the other cases it was the employer or supervisor.

3.3.2 Data storage

The data collected, would be stored in a safe manner. To prevent data loss by any manner, data will also be stored in an external drive. Privacy and confidentiality of the data was maintained at any cost and will not be shared to anyone not involved with the study. Only the Principal investigator has the custody of the raw data and will be kept safe. All personal information of the study subjects is with the principal investigator and after the use it will be destroyed.

3.3.3 Data entry

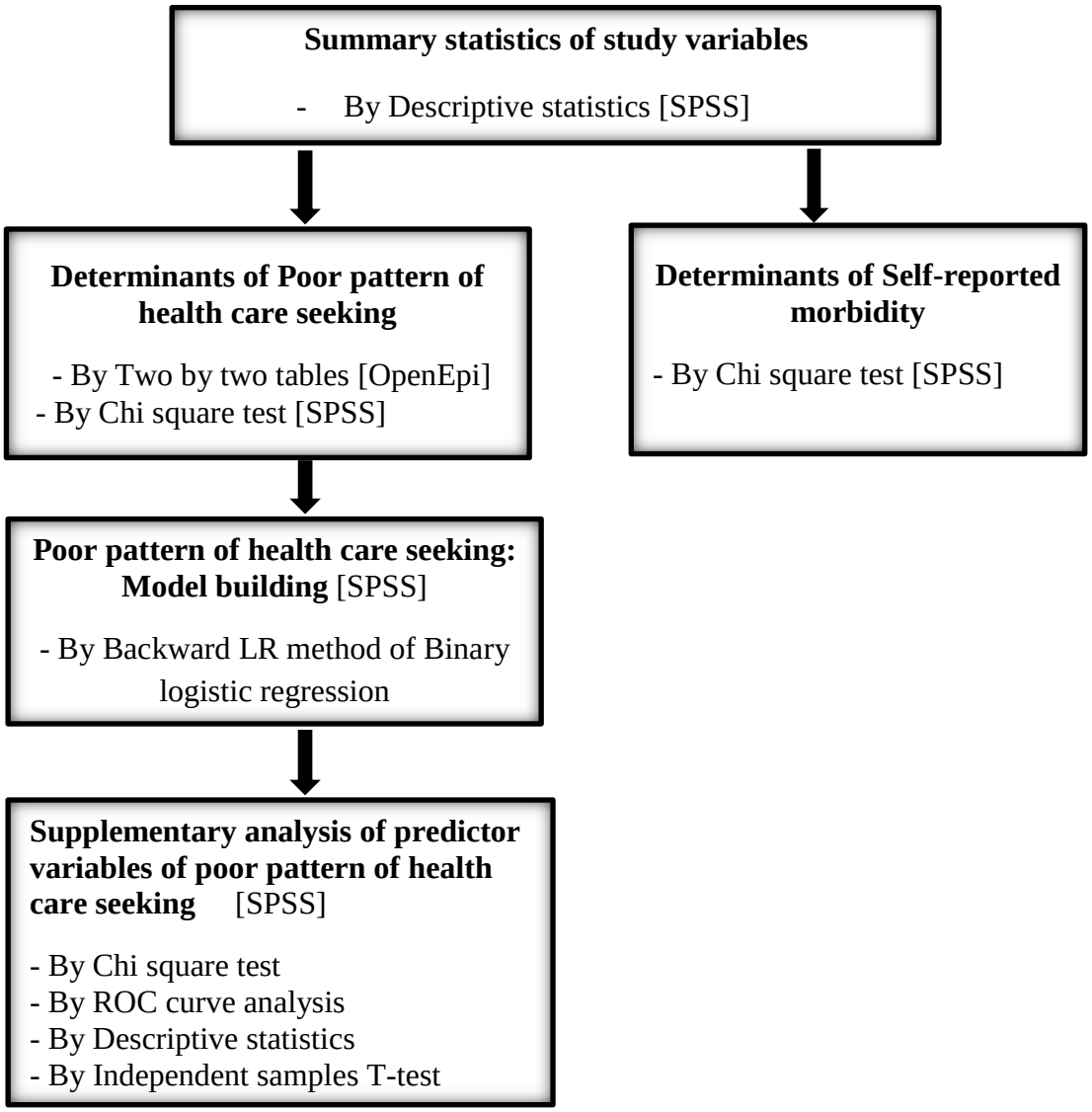
Data was entered using the software EpiData version 3.1. Prior to analysis the entire data sheet was corrected manually and data cleaning was done using computerized cleaning process. Finally data was exported from EpiData version 3.1. to IBM SPSS version 17.

3.3.4 Data Analysis

Analysis was done using the software Statistical Package for Social Sciences [IBM SPSS] version 17 and Open Source Epidemiologic Statistics for Public Health [Open Epi] version 3.2.1. Description of data characteristics, transformation of data, bivariate analysis of the dependent variables with the main independent variables and multivariate analysis has been done as part of the analysis.

The figure 3.1 shows the complete steps through which the analysis progressed and the statistical method that was used in each of the following steps.

Figure 3.1: *Flow chart showing the Statistical steps of Analysis*



3.3.5 Variables used in the study

3.3.5.1 Dependent variables

There are two dependent variables: Poor pattern of health care seeking and Self-reported morbidity pattern.

A] Poor pattern of health care seeking: Is constructed based on responses to three dimensions of health seeking behaviour such as awareness about the nearest health care facility, seek care at medical facility or drug store/self-care, seek care when the person is

ill. Based on the above said dimensions of health seeking behaviours; the Pattern of health care seeking is labeled as: Poor pattern and good pattern.

B] Self-reported morbidity: Is a composite variable; by combining the individual major morbidities like fever, cough, abdominal pain, skin morbidity, injury and musculoskeletal morbidity along with whether they sought care , when they were ill to validate the self-reported morbidity. Self-reported morbidity was categorized into having no morbidity, had morbidity but did not seek care and had morbidity and sought care. Reference period was for one year for long term illness and fifteen days for acute morbidities.

3.3.5.2 Independent variables

Socio-demographic characteristics

1. Age: Age in completed years as reported by the respondent. Age was later grouped into three categories; less than or equal to 20 years, 21 to 30 years and more than or equal to 31.

2. Sex: All the study participants were males.

3. Marital status: As reported by the respondent. There were four groups: single, married, divorced/separated and widower. Later the groups were grouped into currently single and currently married.

4. Monthly income: Monthly income was calculated by multiplying the income per day and the number of days of work in a month. Later monthly income was grouped into high and low taking the median as the cutoff.

5. Full time work: Is whether the respondent had continuous work all throughout the year or not.

6. Occupational sector: Whether working in construction sector or hotel sector.

Migration characteristics

1. State of origin: As reported by the respondent.

2. Place of last residence: As reported by the respondent.

3. Duration of stay: Was recorded in months, as reported by the respondent. Later grouped into two groups: less than or equal to 12 months and more than or equal to 13 months.

4. First migration: Is a variable that indicates whether the individual had migrated for the first time from their home land to the present place of residence.

Employer based characteristics

1. Availability of employer based health facility: Whether there is any available employer based health facility or not, as reported by the respondent.

2. Payment by employer: Whether services are paid by the employer or not.

Awareness factor towards health facility

1. Knowledge about the working hours of the health facility.

2. Knowledge about government health facility.

Adverse health habits

1. Current use of any form of tobacco: use of smoking or smokeless tobacco within the past 30 days, as reported by the respondent.

2. Currently smoke tobacco: Smoking within the past 30 days, as reported by the respondent.

3. Current use of smokeless tobacco: Use of chewing tobacco within the past 30 days, as reported by the respondent.

4. Alcohol use in the past one month.

3.4 Ethical considerations

The study was done in compliance with the basic ethical principles of research. The study was conducted after getting the approval and clearance from the Institutional Ethics Committee (IEC) of Sree Chitra Tirunal Institute for Medical Sciences and Technology. Written Informed consent were taken from the study participants after giving the necessary information regarding the study, the objectives, potential benefits and risk of participating in the study and giving the freedom of choice to the participants to either participate in the study or not. Participants were given the freedom of asking any queries relating to the subject or the study. During the course of study, I came across some persons who have not received any care, for them I gave proper information regarding which health facility they should approach.

3.4.1 Risk or discomfort to the participants.

Participation in the study does not impose any risk to health. Some question regarding the personal use of tobacco and alcohol was asked and no clinical test was undertaken.

3.4.2 Benefits

There was no direct benefit for the participants from this study but their valuable information would be helpful for the benefits of the future migrant labourers who come to the city. This information will help in bringing out strategies that improves the health of the Interstate migrant labourers.

3.4.3 Privacy and confidentiality

The confidentiality of the data provided will be maintained. The personal identity will not be revealed to anyone. The information provided by the participants will not be shared with anyone not involved with the study. All the copies of filled interview schedules and consent forms will be kept under the custody of principal investigator and will be destroyed when they are deemed no longer needed.

3.4.4 Voluntariness

Participation in the study was voluntary and the participants were given the freedom to withdraw from the study at any time and refusal to participate did not have any form of penalty.

3.4.5 Informed consent process

The translated Hindi written informed consent form was used for the study. One carbon copy of the written informed consent taken from the study participants along with the information sheet was handed over to the participants. In the case of illiterate participants, a witness who is literate was made mandatory before taking the thumb impression of the illiterate.

3.5 Funding

The study had been funded by the Kerala State Council for Science, Technology and Environment [KSCSTE].

4. RESULTS

The result chapter describes the outcome of data analysis. Based on the objectives, the results have been formulated. Data was analyzed using Statistical Package for the Social Sciences [IBM SPSS] version 17 and Open Source Epidemiologic Statistics for Public Health [Open Epi] version 2.3.1. Data was analyzed for association between various predictor and outcome variables.

4.1 General description of Study

Expecting a non-response rate of 20%, the final sample size was estimated at 340. Of the 315 eligible interstate migrant labourers contacted; only 283 of them were willing to participate in the study. Therefore a total of 283 interstate migrant labourers were interviewed, with the response rate of 88.69%. Interviews were conducted by the principal investigator using Hindi translated semi-structure interview schedule. For 17 respondents an interpreter was needed to understand the respondent's language. Medical record verification was not attempted and self-reporting alone was taken into account; on an assumption that these migrants represent a mobile population and therefore may not have proper medical reports.

4.2 Summary statistics of the study variables

4.2.1 Socio-demographic characteristics of the study population

The mean age of study population was 24.77 years [SD 4.8]. Age was grouped into three age groups: less than or equal to twenty, twenty one to thirty and more than or equal to thirty one; a large proportion of migrants were in the twenty one to thirty age groups. This type of grouping was done to find out the proportion of very young migrants of less than or equal to twenty years in the study population; accounts for about 17.7 percent. Marital

status was grouped into currently single and currently married. Currently single which accounts for 71.4 percent which comprises the single [69.6 percent], divorced/separated [0.7 percent] and widower [1.1 percent]. About 44.1 percent of the study population had completed upper primary education; on the other hand 8.5 percent had no formal education of any kind.

Table 4.1 A: *Socio-demographic characteristics of the study population*

Variables [N = 283]	**Frequency [n]**	**Percentage [%]**
Age group (in years)		
< = 20	50	17.7
21 – 30	203	71.7
>= 31	30	10.6
Marital status		
Currently single	202	71.4
Currently married	81	28.6
Educational qualifications		
No formal education	24	8.5
Primary	63	22.3
Upper primary	125	44.1
High school & above	71	25.1

Note: ***[%]Percentages within the bracket shows row percent***

A large segment, 80.6 percent of the study population was working as construction labourer. Construction labourer, supervisors and others category which include masons and plumbers were included in the construction sector which accounts to a total of 87.6 percent. The mean days of work of study population was 27.12 days [SD 2.99] and the mean current income per day was 325.30 Indian rupees [SD 62.78]. Monthly income was categorized into low and high based on the median. The variable socio-economic status was created by combining the variables educational qualification, current occupation and monthly income. A total of 81.6 percent of the study population was in the low socio-economic status group.

Table 4.1 B: *Socio-demographic characteristics of the study population*

Variables [N =283]	**Frequency [n]**	**Percentage [%]**
Current occupation		
Construction labourer	228	80.6
Supervisor	6	2.1
Hotel employee	35	12.4
Others	14	4.9
Occupational sector		
Construction sector	248	87.6
Hotel sector	35	12.4
Monthly income group		
Low	154	54.4
High	129	45.6
Socioeconomic status group		
High	52	18.4
Low	231	81.6

Note : [%]Percentages within the bracket shows row percent

4.2.2 Migration characteristics of the study population

For 64.3 percent of the study population, it was their first migration. For 38.5 percent of the migrants, the state of origin was West Bengal.

Table 4.2 A: *Migration characteristics of the study population*

Variables [N = 283]	**Frequency [n]**	**Percentage [%]**
First migration		
Yes	182	64.3
No	101	35.7
State of origin		
West Bengal	109	38.5
Odisha	54	19.1
Bihar	52	18.4
Assam	38	13.4
Jharkhand	30	10.6

Note : ***[%]Percentages within the bracket shows row percent***

For 93.6 percent of people the place of birth was rural and for 61.8 percent of the study population, the place of last residence was rural. When the place of birth and place of last residence was taken into the measure; it was possible to draw five patterns of migration streams. Rural to Urban migration dominated; on the other hand there was not a single case of Urban – Rural – Urban migration stream.

Table 4.2 B: *Migration characteristics of the study population*

Variables [N = 283]	**Frequency [n]**	**Percentage [%]**
Place of birth		
Rural	265	93.6
Urban	18	6.4
Place of last residence		
Rural	175	61.8
Urban	108	38.2
Migration streams*		
Rural – Urban	168	59.4
Rural – Urban – Urban	90	31.8
Urban – Urban	14	4.9
Rural – Rural – Urban	7	2.5
Urban – Urban – Urban	4	1.4

**** Urban – Rural – Urban migration stream was absent in the study population***
Note: [%]Percentages within the bracket shows row percent

The mean duration of stay was 12.80 months [SD 12.90]; with the length of duration of stay extending from 3 to 84 months. Among the respondents, a majority of them migrated for employment, 46.3 percent of the migrants came to know about the present place of residence through friends. Relatives and friends were a major factor which helped them in migrating to the present place of residence. Migrants did not visit their homeland since migration was 45.6 percent and for a majority of respondent the occasion of visit is during festive seasons. A large portion of the interstate migrant labourers [83.4 percent] do remit their money back home.

Table 4.2 C: *Migration characteristics of the study population*

Variables [N = 283]	**Frequency [n]**	**Percentage [%]**
Reason for migration		
Employment / work related	274	96.8
For other purposes	9	3.2
Knowledge about the opportunities of this place		
Friends	131	46.3
Relatives	83	29.3
Agencies / contractors	60	21.2
Village people	9	3.2
Helped in migration		
Friends	97	34.3
Relatives	119	42
By self	29	10.2
Agencies / contractors	38	13.4
Frequency of visit to homeland		
Did not visit	129	45.6
Once in six months	49	17.3
Yearly once	87	30.7
Once in two years	15	5.3
Any time	3	1.1
Occasion of visit to homeland		
During festive seasons	103	36.4
For treatment purposes	6	2.1
For family affairs	61	21.6
When any need arises	84	29.7
Others	29	10.2
Remittance of money		
Yes	236	83.4
No	47	16.6

Note: [%]Percentages within the bracket shows row percent

4.2.3 Health seeking behavioural characteristics of the study population

Among the study population 79.2 percent had knowledge about the nearest available health facility and 82.7 percent knew about the working hours of the health facility. Those who had knowledge about government health facility were 57.6; but on the contrary Medical or drug store was the major place to seek care when they were ill. Among the respondent 51.6 percent had visited the health facility in the last fifteen days.

Table 4.3 A: *Health seeking behavioural characteristics of the study population*

Variables [N = 283]	**Frequency [n]**	**Percentage [%]**
Knowledge about nearest available health facility		
Aware	224	79.2
Unaware	59	20.8
Knowledge about government health facility		
Yes	163	57.6
No	120	42.4
Knowledge about working hours of the health facility		
Do not know	49	17.3
Knew the timings	234	82.7
Place of seeking care at the time of illness		
Government hospital	63	22.3
Private hospital	75	26.5
Private clinics/ nursing home	40	14.1
Private doctor	20	7.1
Medical / drug store	81	28.6
Self-care	4	1.4
Visited health facility in the last 15 days		
Yes	146	51.6
No	137	48.4

Note: [%]Percentages within the bracket shows row percent

A small percent [23.7 percent] of the respondent had an employer based healthcare facility. For 55.5 percent of the migrant labourers, they needed the permission from their employer to seek health care and for 27.6 percent of migrant labourers, payment for health care were paid by the employer.

Table 4.3 B: *Health seeking behavioural characteristics of the study population*

Variables [N = 283]	**Frequency [n]**	**Percentage [%]**
Availability of employer / contractor based health facility		
Yes	67	23.7
No	216	76.3
Permission of the employer to seek health care		
Yes	157	55.5
No	126	44.5
Payment for services by the employer		
Payment not paid	205	72.4
Payment paid	78	27.6

Majority of them were accompanied to the health facility by their friends; auto rickshaws was the common mode of transport. 33.6 percent of them received medicines and injections and are examined by the doctor. A total of 21.9 percent of migrant labourers paid only one rupee to seek care and in a totality 77.1 percent paid less than rupees 500 for each health visit.

Table 4.3 C: *Health seeking behavioural characteristics of the study population*

Variables [N = 283]	**Frequency [n]**	**Percentage [%]**
Accompany to the health facility		
Local help	22	7.8
Friends	164	58
Relatives	32	11.3
Contractors	24	8.5
Alone	41	14.5
Mode of transport to the health facility		
By walking	68	24
Public transport	39	13.8
Auto rickshaws	163	57.6
Own vehicle	5	1.8
Others	8	2.8
Services available at the health facility		
Examined by doctor	88	31.1
Examined by nurse /other staff	41	14.5
Received medicines / injections	95	33.6
Diagnostic test	22	7.8
Referred to another hospital	4	1.4
Admitted in the hospital	9	3.1
Education / counseling	16	5.7
No treatment	8	2.8
Payment for services		
Yes – more than 1 rupee	218	77
Yes – 1 rupee	62	21.9
No payment	3	1.1
Amount of money spend for each health visit [N=280]		
< rupees 500	216	77.1
500 – 1000 rupees	55	19.6
>1000 rupees	9	3.2

Note: [%]Percentages within the bracket shows row percent

About 66.4 per cent of the migrant labourers took leave for accessing health care and 26.9 percent of respondent had no difficulty in accessing health care. But longer waiting periods [20.8 percent] and language barriers [20.5 percent] were some of the major problems for access of health care.

Table 4.3 D: *Health seeking behavioural characteristics of the study population*

Variables [N = 283]	**Frequency [n]**	**Percentage [%]**
Taken leave for seeking health care		
Yes	188	66.4
No	95	33.6
Problem for access of health care		
Lack of money	30	10.6
Health facility located faraway	8	2.8
Longer waiting periods	59	20.8
Unavailability of free medicines	32	11.3
Language barrier	58	20.5
Bad behaviour from service providers	16	5.7
No problem	76	26.9
Others	4	1.4

Note: [%]Percentages within the bracket shows row percent

4.2.4 Self-reported morbidity of the study population

Among the respondent 43.8 percent had fever of which 11.7 percent had intermittent fever. General body pain and abdominal pain among the respondent were 22.3 and 28.6 percent respectively. Among the respondent 40.3 percent had cough; 17.3 percent had the duration of cough extending for more than two weeks. A major proportion had injuries accounting to 38.9 percent; can be considered occupation related. Skin, musculoskeletal and dental morbidity measures more or less similar. 18 percent of the migrant labourers had some form of ophthalmic morbidity ranging from redness of eyes to watery eyes. Other morbidities which showed minute percentage were cardiovascular morbidity, fractures, burns, ear problems, diabetes etc.

Table 4.4 : *Self-reported morbidity of the study population*

Variables [N = 283]	**Frequency [n]**	**Percentage [%]**
Fever	124	43.8
General body pain	63	22.3
Cough	114	40.3
Abdominal pain	81	28.6
Injuries	110	38.9
Ophthalmic morbidity	51	18
Skin morbidity	74	26.1
Musculoskeletal morbidity	73	25.8
Dental morbidity	76	26.9

Note: [%]Percentages within the bracket shows row percent

4.2.5 Adverse health habits of the study population

In the study population there was a higher rate of use of tobacco; 89.8 percent of the population had the habit of using any form of tobacco. Current use means the use of the product within the past one month. A total of 72.8 percent and 64.3 percent of the study population currently use smoking and smokeless tobacco respectively. The mean number of tobacco products used daily was 7.77 [SD 4.459] and the mean number of times of use of smokeless tobacco was 3.48 [SD 2.734]. Among the users of smoking tobacco, 44.9 percent use cigarette; 12.4 percent use both cigarettes and bidI and in the case of smokeless tobacco users,17 percent use ghutkha, while the use of multiple smokeless tobacco products is high, measuring 14.8 percent.

The percentage of respondents initiated the use of tobacco after coming to the present place of residence was 20.1 percent and 41 percent of the respondent had their duration of use of tobacco between five and ten years and majority of them used tobacco with the company of friends, after meals or during relaxing hours. Among the alcohol users, 24 percent had consumed alcohol in the past one month.

Table 4.5 : *Adverse health habits of the study population*

Variables	**[N = 283]**	**Frequency [n]**	**Percentage [%]**
Current use of any form of tobacco		254	89.8
Currently smoke tobacco		206	72.8
Currently smoke tobacco daily	**[N = 206]**	168	81.6
Smoking tobacco products	**[N = 206]**		
Cigarette		127	44.9
Bidi		44	15.5
Both cigarette & bidi		35	12.4
Current use of smokeless tobacco		182	64.3
Current use of smokeless tobacco daily	**[N = 182]**	132	46.6
Smokeless tobacco products	**[N = 182]**		
Paan masala		24	8.5
Supadi pan		47	16.6
Ghutkha		48	17
Khaini		18	6.4
Snuff		3	1.1
Use of multiple products		42	14.8
Situations of use of tobacco	**[N =254]**		
At workplace		2	0.7
During relaxing hours		55	19.4
Company of friends		81	28.6
During anxious or stress		13	4.6
After meals		62	21.9
After getting up in the morning hours		14	4.9
Other situations		27	9.5
Initiation of use of tobacco after coming to this present place of residence	**[N =254]**	57	20.1
Duration of use of tobacco (in years)	**[N =254]**		
< 5		95	33.6
5 to 10		116	41
>10		43	15.2
Ever consumed alcohol		130	45.9
Use of alcohol in the past one month	**[N = 130]**	68	24

Note: [%]Percentages within the bracket shows row percent

4.3 Determinants of Poor pattern of health care seeking

For further analysis of Health seeking behaviour, a new variable called 'Pattern of health care seeking' was constructed, based on responses to three dimensions of health seeking behaviour such as awareness about the nearest health care facility, seek care at medical facility or drug store/self-care, and seek care when the person is ill. Based on the above said dimensions of health seeking behaviours; the dependent variable has two possible categories- Poor and Good. Bivariate analysis had been done to find the association between the major independent variables and the dependent variable i.e. **Poor pattern of Healthcare seeking**. 43.5 percent with a 95% confidence interval of [37.69 percent to 49.22 percent]: of the respondents had Poor pattern of health care seeking.

Lower age groups, currently single marital status, low monthly income , full time work are associated with poor pattern of health seeking behaviour; which is found significant also. Full time work may be associated with monthly income, as the result indicates.

Table 4.6 A: *Association of socio-demographic characteristics with Poor pattern of health care seeking*

Variables	**N**	**Poor pattern (n[%])**	**Crude O.R [95 % CI]**	**P value**
Age group				
<=20	50	37 [74]	25.615 [6.642 – 98.794]	< 0.001
21 – 30	203	83 [40.9]	6.225 [1.828 – 21.195]	0.003
>=31*	30	3 [10]		
Marital status				
Currently single	202	99 [49]	2.283 [1.316 – 3.96]	0.003
Currently married*	81	24 [29.6]		
Monthly income group				
Low	154	79 [51.3]	2.035 [1.257 – 3.295]	0.004
High*	129	44 [34.1]		
Full time work				
Yes	133	43 [32.3]	0.4181 [0.2575 – 0.6788]	< 0.001
No*	150	80 [53.3]		

**** Reference category***

If the place of last residence is rural, if it's the first migration and duration of stay less than 12 months the results shows significant association with Poor pattern of health care seeking.

Table 4.6 B: *Association of migration characteristics with Poor pattern of health care seeking*

Variables	**N**	**Poor pattern (n[%])**	**Crude O.R [95 % CI]**	**P value**
Place of last residence				
Rural	175	85 [48.6]	1.74 [1.062 – 2.851]	0.027
Urban*	108	38 [35.2]		
First migration				
Yes	182	89 [48.9]	1.886 [1.138 – 3.124]	0.013
No*	101	34 [33.7]		
Duration of stay				
<=12 months	202	102 [50.5]	2.914 [1.651 – 5.145]	< 0.001
>=13 months*	81	21 [25.9]		

**** Reference category***

If there is no available employer based health facility or if the payment for services is not paid by the employer, there is significant association.

Table 4.6 C: *Association of employer based characteristics with Poor pattern of health care seeking*

Variables	**N**	**Poor pattern (n[%])**	**Crude O.R [95 % CI]**	**P value**
Availability of employer based health facility				
No	216	108 [50]	3.467 [1.84 – 6.531]	< 0.001
Yes*	67	15 [22.4]		
Payment for services by the employer				
Payment not paid	205	100 [48.8]	2.277 [1.303 – 3.981]	0.003
Payment paid*	78	23 [29.5]		

**** Reference category***

Knowledge about the working hours of the health facility and knowledge about government health facility shows significant association.

Table 4.6 D: *Association of awareness factor about health facility with Poor pattern of health care seeking*

Variables	**N**	**Poor pattern (n[%])**	**Crude O.R [95 % CI]**	**P value**
Knowledge about working hours				
Do not know	49	36 [73.5]	4.679 [2.353 – 9.304]	<0.001
Knew the timings*	234	87 [37.2]		
Knowledge about government health facility				
No	120	74 [61.7]	3.743 [2.276 – 6.155]	<0.001
Yes*	163	49 [30.1]		

**** Reference category***

4.3.1 Poor pattern of health care seeking – Model building

Based on the findings from the literature, significance in bivariate analysis; the independent variables for modeling were chosen. In Binary logistic regression, backward LR method was used for model building.

The independent variables that were used for model building are: Age group, Marital status, Monthly income group, Full time work, Place of last residence, First migration, Duration of stay, Availability of employer based health facility, Payment for services by the employer, Knowledge about working hours and Knowledge about government health facility. Any form of morbidity was not included in model building since the dependent variable was constructed along with the morbidity factor. For each of the independent variable its strength of association with the Pattern of health care seeking was given as odds ratio along with the confidence interval after adjusting for other variables.

Table 4.7 A: *Multivariate model on Poor pattern of health care seeking*

Variables	Adjusted O.R	95% CI	P value
Age group (years)			
<=20	16.435	3.778 – 71.497	< 0.001
21 – 30	3.387	0.933 – 12.305	0.064
>=31*			
Duration of stay			
<=12 months	1.907	0.977 – 3.724	0.059
>=13 months*			
Availability of employer based health facility			
No	3.896	1.737 – 8.737	0.001
Yes*			
Payment for services by the employer			
Payment not paid	2.485	1.178 – 5.240	0.017
Payment paid*			
Knowledge about working hours			
Do not know	4.947	2.164 – 11.306	< 0.001
Knew the timings*			
Knowledge about government health facility			
No	3.980	2.151 – 7.365	< 0.001
Yes*			

****Reference category***

A 56.5 percent of Poor pattern of health care seeking had been predicted by the above said predictor variables {p-value [0.028] and Nagelkerke R^2 value [0.414]}.

The five independent variables in the final model : Age group [<=20 years], Non-availability of employer based health facility, payment for services not paid by the employer, Unaware about working hours and about government health facility; found to be significantly associated with Pattern of health care seeking.

4.3.2 Supplementary analysis of predictor variables of Poor pattern of health care seeking

A] Younger age group

From the model it was observed that younger age group of less than or equal to 20 years was significantly associated with Poor pattern of health care seeking. There was a significant association of non-remittance of money and ever use of alcohol among younger age groups; however the use of any form of tobacco was not found significant.

Table 4.7 B: *Supplementary analysis of remittance of money, use of any form of tobacco and consumption of alcohol with Age groups*

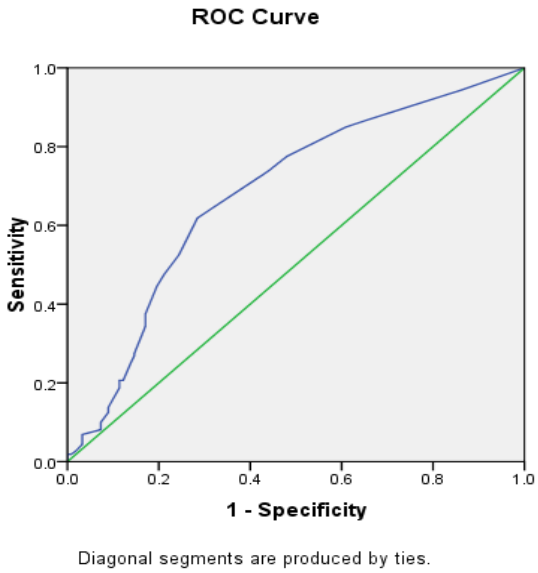
Variables	**Age groups**			**P value**
	<= 20 years [N = 50][%]	**21 – 30 years [N = 203][%]**	**>=31 years [N = 30][%]**	
Remittance of money				
No	13 [26]	34 [16.7]	0 [0]	0.010
Yes*	37 [74]	169 [83.3]	30 [100]	
Use of any form of tobacco				
Yes	44 [88]	181 [89.2]	29 [96.7]	0.405
No*	6 [12]	22 [10.8]	1 [3.3]	
Ever consumed alcohol [N=130]				
Yes	11 [12]	97 [47.8]	22 [73.3]	<0.001
No*	39 [78]	106 [52.2]	8 [26.7]	

****Reference category***
Note: [%]Percentages within the bracket shows column percent

B] Assimilation

Although duration of stay did not have any significant association it is evident that as the duration of stay increases; by the property of assimilation the pattern of health care seeking will become good. ROC curve analysis was attempted to test whether the duration of stay (in months) could be used to predict Good pattern of health care seeking. The area under the curve was 0.683 and this was statistically significant [p value <0.001].

Figure 4.1: *ROC curve for prediction of Good pattern of health care seeking using duration of stay (in months)*



C] Employer related factors

Employer related factors had significant effects on pattern of health care seeking but the difference is not statistically significant. Employer support has influence on pattern of health care seeking beyond the actual care sought: due to better awareness level.

Table 4. 7 C: *Supplementary analysis of Employer related factors with those who reported Any morbidity*

Variables	**Any morbidity & did not seek care (n[%])**	**Any morbidity and sought care (n [%])**
Employer based health facility		
Yes (N = 67)	25 [37.3]	33 [49.3]
No (N = 216)	81 [37.5]	105 [48.6]
Payment for services by the employer		
Payment paid (N = 78)	27 [34.6]	43 [55.1]
Payment not paid (N = 205)	79 [38.5]	95 [46.3]

Note: [%]Percentages within the bracket shows row percent
"No morbidity" data is not shown in the above table

D] Awareness factors about health facility

As the duration of stay at the present place of residence increases, there is a possibility for the respondent to become aware of the surrounding facility as a result of assimilation. Those who were aware about the government health facility had a longer duration of stay [Mean – 15.76 months, SD – 15.002] compared to those who were unaware of the government health facility [Mean – 8.77 months, SD – 7.698] and this difference was statistically significant [p value <0.001]. However the significant association in the multivariate results suggests independent effect of knowledge about government health facility on Poor patterns of health care seeking.

4.4 Determinants of Self-reported morbidity

Self-reported morbidity is a constructed variable; by combining the individual major morbidities like fever (43.8%), cough (40.3%), abdominal pain (28.6%), skin morbidity (26.1%), injury (38.9%) and musculoskeletal morbidity (25.8%) along with whether they sought care when they were ill; was done to cross check the validity of self-reported morbidity to some extent.

Self-reported morbidity is classified into three categories:

- **No morbidity** → percentage of people who consider their health as 'good' and did not report any morbid condition.
- **Any morbidity but did not seek care** → percentage of people who mentioned that they have some form of morbidities, but did not seek care.
- **Any morbidity and sought care** → percentage of people who mentioned that they suffered from morbid conditions and sought care.

Among the self-reported morbidity, 48.7 percent of the respondent suffered from some morbid condition and sought care; 37.5 percent did not seek care, even though they had

morbidities and 13.8 percent reported that they had no morbidity. Except current use of tobacco products none of the other independent variables were significant with self-reported morbidity.

Only 42 percent of respondent of less than or equal to 20 years; who had any morbidity sought care when compared to age group, greater than or equal to 31 years ; 63.3 percent of them sought care. When the state of origin is considered significantly had a lower percent of 5.2 who had no morbidity and a higher proportion of the respondents sought care, about 55.3 percent. While 51.4 percent of the hotel sector sought care compared to 48.4 percent of the construction sector.

Table 4.8 A: *Association of socio-demographic and migration characteristics with the categories of Self-reported morbidity*

Variables [N =283]	**No morbidity (n [%])**	**Any morbidity & did not seek care (n [%])**	**Any morbidity & sought care (n [%])**
Age group			
<= 20	5 [10]	24 [48]	21 [42]
21 – 30	31 [15.3]	74 [36.5]	98 [48.2]
>= 31	3 [10]	8 [26.7]	19 [63.3]
Occupational sector			
Construction sector	36 [14.5]	92 [37.1]	120 [48.4]
Hotel sector	3 [8.6]	14 [40]	18 [51.4]
Full time work			
Yes	16 [12]	50 [37.6]	67 [50.4]
No	23 [15.4]	56 [37.3]	71 [47.3]
State of origin			
Assam	2 [5.2]	15 [39.5]	21 [55.3]
Bihar	4 [7.7]	20 [38.5]	28 [53.8]
Jharkhand	5 [16.6]	11 [36.7]	14 [46.7]
Odisha	12 [22.3]	22 [40.7]	20 [37]
West Bengal	16 [14.7]	38 [34.8]	55 [50.5]
First migration			
Yes	26 [14.3]	69 [37.9]	87 [47.8]
No	13 [12.9]	37 [36.6]	51 [50.5]
Duration of stay			
<= 12 months	27 [13.4]	75 [37.1]	100 [49.5]
>=13 months	12 [14.8]	31 [38.3]	38 [46.9]

[%]Percentages within the bracket shows row percent

Table 4.8 B: *Association of tobacco and alcohol use with the categories of Self-reported morbidity*

Variables [N = 283]	**No morbidity (n [%])**	**Any morbidity & did not seek care (n [%])**	**Any morbidity & sought care n [%]**
Current use of any form of tobacco			
No	7 [24.1]	10 [34.5]	12 [41.4]
Yes	32 [12.6]	96 [37.8]	126 [49.6]
Currently smoke tobacco products*			
No	17 [22.1]	27 [35.1]	33 [42.8]
Yes	22 [10.7]	79 [38.3]	105 [51]
Current use of smokeless tobacco			
No	17 [16.8]	37 [36.6]	47 [46.6]
Yes	22 [12.1]	69 [37.9]	91 [50]
Alcohol use in the past one month [N = 130]			
No	8 [12.9]	26 [41.9]	28 [45.2]
Yes	8 [11.8]	21 [30.9]	39 [5 7.4]

Significant with p-value of 0.045

[%]Percentages within the bracket shows row percent

5. DISCUSSION AND CONCLUSION

5.1 Discussion

This study on interstate migrant labourers in Thiruvananthapuram was done to determine the factors associated with Health seeking behaviour and Self-reported morbidity pattern and also aimed to bring out the adverse habits that affect health, which are prevailing among this population.

The estimated Poor pattern of health care seeking in the study was 43.5 percent, which is not a major fraction, but on the contrary the overall morbidity profile was estimated at 86.2 percent; which is considerably very poor and mainly accounts the occupational morbidity, which needs immediate attention. The study was a cross sectional study; using structured interview schedule and self-reporting was the basis for data collection. Being a cross sectional design the study could only identify the problems at that point of time and since the population characteristics change over time; the ground realities may be somewhat different. The target group being a mobile population, making follow up studies was difficult and a cross sectional study could generate data on the entire migrants under study. Recall bias was a common problem in the study especially in the case of reporting morbidity. The problem of recall bias was reduced to an extent by cross validating the self-reported morbidity with visit to the health facility.

Please Note: Literatures for discussion were restricted mainly to studies from Kerala, India and other developing countries of the world.

5.1.1 Baseline characteristics of the study population

The study was conducted among 283 interstate migrant labourers in Thiruvananthapuram district. All the respondents in the present study were males, and majority of them belonged to younger age group. It was difficult to get female subjects for this study; the reasons might be the same as the study done by Saikia[26] However one of the study indicates that more than half of the interstate migrant workforces are formed by women and constitute more than one third in construction.[59]But another study put forward the fact that share of males in interstate migration is more when compared with females.[61]

Women migrants in India are often classified as 'associated migrants' with their male counterpart.[37] In this present study lack of female representation can be due to the fact that majority; 71.4 percent of the migrants are currently single or migration to Kerala may be considered as long distance from the source station, which women may not prefer or another possibility is that the women migrants may be working as house maids; which was not part of this study setting. Majority of about 87.6 percent of migrants were working in construction sector in the present study. Based on literatures construction sector is considered as the largest sector in India after agriculture.[59]

Majority of the migrants were from West Bengal and migrants were also from states like Bihar, Odisha, Assam and Jharkhand. Tamil migrants, which forms a major section of workforce in Kerala was absent in the sample; might be due to the fact that migrants from one area stay together because of their social networks or in the respective field study area, migrants from other states were absent. More than half of the migrants were having their first migration; cause problems of acclimatization with the destination site. Rural to urban migration was dominating and more majorities of the migrants, the place of last residence was rural. Migration for employment was the major reason and friends circle

played a major role in migration; indicating the importance of close knitted networks. The above said findings; more or less, is consistent with Saikia study[26]. More than three fourth of migrants remit their money; may be due to the opening of special counters on specific days in banks for cash transaction[62] that facilitates easy remittance.

5.1.2 Poor pattern of Health care seeking

Estimated poor pattern of health care seeking was 43.5 percent. The outcome variable – "Poor pattern of health care seeking"; constructed variable was formed based on responses to three dimensions of health care seeking behaviour: awareness about the nearest health care facility, seek care at medical facility or drug store/self-care, and seek care when the person is ill.

The percentages of migrants who seek care at drug store and government hospitals, when they are sick are 28.6 and 22.3 percent respectively in the current study. These findings holds true since in one of the study, about the labour migration to Kerala the corresponding percentages were 29.8 and 20.7 percent.[24] Why people prefer drug store, may be due to the fact that they do not want to take leave for seeking care, no formalities of patient admission, no waiting hours and less chance of language barriers.

- The study suggests that younger migrants had poor patterns of health care seeking; which can be due to reasons as suggested in one of the study that migrants hardly invest their money and spend most of their money in buying consumer durables, mobile phones, music players[26] etc. which are of great interest for the youth. Significant association was found with non-remittance of money and ever use of alcohol among young migrants which further proves the fact.

- Even though duration of stay in the present place of residence missed the significance level by few points, duration of stay fits in the model. From the ROC curve analysis, as the duration of stay increases there is a possibility that the pattern of health care seeking transform from poor to good as they get to know more about the facilities available at the destination.
- Employer related factors such as availability of employer based health facility and payment for services by the employer had significant association with poor pattern of health seeking behaviour. Although there was no insurance like system prevailing among the study population; but in the present study it is observed that if the payment for services were paid by the employer more than half of the migrants sought care when they had any morbidity; this finding is in accordance with a south China based study, done at Shenzen brings out the fact that utilisation pattern differ between insured and uninsured workers and insurance status was found significant.[35] When further analysis was done to find the employer related factors with those who reported any morbidity, there was no significant difference. Employer support has an influence on Pattern of health care seeking, beyond the actual care sought; may be due to better awareness level.
- If the migrant had no knowledge about the government health facility or about the working hours of the facility; there was significant association with poor pattern of health care seeking. Here the major factor that acts as a proxy for the knowledge or awareness level was the 'duration of stay'. From the study it is clear that those who were aware about the government health facility had longer duration of stay in months compared to those who were unaware about the government health facility had shorter duration of stay in months

Duration of migration & Assimilation

Duration of migration is an important dimension in migration, but literatures discuss much less than what is expected. In this present study duration of stay was an important determinant for the pattern of health care seeking behaviour. By the process of assimilation as the duration of stay increase, the migrants come to know about the surroundings and get mingle with the environment. This results in the up-gradation of knowledge and awareness among the migrants about the available health facility, which can have a positive impact on the pattern of health care seeking.

5.1.3 Self-reported Morbidity

The self-reported morbidity in the study was assessed by commuting visit to the health facility with morbidity profile to validate the self-reported morbidity. Thus three categories of self-reported morbidity were identified: No morbidity, Any morbidity but did not seek care and Any morbidity and sought care.

Overall morbidity profile of the migrants was poor; only 13.8 percent of the respondent had no morbidity. This finding is in accordance with the study on labour migration to Kerala where the percentage of migrants who did not had any disease was 13 percent.[24] In the study those who had fever and cough were 43.8 and 40.3 percent respectively. Respiratory morbidity [45.6 percent] and skin morbidity [26.1 percent]; consist mainly rashes, allergies, cement dust allergies and sun burn patches in the skin. Gastrointestinal tract morbidity [40.6 percent]; consist mainly of abdominal pain, nausea/vomiting, burning sensation in the stomach and gas problems. Ophthalmic morbidity [18 percent]; includes watery eyes and redness of eyes was a major finding at the construction sector. Migrants working in the construction sector had a higher proportion of musculoskeletal morbidity when compared to hotel sector workers. Injuries [38.9 percent]; form an

important segment of morbidity, indicating the importance of occupational safety among workers. Many of the studies report these kinds of similar morbidity findings[45-48], but in the present study the higher prevalence of morbidity can be due to continuous or full time exposure to occupation. During the survey working overtime and working on holidays was a common finding.

5.1.4 Adverse health habits

More than three fourth of the migrants currently use tobacco in any form, which was exceptionally high. Stress was identified in one of the study as the major risk factor for smoking.[53] The current use of both forms of tobacco was found high. The consumption of tobacco was common with the company of friends and close to one fourth of the migrants consumed alcohol in the last one month. In studies, the reason behind the use of tobacco and alcohol among migrants were identified; use of tobacco particularly chewing tobacco and alcohol was considered as the only leisure activities available.[55]During the field survey many migrants complained of the lack of migrant friendly places for get together in the city and the only means of recreation for them were drinking alcohol and tobacco use; which might be the reason for high consumption.

5.2 Strengths of the study

1. Study is unique in nature, which helps us in identifying the patterns of health care seeking and other related issues; further provides some valuable insights into the migrant's health.
2. Study is first of its kind in this setting, as interstate migration becomes an integral part of Kerala.

3. Study brings out the high percentage use of smokeless tobacco when there exist a ban on all products of chewing tobacco by the Government of Kerala; therefore help us in identifying the loopholes of policy implementation.
4. Study could identify the streams of migration, which further affects health seeking behaviour.
5. Study identifies the morbidity profile of migrants and recognizes the need for addressing the complete health profile of migrants rather than focusing on disease control programme.

5.3 Limitations of the study

1. There was no available complete list of the migrants [only the number was available] and could not cover all the areas of Thiruvananthapuram district and could only cover one PHC area.
2. The entire respondents were males. So could not cover areas regarding antenatal, maternal and post natal issues.
3. Tamil migrants, which form a major section of Kerala labour market, were not part of this study.
4. Study included only migrant workers from construction and hotel sector.
5. Issues of self-reported morbidity i.e. recall biases.
6. No physical and clinical measures were undertaken in the study.
7. Lack of a qualitative aspect; which could have provided an effective foundation for probing the relevant findings much deeper.

5.4 Recommendations

Policy development and recommendations in the near future should be carried out after analyzing the problems with the key stakeholders: the health system, labour department, employers and the migrants as well as formulating an integrated approach.

Recommendations from the study results come under five basic headings.

A] Recommendations for the Health system

A major policy focus should be driven to ensure better health facility for the migrants. Enhance visit by health workers, registering migrant settlement at Sub center level, monitoring and supervisions by Medical officers, expansion of current facilities in community health centers and design health programs and interventions which are culturally sensitive to integrate migrants with in the health system. Health system should have continuous and periodic surveillance mechanisms, which could identify emerging infectious diseases. The health system can create awareness among migrants by incorporating institutions like banks, post office, hotels and small shops using translated custom made posters containing health awareness messages.

B] Recommendations for the Labour department

Rather than recommendations the Labour department of the government of Kerala should be praised for the good gesture for implementing labour cards and ensuring the registration of migrant workers. One of the major sections where the labour department has to focus: implementation of a uniform safety standards and norms for the migrants at the worksite. Injuries which were found as one of the major occupational morbidity should be given priority and strict safety norms should be practiced.

C] Recommendations for the employers

The employers should provide work place safety by providing safety equipment and should give proper training to the migrant workers since majority of them are unskilled labourers. Insurance system should be made mandatory so that the medical expenses can be easily covered. Periodic medical camps and awareness campaigns should be organized by the employer in conjunction with hospitals in the locality. Full address proof of the migrants should be kept mandatory by the employer.

D] Recommendations for the migrants per se

Migrants should make their effort to utilize the existing provision of law and claim their rights. During the process of migration, they should always try to keep contact with their close networks: which are helpful at difficult times. Migrants should seek care when there is any minor morbidity rather than doing self-care or seek care at the drug store. Adverse habits like the use of tobacco and alcohol should be reduced; which can cause serious adverse health habits in the long run as well as carves out the savings of the migrants.

E] Recommendations for further research.

Possibility of further research, which should include health seeking behaviour and morbidity profile of interstate migrants working in various sectors like construction, hotel, street vendors, brick factory etc. Qualitative aspect of the present study can aggravate the present issues more clearly. A continuous survey is needed to update the findings of the study, in order to make fruitful suggestions on improving the morbidity status and health seeking behaviour of the interstate migrant labourers.

5.5 Conclusion

The present study could explain and contributes to our understanding of the factors associated with health seeking behaviour and self-reported morbidity pattern among the interstate migrants. The study brought out younger age, employer related factors and awareness factors about health facility as the major factors that can lead to Poor pattern of health care seeking. As the state is concerned, migrant's health deterioration can in turn affect the state health indicators; this is a major concern and challenge of the Kerala public health system. The study tried to explore various migration characteristics on the pattern of health care seeking and even identified major occupational morbidities prevailing among them. This study should be treated as a novel innovative beginning towards further research which will further strengthen the needs of migrant labourers from all possible perspective. More or less the factors associated with Poor pattern of health care seeking and major occupational morbidities was 'brought to light' by the study.

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ANNEXURE –I

CONSENT FORM

Subject Information Sheet

Namaskar

I am Dr. Sreejini J, doing my second year Master of Public Health (MPH) at Achutha Menon Centre for Health Science Studies, Sree Chitra Tirunal Institute for Medical Sciences and Technology, Thiruvananthapuram. As part of my thesis I am doing a study on the Factors associated with the Health seeking behaviour and Self-reported morbidity pattern among the Interstate migrant labourers in Thiruvananthapuram district.

Purpose of the Study:

Migration, the movement of person or group of person from one place to another is a common practice in today's world. Migrants represent potentially vulnerable population in relation to the health needs. Recently there is a higher increase in the number of Interstate migrant labourers to Kerala. Labour migrants have poor access to health care services, often exposed to poor unsafe working condition leading to much occupational related morbidity. The use of Tobacco and alcohol is found to be increasing among the interstate migrant labourers which need attention. The study is designed with the following objectives:

1. To study the factors associated with the Health seeking behaviour and Self-reported morbidity pattern among the Interstate migrant labourers in Thiruvananthapuram district.

2. To document existing adverse habits like the use of tobacco and alcohol, that affects the health of the Interstate migrant labourers in Thiruvananthapuram district.

Duration of Subject participation:

I will be asking some questions related to your social and demographic characteristics, related to self-reported morbidity pattern, health seeking behaviour and some questions on Tobacco and Alcohol use. This will take up to 30 minutes of your valuable time.

Risk or Discomforts:

Participation in the study does not impose any risk to health. Some question on the use of tobacco and alcohol will be asked.

Benefits:

There is no direct benefit for you from this study but your valuable information will help in the benefits of the future migrant labourers who come to the city. This information will help in bringing out strategies that improves the health of the Interstate migrant labourers.

Confidentiality:

The confidentiality of the data provided will be maintained. Your personal identity will not be revealed to anyone. The information provided by you will not be shared with anyone not involved in the study. All the copies of filled interview schedules and consent forms will be kept under the custody of principal investigator and will be destroyed when they are deemed no longer needed.

Voluntariness:

Your participation in the study is voluntary and you can withdraw from the study at any time and refusal to participate will not involve any form of penalty.

If you have any questions about this study you may contact me or the IEC member secretary. Thanking you.

Dr. Sreejini J
808908805

Dr Anoopkumar Thekkuveettil
0471-2520256/257

CONSENT STATEMENT

The nature of the study has been explained I confirm that, I understood the information provided above. I am willing to take part in the above study by signing / providing thumb impression on this consent form. I understand that my participation is voluntary and I can withdraw my participation at any time during the interview without any explanation.

Serial Number: Date:

Name of the Participant: Signature / Thumb impression

DETAILS OF WITNESS

Name of the Witness: Date:

Signature of the Witness:

Name of the Investigator: Date:

Signature of the Investigator:

CONSENT FORM FOR THE INTERPRETER (IF NEEDED)

I am willing to take part in the study by interpreting the language of the interview schedule.

Name: Date:

Address:

Signature:

ANNEXURE – II [Interview schedule]

Factors associated with the Health seeking behaviour and Self-reported morbidity pattern among the Interstate migrant labourers in Thiruvananthapuram district.

Interview schedule given by ☐ The Respondent Serial Number: -------

☐ The Interpreter Date: ----------

Cluster Code ☐ Cluster Number ☐

A) SOCIO-DEMOGRAPHIC INFORMATION

Sl No.	***Questions***	***Response***	***Code***
1.	Age of the respondent	------ years	SD1
2.	Sex	Male ☐ 1 Female ☐ 2	SD2
3.	What is your Marital status?	Single ☐ 1 Married ☐ 2 Widow/Widower ☐ 3 Divorced/Separated ☐ 4	SD3
4.	What is your Educational qualification?	No formal education ☐ 1 Primary ☐ 2 Upper primary ☐ 3 High school & above ☐ 4	SD4
5.	What is your current occupation?	Construction labourer ☐ 1 Supervisor ☐ 2 Hotel employee ☐ 3 Street vendor ☐ 4 Others ☐ 5 Others (specify)----------	SD5
6.	What is your average current income per day?	Rupees ----------/day	SD6
7.	In a normal month (30 days) how many days do you work?	----------days	SD7
8.	For the past one year do you have continuous/ full time work throughout the year?	No ☐ 0 Yes ☐ 1	SD8
9.	Place of birth.	Village/ Rural ☐ 1 Town/ Urban ☐ 2	SD9A
		District	SD9B
		State	SD9C

10.	Is this your first migration?	No ☐ 0 Yes ☐ 1	SD10
11.	Place of last residence.	Village / Rural ☐ 1 Town/ Urban ☐ 2	SD11A
		District	SD11B
		State	SD11C
12.	What is the duration of stay at the present place of residence since migration?	---------- months	SD12
13.	What is the reason for migration?	Work/Employment ☐ 1 Others ☐ 2 Others (specify) ----------	SD13
14.	How did you come to know about the opportunities in this place?	Friends ☐ 1 Relatives ☐ 2 Agencies ☐ 3 Others ☐ 4 Others (specify) ----------	SD14
15.	Who helped you in migrating to this place?	Friends ☐ 1 Relatives ☐ 2 Self ☐ 3 Agencies/Contractors ☐ 4 Others ☐ 5 Others (specify) ----------	SD15
16.	How frequently did you visit your native place in the past one year?	Did not visit ☐ 1 Monthly ☐ 2 Once in 6 months ☐ 3 Yearly once ☐ 4 Once in 2 years ☐ 5 Others ☐ 6 Others (specify) ----------	SD16
17.	When do you visit your native place?	During festive seasons ☐ 1 For treatment purposes ☐ 2 For family affairs ☐ 3 When need arises ☐ 4 Others ☐ 5 Others (specify) ----------	SD17
18.	Do you send/remit money to your home?	No ☐ 0 Yes ☐ 1 *[If response is **No** skip Q No.18]*	SD18
19.	How much money do you send to your home on a monthly basis?	----------	SD19

B) INFORMATION ON SELF REPORTED MORBIDITY PATTERNS

20.	Did you suffer from any illness that developed within the past 15 days?	No ☐ 0 Yes ☐ 1			SRM1
21.	Do you suffer from any long term illness for the past 1 year?	No ☐ 0 Yes ☐ 1 Don't know ☐ 2 *[If response is **No** / **Don't know** skip Q No.21]*			SRM2
22.	If Yes, have you had any acute exacerbation of the long term illness within the last I month?	No ☐ 0 Yes ☐ 1			SRM3
23.	Did you suffer from any of the following diseases listed below within the past 30 days?				
23A.	Fever	No ☐ 0 Yes ☐ 1 *[If response is **No** skip Q No.22B]*			SRM4
23B.	Do you suffer from intermittent fever?	No ☐ 0 Yes ☐ 1			SRM5
23C.	Headache	No ☐ 0 Yes ☐ 1			SRM6
23D.	General body pain	No ☐ 0 Yes ☐ 1			SRM7
23E.	**Respiratory problems** like *[Please tick the appropriate boxes]*		No -0	Yes -1	SRM8
		Cough			
		Breathing difficulties			
		Asthma			
		Others (specify)			

23F.	If you are suffering from cough what is the duration of it?	Less than 2 weeks ☐ 0 More than 2 weeks ☐ 1			SRM9
23G.	**Skin problems** like *[Please tick the appropriate boxes]*		No -0	Yes -1	SRM10
		Rashes			
		Allergies			
		Others (specify)			

23H.	**Gastro intestinal tract diseases** like *[Please tick the appropriate boxes]*		No – 0	Yes - 1	SRM11
		Abdominal pain			
		Diarrhoea			
		Constipation			
		Nausea/Vomiting			
		Loss of appetite			
		Peptic ulcers			
		Others (specify)			

23I.	Injuries/Fractures/Burns *[Please tick the appropriate boxes]*		No -0	Yes -1	SRM12
		Injuries			
		Fractures			
		Burns			
23J.	**Cardiovascular problems** like *[Please tick the appropriate boxes]*		No -0	Yes -1	SRM13
		Chest pain			
		Raised blood pressure			
		Others (specify)			

23K.	Diabetes	No ☐ 0 Yes ☐ 1			SRM14
23L.	**Musculoskeletal disorders** like *[Please tick the appropriate boxes]*		No -0	Yes -1	SRM15
		Backache			
		Joint pain			
		Others (specify)			

23M	Problems with eye	No ☐ 0 Yes ☐ 1			SRM16
23N.	Problems with ear	No ☐ 0 Yes ☐ 1			SRM17
23O.	Urinary tract infections	No ☐ 0 Yes ☐ 1			SRM18
23P.	Dental diseases like *[Please tick the appropriate boxes]*		No -0	Yes -1	SRM19
		Tooth ache			
		Mouth ulcers			
		Others (specify)			

23Q.	Do you have any other diseases other than mentioned above?	No ☐ 0 Yes ☐ 1 Yes (specify) ----------			SRM20
24.	Are you currently taking any medication?	No ☐ 0 Yes ☐ 1 *[If response is **No** skip Q No.24]*			SRM21

25.	If yes specify the purpose of the use of medication?	----------	SRM22
26.	Have you had any hospitalization over the past 1 year?	No ☐ 0 Yes ☐ 1 *[If response is **No** skip Q No. 26& 27]*	SRM23
27.	For which of the following reasons were you hospitalized?	For treatment/observation ☐ 1 For Surgical procedures ☐ 2 Others ☐ 3 Others (specify) ----------	SRM24
28.	What is the duration of stay of most recent hospitalization?	---------- days	SRM25

C) INFORMATION ON HEALTH SEEKING BEHAVIOURS

29.	Are there any health facilities near your stay/work?	No ☐ 0 Yes ☐ 1 *[If response is **No** skip Q No. 29]*	HSB1
30.	Which all are the health facilities that are available near your stay/work?	Government hospital ☐ 1 Private hospital ☐ 2 Private clinics / Nursing homes ☐ 3 Private doctors ☐ 4 Local practitioners ☐ 5 Don't know ☐ 6 Others ☐ 7 Others (specify) ----------	HSB2
31.	When you are sick where do you seek care? *[please take only one response]*	Government hospital ☐ 1 Private hospital ☐ 2 Private clinics / Nursing homes ☐ 3 Private doctors ☐ 4 Local practitioners ☐ 5 Medical/Drug store ☐ 6 Self-care ☐ 7 No treatment ☐ 8 Others ☐ 9 Others (specify) ----------	HSB3
32.	Is this a company / employer / contractor based treatment facility?	No ☐ 0 Yes ☐ 1	HSB4

33.	Is it necessary that you should go to the company / employer / contractor based treatment facility first?	No ☐ 0 Yes ☐ 1	HSB5
34.	Do you need the permission of the company / employer / contractor to visit any other treatment facility?	No ☐ 0 Yes ☐ 1	HSB6
35.	Did you visit any health facility in the last 30 days?	No ☐ 0 Yes ☐ 1 *[If response is **No** skip Q No. 35, 36]*	HSB7
36.	How many times did you visit the health facility in the last 30 days?	----------	HSB8
37.	Did anyone accompany you to the health facility?	No ☐ 0 Yes ☐ 1	HSB9
38.	Who normally accompanies you to the health facility?	Local help ☐ 1 Friends ☐ 2 Relatives ☐ 3 Contractors ☐ 4 Others ☐ 5 Others (specify) ----------	HSB10
39.	How do you normally travel to the health facility?	By walking ☐ 1 Public transport ☐ 2 Auto-rickshaws ☐ 3 Own vehicle ☐ 4 Others ☐ 5 Others (specify) ----------	HSB11
40.	How long does it take you to travel to reach the health facility?	---------- minutes	HSB12
41.	Do you know about the working hours of the health facility?	Knew the timings ☐ 1 Don't know ☐ 0 *[If response is **Don't know** skip Q No. 41]*	HSB13
42.	Are the health facility timings convenient for you?	No ☐ 0 Yes ☐ 1	HSB14

43.	What services do you receive at the health facility?	Examined by Doctor ☐ 1 Examined by Nurse /Other staff ☐ 2 Received medicines / Injections ☐ 3 Diagnostic test ☐ 4 Referred to another Hospital ☐ 5 Admitted ☐ 6 Education/Counselling ☐ 7 No treatment ☐ 8 Others ☐ 9 Others (specify) ----------	HSB15
44.	Do you have to pay for the services?	No ☐ 0 Yes more than 1Rupees ☐ 1 Yes 1 Rupees ☐ 2 *[If response is **No** skip Q No.44]*	HSB16
45.	How much did you pay per visit?	Less than Rupees 500 ☐ 1 Rupees 500 to 1000 ☐ 2 More than Rupees 1000 ☐ 3	HSB17
46.	Do your company/ employer/ contractor pay for your health expenditure?	No ☐ 0 Yes ☐ 1	HSB18
47.	Have you taken any leave from job for visiting the health facility?	No ☐ 0 Yes ☐ 1 Some times ☐ 2	HSB19
48.	Did you have any delay in getting the health care?	No ☐ 0 Yes ☐ 1 Some times ☐ 2	HSB20
49.	What all are the problems you faced while accessing health care?	Lack of money ☐ 1 Health facility located faraway ☐ 2 Longer waiting periods ☐ 3 Unavailability of free Medicines ☐ 4 Language barrier ☐ 5 Bad behaviour from the service Provider ☐ 6 No problems ☐ 7 Others ☐ 8 Others (specify) ----------	HSB21
50.	Are you satisfied with the health facility?	Not satisfied ☐ 0 Satisfied ☐ 1	HSB22
51.	Have you ever been referred to any higher health facility?	Not referred ☐ 0 Referred ☐ 1 *[If response is **Not Referred** skip Q No. 51,52 &53]*	HSB23
52.	If Yes where have you been referred to?	----------	HSB24

53.	If referred, did you seek care at the referral health facility?	No ☐ 0 Yes ☐ 1 *[If response is **Yes** skip Q No. 53]*	HSB25
54.	What are the reasons for not seeking care at the referral health facility?	----------	HSB26
55.	Have you ever visited any other health facility for the same complaint?	No ☐ 0 Yes ☐ 1 *[If response is **No** skip Q No. 55 & 56]*	HSB27
56.	If 'Yes' specify the health facility.	----------	HSB28
57.	What are the benefits of the new health facility?	Less waiting hours ☐ 1 Good behaviour from service providers ☐ 2 No language barrier ☐ 3 Nearness of the health facility ☐ 4 Less money needed ☐ 5 Availability of free medicines ☐ 6 No benefits ☐ 7 Others ☐ 8 Others (specify) ----------	HSB29
58.	Do you know about the government health facility?	No ☐ 0 Yes ☐ 1 *[If response is **No** skip Q No. 58 & 59]*	HSB30
59.	Do you seek treatment at the government health facility*?	No ☐ 0 Yes ☐ 1 *[If response is **Yes** skip Q No. 59]*	HSB31
60.	If No what are the reasons for not seeking treatment from a government health facility?	----------	HSB32

D) INFORMATION ON TOBACCO AND ALCOHOL USE

61.	Do you currently smoke any tobacco products?	No ☐ 0 Yes ☐ 1 *[If response is **No** skip Q No.61, 62 & 63]*	TA1
62.	Which of the following tobacco products do you smoke?	Cigarette ☐ 1 Bidi ☐ 2 Others ☐ 3 Others (specify) ----------	TA2

63.	Do you currently smoke tobacco products daily?	No ☐ 0 Yes ☐ 1 *[If response is **No** skip Q No. 63]*	TA3
64.	How many of the following do you smoke each day?	Cigarette ----------/day Bidi ----------/day Others ----------/day	TA4
65.	Do you currently use any smokeless tobacco products?	No ☐ 0 Yes ☐ 1 *[If response is **No** skip Q No.65, 66 & 67]*	TA5
66.	Which of the following smokeless tobacco products do you use?	Paan Masala ☐ 1 Paan ☐ 2 Gutkha ☐ 3 Khaini ☐ 4 Snuff ☐ 5 Multiple products ☐ 6 Others ☐ 7 Others (specify) ----------	TA6
67.	Do you currently use smokeless tobacco products daily?	No ☐ 0 Yes ☐ 1 *[If response is **No** skip Q No.67]*	TA7
68.	How many times a day do you use smokeless tobacco?	----------/day	TA8
69.	In which of the following situations do you frequently use tobacco?	At workplace ☐ 1 During relaxing hours ☐ 2 Company of friends ☐ 3 Feeling anxious or Stressed ☐ 4 After meals ☐ 5 After getting up in the morning ☐ 6 Others ☐ 7 Others (specify) ----------	TA9
70.	Did you initiate the use of tobacco after coming to this city?	No ☐ 0 Yes ☐ 1	TA10
71.	For how long are you using the tobacco products?	Less than 5 years ☐ 1 5 to 10 years ☐ 2 More than 10 years ☐ 3	TA11
72.	Have you ever consumed an alcoholic drink?	No ☐ 0 Yes ☐ 1 *[If response is **No** skip Q No.72 & 73]*	TA12

73.	Have you consumed an alcoholic drink within the past one month?	No ☐ 0 Yes ☐ 1 *[If response is **No** skip Q No. 73]*	TA13
74.	During the past one month, how many standard alcoholic drinks did you have during one drinking occasions?	----------	TA14

Outcome of the Interview	**Completed** ☐ **Incomplete** ☐
Reasons for incompleteness	
Name of the Interviewer	
Signature of the Interviewer	
Date	