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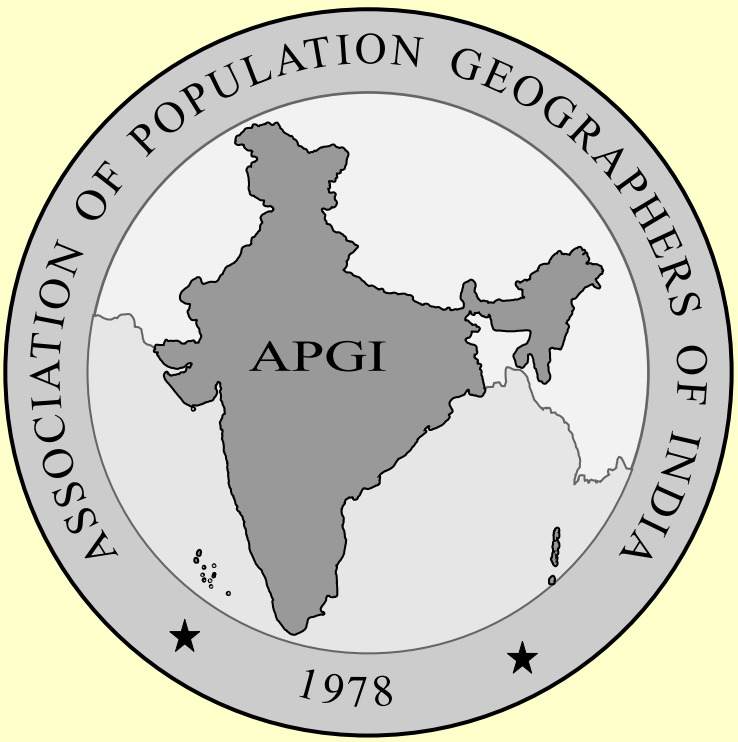

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Editorial Note

The contributors of papers in this number are a mix of young and mature scholars from geography. In this number, the diverse themes covered include the study of interstate migration of construction workers between the two Indian states having different cultural and linguistic backgrounds, household-level food security in a hill-tribal region of Maharashtra, emigration, remittances and rural development in Goa, nutritional status of the child population in the Indian Hill States, and safety perceptions of women hostellers at Panjab University, Chandigarh. Covering three spatial scales and diverse themes, research papers included in this number leave several important messages of theoretical, methodological and applied nature. The authors put the traditional and modern techniques of data analysis and interpretation into service.

In the fourth edition of Geo-Reflections, Professor Samantha shares her views on gender perceptions and politics in Indian Geography. Touching upon various issues linked with gender geography in India, she leaves enough food for further debate and discussion on the theme. Finally, I express my sincere gratitude to the Members of the Executive Committee of the Association of Population Geographers of India (APGI) and the Editorial Board of Population Geography for their unqualified help and support in discharging my duties as the Editor. My special thanks are to Professors K.R. Dikshit, Gopal Krishan, Nina Singh and Mr Mohan Singh for their encouragement, help, support and guidance.

Surya Kant
Editor

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Well-being and Susceptibility of Interstate Migrants in India: A Study of Kerala's Migrant Construction Workers from West Bengal

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Abstract: Socio-economic disparity in spatial development in a vast country like India catalyses interstate labour migration, transposing thousands of migrant workers into unfamiliar cultural and social settings. Focusing mainly on migrant construction workers from West Bengal moving to Kerala, this article examines the well-being and susceptibility of Bengali migrants. Based on a field survey in Kerala, the study shows that Bengali migrant workers in construction activities get the highest wage rate in India. The majority of them find work regularly. Most Bengali migrants reside in rented accommodations in place of construction sites, as confirmed by many other micro-studies in India. The language barrier among Bengali migrants is a huge problem. It increases Bengali migrants' vulnerability, particularly in finding jobs, bargaining power for equal wages, and accessing Kerala's public health care system.

Keywords: Migrant workers, Kerala, Language barriers, Living conditions, West Bengal

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Introduction

In India, internal labour migration happens on a large scale. According to the Census of India, 33.0 million people had migrated for employment-related reasons in 2001, and the number further increased to 51.0 million by the 2011 Census. The disparities in economic opportunities between and within states catalyse the migration of people from one place to another in search of employment (Deaton and Drèze (2002). Recent years saw a sharp increase in rural-urban migration, with young men travelling in large numbers to work in construction and urban services in the expanding informal sector (Srivastava and Bhattacharyya, 2003). Male migrates to work as semi-skilled and unskilled workers, primarily contractual labour in various service and informal sectors (Kar, 2019). They work in unsafe worksites in manufacturing activities ranging from construction and brick kilns to rural harvesting operations (ILO, 2017). In particular, the construction sector, notorious for its poor working conditions and low wages, is dominated by seasonal migrants (Datta, 2020). The recent Covid-19 pandemic has had a more significant impact on the lives of migrant labourers across the country, losing their jobs and incomes and becoming stranded in distressing conditions in destinations far away from their homes. The subsequent lockdown imposed by the central and various state governments to slow down the pandemic spread created an unprecedented humanitarian crisis for *internal* migrants, revealing the vast magnitude of invisible and vulnerable migrants in India's workforce across cities and states (Srivastava, 2020).

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Therefore, migrants' working and living conditions, especially at the destination, are always a serious concern because of losing the local support enjoyed in their native places. Solanki (2002) has observed that, for migrants, the tenure of work in industries like construction is unpredictable, leaving them insecure about income and employment. The pay, time, and working hours depend upon employers, who do not provide them anything more than minimum subsistence wages and unacceptable working conditions (Lall, Selod and Shalizi, 2006). Long and flexible working hours combined with low salaries characterise the seasonal migration in India (Singh and Iyer, 1985; Krishnaiah, 1997). Srivastava and Sutradhar (2016) found that migrant construction workers work in poor conditions in the National Capital Region, Delhi. Besides, workers in the informal sector are often thrown out of their jobs without being paid (Mukherjee et al., 2009). Moreover, the unequal wage rate between migrant and local labourers is a vital issue examined in many migration studies.

In migration studies, the living conditions of migrant workers have also been examined. Srivastava and Sutradhar (2016) observed that the migrant construction workers in the National Capital Region, Delhi are impoverished and live mainly in the slums. In a study, Naraparaju (2014) found that about 75.0 per cent of migrants in Navi Mumbai reside in kutcha and semi-pucca houses. The living conditions of the migrants in Bangalore city were deplorable as most migrant workers stay in small sheds, either on the construction sites/basement or on neighbouring vacant sites or the roadside (Premchander et al.,2014). The migrants' susceptibility, defined as a state of being exposed to vulnerability or danger or abuse (Chaterjee, 2006), is another pertinent issue examined in migration studies. A combination of factors at the place of destination complicates the vulnerability, premised on the alien status of the migrants (Borhade, 2011).

The rationale of the study:

According to the latest census data (2011), India has recorded 37.6 per cent of its total population, i.e. 455 million people as migrants, nearly seven percentage points more than the previous census year (2001). Of this total, almost 68.0 per cent constitute female migrants, mostly moving after the marriage and nearly 24.0 per cent of the male migrants, moving for work or employment, both within and beyond state boundaries.

In India, regional inequalities in employment opportunities among states result in large-scale interstate migration (Deshingkar and Akter, 2009). Interstate migration in India constituted 12.0 per cent of total migration, meaning thereby 54.0 million people crossing state boundaries. Of these, 23 million are male migrants, one-half moving for work/employment. The migration for economic reasons has increased over time and appears to drive the internal migration of men (Nayyar and Kim, 2018). A few well-established long-distance interstate migration streams have been prominent in India, and the various macro and micro studies have highlighted this. Recent studies focusing on Bihar suggest that the out-migration rate has doubled since the 1970s, indicating that migration is now mainly to urban areas as work availability has declined in traditional destinations in irrigated commercial agricultural parts of Punjab (Karan, 2003). Labour migration from Bihar and Uttar Pradesh to Maharashtra is another significant inter-state migration stream in India (see Mukherjee et, 2009; Chandrasekhar and Sharma, 2014; Thorat and Jones, 2013).

Migration to Delhi from far distance states like West Bengal, Bihar, and Jharkhand is a typical migration stream (Mukherjee, 2001). Gujarat is one of the favourite destinations for interstate migrants, especially its linkage with the Orissa (now Odisha) state (Bhagat et al., 2020; Sahu and Das, 2008).

But labour migration to Kerala from distant states like West Bengal, Odisha, Bihar, Uttar Pradesh, Assam and Manipur is a recent phenomenon (Kumar, 2011). Narayana et al. (2013) report that Kerala has a migrant labour population of 2.5 million, projected to rise to 4.8 million in the next ten years. West Bengal holds the largest share of about 20.0 per cent of the total migrant labour force. Since the late nineteenth century, West Bengal, a migrant destination state (Ghosh, 2013), has become a source of male out-migration, especially from its economically and agriculturally depressed areas. Low wages (Reja and Das, 2019), lack of job opportunities (Debnath and Nayak, 2018), underemployment (Dutta, 2019), or debt push migrants from rural West Bengal to other states. The recent West Bengal-Kerala migration stream is one example of this.

In Kerala, the construction sector is booming, attracting construction labour from several states of India. West Bengal contributes the most significant chunk to this labour stream. In Kerala, the phenomenal growth of the construction sector and the state's large remittance flows, mainly from Gulf countries and the progress of IT-related services in urban centres are interlinked (Shameer and Kasim, 2017).

The Bengali migrants come in large numbers to Kerala for construction work, and their socio-economic and cultural milieu significantly differ from that of Kerala. Also, the distance traversed by these migrants is nearly 2,500 km. They face different kinds of adversities and challenges in the new environment. A few and far studies focus on all such issues and problems faced by the construction workers coming to Kerala from rural West Bengal. Hence, there is a need to examine.

Objectives of the Study

In the light of the above statements, the present study examines the social-wellbeing of the migrant labourers from West Bengal after they move to a socially, culturally and linguistically different environment after coming to Kerala state (Kumar, 2011). The vital issue to explore here is how vulnerable these Bengali migrants are in the new milieu? In addition, the effort is to understand to what extent various legal laws enacted by the Government of India successfully safeguard the interest of the Bengali migrant construction workers in Kerala.

Database and Methodology

Based on a primary survey from April to July 2013 in Ernakulam district (Kerala), the study has a sample size of 300 migrant construction workers from West Bengal working in Kerala for a minimum of six months. The survey used purposive sampling and snowball sampling techniques. The author used a structured and pre-coded questionnaire schedule to interview the thirty migrant workers engaged in construction activities to assess their living conditions. In addition, the researcher held two focus group discussions with the migrant construction workers as part of the

study. The author used simple statistical techniques such as mean, median, and standard deviation for data analysis.

The fieldwork was conducted nearly a decade before, in 2013, yet the ground realities have not changed much in the last eight to nine years. Hence, the author believes that the study findings emerging from the present data analysis must be relevant.

Bengali Migrant Workers: Working Conditions

The majority of the 300 sampled Bengali migrant workers in Kerala worked as construction helpers, with nearly 46.0 per cent as masons and the remaining as masons-cum-contractors (Table1). Thus, most Bengali construction workers in Kerala are unskilled labourers. Further, about three-fourths of them were engaged in privately-owned housing construction, indicating the importance of gulf remittances in the housing sector of Kerala state (Azeez and Begum, 2009). Of them, more than one-fourth were involved in the construction of offices, schools, theatres, factories, hospitals etc. Only one per cent of respondents were engaged in making roads, tunnels, bridges, dams, canals etc.

Table 1: Migrant construction classification by different characteristics

Occupation type	Workers No.	Per cent
Mason	137	45.7
Construction helper	156	52.0
Masons-cum-contractors	7	2.3
Nature of Work		
Building private houses	217	72.3
Building offices, cinemas, factories, hospitals, schools etc.	79	26.3
Constructing roads, tunnels, bridges, dams, canals etc.	4	1.4
Number of working days/month		
< 20 days	36	12.0
21-25 days	81	27.0
25-30 days	183	61.0
Nature of work supervision		
Self	34	11.3
Contractor	231	77.0
Big companies	23	7.7
Self/Contractor	12	4.0

Source: Fieldwork, 2013

Similarly, more than three-fourths of such workers were working under contractors. Such a finding conforms with earlier observations of the Gulati Institution of Finances and Taxation (2013), stating that 'having reached Kerala bulk of interstate migrants (66.0 per cent) work under contractors'. Though large numbers of the migrants worked under contractors, they were hardly ever recruited by contractors. Instead, the migrants entered the labour market with the help of their friends, relatives or fellow villagers (Reja and Das, 2019). More than one in ten Bengali migrant workers in Kerala work independently (Table 1).

These migrant workers assemble at a particular place in a market area in the early morning and wait to get picked up for work. Migrants were picked up by both the contractors and the local people. Sometimes, suppose the contractor or the local people hired a particular migrant on a specific day and was happy with his work. In that case, that migrant worker will continue working on the same site/house till the end of construction work. Interestingly, the respondents among migrant workers told the present author that they do not like to work with a contractor, although working under a contractor means more working days regularly. They get far better daily wages from direct contacts than from a contractor. Therefore, several migrant construction workers from West Bengal initially working under a contractor start working through independent connections at the earliest opportunity. However, about 8.0 per cent of respondent workers reported that they worked under big companies and enjoyed the benefits of free accommodation and a regular job but below the wage market rates.

Further, the migrants' monthly income is the outcome of the daily wage rate and the working days in a month. Sixty-one per cent of the total migrants reported 25-30 working days, 27.0 per cent 21-25 working days, and 12.0 per cent less than 20 working days in a month. The mean working days were the highest (27 days) for the migrant workers working under the banner of big companies and contractors and the lowest (24 days) for working on the individual level. As expected, wage rate differentials were the maximum for self-operating migrant labourers and the minimum for those working under the banners of the big companies. Surprisingly, wage rate differentials were also relatively high in the case of migrant workers working under contractors.

Wages: Rates and Frequency of Payment

More than two-thirds (67.0 per cent) of the migrants reported monthly wages received ranged between Rs 400 and 599, and only less than one-third (28.3 per cent) received Rs 600 or more. A small share of less than 5.0 per cent received wages below Rs 400/day (Table 2). The mean daily income of the Bengali migrant construction workers in Kerala is Rs. 516.32, with a standard deviation of 85.22. This wage rate reflects that the Kerala state offers the highest wages for migrant workers in the unorganised sector (Peter et al., 2020; Zachariah and Rajan, 2012). Thus the Bengali migrant construction workers in Kerala are better paid than prevailing rates at their native place or workplace in other parts of India (Reja and Das, 2019).

However, wage rates differ widely between migrant and local workers in construction activities in Kerala. The Bengali migrant workers reported that notwithstanding the similar nature of work, a Malayalee worker is paid an amount of Rs 100-200 more than their counterpart from West Bengal. In a study, Baiju and Shamna (2019) also observed the wage gap between in-migrant and local labourers in the construction sector of Kerala. The failure of migrants to integrate with the local community is the significant reason for their exploitation and discrimination at the hands of employers and contractors (Moses and Rajan, 2012).

However, the migrant construction workers appreciated the wage payment timings. The majority of migrant workers (58.0 per cent) stated that they received their wages at the end of the day. In their own words, '*the best thing in Kerala was that we got wages instantly after cleaning*

the hand (after finishing the day's work).' Only the ten of 300 respondents, making 3.0 per cent of the total, stated that they get their wages every month, while none reporting delayed or nonpayment of wages.

Table 2: Distribution of migrant construction workers by daily wage rates		
Wage rate/day (in Rs)	**Number of respondents**	**Per cent**
below 400	14	4.7
400-499	101	33.7
500-599	100	33.3
600 and above	85	28.3
Frequency of Payment		
Daily	175	58.33
Weekly	115	38.33
Monthly	10	3.33

Source: Fieldwork, 2013

Living and Work Place: Travel mo de and distance

Another critical issue is the distance between the place of living and working. Migrants' workplace frequently changes with the employer's shifts to new work sites. The functional area also gets altered when the migrants change their contractors or employers. Sometimes the migrants also change their living places, changing the distance between the working and living places. Of course, the mode of transport, cost of travel and the journey time are the factors involved.

Table 3: Classification of migrant workers by travel mode, distance, and cost between work and living places					
Distance travel (in Km)	No.	Per cent	Distance travel (in Km)	No.	Per cent
< 2.0	76	27.0	15.0 – 20.0	7	2.5
2.0 – 5.0	33	11.7	> 20.0 km	10	3.5
5.0 – 10.0	92	32.6	**Total**	**282**	**100.0**
10.0 – 15.0	64	22.7			
Travel Mode					
Walking	73	25.9	Bus	169	59.9
Bicycle	15	05.3	Company/contractor own car	25	08.9
Is travel cost charged?					
Yes	169	59.9	No	113	40.1
If charged, borne by					
Self	91	53.8	Contractor/Company	38	22.5
Shared (self and contractor)	40	23.7	Total	169	100.0

Source: Fieldwork, 2013

Except for eighteen respondent migrant workers, all lived in rented accommodations away from their work sites. Of the 282 migrants living in rented accommodation, about two-

fifths (38.0 per cent) lived within a radius of 5 km of their worksites (Table 3). More than half of the sample migrants, i.e. 56 per cent, reported that the distance between their living place and the work area was between 5km and 15 km. Another 5.0 per cent of the sample migrants said they had to travel a distance of more than 15 km to reach their present workplace.

Sixty per cent of the migrants used public buses to get to the work area. Another one-fourth of the migrants mentioned that they used to go to work by walking, whereas about 6.0 per cent of migrants said they used bicycles to go to the working site. The rest of the migrants used to go to the worksite by carriages provided by respective companies or contractors.

Further, 40.0 per cent of migrants did not have to bear any transportation costs since they will to reach the worksite either on foot or by bicycle or by the company-provided vehicles. However, half the migrants mentioned that they had to pay their transportation costs themselves. In contrast, nearly one-fourth of the respondents stated that they and the contractors equally share the transport cost.

Living Conditions of Migrant Construction Workers

The Living condition of the migrants, especially at their destination, are significant and pertinent issues in migration studies. More than 85.0 per cent of the sampled migrants lived in rented accommodations. Another eight per cent lived in the houses provided by the company, and the remaining six per cent lived at the construction site. Most rented rooms are semi-pucca houses of brick walls, cemented floors, tiles, or tin roofing. Two-thirds of migrants lived in these semi-pucca houses, one-story buildings with 4-5 rooms. These rooms are overcrowded. One-third of the total migrants lived in pucca dwellings with two or three-story apartments with many rooms. The owners rent the entire building to the migrants by the building owners. Room rent is slightly higher than the semi pucca rooms. These findings are in sharp contrast to many migration studies that highlighted the deplorable living conditions of the migrant construction workers at their place of destination.

More than half (53.0 per cent) of the respondents shared a room with six to ten persons, one-fourth with one to fifth people and the remaining more than one-fifth with more than ten persons (see Table 4). Thus, the average number of construction workers sharing a room was about nine, a very high room density. GIFT (2013), in a study entitled 'Domestic Migrant Labour in Kerala, reported that "In one of the one-room houses, there were 12 occupants.....all of them slept on the floor". Sharing rooms with others is economical as it helps them minimise their room rent and save money for the home. Most often, the migrants sharing rooms come from the same locality/village in their home state. In 2019, the Kerala Government launched the *Apna Ghar* migrant housing project under the Interstate Migrant Workers' Welfare Scheme (ISMWWS-2010) to provide affordable housing on rent to migrant workers. Such dormitory-style rooms are equipped with cooking, dining and toilets facilities. As most of the migrant workers in Kerala are not registered (Peter et al., 2020), these migrant workers cannot get substantial benefits from this scheme.

Forty-four per cent of the total 257 migrants paying room rent paid an amount between Rs. 400-499, another 41.0 per cent Rs. 500-599 per head per month (Table 4) and the remaining 14.0 per cent between 300-399. The average amount paid as room rent per worker per month is Rs. 468.60 per head per month; most migrant workers paid room rates higher than the average rent.

Table 4: Bengali Migrant Construction Workers: A living arrangement in Kerala

Arrangement type	**No.**	**Per cent**	**Arrangement type**	**No.**	**Per cent**
Rented	257	85.7	Construction site	18	6.0
Company provided houses	25	8.3	**Total**	**300**	**100.0**
Building Materials					
Pucca	97	34.4	Semi-pucca	185	65.6
Persons living per room					
1 -5	70	24.8	11 -15	33	11.7
6 -10	150	53.2	> 15	29	10.3
Room rent/migrant (in Rs)					
300-399	22	8.6	500-599	106	41.2
400-499	112	43.6	600 and above	17	6.6
Source of Fuel					
Kerosene	38	12.7	Diesel	213	71.0
Fuelwood	49	16.3			

Source: Fieldwork, 2013

All the sampled migrants reported having toilets within living premises. The survey, however, revealed that the number of bathrooms is less than the number of occupants. In many cases, there was hardly one or two toilets catering to the need of 20- 25 people. Few people had also complained about the water availability, but not a problem for the majority. The chief source of water is the well. In Kerala, almost all household has a well, and the water is pumped through a submersible pump. The migrants used this water for domestic purposes, including cooking and drinking. The wells are covered with mosquito nets to prevent the fall of leaves from the trees or other things into the well, and chemicals are applied to maintain the wells' water quality.

Most Bengali migrants prepared food in a group. They usually got up early in the morning and started cooking to finish around 7.00 am to finish eating before leaving for work. They also carried the same cooked food for lunch with them. One migrant said that *'Malik'* (contractors or employers) distribute tiffin around 10-11 am. They usually cook rice for breakfast, lunch, and dinner as per their eating habits. Everyone in the group took part in preparing food by turn. For cooking, a portion of the rooms or verandas were temporary kitchens. By and large, migrants used kerosene stoves for cooking. More than 70.0 per cent of the sampled migrants had reported using diesel as cooking fuel. About 13 per cent of migrants used kerosene as a cooking fuel (Table 4). Though diesel was costlier than kerosene at the open market, the easy availability of diesel from pumps encouraged them to use diesel as the principal cooking fuel. About 16.0 per cent of the sampled migrants used fuelwood for cooking purposes.

Migrants' Communication with their Family Members

The frequency of communication indicates the degree of migrants' attachment to their family members. Therefore, this study tries to determine the nature of the Bengali migrants' link with their family members. For this, the migrants were asked about the frequency of their communication bach home with family members, frequency of home visits, and stay duration at the native place from the workplace in Kerala.

Most of the respondents talk on the phone with their families daily. In contrast, a few do the same with a gap of more than a week (Table 5). The migrants, not having their mobile phones, used friends/relatives/fellow villagers' mobiles and paid the charges for that call. In many cases, migrants bought only a SIM card, recharged it, inserted the SIM card into others' mobiles, and then talked with their family members.

About 70 per cent of the sampled migrants said they visited their home once every 3-6 months (Table 5). Another one-fifth of the sample migrants reported visiting home once in more than six months. Considering the distance to be travelled and the cost involved in this long journey to see the native place, the frequency of migrants' home visits is relatively high. It may be because Bengali migrant construction workers leave their families in their native locales (Reja and Das, 2019).

Seventy-one per cent of migrants said that they usually stayed at their native place for only 1-2 months, and another 10.0 per cent mentioned that their waiting period was about 2-3 months (Table 5). On the other hand, about 16.0 per cent of migrants reported a very short stay at home, i.e. less than one month. Thus, the Bengali migrants take a small break and return quickly to their workplace in Kerala. Among the sampled migrants, only 3.0 per cent reported a little longer staying period at home, i.e. about more than three months. Therefore, this migration stream is more of circular migration in nature, working in multiple destinations during their lifetime and returning to their native places (Deshingkar and Anderson, 2004).

Table 5: Communication of migrant construction workers with their family members

Communication frequency	**Number**	**Per cent**	**Communication frequency**	**Number**	**Per cent**
Daily	177	59.0	Once a week	49	16.3
2-4 days a week	65	21.7	In more than a week	9	3.0
Frequency to go home					
Once in 3 months/less	28	9.93	Once in 3-6 months	197	69.86
> Six months	57	20.21			
Stay months in native places					
One month or below	45	16.0	> Three months	7	2.5
1-2 months	201	71.3	Total	282	100.0
2-3 months	29	10.3			

Source: Fieldwork, 2013

Bengali Migrant Workers in Kerala: Language and Health vulnerability

In a vast and highly diverse country like India, intra- and inter-state migration transpose workers into unfamiliar cultural and social settings because of India's physical and socio-cultural diversities (Mahadevia, 2002). In the case of migrants, According to Chatterjee (2006), migrant workers' vulnerability is justified due to differences in culture, language and people between their origin and destination places. In the present case, West Bengal and Kerala, migrants' origin and destination states, markedly differ socially, culturally, and linguistically (Kumar, 2011). For instance, the mother tongue of the migrants' is 'Bengali', an Indo-Aryan family language. In contrast, the mother tongue of Kerala's people is Malayalam, a Dravidian family language. The rural background of Bengali migrants makes things still challenging. They can speak either Bengali or broken Hindi. To better understand the intricacy of the language problem, the author asked the migrants about the difficulty they face in communicating with local people. More than two-thirds of the sampled migrants levelled the language problem as 'very much in dealing with local peoples. Another one-fourth of migrants termed language problems as 'medium'. Only 21 persons thought that language 'was not so much a problem in communication with the local people as they understand the Malayalam language well. Moses and Rajan (2012) also observed that the lack of local language prevents the migrant labour from adequately communicating with the local population. For example, one of the migrant workers shared with this author that on some occasions, the local people who came to hire labour on labour hiring sites did not hire his services because he failed to communicate appropriately in the local Malayalee language. In obtaining access to health facilities in private and public health centres, the language barrier has emerged as the biggest problem for migrants as they cannot express their problems to the doctors.

The poor living conditions, including overcrowding, malnutrition, poor housing conditions, hazardous occupational conditions, low accessibility to health care services, and a low level of awareness, increase the health vulnerability of migrant workers (Borhade, 2011). The Bengali migrant construction workers live in overcrowded rooms and sometimes unhygienic environmental conditions. Thus they are exposed to many health hazards and, more specifically, increase the chance of being prone to infectious diseases. Also, they lacked access to Kerala's public health system. First of all, poor language skill prevents them from going to public health care centres. In the words of one migrant, "*In a public hospital, to communicate with a doctor about the problems was very difficult.*" Secondly, the timings of the government hospital are inconvenient for the migrants. If the migrants have to consult a doctor in a government hospital, they have to forgo a day's work that they generally do not want to do to maximise their earnings. Thirdly, they stated that they seldom got free medicines from public hospitals. These factors collectively discourage the migrants from visiting public health centres or hospitals. Only five per cent of the migrants visit any government dispensary/hospital for treatment. About 30.0 per cent of the migrants preferred to go to private hospitals/clinics (Table 6). According to Kumar (2011), interstate migrants in Kerala depend more on private clinics and hospitals than public hospitals. Almost two-thirds of the migrants brought medicine from medical shops without consulting doctors. Thus, the prevalence of self-medication, which positively impacts individual health and the health care system (Bertoldi et al., 2014), was found among the migrants. The

factors promoting self-medication were operative mainly due to the mild nature of the illness. More than two-thirds of sampled migrants reported fever, headache and cold and cough coupled with a long time spent in queues for doctor's visits and the language barrier support such practice.

The migrants need comprehensive health coverage as they primarily work in the unorganised sector and are vulnerable. The Government of India launched *Rashtriya Swasthya Bima Yojana* (RSBY) in 2008, a health insurance scheme for unorganised sector workers belonging to the BPL category and their family members. However, during the survey, it was observed that no one was aware of such a health scheme. The Kerala Government also launched *the Aawaz Insurance Scheme* in 2016*,* an insurance package designed exclusively for migrant workers which offer health insurance cover of ₹15,000 and an accidental insurance cover of rupees two lakhs. Nevertheless, the majority of the migrant workers in the state are unaware of its existence (Sreekumar 2019).

Table 6: Distribution of medical health care services, migrant construction workers' visits for treatment by management type

Place of Treatment	Number	Per cent
Private hospital	36	12.68
Government hospital	15	5.28
Private clinic	49	17.25
Medical shop	184	64.79
Total	284	100.00

Source: Fieldwork, 2013

State labour laws protect all labourers, including migrants. Some such legal protections and policies included the Minimum Wages Act, 1948; the Contract Labour (Regulation and Abolition) Act, 1970; the Equal Remuneration Act, 1976; the Building and Other Construction Workers (Regulation of Employment and Conditions Service) Act, 1996 and so on. The Inter-State Migrant Workmen (Regulation of Employment and Conditions of Service) Act (1979) Act, enacted in 1976, deals with malpractices associated with recruiting and employing workers who migrate across state boundaries. The Act only covers interstate migrants recruited through contractors or intermediaries and those establishments that employ five or more such workers on any given day. In addition to (ISMW) Act, Kerala launched an Interstate Migrant Workers Welfare Scheme (ISMWWS-2010) in 2010, which has several provisions for the welfare of the migrant workers. The main concerns are safeguarding migrants' right to non-discriminatory wages, travel and displacement and journey allowances, and suitable working conditions.

Though Kerala was the first Indian state to enact a social security scheme for migrant workers (Srivastava, 2020), it has to put much effort into ensuring the legal rights of the migrants. The study found wage differences between Bengali migrants and local labours for the same work, which violated the provision of equal wage under labour laws. In addition, the study also found that the migrants were unaware of displacement allowances or journey allowances under any legal act. However, in this regard, some migrants said that sometimes contractors give money for their journey to their native place. But that amount was neither fixed nor governed by

any Govt. acts, and it was a goodwill gesture. The amount depended on the whim of the contractors.

Conclusions

The Kerala labour market offers a high wage rate and plenty of job opportunities, primarily blue-collar jobs- working as a significant pull factor for the Bengali migrants. Besides, the majority of the migrants were also satisfied with the state's prevailing timely wage payment system.

The majority of the migrants live in rented pucca and semi-pucca type accommodations in place living on construction sites. This finding contrasts with the conclusion of many other micro-studies conducted earlier in India. However, overcrowding was the salient feature of such rented accommodations. A majority of the migrant workers, who worked initially as contract labourers, got regular work later.

The Bengali migrant construction workers are vulnerable on many grounds. They faced severe language problems, preventing them from accessing health care and protecting their rights, making them more vulnerable. Lack of local language skills prevents them from understanding their labour rights, like the right to equality, the freedom to secure work, security schemes, etc. They also cannot take advantage of Kerala's acclaimed public health system and the different health schemes of central and state governments, including the Rashtriya Swasthya Bima Yojana (RSBY) Aawaz Insurance Scheme, etc.

The state government must help the migrant labourers to register under different health schemes and work for information dissemination in the mother tongue of the migrant workers at specific locations for their benefit. After all, Migrant workers are necessary to carry out low-end jobs not performed by the local workers.

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Household Food Security and Coping Strategies in Palghar District, Maharashtra

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Abstract: Notwithstanding the right to food is one of the fundamental human rights; there is striking diversity and disparity in access and availability of food at the household level in India. This situation warrants an in-depth understanding of the scenario at the household level, especially in tribal and remote areas resided by people depending for a livelihood on forest products or subsistence farming in their locale.

The present study picked up Palghar district of Maharashtra to measure household-level food security with the help of data/information collected through fieldwork. Characterized by forested land and tribal population, the district's economy is highly dependent on rainfed subsistence agriculture and forest products. The income level is low and unreliable. For studying food security, the authors conducted a field survey in 2019 to collect data from 808 households distributed in sixteen sampled villages to analyze quantity, severity, frequency, diversity and coping strategies through household food security indicators, namely Daily Calorie Intake (DCI), Household Food Insecurity Access Scale (HFIAS), Coping Strategy Index (CSI) and Food Consumption Score (FCS). The results indicate that a good DCI value reveals high availability of food quantity. However, poor HFIAS, FCS, and CSI values highlight the need to improve access to and diversity of food and coping mechanisms of households to improve the food security of people living there.

Keywords: Household Food Security (HFS), Daily Calorie Intake(DCI), Household Food Insecurity Access Scale (HFISA), Coping Strategy Index (CSI), Food Consumption Score (FCS)

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Introduction

Adequate food and nutrition are basic needs for human growth and development. Most societies prospered due to successful cultivation and proper food security. Despite advances in technology, we have failed to ensure the fulfilment of the basic human need of all on the planet earth. According to FAO (1996), food security is a condition '*when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life*.' Such a condition demands constant efforts that systematically monitor and make provisions for its fulfilment. The ability to conceptualize food security at an adequate depth and breadth as objectives demand is critical to this effort.

Four widely recognized dimensions of food security are *availability, accessibility*, *adsorption (utilization)* and *stability* (see FAO 2008; Webb and Rogers 2003). Food availability refers to the physical accessibility of quality food resources, whereas an individual's endowments allowing her to

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acquire food resources is access to food. Food accessibility stands for both physical and economic access, i.e. affordability factor. Utilization or absorption encompasses nutritional sufficiency and the emphasis put on non-food elements that allow proper food absorption due to hygiene, sanitation, and water supply, among other things. The final component of stability highlights challenges to achieving food security across time for everyone (FAO 1996, 2008). These dimensions make it imperative to use a bag of indicators to assess food security, identifying food-insecure households, individuals and nations rather than relying on a single measure (FIVIMS 2002; Hoddinott 1999; Haddad et al., 1994).

Further, levels of analysis of food security measurement can vary at different spatial scales: global, regional, national, sub-national, local/micro and households. This change from macro to micro levels is testimony to recognizing food security's cultural and geographical specificity (Leroy et al., 2015). This limitation is also reflected in food security indicators, which rely on local specificity, like food varieties consumed, and therefore are not easily comparable across geographies. Further, studies have also moved from quantitative analyses of food security measurement to the study of food security experiences (Maxwell 1996).

Household-level analysis of food security gained prominence in the 1980s with a shift in concern of solely quantity or supply of food available to multidimensionality of the concept, including problems of economic access and nutritional adequacy (Maxwell and Smith 1992). The 'household' is used as the study unit to reflect the collaborative practices enacted at this level. Unlike the rational-individual economic models using a single criterion for decision-making, household-based decisions and strategies emerge from a particular socio-cultural milieu (Wallace 2002; Wheelock and Oughton 1996). While it is a unit of consumption in most cases, one must also be mindful of intra-household disparities in gender, age and other factors (Kabeer, 1994; Niehof, 2011; Sen, 1990).

The household level provides a reliable micro-scale to assess food security dimensions due to the cohesive behaviour of its members. Availability of food and access to it is a pooled phenomenon for household members. Even in crisis times, it is at the household level where coping mechanisms such as food rationing are implemented. As a result, it seems appropriate to do a micro-level analysis at the household level.

Research Objectives

In the light of the above statements, the present study examines food security and coping studies at the household level using multifactorial indices in the Palghar district of Maharashtra state with the following objectives:

1. To measure the quantity of food consumed through DCI and the severity and frequency of problems in accessing food with the help of HFIAS.

2. To assess quality and diversity in food consumption through FCS and coping strategies adopted during food crisis through CSI.

Research Questions

In the light of the above-stated research objectives, the present study attempts to answer the following research questions with the help of data analysis and interpretation:

1. What is the quantity of food consumed (Kcal) by each household?
2. Which are the challenges the households face to access sufficient food regularly? and
3. What are different types of coping strategies adopted by households?

Study Area

Palghar, a newly formed district, is located along the Konkan coast in western Maharashtra. Two-fifths area of the district is under forest cover. The district has a significant share (37.4 per cent) of the tribal population. Four of the eight tehsils in the district have a tribal population of more than nine-tenths of the total. The density of population varies widely across the district. Among the tehsils, Vasai has the highest population density of 2371 persons/km^2. It is distantly followed by Talasari (532), Palghar (438) and Dahanu (336) in the coastal part. Against this, tehsils to the east, Jawahar (219) and Mokkada (170), part of the Sahyadri range, have the lowest densities. The Vikramgad (252) and central Vada (230) have moderate densities. Such a pattern of population density is explained mainly by topographical and rainfall differentials. The tehsils located in the eastern part have hilly terrain and forested areas. Against this, those in the western part have relatively flat topography and fertile lands.

The district, located on the periphery of the Mumbai Metropolitan area, has benefitted from its spillover effect. Palghat is an urban majority district, with more than half (52.2 per cent) population residing in urban areas (Census of India, 2011). However, only a few tehsils have a high concentration of urban population, especially Vasai, a highly urbanized tehsil.

Palghar has more than two-fifths or 42.0 per cent of land area under agriculture. However, the size of landholdings is tiny. Three-fifths of the farmers fall under the marginal farmers' category, having less than one hectare of farmland. The combined share of marginal landholding made only less than one-seventh or 15.0 per cent of the farmland in the district. Agriculture is highly dependent on monsoonal rains; the irrigated area is only less than 4.0 per cent of the total cropped area. Agriculture is of subsistence type, and land productivity is relatively low.

In tehsils, where the share of the tribal population is relatively high, the prevalence of malnutrition is significantly higher. The tribal people living in the Mokkada and Jawahar tehsils of the district recorded an increased incidence of infant and child death rates in the child population. The infant mortality rate in Mokkada and Jawahar tehsils was 44 and 33, against the district average

of 21. Child population death rates were 64 and 45 against the district average of 30 per thousand (see Ghosh and Varerkar (2019). The prevalence of poverty, illiteracy and seasonal migration among the tribals and the failure of welfare policies of the state government is considered the major factors contributing to food insecurity among the tribals of the district. The food security mapping for the district shows that insecurity in terms of availability, access, and adsorption (utilization) increases from coastal areas to hilly, forest tribal areas of Palghar (Kokane and Jaybhaye 2019).

Data Source and Methodology

A structured questionnaire was prepared and pre-tested to collect information from 808 households distributed in sixteen sampled villages; selected two from each of the eight tehsils in the district. The authors used the purposive sampling technique to determine the number of households giving due consideration to the population size of the villages. While selecting households, efforts were made to provide a fair representation of urban and rural areas and tribal and non-tribal populations living in the district. The questionnaire was organized into six sections to calculate the following indices on Household Food Security (HFS).

Daily Calorie Intake(DCI) calculates the amount of food consumed in Kilocalories (Kcal). It set the threshold for classifying households as food secure or food insecure, covering many food sources, including own-production, markets and PDS purchases. As a comprehensive measure of food intake, the respondents from the selected villages were asked questions about different food items consumed from the morning meal to the night's dinner. The responses were compiled to generate a list of food items consumed daily in the household, converted into kilocalories based on a chart of calorie content per unit of food as per the 26^{th} round of NSS, Government of India. The food, which the individual members of the households consumed, was converted into per adult equivalent kilocalories consumption.

Hence, the total food a household consumes is calculated as follows,

$$\mathbf{A_i = B_i + k_i}$$

Where,

$\mathbf{A_i}$= Total consumption of food in the household; $\mathbf{B_i}$= purchased food consumption; $\mathbf{k_i}$= consumption of food either from own production or PDS

The total food consumed per adult equivalent in Kilocalories is calculated by taking the ratio of the total consumption of food to the number of members in the i^{th} household in terms of adult equivalent.

Where,

$$Xi = \frac{ai}{Hi}$$

Xi = Total food consumed per adult equivalent in Kcal

ai = Total consumption of food by household

Hi = No. of members in the i^{th} household in terms of adult equivalent

Lastly, 2100 kilocalories per day per adult equivalent by household is considered a threshold to divide household into food security. This threshold is determined based on the recommendation given by ICMR and FAO. Based on kilocalories consumption per day adult equivalent, households were classified into three categories: (i) Food secure (>2100 Kcal), (ii) Mildly food insecure (2100-1800 Kcal) and (iii) Severely food insecure (<1800 Kcal).

Household Food Insecurity Access Scale (HFIAS) calculates the severity and frequency of food shortages in selected households over 30 days. It uses a set of nine questions to determine food secure or food insecure households. The HFIAS questions were designed to elicit knowledge about food security, food shortages, food quantity, and diet efficiency. There are four indicators of HFIAS, namely "Household Food Insecurity Access related Conditions", "Household Food Insecurity Access related Domains", "Household Food Insecurity Access Scale Score", and "Household Food Insecurity Access Prevalence". The present study takes into account "Household Food Insecurity Access Scale Score" for the calculation of the mean scores of households and "Household Food Insecurity Access Prevalence" for categorization of a household into three levels of food access based on the prevalence of accessibility scores based on questions (Goshu, 2016). Primarily HFIAS deals with households' access to food and the degree of anxiety involved in access to food.

HFIAS Score= Sum of the frequency of occurrence during the last thirty days for the 9-food insecurity related conditions

$$\text{HFIAS Score} = \frac{\text{sum of HFIAS score of households}}{\text{number of households (808)}}$$

Based on the HFIAS score, households were classified into three categories viz. food secure (0-2), mildly food insecure (3-10) and severely food insecure (>10).

Coping Strategy Index (CSI) measures behavioural responses or coping strategies during a food crisis in the household during the last thirty days. These are easily observable and provide simple, cost-effective, and relatively rapid alternatives to collecting data on households' food consumption (CARE-WFP,2013). A ll such behavioural responses are termed coping strategies. The CSI is used to assess food security conditions in crisis, target households, serve as an early warning indicator, and measure the impact of interventions and long-term changes in food security. In this method, a set of 13 questions asked from the respondents are generally categorized: (i) dietary change, (ii) increase in short term availability, (iii) decrease in the number of people in the household, and (iv) rationing strategies. In preparation for CSI, the present study considers 11 of 13 questions.

In the sampled villages of Palghar district, the respondents were asked questions on coping strategies or mechanisms adopted during the recall period of 30 days. Range values of severity or frequency are from "0" (Never), "1" (<one time /week)," 2" (1-2 times/week),' 3" (3-6 times /week), and "4" (always every day). CSI has been calculated by multiplying severity/frequencies with the weights of questions. Finally, households were categorized based on CSI score into food secure (0-2), mildly food insecure (3-12) and severely food insecure (>13).

The Food Consumption Score (FCS) developed by World Food Programme calculates food intake in diversity, quantity, and adequacy. It calculates FCS based on household consumption categorization in eight food groups: Cereals (2), Pulses (3), Vegetables (1), Fruits (1), Meat or Fish or Egg (4), Milk (4), Sugar (0.5), and Oil (0.5) during the last seven days. FCS is calculated by taking the multiplication of frequency into weights of food groups, and the final summation gives FCS. The score of FCS ranges from "0" to "112", where "0" shows the household didn't consume any food during the last seven days, and the score of "112" indicates the household had consumed each food group during the previous seven days.

Finally, the score of each food group is multiplied by the respective weights, and the results are summed up to get FCS. There is no universal cut-off range for food consumption scores. This study classifies households as per FCS score given by Leroy et al. (2015) into severely food insecure (0- 21), mildly food insecure (21- 35), and food secure (> 35).

Results and Discussion

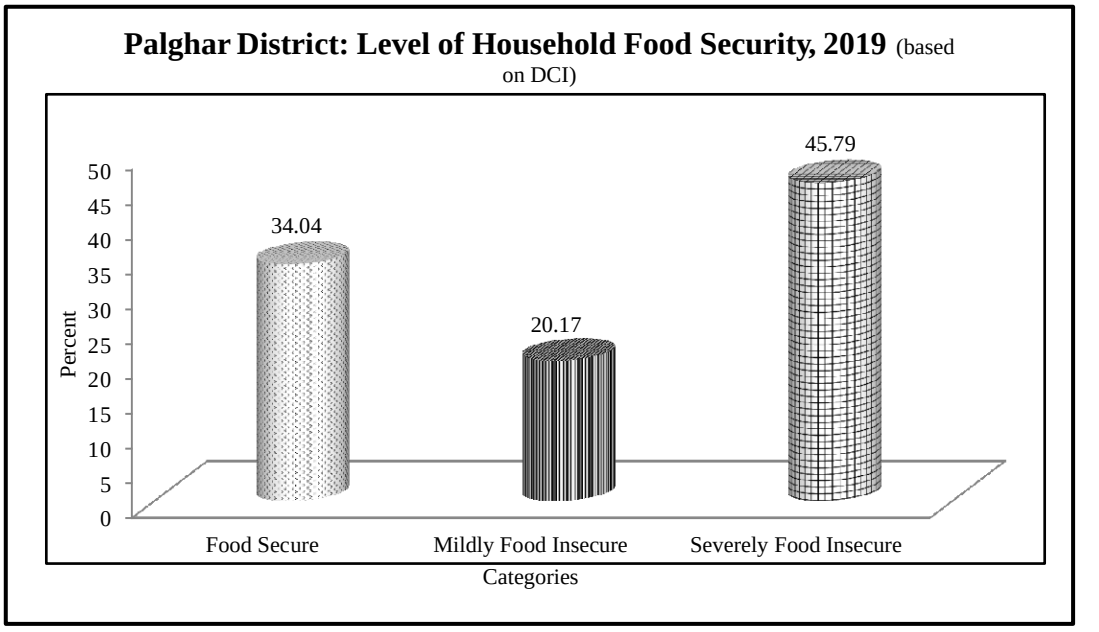
Household Food Security (HFS), a multifactor concept not solely dependent on calorie intake, is difficult to analyze (Rajput and Arora, 2020). HFS is often ignored for its interlinkages with numerous socio-economic, political, demographic, and environmental factors. The nutritional status of the household is dependent on the levels of dietary intake and the prevalence of morbidity among individuals in the house. Food availability, access, and utilization are used to assess HFS. Interdependence and symbiotic relationships are seen across these dimensions; food availability is crucial for food security, but it is not enough to ensure food accessibility. Access to food is also needed but not enough to provide food utilization (Barret,2010).

A variety of factors, including food production at the spatial scales of the household, region and globe, and food system infrastructure (transport and storage), are involved in the households' food availability. Against this, food access is determined by household income and assets, food and non-food prices, social security, women's agency, and food system infrastructure like marketing and exchange. Food utilization at the household level is a function of ownership of cooking or food storage facilities, cultural food practices and household food preferences, knowledge of nutritional requirements, household nutritional needs and availability of time for food preparation (Harris-Fry et al., 2015). The studies suggest that a single indicator cannot capture all dimensions of household food security (FIVIMS,2002; Hoddinott,1999). Hence, a combination of household food security

indicators is required to represent the complex reality of household food insecurity fully. The present study considers popular and commonly used indicators of household food security like Household Food Insecurity Access Scale (HFIAS), Direct Calorie Intake (DCI), Food Consumption Scores (FCS), and Coping Strategy Index (CSI) in selected villages of Palghar district.

Household Food Security based on DCI

Direct Calorie Intake (DCI) collects information on the quantity of food consumed by the household. This information is converted into kilocalories with the help of appropriate food conversion factors to understand the energy requirements of families and individuals. One must take care of the specific prerequisites like converting consumed food into adult equivalent, appropriate use of calorie conversion tables, and conversion of prepared food at home in kilocalories in DCI calculation. Finally, the derived output is compared with a given norm or reference point to understand the shortfall in food energy deficiency.



Source: Field Survey, 2019 **Fig. 1**

The present study uses a daily calorie intake of ICMR and FAO of 2100 kilocalories per day per adult equivalent by household to divide households into food secure or insecure. In addition, households with consumption between 2100 kcal to 1800 kcal daily per adult equivalent and below 1800 kcal daily per adult equivalent are classified as mildly food insecure and severely food

insecure. For the result of the DCI of sampled villages in Palghar district, see Fig. 1. Data analysis shows that one-third (or 34.0 per cent) of the studied households are food secure, one-fifth (20.2 per cent) mildly food insecure, and more than two-fifths (45.8 per cent) severely insecure. The share of households consuming below the threshold range of 2100 kcal is 66.0 per cent, which is relatively high.

The headcount ratio method has been used to calculate the number of households falling below the threshold line of 2100 kcal. The headcount ratio for sampled villages of Palghar district shows that 66.0 per cent of households fall below 2100 kcal daily per adult equivalent, whereas 45.0 per cent of households fall below 1800 kcal daily per adult equivalent. The gap index is calculated by considering the average food insecurity gap with zero gaps for food-secure households. The gap index below 2100 and 1800 kcal daily per adult equivalent are 0.11 and 0.21, respectively (Table 1).

Summary statistics of kilocalorie consumption give 1905 kcal daily per adult, equivalent to the mean for selected households. 3118 kcal and 1440 kcal are maximum and minimum daily per adult equivalent, respectively, with standard deviation (N=377), indicating a high degree of differentials among households (Table 2). One can conclude that performance in terms of DCI is poor, requiring the priority attention of the government to cover them under the safety net programs of food security.

Table 1: Palghar district: Indices calculated based on kilocalorie consumption, 2019

Indices	**Below 2100**	**Below 1770**
Head-Count Ratio	0.66	0.458
Gap Index	0.11	0.21

Table 2: Palghar district: Kilocalorie Consumption-Summary Statistics

Name of parameter	**Kilocalorie Consumption value**	**HFIAS**	**CSI**	**FCS**
Mean	1905	10.18	13.83	27.12
Minimum	1440	0	1	17
Maximum	3118	25	41	51
Standard Deviation	377	8.19	12.23	8.41

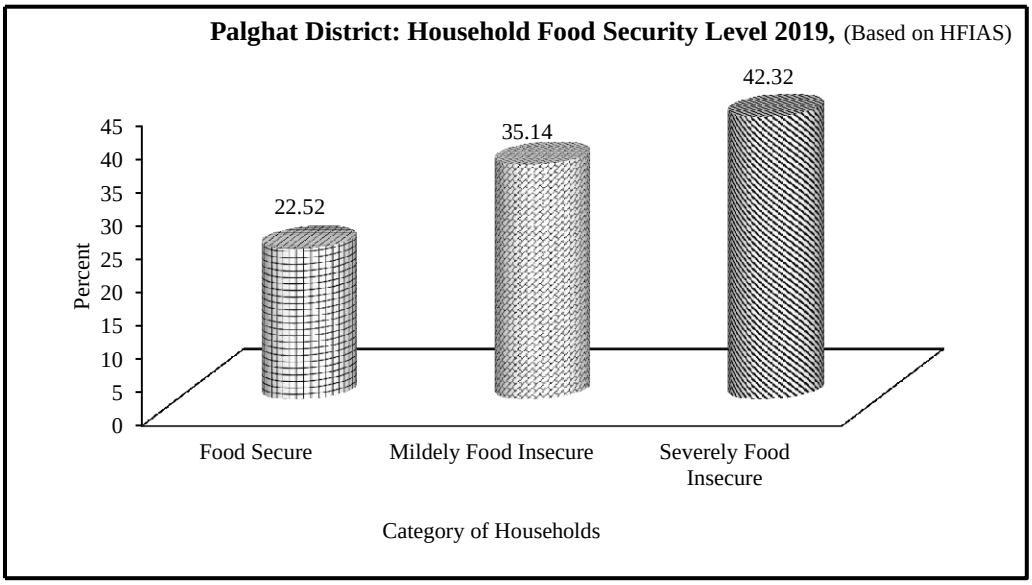
Source: Field Survey, 2019

Household Food Security based on HFIAS

Household Food Insecurity Access Scale (HFIAS) summarises a set of predictable reactions related to food insecurity experiences and its quantified set of measurements related to food access carried through household surveys. The present study used two indicators of HFIAS, the Household Food Insecurity Access Score for calculations of mean scores and the Household Food Insecurity Access Prevalence for categorizing households into three different levels based on scores.

For the performance of HFIAS to understand household food insecurity status see Table 2. The value of the performance level score of HFIAS ranges from 0 (for the household reporting 'no' to all HFIAS questions) to 27 (for households reporting 'often' for all occurrences of HFIAS questions). Higher the value of the performance score of the HFIAS higher, the food insecurity in terms of accessibility experienced by a household, and vice-versa. The average score for the sampled villages of Palghar district is 10.18.

The minimum score for HFIAS for the study area is '0', and the maximum score for respective households is '25'. As far as the standard deviation of HFIAS summary statistics is concerned, it is 8.19, which shows a high level of disparity in HFIAS scores among households. There is no clear boundary of cut-off points for the classification of households based on the HFIAS score.



Source: *Field survey, 2019* **Fig. 2**

Household Food Insecurity Prevalence is used to classify households into three categories: response, behaviour, and experience related to food access (Coates et al., 2007; Goshu, 2016). For the final output of HFIAS as per methodological procedure, see Figure 2. The result shows that 22.5 per cent of households are food secure, 35.1 per cent are mildly food insecure, and 42.3 per cent are severely food insecure. More than three-fourths (77.0 per cent) of selected villages are, thus, food insecure in terms of food accessibility, indicating a grim situation of food accessibility at the household level.

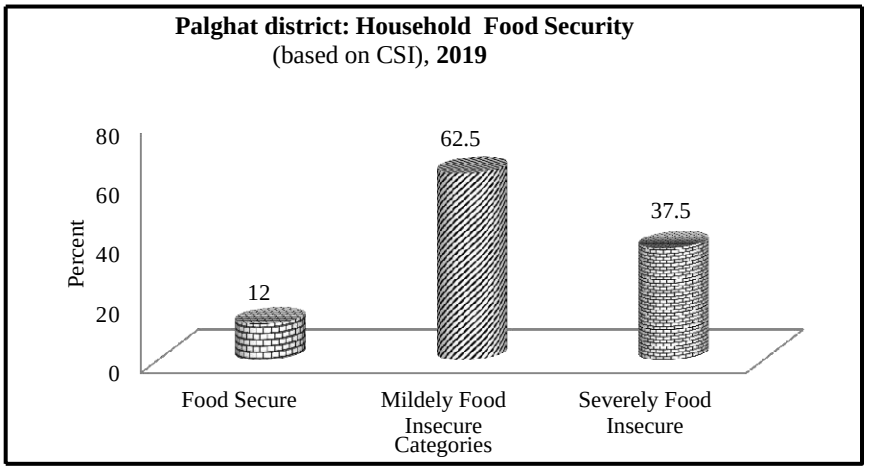
Household Food Security based on CSI

Coping Strategy Index (CSI) assesses food security conditions in crisis by measuring the behavioural responses to the shortage. These are specific to target households and serve as an early warning of food insecurity and measure the impact of interventions and long-term changes in food security.

This study has considered the classification method devised by Maxwell et al. (2014) and used by Goshu (2015) to classify households in Ethiopia. As per Maxwell et al. (2014), households with a score of 0-2 are treated as food secure, 3-12 considered mildly food insecure, and above 13 as severely food insecure.

As per this classification, 12.0 per cent of households from selected villages of Palghar district are food secure, 62.5 per cent of households are mildly food insecure, whereas 37.5 per cent of households are severely food insecure. It means that 88 per cent of households are food insecure when it comes to adopting appropriate coping strategies during a food crisis (Fig. 3)

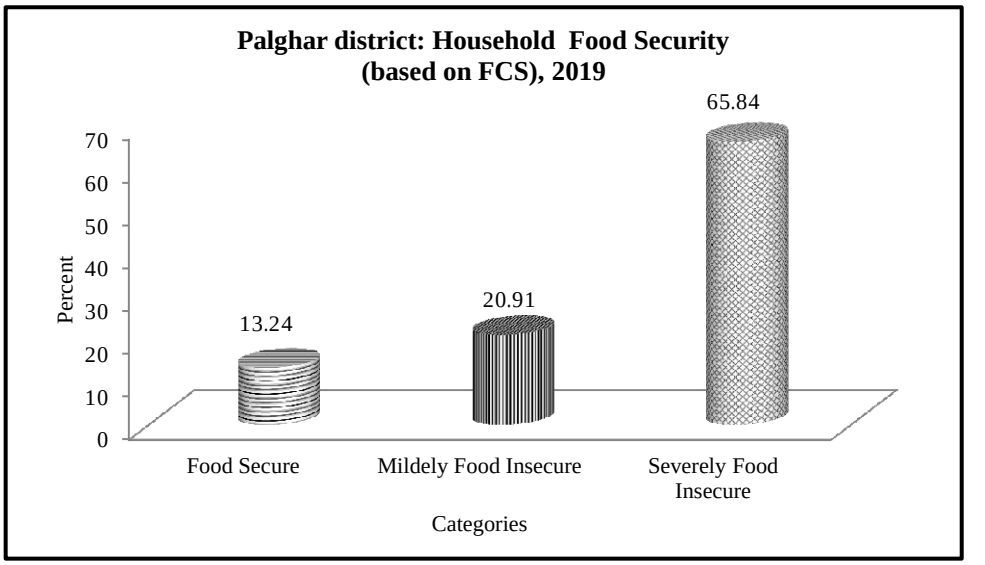
For summary statistics based on the score of CSI, see Table 2. CSI's mean score is 13.83, with a high level of household variation (SD=12.23), whereas the maximum and minimum for the study area are 1 and 41, respectively. The performance of CSI in selected villages of Palghar district indicates poor strategies to cope with the food crisis. There is immediate priority support needed to provide to households through food safety net programs to cope with the food crisis.



Source: Field Survey, 2019 **Fig. 3**

Household Food Security based on FCS

Food Consumption Score (FCS) is a widely used frequency-weighted dietary diversity score based on a household consumption categorization in eight food groups.



Source: Field Survey, 2019 **Fig. 4**

As per the performance of FCS, 13.2 per cent of households are food secure, with FCS being more than 42, 20.9 per cent of households are mildly food insecure, FCS ranging between 28 and 42, and 65.8 per cent of households are severely food insecure, FCS being less than 28 (See Fig.4).

The mean FCS of selected villages in Palghar district is 27.12, and minimum and maximum scores are 17 and 51, respectively. A high level of intra-household variation is seen through a standard deviation value of 8.41 (see Table 2).

The mean of all food groups consumed by households during the last seven days is collected during a field survey and represented in Table 3. Consumption of food from each group shows the level of food diversity in different tehsils of Palghar district. Data analysis shows that rice is the most consumed and staple food in the study area, followed by pulses and vegetables. Wheat consumption is more towards semi-urban areas in selected villages of tehsils like Talasari, Dahanu, Palghar, and Vasai. Low consumption of fruits, chicken, fish or meat and dairy products is seen in all sampled households except selected households in Palghar and Vasai tehsil. The sugar and oil consumption level of households during the last seven days is above the threshold. The mean of all food groups consumed during the previous seven days indicates households' inclination towards rice and pulses. To improve household food security, it is necessary to increase the consumption of vegetables, fruits, chicken/meat/fish, and dairy products to enhance food consumption quantity, quality, and diversity. This will tackle deep-rooted food insecurity conditions among tribal households.

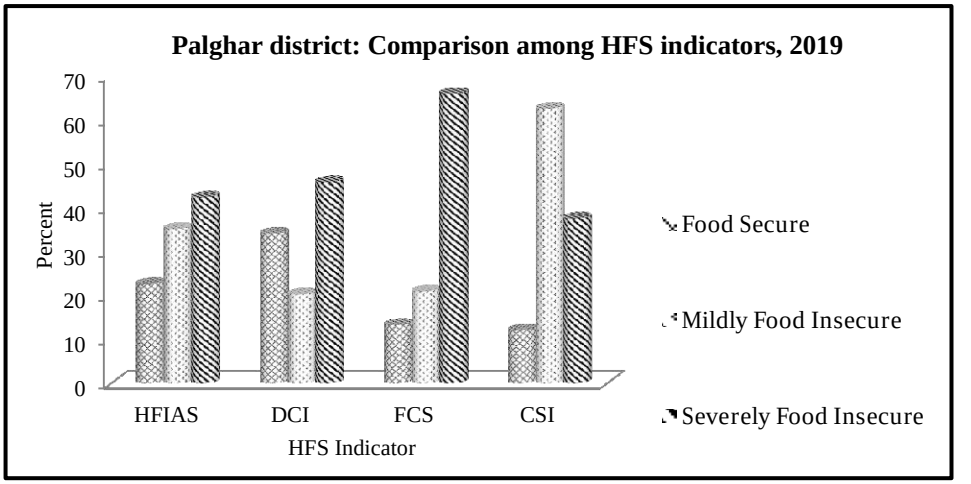
Table 3: Mean of food baskets consumed during the past seven days

Name of sampled village	Rice	Wheat	Pulses	Vegetables	Fruits	Chicken /meat	Dairy Products	Sugar	Oil
Kainad and Waki (Dahanu)	7	3	5	4	0.5	0.5	1	5	4
Kasatwadi and Jaradwadi (Jawhar)	7	4	4.5	4	0.5	1	1	5	4
Nilmati and Poshera (Mokhada)	7	3.5	4.5	3	0	0.5	0.5	5	3
Durves and Bot (Palghar)	7	1	5	3	0	0.5	0.5	5	3
Sutrakhar and Savroli (Talasari)	7	1	4.5	3	0	0.5	0.5	5	3
Khardi andDolivpada (Vasai)	7	1	5	3	0	0.5	0.5	5	4
Uparale and Bhopoli (Vikramgad)	6.5	4	6	5	0.5	2	3	6	5
Amgaon and Khutal (Wada)	6.	5	6	5	1	2	3	6	5

Source: Fieldwork, 2019

The relative differences in the food security/insecurity captured by the indicators highlight the spread of various dimensions of food security in households in the Palghar district (Fig. 5). FCS indicators report a high level of severely food insecure households, whereas DCI reports the prevalence of high food-secure households in the study area. While the DCI method focuses solely on the quantity of food consumed, FCS also includes the qualitative dimension. This difference means that households consuming more of a limited variety of food can be regarded as secure under DCI. It can provide them with caloric requirements without meeting the need for diversity. The quantity of food consumption through DCI methods indicates a high level of food availability in urban, semi-urban and rural and tribal parts of the study area.

Regarding dietary diversity through FCS among households in the study area, it highlights a high diversity in food baskets in urban and semi-urban parts than in rural and tribal areas. A high level of non-agricultural income and consequent spending on food among urban and semi-urban households are associated with a more diverse food basket. Yet, the literature highlights that this relationship is not always present, and hence researchers need to be careful before benchmarking one another (Lovon and Mathiassen 2014).



Source: *Field Survey, 2019* **Fig. 5**

This study also points to a high level of 'mildly food-insecure households' reported by CSI. Ordinarily, HFIAS is expected to show higher levels of food insecurity, followed by CSI and FCS. This is because HFIAS captures nuanced psychological experiential facets that indicators like FCS do not. However, as a measure of strategies during extreme instances of the food security crisis, CSI is expected to capture a lower incidence of food insecurity (Maxwell, Vaitla, and Coates, 2014). However, food-insecure households (severe and mild together) are highest under CSI measures, followed by FCS measures and finally, the HFIAS index. A justification for this can be perhaps derived from analyzing the questions administered to gather data for each indicator. HFIAS questions are framed from a perspective of worry or anxiety about an impending resource shortfall or a decline compared to an assumed average rate.

On the other hand, CSI questions are on the understanding that such shortfall is relatively prevalent and hence enquires the strategies in the face of the crisis. Thus there is a progression from anxiety to active strategy on an actual course of actions. Therefore, if the households studied are already under severe stress of food insecurity and actively practising coping strategies, these become habitual and no longer an active component of worry. There is evidence for this in literature, where food intake is low, and self-reported scores can have a downward bias (Maitra 2017).

Conclusion

For its connection with various unstable and dynamic human factors, food security at the household level is a challenging task. A relatively good DCI value for the study area shows the high availability of the quantity of food. However, poor HFIAS, FCS, and CSI values indicate a need to improve access and diversity to food and coping mechanisms of the household to serve their food security

prospects better. It also emphasizes that food availability is not a concern. Still, sufficient quantity, quality, and diverse access to food is a significant issue in the Palghar district since households fulfil their caloric needs but fail to meet the demand for food diversity, low income, and subsequent limited choices.

Furthermore, households examined are already under significant stress from food insecurity, and they are actively exercising coping strategies. Such routine activities do not add substantial worries to their food access. However, the lack of coping strategies in households exacerbates the problem, especially among tribal people.

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Emigration, Remittances and Rural Development: A Case of Goa, India

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Abstract: Overseas migration of the economically active male population from Goa started during the Portuguese rule to the varied destinations is a remarkable and noteworthy societal phenomenon. This trend continues even in the post-liberation phase of Goa. The present study attempts to analyze the socio-economic and demographic background of the emigrants and destination countries and the activities in which they invest the remittances.

For conducting the study, the authors piloted a field survey in the four villages of Raia, Curtorim, Chandor, and Assolna, distributed in Salcete taluka of the state. The authors used the purposive sampling technique to select the study villages, and a structured questionnaire was prepared and pre-tested to collect responses from 224 emigrant respondents. A descriptive statistical method such as mean and the Fisher's exact test was applied.

The study findings reveal that most emigrant workers from Goa work as seafarers in destination countries, the most famous work destinations being the Middle East and the U.K. as their work destinations. The educational level of emigrants was generally low; they primarily worked in low profile jobs like waiters, room boys, stewards, cooks etc. Most of them migrate abroad through the contact of relatives and friends. However, the core focus of emigration is enhancing their economic and social status. Notwithstanding the vast diversity of investments and savings sources available to them, the construction of houses partakes a significant share of the income earned through remittances.

Key words: Emigration, Seafarer, socio-economic status.

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Introduction

Migration indicates to growth and development trajectory of a country. It would be prudent to state that International migration, a vital global policy issue, is full of enormous social, economic and cultural implications, especially linked with remittances (Haas, 2007: 6). To be understood and analyzed correctly, it's essential to comprehend mobility dynamics, but geographical studies covering migration profiles are few and sporadic. Of course, several world regions have prepared very few profiles (Olga, 2011:23). Therefore profiling emigrants become an essential component of migration studies. Demographics of emigrants are an integral component of migration studies. It enables us to understand who migrates, where and why? (Sawant, Sapakale and Naik, 2006:30), impacting both places of origin and destination. Therefore, migration leaves significant and lasting effects on the areas of its origin in moulding the social, economic, cultural and demographic attributes of the population (Roy and Debanath, 2011:198)

According to the International Organization for Migration, India has the world's most significant number of emigrants, i.e. 17.5 million. The history of emigration from India goes back

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to the colonial era; Indian migrants are distributed in 199 countries (MEA,2021). More recently, the flow of migrants is towards the Middle East and the USA. Slightly more than half of the Indian emigrants live in Gulf countries (Singh, 2022:1). In 2020 the Indian population in the Anglo-America was 4.2 million; similarly, it is 8.5 million in the Middle East. (MEA,2022). The World Bank estimates place India on the top globally regarding the foreign remittances it receives. In 2020, India received foreign remittances worth $87 billion (World Bank, 2021).

Thus, remittance is a direct source of foreign exchange earnings to the home countries. Increased income from remittance helps to reduce poverty and indirectly stimulates economic development. The priority of migrants is constructing concrete houses, replacing the traditional stone dwellings. It also allows migrants to overcome market constraints, thereby investing in productive activities and improving their livelihood (Haas, 2010:.229).

Aims and objectives

In the light of the above statements, the study analyzes the demographic and socio-economic characteristics of the emigrants from rural Goa with the following research objectives:-

a) To examine the spatial distribution of male emigrants from rural areas of Goa,

b) To analyze their demographic characteristics, and

c) To assess socio-economic implications of the remittances the migrant earn.

Research Questions

Based on the above-said objectives, the present paper attempts to answer the following research questions with the help of data mapping and analysis:-

a) Has the geographical direction of emigration from rural Goa changed over the decades?

b) What are the drivers for emigration.?

c) How do the remittances contribute to the quality of life and social status of emigrant households in rural Goa?

Database and methodology

The migration studies are interdisciplinary by nature, requiring mixed data collection methods. The paper study used primary and secondary data sources both. The primary data used the interview technique through a field survey and a structured questionnaire. The purposive stratified random sampling technique was applied to collect data from two hundred twenty-four overseas working respondents distributed in the four villages, Curtorim, Chandor, Assolna and Raia, of Salcete taluka in Goa state. Only married emigrants with five years of work experience selected primarily belonged to the Christian community.

Before administering the survey in the selected villages, a pilot survey was conducted to gauge the questionnaire's compatibility. The questionnaire had ranking, closed, and a few open-ended questions, broadly divided into (a) demographic, (b) employment, and (c) investments and planning related questions. The collected data was classified, tabulated and then analyzed. The authors used descriptive statistical techniques such as the mean and Fisher's exact test.

Discussion and Analysis

Historical research indicates that early migration from Goa, which commenced in the early 19th century from Salcete and Bardez talukas, was of seamen (Boxer,1969), belonging to the lower castes with little or no educational background after obtaining the essential training to serve as Seafarers. Many Goans worked as ship hands, sailors, stewards and cooks on passengers and cargo ship liners (DeSilva, 2000: 427). Initially, it was a forced migration due to heavy taxation and aspiration to improve quality of life. (D'Souza,1979). The influence of Christianity, Western education and cultural syncretism endowed the Goans with an inclusive identity and facilitated their migration to the Western World (Goa Migration Study,2008). From the 19th century, the exodus of Goans overseas became a regular practice (Pinto. 2019). Such a legacy continued in the 20th century in the post-liberation era of Goa, that is, 1961 onwards. It is purely voluntary for economic enhancement and prosperity, resulting in a remittance economy. Thus, bringing economic growth, social empowerment and cultural development to their families.

A. **Destination and Work Profile:** It is pertinent to understand where these rural males emigrate and what is their background. The early emigrants served as pace-setters. Later, their periodic visits to villages provided opportunities to experience the virtues of the new life, thus producing powerful stimuli to the migration of peers and juniors (Stella,1990: 246). A cursory glance indicates that the legacy that commenced in the 19th century still holds good. The Christian Catholic menfolk still work as seafarers. Of the 224 sampled emigrants, 168 (or 70.0 per cent) work on cargo ships and cruise liners as seafarers. Working as seafarers is a matter of pride, and this trend continues (Goa Migration Report, 2008). Therefore, they are popularly known as "*Shippies*" in Goa.

Table1: Classification of Emigrants' workplace location

Workplace location	**Sub-location**	**Per cent to total**
Sea (70.0 per cent)	Cargo ship	30
	Cruise	64
	Rig	06
Land (30.0 per cent)	Middle East	47
	Asia (except the Middle East)	05
	U.K.	33
	USA	15

Source: Fieldwork, 2019

According to a respondent, '*to work on the cruise provides economic benefits and enough time to spend with family. He works for four to six months as per the contract with a company'.* With the oil boom in the 1970s and economic opportunity in various sectors, many Goans headed toward the Middle East (DeSilva, 2000: 429). The remaining 30 per cent of the emigrants work in different locations of the world; however, the dominance is towards the Middle East countries (Table 1). Recently, there has been an increasing trend of Goans choosing the U.K. as their destination as they hold Portuguese passports, making it more convenient to work in the European

world. Yet another factor that can be attributed is the ease with the language and the desire to earn pounds over Euros (Martins, 2013).

Since most emigrants work on the ship, either on cargo or cruise liners, the job profile remains restricted. Two-fifths of emigrants are service providers, performing multiple tasks; this is more applicable working on the Cargo ship where the staff is limited. Almost 13.0 per cent work as cooks, one-tenth as waiters and an equal number as housekeeping staff (Fig. 2). Only the marginal shares (three per cent and one per cent) work as the engineer and managers. Low education results in low-status work like waiters, room boys, cleaners, helpers, stewards, butlers, and cooks. This applies to both working on the ship or any other destination. An earlier study on Assolna village, Goa, revealed similar results (Sawant, Sapakale and Naik, 2006). However, the positive outcome is their wages are much higher than they achieved in Goa.

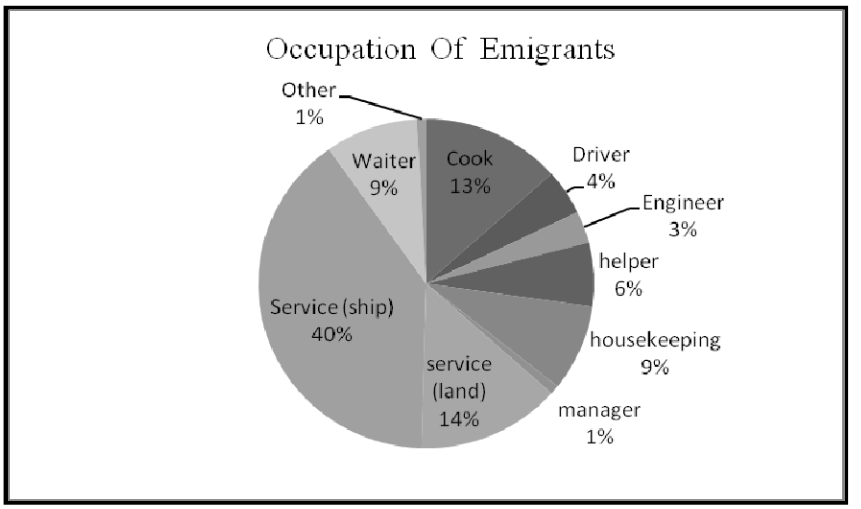

Fig. 1: Occupational classification of emigrants, Source: Fieldwork, 2019

Education determines the sector of employment and work profile. Almost 35 per cent of emigrants preferred to migrate overseas after finishing their Higher Secondary School (Fig. 3). Since the type of work profile requires a minimum qualification of 10^{th} grade pass, usually the trend is to take up a vocational training programme and then work a while in Goa to gain work experience before seeking employment abroad.

Since they don't intend to undertake higher studies, they usually work as chefs, waiters, bartenders, housekeepers etc. Only about one-fifth are graduates, professional degree holders and postgraduates working as mechanical engineers, electrical engineers, accountants and managers. With emigration, there is a potential transfer of skill and knowledge, which stimulates development at the place of origin.

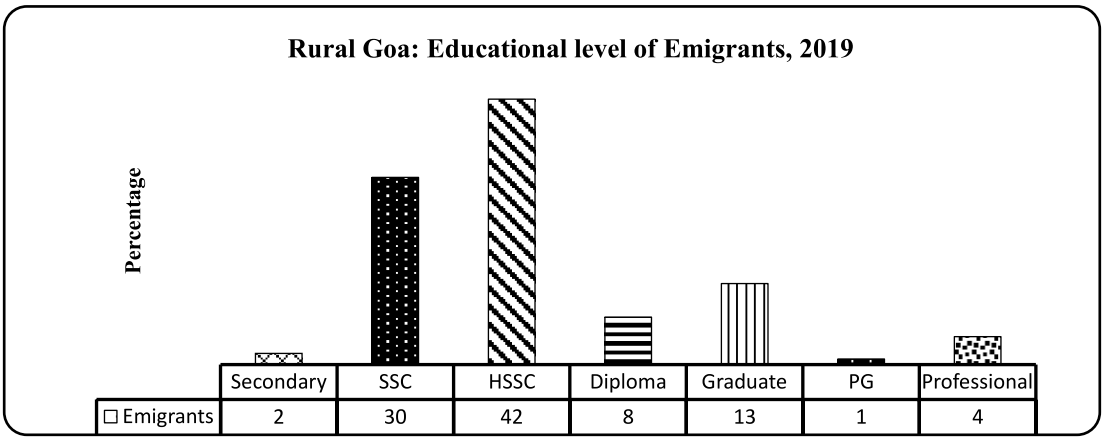

Fig. 2: Educational Qualification; *Source: Fieldwork, 2019*

Fisher's exact test was applied to determine the correlation between education and sector of employment. P-value =0.0004998 is less than α=0.05 at a 5.0 level of significance, indicating that the two variables are dependent. Most emigrants have completed twelfth-grade education followed by a professional diploma in related employment sectors like A.C. servicing, front office, culinary, etc.

B.Modus Operandi to emigrate: Personal contacts and references are the two main channels that enable one to seek employment overseas. Another medium is newspaper advertisements and recruitment agencies.

Relatives and friends play the pivot role in facilitating the emigration process, much attributed to the legacy of emigration of the Goan folks (Fig. 3). Their inspiration and support encourage juniors and peers to migrate abroad. As correctly said by one of the respondents stated, "*I always wanted to work on the ship as my father worked overseas which ensured comfort and quality of life to family. This couldn't have been possible working in Goa"*. Obviously, even today, most youth dream of migrating abroad, and economic factors are the key motivator. Therefore several institutions have been set up to offer diploma/vocational courses in hotel management, catering, bakery, ship management, electronics etc., to these youngsters and later help in recruitments on ship or land.

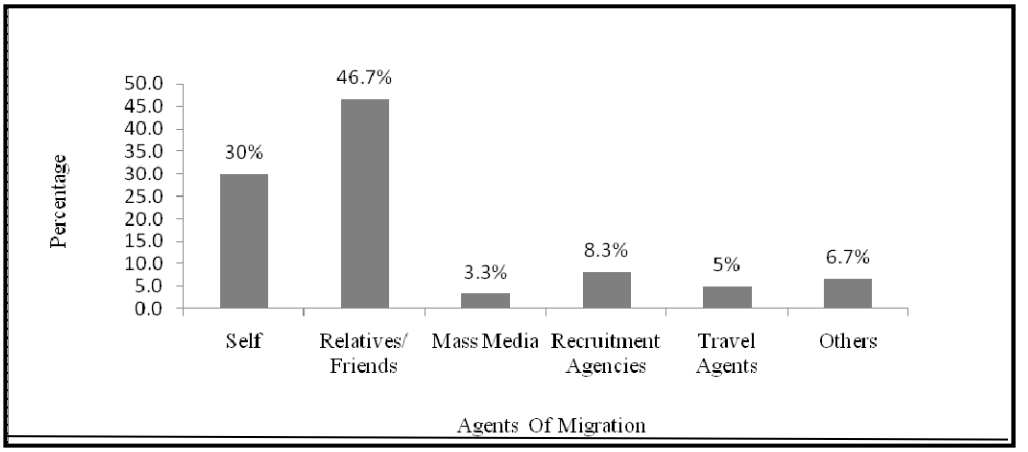

Fig 3: Rural Goa: Modes of Emigration *Source: Fieldwork, 2019*

Less than one-tenth (8.3 per cent) of emigrants departed overseas directly through recruitment agencies, and another more than one-twentieth (6.7 per cent) secured jobs through overseas employment exchange. While travel agencies and mass media also act as the leading agencies in offering the job to the youth. Newspaper advertisements, Magazines, and internet-based sites are the medium through which one can migrate abroad/ overseas. Therefore, it has become a norm to migrate abroad/overseas to overcome family problems, live a life full of comfort, learn new skills, and earn a higher income. Therefore, economically and socially satisfying needs of the families in their home countries.

C. Drivers of Emigration: More than two-fifths (46.0 per cent) of migrants were employed, and the majority (53.0 per cent) were unemployed before going abroad. They migrated overseas due to dissatisfaction with the job in Goa, the low salary level, a desire to live a better quality of life and so on. Based on the research, the ranking was done (Table 2). High income and better employment in the destination country are most emigrants' priorities. It enhances their standard of living and socio-economic status at their place of origin (Fernandes, 2008:1). The families feel proud when the household members work abroad. It helps to bring economic prosperity to the family. Thus the status of the family is represented by their houses, education of children, clothing and participation in village celebrations (Sawant and Rebello, 2017: 66). Another priority that drives the migrant to migrate is savings which stand at fourth rank as migrants want to acquire more money to satisfy the future needs of their families. Many of them take loans to migrate abroad or construct a house. Therefore repaying the debts and savings is yet another priority for migration. Another reason to relocate overseas is to be exposed to different advanced technologies, cultures and languages.

Implications of emigration

The mean age of marriage of emigrants is 30 years; marrying between 24 to 40 years of age. Most migrants prefer to migrate after completing their high/higher Secondary School education and then financially stabilize. Usually, they plan to settle down with all the necessary amenities like a bungalow, car, landed property and good financial back–up, impacting their age at marriage.

Table 2:- Rural Goa: Drivers of Emigration			
Migration Reasons	**Rank**	**Migration Reasons**	**Rank**
High Income-Better Employment	1	Skill learning-future prospects	4
Better life Quality-Peer Pressure	2	Permanent nationality	5
Indebtedness	3	Other factors	6
Source: Fieldwork, 2019			

The ramifications of emigration are multiple, positive as well as harmful. Emigration has also led to the emergence of the remittance economy. Remittance has enabled the emigrants' families to have a better standard of living (Zachariah and Rajan, 2009). A sizeable part of the earnings is spent on luxurious living and providing better education to the children. Most emigrant families use their savings to invest in an apartment or construct a house. Others have invested their savings in purchasing property and other businesses (Stella, 2000). In the present study, house type has been considered to show enhanced lifestyle and quality of life that is ensured due to emigration. The Goans invest a considerable amount of their earnings in constructing houses, a visible symbol of status.

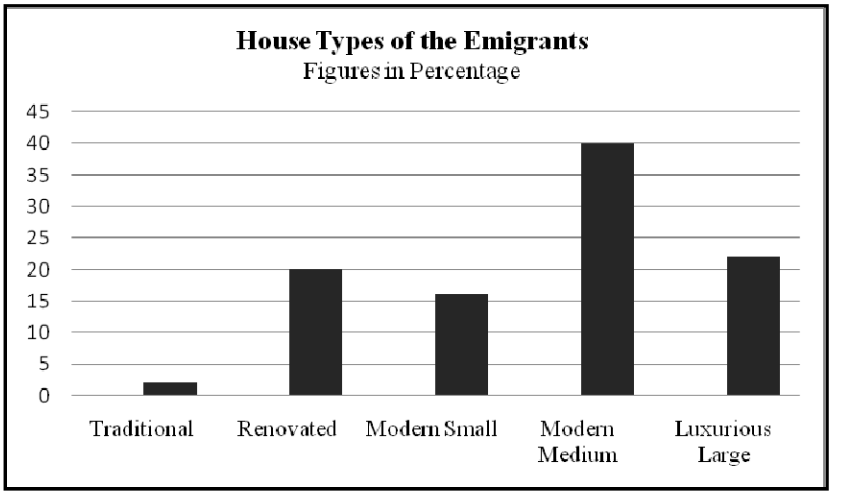

Fig. 4: Rural Goa: Categorization of Emigrants' Houses by available facilities
Source: Field Work, 2019

The classification of houses was done based on parameters like gardens, swimming pools, parking areas, balconies, rooms, halls and storerooms. The houses are divided into five categories: (a)The luxurious bungalows, designed gardens, swimming pool, spacious parking lots, three balconies, five rooms, huge halls, and storerooms, (b) The medium modern houses consisting of small gardens, small parking lots, two balconies, and halls with four rooms, (c)The small modern house having a small hall, three rooms, and one balcony, (d) Renovated traditional houses consisting of small halls, two rooms, a storeroom and a backyard, and (e)The traditional houses having small halls, at least two rooms, a small storeroom and a backyard. Thus, most emigrants (nearly 62.0 per cent) have medium modern to big luxurious houses as they spend the bulk of their earnings on constructing such houses. Thus it shows a high standard of living among emigrants. It

would be prudent to state that the rural landscape of Salcete taluka is changing with the mushrooming of colourful exotic independent houses in these villages.

Investments and Savings

As discussed earlier, house types represent the status symbol enhancing their societal position. Hence, a significant investment in constructing the house and household amenities (Table 3). More than one–third of emigrants invest in purchasing the landed properties, preferably plots, and act as brokers, thereby doing a profitable business.

Table 3: Investments and Savings

Investment and Savings Type	Per cent	Investment and Savings Type	Per cent
House construction and related assets	41.67	Savings & Investments (LIC/FDs)	15.00
Land purchase (Plots)	35.00	Total	100
Commercial property (shops etc)	8.33	Source: Fieldwork, 2019	

The savings are in the form of monetary funds, LICs, insurance and bank deposits account for 15 per cent. One respondent stated, "Earlier, *my parents used to invest significantly in fixed deposits, but since the interest rates are negligible, it's better to invest in property*. A few of the emigrants spent buying a commercial property to start their business when they return or presently rent it out.

Conclusion

Gradually, the Goan economy has transformed from primary to tertiary services under the impact of the overseas migration legacy. Initially, migration remaining forced slowly changed to economic transformation and the creation of assets. The topology of emigrant reveals that migrant migrates to the west in the 25–30 bracket, the prime age group. Most of the emigrants are seafarers, while others work at significant destinations in Middle Eastern countries like Kuwait, Dubai, Oman, Saudi Arabia etc. Nowadays, they prefer to migrate to Australia, the United Kingdom and America for better prospects and enhance their status. Secondly, due to low education qualifications, the migrants are forced to take up low-status jobs, and most of the migrants work as waiters, room boys, stewards, cooks, etc.

In contrast, a small minority work in service sectors and professional jobs. Most of them migrate abroad through the contact of relatives and friends. Others migrate through recruitment agencies, travel agencies and mass media.

Most of the emigrants secure education till HSSC and procure a diploma course. Hence, educational levels decide the employment and payments, along with years of experience in the particular employment sector. Emigrants obtained higher housekeeping skills while working as cooks, stewards, butlers, room boys etc.

The emigrant workers prioritized the modernization of their houses, followed by celebrations, participation in youth clubs, etc. In addition, they contribute some amount to charity

and investments. Due to the rise in the standard of living, emigrants spend on constructing houses and purchasing land. Most emigrants prefer to send their children to work abroad or overseas to continue the trend of migration and enhance their lives.

Based on the present research, there needs to be a focus on higher education and procurement of professional degree/s, enabling the rustics to secure better employability and even diverse employment destinations. Greater emphasis must be on financial savings and investments—the present trend is more on showcasing status through tangible products.

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Nutritional Status of Child Population in the Indian Hill States: A District Level Analysis

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Abstract: The present study examined the nutrition status of the child population below five years of age considered the most vulnerable in nutritional value, in the Hill states of India. The study was conducted at the district level, covering ninety-five districts in twelve states, and used the National Family Health Survey IV (NFHS-4) data The determinants of nutritional deficiency, namely stunting, wasting and underweight, were cross-examined with the thirteen-independent socio-demographic attributes. The researchers applied descriptive statistics, bivariate and multivariate analysis, and binary logistic regression for data analysis. The study findings reveal that the prevalence of stunting, wasting, and underweight among children under five years is lower in the Himalayan region than the national average. Several socio-demographic indicators were significant. However, the state of Meghalaya shows the highest cases of stunting and underweight, and the same is true for Uttarakhand in terms of wasting.

Keywords: *Child nutrition, stunting, wasting, underweight, Indian Himalayan states*

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Introduction

Nutrition status is one of the most critical global health problems in developing and underdeveloped countries. Nutrition status is defined as the current body mass condition of an individual or group associated with the status of nourishment (Bechard *et al.,* 2016; Conde and Monteiro, 2006; Bailey and Ferro-Luzzi, 1995). Malnutrition is a complex global health threat that affects poor women and children (Sood, 2010; Underwood, 2000). Some studies recognize the nutritional status as an indicator of national development (Rasul *et al.,* 2017). Children under the age of five are considered the most vulnerable segment of a community. Their nutritional status is a sensitive indicator of the health and nutrition status of the community. In 2011, child malnutrition accounted for almost 45.0 per cent of child mortality across the globe (De Onis *et al.,* 2015; United Nations, 2015). It can lead to mortality and morbidity in children under five in extreme cases (Fenske *et al.,* 2013; Black, 2008; Nandy *et al.,* 2005; Pelletier *et al.,* 1995). In the case of children, undernutrition is determined by stunting, wasting, being underweight and deficiencies of micro-nutrients (Black *et al.,* 2008; UNICEF, 2006). Stunting, wasting, and being underweight affect the body differently. The wasting usually has short term effects, whereas stunting and being underweight have long term effects. The immediate causes of children's malnutrition are its large population (Dimitrova and Bora, 2020), inadequate food consumption higher food insecurity (Kuklina *et al.,* 2006) and reoccurrence of diseases (WHO, 2012). In the long run, poor diet weakens immunity, disrupts growth and causes cognitive delays (Rasul *et al.,* 2017; Sood, 2010; Nandy et al., 2005; Pande, 2003; Underwood, 2000), leading to poor

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educational attainment, low intellectual and physical disabilities (Rasul *et al.,* 2017), economic productivity and reproductive abilities etc., (Black, 2008).

The problem of child malnutrition differs widely across countries in the world. South Asian countries have the highest concentration of the child population suffering from malnutrition (Stevens *et al.,* 2012). Studies suggest (see Pelletier *et al.*, 2003; Black *et al.,* 2008) that malnutrition is the primary factor of child mortality and morbidity in low and middle-income group countries. About one-third of the developing world's children are under-nourished, contributing to approximately 60.0 per cent of deaths in the child population (Levinston and Bassett, 2007; Pelletier et al., 1995). Maternal and child undernutrition is extremely widespread in low and middle-income countries, resulting in a considerable increase in mortality and overall disease burden (Black, 2008). According to de Onis *et al.* (2013), West Africa and South-Central Asia have the maximum prevalence of malnutrition. According to UNICEF (2006), 1.46 billion underweight children live in developing nations, and 57 million live in India. The persistent and high prevalence of childhood malnutrition in South Asia compared to other countries with similar economic growth is mysterious; therefore, this phenomenon is also termed the "Asian enigma" (Ramalingaswami *et al.,* 1996).

India is the 2nd most populous county globally, accounting for about one-sixth of the world's population. The extent of malnutrition in India is considerably large (Stevens *et al.,* 2012). Despite the economic improvement in India, the number of malnutrition children under under-five years of age has remained unchanged since 1990 (Rasul *et al.,* 2017; NFHS, 2005-2006; UNICEF, 2006). According to the NFHS-4, the prevalence of stunting was 38.4 per cent, wasting was 21.0 per cent, and 35.7 per cent were underweight. Several studies suggested a close association between the child malnutrition and the factors like socio-economic status, political aspects (Vollmer *et al.,* 2014), genetics, demography, women's status (Ramalingaswami *et al.,* 1996), poor sanitation (Spears, 2013), low birth weight (Kuklina *et al.,* 2006), climate and environment (Fenske *et al.,* 2013; Bentley *et al.,* 2015; Galgamuwa *et al.,* 2017). Meshram *et al.* (2012) state that the burden of undernutrition seems to be exceptionally high among the rural and tribal populations. Notwithstanding that states in the Himalayan region have a large proportion of the rural and tribal population, there are few and sporadic studies comprehensively dealing with child nutrition. The Himalayan region is a habitat for many economically deprived communities, and the area is among the poorest and most vulnerable (Pandey *et al.,* 2017; Shukla *et al.,* 2016; Gerlitz *et al.,* 2017). The poorest and marginalized communities suffer from high rates of under-nutrition in the mountain regions (Rasul et al., 2017). The distinct environment, fragile ecology, and remoteness (Gopirajan *et al.,* 2020; Rajesh *et al.,* 2014) cause wide differentials in physical infrastructure, socio-economic development, food security, education, etc. (Chauhan *et al.,* 2020; Gupta *et al.,* 2020; Shukla *et al.,* 2019; Simane *et al.,* 2016).

Research Objectives

In the light of the above statements, the present study attempts to understand child nutrition status in the twelve Himalayan states in the light of the role of different factors affecting it in the region with the following objectives-

1) To assess the nutritional status of the child population in the Indian Himalayan states.
2) To examine the role of different socio-demographic factors in determining the nutritional status of the child population in the study region.

Data Sources and Research Methodology

Based on secondary sources, the present study used data from the fourth round of the National Family Health Survey (NFHS-4) conducted in 2015-16. NFHS is a cross-sectional survey conducted across every state and union territory in India and interviewed 601,509 households (699,686 women aged 15–49 years and 112,122 men aged 15–54 years). Two-stage stratified sampling, adopted to collect the sample, used the Census of India (2011) as the sampling frame. District formed the study unit for data mapping and analysis. The study covered ninety-five districts distributed in twelve hill states of India, namely Jammu & Kashmir, Uttarakhand, Himachal Pradesh, Sikkim, Arunachal Pradesh, Meghalaya, Nagaland, Manipur, Tripura, Assam, Mizoram, and West Bengal. In the case of Assam and West Bengal, which have both the hill and plain areas, we covered only the hill districts.

Outcome variables: The determinants of undernutrition are stunting, wasting and underweight of children below five. Stunting, wasting and underweight are the measure of body mass proportion of an individual. For calculating stunting, the WHO (World health organization) considers the height-for-age Z-score minus 2 SD (standard deviations) and minus 3 SD from the median of the reference population to term chronic and severe stunted. It's a sign of chronic malnutrition that reflects a failure to receive adequate food over a long period. The children whose weight for age Z-score is minus 2 SD and minus 3 SD from the reference population's median value are considered acute and severely wasted. It happens due to inadequate food intake during a shorter period (NFHS-4 report, 2015). Underweight or low Weight-for-age is a composite index of under-five children with stunting and wasting, whose weight for age Z score was below -2 SD and below -3 SD from the median of the reference population are called chronic and severely underweight. These three indicators provide information on mass body composition that helps understand children's nutritional status. All the outcomes' variables were dichotomized into two binary groups, yes (1= -<2SD) and No (0=else).

Independent variables: The socio-demographic variables selected for analysis included age of a child in months (5-11, 12-23, 24-35, 35-47, and 48-59 months), sex of child (Male and female), mother education, (Illiterate, Primary, Secondary, and Higher level of education) religion, (Hindu, Muslim, and Others) caste/tribe, (ST, SC, OBC and GEN), Birth weight, an essential indicator for malnutrition analysis, was categorized into two groups (<2500gms and >2500gms), Birth order (1, 1-3, 4-5, 5+), Birth Size (large, average, small), Birth interval (< 1, 1-3, 4-5, 6+ years), and Cooking fuel (Clean, Solid). In addition, we included media exposure (no, partial, total), toilet facility (improve, unimproved) and wealth index (Poor, Middle, Rich, Richest).

Statistical analysis: The study used various statistical techniques, including descriptive statistics, bivariate and multivariate analysis, binary logistic regression along with cartographic techniques such as choropleth maps. For studying the percentage distribution of various background

characteristics with dependent variables, bivariate and multivariate methods, to see all predictor (independent variables) impact on outcome (dependent variables), binary logistic regression, and choropleth maps to understand the spatial distribution of the nutritional status of under-five children in the Indian Himalayan region (IHR). The researchers used data analysis and mapping software such as Stata version 13.1, Arc GIS version 10.5 and Excel version 16.

Results and Analysis

Comparing stunting, wasting, and underweight among child populations under five years between the Hill states and the national average is quite revealing. All the three values are significantly lower for the Hill states than the national averages (Fig. 1). For the Himalayan states, the respective figures are 30.4 per cent, 14.4 per cent and 21.6 per cent. Against this, the national averages of 38.4 per cent, 21.0 per cent, and 35.7 per cent. Interesting, the percentage share underweight child population in Hill states is 14.0 per cent compared to the county.

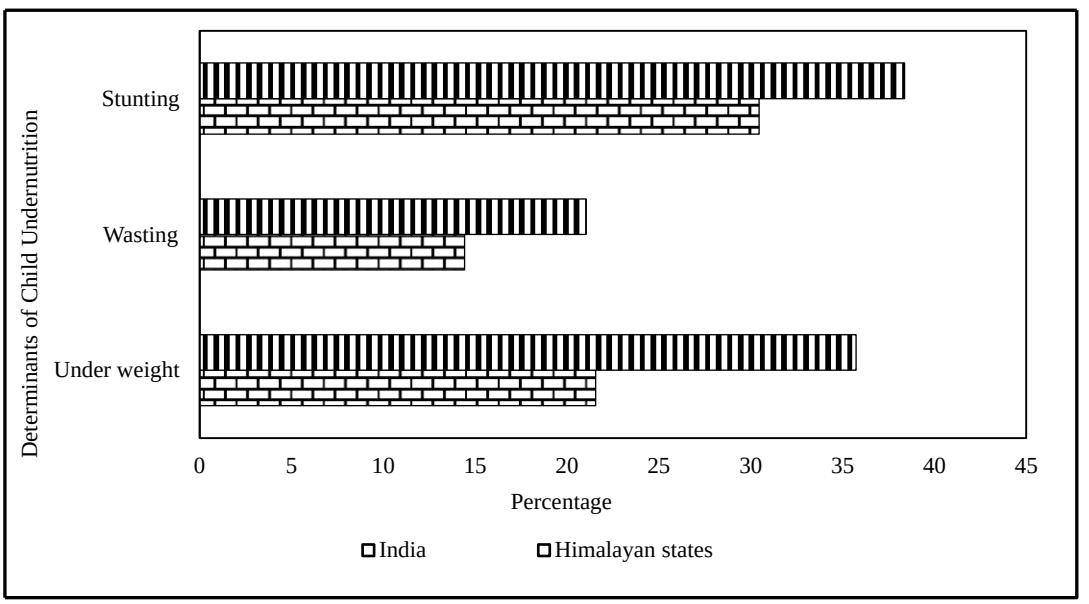

Fig. 1: **Nutritional Status of Under-Five Child Population: A Comparison**
Source. NFHS-4, 2015-16.

Notwithstanding the better nutritional status of the child population under five years in the Hill states than in India, there are wide inter-state differentials among Hill states (Fig.2). The percentage share of stunted children ranged from a high of more than 40.0 per cent in Meghalaya to less than 25.0 per cent in Tripura. Child wasting share ranged from a high of about 20.0 per cent in Uttarakhand to a low of only about 5.0 per cent in Mizoram. Similarly, the underweight child population was as high as about 30.0 per cent in Meghalaya and as low as only 10.0 percent in Mizoram. In relative terms, the percentage share of the stunted child population had been high to very high in Meghalaya, Uttarakhand, and Assam, and low in Tripura, Himachal Pradesh and Jammu and Kashmir.

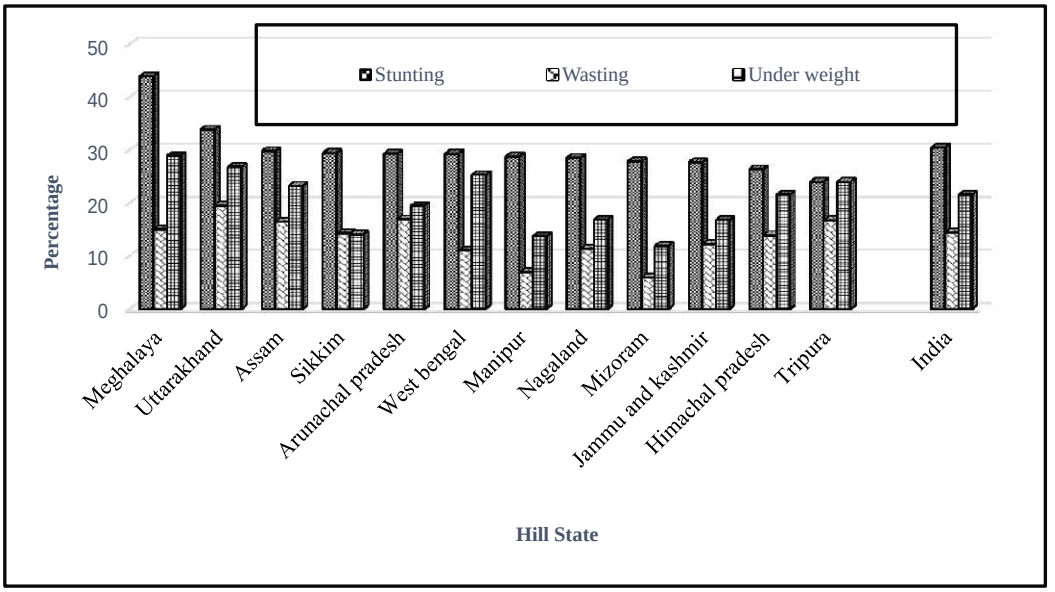

Fig. 2: **Nutritional Status of Under-Five Child Population: A Comparison among Hill States**
Source: NFHS-4, 2015-16

Similarly, the percentage share of wasted children was high in Uttarakhand, Arunachal Pradesh and Tripura but low in Mizoram, Manipur and Nagaland. The ratio of the underweight child population was high in Meghalaya, Uttarakhand, West Bengal, Tripura and H imachal Pradesh, but low in Mizoram, Manipur and Sikkim. Broadly speaking, Meghalaya in the eastern and Uttarakhand in the western Himalayan region have an unhappy nutritional status of under five years of the child population.

Based on the percentage share of underweight children in the total child population of under five years of age, 95 districts of twelve hill states have been grouped into four categories: (i) districts having below 10.0 per cent share, (ii) districts having 10-20 per cent share, (iii) districts having 20-30 per cent share, and (iv) districts having more than 30.0 per cent share. Alternatively, we can call these categories: low, moderately low, moderately high, and high concerning the share of underweight children under five years of age. Most of the districts having a share of underweight children due to malnutrition above 30.0 per cent are located in Meghalaya and Uttarakhand states. This category included districts of Uttarkashi, Tehri Garwal, and Dehradun from Uttarakhand, South Garo Hills, Ribhoi, East Khasi Hills, and Jaintia Hills from Meghalaya, Tirap from Arunanchal Pradesh, North Tripura from Tripura, and Solan from Himachal Pradesh (Fig.3a). Against this, the percentage share of underweight children under five was low (below 10.0 per cent) in Anantnag, Badgam, Ganderbal, Kathua (Jammu and Kashmir), Peren, Mokokchung (Nagaland), Tawang (Andhra Pradesh), and Aizawl (Mizoram) districts. The rest of the districts fall in the moderate category (10.0 per cent to 30.0 per cent).

As indicated earlier, the percentage share of stunted children, defined as low height-for-age, in the malnutrition child population is the highest in Indian Hill states. Moreover, there are

wide inter-district differentials. Against the average share of 30.4 per cent for all the Hill states, the percentage share of stunted children in nine districts distributed in Meghalaya (West Khasi Hills, Ribhoi, East Khasi Hills, and Jaintia Hills, Jammu & Kashmir (Udhampur), Nagaland (Kiphire), Arunachal Pradesh (East Kameng, and Kurung Kumey) and Sikkim (West Sikkim) was above 40.0 per cent (Fig.3b). In contrast, the percentage share of such children was low (below 20.0 per cent) in seven districts distributed in Jammu & Kashmir (Pahalgam and Samba), Himachal Pradesh (Kinnaur and Kullu), Arunachal Pradesh (Tawang), Nagaland (Mokokchung), and Tripura (West Tripura).

Wasting, low weight-for-height due to malnutrition, is not only the lowest (14.4 per cent) of all the three indicators of child malnutrition in the Indian Hill states but also much below the national average (21.0 per cent), differing widely at the district level. In four districts of Uttarkashi, Tehri Garhwal (Uttarakhand), Upper Siang (Arunachal Pradesh) and South Garo Hills (Meghalaya), the percentage share was more than 30.0 per cent (Fig.3c). In other words, more than double the average for the high states and much higher than the national average. In contrast, the percentage share of the wasted child population was low (below 10.0 per cent) in twenty-three districts distributed in Jammu & Kashmir (Kargil, Ganderbal, Bandipore, Pehelgam, Pulwama, and Badgam), Uttarakhand (Nainital), Arunachal Pradesh (West Kameng and Dibang Valley), Assam (Kamrup), Nagaland (Mokokchung, Zunheboto, Kirphire, and Wokha), Manipur (all the nine districts), and Mizoram (six of eight districts).

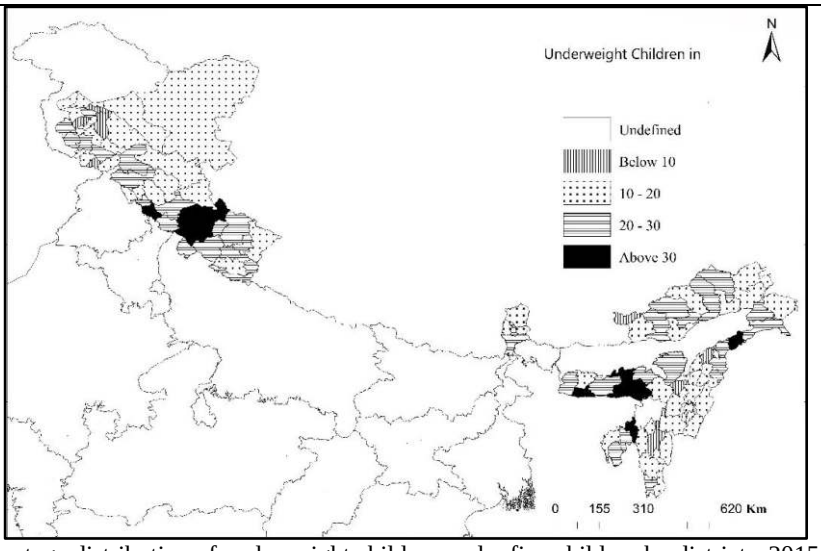

Fig.3a: Percentage distribution of underweight children under five children by districts, 2015-16

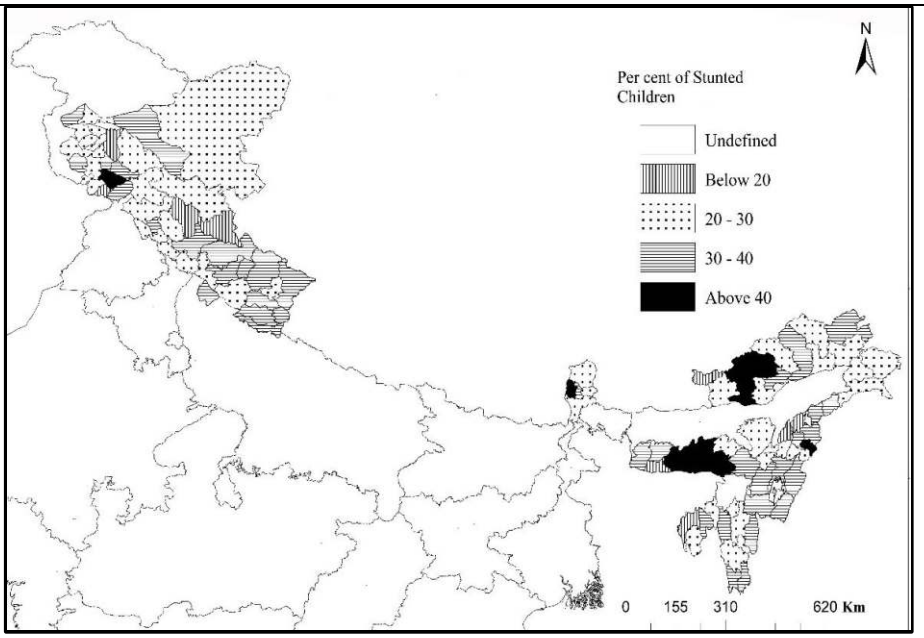

Fig.3b: Percentage distribution of stunted children under five children by districts, 2015-16.

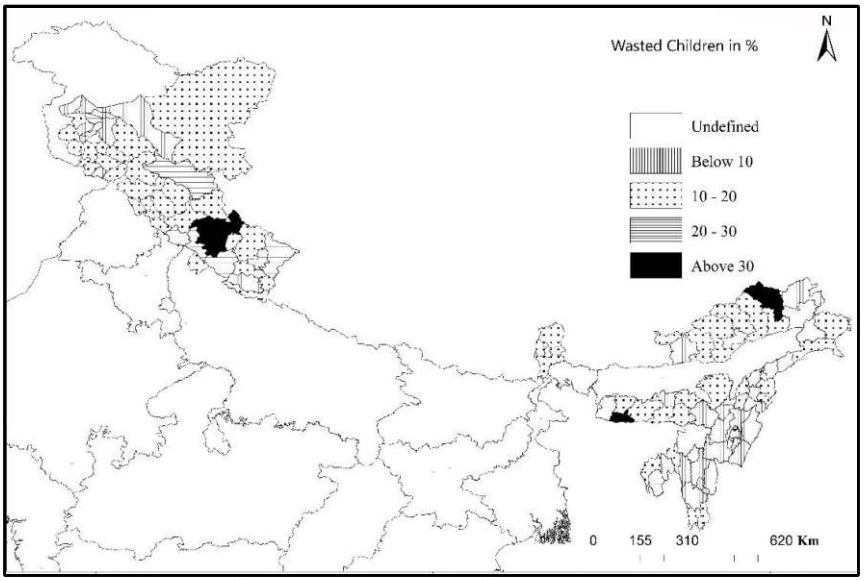

Fig.3c: Percentage distribution of wasted children under five children by districts, 2015-16

Table 1: Hill States: Prevalence of Stunting, Wasting and Underweight among under-five children by their demographic and socio-economic characteristics, 2015-16

Age (in months)	Stunting **(%)**	**Wasting (%)**	**Underweight (%)**	**Age (in months)**	Stunting **(%)**	**Wasting (%)**	**Underweight(%)**
0-11	17.9	20.0	16.4	36-47	34.8	11.6	22.3
12-23	31.6	14.6	19.0	48-59	33.9	13.0	26.8
24-35	32.4	13.6	22.5				
Child Sex							
Male	31.4	14.99	22.2	Female	29.4	13.8	20.8
Birth Order							
1	26.1	13.94	19.0	4-5	41.0	14.7	28.1
2-3	30.6	14.71	21.5	Above 5	46.5	15.0	31.3
Birth Weight							
<2500gm	34.7	17.1	29.1	> 2500gm	26.7	13.2	18.0
Birth Size							
Large	27.0	11.71	18.5	Small	35.9	15.5	27.7
Average	29.8	14.5	20.7				
Birth Interval							
< 12 months	33.2	12.1	20.4	6+	18.6	11.3	15.7
1 - 3 years	28.0	15.2	20.2	Don't know	31.2	14.5	22.3
4 - 5 years	26.8	14.4	17.9				
Media Exposure							
No	40.7	15.2	29.1	Full	26.7	13.9	19.3
Partial	33.2	15.9	22.4				
Caste/Category							
GEN	27.0	13.9	20.1	SC	34.1	13.7	21.7
OBC	31.2	17.2	24.1	ST	34.1	16.1	27.0
Religion							
Hindu	29.1	15.7	22.8	Others	34.4	12.1	20.2
Muslim	30.0	13.7	20.1				
Education level							
Illiterate	39.4	16.1	27.8	Below Secondary	29.1	14.3	20.5
Below Primary	39.7	13.6	27.8	Secondary	23.2	13.7	17.1
Primary	37.0	15.4	25.6	Higher	18.3	12.7	13.2
Wealth Index/Level							
Poorest	42.0	17.6	32.0	Richer	25.1	14.1	18.7
Poorer	36.7	15.0	25.7	Richest	19.1	13.5	13.5
Middle	32.7	13.5	21.7				
Toilet Facility							
Improved	28.0	14.0	19.6	Traditional	35.9	15.4	25.9
Cooking Fuel							
Clean	24.0	13	16.1	Solid	34.1	15.2	24.6
Total	30.4	14.4	21.6				

Briefly, the nutritional status of the child population below five years of age in Indian Hill states was comparatively better than the national average. Still, there were wide differentials at the state and district levels.

The demographic and socio-economic characteristics of the child population and their households have a considerable role in shaping their nutritional status. Incidences of stunting and underweight are maximum (34.8 per cent and 26.8 per cent, respectively) among the children aged between 36 to 47 months, against being the minimum among those in the 0-11 months age group. In general, the incidence of stunting and underweight increases with time among children under five years of age. In contrast, the incidence of wasting registers nearly the reverse trend. In other words, incidences of low height-for-age and weight to age increase with children's growth, while the incidence of low weight-for-height records a decline with the development of children aged below five years.

Interestingly, incidences of stunting, wasting and underweight due to malnutrition among male children are relatively higher than in their female counterparts. Another exciting inference emerging after examining data is that the increase in the order of birth of a child worsens the nutritional status of the children below five years. In other words, the nutritional quality of any successive child born to a woman will be poorer than the earlier born child. Birth weight, birth size and interval, and media exposure play a significant role in the nutritional status of children below five years of age. In other words, the larger the weight, size and internal at the birth of a child lower the incidence of stunting, wasting and underweight (Table 1). Similarly, higher exposure of the mother and the household reduces the chances of malnutrition and its effects.

Incidence of malnutrition and its efforts increase as we move from the general caste category of households to the OBC, SC and ST population. The children belonging to scheduled tribe (ST) families registered the highest stunting, wasting and underweight among children under five. However, the household's religion showed little or no effect on the state of malnutrition and its side effects. Further, as expected, education recorded its significant impact on malnutrition of child population in Indian Hill states. A higher level of schooling lowers the percentage of stunting and wasting and underweight among children under five years of age. The higher value of wealth index, improved toilet facilities, and clean fuel for cooking also find a negative association with the severity of malnutrition.

Children aged 0-11 months are considered the reference category. Stunting of the child population in the age group of 36-47 months is 2.9 times more than the children aged 0-11 months; validated at a 99.0 per cent confidence interval (CI). In the case of wasting, 24-35 months children are 0.86 times more likely to be low weight-for-height, at 95 per cent CI and 12-23 months children 0.75 times more, at 99 per cent confidence level (Table 2). Children aged 48-59 months are 2.0 times more likely to be underweight with age than the reference category, at a 99.0 per cent CI level. It shows that as the age of a child increases, the stunting and underweight conditions are more likely to increase but not the wasting, 0-11 months age being the benchmark category. Males are more likely to be stunted (1.2 at $p<0.01$), wasted (1.1 at $p<0.05$) and underweight (1.1 at $p<0.01$) than females. However, birth order is only significant by 1.6 at

p<0.01 among the child population in case of stunting with birth order one as the reference category. Birth weight of more than 2500 grams is significant for stunting (0.7), wasting (0.7), and underweight (0.5) time more likely at a 99.0 per cent confidence interval than birthweight of fewer than 2500 grams, the reference category. The small-sized children than those large sized at birth are 1.3 times more likely to be stunted, 1.3 times more likely to be wasted, and 1.5 times more likely to be underweight; all results are significant at 99.0 per cent CI level.

Table 2: Hill States: Odds Ratio of binary logistic regression analysis for stunting, wasting and underweight with demographic and socio-economic characteristics of the under-five child population

Child Age (in months)							
0-11 ®	**Odds ratio values**						
	Stunting	Wasting	Underweight		Stunting	Wasting	Underweight
12-23	2.451***	0.752***	1.429***	36-47	2.916***	0.703***	1.925***
24-35	2.32***	0.868**	1.756***	48-59	2.678***	0.62***	2.007***
Sex							
Female ®				Male	1.211***	1.108**	1.139***
Birth order (in numbers)							
1 ®							
2-3	1.204***	1.068	1.123***	>5	1.69***	0.819	1.17
4-5	1.54***	0.892	1.227***				
Birth Weight (in gms)							
<2500gms ®				> 2500gms	0.719***	0.749***	0.575***
Birth Size Category							
Large ®							
Average	1.212***	1.358***	1.289***	Small	1.348***	1.35***	1.573***
Media exposure							
No ®							
Partial	0.842***	1.05	0.764***	Full	0.799***	1.061	0.789***
Caste							
GEN ®							
OBC	1.091	1.246***	1.095	ST	1.19***	1.092	1.186***
SC	1.014	1.084	0.895*				
Religion							
Hindu ®							
Muslim	1.106*	0.979	1.039	Others	1.172***	0.77***	0.929
Mother's education							
Illiterate ®							
Below primary	1.182**	0.91	1.225***	Secondary	0.772***	0.847*	0.817**
Primary	1.021	0.935	0.998	Higher	0.713***	0.826**	0.735***
Below Secondary	0.874**	0.899	0.914				
Wealth Index							
Poorest ®							
Poorer	1.009	0.928	0.965	Richer	0.709***	0.917	0.704***
Middle	0.93	0.928	0.897	Richest	0.584***	0.879	0.611***
Toilet Facility							
Improve ®				Unimproved	1.249***	1.114	1.189***
Cooking fuel							
Clean ®				Solid fuel	1.131***	1.208***	1.265***
_cons	0.209***	0.176***	0.219***				
® Stands for reference category, Confidence Interval (CI) Level *** (99 per cent), ** (95 per cent) * (90 per cent)							

'No exposure' of the mother to media, taken as the reference category, has higher chances of stunting, wasting, and being underweight than those with media exposure. Odds ratio values for stunting and underweight in the case of the mothers having complete media exposure indicate that children born to them are about 0.8 times less stunted and underweight than those having 'no exposure', and both values are significant at 99.0 per cent CI.

Further, the incidence of stunting, low weight-for-age, is 1.1 times higher in children born in ST category households than those born in General category households. The same is true for underweight-weight in relation to age. Both values are significant at 99.0 per cent CI. The children born in OBC households are 1.2 times more likely to be underweight than those of general caste households. The impact of a mother's education is significant on the nutritional status of children under five. With the increase in mothers' education, the percentage of stunting, wasting, and underweight among children decreases (Table 2). The same is true for the wealth index, which indicates that the poorest have the highest prevalence of stunting, wasting, and underweight. Use of unimproved toilet facilities results in a significant increase of stunting (1.2) and underweight (1.1), marked at 99.0 per cent CI. In the case of cooking fuel, the people using solid fuel as opposed to clean fuel are highly likely to be stunted (1.3 times), wasted (1.2 times) and underweight (1.2 times), all three values being significant at 99.0 per cent CI.

The better nutritional status of a child population below five in the Hill states compared to the national average is explained by several factors. Inclusion of highly deprived states, such as Bihar, Chhattisgarh, Jharkhand and Odisha, in the national average pulls down the national average (Rasul *et al.,* 2017). The presence of a clean environment and traditional farming coupled with traditional integrated crop-livestock farming systems practised by the most mountain communities (Bisht *et al.,* 2019) and their dependence on the immediate ecosystem to sustain themselves (Gerlitz *et al.,* 2017; Sandhu and Sandhu, 2015) naturally improves the health status. In addition, the Hill communities traditionally have relied on wild edible plants, medicinal plants, mushrooms, and other forest products (Tag *et al.,* 2014). Locally available/grown wild plants, forest products and crops contribute essential nutrients required by people (Tag *et al.,* 2012; Aberoumand and Deokule, 2009).

Then, what explains the vast differentials in nutritional status at the state and district levels within the Indian Himalayan region. For example, several districts of Meghalaya and Uttarakhand have a high prevalence of stunting and underweight among children below five. The cases of wasting are highest in Uttarakhand, followed by Arunanchal Pradesh and Tripura. There is a high degree of heterogeneity in physiographic factors and social, demographic, and economic characteristics present at meso and micro levels. According to Rasul *et al.* (2017), socio economic, environmental and cultural factors like high poverty, low dietary intake, the inadequacy of a hygienic environment, loss of nutritional knowledge, climate change, and ecological degradation influence the food and nutrition security in the Hindu Kush Himalayan region. Limited access to technology and diverse fast-food alternatives adversely affect local people's nutrition and health, causing malnutrition, especially in women and children (Bisht *et*

al., 2019). Mountain areas have a per capita food deficit (Hussain, 2010). Heavy drudgery of women in the mountain terrain also aggravates the prevalence of undernutrition (Rasul et al., 2017). There is a shortage of food in remote, isolated mountain areas (Rasul *et al.,* 2017).

Briefly, the study confirms the association between child nutrition and socio-economic and demographic characteristics of mothers and households in the study region. With increasing birth order, the risk of stunting and being underweight increases. Among infants, the chances of undernutrition are significantly higher among low-birth-weight babies and tiny size new-borns. The ST, SC and OBC caste groups are more at risk of malnourishment than the general caste category. Such a situation is mainly due to a lack of proper development, poor awareness about maintaining and enhancing the nutritional value of food, and lack of hygiene and sanitation compared with the general castes. The wealth index reveals that stunting and wasting are lower among the wealthy income groups than in the poorest, poor, and moderate-income families. The results show that social factors such as better standard of mother's education, improved toilet facilities, clean cooking fuel and media exposure are positively associated with improvement in child nutritional levels as the prevalence of stunting, wasting and underweight decreases.

Conclusion

The study revealed a widespread prevalence of undernutrition among the children of different Himalayan states. Also, the socio-economic and demographic variables exert a significant effect on child nutrition status, creating vast social and spatial inequalities. The study highlights a need for an integrated bottom-up approach considering the presence of high heterogeneity in the Indian Himalayan region to improve the child's health and nutritional status. Undernutrition, a significant public health problem in India, is associated with poor socio-economic status, low birth weight, mother's illiteracy, housing conditions and diversity of dietary habits.

Improving socio-economic status, education and increasing awareness among mothers about child care and nutrition can help in improving maternal nutrition during pregnancy and thus can enhance the issue of low birth weight. In sum, appropriate nutritional strategies, awareness programs, improvement in food security, and proper sanitation facilities may help improve the nutritional status of children belonging to Indian Himalayan states.

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Exploring Choice Preferences and Safety Perceptions of Women Hostellers: A Case of International Hostel for Girls, Panjab University, Chandigarh

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Abstract: The present paper describes some choice preferences and safety perceptions of students staying in the International Hostel for Girls, Panjab University, Chandigarh. It explores how the notion of space, place and location arise in the mind of the girls' hostel students in their everyday living. These concern the choice of the hostel, hostel room, and places to be visited on the campus and outside. It also gauges the perception of spaces of fear on the campus and in the City of Chandigarh. It is an empirical study wherein data were collected using a structured pre-tested questionnaire. The analysis lends itself to clues on planning and designing any infrastructure and creating public spaces with features that enhance women's safety and feelings of security. However, safety centric planning and design of any infrastructure involves concrete and physical attributes of space.

Keywords: Geographical, international, hostel, University, security, preferences

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Introduction

The increased visibility of women in educational institutions and among the professionals and discussions about space and time-space relations brought feminist attention to 'space'. In an article, 'Women in the city', Suzanne Mackenzie (1989) suggests that the feminist approach has become almost focal in geographic studies in today's social and economic reconstruction era, making it crucial for future urban policies.

Recent decades have seen an ever-increasing number of females in higher education. The number of women enrolled in undergraduate courses was only 1.48 million in 1991-92, rose to 3.29 million in 2002-03 and then to 16.0 Million by 2015-16. Also, the same trend has been noticed in graduate, post-graduate and research degree programmes. For example, the number of women enrolled for research degrees was only 8,780 in 1980-81, nearly doubled to 15,018 in 1988-89 and then rose to 23,609 in 2002-03 (for details, see Chanana, 1990; Singh, 2008). According to figures available from the All India Survey on Higher Education (AISHE), 2019-20, the gross enrolment ratio in higher education in India is 27.1 (18-23 years). Gross enrollment for men is lower (26.9) than for women (27.1).

It means that public spaces now are more intensely shared by males and females. In a society with strong patriarchal values, it is not uncommon to witness the display of male chauvinism, especially in the north Indian states of Harayana, Punjab, Uttar Pradesh and Rajasthan having highly imbalanced sex ratios. With the spread of education and women empowerment, educated and working women are becoming assertive. The combined effect of all this is that women in India are now more exposed to crime. Cruelty against women, assault on them to outrage their modesty, kidnapping and abduction, stalling their path in public places etc., are the crimes

that the women face pretty commonly. As a protective measure, the parents don't allow them to move alone in the market or public places. Instead, they move in a group to the market, public gatherings, attend classes, travel in buses, etc. Also, the parents would like their daughters to stay in college/university hostels/women working hostels instead of paying guesthouses (PGs) during their studies in higher education or as single working women. Notably, the PG accommodations are considered risky for security reasons and expensive, especially for middle-income group families.

The existing literature reveals that several factors are involved in choosing a particular hostel facility or accommodation to rent (Adesoji, 2010; Russell, 2010; Li et al.,2005; Amole, 2009). Such factors can be grouped into four categories: (i) Characteristics of the dwelling unit, (ii) Social amenities, (iii) Neighbourhood conditions, and (iv) Management (Adesoji 2010). Oladapo (2006) observed that a dwelling that is adequate from the physical or design point of view might not necessarily be sufficient or satisfactory from the users' point of view.

As the warden in one of the girls' hostels at Panjab University Campus, the present author realized with time that the security concerns of the women students and their parents don't end with getting hostel accommodation at the Panjab University campus. Such considerations continue further to issues like the hostel location (both in absolute and relational space) on the Panjab University campus, where the hostel room is allocated, the floor on which the allotted room exists, the study department and the market. All such issues are geographical and pertain to space, place and location.

In light of the above statements, the present study attempts to study perceptions of girls hostel residents at the Panjab University, Chandigarh campus about the choice of the hostel, hostel floor and the room, security concerns and spaces of fear on the campus and outside the campus. The International Hostel, located in Sector 25 at the University's South Campus, has been taken as a case study with the following research objectives.

Research Objectives

The main objectives of the study are to-

(i) Study the notion of space, place and location in the mind of the girls' hostel student residents at Panjab University, Chandigarh, about the choice of the hostel, hostel room and places to be visited on the campus and outside it; and

(ii) Perception of spaces of fear on the campus and in the City of Chandigarh

Data source and Methodology

Having closed and open-ended questions, a questionnaire was formulated, tested, and then used to collect data/information from all the ninety-five women students residing in the hostel. However, the filled questionnaire was not received from five of them. In this way, data/information acquired from the ninety women students were collected, compiled and analyzed.

In framing the questions, asked through a questionnaire from the respondents, the following four components of accommodation were given due focus: (i) Design and other features of the accommodation, (ii) Preferences of residents, (iii) Security of residents within the accommodation, campus, and City, and (iv) Options for recreation within the City for Hostel Residents

The author conducted the survey in February 2020. In addition, Focus Group Discussions (FGDs) were also held with the residents of the International Hostel to understand their perceptions on many aspects of life associated with hostel living. Parts covered included information about the native places of residents, the hostel's location, the perception of the sites of fear, and the favourite places within the City and its surrounding areas. After the data collection, the responses were analyzed and interpreted to draw inferences. To represent collected and compiled information, the author took the help of tables, bar graphs, and pie charts.

Sarvadaman Chowla Hall: The Study Area

In the 1970s, there was only one hostel for women students on the Panjab University, Chandigarh campus. With the increase in teaching and research courses and the growing number of female candidates admitted to such studies, the demand for girls' hostels increased. As a result, there is a massive demand for hostel accommodation for women students. The overwhelming majority of women students demanding hostel accommodation at the Panjab University campus come from neighbouring states of Punjab, Haryana, Himachal Pradesh, Uttar Pradesh, and NCT of Delhi. Nevertheless, there are a few students from abroad. With grants available from the University Grants Commission and other sources, the University has been trying hard to build new hostels to cater for the fast increasing demand for campus hostel accommodation. Panjab University currently has eight boys' hostels, and ten girls' hostels, besides one working women's hostel and one international hostel exclusively for girls. One more hostel for girls is under construction. There is, however, a shortage of hostels as per demand.

Sarvadaman Chowla Hall, popularly known as the International Hostel, is one of the recently constructed girls' hostels on the campus. It has been named after Professor Sarvadaman Chowla, the renowned Indian mathematician who worked on the Number Theory. He was an illustrious alumnus of Panjab University, Lahore (pre-Independence). Located in Sector 25 (South campus), this hostel has a unique character. Infrastructurally, it has five floors. There are five guest rooms on the ground floor. Each floor has ten rooms with an attached bathroom and kitchen and five rooms without a kitchen. The hostel's top (or the fourth) floor has only ten rooms with an attached kitchen. The 5thfloor, though available, reserved for a particular department in the University, is currently unoccupied. Also, there are fifteen rooms on this floor of the hostel. The Sarvadaman Chowla Hall is the only hostel on the campus with air-conditioned rooms with attached washrooms and a kitchenette. The residents are allowed to cook their food here. While LPG is not permitted, the student and other residents can use hot plates, induction cooktops, heaters and microwave ovens for their cooking/ heating requirements. Some of the facilities in this hostel are not available in other campus hostels. For that reason, this hostel may be termed a luxurious one compared to other women's hostels on the Panjab University Campus.

Before proceeding further, we briefly discuss the place of origin and early education of the ninety women students forming the part of the present study.

Place of origin and early education of hostel residents

Interestingly, more than two-fifths (41 of total 90 respondents) of women students residing in the International hostel are from Punjab. On the other hand, more than one-seventh (or fourteen) are from Haryana. In this way, the states of Punjab and Haryana contributed six of each ten students residing in the International hostel. Of the remaining, nine are from Himachal Pradesh, eight are from Delhi, eleven are from different parts of the country, and seven are from foreign countries, including Canada, Thailand, Mauritius, the USA, and Kuwait (Table 1). The overwhelming majority of the residents are, thus, from neighbouring states of Punjab, Haryana, Himachal Pradesh and NCT of Delhi.

Table 1: International Hostel: Classification of resident students by their place of origin

Sr. No.	State of origin	Number	Per cent to total
1	Punjab	41	46.0
2	Haryana	14	15.0
3	Himachal Pradesh	09	10.0
4	Delhi	08	09.0
5	Other states/UTs	11	12.0
6	Foreign nationals	07	08.0
Total		**90**	**100.0**

Source: Fieldwork, 2020

In line with their places of origin, the dominant majority of the hostel residents had their previous education from the neighbouring states of Punjab, Haryana, Himachal Pradesh and NCT of Delhi. Thirty-two (about 36.0 per cent) had their last education in Punjab, eight (about 9.0 per cent) in Haryana, twelve (13.0 per cent) in Himachal Pradesh, and ten (11.0 per cent) in NCT of Delhi (Table 2).

Table 2: International Hostel: Classification of resident students by state/country of previous education

Sr. No.	State/country of previous education	Number	Per cent to total
1	Punjab	32	35.6
2	Chandigarh	16	17.8
3	Haryana	08	08.9
4	Himachal Pradesh	12	13.3
5	NCT of Delhi	10	11.1
6	Other States/UTs	08	08.9
7	Other Countries	04	04.4
	Total	90	100.0

Source: Fieldwork, 2020

A comparison between Table 1 and Table 2 is quite revealing. The second -largest number of hostel residents did their previous studies in Chandigarh, but none of them was a resident of

Chandigarh. Secondly, as many as seven residents were foreign nationals, but only four had studied before in foreign countries. A substantial number of resident students originally belonged to other states, especially Punjab but were previously studying in Colleges/institutes located in Chandigarh. The same is true for nearly half of the foreign nationals residing in the International hostel.

Room Preference: Geographical Considerations

There are residents whose first preference was this hostel. However, several of them were admitted here as they could not get access to any other hostel. Many parents do not prefer to have their daughters in PG accommodation. They are greatly concerned about their children's safety and security in selecting a hostel where will be admitted their ward.

As far as the geographical placement of students within the hostel is concerned, a preference is observed for particular rooms. However, none of the residents reported any individual floor preferences because of the availability of lifts at the hostel. The hostel has three kinds of rooms.

a) Diagonal Rooms: These rooms do not have a kitchen and sink
b) Sun Facing rooms: These rooms are bright throughout the day as they face the sun. There are fewer chances of their being damp during the monsoon and winter.
c) Park or Lawns Facing rooms: These rooms face the greener areas where lawns and trees are visible and give a pleasant view to the residents.

After looking at different types of rooms available, the students were asked to reveal their choices for room preferences. It has been observed that the maximum number of residents preferred sun-facing rooms as they found it convenient to dry their clothes on the balcony, especially during the monsoon and winter seasons. Furthermore, these rooms were experiencing less dampness than the non-sun facing rooms. About 50.0 per cent of the residents of the hostel reported their preference for these rooms. The next priority was the rooms facing the lawn with a beautiful garden view despite less sunlight. These rooms were considered better than the diagonal rooms, which were taken up only by those residents who did not get any other accommodation.

Twenty-nine residents occupied sun-facing rooms, and 11 resided in the lawn facing rooms. Thus, there were 40 residents occupying rooms that had access to sunlight and were also lawn facing besides being bigger. Ten residents did not have any specific preference (Fig 1).

Places of Fear and Insecurity: Perceptions and Geographical Realities

The places of fear had relevance for the girl residents of the hostel, especially during the dark hours after 7 pm. Of the 90 girls, sixty did not fear moving within the hostel or the City (Table 3). Three girls feared going out on the balcony at night, especially those on the first floor. Some thirty-one girls considered the main gate near the Alumni house unsafe for inadequate light arrangements. Also, eight girls feared the 4th and the 5thfloor as they suspected that the 5thfloor was lying vacant, probably for some sinister reason.

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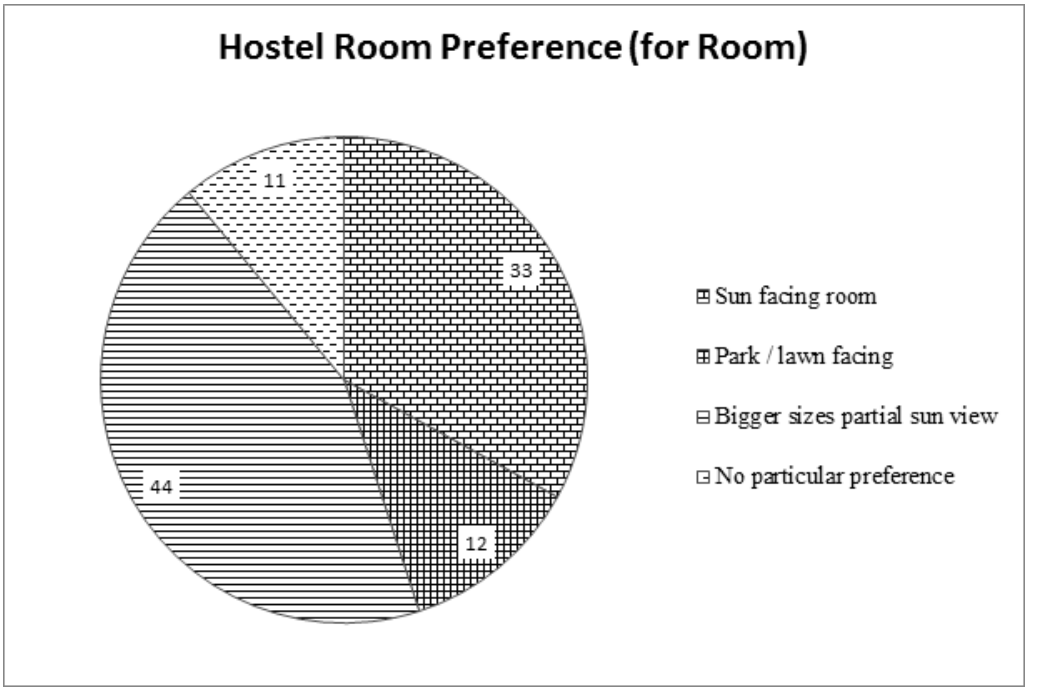
Table 3: Places of Fear as Perceived by Residents

Sr. No.	Location	Frequency	Percentage (%)
1	Within the hostel premises	11	12
2	Within the campus	46	50
3	Surrounding Near Campus	11	13
4	Within the city as a whole	16	18
5	No perception of Fear	6	7
	Total	90	100

Source: Based on Field Work 2019-2020

Fig. 1: Preference for Specific Rooms among Hostel Residents



Source: Based on Field Work, 2019-2020

Fifteen girls reported that the University of the Institute of Engineering and Technology (UIET) area was rather unsafe as there was no habitation and lighting during the night hours. Another 11 felt that the nearby Sector 25 slum area was a hazardous area in case they had to venture out at night. Only one or two girls were uneasy that the hostel was proximal to the City's cremation grounds. They were afraid of going out even to their room's balcony for fear of meeting a ghost or 'Atma'. Thus, while most of the girls had no idea about any safety concerns while dwelling in the international hostel for girls, a significant proportion was uneasy about some of the areas in the vicinity.

in the company of male friends during the late evening hours and late night than being all alone or with their female friends.

Further, the hostel residents of the International hostel found Chandigarh far safer than Delhi and other metros. But, Chandigarh city was also considered unsafe for girls after 11.0 pm. Chandigarh, mainly an administrative city, has little movement on roads after 10.30 pm.

Preferred places of visit in the City and its surroundings

It is interesting to analyze the responses of the international hostellers regarding favourite places for an outing inside the City and its surroundings. Nine of every ten students, who responded to this question, prefer to visit places within Chandigarh. Chandigarh, a rare epitome of modernization co-existing with natural preservation, is called India's 'City Beautiful'. Hence, it attracts both city residents and tourists from all over the world.

Only 10.0 per cent of the total 169 hostel residents registered their preference to visit Pinjore Garden, a tourist spot in Haryana, or Kasauli, a small hill station in Himachal Pradesh, for recreation and entertainment (See Table 4).

Table 4: Preferred places for recreation and entertainment

Sr. No.	Preferred Place for Recreation	Frequency	Percentage (%)
1	Sukhna Lake	55	33.0
2	Sector 8 eateries	40	23.0
3	Elante Mall	35	21.0
4	Sector 17 (City Centre)	13	08.0
5	Sector 26 eating joints	6	03.0
6	Indian Coffee House	4	02.0
8	Kasauli (Tourist spot in Himachal Pradesh)	9	06.0
7	Pinjore Garden (Tourist spot beyond Panchkula in Haryana)	7	04.0
Total		**169**	**100.0**

Source: Field Work, 2020

In Chandigarh, Sukhna Lake, an artificial lake located on the northern side of the City, is the most popular choice of students residing in the International Hostel. Fifty-five or one-third of the total 169 respondents in our survey visited Sukhna Lake for boating, a stroll, a camel ride and even Bungee jumping at times. The next favourite place of hostellers is Sector 8 Market, which they visit to enjoy the variety of foodstuffs served at numerous eateries concentrated in the sector market. Forty of 169 respondents making more than one-fifth of the total respondents, claimed their regular visits to eateries in Sector 8 market. Some contended that the food served is tasty and relatively cheaper than other places in the City. The Elante Mall, a large retail complex containing a variety of stores and restaurants and other business establishments housed in a single building in the Industrial area (Phase-I), is the third popular choice of the hostellers, visited by thirty-five or more than one-fifth of the total respondents. The Mall was visited for shopping, movies, and simply hanging around for window shopping and enjoying the multicuisine on offer.

More than three of each four women residents of International Hostel visit any one of three places, namely the Sukhna Lake, Sector 8 Market and the Alante Mall, for recreation, entertainment and shopping/eating. The hostellers' fourth popular destination for amusements and entertainment has been Sector 17, the City Centre. Once, Sector 17 Market was the most popular visiting destination among the boys and girls students staying in different hostels at Panjab University campus. However, with the emergence of Shopping Mall culture in the City and its surroundings coupled with the availability of motorized personal vehicles with hostellers, it has lost its attraction, especially among young girls and boys. Only thirteen of the total 169 respondents visited Sector 17 market frequently. Of the remaining 26 respondents, six preferred eating joints in Sector 26, four the Indian Coffee House, seven the Pinjore Gardens, and nine the Kasauli hill station. The former two were located inside Chandigarh, and the latter two were outside Chandigarh in Haryana and Himachal Pradesh. A few respondents mentioned the Rock Garden and the Rose Garden as their preferred places.

The women residents of the hostel, Indian and non-Indian, were also asked to state their preferences for sightseeing locations/places during vacations. They were asked to limit their discretion in order up to the third place. Unfortunately, the spatial scale of their preferred sites differed from as large as the region/zone (e.g. Northeast), state (e.g. Kerala), Sub-region (Ladakh), and forested area in the river delta (e.g. Sunderban) to a particular city (e.g. Agra). Since the spatial scale of locations/places differs widely, it may be possible for us to pinpoint the most preferred locations/places at a similar spatial scale.

Interestingly, the maximum respondents reported Kerala as the first and the second and Goa as the third preferred destination for sightseeing. Northeast India, especially Assam and Sikkim, is registered as the second-best choice after Kerala in all three orders (first, second, and third). The third position jointly goes to Goa and Kashmir Valley. Interestingly, Goa is reported as the third choice under the second option and the first under the third option (Table 5). Under the first choice, fifth, sixth and eighth positions have been accorded to Ladakh, Mumbai and Andaman & Nicobar Islands, respectively. It is abundantly clear from the above discussions on sightseeing preferences of the hostellers in International Hostel that the locations/places/areas having natural scenic beauties are the most preferred sightseeing destinations. If we add Shimla, Kullu, and Manali from Himachal Pradesh, Sunderban from West Bengal, and Dehradun from Uttarakhand, 80.0 per cent of the respondents registered their first preference and about 75.0 per cent their second preference for places having natural scenic beauty.

For the remaining 20.0 per cent of respondents, places of religious (e.g. Pushkar, Mathura and Benaras) or historical (e.g. Agra, New Delhi) importance and metropolitan cities (e.g. Bengaluru) made the first preference. Notably, the hostel residents from abroad find interest in visiting the Golden Temple at Amritsar. On the whole, places of natural beauty distantly followed by religious and historical importance made the preferred sightseeing locations.

Table 5: Preferred locations/places during vacations of the Boarders in International Girls Hostel, 2020

Sr. No.	Preferred location/area/place to visit	Preference		
		First	Second	Third
01	Kerala	21 (23.0)	15 (17.0)	08 (9.0)
02	North East India (especially Assam & Sikkim)	11 (12.0)	14 (15.0)	14 (15.0)
03	Kashmir Valley (J & K)	08 (9.0)	04 (5.0)	08 (9.0)
04	Goa	08 (9.0)	12 (13.0)	15 (17.0)
05	Ladakh (J & K)	07 (8.0)	10 (11.0)	05 (6.0)
06	Mumbai (Maharashtra)	07 (8.0)	04 (5.0)	05 (6.0)
07	Pushkar (Rajasthan)	06 (7.0)	08 (9.0)	05 (6.0)
08	Andaman & Nicobar Islands	05 (6.0)	01 (1.0)	04 (4.0)
09	Bengaluru (Kernataka)	04 (4.0)	-	05 (6.0)
10	Shimla, Kullu, Manali (Himachal Pradesh)	03 (3.0)	01 (1.0)	08 (9.0)
11	Any part of India	03 (3.0)	02 (2.0)	04 (4.0)
12	Puducherry	02 (2.0)	02 (2.0)	-
13	Agra/Mathura/Benaras (Uttar Pradesh)	05 (6.0)	06 (7.0)	04 (4.0)
14	Sunderban (West Bengal)	-	03 (4.0)	-
15	Dehradun (Uttarakhand)	-	02 (2.0)	-
16	South India	-	02 (2.0)	-
17	Amritsar (Punjab)	-	02 (2.0)	-
18	New Delhi (NCT of Delhi)	-	02 (2.0)	04 (4.0)
19	Patna Sahib (Bihar)	-	-	01 (1.0)
Total		**90 (100.0)**	**90 (100.0)**	**90 (100.0)**

Source: Based on Field Work 2019-2020
Note: Figures in parentheses indicate the percentage of total preferences

Conclusions

The dominant majority of women hostellers residing in the International Hostel of Panjab University, Chandigarh, belonged to neighbouring states of Panjab, Haryana, Himachal Pradesh and NCT of Delhi. Only a miniscular number of seven women hostellers making less than one-tenth of total residents, comprises foreign nationals. The nomenclature of the hostel is thus a misnomer. A substantial number of resident students originally belonged to other states, especially Punjab but were previously studying in Colleges/institutes located in Chandigarh. The same is true for nearly half of the foreign nationals residing in the International hostel.

Most residents preferred sun-facing rooms as they found it convenient to dry their clothes on the balcony, especially during the monsoon and winter seasons. The following preferred location was for the lawn facing rooms with a beautiful garden. While the dominant majority of hostellers did not fear moving anywhere inside the hostel/campus/city, several students feared specific locations. The three feared going to the balcony of their hostel rooms at night, thirty-one considered the gate near the Alumni house unsafe, eight were afraid of the hostel's 4th and the 5thfloors, fifteen found the University of the Institute of Engineering and Technology (UIET)

unsafe for an evening walk, for eleven slum area in Sector 25 was a dangerous place, and a few were uneasy with the thought that City's cremation ground is near to their hostel. The majority of the residents considered it unsafe to go out of the hostel after 9.0 pm. They believed that Panjab University's South Campus is insecure compared to the North campus. Interestingly, several girls found them safer in the company of male friends during the late evening hours and late-night than being alone or with their female friends.

Ninety per cent of the girls preferred to visit places within Chandigarh. Only 10.0 per cent or eleven of the total 169 hostel resident students like to visit Pinjore Garden, a tourist spot in Haryana, or Kasauli, a small hill station in Himachal Pradesh, for recreation and entertainment. Within Chandigarh, the Sukhna Lake, Sector 8 Market, the Alante Mall and Sector 17, the City Centre, were the most preferred places for recreation, entertainment and shopping/eating.

The maximum respondents reported Kerala as the first and the second and Goa as the third preferred destination for sightseeing. Northeast India, especially Assam and Sikkim, is registered as the second-best choice after Kerala in all three orders (first, second, and third). The third position jointly goes to Goa and Kashmir Valley. On the whole, places of natural beauty distantly followed by religious and historical importance made the preferred sightseeing locations.

Finally, the study recommends planning and designing safe public spaces for women and girls should analyze the various uses of public spaces, especially regarding who uses them, when, and how long. Hence, the planning and designing of safe public spaces for women and girls require constant attention and evaluation of the social and physical implications for the entire planning and design process. The women and girls will not use spaces where they fear or experience violence. The specific safety needs of women and girls are necessary to be incorporated into all infrastructural geographic planning and design (especially in the case of hostels on campus) to create women-friendly spaces. These aspects include (i) easy access to and from the campus, (ii)ease of movement within both campuses, (iii) good lighting, (iv) clear, well-kept paths for ease of movement, and (v) general visibility of the entire space.

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Claiming Space: Locating Women in Indian Geography

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Introduction

One of my colleagues, who has a great sense of humour, often jokingly calls me 'Danger Geographer' by twisting the term 'Gender Geographer'. I do not mind when he says this because I know he does not intend to insult me and says it as a joke. However, the term seemed intriguing to me when I first heard it. The term would not leave my mind, haunting me whenever I thought about claiming gendered space within the discipline. I tried to understand where exactly is the 'danger' in claiming gender as an intrinsic matter of Geography discipline. Doesn't Geography treat human society as the core of its interests? Or does patriarchy, as in all other cases, trigger the perception of gender as a problematic issue? Does gender threaten to destabilize the 'all is well' kind of status-quo thinking that still exists within our discipline? I dig deeper into the 'danger' to answer these questions in this article. I do so by exploring how gender concerns do indeed destabilize many well-established (and often rooted in patriarchal) norms and beliefs within our adored discipline.

At the beginning of this article, I must state that I have never experienced any discrimination in the Department of Geography of The University of Burdwan as a woman academic. I am not a victim of patriarchy within this context. However, the fact that I was not a victim does not mean that patriarchy does not work within the disciplinary boundaries of Geography departments. The challenges related to gender within the discipline are often clouded by the 'everything is all right' kind of idea. This status-quo belief occurs because gender issues are not overtly expressed, discussed or manifested.

In most cases, even if women within academia experience gender-based discriminatory practices, they hardly ever raise their voices because of their middle-class identity, which trains them to conform to and maintain the status quo. Maybe they do not want to be marked as 'feminist', perceived as a problematic identity in India. Having lived experiences as a girl from a village and as a woman in Indian small cities, I have observed how gender-based injustices (read structural violence) work in our society and how middle-class women try hard to conform. Later on, as a professional within the discipline of Geography, I have also engaged myself in critically understanding the invisible components of gendered space and spatiality within the discipline. Here, I would like to say that the situation within Geography might not be very different from other academic disciplines in Indian universities. However, I am not going to discuss the situations of other disciplines as I lack enough experience in working in those specific spaces. As an insider, I can only comment on the discipline I am linked to—in teaching, research, and curriculum framing.

Two broader arguments frame this article: (a) high level of preferential treatment is given to men in recruitment policies despite the feminine character of the discipline from the perspective of students at the postgraduate level, and (b) there is gender blindness in the curriculum at the postgraduate level. From the websites of the Geography departments of premier Indian universities, I have collected secondary information on the faculty positions and postgraduate curriculum. I have emphasized the Geography departments of the 18 universities in West Bengal as I have some expertise in the ground-level situation. I have collected data on the women–men ratio (WMR) among 2nd semester Master's degree students in Geography at every university in West Bengal from the faculties of the respective departments by telephonic conversation, email, and WhatsApp correspondence. The same method has been applied to universities outside the state. In this case, I only received the average percentage of female and male students as their respective faculty members mentioned in those cases. That is why there might be a little approximation in those proportions, but I trust the data from faculty members who have been part of these departments for several years. A point to note: in this article, 'Geography departments' are used to mean the postgraduate departments of different universities.

'Missing Women' in the Geography Departments

Gender mainstreaming in the Millennium Development Goals and Gender Equality in Sustainable Development Goal 5 prioritize the increase in the proportion of women in leadership and decision-making through their presence in higher bodies of academia and policymaking. The presence of women in higher academic bodies of a discipline has a particular value. Gender balance, both in selection and nomination, is the desired goal of bringing about gender justice. There is a push from feminist organizations in developed countries to bring this gender justice to the highest level of educational institutions, i.e., the universities.

Although there is an ongoing debate on the association between women's presence in decision-making bodies and its impact on people in general and women or girls in particular, numerous studies confirm that the relationship is always positive. The status of women changes along with their higher presence in decision making bodies. There might be confusion on the issue of how I can compare university faculties with the members of policy and decision-making bodies. My argument, in that case, would be that they are indeed comparable. The future of Geography as an academic discipline lies in the hands of university faculty members who frame the curriculum at both postgraduate and undergraduate levels. The kinds of research carried out, the approaches followed, and the methods used by the university faculty also direct the development and set the future course of the discipline. From that perspective, the gender balance among the faculties is significantly important in a discipline like Geography, whose core interest lies in the production of space by human societies.

When I was pursuing my higher studies, Geography was perceived as a 'feminine' subject, a soft discipline for girls with better results to go into. In those days, it was primarily taught in girls' colleges in West Bengal. Consequently, the proportion of postgraduate students was heavily biased towards women. The women–men ratio was often 30:3, with the worst figure being 30:1 in some academic sessions in the early 1990s. Afterwards, many co-education colleges started

offering Geography as a major, and slowly the proportion of male students increased in the Geography departments. These newly created undergraduate departments also opened up the opportunity for jobs at a higher level than school teaching, which probably attracted more male students. In every sphere of work in India, we see more women at the lower levels, with their number decreasing in the upper hierarchies. However, despite this change, the proportion of male students hardly ever crossed the 50.0 per cent mark. When I joined the Geography department at the University of Burdwan in 2006 as faculty, there were more male students than during my time as a student. However, female students were still the majority group. The proportion varies from year to year, but women outnumber men if we take a long-term average. For instance, in the 2021–23 academic session, the WMR at our department at the University of Burdwan is 43:16.

As the number of universities increased in West Bengal in the last ten years under the new political regime, so did the number of Geography departments. All these new departments have something in common with the old Geography departments — there are more female students[1] than male students, and the WMR varies between 60:40 and 90:10 (Table 1). However, let's look into the gender-disaggregated database of faculty members of 18 universities in West Bengal. It is biased towards men (Table 1), which raises the question of where these missing women are going. As per my knowledge, women are very much present in the teaching faculties of secondary and higher secondary schools in West Bengal. After pursuing the Master's course, many women take up school teaching jobs and get married due to immense pressure from their parents. However, this does not mean that women are falling behind in pursuing PhD or MPhil degrees in Geography these days. They are fighting against all odds but not giving up on their higher education.

According to the University of Burdwan records, among MPhil students in the academic session of 2018–20, the WMR was 8:7. In the 2019–21 academic session, this ratio was 8:5. Most MPhil students from different universities are accommodated in PhD programmes in the current scenario. Even if we consider the possibility of an increased dropout rate among women at the PhD level, that alone cannot suffice to explain why their proportion has come down to 27% among university faculties. It appears that the backsliding starts at the recruitment level for college teachers. However, we still find many women faculty members at the undergraduate level in different Degree colleges. When it comes to the case of faculty at the highest level, however, women are grossly under-represented. Here the question arises, how come a feminine discipline becomes masculine at the top level? Where are made the decisions regarding teaching and knowledge production in Geography?

If we try to look into the gender difference between the proportion of male and female faculties of all postgraduate departments of Geography in the universities of West Bengal, the difference is enormous. Men occupy 73.0 per cent or roughly three-fourths of total full-time faculties, whereas the proportion of women has gone down to 27.0 or about one-fourth.

[1] Because of data limitations, I am treating all women students in one bracket without considering the intersectional differences under categories such as SCs and STs.

Interestingly, this is the reverse of the situation seen with the proportion of female and male students. Cannot we call this a case of gender disparity? Is it not a clear case where patriarchy operates with its entire male bias in the recruitment process? Or is it a spatial hierarchy where the universities of Delhi, dominated by male students, get priority over regional universities in the recruitment process because of their higher social status and patronage of male networking? I do not have the answer, and I would like to invite young geographers to engage themselves in analyzing the reasons. While collecting this data and analyzing the reasons for the same, I also spoke to several young male faculties, seeking to understand their perception of this matter. After our discussion, they responded, "We never thought about it, but if you are telling us with the data, we have to accept the fact". Thinking about it some more, they added, "Probably it is thought that it is a field-oriented discipline, so men are more qualified." Through further conversation, especially considering that all-female college teachers undertake rigorous fieldwork and research every year, they realized how the patriarchal influence works to moderate their mindset.

Table 1: West Bengal: Gender disaggregated data on Geography faculties in the universities

Sl. No.	Name of the University	Total Faculty	Male Faculty	Female Faculty	Total Students	Female Students
1	Visva-Bharati University	7	4	3	54	35 (65)
2	Aliah University	7	4	3	50	32 (64)
3	The University of Burdwan	11	8	3	59	43 (73)
4	University of Calcutta	8	5	3	140	90 (64)
5	Cooch Behar Panchanan Barma University	5	4	1	53	24 (45)
6	Diamond Harbour Women's University	6	5	1	60	60 (100)
7	Gour Banga University	5	4	1	29	10 (34)
8	Jadavpur University	3	2	1	16	12 (75)
9	Kalyani University	3	2	1	43	29 (67)
10	Kazi Nazrul University	6	5	1	43	36 (84)
11	North Bengal University	12	9	3	81	56 (69)
12	Presidency University	14	11	3	19	14 (74)
13	Rabindra Bharati University	1	0	1	84	60 (71)
14	Raiganj University	7	6	1	59	27 (46)
15	Sidho Kanho Birsha University	6	6	0	25	17 (68)
16	Vidyasagar University	6	5	1	78	48 (62)
17	West Bengal State University	1	0	1	38	23 (60)
18	Adamas University (private)	7	4	3	13	11 (85)
	Total	**115**	**84 (73)**	**31 (27)**		

Note: Figures in parentheses are percentages

Perhaps it is our own mistake for not raising these issues to unsettle the situation within the discipline and consequently be perceived as a real 'danger geographers'. The male bias is a weapon with the help of which the patriarchy works. It works in the same way as other axes of inequality, such as caste and ethnicity, work by favouring one group and disallowing the other. Therefore, it can be claimed that it is a form of preferential treatment given to one gender within Geography academia. Such a situation reminds me of a similar kind of sexist attitude among the male members of the Indian Parliament. They were able to pass the bill for women's reservation in local governments but did not pass the same bill in the Parliament, which would have challenged their interests. Is it a similar kind of male bias which does not want to bring the

'danger' home to unsettle their comfortable existence? Or is it assumed that women are less capable than men of performing well in the highest academic bodies? To refute this notion that men are more qualified to be faculty in the Geography departments, I would like to raise two cases to defend my argument. In West Bengal, two universities -West Bengal State University, Barasat, and Rabindra Bharati University, Kolkata (Table 1), have single-faculty Geography departments. Both are run by one female faculty member each, with the help of a bunch of guests and contractual faculties.

If we think that this gender disparity is limited to the Geography departments of the universities of West Bengal, the fact is 'not at all'. Suppose we look at the proportion of female faculty in 16 premier Geography departments outside West Bengal. In that case, the situation is not very encouraging, though it is a bit better than that of West Bengal. In the other Indian universities, the proportion of female faculty is only 29.0 per cent against 71.0 per cent of male faculties. This proportion does not even cross the minimum mark of 33.0 per cent, as conceived by the Indian Constitution Amendment Act (73 and 74) as a critical mass to have certain kinds of impacts on policymaking. Let's consider the proportion of female students in these Geography departments. It ranges from 60.0 to 80.0 per cent in different regional universities across India, irrespective of their location in the North, South, East, West or North-East (Table 2).

The only exception we found was in the universities located in NCT of Delhi, where the proportion of female students is between 40.0 to 50.0 per cent. From a gender perspective, the case for universities in Delhi is justified but from a different angle. In Indian families, boys get preferential treatment in terms of a) spending money for education and b) mobility to other cities compared to their daughters. Thus, although students from all over India go to Delhi for higher education, comparatively more boys get this opportunity in support and encouragement from their families to pursue higher education in universities located in distant metropolitan cities like the national capital. The male students also go to the universities of Delhi in preparation for other jobs such as UPSC. BHU and AMU, two other premier universities in the North, also have a higher proportion of male students because of their more extensive catchment. However, if we take the all-India average proportion of female students at the postgraduate level, it comes to 55.0 per cent. If we were to exclude the universities of Delhi, BHU and AMU on the grounds of having an all-India catchment favouring more admission of male students, the percentage would go up. Therefore, the data structure on students does not explain why there is just a 29.0 per cent presence of women among the faculties. A deviation in this general trend is only observed in Panjab University, where female faculty members are double the number of male faculty members. In that department, the proportion of female students has also increased from 40.0 per cent in the 1980s to 70.0 per cent.

Why Does it Matter, and Where Do We Stand?

Let us now come to the question: Why are there so many female students in Geography? We do not need to conduct much research to find the reason. Up to the undergraduate level, Geography is considered an Arts subject. We all know that women are more concentrated in Arts disciplines, irrespective of whether they belong to the Humanities or the school of Social Sciences. At the

postgraduate level, Geography in most universities exists under the faculty of sciences. Still, both MA and MSc degrees are offered, depending on their degree at the undergraduate level.

Table 2: Gender disaggregated data on faculties of selected Geography departments in the universities outside West Bengal

Sl. No.	Name of the University	Total Faculty	Male Faculty	Female Faculty	Average share of female students (%)
1	Jawaharlal Nehru University	25	17	8	50.0
2	University of Delhi	11	8	3	40.0
3	Jamia Millia Islamia	11	7	4	40.0
4	Benaras Hindu University	20	14	6	25.0
5	University of Madras	4	4	0	60.0
6	University of Rajasthan, Jaipur	11	6	5	---
7	University of Mumbai	7	4	3	70.0
8	Savitribai Phule Pune University	11	7	4	40.0
9	Panjab University, Chandigarh	9	3	6	70.0
10	North-Eastern Hill University, Shillong	7	5	2	60.0-65.0
11	Gauhati University	11	10	1	60.0
12	Bharathidasan University, Tiruchirappalli	3	3	0	50.0
13	Himachal Pradesh University, Shimla	4	3	1	70.0
14	University of Kashmir	9	9	0	--
15	Aligarh Muslim University	13	11	2	47.0
16	Chittur PG College, Kerala	10	8	2	80.0
	Total	**166**	**119 (71.0)**	**47 (29.0)**	

Note: Figures in parentheses are in percentage

Now the question arises, why is the issue of the 'missing women' important to look at, and why do we need more women in faculty positions, i.e., in decision-making bodies. The issue of 'missing women' is just a product of a slippery path which becomes more slippery for women who try to reach professional heights and find their path obstructed by the glass ceiling. Women also often bring a kind of 'danger', -the power of questioning traditional patriarchal and misogynist tradition-, in every walk of life. Geography is not an exception to that rule. Here, I do not claim that the mere presence of female faculty members will change the gender blindness within the curriculum and teaching modules within the discipline overnight. Still, I believe that it will have a long-term deep impact'- on the discipline by questioning and destabilizing the orthodox practices of pushing out the gender lens.

When we talk about gender geography, people start thinking that we are discussing an edge to the discipline, as a 'ledge of a window. We never think from the perspective that if we claim that human beings are at the centre stage of the discipline, how can the gender question be left behind! My further query about incorporating gender in the core course of the discipline is an eye-opener. It is only mentioned in most university curriculums in the 'Philosophy of Geography' section. There is no scope for excluding feminist or gender geography if we intend to include

critical geography in the curriculum. The credit allotted for gender in the syllabus is a minuscule fraction, which is difficult even to mention. It was only in a handful of universities, such as the University of Calcutta and The University of Burdwan, where we found gender in sections other than 'Geographical Thought'; of these two universities, Calcutta University is more inclusive of gender questions in their curriculum. Aligarh Muslim University and Bharathidasan University have mentioned gender under Social Geography in their curriculums (Table 3). To our utter surprise, we also find five departments where there is no mention of the term 'gender' anywhere in the entire curriculum of core courses.

Table 3: Mention of gender in core courses of selected Geography departments

Name of the University	Paper title	Topic
University of Delhi	1. Modern Geographical Thought	1.1. Feminist Geography
BHU	--	--
University of Calcutta	1. Philosophy of Geography 2. Historical and Political Geography 3. Social and Cultural Geography 4. Regional Geography of India	1.1. Feminist Geography, Geography of Gender 2.1. Gender; 3.1. Feminism 4.1. Gender Discrimination and Empowerment
University of Madras	--	--
University of Rajasthan	--	--
JNU	--	--
University of Mumbai	1. Socio-Cultural and Political Geography	1.1. Gender and Geography
The University of Burdwan	1. Recent Trends in Geography 2. Geography of Development and Political Geography	1.1. Gender Geography 2.1. Development and Gender; Gender-Based Inequalities; Women's Empowerment and Empowerment Policies in India
SBP Pune University	1. Geographical Thought	1.1. Geography of Gender
Presidency University	1. Philosophy of Geography and Geopolitical Issues	1.1. Geography of Gender
PU, Chandigarh	1. Geographic Thought	1.1. Feminism and Post-Feminism in Geography
NEHU, Shillong	1. Geographical Thought	1.1. The Gender Question
Gauhati University	1. Geographic Thought	1.1. Socio-Spatial Dialectic and Gender Perspective
Bharathidasan University, Tiruchirappalli	1. Social Geography 2. Geographical Thought	1.1. Gender Discrimination, Empowerment of Women 2.1. Perspectives in Geography
HPU, Shimla	--	--
Jamia Millia Islamia	1. Evolution of Modern Geographical Thought	1.1. Post Modernism and Feminist Geography
University of Kashmir	1. Social and Cultural Geography	1.1. Gender Discrimination and Empowerment
Aligarh Muslim University	1. Social Geography 2. Modern Concept in Geography	1.1. Gender Inequality, Women Empowerment, Women Literacy and Health 2.1. Concept of Gender Geography, Feminism

There are some universities where gender is offered as an optional paper. The University of Delhi excels among these universities, as gender is provided in many optional papers. However, my argument favours keeping gender in the mainstream in geography by including gender concerns in the core courses. Optional papers depend on the individual faculty and cannot have a high impact on the discipline's transformation. We have clear evidence of this as well. After the retirement of Professor Saraswati Raju, pioneer Gender Geographer of India, the optional gender course is not being offered in JNU any longer, although it began there.

The Methodological Fix and Epistemological Challenges

In most cases, Geography departments are part of the Faculty of Sciences in Indian universities, and we face constant pressure to prove scientific rigour in our discipline. Recently we have started following a new undergraduate syllabus where practicals have become mandatory for each course in undergraduate studies in Geography. To navigate this change, we have kept fieldwork as the required practical in those courses where we cannot find any alternative practical task. In this way, we get stuck at some points, but somehow, we make our way to maintain our position on the boundary between Arts and Sciences. Holding the idea of Geography as a spatial science is an important output in that direction. The focus in Indian Geography is mainly on the positivist approach, hypothesis testing, objectivity, universal model building, quantitative techniques, Remote Sensing and GIS, keeping geographers occupied at the level of understanding spatial patterns.

In contrast, Geography elsewhere is expanding and shifting more towards critical approaches, organizing research around central research questions, qualitative methods, and analytical understanding of built environments and lived experiences. Human society, built-up environments, and lived experiences can never be gender-neutral, and we are trying hard to understand them without access to appropriate tools. It is something like fighting a modern war with ancient weapons.

The feminist geographers are constantly questioning these epistemological and methodological processes.[2] After all, these old tools help us understand the visible patterns for sure, but not the processes that created those patterns. Delving deeper beyond the existing spatial pattern is the only way to make our discipline a viable contributor to the knowledge domain. The real world, which we are deeply interested in, is very complex, but we keep trying to simplify these complexities in epistemological practices because of methodological limitations. One of the primary reasons behind our reluctance to accommodate the gender question is the methodological fix. Gender cannot be mapped and quantified easily. It is also tough to draw the boundary between gender categories, which operate at a micro-scale, such as home and workspaces. In contrast, we are not yet ready to go beyond conventional tools like statistics and GIS mapping.

Hierarchy in knowledge production is another significant baggage we have long been carrying on our shoulders within the discipline. The epistemological processes are laden with

[2] Suggested reading: Lahiri-Dutt, Kuntala (2011) 'Doing Gender' in Geography: Exploring Contemporary Feminist Methodologies, in S. Raju and K. Lahiri-Dutt (eds), *Doing Gender Doing Geography*, Routledge, New Delhi.

such hierarchies. We are happy to use structured questionnaires to depict empirical observation, never considering that the structured questionnaire and bounded scalar response (1 to 10) are weapons to put the research participant in a subordinate position in producing knowledge. Moreover, the language we use in our research is also burdened with authoritarian terms such as 'sample'. Following the path of natural sciences, how can we define human research participants as a 'sample'? By using the term 'sample,' we cut down the possibility of contribution by our research participants in the epistemological processes. There are ample evidences like this, but my intention here is not to make a list. The point is that the patriarchy prefers the power hierarchy in knowledge production, and gender poses a real 'danger' by questioning those hierarchies in our teaching and research. Therefore, it is easier to keep tradition and convention alive to maintain the existing power structures, and in that process, it is safer to keep 'gender' away. However, feminist geographers are creating a change by asking for more reflexive methodologies for understanding everyday lives and experiences in analyzing spaces.

I am writing this series' Geo-reflection' in popular mode and am trying to offer some food for thought which postgraduate students, research scholars, and young faculty members of Geography can debate on. I hope they will read this fourth article, think it over, and reflect on the age-old practices of perceiving gender as a ledge to the discipline. This is the only viable process to ensure the development of a discipline where we engage in identifying our problems and the ways to overcome them. This is how critical geography flourishes! In the end, I argue that gender is at the core of the discipline, and mainstreaming of gender is both essential and possible within the curriculum. This is a far more effective method, rather than focusing on feminist geography as one lens among others under the broad categories of critical geography and putting in the mere mention of women or gender in the curriculum.

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IN REMEMBRANCE

Kanwar Surjit Singh (1949 -2021)

Popularly known as Kanwar Surjit or Surjit among his friends, colleagues, teachers and well-wishers, Kanwar Surjit Singh is no more with us. He left for his heavenly abode on December 22, 2021, almost after winning the fight against COVID-19. His friend and well-wishers will never forget him for his commitment to work, generosity, and being a fine institution builder and nurturer. He was a work alcoholic, dignified and a friend in need.

Born on May 22, 1949, in a dusty village (Kharasa-Bungal) of the then Gurdaspur district (Punjab) to Late Thakur Khushi Ram Guleria and late Smt Dhanni Devi, Kanwar Surjit had his initial education in village Jugial (Sahpur Kandi). For secondary education, he moved to Government Higher Secondary School, Pathankot, and then to Government College, Kathua (Jammu and Kashmir), to pursue a graduate degree. He had a keen interest in geography, so he joined Panjab University, Chandigarh, for a Post-graduation degree in Geography.

Soon after the declaration of the result of his M.A. degree in Geography, he joined a research project in the Department itself to prepare Gazetteer for Chandigarh under the supervision of Professor (Dr) Gopal Krishan or GK. Joining a research project was thus the modest beginning of his professional career. Hardly anyone knows how this relationship between Professor GK and Kanwar Surjit blossomed into a lifetime camaraderie of mutual respect and affection but

continued till his last breath. To further strengthen his professional skills and bring the best out of him, in 1974, he joined Guru Ramdas School of Planning at GNDU, Amritsar, for a two-year degree course, Masters in City and Regional Planning (MCRP). In his dissertation for partial fulfilment of the degree, he applied Walter Christaller's Central Place Model in the Doaba region of Punjab to evaluate its applicability and efficacy in the regional settlement system. He was awarded Sardar Bharpur Singh Gold Medal in the ceremony held to grant him the MCRP degree for his commendable work. Then, he joined the Area Planning office of the Town and Country Planning Department, Punjab, at Hoshiarpur for a minimal time.

After that, he never looked back. He was appointed the Assistant Town Planner at Hisar in 1976. He transformed the Form, Function, Image and Texture of Hisar City and many nearby urban settlements like Hansi by preparing Town Planning Schemes and Improvement Trust schemes. He was honoured thrice for his commendable work in urban development, including the one by His Excellency the Governor of Haryana). All this paved the way for his greater demand for his professional expertise to find solutions for more challenging planning and policy-making talks. Haryana Urban Development Authority (HUDA, and now HSVP) invited him on the deputation to serve its headquarters from 1991 to 1997. During this period, he contributed to framing/evolving the path-breaking policies and solutions to the issues and problems. HUDA created an extensive land bank to develop residential, industrial, and commercial estates throughout Haryana and initiated land acquisition at smaller urban estates.

He scaled down all the crucial ladders of urban and regional planning organizations in Haryana state from 1997to 2007: from District Town Planner to Senior Town Planner , and then rose to the position of the Chief Town Planner. As a distinguished planner , he was Chief Town Planner, Chief Town Planner of Haryana Urban Development Authority and Chief Town Planner of Haryana State Industrial Development Corporation (HSIDC).

The Watershed Planning and Development movement was at its peak when he was on the deputation to the Haryana State Industrial and Infrastructural Development Corporation (HSIIDC) from 1997 to 2007. He established a Planning Division within the Corporation. He successfully established an Industrial Model Township (IMT) at Manesar on about 1500 acres of international standards. It became a benchmark industrial township not only in Haryana but also in India. This township attracted significant industrial investment in Haryana, especially from the companies like the Suzuki and the Honda, setting here their mother plants. Such success created the demand for plots for many ancillary units. It is one of the best-planned industrial complexes in India; the township expanded from 1500 acres to 6000 acres. The Bawal Industrial Model Township is yet another project adjoining the Rajasthan border that Kanwar Surjit initiated on 1500 acres and extended to 3600 acres. It boasts international brands like YKK, Caparo Maruti, Kansai Nerolac, Mushashi Auto, Asahi Glass, etc.

Kanwar Surjit was aware that Highways play an essential part in Industrial development; therefore, he started projects at Kundli, Rai and Barhi in Sonipat District on National Highway No.1(now 44). He was instrumental in conceiving industrial estates in smaller places like Saha in Ambala, Barwala in Panchkula and Jagadhari. Applying Urban geography concepts of form,

function, size and spacing for urban industrial centres/industrial estates, he evolved regional patterns for the state of Haryana and successfully planned and developed industrial estates. All this worked as a catalytic force in making Haryana an industrially dynamic state.

He had a deep understanding of the links that the industrial estates needed of the high-speed accessibility for quick movement of goods and services, which fructified in the planning and execution of the 135 km long Kundli-Manesar-Palwal Expressway. He had a grassroots understanding of India's urban development issues and challenges from a global perspective. Hence, he was able to evolve a balancing approach between the Constitutional provisions and the practice of urban development in India. His official dealings with the higher level bureaucracy in the state, on the one hand, and the political leadership, on the other hand, were testimony to it.

With experience, the professional in him gradually realized the need for some research and monitoring centre to apprise the government on comprehensive and multilayered issues in a regional context to formulate policies and programmes for sustainable development. In collaboration with other like-minded professionals and academicians, his dream vision got translated into the Centre for Urban-Rural and Environment Research (CURER), followed by the Institute of Spatial Planning India (ISPI), the CURER and the ISPI, in an order. The final shape was yet to come. That came with establishing the Institute of Spatial Planning and Environment Research (ISPER) in 2000. His tireless hard work and organizational acumen brought ISPER to today's level.

ISPER is currently doing GIS-based Master Plan/ Regional Plan projects in Punjab, Uttar Pradesh, Rajasthan, Himachal and UT of Ladakh. He realized the need for exchanging ideas in the dissemination of knowledge. ISPER holds National and international seminars, attracting distinguished academicians and professionals. His fondness for his teachers and fellow professionals recognized the need to honour them by publishing commemorative volumes. ISPER is a recognized institute for the Ministry of Housing and Urban Affairs, Government of India and the National Institute of Urban Affairs (NIUA). ISPER is an alliance partner in climate change issues of the latter.

Kanwar Surjit Singh had varied academic and professional interests. Apart from urban planning and development, his core subject, environmental research, was quite close to his heart. Soon after establishing ISPER, a research study on the revival of the Ghaggar river was initiated and completed. Another survey of the watershed management followed this in Shivalik Hills in collaboration with NABARD. Presently such projects are going on in Shivaliks in Haryana and Himachal Pradesh.

The cause of charity was dear to his heart. He never accepted a penny in lieu of his services to ISPER. He firmly believed in empowering the women coming from rural and marginalized sections of our society. ISPER has developed the Nanki Devi centre inside its campus to impart free training to the girls in computers, dress design, and skincare as part of its charity mission. Kanwar Surjit Singh was not merely a thinker but an institution who knew the art and science of executing his ideas and concepts. He was full of emotions and was a family man as he

affectionately loved his wife, son, daughter, granddaughter, grandchildren, and a friend of friends. He was always cheerful and active until his last breath.

I pray to the Almighty that his soul rests in peace.

Bule Shah's following verse defines his unrepairable loss to friends and family.

ਲੋਕੀ ਇਸ਼ਕ ਇਸ਼ਕ ਕਰ ਲੈਦੇ ਨੇ,
ਅਸੀ ਇਸ਼ਕ ਦੀ ਪੀੜ ਜਗਾ ਬੈਠੇ ॥
ਲੋਕੀ ਯਾਰ ਲੱਭਣ ਨੂੰ ਫਿਰਦੇ ਨੇ,
ਅਸੀ ਲੱਭਿਆ ਯਾਰ ਗਵਾ ਬੈਠੇ ॥ Its transcript reads:

People get engrossed in love,
I am feeling pangs of love,
People are striving hard to find a true friend,
But I had a true friend whom I have lost.

Professor Manjit Singh (Retd.),
Guru Ramdas School of Planning, GNDU, Amritsar.
Past President and Member Executive Council,
Institute for Spatial Planning and Environment Research, India,
Panchkula.

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