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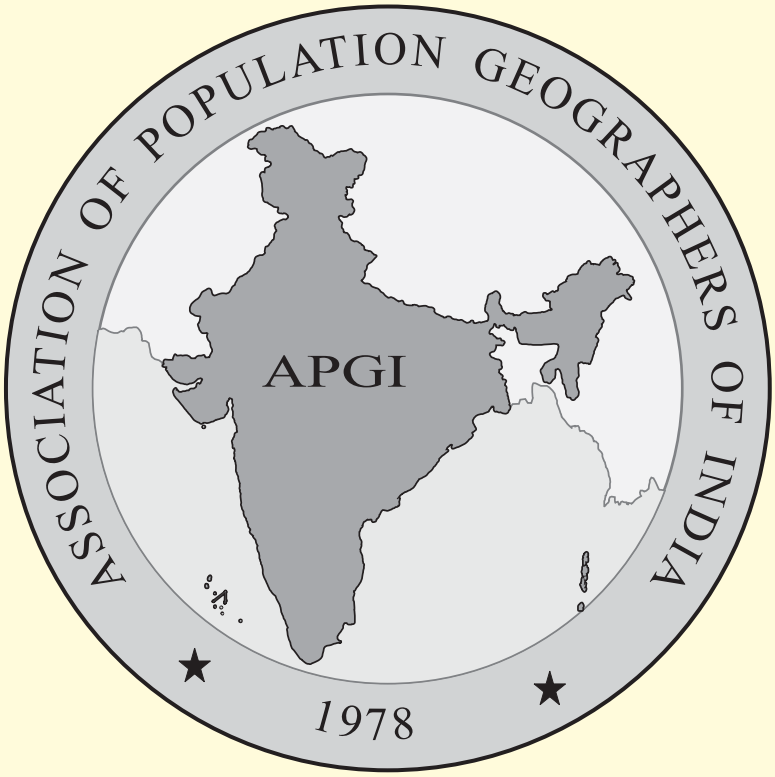

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From the Editor's Desk

Population Geography December 2024 issue includes eight reviewed articles and one invited article published in our signature series, Geo-Reflections. These address many relevant population issues; most findings are based on fieldwork. The picked-up themes relate to human-environment interactions, human development status in an eco-sensitive zone, people's health, well-being, quality of life, condition of the elderly, systemic marginalisation of transgender individuals, gentrification displacing poorer residents, population explosion and its unconventional security fallout, the impact of migration on family members of in-migrants.

The articles' focus on the Indian landscape is evident. Some discourse on the global picture or global perspectives would have been desirable.

Research and writing the 'urban' in Indian geography: A critique of pathways highlights the underrepresentation of urban geographers in mainstream urban studies scholarship in India. Through reflexive writing, the author identifies three main factors: spatial pattern and scale, methodology, and theoretical grounding, all interconnected and influencing one another. It provides food for thought for urban geography scholars, particularly in India.

Looking around, we observe more pressing persuasive themes about people worthy of research. Say, India's population has surpassed that of China. What implications does this have for the country's society, economy, polity, infrastructure, and resources? What are the concerns and challenges ahead?

Likewise, armed conflicts in different countries are seriously impacting women and children, among other things.

We also witness increasing international migration through legal or illegal pathways, leading to discontent among the host country's residents.

An important component of our population is the ageing generation, which poses its challenges. How does ageing reshape societies, policies, and opportunities globally? How should we look for solutions?

Equally important are the vital areas of child and maternal health and the most demanding health challenges affecting populations worldwide.

Population is a vast area for research for geographers, whether it relates to demographic characteristics—including size, composition, and distribution of its inhabitants; metrics—such as population growth rate, age structure, gender balance, and urbanisation; or factors—such as migration, fertility rates, and healthcare—all of which are fertile areas for investigation.

Lastly, we deeply appreciate the reviewers' support in this endeavour.

Nina Singh

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[2] Invited Article

POPULATION GEOGRAPHY
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Assessment of Human Development Status in Eco-Sensitive Zone of Northern Part of Western Ghats, Maharashtra

Snehal P. Patil, Ravindra G. Jaybhaye, and Kajal H. Sawkare

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Abstract

The government's commitment to safeguarding forest areas in the northern part of Maharashtra's Western Ghats, a globally recognised biodiversity hotspot, has led to the designation of an Eco-Sensitive Zone (ESZ) covering 287 villages. While this move restricts development activities to prevent further environmental degradation, it also raises concerns about the well-being of local communities. This study assessed the human development status of these villages, considering the standard of living and deprivation levels. The analysis, categorised into five classes, revealed that 88% of the villages experience high levels of deprivation, with only 51% maintaining a high standard of living. This indicates a low level of human development. These findings are crucial for understanding the current state of the Eco-Sensitive Zone and formulating effective strategies for its sustainable development. The study emphasises the need to balance environmental protection with the well-being of local communities, promoting eco-friendly activities like ecotourism, agroforestry, fisheries, and agro-based enterprises. These strategies offer sustainable livelihoods and promise to preserve the environment and improve the quality of life for the local communities. This research serves as a benchmark for aligning environmental efforts with the welfare of all stakeholders, instilling hope for a better future.

Keywords: standard of living, deprivation index, eco-sensitive zone, ecotourism, hotspot, Western Ghats, protected areas

Introduction

Western Ghats is a unique land feature along the western part of the peninsular India. It is a UNESCO World Heritage Site (IUCN) known for its scenic beauty, vast biodiversity, and endemism of several flora and fauna (Balasubramanian, 2017). The area has several famous tourist attractions like historical monuments, ancient caves, temples, water bodies, beautiful picnic spots, and

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indigenous cultural traditions. However, Western Ghats is identified as one of the Hotspot areas at the international level because it has been significantly impacted and altered by human activities, such as poaching, changing cropping patterns, forest-based industries, river valley projects, mining activity, mass tourism, road constructions, settlement, etc. These activities have led to irreversible damage to historic places, monuments, and wildlife, and the streets and roads are overcrowded. Davidar, Arjunan, and Puyravaud (2008) explore the complex interplay of factors driving these activities, addressing the ecological and socioeconomic concerns that emphasise aspects crucial for conservation and sustainable resource management in this biodiversity region.

The Government's response to the situation involved designating it as an Eco- Sensitive Zone (ESZ), a significant move recommended by both the Gadgil and Kasturirangan committees (Kasturirangan (2013), Gadgil (2011)). This designation is crucial as it curbs productive and developmental activities that contribute to environmental degradation, thereby protecting the fragile areas surrounding the Western Ghats. An Eco-Sensitive Zone pertains to the fragile areas surrounding protected zones, as declared by the Ministry of Environment, Forest, and Climate Change (MoEFCC). In India, ESZ regulations were initially introduced in 2002 under the Wildlife Protection Act, further established by the National Green Tribunal in 2013, and more recently reinforced by the Ministry of Environment, Forest, and Climate Change in 2019, all aimed at preventing further degradation within the Western Ghats region. Das et al. (2006) notably prioritised conservation areas within the Western Ghats, identifying and safeguarding key ecological regions in this biodiversity-sensitive zone. Maharashtra has encompassed 2092 villages within these Eco-Sensitive Zones, with 287 located in northern Western Ghats, spanning Nashik, Ahmednagar, and Pune districts. These designated areas include wildlife sanctuaries, national parks, community reserves, and conservation reserves.

Development activities are already restricted, but anthropogenic interference increases peripherally for various reasons, such as agriculture, resorts, mining, agriculture-based or forest-based industries, etc. Therefore, a buffer area of 10 km is kept around the protected area boundary in the ESZ.

In the contemporary era, people from all economic and social levels prefer to spend much of their time and money on recreation and relaxation. In contrast, the high rate of urbanisation has changed the old traditional attitude of inhabitants and has made them materialistic (Kumari & Pavendar, 2003). This changing attitude has created the problem of over-exploitation of natural resources at tourist places, resulting in various environmental

problems and threatening the area's sustainable livelihood and security. Paranjpae (2010) provided illustrations of cases like Amby Valley and Lavasa to highlight that such urbanisation and tourism development primarily cater to the elite in society and pose a significant ecological threat to the Western Ghats. Manickavasagam (2003) has mentioned that tourism has caused irreversible damage to historic places, monuments, and wildlife. The streets and roads of pilgrim centres, tourist interest places, and holiday resorts are overcrowded.

Consequently, the fragile ecosystem is affected. In this background, the government has developed some rules and regulations restricting the development activities in the area for conservation purposes, specifically in ESZ areas. The restrictions on development activities have created a dilemma regarding the area's development or conservation of the environment, where the standard of living is low and the deprivation of basic needs is high. The objective of the study is to evaluate the development status of the Eco-sensitive zone (ESZ) in the context of deprivation and the standard of living of people. Therefore, the paper emphasises comprehending the status of development based on deprivation and the standard of living level that may be relevant to designing a conservation policy for the study area while considering the sustainable livelihood strategies of the local communities.

Study Area

The selected study area is part of the Western Ghats's declared ESZ in Maharashtra, which covers the western area of the Nasik, Ahmednagar, and Pune Districts (Fig 1). The study area has many natural and cultural sites with significant heritage value and is recognised as a potential tourist destination.

However, the area is less developed, and most people are socio-economically poor and face challenges in meeting the necessities for a sustainable livelihood. On the other side, there are numerous problems related to environmental degradation and changes in the local people's authentic cultural and traditional values. In consideration of the sensitivity of the area, the government has taken various conservative actions by declaring ESZ and protected areas and restricting productive activities that may affect development measures in the area. It may hamper the area's development process, and the fate of the already socio-economically backward communities will be grim. Hence, the villages were selected from the eco-sensitive zone to study the status of the local communities living in the area. The ESZ area in the Western Ghats region of Maharashtra covers 63 talukas in 12 districts, including seven tribal districts. There are a total of 2092 Eco-sensitive villages in the notified list of the government of Maharashtra. The selected study area covers 287 villages out of the 2092 villages notified as Eco-sensitive villages by the government of

Maharashtra. The district-wise distribution of villages has been given in Table 1. It has an area of 58.6 lakh hectares (19% of the state total) and a population of 101.2 lakhs (10% of the state total). Most of the villages are notified as tribal villages.

Figure 1

Map of the Study Area

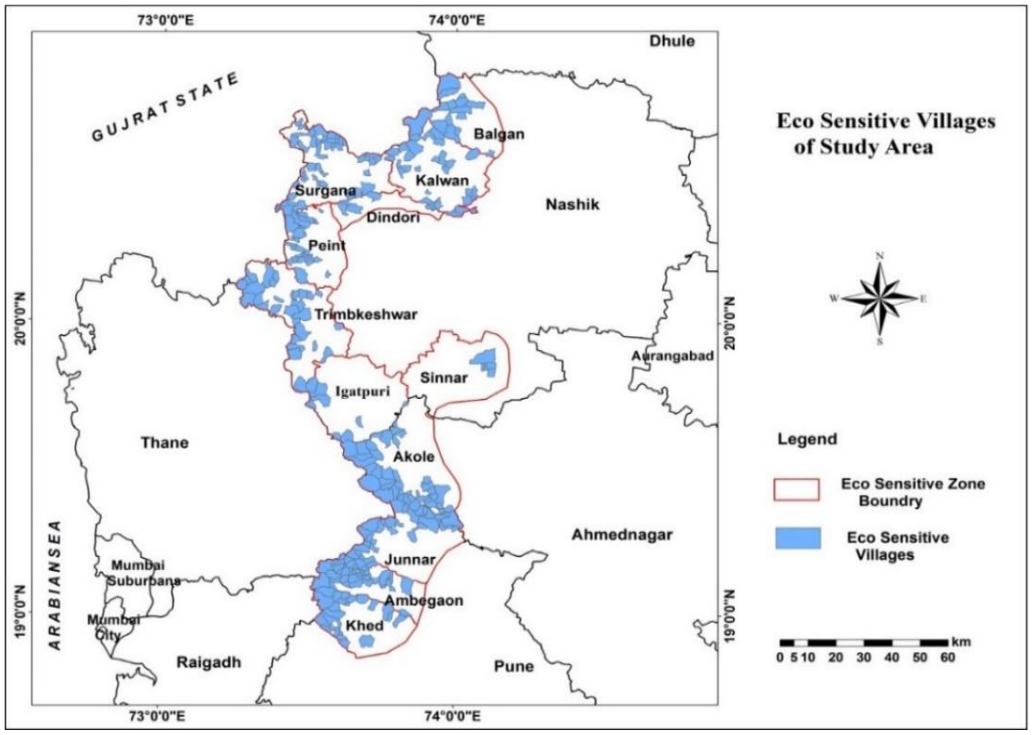


Table 1

District-wise Eco-Sensitive Villages of Study Area

Districts name	Tahsil name	No of Villages
Nashik (156)	Baglan	15
	Dindori	5
	Igatpuri	8
	Kalwan	28
	Peint	23
	Sinnar	5
	Surgana	42
	Trimbakeshwar	30
Ahmednagar (41)	Akole	41
Pune (90)	Ambegaon	36
	Junnar	32
	Khed	22
Total (3)	12	287

Objectives

1. To understand the current situation of deprivation in the study area.
2. To access the development status of the study area with the help of the standard of living index.

Methodology

The study aims to assess the development status of eco-sensitive zones (ESZ) in terms of deprivation and standard of living. This involves evaluating the availability and access to basic needs and essential infrastructure. The village-level data is sourced from the census data. The study primarily relies on secondary data from government and non-government organisations, books, gazetteers, monographs, and the 2011 Census. Fieldwork is conducted to validate the situation through observations and discussions with the villagers. The study area map is created using census maps, while the location map and index outcome maps are generated using the GIS platform. The investigation takes an integrative perspective and employs a quantitative approach, utilising measures such as the Deprivation index and Standard of Living status to understand the existing socioeconomic characteristics and assess the level of development.

Deprivation Index

Deprivation is generally recognised as a complex concept. A single variable cannot be measured; instead, it requires the combination of several variables to understand it. To calculate Deprivation and Standard of living, we multiply the score assigned to selected parameters on the Likert scale by the percentage of different parameters. Then, we divide the result by the maximum possible value of the assigned scores for each village. The Deprivation Index is calculated using the following formula:

DI = [1/5 (d 3+d 3+d 3+d 3+d 3)] 1/3

The following factors have been considered to assess the livable conditions: source of drinking water, lighting, house condition, latrine facility, and waste water outlet connected to the drainage. These factors are essential for maintaining a minimum quality of life.

Deprivation is measured on a scale of 0-100 per cent in intervals of 20 per cent. Based on the ascending 20 per cent intervals, the deprivation status ranges from very low to very high. Each criterion is scored on a Likert scale from 0 to 3, with higher scores indicating greater deprivation. For instance, d1 represents the location of the drinking water source, where 0 signifies that the source is within the premises, 1 means it is near the premises, and 2 indicates a distant water source.

Standard of Living Index

Living standards directly measure an individual's or family's consumption of goods and services necessary for well-being. People experiencing low living standards often lack material goods, participate in limited social activities, and may need to economise to afford basic necessities. These parameters directly assess people's consumption of goods and services essential for their well-being, making living standards a direct and immediate indicator of a specific region's economic well-being and development.

The following seven indicators have been used to identify households' standard of living: house condition (Material used for wall and Material used for roof), Household Ownership status, Source of Drinking water, Type of fuel used for cooking, Kitchen facilities, Availability of Assets / Entertainment, and House type by Structure. The following formula has been used to measure the standard of living:

Standard of living index

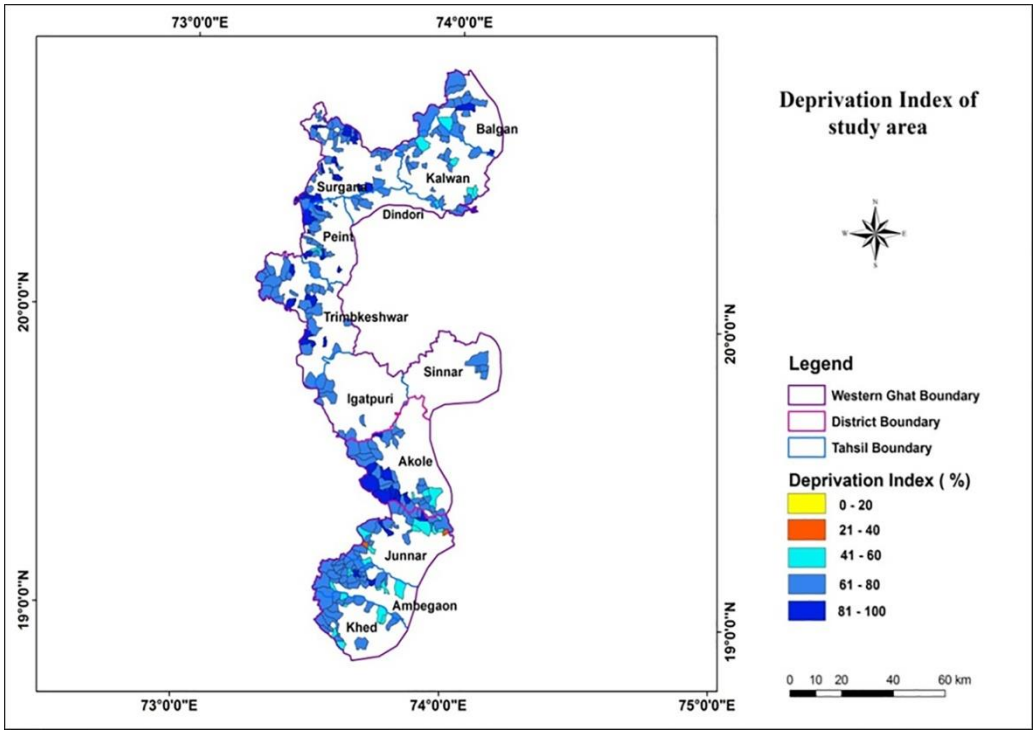
$$= \sqrt[7]{a * b * c * d * e * f * g}$$

Seven components are considered in the standard of living, a to g, and the weights are given to each parameter, like 0 to 4, based on the Likert scale. If the status of the standard of living is excellent, the score is higher; if the score is low, the score is lower.

The status of the standard of living has been assigned scores based on a Likert scale of 0 to 3 or 4 based on availability and quality or the condition of the parameter selected for the analysis. The standard of living extends from 0 to 100 per cent in a 20% ascending manner.

Figure 2

Deprivation Index



Results and Discussion

Deprivation is a broader concept than poverty, focused on capabilities, opportunities, and empowerment. The relationship between deprivation and poverty can be viewed as causal: poverty is the lack of resources to meet unmet needs, which constitutes deprivation (Townsend, 1987).

The deprivation Index analysis for the selected villages has been classified into five categories. Based on low and high deprivation levels, the classes range from very low to very high. The analysis revealed that none of the villages is in the very low category, representing an excellent situation.

Of the 287 villages under ESZ, 34 are within the low to medium categories (Fig.2). This means the villages are in better condition than the parameters selected for the analysis. It may reveal a source of drinking water near the premises; the main source and power supply are satisfactory; the house condition; and latrine facilities are in good condition, and the wastewater outlet connected to drainages is in a moderate state, i.e., Akola and Bholewadi villages.

A better situation is mainly a result of easy accessibility, responsible leadership, active participation of the local communities in village development activities, and efficient use of government schemes.

However, a significant number of villages, 213 in total, fall into the category of high deprivation due to a distant source of drinking water, which worsens during the summer season, and poor main source and supply of power, house condition and latrine facilities, and wastewater outlet connected to drainage. Finally, 40 villages fall into the category of very high deprivation (Fig. 2) due to a more severe lack of access and poor conditions across the parameters.

The other aspect is that the standard of living has a positive dimension when assessing the level of development. Out of a total of 287 villages, 11 villages fall under the low category, showing a poor standard of living, and 134 villages come under the moderate category, ranging from 41-60% of the standard of living, which shows a moderate condition of houses, electricity, water, latrine, cooking material, available asset, etc. in the villages.

None of the villages fall under the very low category (Fig. 3). The low to moderate standard of living is due to a lack of knowledge and limited potential development (Basavarajaiah, 2020).

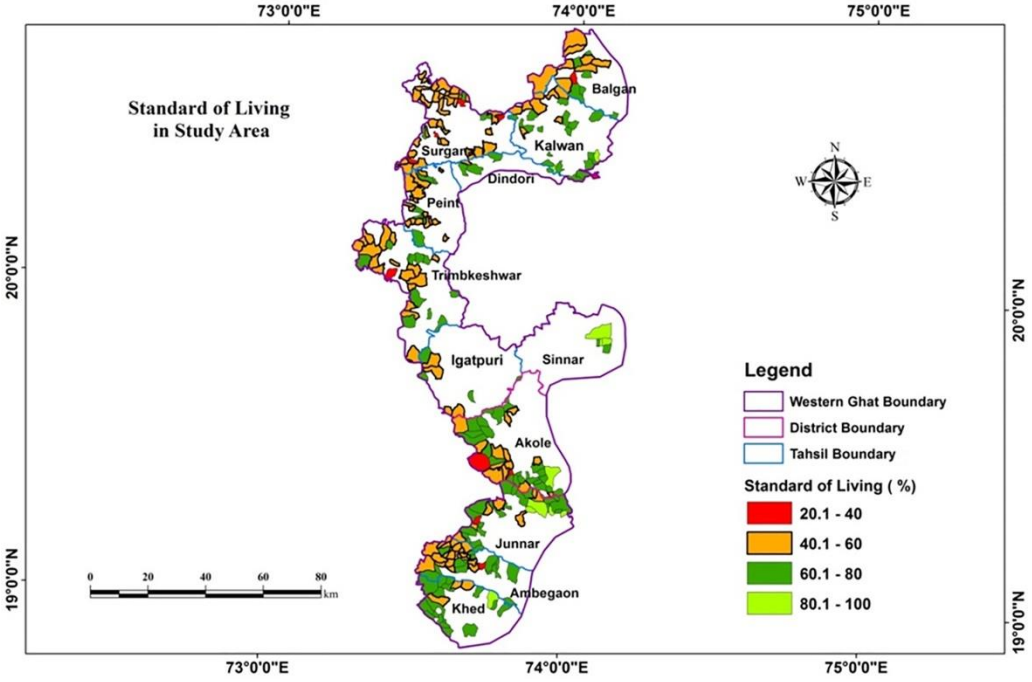
Also, the region's physiography leads to low infrastructural development (Jaybhaye, 2007). The villages in less to moderate categories, Saptashrungigad, Mehadar, and Murshet, have poor state housing conditions. These structures are predominantly made from grass, thatch, bamboo, wood, mud, plastic, polythene, etc. The status of house ownership in these villages is deemed poor. Galbari village exhibits the lowest cooking conditions, as cooking outdoors is prevalent in most

villages. However, using firewood, crop residue, cow dung cake, coal, etc., for cooking indicates poor fuel usage. For drinking water, some villages rely on sources like wells, tube wells, hand pumps, tanks, ponds, lakes, and springs for their water supply instead of tap water.

One hundred thirty-one villages are found in the high standards of living category, ranging from 61 to 80%. These villages have comparatively very good conditions for houses, electricity, water, latrines, cooking materials, available assets, etc. For example, Bhivegaon village primarily comprises permanent and semi-permanent houses, indicating a favourable living situation.

Figure 3

Standard of Living



Conclusion

The delineation of the area as an eco-sensitive zone is the outcome of various studies that confirmed severe environmental degradation in the Western Ghats, leading to conservation and protection becoming the prime necessity in the region. Prioritising environmental protection and conservation has affected development activities and halted the region's development process. It has mainly impacted the local communities harmoniously adapted to the environment for generations. The culprits are outsiders, and the sufferers are the local communities. It raises the

question of social justice, highlighting the need to find strategies that balance environmental care with the well-being of local communities. A study emphasising understanding the development level of this community at the village level, including deprivation and standard of living, found that 88% of villages have high levels of deprivation and 51% have low living standards. The communities lack basic needs such as proper housing, access to clean water, and adequate cooking facilities. They also lack opportunities for skills development and occupations. Encouraging environment-friendly activities such as ecotourism, agroforestry, and cottage industries could help improve the environmental status while providing economic opportunities for the local communities. This paper has policy relevance in developing this less-developed section and providing environment-friendly economic activities for sustainable development in the region despite the restrictions of the eco-sensitive zones.

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Social Discrimination Against the Transgender Community in Kolkata

Ranita Karmakar and Lakshmi Sivaramakrishnan

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Abstract

Conventional perspectives on gender emphasise a dichotomy between male and female categories. This social foundation is the cornerstone upon which state policy and governance are erected. Over time, diversity has become increasingly prevalent in various aspects of society. Contemporary society is characterised by a prevalent acceptance of diverse races, religions, communities, and languages, resulting in a pluralistic landscape. However, there remains a deficiency in the realm of sexual identities concerning developmental progress. As per the 2011 Census, the male population in India was recorded at approximately 623,724,248, while the female population was approximately 586,469,174(Iyer, S.,2014).

Furthermore, it is significant to acknowledge that a certain portion of the populace identifies themselves as eunuchs, expressing their inclination to be regarded as neither male nor female and to embrace a way of life that corresponds with their sexual nonconformity. The estimated population of intersex individuals who identify and live as either male or female and conform to societal norms in India is approximately 1.9 million as of March 1, 2022. The data provided is estimated and sourced from surveys conducted by the Salvation of Oppressed Eunuchs (SOOE). This is because eunuchs tend to inhabit a clandestine and obscure realm that they have fashioned for themselves as a means of escaping the maltreatment and oppression of mainstream society. Despite constituting a significant portion of the population, transgender individuals in India are systematically marginalised and deprived of the fundamental prerequisites for a respectable and equitable existence. This discriminatory practice suggests that the development objectives may not be attainable if a significant portion of the population remains marginalised.

***Keywords**:* social discrimination, salvation of oppressed eunuchs (sooe), sexual identities, marginalised, Kolkata

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Introduction

Before delving into a detailed discourse regarding their socio-economic standing, defining transgender to establish a clear understanding is imperative. As to the Merriam-Webster Dictionary, "transgender" is defined as an individual who identifies with or exhibits a gender identity that differs from the gender given to them at birth, including transsexuals or transvestites. In the Indian context, the term "hijra" is commonly used to refer to an individual who is perceived to be "sexless." This term has been defined in the dictionary as a castrated man. A hermaphrodite is an organism that exhibits the presence of both male and female reproductive organs. A transvestite is an individual who selects a gender identity that differs from their assigned sex at birth. Empirical evidence suggests that individuals who have undergone neutralisation of their gender are a relatively uncommon occurrence. The hijra community in India exhibits a distinct hierarchical organisation and geographical associations under the leadership of a group leader. Although the deity Balucharaji holds a significant place in their religious beliefs and the veneration of Ambe Mata is also observed, distinct religious boundaries exist. The majority of individuals align themselves with the majority of those who have engaged in prostitution at some point in their lives.

In Indian culture, the face is regarded as an auspicious symbol. Frequently, they are observed donning ill-fitting blouses and vibrant saris, presenting a distorted representation of femininity while traversing bustling marketplaces in packs, instilling fear in pedestrians, and soliciting nominal sums of money. The countenance of the individual is frequently adorned with low-cost kajal, powder, and vividly hued lipstick. These individuals do not conform to the typical profile of beggars encountered on urban sidewalks. Encountering individuals who use vulgar language, accompanied by a distinctive hand gesture involving the intersection of palms, is common during commutes via the local or long-distance railway systems and at heavily trafficked intersections. The group targets vulnerable individuals who are more likely to relinquish their money rather than endure the spectacle of the group lifting their saris and exposing their mutilated genitalia in close proximity.

Origins and Development of Existence

Castrated males, commonly called eunuchs, have been present in India since the 9th century Jaffrey (1996). The term's etymology can be traced back to its Greek origin, where it was used to refer to individuals responsible for safeguarding the chambers of royalty. This term, "keeper of the bed," was particularly associated with eunuchs who were highly sought after for this role (Sinha, 2016). Eunuchs possess a longstanding historical legacy that extends over several millennia. The significance of eunuchs during the

Mughal period in the Indian Subcontinent is widely acknowledged. Eunuchs were the favoured selection of enslaved men among royal emperors due to their perceived lower security risks within ordinary Muslim harems, palaces, and domestic affairs. They were granted entry to regal residences where they served as sentinels for the harems, overseers, educators, financiers, and devoted attendants (Nanda, 1990).

Background of the Study

The umbrella term "Transgender" encompasses individuals who do not conform to the traditional model of sex/gender, including but not limited to transsexuals, transvestites, and intersex individuals. The term "transgender" is a broad descriptor that encompasses a range of gender identities and expressions. The term Hijra is frequently employed as a comprehensive term to denote individuals who challenge conventional binary gender constructs and exhibit a disruption and fusion of culturally established gender roles that are stereotypical. The population under consideration comprises pre-operative, post-operative, and non-operative individuals who identify strongly with a gender that is opposite to their biological sex, as stated by Chakrapani (2010). "Hijra" originates from the Arabic root "hjr," which connotes departing from one's tribe. This word has been assimilated into Hindi after being adopted from Urdu. The term "Hijra" in Urdu and Hindi language can be transliterated as hijira, hijda, hijada, hijara, or hijrah. As per the United Nations Development Programme (UNDP), the term 'hijra' serves as a comprehensive descriptor for individuals who identify as sexual minorities. According to the text, hijra cultures serve as support systems for sexual minorities in India. Before the emergence of the Western gay liberation movement, individuals in India who identified as homosexuals, bisexuals, transvestites, transsexuals, and kothis sought sanctuary within this inclusive framework.

The etymology of the term "eunuch" can be traced back to its Greek origin, "Euneukhos," which translates to "bed chamber attendant." During the later Mughal period, they were entrusted with managing harems. Eunuchs, having undergone emasculation either voluntarily or involuntarily, were deemed appropriate for the role of guarding harems due to their sexual incapacity. Per Sharma's (1989) findings, eunuchs refer to emasculated males who may or may not adorn feminine attire. The origins of castration in Indian society can be traced back to the practice of desexualising animals. Castration of horses was a common practice during the Vedic era. By customary practice, historically, castration was predominantly performed on males rather than females. The act of castration was widely prevalent for diverse motives, particularly in regions beyond the borders of India. One of the primary historical

motivations for castration was the aspiration to cultivate a specific physiological and psychological constitution. It has been observed that the implementation of castration in minors serves as a preventative measure against the emergence of secondary sexual characteristics. These individuals may serve as high-ranking enslaved people tasked with safeguarding harems. As a result of their castration, these men exhibited reduced attraction towards their families and demonstrated increased loyalty towards their owners and masters.

Piyush Saxena (2011), the chairperson of the Salvation of Oppressed Eunuchs (SOOE), (as well as an author) provides an account of the existence of a typical eunuch in Indian society, contextualised by medical and mythological perspectives. The author notes the systematic marginalisation of Eunuchs in Indian culture, which can be attributed to cultural stereotypes and expectations, as well as bureaucratic regulations that result in cycles of homelessness, unemployment, and limited access to essential services such as identity documents, bank accounts, and healthcare facilities. The author examines the medical intricacies of different forms of intersexuality and transsexuality, supplemented by visual aids, as well as the medical interventions utilised in gender reassignment. Additionally, the author explores the socio-economic implications of gender transformations. Saxena's research lacks a systematic categorisation of the challenges encountered by Eunuchs in contrast to other disadvantaged communities. Dutta (2012) states that India has the most deplorable state of eunuchs globally. Despite improvements in the condition of this group, they continue to face discrimination and neglect of their civil rights in India. A community that has faced both natural and human discrimination and has dedicated its lives to serving both God and the state deserves the same level of respect as any other group. The article concerning the disadvantaged circumstances of eunuchs serves as a disconcerting indication that progress is imperative yet gradual. Nevertheless, the article's accessibility allows individuals to acquire knowledge. However, it should be noted that Dutta's (2012) viewpoint is confined solely to India.

An article by Jayaswal (2011) emphasises that eunuchs experience a lack of familial and societal affection due to a genetic disorder rather than criminal behaviour or wrongdoing. This poses a puzzling contradiction in a society where persons engaged in criminal activities can have unrestricted civil and human rights. The author discusses the historical discrimination faced by individuals who identify as "third gendered" within the Indian Legal framework, resulting in the deprivation of fundamental rights necessary for a dignified life. However, it is noteworthy that the article does not advocate for legal

recognition of this sexual minority group.

Currah et al. (2006) analysed the Transgender Rights movement with input from legal and policy experts, activists, and advocates. Their assessment evaluates the movement's accomplishments, obstacles, and potential for future action. The study delves into significant areas such as family law, employment policies, public health, economics, and grassroots organising. This pioneering research is crucial in the ongoing struggle for the liberation and parity of individuals who transgress gender norms. The research endeavours to establish a novel transgender movement by delving into the authentic lives and concerns of transgender individuals, surpassing the confines of media portrayals. Notwithstanding their exceptional research, their work neglects to address the challenges surrounding the societal acceptance of transgender individuals.

Objectives

This investigation examines the evolution of transgender persons in relation to various social frameworks throughout history. The objective is to seek formal acknowledgement of transgender persons through legal means. This research aims to evaluate the feasibility of the "The Rights of Transgend Persons Bill, 2014" as a strategy for incorporating transgender persons into the developmental dialogue in India. This research aims to present a concise summary of the socio-economic condition of the hijra population while also analysing the obstacles they face, specifically about their well-being and the ongoing persecution they encounter in their routine activities.

Methodology

The research was carried out at two distinct levels. The initial phase involved Doctrinal Research, encompassing an examination of pertinent literature sources such as the primary resource, The Constitution of India, Governmental Documents, and NGO reports from organisations such as The Salvation of the Oppressed Eunuchs, Transgender Rights Association, Seeds of Peace. Articles, journals, books, periodicals, case laws, and legislation were also reviewed. The subsequent tier entailed conducting fieldwork or empirical research. The selected research topic examines the socio-economic status of the Hijra community residing in Kolkata. During my research, I employed the snowball sampling technique, which is commonly utilised when dealing with populations that are either unknown or rare. Due to their prior anonymity, the identification and contact of individuals from these populations have posed a challenge, rendering snowball sampling a more feasible approach. The present study involved interviews with many individuals from the "hijra community" in Kolkata. The sample primarily comprised individuals who engage in begging activities at local and long-distance trains and those who beg at major traffic signals in the

city, particularly during congested periods.

Importance of the Research

The study aimed to address the social frustration experienced by transgender individuals who reside in marginalised areas of society. The goal was to facilitate their integration into the mainstream social strata. The present study aimed to ensure that the marginalised transgender community is included in the development plans and policies of society. Additionally, it sought to highlight the government's shortcomings in addressing this vulnerable population's needs and advocate for protecting their fundamental human rights. The government must acknowledge the growing population of transgender individuals and the persistent discrimination and harassment they encounter. Failure to do so may result in widespread unrest within this community, potentially leading to societal disorder.

Altering Social Roles Among Eunuchs

Upon the British colonisation of India, the status of the eunuch community underwent a significant transformation. The colonisers, expressing their disapproval, enacted a law in 1897 that categorised all eunuchs as offenders. Subsequently, numerous individuals have faced ostracism due to their engagement in cross-dressing or identification as intersex. As a result, they have established their communities, typically inhabited marginalised areas of society and sought guidance and support from a revered leader or maternal figure to ensure their emotional and financial well-being.

Numerous individuals resorted to utilising a covert linguistic system called Hijra Farsi to safeguard themselves. In contemporary times, hijras have garnered a reputation for being propitious and are frequently invited to bestow blessings upon festive occasions such as nuptials and childbirths. In certain urban areas of India, individuals may be compelled to engage in begging or prostitution, resulting in a substandard existence akin to that of an animal. The impact of the hazardous nature of this occupation and the restricted availability of healthcare and social welfare resources within the community is evidenced by the alarming statistics indicating a high prevalence of HIV among hijras.

Rights of Transgender Persons Bill, 2014

In February 2014, the Supreme Court made a significant advancement in addressing the grievances of a socially excluded group by recognising "transgender" as a gender identity and urging prompt remedial action. This landmark decision is called the National Legal Services Authority (NALSA) verdict. The verdict instilled a sense of optimism within the community and its advocates. However, the rate and consistency of progress achieved thus far have not met some expectations. However, notwithstanding the positive reception of the legal amendment, Indian advocates caution that not all individuals

identifying as transgender are at ease with being denoted as the "third sex". Many individuals opt to be categorised solely based on the gender identity they have selected, either as females or males. Advocates assert that additional measures are necessary to prevent the criminalisation of transgender individuals and hijra communities, particularly through the revocation of the contentious Section 377 statute, which deems homosexual conduct unlawful (Govindarajan P., 2016).

India has made significant progress in addressing discrimination against transgender individuals within the country, as evidenced by efforts such as the revision of the Rights of Transgender Persons Bill in 2014 and the inclusion of transgender individuals as beneficiaries in social security schemes.

The Transgender Person (Protection of Rights) Bill 2016

The Union Cabinet has approved the Transgender Person (Protection of Rights) Bill 2016, which seeks to safeguard the social, economic, and educational rights of transgender individuals. The legislation above was enacted under the auspices of Prime Minister Narendra Modi and conferred a substantial advantage upon a significant portion of the ostracised populace in India. The Transgender Rights Bill of 2016 faces challenges in its attempt to establish a clear definition of individuals who identify as transgender (Govindarajan P., 2016)

The National Legal Services Authority (NALSA) verdict established that individuals who do not identify with their assigned gender at birth have the right to self-identify as transgender without the requirement of a physical examination or certification. However, the recently proposed Bill negates this opportunity in principle and implementation. As per Bill 3, the term "transgender persons" refers to individuals who do not identify as exclusively male or female and may identify as a combination of both genders or neither gender. The act of defining the transgender experience negatively, such as placing it as "not" male or female, or in fragmented terms, such as "neither wholly" nor a "combination," can potentially infringe upon an individual's right to self-identify. This may limit their ability to choose how they wish to be recognised, whether as male, female, a third gender category, or any other identity outside of the limited suggestions presented in the Draft. The presence of screening committees consisting of medical professionals who provide certification for individuals identifying as transgender exacerbates the overall phenomenon. Therefore, the concept of self-determination is accompanied by measures of monitoring and regulation for a marginalised community.

Transgender Persons (Protection of Rights) Act, 2019

The 2019 legislation eliminates a limited number of the contentious elements in the 2018 bill, including the district screening committee and the criminalisation of begging. The 2019 act's statutory provisions entail

the prohibition of discrimination against individuals who identify as transgender. The 2019 act, akin to its 2018 predecessor, encompasses intersex individuals, hijras, jogtas, and kinnars in its delineation of transgender individuals. Additionally, the act incorporates trans-men, trans-women, and genderqueers, albeit without providing explicit definitions for these terms. The 2019 act and the 2018 bill both define a transgender individual as an individual whose gender identity differs from the gender assigned to them at birth.

However, it remains to be seen whether this legal recourse can effectively resolve all the challenges encountered by this group of individuals who have lost their parents. The following section elaborates on the disadvantages.

- The Bill was enacted to provide benefits to a significant population of transgender individuals in India and was passed, in part, as a measure to destigmatise transgender identity. The legislation above confers responsibility upon both the Central Government and local authorities to safeguard transgender individuals from instances of maltreatment, prejudice, and acts of violence. The inquiry aimed to elucidate the precise definition of "atrocities" committed against individuals who identify as transgender, the available avenues for seeking justice, and the corresponding penalties for those found guilty of such offences. The study would also examine the issue of affirmative action in employment and educational establishments for individuals who identify as transgender, as well as potential corrective actions. In light of their alleged unjust displacement, there is a need to examine their eligibility for scholarships. However, a concern arises regarding the appropriate individual to contact when experiencing harassment or discrimination. The user's statement lacks clarity. The text fails to address the available avenues for seeking justice in cases of harassment and atrocities against transgender individuals. The eighth chapter of the Bill enumerates four distinct categories of offences, which include the deprivation of access to public areas and sexual assault. However, it is important to note that the maximum penalty for these offences cannot exceed two years. The Bill lacks a clear definition of "discrimination" and fails to guide the appropriate channels for individuals to report instances of discrimination.
- Transgender individuals in India are still subjected to various forms of mistreatment and harassment in the present day. In India, individuals belonging to certain groups are frequently subjected to police brutality, torture, and systemic discrimination, leading to their

marginalisation and abuse. The recently proposed legislation lacks specificity regarding instances of police brutality. This presents a significant limitation, given that instances of police violence are a recurring source of trauma experienced by transgender individuals. In addition, they encounter social marginalisation, prejudicial treatment, and limited availability of educational resources. The New Law does not incorporate any particular mechanism aimed at preventing the disownment of transgender individuals by their families.

- Consequently, when individuals are rejected by their families, they may encounter difficulties accessing educational opportunities. The legislation fails to provide explicit provisions for reservations in educational institutions for transgender individuals who are not affiliated with the Scheduled Castes or Scheduled Tribes. Despite the anticipation that such provisions would be included under the Other Backward Classes category, the Bill does not address this matter. The lack of discourse surrounding police brutality towards the community is a significant contributing factor to the marginalisation of said community in India.
- The newly proposed Bill lacks provisions for the rehabilitation of transgender communities that have been ostracised since birth and raised in a clandestine environment, isolated from mainstream society. What actions can these individuals take to access the advantages provided by this recent legislation? The absence of access to education prevents individuals from securing employment opportunities, resulting in a continued reliance on their previous occupation of begging. The Transgender Persons (Protection of Rights) Bill 2016 can be deemed significantly uninformed regarding the matters it seeks to resolve.

Case Study

In Kolkata, it is a frequent occurrence for pedestrians and daily commuters to encounter clusters of individuals who identify as male but present themselves in feminine attire adorned with sparkling saris and vibrant makeup. These individuals congregate at traffic signals, eagerly anticipating the red light to solicit alms from passing motorists who lower their car windows to assess the situation. The individuals in question are commonly referred to as "hijras" and have recently been recognised as a distinct third gender following the enactment of "The Transgender Rights Bill, 2014." In certain urban areas of India, particularly those with larger populations, individuals belonging to this community are frequently compelled to engage in begging or prostitution, leading to a substandard existence akin to that of an animal. This is largely due to the lack of acceptance by the purportedly civilised society in which they reside.

The impact of hazardous occupations and the restricted availability of healthcare and welfare resources within the community is evidenced by the alarming prevalence of HIV among hijras.

While constructing this manuscript, I have endeavoured to engage in discourse with certain individuals whom I frequently encounter during my commute via automobile at intersections en route to my place of employment. The majority of their narratives evoke feelings of pity, and their lifestyles deviate significantly from what is commonly regarded as the standard human experience. I will expound upon the results I obtained through dialogue with them, utilising a point-by-point format.

Social Structure

Gender. All participants self-identified as members of the hijra cult/community. Approximately 36% of this demographic expressed a desire to self-identify as female. Despite 95% of the respondents indicating they were assigned male at birth and raised as boys during childhood, none identified themselves as male. Merely 5% (3 out of 60) of the participants reported their gender at birth as hijra, which denotes a non-binary gender identity. Among them, two individuals indicated being raised as female during childhood, while the third reported being raised intermittently as both male and female. Most individuals exhibited a significant lack of knowledge regarding the Transgender Rights Bill 2014. Furthermore, among the minority who possessed some level of awareness, there was notable dissatisfaction with the definition of "transgender" as outlined in the Bill.

The age range of the interviewees varied from 18 to 75 years, with a range of 54. Regarding the educational background of the community members interviewed, it was found that the majority had not received formal education due to being disowned by their families at birth. In certain cases, individuals who were socialised as male until age 14 or 15 were allowed to enrol in secondary education institutions. A small number of individuals identified as transgender; however, their college attendance was facilitated by their supportive family dynamics.

Economic Background. A significant proportion of transgender individuals have not completed their education. Likewise, individuals who identify as gay or bisexual, particularly after the intentional or unintentional revelation of their sexual orientation, encounter a significant amount of social disapproval and bias within educational institutions. Individuals who experience insufficient access to education and limited employment prospects may be compelled to engage in activities such as sex work and begging. Out of a sample of 60 hijras, 20 were employed in labour-intensive occupations, with a majority working as construction labourers for local contractors. Certain individuals were employed in

non-governmental organisations operated by civil society, primarily emphasising enhancing these communities. In contrast, others were engaged in activities that specifically targeted HIV/AIDS. Other significant occupations in which they were involved included soliciting at intersections or delivering mail over long distances, performing dances, soliciting gratuities in exchange for blessings bestowed upon newborns, and primarily engaging in sex work, which put them at high risk for contracting HIV/AIDS.

It is noteworthy that the above delineates the primary vocations (or means of financial sustenance) of the hijras, notwithstanding the possibility of their involvement in additional occupational pursuits. When a hijra is employed in a project, their primary designation is an employee. However, it is noteworthy that the same hijra may also be involved in other activities, such as sex work and begging, among others. The participants exhibited reluctance to discuss their income, possibly due to apprehension openly. However, one of the participants revealed that transgender individuals who engage in sex work and participate in NGO projects are the ones who earn a substantial income. Notably, some individuals residing in clustered groups under the authority of a head eunuch exhibit minimal financial contributions toward their household expenses.

Common Problems Faced by the Transgender

Health. Regarding health, approximately 40% of the sample (N=60) reported experiencing one or more illnesses. Seven participants reported experiencing either low or high blood pressure, while the elderly individuals in the group were diagnosed with diabetes. One individual reported experiencing allergic reactions resulting from insect bites. A mature hijra reported having sustained deep lacerations that were not healing. She disclosed receiving bi-daily injections to manage her diabetes and taking a tablet in the afternoon to address the wound on her leg. Due to this medical condition, she was confined to her residence. The interviews were conducted in Kolkata during the monsoon season of 2016, which was marked by a significant dengue fever and malaria outbreak. The government had implemented preventive measures to combat the epidemic. However, a group of transgender individuals raised concerns that despite the presence of municipal officials who conducted inspections and sprayed exposed water sources to prevent the breeding of dengue mosquitoes, the slums inhabited by these individuals were neglected.

Numerous primary healthcare facilities continued to refuse treatment of transgender patients, even in emergencies. Approximately ten hijras reported experiencing various health ailments, including knee pain resulting from strenuous

walking and climbing during begging, both in trains and shops. Other illnesses mentioned included cold, flu, typhoid, malaria, skin allergies, stomach pain, allergic asthma, acidity, piles, herpes, and sexually transmitted infections (STIs). Individuals who have experienced herpes and sexually transmitted infections (STIs) have also refrained from disclosing their HIV status.

Police Harassment. Hijras encounter various manifestations of subjugation at the hands of law enforcement personnel, giving rise to multiple predicaments. Frequently, individuals are subject to arbitrary detainment, unwarranted harassment, and unjust penalties for transgressions they have not committed. The study revealed that a significant proportion of hijras (80.5%) reported encountering difficulties attributed to law enforcement personnel, including officers from local police stations (50%), railway police (25%), and traffic police (8%). Numerous individuals shared poignant personal accounts, which were documented through open-ended inquiries. The hijras also recounted narratives of severe mistreatment, including instances where they were subjected to physical abuse by law enforcement officials for engaging in begging and obstructing traffic signals. Additionally, they were occasionally accused of theft or robbery without evidence, resulting in their names being included on police station lists of notorious burglars, much to their dismay.

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The hijra community is subjected to various forms of harassment:

- The phenomenon of police harassment in public spaces.
- Experiencing familial disownment.
- Instances of verbal, physical, and sexual abuse.
- The practice of police entrapment.
- Instances of abuse and harassment within social spaces.

- Dress codes that are inflexible and vary based on gender.
- Insufficient access to precise and reliable data and inadequate instruction and learning opportunities.
- The intentional and impolite misuse of personal names and gender pronouns.
- Insufficient availability of housing accommodations and limited engagement in social activities.

Hijras are subjected to various forms of oppression. They encounter a range of challenges that are associated with diverse forms of social marginalisation. The findings indicate a lack of secure sociopolitical environments in which Hijras can live with the same level of respect and dignity afforded to other individuals. Hijras in India and the study area face limited opportunities for socio-cultural, economic, and political inclusion, resulting in inadequate access to benefits from traditional social structures and institutions. Individuals who identify as Hijra face significant limitations in accessing socio-cultural, legal, educational, and health-related services. The general conclusions indicate that the majority of hardships experienced by the Hijra community stem from the lack of acknowledgement of Hijras as a distinct gender identity, which extends beyond the traditional male-female binary. This circumstance has impeded their ability to establish a position within the broader societal context, limiting their potential for personal growth and preserving their inherent worth as individuals. Hijra individuals are subject to significant marginalisation, primarily due to moralistic perspectives on gender and sexuality within mainstream society, which often equates diversity with deviance and disadvantage.

Conclusion

The Hijra community is presently subjected to social and cultural marginalisation, familial and societal ostracism, inadequate educational and healthcare opportunities, and curtailed civil liberties as citizens of India. The constraints above encompass the entitlement to enter into matrimony, engage in electoral processes, exercise suffrage, pursue job opportunities, acquire essential identification papers, and strive for subsistence. The Indian State officially recognised the Hijra community in the 2011 census. This decision was met with mixed reactions, with some community members expressing approval while others maintained a degree of scepticism. As per the verdict of the Supreme Court in 2014, Hijras are to be recognised as a unique and autonomous gender classification, distinct from the conventional binary genders. In India, Hijras can self-identify as a eunuch ("E") on passports and certain government documents. The Election Commission (EC) has recently incorporated a new column labelled 'O' in their voter enrollment and registration forms, specifically designated for the inclusion of 'Others' (Transgender or Hijras). The Unique Identification Authority of

India (UIDAI) has recognised the transgender community, much like the Election Commission. Janardhan G. (2013) reported that the enrollment forms of the UIDAI incorporate a third column designated by the letter 'T' to signify the transgender community. This supplementary column extends the conventional 'M' and 'F' columns corresponding to the male and female genders.

Several pressing concerns necessitate meticulous examination and efficacious interventions, such as the availability of essential amenities, education, medical services, and resources. The challenges above can be effectively addressed by implementing progressive measures, such as increasing societal consciousness regarding personal identities. Civil society organisations receive assistance to promote their objectives and initiatives, including but not limited to advocating for land and housing, creating specialised public facilities for sanitation and healthcare, recognising their right to vote as citizens, and securing representation in electoral processes. It is imperative to assist with traditional and digital media forms to illuminate the conditions and obstacles individuals encounter rather than portraying them in an unfavourable light. It is advisable to furnish supplementary financial aid to community-based organisations that manage transgender communities. It can be deduced through logical reasoning that Hijras, a constituent of the human species, possess the complete spectrum of human rights. Hijras, as with all individuals, have an inherent entitlement to maintain a dignified existence, regardless of their legal, social, or political status, in alignment with the fundamental human right to life. A subset of Hijras has reported instances of dehumanising and disrespectful treatment, specifically within government hospitals, at the hands of healthcare providers. Several non-governmental organisations have been committed to advancing Hijras's social status. Several organisations provide vocational training programs to improve their financial capacity. The effectiveness of these gradual actions relies on the willingness of individuals to embrace a more open and inclusive mindset toward them. Transgender individuals are likely to persist in experiencing a marginalised existence marked by a shortage of awareness, disregard, and muted discourse in their daily interactions as long as they are subjected to societal discrimination and relegated to subordinate status as the "third sex." The social exclusion phenomenon encountered by the primarily orphaned population not only generates discord, hostility, and disruption but also perpetuates societal inequity and privation. The resolution of exclusion-related issues is a fundamental requirement for the establishment of a truly democratic society.

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Assessing Basic Amenities and Quality of Life in Slums: A Case Study of Amritsar City

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Abstract

The largest city in Punjab, north India, is Amritsar, which is determined by its slum population. This research examines the availability of essential facilities in Amritsar's slums, such as safe drinking water, bathing provisions, drainage connectivity, fuel for cooking, and electricity. The study also seeks to evaluate the quality of life in these areas. Despite the current challenges, these areas have significant potential for improvement. The study concluded that public planning agencies, as the key entities responsible for urban development, have not adequately provided necessary facilities to the economically disadvantaged sections of society. The study highlights the need to involve the private sector in slum upgradation, implement participatory planning for slum areas, and adopt inclusive planning measures to ensure basic amenities and a better quality of life for slum dwellers.

Keywords: Basic amenities, housing, informal settlements, quality of life, slum, urbanisation

Introduction

In recent years, the urban population has been growing at varying rates and has become an inevitable component of economic development, particularly in low-income countries. As researchers, urban planners, policymakers, and individuals interested in urban development, you play a crucial role in addressing the challenges slum dwellers face. The continuous and substantial urban-induced mobility in low-income countries will likely create far-reaching economic, social, and political consequences. Many urban observers and experts fear that increasing such migrants may lead to urban unemployment, poor sanitation, inadequate electricity, housing shortages, inadequate access to drinking water, transport issues,

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and other services. Additionally, the influx of migrants from rural areas contributes to the growth of slums and an overall decline in the quality of urban life.

In economic literature, the term "slums" has been used to describe unofficial urban neighbourhoods with inadequate housing and poor living conditions. Slums have been present in almost all cities throughout history. According to UN-Habitat estimates from 2003, one billion people, or one-third of the world's population, live in slums or squatter communities. Another estimate from WUP in 2014 showed that compared to 1950, when 30% of the world's population lived in cities, projections for 2050 indicate that 66% of people will live in cities. Studies have indicated that the Asian region, which is rapidly urbanising, has the highest percentage of the world's population living in slums. For example, in 2001, approximately 554 million people lived in slums in Asia, making up almost 60% of all slum residents worldwide. Specifically, slum and squatter settlements accounted for 58% of the urban population in South Asia, compared to 36.4% in East Asia and 28% in Southeast Asia. Slums are home to 28% of Southeast Asia's urban population, making up 38.3% of the country's total population (Ooik & Phua (2007). It is evident from these statistics that a significant portion of the global urban population will live in metropolitan areas.

Recent empirical studies have found that the main reason for the development of squatter and slum settlements is the lack of adequate planning, management, and execution of development schemes that can provide affordable housing for the low-income urban population. Public planning agencies have also failed to supply developed land to the weaker sections of society, leading to the haphazard creation of slums. Therefore, empirical studies worldwide suggest that squatter and slum homes are the best options for low-income urban populations (UN-Habitat, 2003). Many studies on slums have also linked the expansion and proliferation of existing slums and the emergence of new slums, especially in third-world countries, to the failure of government urban planning policies (Kuffer et al., 2016).

India, as an emerging country, is grappling with the challenge of eradicating slums in the upcoming decades, as around 1.37 crore households (17.4 per cent) of urban households were living in slums in 2011. The unplanned rapid urbanisation in India has led many city dwellers to urban slums. City authorities face multiple challenges in managing and meeting the diverse requirements for infrastructure to fulfil economic and social needs. Basic amenities are fundamental for a decent living and improving economic growth and quality of life. These amenities include safe drinking water, sanitation, housing, roads, electricity, fuel, connectivity,

healthcare, schools, playgrounds, and other recreational facilities. Achieving inclusive societal growth is contingent upon resolving these basic issues for low-income and marginalised people. To improve the living standards of slum dwellers, India has become a founding signatory to the United Nations' New Millennium Development Goals, which primarily aim to enhance the living quality of city dwellers residing in slums (Tripathi, 2015).

The government's efforts notwithstanding, the persistent neglect of a segment of the population in a democratic society raises questions about our concept of nationhood and the ongoing development process. Ordinary people's living conditions indicate a country's socioeconomic, political, and environmental progress. Despite the implementation of specific schemes and budgetary allocations, the impoverished and marginalised individuals residing in slums and squatter settlements are deprived of basic amenities.

Slums in Indian Smart City Amritsar

Amritsar is one of Punjab's largest cities and has the highest slum population, accounting for a significant percentage of the city's population. The slum population grew rapidly by 8.13% from 2001 to 2011 (Master Plan for Amritsar, 2010). Most of the city has been developed without proper planning, with 51% of the area being developed haphazardly. This unplanned development has resulted in a walled city, slums, and 158 unauthorised colonies (Master Plan for Amritsar, 2010).

As of 2011, Amritsar Municipal Corporation had notified 63 slums, representing 29.33% of the city's total population (Census, 2011). The slum population in Amritsar increased from 5% in 1981 to 29.33% in 2011 (Sandhu & Sekhon, 2017). Most of the slums, around 89%, are located on private land, with the remaining 11% on Municipal Corporation lands, mainly in the city's southern part. This is a notable deviation from the usual trend, where most slums are on government land.

Table 1

Growth of City and Slum Population, Amritsar City (1981- 2011)

Years	City population	Slum population	Slum population as Per cent of the city population
1981	589299	32632	5.53
1991	708835	123000	17.35
2001	966862	229603	23.74
2011	1132719	332274	29.33
Source: Census of India, 2011			

Materials and Methods

Study Area

Amritsar, known as a Pool of Nectar, gets its name from Amrit Sarovar. The city of Amritsar is located at 31°07" and 32°03" North latitude and 74°29" and 75°23" East longitude, with an average elevation of 234 meters (768 ft.). It is situated on the Grand Trunk Road, only 27 km from the Indo-Pak International Border. The city is in a depression in the middle of the Bari Doab, with a population of 1,132,761 as per the Census of India, 2011. A Class I municipality has served Amritsar since 1868, which was upgraded to Municipal Corporation in 1977.

The Punjab Municipal Corporation Act 1976 governs the Municipal Corporation of Amritsar. The total area of the Municipal Corporation Amritsar is 139.58 sq. km, out of which 105.86 sq. km is developed and 33.72 sq. km is undeveloped. It is one of the 22 district headquarters of Punjab and is the second largest city in Punjab after Ludhiana. The city is situated on the main Grand Trunk Road (GT Road), also known as National Highway 1, from Delhi to Amritsar, connecting Lahore in Pakistan, and therefore is well connected to the road network. Amritsar is also well connected by rail to almost all major cities in India.

Aims and Objectives

The current study seeks to evaluate the accessibility of essential facilities in recognised slums in Amritsar City. Using the most recent primary data, the paper aims to contribute to the existing knowledge about the availability of basic amenities in Amritsar's slums and analyse the quality of life in these areas. The research was carried out in Amritsar City, which had a population of 1,132,761 according to the 2011 Census of India, with 29.33 per cent residing in slums.

Data Sources

The current study is based on both primary and secondary data. The primary data was collected using a structured interview schedule, and the researcher personally administered the schedules. The study used the stratified random sampling method to achieve its main objectives, and the primary survey was conducted in the notified slums of Amritsar city in August-September 2022. Secondary sources of data include information and publications from the Census of India, including the Primary Census Abstract for Slums 2011 and District Census Handbooks, the Ministry of Housing and Urban Poverty Alleviation, Punjab Urban Planning and Development Authority (PUDA), Amritsar Development Authority (ADU), Municipal Corporation of

Amritsar, Town and Country Planning Department, Punjab, and other relevant government departments.

The Sample

The first step involves classifying Amritsar slums into six categories based on location. Next, a proportionate number of slums from each category are selected for the survey, with a total of nine sample slums in six major categories included in the primary survey: Chhota Haripura, Angarh, Dhapai, Ekta Nagar, Ram Talai, Maqboolpura, A/O Gilwali gate, Fatehpur, and Ghanupur (Table 2). Finally, 5% of households are selected from each slum for the primary survey. The primary survey involves an in-depth assessment of 614 households through interviews to evaluate basic amenities and the quality of life.

To evaluate the quality of life, the z-score has been calculated for all the indicators using the following formula:

$$z = (x-\mu)/\sigma$$

Where z is the z-score, X is the original value of the ith variable, μ is the mean value, and σ is the standard deviation from the mean value. The composite score was computed after calculating the z-score by summing up the z-score values of all indicators for all six categories of slums to determine the quality of life in the slums of Amritsar city.

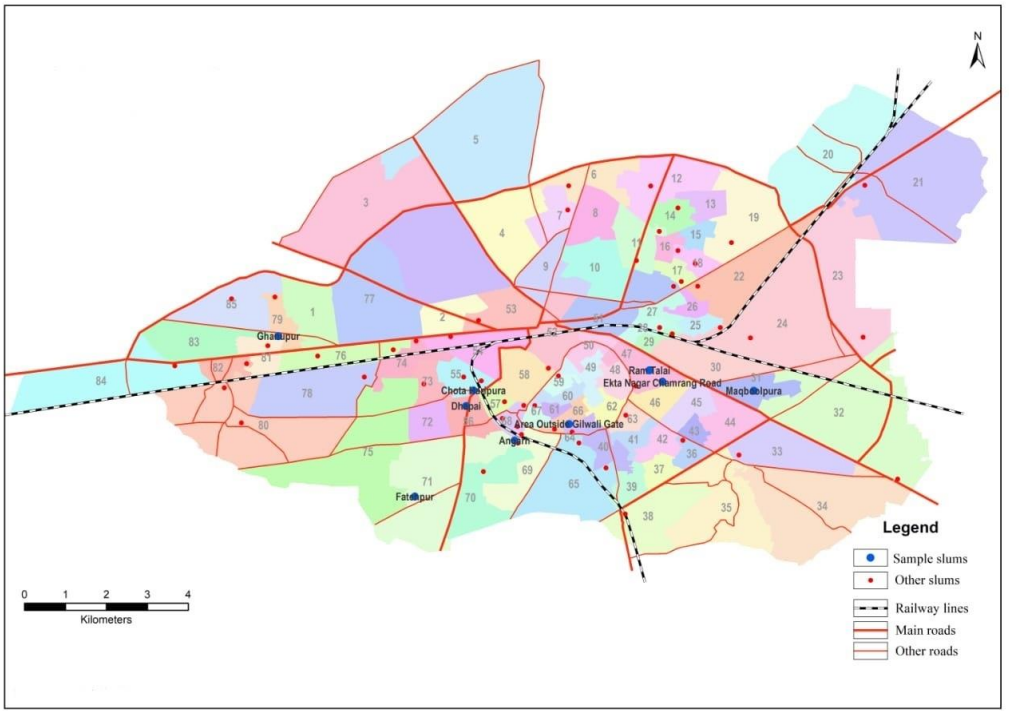
Table 2

Selection of Sample Size

Slum Category*	Name of the sample slum	Population	Total household	Sample household
Slums along Railway line	1. Chhota Haripura	8300	1660	83
	2. Angarh	3850	770	39
Slums along Major roads	3. Dhapai	8800	1760	88
	4. Ekta Nagar	2300	460	23
Walled city slums	5. Ram Talai	3300	660	33
Industrial slums	6. Maqboolpura	11000	2200	110
Refugee slums	7. A/o Gilwali gate	1000	200	10
Sporadic slums	8. Fatehpur	5550	1110	56
	9. Ghanupur	17160	3432	172
Total		61260	12252	614

Notes: The researcher categorised slums based on their location in Amritsar city.
Source: Municipal Corporation, Amritsar

Figure 1
Location of Slums in Amritsar City (Ward wise)



Source: Prepared by Researcher

Results and Discussion

The present study is divided into two sections. In the first section, the availability of basic amenities in the slums of Amritsar city has been discussed (See Table 3). Five parameters are chosen to assess the availability of basic amenities in different slums of Amritsar city. Five parameters used to determine basic amenities are a source of drinking water, type of toilet facility, availability of drainage connectivity, access to electricity supply and type of fuel used for cooking. In the second section, based on these parameters, the quality of life in different slums has been evaluated using a composite score.

Assessment of Basic Amenities in Amritsar Slums

Safe drinking water is essential for human survival. In the slums of Amritsar city, residents obtain their drinking water from four main sources: piped water supplied by the Municipal Corporation, hand pumps, private piped water arrangements, and tanks (refer to Table 3). Piped water is the most common water source, used by 55.86% of the slum population. The second most preferred water source is hand pumps, which 22.96% of people use. Approximately 10% of the slum population uses private arrangements and tanks for their drinking water. In sporadic slums, 65% of people use piped water; in refugee slums, only 30% use this source. Hand pumps are the major

source of drinking water for 27.27% of the population in Industrial and the slums along walled cities. Private piped water sources are chosen as the source of drinking water by 14.75% of the population living in the slums along railways. Tanks are used as a source of drinking water by 15.31% of the population in the slums along major roads, while only 7.01% use tanks to obtain water in sporadically spread slums.

Toilet facilities are essential for every household. In the slums, the most common toilet facilities are flush and pit toilets (See Table 3). In Amritsar, 78.17% of slum dwellers use a flush system, while 15.63% have pit toilets in their homes. Additionally, 6.18% of slum dwellers use open grounds or farms near the slum areas for toilet purposes. Along major roads, 86.48% of slum residents have flush system toilets, while 26.36% of people in industrial slums use pit toilets. In sporadic slums, 8.77% of the population also have pit toilets. Approximately one-tenth of the population in industrial slums use open grounds and nearby farms for toilet purposes.

Waste disposal is a significant issue in slum areas, often overlooked due to the perception of these areas as backward. Proper disposal of solid and liquid waste is crucial for maintaining hygiene in these areas. In slums, water disposal facilities are either open or lack a specific drainage system. According to Table 3, 51.62% of slum dwellers have drainage facilities, which are uncovered, posing a significant health risk as water-borne diseases can easily spread through flies and mosquitoes. Additionally, 10.09% of the slum population has no facility available for water disposal, and 38.27% have no covered drainage facilities. In sporadic slums, 64.03% of people have an open water disposal facility. However, 21.21% of slum dwellers in slums along old-walled cities have closed water disposal facilities, and 4.91% of those in slums along railways also have closed liquid waste disposal facilities. Furthermore, 50% of residents in industrial slums lack special liquid waste disposal facilities, leading to potential health issues due to industrial effluents.

Electricity is undeniably one of the most crucial gifts that science has bestowed upon humanity. It has become an indispensable part of modern life; a world without it is unimaginable. In Amritsar, slum dwellers can access legal and illegal electricity supplies (Table 3). Almost 80% of people in the slums have legal electricity connections. However, approximately 11.88% of the slum population has no access to electricity, while a small percentage (3.42%) has access to electricity from illegal sources.

Along the old city's walled slums, 96.96% of the population has legal access to electricity, but 16.21% of the population in slums along major roads lacks assured access to electricity. In refugee slums, about 10% of people have access to electricity from illegal sources; in industrial slums, 1.81% use electricity from illegal sources. It is important to note that there is a higher risk of accidents from electric shocks associated with power theft.

A key component of slum upgrading involves improving basic household services, such as cooking energy and open living spaces. In Amritsar, the slum population uses

four different sources for cooking: LPG, Kerosene, Electricity, Firewood, and Dung cakes (refer to Table 3). Approximately 7.50 per cent of the slum population uses LPG, while 2.60 per cent uses kerosene for cooking. About 10.42 per cent of the population relies on electricity for cooking. Over one-third of the population uses firewood or dung cakes, with 57.57 per cent of the slums in the old walled city using LPG and 35.24 per cent of the population in railway slums using LPG. In the old walled city slums, 12.12 per cent use kerosene, while less than one-third of the population in refugee slums use electricity for cooking. Additionally, 41.81 per cent of the industrial slum population cooks with firewood or dung cakes and 4.83 per cent of railway slum residents. However, people using dung cakes and kerosene are susceptible to health-related diseases, which can increase the risk of respiratory problems.

Table 3

Availability of Basic Amenities in Slums of Amritsar City

Parameters	Indicators	Slums along railway	Slums along major roads	Old Walled city slums	Industrial slums	Refugee slums	Sporadic slums	Total
		% of HH [1]	% of HH	% of HH	% of HH	% of HH	% of HH	
Source of drinking water	Tapped Water	47.54 (58)	53.15 (59)	39.39 (13)	54.54 (60)	30 (3)	65.78 (150)	55.86 (343)
	Hand Pump	25.40 (31)	18.01 (20)	27.27 (9)	27.27 (30)	30 (3)	21.05 (48)	22.96 (141)
	Tubewell/ Borehole	14.75 (18)	13.51 (15)	21.21 (7)	9.09 (10)	20 (2)	6.14 (14)	10.74 (66)
	Others [2]	12.29 (15)	15.31 (17)	12.12 (4)	9.09 (10)	20 (2)	7.01 (16)	10.42 (64)
Type of toilet facility	Flush	71.31 (87)	86.48 (96)	75.75 (25)	65.45 (72)	60 (6)	85.08 (194)	78.17 (480)
	Pit	21.31 (26)	9.00 (10)	21.21 (7)	26.36 (29)	40 (4)	8.77 (20)	15.63 (96)
	Other	7.37 (9)	4.50 (5)	3.03 (1)	8.18 (9)	0 (0)	6.14 (14)	6.18 (38)
Availability of drainage connectivity	Closed	4.91 (6)	14.41 (16)	21.21 (7)	9.09 (10)	30 (3)	8.77 (20)	10.09 (62)
	Open	51.63 (63)	40.54 (45)	45.45 (15)	40.90 (45)	30 (3)	64.03 (146)	51.62 (317)
	No Drainage	43.44 (55)	45.04 (50)	33.33 (11)	50 (55)	40 (4)	27.19 (62)	38.27 (235)
Access to electricity supply	Yes (Legal/ Illegal)	81.14 (99)	81.08 (90)	96.96 (32)	87.27 (96)	90 (9)	85.08 (194)	84.69 (520)
	No	18.85 (23)	18.91 (21)	3.03 (1)	12.72 (14)	10 (1)	14.91 (34)	15.30 (94)
Fuel used for cooking	LPG	35.24 (43)	48.64 (54)	57.57 (19)	53.63 (59)	40 (4)	56.14 (128)	50 (307)
	Kerosene	0.81 (1)	1.80 (2)	12.12 (4)	1.81 (2)	0 (0)	3.07 (7)	2.60 (16)
	Electricity	15.57 (19)	10.81 (12)	6.06 (2)	2.72 (3)	30 (3)	10.96 (25)	10.42 (64)
	Other[3]	4.83 (59)	38.73 (43)	24.24 (8)	41.81 (46)	30 (3)	29.82 (68)	36.97 (227)

Notes: [1] HH stands for Household.
[2] Others include wells and tanks.
[3] Firewood/Coal/Crop residue/Dung cakes etc.
The table's figures are in percentiles, and the figures in the brackets are the number of people surveyed.
Source: Primary Survey

Levels of Quality of life

In this section, we used five essential parameters to evaluate the quality of life in the major slums of Amritsar city. To measure the quality of life, we computed a composite z-score by summing up the z-score values of all five indicators (Table 4). The mean value for the calculated composite score is 13.308.

Table 4

Selected Variables for Quality of Life of Slum Dwellers of Amritsar City and Their X Value

Variables	Parameters	Indicators	Weightage value	Slums along railway		Slums along major roads		Walled city slums		Industrial slums		Refugee slums		Sporadic slums	
				% of HH	X value	% of HH	X value	% of HH	X value	% of HH	X value	% of HH	X value	% of HH	X value
X1	Source of drinking water	Tapped Water	4	48	1.92	53	2.12	39	1.56	55	2.2	30	1.2	66	2.64
		Hand Pump	3	25	0.75	18	0.54	27	0.81	27	0.81	30	0.9	21	0.63
		Tubewell/ Borehole	2	15	0.3	14	0.28	21	0.42	9	0.18	20	0.4	6	0.12
		Others (1)	1	12	0.12	15	0.15	12	0.12	9	0.09	20	0.2	7	0.07
X2	Type of toilet facility	Flush	3	71	2.13	87	2.61	76	2.28	66	1.98	60	108	85	2.55
		Pit	2	22	0.44	9	0.18	21	0.42	26	0.52	40	0.8	9	0.18
		Other	1	7	0.07	5	0.05	3	0.03	8	0.08	0	0	6	0.06
X3	Availability of drainage connectivity	Closed	3	52	1.56	41	1.23	46	1.38	41	1.23	30	0.9	64	1.92
		Open	2	5	0.1	14	0.28	21	0.42	9	0.18	30	0.6	9	0.18
		No Drainage	1	43	0.43	45	0.45	33	0.33	50	0.5	40	0.4	27	0.27
X4	Access to electricity supply	Legal	3	81	2.43	81	2.43	97	2.91	87	2.061	90	2.7	85	2.55
		Illegal	2	5	0.1	3	0.06	3	0.06	2	0.04	10	0.2	4	0.08
		No supply	1	14	0.14	16	0.16	0	0	11	0.11	0	0	11	0.11
X5	Fuel used for cooking	LPG	4	35	1.4	49	1.96	58	2.32	54	2.16	40	1.6	56	2.24
		Electricity	3	16	0.48	11	0.33	6	0.18	3	0.09	30	0.9	11	0.33
		Kerosene	2	1	0.02	2	0.04	12	0.24	2	0.04	0	0	3	0.06
		Others (2)	1	5	0.05	39	0.39	24	0.24	42	0.42	30	0.3	30	0.3

Notes: (1) Others include wells and tanks.
(2) Firewood/Coal/Crop residue/Dung cakes etc.
HH stands for Household. Weightage has been assigned according to rank. The X value is calculated by dividing the weightage value by 100 and then multiplying it by the percentage of the household.

Table 5

Composite Score for Slums in Amritsar City

Slum Category	X1	X2	X3	X4	X5	X6	X-X	(X-X)2
Slums Along Railway	3.09	2.64	2.09	2.67	1.95	12.44	-0.868	0.753
Slums along major roads	3.09	2.84	1.96	2.65	2.72	13.26	-0.048	0.002
Walled city slums	2.91	2.73	2.13	2.97	2.98	13.72	0.412	0.169
Industrial slums	3.28	2.58	1.91	2.76	2.71	13.24	-0.068	0.004
Refugee slums	2.7	2.6	1.9	2.9	2.8	12.9	-0.408	0.166
Sporadic slums	3.46	2.79	2.37	2.74	2.93	14.29	0.982	0.964
Total						79.85		2.058

Source: Calculated using Primary Data

Table 6
Levels of Quality of Life

Level of quality of life	Composite score	Slum category
Low	11.5-12.5	Slums along railway
Medium	12.5-13.5	Refugee slums, Industrial slums, Slums along major roads
High	13.5-14.5	Walled city slums, Sporadic slums

Source: Calculated using Primary Data

Based on the calculation of composite z-score values (Table 5), we categorised levels of quality of life into three groups: low (composite z-score between 11.5-12.5), medium (composite z-score between 12.5-13.5), and high (composite z-score between 13.5-14.5) (Table 6). It has been observed that slums along railway lines, such as Chhota Haripura and Angarh, have a low quality of life. Slums along major roads, including those on highways or roads connecting other district headquarters, have a medium quality of life. As part of this study, we conducted the primary survey in two slums on major roads: Dhapai and Ekta Nagar. Industrial and Refugee slums also exhibit a medium level of quality of life. Interestingly, slums scattered sporadically along an old walled city in the city's centre have a high quality of life. These areas offer easy access to all the basic amenities.

Conclusions

The study demonstrates that access to basic amenities varies among different slums in Amritsar city based on their location. In most slums, people still rely on groundwater for drinking, as municipal water supply is a distant dream for many. About 45% of the slum population still does not have access to piped water from the Municipal Corporation, and approximately 22% still lack access to a toilet facility. Lack of proper waste disposal facilities and poor sewage systems are causing pollution and health-related problems in slums. Additionally, around 39% of areas in slums lack a proper drainage system, which is crucial for maintaining proper hygiene. Over half of the slum population has to face open drainage, leading to serious health issues. It is concerning that in the 21st century, people still lack access to electricity in Amritsar slums.

Interestingly, almost 50% of people use conventional energy sources to cook food. The disparity among different slums also leads to changes in the socioeconomic setup of the city. Although the quality of life is low in all sample slums, it varies from one slum to another. To improve the socioeconomic condition of slum dwellers, the government must improve the quality of life in slums through services like tenure

regularisation. Slum upgrading should be adopted as a solution with basic amenities as required, especially after discussion and agreement with slum residents. Affordable housing is also the need of the hour, along with the presence of basic facilities. The successful implementation of the new mission of the Government of India, i.e., Prime Minister Awas Yojana (PMAY), will lead to improved quality of life and access to improved amenities for slum dwellers. Several non-government organisations have been working to normalise the life of slum dwellers in Amritsar. The government should encourage the private sector to be involved in improving the condition of slums. There is an urgent need to minimise the variations in the availability of basic amenities by strengthening the financial resources and technical capacity for adequate provision.

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Overweight/Obesity Transition and its Determinants in India, 2005-06 to 2015-16

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Abstract

In India, 135 million people suffer from overweight/obesity. The prevalence of obesity varies by age, gender, location, and socioeconomic factors in India. The existing healthcare services are causing a growing public health concern. This study used the National Family Health Survey data from 2005-06 to 2015-16 to measure the prevalence and obesity transition among different sub-populations of India. The study used unit-level data for NFHS-3 & 4 (2005-06 and 2015-16). Bivariate analysis was used to study the prevalence of overweight/obesity, and geospatial maps were used to portray the overweight/obesity transition across sub-populations, space and time. Multivariate analyses were used to determine the likelihood of overweight/obesity among different variables. The results showed that the prevalence of overweight/obesity in most of the developed states is still high among different sub-groups of the population, with a few EAG states experiencing positive incremental change. Overweight/obesity has substantially increased in all EAG states with varying degrees of convergence across the population cohorts. The study found that the likelihood of overweight/obesity is higher among females compared to males. It was concluded that India's health delivery system needs reorganisation to consider the evolving disease patterns. Health system funding must be rearranged to account for rising NCD costs and the poor's disproportionate share of those costs.

Keywords: obesity, nutritional transition, low HDI, socioeconomic status, poor, BMI

Introduction

The rise in overweight and obesity has become a global phenomenon, with a significant increase over the last two to three decades. While obesity has been a problem in developed nations, it has now become more prevalent in low and

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middle-income countries (WHO, 2010). The increase in overweight and obesity in these countries is linked to changes in food habits due to urbanisation, as well as reduced physical activity resulting from demographic and epidemiological transitions (Popkin *et al.*, 2012; Griffiths & Bentley, 2001; Law *et al.*, 2020; Meenakshi, 2016; Misra *et al.*, 2011; Shamsi *et al.*, 2018; Shetty, 2002).

Global dietary trends are shifting towards energy-dense foods high in fats and sugars. At the same time, reduced physical activity due to technological advancements, urbanisation and economic progress have led to a significant increase in overweight and obesity, posing a serious public health crisis. As a result, there has been a shift in the disease burden from infectious and communicable diseases to non-communicable diseases (NCDs), such as obesity, diabetes, and cardiovascular disease, causing major morbidity and mortality (Arokiasamy, 2018; ISDBIC, 2017; Zakaria & Donato, 2020).

The rise in overweight and obesity is no longer confined to wealthy industrialised societies but is also occurring rapidly in developing nations. India, for example, has experienced high economic growth, leading to social and economic changes. In addition to undernourishment among young children, India is now facing the additional burden of overweight and obesity among young adults, which may have significant social, physiological, and psychological impacts (Khan & Mohanty, 2018; Ansary & Rath, 2020; Shetty, 2002). However, there is a lack of comprehensive research into the macroeconomic causes of the rise in overweight or obesity in India.

According to the World Health Organization, as of 2021, 1.9 billion people worldwide are overweight, with 650 million of them classified as obese. WHO's 2017 report on global disease burden revealed that over 4 million people die annually due to complications related to being overweight or obese. In India, approximately 135 million people are suffering from overweight or obesity (Ahirwar & Mondal, 2019). The prevalence of obesity in India varies across age, gender, location, and socioeconomic status. India, as a developing nation, is undergoing a transition from issues of malnutrition to obesity due to industrialisation and rapid urbanisation. The incidence of obesity differs between states, rural and urban areas, and genders. Although socioeconomically underdeveloped states (Empowered Action Groups including Madhya Pradesh, Chhattisgarh, Bihar, and Jharkhand) have lower obesity rates compared to more developed states such as Punjab, Andhra Pradesh, and Chandigarh, the former recorded significant increases between 2005-06 and 2015-16. In a study by Mishra *et al.* (2018), it was revealed that urban residents are more likely to be obese than rural residents.

On the other hand, a study showed that indigenous populations

are at a higher risk of obesity (Oliveira *et al.*, 2015). The study also indicated a clear link between obesity and excessive calorie intake, less physical activity, consumption of junk food, and a sedentary lifestyle among Indian students (Shaik *et al.*, 2016; Ningombam *et al.*, 2018). Siddiqui and Donato (2016) highlighted that the obesogenic environment in India has led to the prevalence of overweight or obesity not only among males and females but also across different social groups and regions. Both Muslim females and Sikh females have high rates of overweight or obesity due to sociocultural influences (Garg *et al.*, 2010). Consequently, poor eating habits, sedentary lifestyles, and limited healthcare services are contributing to the increasing public health concerns related to overweight and obesity in India (Ahirwar & Mondal, 2019). Given these circumstances, this study aims to comprehensively assess the overweight and obesity epidemic among adult men and women in India using unit-level data from the nationally representative National Family Health Survey.

Objectives

The main goal of this study is to explore the transition towards overweight and obesity across various sub-groups of the population in India and its states. The study also aims to analyse the influence of individual factors, local neighbourhood factors, and state-level factors on obesity and overweight among different sub-populations in India.

Data Sources and Methodology

This study utilises data from two National Family Health Survey (NFHS) rounds. The unit level data of NFHS-3 (2005-06) and NFHS-4 (2015-16) were obtained from the Demographic Health Survey website. These surveys gather maternal and child health information, including body measurements for females aged 15-49 and males aged 15-54. NFHS-3 had 124,384 female and 74,369 male participants, whereas NFHS-4 included 699,686 females and 112,122 males. Body mass index (BMI) is used to classify overweight and obesity among adults, with a BMI ≥25 indicating overweight or obesity. The study includes bivariate analysis using socioeconomic and demographic variables such as place of residence, religion, caste, education level, wealth index, age group, and working status. Additionally, geospatial mapping is used to analyse regional variations over time. Furthermore, logit regression analysis examines the socioeconomic and demographic predictors of overweight and obesity prevalence after accounting for other factors. It aims to find the best-fitting model to describe the relationship between the dichotomous characteristic of interest (dependent variable = response or outcome variable overweight/obese coded ‘1’ and not overweight coded '0’) and a set of independent (predictor or explanatory) variables.

The logit equation is expressed as:

$$\text{Logit}\ (p) = \beta 0 + \beta 1 X1 + \beta 2 X2 \ \ldots\ \ldots\ \beta n Xn + E$$

p = Dependent variable (different measures of undernutrition coded as 1 and nourished coded as 0). ß0 = Constant; ß1 = Coefficient of variable X1; E = Error Term

Analysis and Discussion

Overweight/Obesity Transition Among Different Sub-groups of Population in India

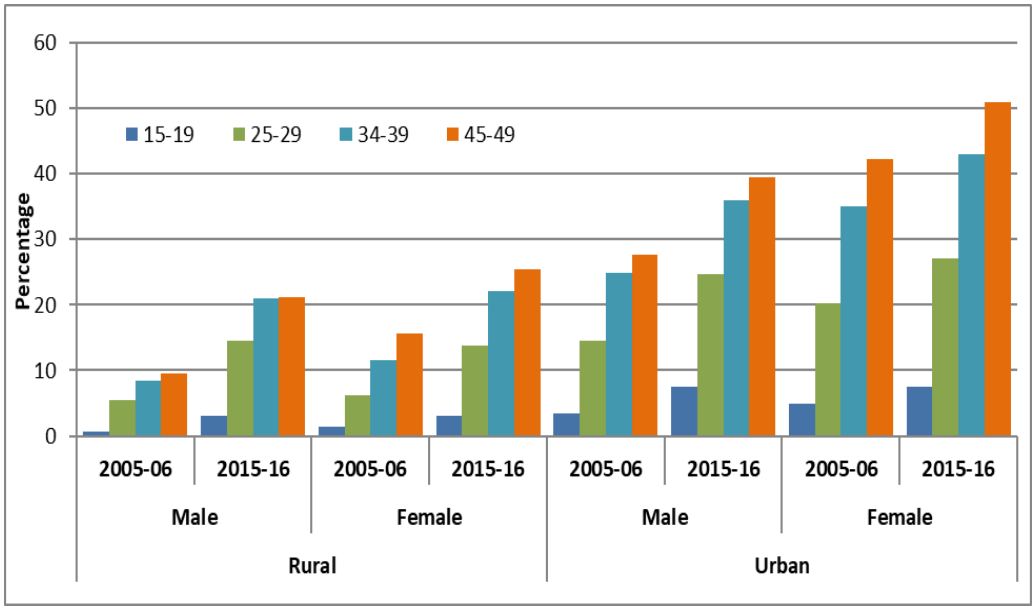
Over the past decade, the number of overweight or obese men and women in India has more than doubled. From 2005-06 to 2015-16, there was a significant increase in overweight and obesity across all Indian states, in both rural and urban areas. Some states saw a rise in overweight/obesity levels to a critical point, particularly in areas where it was not previously a severe issue. In 2015-16, there was a wider gap in overweight and obesity prevalence between rural and urban areas compared to 2005-2006, impacting both men and women. Surprisingly, it was found that eating habits did not seem to have a clear impact on the prevalence of overweight and obesity. The prevalence of obesity varied significantly between different populations, with obesity increasing with age and peaking between ages 44-49 for women and 50-54 for men (Figure 1). Furthermore, a significant percentage of adults in India were found to be overweight or obese, with women having a higher average prevalence of obesity than men.

In all rounds of the NFHS, both males and females in rural and urban areas are more likely to be overweight or obese as they age, from 15 to 19 to 45 to 49. According to Figure 1, which shows the mean prevalence of overweight/obesity for each age group, the 45-49 age group among rural males has the highest percentage of mean prevalence of overweight/obesity. Along with diverse and inconsistent dietary practices among the states, balanced diets are another factor. We found that states with higher levels of socioeconomic development had a greater risk of overnutrition at the individual level. However, in recent years, states with lower levels of socioeconomic development have also seen significant increases in the incidence of overweight and obesity.

Analysis of the household level wealth index across sub-populations based on gender, rurality, and NFHS rounds found that the mean prevalence of overweight/obesity has increased dramatically in India over the past ten years. In rural India, the mean prevalence of overweight/obesity among men in the poorest quintile was only 1.5 per cent in 2005-2006, but it rose to 7.4 per cent in 2015-16, a fivefold increase. The figure doubled simultaneously within the same reference group, going from 13.3 per cent to 24.7 per cent. Table 1 further reveals that rural men in the richest quintile are more obese than those in the poorest quintile.

Figure 1

Mean Prevalence of Overweight/Obesity and Age Groups by Sectors and Gender



Source: National Family Health Survey-2005-06 & 2015-16

Table 1

Mean Prevalence of Overweight/Obesity and Wealth Quintiles by Sectors and Sex in India.

Proportion of population with overweight/obesity								
Wealth Quantile	Rural				Urban			
	Male		Female		Male		Female	
	2005-06	2015-16	2005-06	2015-16	2005-06	2015-16	2005-06	2015-16
(1) Poorest 20%	1.5	7.4	2.5	7.4	5.9	14.6	9.0	19.0
Q-2	2.3	9.7	3.9	10.2	9.1	21.7	14.3	27.4
Q-3	3.6	12.8	5.0	12.9	14.0	29.4	21.7	32.0
Q-4	5.6	16.1	7.4	17.0	22.8	31.7	30.3	36.7
(5) Richest 20%	13.3	24.7	14.7	25.3	30.6	38.1	37.7	39.8
Total	5.9	14.7	7.3	14.9	16.7	27.3	23.2	31.1
	34,559	74,683	65,560	4,88,060	34,650	34,017	53,174	1,99,096

Source: National Family Health Survey-2005-06 & 2015-16

Women in both the poorest and richest quintiles are in a similar predicament. It is interesting to note that the prevalence of overweight/ obesity is higher among women in rural areas than among men in both the richest and poorest quintiles. In urban areas, the mean prevalence of obesity among men in the lowest quintile was greater in 2005-2006 (6 per cent vs 1.5 per cent in rural areas). The result shows some

concerning trends related to overweight and obesity in different demographic groups. In urban areas, the prevalence of overweight and obesity is significantly higher among males in the wealthiest quintile compared to males in both the poorest and richest rural quintiles. Urban females also have a higher prevalence of overweight and obesity compared to males, regardless of income. Over the years, there has been a notable increase in overweight and obesity among females in the poorest quintile.

Furthermore, the data also reveals that in 2005-06, 21.9% of Sikh men in rural areas were overweight or obese, with Christian males following closely at 11% (Table 2). In the same period, 28% of rural Sikh women were overweight or obese, compared to only around 4% of Christian-ST women. These patterns have persisted, with approximately one-third of Sikh men in rural areas being overweight or obese in 2015-16, while the prevalence of overweight and obesity among rural Christian-ST women remained significantly lower.

The prevalence of overweight /obesity is higher among Hindu women as a whole (over 20%) compared to Muslim women (16.4%). This difference is particularly noticeable in urban areas. While the prevalence among Sikh men remains high, there has been a declining trend from 2005-06 to 2015-16. In urban areas, over 37% of Sikh men were obese in 2005-2006, which decreased to about 34% in 2015-16. On the other hand, the mean prevalence of overweight/obesity showed an increasing trend across all other socio-religious categories. Among the Christian general category, 22% of males were overweight in 2005-06, increasing to 32% in 2015-16.

The increase in obesity in India is attributed to low levels of physical activity and shifts in dietary habits toward more animal products, saturated fats, and sweets. Research has demonstrated a strong link between food choices and physical exercise and the risk of obesity, hypertension, diabetes, and stroke. Additionally, studies on occupational physical activity have concluded that occupation is a categorical variable influencing obesity. Regarding women with a higher physical activity related to employment, Table 3 shows that the risk of manual labour workers being overweight is lower than those not employed. In contrast, white-collar men and women in rural areas are more likely to be overweight than non-working individuals. For example, white-collar male workers were 25.6 % overweight or obese in rural areas during this decade compared to those who were not working, which was 8.8%.

Further, the findings indicate no statistically significant differences between male manual workers and unskilled labourers in urban and rural areas. In the 2005-2006 period, around 14% of people categorised as not in the workforce reported being

obese or overweight; this number increased to 20% in 2015-16, while the average incidence of obesity among white-collar jobs increased to 32% from 20% over the same period. The mean prevalence of obesity among manual labour workers has tripled over the same period, reaching 18% in 2015-16. According to Table 3, the population in white-collar jobs in India is more likely to be obese or overweight, regardless of their gender, place of residence, or surroundings, although with varying degrees. Data analysis indicates that the mean prevalence of overweight/obesity among white-collar rural males doubled over the past ten years, from 12.2% to 25.6%. At the same time, the mean prevalence of overweight/obesity increased for those not in the workforce and manual labour from 2.3% and 5% to 8.8% and 14.7%, respectively.

The mean prevalence of obesity among female manual workers increased threefold from 4.2% to 13.3% (Table 3). Still, the mean prevalence of overweight/obesity is higher among white-collar female employees (25.5%). While urban females in the same category reported 35.4%, urban males in white-collar jobs reported a higher prevalence of overweight/obesity with roughly 37%. It is interesting to note that in 2015-16, the prevalence of overweight/ obesity was higher among urban females

Table 2

India: Mean Prevalence of Overweight/Obesity among Social Religious Groups by Sectors and Sex

Proportion of population with overweight/obesity								
Correlates	Rural				Urban			
	Male		Female		Male		Female	
	2005-6	2015-16	2005-06	2015-16	2005-06	2015-16	2005-06	2015-16
Hindu-caste	4.4	13.2	5.3	12.8	13.8	24.9	19.3	28.7
Hindu-general	9.6	18.6	10.9	20.3	21.1	32.0	28.6	35.4
Muslim	5.6	14.7	8.2	16.4	14.0	26.0	22.7	31.4
Christian-ST	3.5	9.5	4.2	10.0	10.6	22.2	9.8	21.7
Christian-general	11.3	26.0	17.2	29.5	22.4	32.4	29.1	38.1
Sikh	21.9	29.3	27.7	29.6	37.4	34.1	41.7	36.1
Other Groups	2.9	12.8	4.4	12.4	22.7	30.2	20.9	29.2
Total	5.9	14.7	7.3	14.9	16.7	27.3	23.2	31.1
	34,559	74,683	65,560	488,060	34,650	34,017	53,174	199,096

Source: National Family Health Survey-2005-06 & 2015-16

Table 3

India: Mean Prevalence of Overweight/Obesity and Nature of Occupation by Sectors and Gender

Proportion of population with overweight/obesity								
Correlates	Rural				Urban			
	Male		Female		Male		Female	
	2005-06	2015-16	2005-06	2015-16	2005-06	2015-16	2005-06	2015-16
Not in workforce	2.3	8.8	9.2	14.9	7.1	17.0	24.4	31.1
White collar	12.2	25.6	16.1	25.5	24.1	36.7	25.4	35.4
Manual labour	5.0	14.7	4.2	13.3	13.0	26.8	14.9	29.3
Total	5.9	14.7	7.3	14.9	16.7	27.3	23.2	31.1
	34,559	74,683	65,560	4,88,060	34,650	34,017	53,174	1,99,096

Source: National Family Health Survey-2005-06 & 2015-16

who were not employed than among males. In the non-working group of urban males in 2015-16, 17% were reported to be obese, compared to 31% of urban females. Similarly, among manual labour in 2015-16, 26.8% of urban males reported being overweight or obese, compared to more than 29% of urban females (Table 3).

Overweight/Obesity Transition Across the States and Sectors in India

The following section illustrates the prevalence of overweight and obesity at a sub-national level. The average overweight and obesity prevalence in the country increased by 8.8 percentage points between 2005-06 and 2015-16. Andhra Pradesh reported the highest increase (15 percentage points), more than double the national average. Following Andhra Pradesh, Goa (15 percentage points), Himachal Pradesh (14.8 percentage points), Jammu & Kashmir (14.4 percentage points), and Sikkim (14.2 percentage points) also showed significant increases. It is interesting to note that more than 50 per cent of Indian states experienced an increase in overweight and obesity prevalence. Punjab had the lowest increase at 3.7 per cent. Further analysis shows that the northern, northeastern, and southern states had the greatest changes in prevalence. Central and northeast Indian states acted as a boundary between those in the north and south in 2005-06 and 2015-16 (Maps 1&2). In 2005-06, Punjab (27.1 per cent) and Kerala (25.1 per cent) reported the highest prevalence, while the remaining northern and southern states had medium rates. Meanwhile, central and north Indian states had low rates. Jharkhand had the lowest

prevalence at 5 per cent, followed by Bihar, Chhattisgarh, Madhya Pradesh, and Rajasthan (Maps 1&2). It is worth noting that states with the lowest rates of overweight and obesity are also known as India's "hunger bowl," where a high percentage of children are underweight and have stunted growth. BIMARU/EAG states also showed a lower prevalence of overweight and obesity.

Based on map 2, it is clear that over the past ten years, overweight and obesity rates have increased in central India, while the northern and southern states have consistently high prevalence rates of overweight/ obesity. In 2015-16, states like Himachal Pradesh, Uttarakhand, J&K, Haryana, Delhi, and Punjab reported a mean prevalence of overweight/obesity greater than 20 per cent, along with Gujarat, Maharashtra, Andhra Pradesh, Karnataka, Goa, and Kerala in the southern states. In these states, one-third of the population reported being overweight or obese, with Jharkhand having the lowest rate at 10 per cent.

India is experiencing unprecedented changes in the prevalence rate of overweight/ obesity, especially as more than two-thirds of the population lives in rural areas. Rural India's obesity rate has doubled in the past decade, increasing from 7 per cent to 15 per cent, while urban areas have a prevalence rate of 30.5 per cent. Although the prevalence rate is higher in urban areas, the occurrence rate decreases. The impact of nearby urban areas on rural surroundings has led to changes in lifestyle, eating patterns and access to manufactured foods, led to changes in lifestyle, eating patterns and access to manufactured foods, contributing to the rising obesity rate in rural areas.

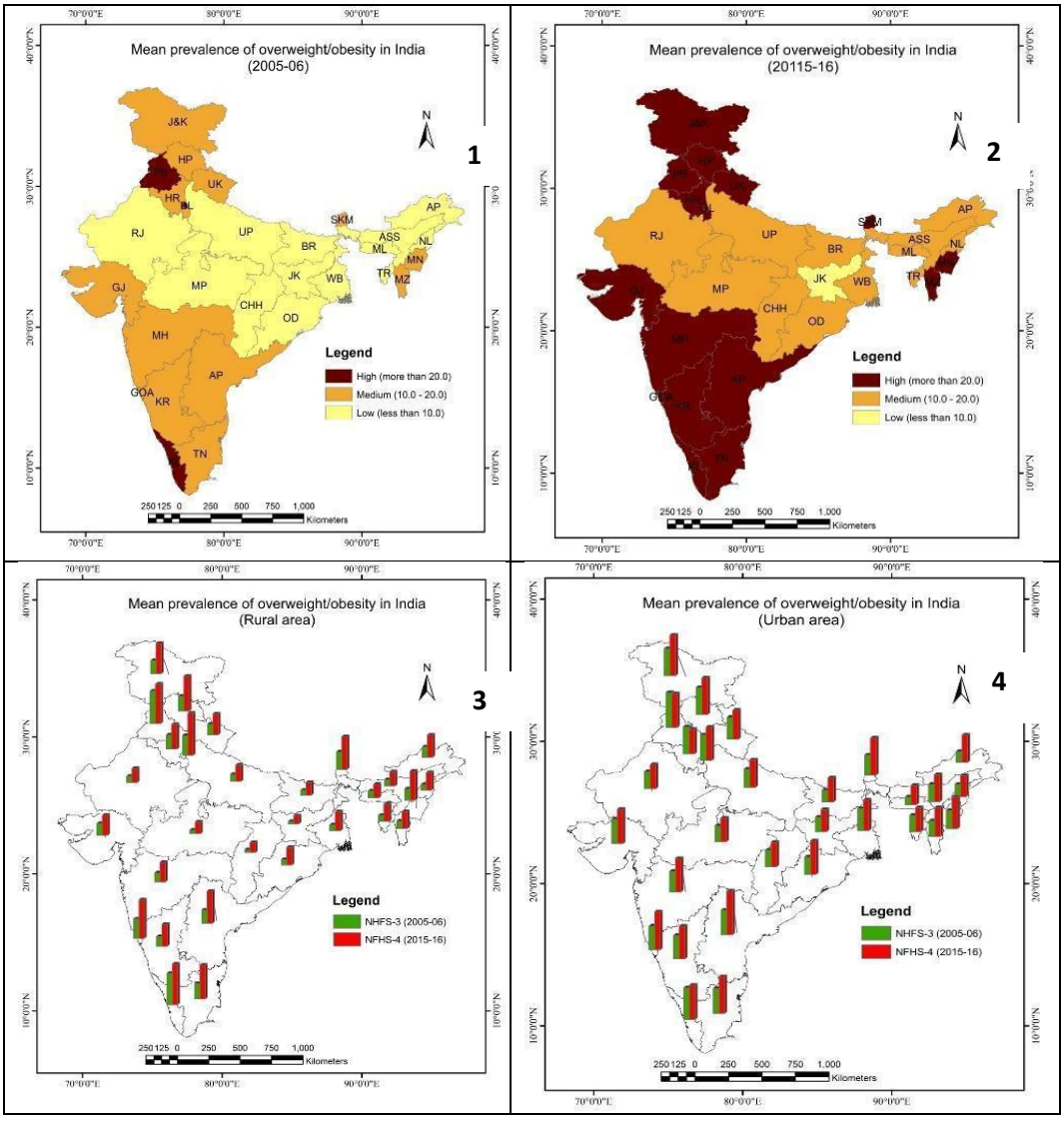
In the last ten years, most Indian states have reported a high prevalence of urban obesity, with Andhra Pradesh having the highest percentage of overweight/obese urban residents in 2015-16 at 41.9 per cent. Punjab and Haryana have shown a drop in overweight/obesity rates from 2005-06 to 2015-16, while Odisha recorded a doubling of the mean prevalence of overweight/ obesity.

Determinants of Overweight/ Obesity Transitions in India

The analysis was conducted separately for rural men and women and urban males and females in both the NFHS-3 and NFHS-4 rounds, with the results presented in Appendix 1 and 2. The study's model suggests that in younger adult ages, men had a higher probability of being overweight or obese than women, even after adjusting for age, sex, and other socioeconomic and demographic factors. The study also demonstrates that overweight/

Maps (1, 2, 3, & 4)

State-wise Prevalence of Overweight/Obesity in Different Scenarios



obesity currently affects a higher percentage of women and is still a serious public health concern. Due to the complex and diversified food consumption patterns in the Indian states, the effect of eating habits does not reflect a long-term pattern of overweight/obesity risk in men and women. This might be because NFHS-3 and NFHS-4 data are too limited to analyse several lifestyle aspects thoroughly. The rise in prevalence rates and the favourable wealth gradient that exists across the four subpopulations in both the NFHS rounds are included in the

obesity transition concept. According to our model's findings for urban and rural females, education first positively correlates with the risk of being overweight or obese in 2005-06 and 2015-16. This study also found that the gender gap widened with quintiles between 2005-06 and 2015-16. Across all subgroups, the population in the richest quintile is more likely to be overweight or obese than in the poorest quintile. Compared to the other cohorts in the reference group without schooling, rural males with a number of years of schooling between 13 and 15 indicated an increased likelihood of being overweight or obese. The study found that the probability of overweight and obesity among men under the age of adulthood has been rising quickly.

Compared to the reference age range of 25-29, urban females aged 45-49 reported having higher odds of being overweight or obese (Appendix-1&2). Watching TV daily positively impacts the chance of becoming overweight or obese, and the influence is more pronounced among rural women than urban women. In both rural and urban male cohorts, the likelihood of being overweight or obese is higher among Sikhs than among Hindus in general, followed by Muslims and then Christians (Appendix-1 & 2).

In this socio-religious group of rural female cohorts, Muslim rural females are more likely to be overweight/obese than Hindu-General (Ref category). In contrast, Sikh community urban females are more likely to be overweight/obese than Hindu-general (Ref category). In both the 2005-06 and 2015-16 NFHS cycles, the SC and ST populations had lower odds of being overweight or obese than the Hindu-general population. Additionally, the study indicated that using motorised vehicles and clean cooking fuels increased the likelihood of being overweight or obese in all subpopulations compared to not utilising (Appendix-1 & 2). Males who live in rural areas are more likely than the rest of the subpopulation to be overweight or obese. Gender inequalities were found to be greater among Muslims than among Hindus and other groups.

Finally, it can be claimed that gender variations exist in the risk of being overweight or obese in India. Regarding the male-female subpopulation in rural and urban areas and types of economic activities, the likelihood of overweight/obesity is higher among the subpopulation in white-collar jobs than among the subpopulation engaged in manual work in 2005-06 and 2015-16; the result is also statistically significant (sig. 0.000) (Appendix-1&2).

Conclusion

The global prevalence of overweight and obesity has significantly

increased over the past few decades. Studies show that there are over one billion overweight individuals and nearly half a billion obese adults worldwide. What was once primarily a problem in well-developed nations has become a serious epidemic, even in middle-income countries. Factors such as urbanisation, changes in eating habits, lack of physical activity, demographic changes, and sedentary lifestyles all contribute to the obesity epidemic and other non-communicable diseases.

India is currently undergoing a dietary and epidemiological shift, and this transition is closely linked to the rising obesity rates. The country faces significant income and health disparities, which have led to varying levels of obesity among men and women across different states. The prevalence of overweight and obesity has increased significantly over the past decade, showing differences across population groups, states, genders, and wealth quintiles. While some states have seen decreases in overweight and obesity rates, others, particularly less developed and more populated states, have experienced significant increases, surpassing wealthier states.

This situation indicates an impending health crisis in states with lower Human Development Index (HDI) scores, with individuals from lower socioeconomic backgrounds being disproportionately affected. India's economic transition, sedentary lifestyles, changing eating habits, and globalisation have contributed to the rise in obesity.

As these factors permeate populations with previously lower obesity rates, the prevalence of overweight and obesity is expected to continue rising. However, the regional impact of this obesity shift, particularly in states with lower HDI scores, remains uncertain. Understanding sociocultural influences, gender and education dynamics, and the interplay between individual and state-level economic and human development is crucial for addressing the geographic disparities contributing to the obesogenic environment.

Policymakers face the challenge of identifying regionally specific factors influencing high body mass index (BMI) rates and developing targeted policy solutions while avoiding a broad, macro-level approach. India's health system must adapt to the changing disease patterns and allocate resources to address the increasing costs associated with non-communicable diseases.

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Appendix 1

Multivariate Logistic Regression Analysis of Overweight and Obesity by Selected Background Characteristics, India National Family Health Survey (2005-06)

Parameters	Rural male		Urban male		Rural female		Urban female	
	N=33,159		N=33,594		N=65,502		N=53,131	
	OR	CI (95%)	OR	CI (95%)	OR	CI (95%)	OR	CI (95%)
Poorest quintile (Ref)								
Q_2	1.66**	1.27-2.18	1.36**	1.17-1.59	1.18*	1.02-1.35	1.39**	1.26-1.54
Q_3	2.16**	1.67-2.79	1.87**	1.60-2.18	1.40**	1.22-1.60	1.88**	1.69-2.08
Q_4	2.59**	2.02-3.33	2.48**	2.10-2.94	1.58**	1.39-1.80	2.47**	2.21-2.76
Richest quintile	3.26**	2.51-4.23	3.26**	2.72-3.90	1.96**	1.71-2.24	3.31**	2.94-3.73
No education (Ref)								
1-5 Years	1.24*	1.03-1.49	1.11	0.94-1.31	1.33**	1.21-1.45	1.18**	1.08-1.28
6-8 Years	1.21*	1.00-1.46	1.34**	1.15-1.57	1.59**	1.44-1.75	1.33**	1.23-1.44
9-10 Years	1.49**	1.24-1.78	1.39**	1.19-1.61	1.55**	1.40-1.71	1.32**	1.22-1.43
11-12 years	1.55**	1.26-1.91	1.31*	1.12-1.55	1.52**	1.33-1.74	1.28**	1.17-1.41
13-15 Years	1.71**	1.37-2.12	1.41**	1.20-1.66	1.41**	1.20-1.65	1.15*	1.04-1.26
>=16 years	1.31*	0.98-1.75	1.49**	1.24-1.78	1.50**	1.17-1.91	1.20*	1.06-1.34
Age groups 25-29 (Ref)								
15-19	0.15**	0.11-0.21	0.25**	0.21-0.30	0.19**	0.16-0.22	0.21**	0.19-0.23
20-24	0.47**	0.38-0.58	0.51**	0.45-0.30	0.49**	0.43-0.55	0.45**	0.41-0.49
30-34	1.62**	1.37-1.93	1.52**	1.36-1.70	1.70**	1.53-1.88	1.68**	1.56-1.81
35-39	2.16**	1.82-2.55	2.17**	1.94-2.42	2.56**	2.31-2.84	2.39**	2.22-2.58
40-44	2.19**	1.84-2.61	2.21**	1.97-2.47	2.98**	2.68-3.31	3.07**	2.83-3.32
45-49	2.61**	2.18-3.12	2.47**	2.20-2.78	3.49**	3.12-3.91	3.15**	2.89-3.43
50-54	2.43**	2.00-2.96	2.20**	1.93-2.51	NA	NA	NA	NA
Not watching TV (Ref)								
Less than once a week	1.16	0.96-1.40	0.89	0.72-1.10	1.50**	1.34-1.68	1.14*	1.00-1.30
At least once a week	1.29*	1.07-1.57	1.00	0.83-1.22	1.78**	1.60-1.98	1.29**	1.15-1.45
Almost everyday	1.79**	1.51-2.13	1.22	1.02-1.46	2.20**	2.01-2.40	1.49**	1.35-1.65
No tobacco use (Ref)								
Uses tobacco	0.79**	0.71-0.89	0.73**	0.67-0.80	0.63**	0.55-0.72	0.76**	0.68-0.85
No alcohol (Ref)								
Alcohol	1.09	0.98-1.20	1.05	0.98-1.12	0.97	0.80-1.17	0.95	0.78-1.15
Hindu-general (Ref)								
Hindu caste	0.86**	0.77-0.96	0.85**	0.79-0.92	0.87**	0.81-0.94	0.86**	0.81-0.90
Muslim	1.05	0.85-1.30	1.16*	1.04-1.28	1.67**	1.51-1.86	1.35**	1.26-1.45
Christian-ST	0.68**	0.55-0.84	0.52**	0.44-0.63	0.63**	0.54-0.73	0.42**	0.37-0.48
Christian-general	1.51**	1.14-1.99	1.10	0.93-1.31	1.56**	1.33-1.82	1.15*	1.02-1.30
Sikh	3.09**	2.43-3.92	1.97**	1.52-2.55	3.13**	2.75-3.56	1.85**	1.57-2.18
Others	1.14	0.83-1.56	0.87	0.73-1.04	1.09	0.90-1.32	0.77**	0.67-0.87
Not using a motorised vehicle (Ref)								
Using motorised vehicle	1.89	1.69-2.12	1.35**	1.25-1.46	1.21**	1.12-1.31	1.04	0.98-1.10
Not using clean fuel (Ref)								
Clean cooking fuel	1.78	1.58-2.01	1.21**	1.09-1.33	1.58**	1.46-1.71	1.30**	1.22-1.39
Manual work (Ref)								
Not in workforce	0.97	0.75-1.25	0.88*	0.76-1.01	1.59**	1.48-1.71	1.41**	1.30-1.52
White collar	1.36**	1.22-1.53	1.21**	1.13-1.31	1.62**	1.44-1.82	1.24**	1.13-1.36
_cons	0.01**	0.01-0.01	0.04**	0.03-0.05	0.01**	0.01-0.02	0.05**	0.04-0.05

Note: Asterisks denote the level of statistical significance: ** P < 0.001; * P < 0.05.
OR denotes Odd Ratio, and CI denotes confidence interval.

Appendix 2

Multivariate Logistic Regression Analysis of Overweight and Obesity by Selected Background Characteristics, India National Family Health Survey (2015-16)

Parameters	Rural male		Urban male		Rural female		Urban female	
	N= 74,683		N= 34,017		N= 488,060		N= 199,096	
	OR	CI (95%)	OR	CI (95%)	OR	CI (95%)	OR	CI (95%)
Poorest quintile (Ref)								
Q_2	1.07	0.98-1.17	1.14*	1.04-1.26	1.19**	1.15-1.23	1.36**	1.31-1.41
Q_3	1.18**	1.08-1.28	1.43**	1.28-1.58	1.34**	1.30-1.39	1.59**	1.53-1.66
Q_4	1.30**	1.19-1.42	1.44**	1.28-1.61	1.53**	1.47-1.58	1.80**	1.72-1.89
Richest quintile	1.53**	1.39-1.69	1.71**	1.52-1.94	1.86**	1.79-1.93	2.04**	1.94-2.14
No education (Ref)								
1-5 Years	1.30**	1.19-1.42	1.13*	0.99-1.30	1.26**	1.23-1.30	1.24**	1.19-1.29
6-8 Years	1.32**	1.21-1.44	1.23**	1.09-1.40	1.44**	1.40-1.48	1.33**	1.28-1.38
9-10 Years	1.52**	1.40-1.65	1.36**	1.20-1.53	1.57**	1.52-1.61	1.37**	1.31-1.42
11-12 years	1.51**	1.38-1.66	1.34**	1.17-1.52	1.54**	1.49-1.60	1.27**	1.22-1.33
13-15 Years	1.61**	1.45-1.78	1.37**	1.20-1.56	1.42**	1.36-1.48	1.15**	1.10-1.20
>=16 years	1.59**	1.39-1.80	1.29**	1.11-1.49	1.51**	1.42-1.60	1.18**	1.12-1.24
Age groups 25-29(Ref)								
15-19	0.20**	0.17-0.22	0.23**	0.20-0.27	0.18**	0.17-0.19	0.21**	0.20-0.22
20-24	0.52**	0.47-0.57	0.55**	0.49-0.61	0.49**	0.48-0.51	0.48**	0.46-0.50
30-34	1.48**	1.37-1.60	1.46**	1.33-1.61	1.68**	1.64-1.73	1.69**	1.63-1.75
35-39	1.85**	1.70-2.00	1.80**	1.64-1.98	2.17**	2.10-2.23	2.19**	2.12-2.28
40-44	1.95**	1.80-2.12	2.05**	1.86-2.26	2.57**	2.49-2.65	2.72**	2.62-2.82
45-49	2.01**	1.85-2.19	2.07**	1.87-2.28	2.91**	2.82-3.00	3.00**	2.88-3.12
50-54	2.07**	1.89-2.27	2.04**	1.83-2.27	NA	NA	NA	NA
Not watching TV (Ref)								
Less than once a week	1.07	0.97-1.18	0.88	0.74-1.03	1.21**	1.16-1.25	1.06**	0.99-1.13
At least once a week	1.32**	1.22-1.44	0.93	0.81-1.06	1.37**	1.32-1.41	1.14**	1.08-1.21
Almost everyday	1.62**	1.51-1.75	1.02	0.91-1.16	1.73**	1.69-1.77	1.29**	1.24-1.35
No tobacco use (Ref)								
Uses tobacco	0.72**	0.68-0.75	0.71**	0.67-0.76	0.73**	0.71-0.75	0.82**	0.79-0.85
No alcohol (Ref)								
Alcohol	1.15**	1.10-1.21	1.05*	0.99-1.12	0.95*	0.90-1.00	1.01	0.92-1.10
Hindu-general (Ref)								
Hindu caste	0.84**	0.79-0.89	0.85*	0.79-0.91	0.78**	0.76-0.79	0.88**	0.85-0.90
Muslim	1.10*	1.01-1.20	1.00	0.92-1.09	1.43**	1.39-1.48	1.33**	1.29-1.38
Christian-ST	0.86*	0.77-0.96	0.83*	0.72-0.95	0.80**	0.76-0.83	0.67**	0.64-0.71
Christian-general	1.39**	1.17-1.65	1.09	0.90-1.31	1.33**	1.23-1.42	1.28**	1.18-1.39
Sikh	1.65**	1.46-1.88	1.23	1.03-1.47	1.58**	1.51-1.66	1.06	0.98-1.14
Other religion	1.31**	1.16-1.48	1.14	0.96-1.35	1.09*	1.03-1.15	0.91*	0.85-0.98
Not using a motorised vehicle (Ref)								
Using motorised vehicle	1.38**	1.31-1.45	1.34**	1.25-1.43	1.14**	1.12-1.16	1.04*	1.02-1.07
Not using clean fuel (Ref)								
Clean cooking fuel	1.55**	1.47-1.63	1.48**	1.36-1.61	1.56**	1.53-1.60	1.32**	1.28-1.36
Manual work (Ref)								
Not in workforce	1.08*	1.00-1.16	1.02	0.94-1.11	1.13**	1.09-1.18	1.13**	1.06-1.20
White collar	1.24**	1.16-1.32	1.10*	1.03-1.17	1.23**	1.11-1.36	1.10*	0.99-1.22
_cons	0.05**	0.05-0.06	0.13**	0.11-0.15	0.04**	0.04-0.05	0.10*	0.09-0.11

Note: Asterisks denote the level of statistical significance: ** P < 0.001; * P < 0.05 OR denotes Odd Ratio, and CI denotes confidence interval

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Developing Suburbs as Independent Alternatives–A Study on Sathanuru, Kanakapura Taluk, Bengaluru, India

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Abstract

Any settlement in the vicinity of any city, be it a Capital or Metropolis, always tends to accommodate a sizeable population of the latter. Any research, specifically the social ones, always witnesses a hiatus between the city planners on the one hand and end users or the common people on the other hand, generally giving rise to a dilemma that is not so easy to unfold. Often, terms like gentrification and the surfacing of issues like 'gated communities' further complicate the process. As the urban communities move to the countryside for better accommodation, big and spacious ones, and a clean environment, the growth and development of the region will be pulled up, triggering businesses, trade, and transport potentialities. However, such benefits may lead to forced migration of the poorer residents towards further distances due to rapid displacement as opposed to nominal compensations. This paper aims to highlight such issues, where gentrification leads to the displacement of the local people, with Sathanuru situated in Kanakapura taluk in the south-western periphery of Bengaluru city as a case study.

***Keywords*:** gated communities, metropolis, gentrification, suburbs, land use

Introduction

A hinterland, often termed Umland or tributary region (either rural or urban or both), is closely associated with a nearby town or a primate city. Chisolm G.G., for the first time, used the term Hinterland as the Hinder-Land to define the back-country of a port or coastal settlement. Chisholm continued to use hinder-land in subsequent editions of his *Handbook,* but hinterland became popular. By the early 20th Century, a port's backcountry or tributary region was usually called its hinterland. Later, hinterlands were considered important 'areas' of extension for

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important urban activities. This was true for Asian Cities and, typically, Indian cities. One such example is Bengaluru city, situated in peninsular India, which happens to be the software capital of India, and it 'eases' the pressure of urban activities into its fringe areas.

Sathanuru is one such 'alternative' for the city, which is located in the fringe area and will be a major (planned) urban area. Gentrification is defined as the process of a city neighbourhood being transformed in an urban land from 'low' value to 'high' value. It is solely a process of urban development where rural land use is steadily transformed into urban character with the actual residents being 'marginalised' and new residents dominating as gated communities, as an obvious urban-renewal program. This has been followed by inflated home prices and displacement of the previous residents. This leads to quite an alteration of the overall demographic conditions of the 'new' residents over the 'old', adding to further disparities in income levels, race, and caste.

Additionally, the size of households steadily declines as the low-income families with bigger sizes are often replaced by younger 'rich' independent couples desiring to be closer to their job locations and regular activities near the urban core. What emerges noticeably is the emergence of already mentioned gated communities where the newer countryside residents prefer apartment living within defined boundaries of securities and movements. Offices, retail stores, restaurants, and other leisure facilities steadily grow in the countryside, replacing rural land use. Finally, because of these changes, gentrification significantly affects an area's culture and character, making gentrification a controversial process. Re-orienting the growth of Bengaluru, the State government recently focused on developing the City's western and southern suburbs. Such activities resulted in the natural and obvious outcome of gentrification taking place silently in these areas.

Historical Background

The historians once remarked that the Indian part of the peninsula is vast and the empires and historical materials are 'many'. The *Deccan peninsula* witnessed a series of invasions and reigns of notable kings like the Chalukyas, Kalyanis, the Rashtrakutas and the Cholas, followed by the British at the conclusion. The land to the south of the *Vindhya* is curved out by the rugged terrain shelters Sathanuru, which once was a small settlement designated as the rural countryside of Karnataka. However, the Vindhyas that physiographically divide the Northern plains of India to the southern plateau of Deccan had witnessed no such period when these two physical units did not influence each other politically, culturally and, of course, socially. Ancient India saw the rise and fall of many kings and their dynasties in this plateau region, located halfway on the maritime

routes from the Mediterranean Sea via Africa to China, providing a brisk maritime trade with the nations on either side. With time, many kingdoms flourished not only in the northern plain but also in the southern peninsula region. This led to quite a varied culture to develop in the area. Only a few years back, a handweaving industrial unit was set up in Sathanuru hobli, situated in Kanakapura taluk of the southern state of India, solely to train the backward women in these areas. Such initiatives boasted the people of the region, and soon, the government took every opportunity to develop the place as one of many alternatives for decentralising the urban activities of Bengaluru and developing it as one of the leading centres in the hand-weaving industry. This would give general impetus to the backward region of Kanakapura for urbanisation, which would be sustainable and impactful for the weaker sections of the residing communities.

As a landscape phenomenon, the fringe areas generally vary geographically and temporally. A fringe area is continuous and hardly unrecognisable around several cities in regions like the Netherlands. However, intermingling and scattered components of land use are often abrupt and irregular in countries like the USA and France. London, however, shows a different picture with patches of green belts that are strongly trying to maintain the basic components of rural land use over urban activities (Pryor, 1968).

Literature Review

Regarding space and social space, it is always necessary to ensure well-being in living activities, including physical wellness, social wellness and neighbourhood support. The seventeen sustainable goals (numbered 11) target sustainable cities and communities. With growing urbanisation, cities globally face the challenges of accommodating the residents and growing demand for infrastructure. Asian countries, in particular, are going through immense self-contradicting methods of decentralisation and in-situ renewal processes, and they are hardly aware of the right solution. The cities globally are probably the chief areas of concern, which have to be kept ‘running’ for the sake of the economy and need to be

‘checked’ to expand further for the ‘good’ of our crop-producing communities worldwide. The most disturbing effect of land transformation is a matter of displacement, where the landowners are insufficiently compensated, and resettlement drives often fail due to the unwillingness of the landowners to completely new regions and separate social neighbourhoods (Danielle L., 2015). Such consequences bring chaos and people's non-reluctance to cooperate. A large amount of literature explicitly investigates how the urban- region is governed, but how much less attention was made to the queries of the activities in the suburbs, specifically the cross-lapping of public and private processes, the

actors, and institutions that determine the shape of planning, design, politics, economies of suburbs specially and everyday behaviours of the people (Ekers et al., 2012). The fact remains that cities rise and fall, but what is concerning is the fate of urban components likely to be controlled by capitalism and colonial influences (Roy & Aihwa, 2011). Contextually, there may be advanced ideologies to frame and operate the components of social and physical planning to understand better the dilemma of growing urban areas and receding rural boundaries achieving none (Scott, 2013). Indeed, the suburb's definition is contested (Wissink,1962). These suburbs are often considered residential *frills* around the administrative divisions of urban areas. However, the suburbs also frequently lose their administrative divisions (via arrangement and rearrangement) to accommodate city growth geographically (Whitehand & Carr., 2001). The suburb has been considered the focus of much physical change during the twentieth century -firstly, in developing new forms of extensive low-density urban landscapes. Also, changes have been either at the small scale of personalisation or the intermediate scale of housebuilding in the back garden' (Whitehand & Larkham,1991). In developed countries like the UK, the suburban landscape has been quite a subject of exclusive protection and management through thorough legal restrictions on plots, building forms, styles of architecture and land use patterns.

Study Area

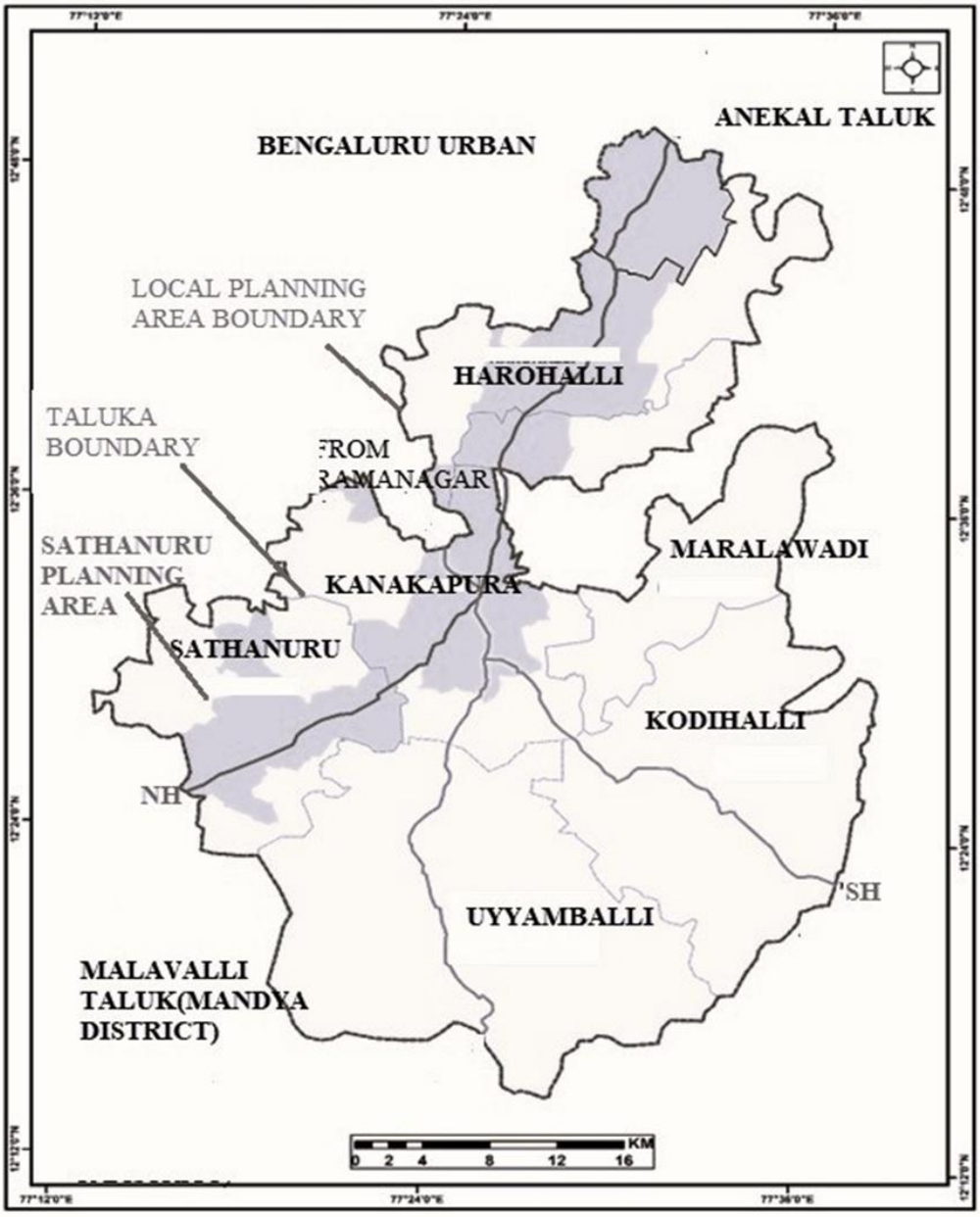
Sathanuru is an important part of Kanakapura Taluk of Ramanagara district of Karnataka state, located in the neighbourhood of Bengaluru. Kanakapura itself is quite noted for the production of silk rather than sericulture and rich granite deposits. Besides, the region produces silk, power looms, brick production, pottery industries and other agro-based industries. This proves that the taluk is quite dependent on agriculture as a major occupation, and apart from that, it has been reported that nearly forty villages practice bee-keeping where more than one hundred and fifty households are engaged in beekeeping activities, who maintain nearly three hundred bee colonies. Such activities are also encouraged by the state government. Agriculture is the main source of income for people. Kanakapura taluk or block covers an area of around one thousand and six hundred square kilometres consisting of six sub-regions or Hoblies (Fig.2), namely;

a) Kasaba Kanakapura
b) Harohalli
c) Maralawadi
d) Kodihalli
e) Sathanuru
f) Uyyamballi

The hobli named Sathanuru is often termed as a sleepy village as it is located in the rain-shadow area of Western Ghats of peninsular India with low rainfall and not so heavily populated region. The region

typically is a less developed part of Karnataka, though lately, the planning authorities had planned for its 'makeover' under the scheme of the local planning area of Kanakapura and ten small villages and their adjoining areas under forest were selected for exclusive development with modern urban-inclined infrastructure facilities.

Figure 1
Kanakapura Hobli and its Six Hoblies



Source: Report: Kanakapura LPA (2019)

Sathanuru and the Scope of Development

As discussed earlier, Sathanuru has been considered quite an example of sustained urban land use, which would offer immense opportunities to generate job opportunities via silk industrial activities for the local people and establish newer infrastructure for those settling here. The place has been known for its potential in construction industries (for building materials like steel and cement and service activities). Now, this would solve two problems at once: firstly, moving away from the backward pockets of Kanakapura taluk may be lowered owing to the newer opportunities in their regions, and secondly, the region would also cater to the housing needs of the population shifting from Bengaluru to these places of the countryside. At the initial stages of planning, the region was considered to be developed as a new independent Township Area where modern amenities typically needed for urbanisation may be provided to attract investment and, of course, a population that may pull up the growth of the area and ease out the excessive population pressure of Bengaluru, being the software capital of India. However, due to certain issues and protests raised by the local people, the policy of making the Township project a reality was shelved. This was initially a setback, but later, in 2019, a Local Planning Area plan was formulated to cater to the need for overall development at a regional level. This is important as the township project, if realised, could trigger more imbalance and the least development at the socio-economic level.

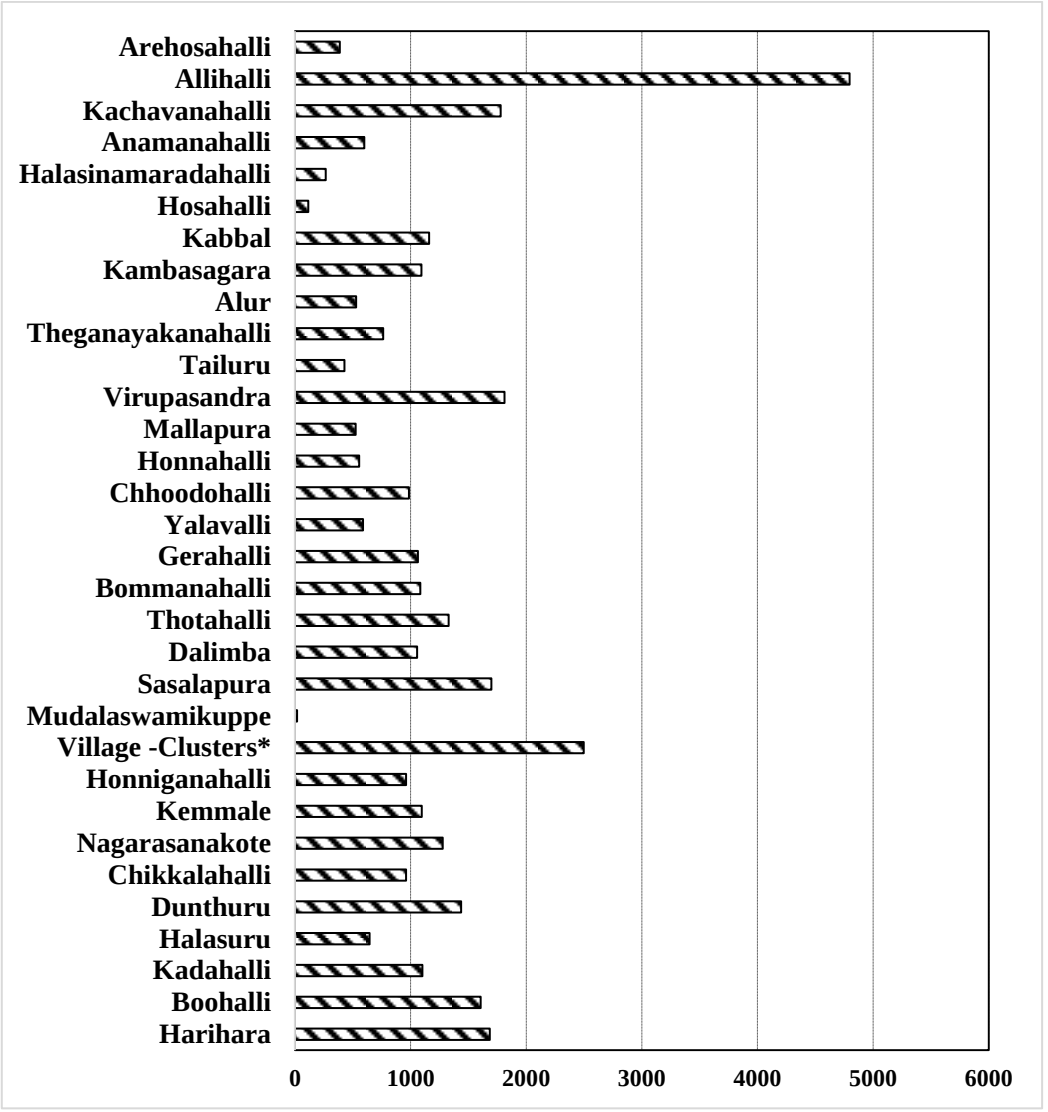
Demography and Others...

Sathanuru Hobli within Kanakapura Taluk encompasses nearly forty villages that will be brought under the Local Planning Area project with special emphasis on the Sathanuru hobli. The hobli is situated in the southwestern part of Kanakapura Taluk and has its maximum population concentrated in the Allihalli village and least Mudalaswamikuppe village. The next village in order (in the concentration of population) is the village clusters composed of six villages (Deshohalli, Somanathapura, Naripura, Achalu and Yadagondanahalli and Naripura) with little or no population (Fig.2). Such cluster would provide greater scope for urban expansion and thoughtful provision of housing for the people who have settled here off Bengaluru. However, the village with a moderate to high population (skilled and unskilled labourers) would face the ultimate dilemma of identifying their 'places' in the social and geographical space. There is a possibility of a widening gap between the economic level of the rich outsiders and the poor insiders. Indeed, there are two forested areas, named Kabbalu and Tailuru, rich in natural resources like timber, which would be delimited aerially and would pose a challenge to the existence of people who rely upon timber collection, and related industries would be at stake. The average size of families residing originally in the Sathanuru villages was as large as five to six members, which would be readily and slowly displaced and occupied by the new urban population groups with white-collar jobs. Also, as far as the family size is concerned, the villages include

a large number of family members, say, a size of at least 5-6 members. However, when they get displaced, what would establish small and nucleated families with few household members impact the demography quite distinctly?

Figure 2

Distribution of Villages in Sathanuru Hobli, Basis Population 2011 Census



*Includes Deshohalli, Somanathapura, Naripura, Achalu and Yadagondanahalli and Naripura

Source: Sathanuru Local Planning Area: Kanakapura Taluk, 2021: Census of India, 2011

Suggestions

Geographers view the process of gentrification seriously, and thus, a Local Planning Area has been planned to improve and develop the condition of Kanakapura taluk and exclusively Sathanuru with the sole aim of taming the opportunities of the Hobli in particular and the adjoining areas in the bigger perspective. Such a way would pave the way for the realisation of the major target of developing the suburbs of Bengaluru City as an alternative to reducing its population pressure and, more importantly, sustainably. Urban planners and many others argued that the suburbs are thus planned to improve and attract new residents. Kanakapura taluk has rich sources of minerals, specifically granite quarrying. However, this may also threaten these regions' environment and growing urban population. Such measures included;

- Rainwater (that accumulates in the quarrying region) may be stored and drained with guided cleaning processes in between to water the agricultural fields in the neighbourhood
- The planners who are more concerned with the environmental perspectives have already suggested garland draining of the rainwater towards dry fields for better groundwater recharge
- In fact, the region brought under the plans of developing it suitable for urbanisation and in-situ upgradation has also been taken into consideration for developing a green belt that not only would add to the aesthetic value of the region but also keep the promise of seeking environmental balance.
- However, there are issues as far as the underlain rock bed is concerned for rigorous plantations, but the planners argue for major afforestation measures wherever possible as the forested regions of Sathanuru are somehow affected by the previous attempts of unthoughtful urbanisation
- The drive towards sustainable urbanisation would also take into account the reduction of noise pollution and emission of pollutants or the combination of any degradation process in order to make Sathanuru an example of sustainable urban land use with mixed urban components, green pastures sheltering quite a great species of singing (or chirping) birds

Past literature reveals that there has always been quite a bone of contention between the very existence of suburbs and old small towns (or medium-sized) as an ideological urban residential alternative. Both concepts have been mentioned repetitively in various contexts, and thus, country-sides have admirers and strong critics (Alizadeh, 2012). To some, these are distinctive features of the contemporary urban landscape with an immense scope of change

(modifications) through human interventions. Contrary to this, some experts believe that suburbs attract chaos that includes all kinds of worst features of rural and urban living. Thus, any kind of planning around Bengaluru city should be sustainable and balanced as far as urban planning is concerned. If the urban boundaries of Bengaluru Metropolitan Region revise and rearrange itself with the expanding zone of its influence, it should not bring the cries of the rural people who were originally settling in the countryside with much ownership feels. It is useless if the planning becomes lop-sided towards the rich and completely denies the existence of the farmers. The resettlement or compensational drive for their 'damage' should not be the necessary outcome. Rather, in-situ arrangements for the landowners should be the top priority for the government.

Conclusion

Particularly in Asian countries, gentrification is most likely to occur if urbanisation occurs. Recent researches, however, talk about striking a harmony and a balance, to be precise, where the change of land use (from rural to urban) is more gradual than abrupt to provide a scope for adjustment. Such a statement may be further clarified by reducing growing disparities between the rich who opt for the countryside and the poor who originally belonged there. There is perhaps no means of forming a reliable and quantifiable data table for the 'loss' that the indigenous farmers are incurring with the change of land use owing much to the impact of land-pooling policies by the government). However, the visible (negative) impact may be reduced by promoting employment (alternative) opportunities, education, training, and skill enhancement programmes to cater to the needs of the residents of Sathanuru. This way, there

may be quite a scope to improve the condition of such disparities. In India, it is indeed true that quite a majority of the population lived in villages, and agriculture was their major occupation. Thus, great prestige has been attached to such land ownership (even for a small parcel of land) that they could call their own. Moreover, this cannot be overlooked.

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Population Explosion and its Unconventional Security Fallout: A Case Study of India

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Abstract

The demographic composition of a country plays a crucial role in shaping its trajectory, particularly evident in the case of India, the world's most populous country. Diversity brings many challenges, presenting opportunities and threats to its development, intensifying as the population grows. While some argue that population growth may not necessarily hinder prosperity, effective resource management and governance are imperative to address the complex challenges. This study delves into various dimensions to assess the country's strengths, weaknesses, opportunities, and threats, shedding light on governance dynamics and their impact on the nation's trajectory. Drawing upon environmental, humanitarian, and security concerns, this study explores the complex relationship between population trends and resource availability in the country. It examines how governance structures influence population trends and vice versa, highlighting the interconnectedness between demographic factors and governance outcomes. Through a nuanced analysis of non-traditional security issues, the article emphasises the need to manage population growth, offering insights into navigating the socio-political landscape of India.

***Keywords*:** unconventional security, population explosion, human security, good governance sustainability

Introduction

Conventional and non-conventional threats can both undermine a nation's security. It is crucial to identify these threats as they significantly impact a country's domestic and foreign policies and reflect the strengths and weaknesses of the nation. Conventional threats typically involve military actions that directly challenge a country's security

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and sovereignty. On the other hand, non-conventional security issues encompass a wide range of concerns, including climate change, health issues, terrorism, human rights violations, and food shortages, all of which affects the well-being of citizens. Resolving non-traditional and traditional security issues is essential for achieving positive peace, as Galthung's peace construct suggested. Non-conventional security issues can disrupt a country's peace and may lead to traditional security issues if left unaddressed. International non-conventional security issues such as terrorism, drug trafficking, and other transnational crimes require global collaboration for effective solutions. In contrast, domestic non-traditional issues are the responsibility of national policymakers.

The demographics of a nation are an indicator of several factors. Amongst the non-traditional security issues, most of the threats are directly or indirectly associated with the growth and fall of the population. The connection between the factors is explored in a subsection below. These factors contribute to the stability, uniform standard of living and the overall peace of the country. Unprecedented excess population growth can thoroughly disrupt a state's governance. A country's size and diversity are also catalytic in a state's constitution. Studies on why small states or countries with comparatively homogeneous populations have higher happiness indexes and lower hate crimes and human rights violations are thus relevant. Population presents the governance with a resource that can be navigated to their advantage or that can be the vehicle that derails them. Of the non-traditional security issues that the country is facing, be it terrorism, food security, energy crisis or ethnic violence, the demographics comes as a factor that intensifies it. As the first to implement a family planning initiative and the country with the most diaspora globally, India has been a people-centric nation, inclusive of many facets in the social and cultural sphere. The country is presented with such an opportunity to forge a future that elevates the country's prosperity.

India is the most populous country in the world as of 2023. The exponential growth of the human population has transcended conventional boundaries of security, reshaped geopolitical landscapes and necessitated a nuanced understanding of its multifaceted impacts. From environmental degradation to socio-economic disparities, population explosion poses significant challenges across diverse security dimensions. The strain on natural resources, infrastructure, and social services exacerbates vulnerabilities, heightening risks of conflict, instability, and societal unrest.

Within the context of India, a country experiencing rapid population growth, the government and civil society are actively addressing the multifaceted implications of this phenomenon.

Initiatives focusing on family planning, education, healthcare, and socio-economic development underscore efforts to mitigate the security fallout. However, the unprecedented scale and pace of population growth highlight the urgency of concerted action to address its unconventional dimensions and avert potential security threats. To navigate the complexities of population explosion and its security implications, adopting holistic approaches and innovative strategies to safeguard global stability and sustainable development is imperative.

History of Population in India

In 1997, *The Population Bomb* by Paul Ehrlich took the liberty of compressing India into a few deprived images: "crowded slum area", streets "alive with people", and "people, people, people, people," which were to remain thrust in the Western mind (Ehrlich, 1997, p.1). The Indian example was used to instil fear in the minds of the Americans about the repercussions of overpopulation, which can lead to the fall of civilisation. Decades later, while Ehrlich's presumed reality was not as much of a loud explosion as he anticipated it to be, his intention had done its job of viewing the population issue in association with an apocalypse and familiarising the hesitating world of the need for the hour: adhering to control measures. Ehrlich's work had carried enough bass and popularised the population factor as a security issue.

Historically, India had its fair share of population fluctuations, influenced by multiple famines and epidemics, including the Bengal famine in the years 1769–1770, upon which the Company levied high taxes and tariffs that resulted in the deaths of almost 10 million people, pushing the surviving into absolute poverty (Mallik, 2022). In the years following, from 1770 to 1990, 25 million Indians perished due to recurring famines, as opposed to the mere 5 million resulting from wars from all over the world (Tharoor, 2018). Many factors, such as better living conditions, satisfying health facilities, decent earnings, and biological immunisation, contributed to a dive in the mortality rates during the early to mid-twentieth century, from about 1920 to 1945, paving the way for the real shoot-up after independence. The partition would see the nuances of population statistics change in nature and its later years, owing to communal riots and agitations and a series of socially instigated decline factors such as sex-specific abortions, political instability, inadequate family planning, continued contraceptive measures, and more, the growth would still stagnate. The first official family planning program was introduced in 1952, based on the results of the 1951 Census. Despite the efforts, the population would still grow from 360 million to 440 million in the next Census of 1961 (Gaur, 2022). Female and male sterilisation were introduced, along with the establishment of a separate Family Planning Department in 1965. The

Fifth Five-Year Plan was established by launching the National Population Policy in 1976 and raising the marriage age, as mentioned in the Sharda Act 1929. In 1977, India would have 620 million people trodding its land, a dramatic increase of over 10% during the decade (Bird, 1977). As a means of positive reinforcement, Prime Minister Indira Gandhi and her son, Sanjay Gandhi, would sterilise over 8 million men and women in just a year in exchange for necessities and attractive rewards, dragging the refusers to clinics without mercy (Gupte, 2017). In the 1991 Census, the population had climbed to 843 million, and many discussions would continue for a decade, none of which would bear fruit until a new population policy was implemented in 2000 (Chaudhry, 1992).

Prime Minister Narendra Modi mentioned the "population explosion" as a recognised issue the country faced in 2019 and appreciated nuclear families. The term " population momentum " describes India's population growth," which denotes that the population continues to grow despite the fertility rate falling. This phenomenon allows the population to multiply for centuries despite the low fertility since even "if fertility rates were reduced immediately to the level of replacement (that is, one daughter per woman), the population of the country would not stabilise until the year 2050" (Sinha, n.d.). India's trend is expected to continue for decades, even while the growth rate decelerates. The distribution of fertility rate is disproportionate nationwide, further elaborating the development disparities among states. India's population growth is opposed to China's falling population due to their preventive measures, which ensured India overtook the most populous country at some point in 2023. Goli and Jain (2020) argue that 1.65 billion additional births resulted from non-adherence to family planning methods from 1990-2016. They also point out that sustained implementation of family planning initiatives can avert around 1.9 billion births, assuming the Total Fertility Rate (TFR) remains stable at 1.8 births per woman until 2061 (Goli & Jain, 2020). The reason for such an explosion can be multifaceted, not in any specific order:

1. As a side effect of development, death rates can be significantly reduced, and life expectancy can increase, leading to a minor fall in birth rates, but only in the long run. The gap between birth and death ages is projected to be a huge portion of the population. India's development phase after the famines justifies this. Development referred to educational facilities, spreading awareness, effective vaccines in the health care sector, and advanced living standards with clean sanitation and nutritious food.
2. Urbanisation and industrialisation and resultant migration into cities did not disrupt fertility rates in Indian families, albeit the births

were slightly less in urban areas. (Sinha, n.d.)

3. The average family structure constitution changed, hence the number of children in the family and the total fertility rate.
4. Child marriages were common in India, ever so prevalent after the Child Marriage Prohibition Act, with women bearing children as young as 15 to 19 years of age, as per customs.
5. ignorance and lack of availability of contraceptive methods were prevalent in society, leading to additional pregnancies. This can be read with conservatism, religious and moral, where not only abortion is considered a sin, but procreation is encouraged.
6. Literacy is another factor. The most populous states, like Uttar Pradesh and Bihar, have fewer literate people, as opposed to states like Kerala, where the population is lower and literacy is high. A lack of literate and career-oriented women in the 20th century boosted population growth.
7. The earlier trend of having more members in an agriculture-based family and engaging in farming-related activities until the rise of the middle class can be associated with the steady growth in population in the late 1900s. The subsidisation has interestingly catered to their desires to have more children than to uproot from poverty, hence pushing them into a perpetual state of "populous poverty."
8. Traditionally, Indian families viewed children as assets and income-generating human capital for the future. More offspring meant they had additional access to acquiring money, pulling them out of poverty, and securing wealth for future generations.

The second decade of the century began by facing the COVID-19 pandemic. Due to the pandemic, deaths reached a rate of 1 death per 2574 inhabitants (New York Times, 2023). The birth rate followed the falling trend since 2011, remaining comparatively unchanged in the last four years with 16.42 live births per 1000 citizens, yet being the lowest value, it ever touched (O'Neill, 2023). Similarly, the fertility rate remained mildly static from the previous year at 2.03 children per woman and at its lowest (O'Neill, 2023a). This low reflects not on its population growth but on its age structure. Its inherent childbearing characteristics, and hence its population momentum, largely depend on the population of women in their reproductive years (Blue & Espenshade, 2011). In the case of India, the replacement fertility level, referring to each generation passing down the same number of children born to their previous generation, has fallen in urban areas to 1.6 children per woman owing to education, especially among women, and the eradication of poverty levels (Arora, 2021). Economic advancements, stability in the unemployment rate, and overall

better living conditions have contributed to life expectancy declining to 67.5 years for men and 69.5 years for women. However, it is the lowest since 2014, stressing that giving due attention to income and graded inequalities and their implications on sustaining life cannot be compromised anymore (Iyer, 2021).

According to UN DESA, India is now the most populous country in the world with a population of 1.42 billion, overtaking China, and that too with a growing trend, unlike that of China's population, which shall plummet owing to their erstwhile population policies (United Nations, 2023).

The Dimensions

Below, various facets are analysed to draw the population as a security issue. It is seen through the lenses of environmental, national, and human security, along with good governance practices.

1. Environmental Security

The population growth rate is at 1 per cent annually. The increase indicates that there will be environmental impacts as it puts pressure on resources and their exhaustion. There have been rising concerns over land exploitation, cutting down trees, desertification and urbanisation. According to a study by Nature Journal, there are 35 billion trees in India, which shows that each Indian citizen will have 24 trees to themselves. Reading this, along with complex factors such as the standard of living, clean water, sanitation and air pollution, especially in densely populated cities like Delhi and Mumbai, implies proper resource planning (Prakash, 2022).

The Ehrlich threat was tackled in India in the 1960s with the initiation of the Green Revolution (Frontline, 2022). However, it is to be considered if such a bold advancement is possible without spiralling into the unearthing of several other issues such as soil erosion, overuse of toxic pesticides, related land degradation, and contamination of water bodies. Urbanisation requires that its benefactors possess lower fertility rates and more productivity, yet it takes a severe toll on human rights and environmental factors. Megacities ought to turn into slums and poverty hubs. Sustainability must be thus synonymously addressed with development. The focused development, however, projects an urban-rural divide that further intensifies the income gaps, along with education, occupation opportunities, technological advancements, amenities, etc.

Carbon emissions from personal infrastructure or factories that produce for the masses worsen the quality of natural resources and lead to severe disabilities and other health issues. Climate changes also affect the coastal and maritime domain, threatening ocean health. Overfishing, illegal mining, trawling, and irresponsible coastal tourism hinder maritime growth and pollute the ocean.

However, two factors come as a consolation to the worries: one, that the population of India as such is not a significant contributor to global carbon emissions. Studies show that the top 10% of emitters are accountable for total CO2 emissions, all inhabiting regions other than South Asia, which places India's population boom in a safe space globally (Cozzi et al., 2023). Two, India's globally recognised policies towards a sustainable future. India sets an example by cutting emissions, and India's Cooling Action Plan sets precedence on the international platform. The UNDP released a best practices guide based on the Indian indigenous and traditional sustainable growth techniques titled "India's Journey Towards Sustainable Cooling" in January 2024, proving that India is conscious of its roots of the environmental issues and is taking action to overcome it (United Nations Development Programme [UNDP], 2024).

2. Human Security

According to the UNDP Human Development Report, human security is "freedom from fear and want." It touches upon the security of hunger and diseases and the safety of housing, economy, food, health, environment, community and violence of any kind (UNDP, 1994). The governing body of a democracy is accountable to its citizens for providing these facilities and rights and aiming for the best possible living standard. As the population increases, it becomes difficult to address the needs related to healthcare, education and infrastructure. The pandemic had crowded cities like the capital, wailing due to inadequate hospital infrastructures and medical equipment. According to a Knight Frank India report, India lacks 24 lakh hospital beds to reach the desirable fraction of 3 beds per 1000 people. Although states are improving their literacy rates, which was 77.7% in the 2017-18 survey, hardly 5% growth compared to the 2011 survey results, the OECD 2017 noted that 71% of the adults do not acquire upper secondary education (OECD, 2019). On the economic front, this implies that there are less skilled professionals. The country's lack of quality higher educational opportunities is leading the youth to fly across the globe.

About 40 per cent of the country's population are born between 1997 and 2012 and are of young working age. The OECD report stated that India's tertiary educated youths will constitute over one-fifth of the share of such educated across OECD and G20. This is a huge advantage for the country's economy, as it denotes a growing interest in progress and development, a vision that the country shares. On the other hand, a dearth of job opportunities awaits them as they finish secondary or college education. The recent pandemic sweep witnessed an additional 230 million people fall back into the BPL category (The Wire, 2021). According to the Centre for Monitoring the Indian Economy,

about 7 million people lost their jobs in the second wave (The Wire, 2021a). India's unemployment rate fell from 8.1% in August to 7.1% in September 2023, almost two years after the pandemic. The labour participation rate (LPR) saw a contrast of decline in the rural area as opposed to the urban hike, with an average decrease in the total LPR from 41.9% in August to 40.9% in September (Centre for Monitoring Indian Economy Pvt. Ltd [CMIE], 2023). The character and the unemployment mode make it harder to define it; the dilemma of jobs drops, and the lack of them makes it difficult to see them as permanent or temporary. Employment generation to satisfy the population needs to be a priority for state and central governments, ideally collaborating on schemes and sponsored programs.

Unemployment and food insecurity go hand in hand. Food scarcity and insecurity are non-traditional human security threats with unplanned and unregulated population growth. According to the State of Food Security and Nutrition in the World (SOFI) report, about 40.6% of the Indian population had to face food insecurity ranging up to a chronic level in 2019–21 (Jolly, 2022). Coupled with malnutrition, congested living conditions, acute climate issues, and unequal production and consumption of industrial and agricultural products, a growing population is a concern that could be a direct cause of poverty. In 2022, India stood at a solid 107th rank in the Global Hunger Index out of the 121 countries (Times of India, 2022). In the newest report, India fell several ranks below and bagged the 111th globally. However, the Indian government has dismissed the report, pointing to the fact that the methodology used to derive the data is faulty and the criteria are biased. If so, India has a long way to go in terms of the nourishment status of the country, which stood at 18.7 per cent, according to the Poshan Tracker, a tool employed by the government (The Indian Express, 2023).

India's socio-ethnic composition is diverse and complex. Indian society has been a victim of various political, ethnic and secessionist violations. Sambanis (2001) explains that the prevalence of poverty, state incompetency and bad governance leads to conflicts. India's environment harbours a mixed pot of classes, castes, religions, ethnicities and cultures. According to the National Crimes Records Bureau (n.d.), there was an increase of 1.2 per cent in crimes against the tribal community in 2021 than in 2020. In 2023, the National Commission for Women (NCW) recorded 28,811 cases of violence against women and children, spanning from sexual crime, dowry harassment and rapes (Press Trust of India [PTI], 2024). The ethnic clashes in Manipur between tribes and the Haryana riot between religious communities draw out the length to which differences and diversity are not tolerated in the country. Resulting in fatalities and injuries, these violence also instil

hostility among the citizens. Political violence leads to severe human rights violations and makes society hard to inhibit. However, conflicts tend to be more evident in institutionally weak countries. India's democracy and constitution thus is a cornerstone to curtailing violence and conflicts in the country to some extent.

The population growth affects the country internally as a human rights security issue. India's GDP has witnessed tremendous growth in the past few years, and it is forecasted to grow 7% in the financial year 2024-25 (Ksheerasagar, 2024). India harbours dire wealth inequality and impending overall growth in society. This questions the positive impacts of economic prosperity reaching the citizens fairly. Additionally, the widening gap makes it hard for the marginal groups to advance. It also raises questions about implementing population policies that affect women unequally.

3. National Security

A few years after Ehrlich terrorised the world of Delhi, the city saw a 50% climb in population in a decade (World Population Review, n.d.). The cause of such a count was the result of migration. Both inland and outward migration are to be closely examined; the search for job opportunities primarily causes both. India witnessed about 450 million internal migrations, according to the 2011 Census. Uttar Pradesh and Bihar had the most migrant outgoing, at around 37% of the total migration. Delhi and Mumbai invited the most migrants. Almost one-third of the population of these cities are migrants (Jha & Kawoosa, 2019). In parallel, the outflow of Indians keen to be expatriates holds a huge percentage of youth in its statistics. Foreign income sources are the backbone of any developing country, and remittances to India have the potential to resolve its social security issues. India, therefore, should cautiously tread when it comes to any relations or riffraffs with popular countries that attract the Indian youth, as the foreign government may target the emigrant population at the heights of tensions. The recent Indo-Canadian diplomatic standoff has strained the Indians in Canada, especially the Sikh population and the student community (Sehgal, 2023).

As with the case of refugees, according to the United Nations High Commissioner for Refugees (UNHCR, 2023), as of February 2023, more than 49,000 refugees have sought asylum in India. The data mentioned is only the registered data of asylum-seekers from Myanmar, Sri Lanka, Tibet, and Afghanistan. A moral dilemma is involved in treating refugees: whether to look at them as a responsibility or a burden, as mentioned earlier. The discomfort caused by their presence in the local soil stems from demographic changes and the loss of habitat, jobs, and resources, which creates paranoia. On the other hand, the impact of this on refugees comes in the form of exploitation of their skills, status-based segregation, and

discrimination. Refugees do not have a policy framework to protect them or identify them as legitimate citizens. This clash is fueled by the refugee population's helplessness of finding a job that suits their profile and lack of necessary documentation to prove their merit, which leads them to work for minimum wages, threatening society with unemployment. Implementing the National Register of Citizens (NRC) on a minute scale in Assam until 2014 sparked debates and discussions on the status and rights of refugees nationally (Azad, 2018).

Climate refugees and their displacement within the country and from neighbouring countries spark tensions in the lives of the population. In the "State of India's Environment- 2022" report, from 2020 to 2021, India was the fourth country to witness climate change-induced migration, with no less than three million people compelled to flee their homes. The trend is anticipated to continue, thanks to the climate issues and their impending global impact. It is estimated that India will see 45 million forced migrants from their homes because of climate disasters by 2050 (Krishnan, 2023). The incoming, occupying, rehabilitating, and community-building that the climate refugees would undergo can burden the stakeholders and the welcoming region, not to mention the psychological effect on the population. The unpredictable nature of climate change also reflects on climate refugees, and India needs to adopt policies ahead to take the worst hit it can impose on the country.

National security should be addressed as an umbrella term that constitutes human security. When human security is in disarray, it becomes difficult to maintain national security. National security should be read by shifting the focus from external threats to internal ones. The population concern can proliferate into territorial disputes and interstate conflicts. The interstate and international migration in search of jobs impacts the demographic and economic constitution. In fact, according to ILO, migrants contribute 10% of the GDP (Kaushik & Campbell, 2023). This raises concern over the strain on the native population and the facilities provided to migrants. For holistic national growth, it becomes necessary to heed the population to balance the market and the nation's security.

4. Governance as a Dimension

Understanding the nuances of demographic changes is crucial for good governing practices. To equate the models of governance with development and growth, it is essential that population factors are brought under surveillance and a multifaceted approach is curated. The principles of governance, the most accurate terms in which good governance can be defined, consider a few parameters. These features are paramount to the citizens as part-takers, benefactors, stakeholders, upholders and pioneers of good governance in a democracy. Inclusive

participation of all the citizens becomes difficult as the population rises; numbers note that women's employment rate decreased by 10 per cent from 2004 to 2022, and only 39 million women are working as opposed to 361 million men. (Al Jazeera, 2023) Their political participation still has space for scope, with the passing of the Women Reservation Act 2023, which ensures 1/3rd reservation for women legislators.

Adherence to the rule of law is another parameter that measures good governance. Data shows that as of July 2023, more than 85% of cases are pending in district courts (4.4 crores out of 5 crore cases filed), out of which 50% are state-sponsored cases (TNN, 2023). Besides, the various facets of relations between bureaucracy and people stand at risk of their staggering percentages. Several officials that can be accommodated in the force to handle the huge population make it harder to govern the country. Transparency and responsiveness in the country are also under threat, as the Global Press Freedom Index 2023 (161 out of 180 countries) and Corruption Perceptions Index 2023 (93 out of 280 countries) denote. Bribery, nepotism, power play, and fair governance must be kept in check as the population soars. The lack of accountability of the authorities can also be noted on this front. The criminal backlog of the MPs elected to Lok Sabha and the general ignorance of the criminal records in which political goons are involved elucidates how politics intertwines illicit and violent activities. These factors, along with strategies taken towards attaining equity, effectiveness and efficiency, layout good governance in the country.

Even within the country, the scale of differences at which the states are ranked based on HDI speaks volumes about the living conditions. Smaller and literate states and union territories are recorded high in terms of their score, such as Kerala, Goa, Chandigarh and Delhi, compared to the larger states with low HDI, such as Bihar, Jharkhand, and Uttar Pradesh. However, there is huge progress in the standard of living, with reportedly almost no state categorised under low HDI states. The country needs a consensus-oriented bottom-to-top policy to integrate growth and distribute benefits equally.

While a population soar impedes taking good governance to the last mile, some best practices can guide the system. Recognising that population growth is a dynamic process that cannot be halted but monitored and managed effectively is imperative. The country's economy benefits significantly from ensuring equal opportunities for both men and women financially. Increased involvement of local bodies in conjunction with the central government, an independent and unbiased press, morally ethical government servants, budget transparency, and a more efficient legislative system are essential to

address the challenges of population growth.

As derived earlier, the population can be defined as the dimensions of cause, consequence, and origin. Environment security threats, which are translated as resource depletion, pollution, habitual destruction, climate change, and waste generation, are impacted by population growth. The population factor accelerates these, and significant planning is lacking. Human security issues can also be related to environmental consequences, as a lack of resources can lead to conflict. Indian fishermen entering into the Sri Lankan territories has resulted in severe diplomatic rows and hence leading to a security crisis. Depletion of resources also leads to health issues like malnutrition, water-borne diseases and hunger. It can lead to a humanitarian and human rights crisis, like during the Bengal famine. Human rights issues and climate change issues are inherently in the purview of national security as they touch upon the legitimacy and sovereignty of a country. A mis-governed and weak nation is targeted by the international community and superior powers to meddle in and take advantage of their interests.

Measures Adopted by the Nation

India is expected to reach 1.5 billion by 2030 (Silver et al., 2023). The disparity in Asia, which harbours about 60% of the world's population but only covers 30% of land and generates 57% of the global GDP, is a maths problem that does not favour the Indian economy in the long run, given that it does not apply involve its resources (National Geographic, n. d.; Seong et al., 2023; Worldometer, n.d.). As much as India is regarded as a doomsday place with its population on the rise, it is not as much of a "ticking bomb" as critics make it out to be, given certain mandates formulated.

First comes the identification of areas where effective human resources can be put to good use. India's demographic dividend leans towards a hopeful future. The proportion of the population in their youth below 35 years is 66% of the total population. (International Labour Organisation [ILO], 2012). If the right policies are brought out, giving importance to education, especially among the marginalised, vocational training, and job opportunities, the nation can widen its scope on many fronts; the economy is the foremost. Government-supported schemes such as Ayushman Bharat, Atal Pension Yojna, Deen Dayal Upadhyay -Gramin Kaushalya Yojana (DDU-GKY), etc., have been introduced to the public. The health sector must be heavily invested to maintain its high life expectancy. Self-sufficiency can finally be thought of as an option without the lack of workforce in the days to come, and a country that initiates to take leadership, as in the case of the G20 Presidency and the bid for hosting Olympics 2036, promises to bring the spirits of the

youth up towards an optimistic future (Ghoshal, 2022; CNBC, 2023)

To ensure safe migration, the 2021 NITI Ayog Report has drafted the National Migrant Labour Policy (Katakam, 2021). Other efforts towards this are reported in the One Nation, One Ration Card (ONORC) project, Affordable Rental Housing Complexes (ARHC), the PM Garib Kalyan Yojna scheme, and the e-Shram portal. The Smart City Mission aims to achieve sustainable environmental impact and provide all citizens with a standardised quality of life by promoting city infrastructural development through smart solutions. They promote an inclusive approach focused on urban city welfare and its equitable reach to all its people.

India, according to the study of UN reports and popular critics, is in a dire pickle as it faces a low fertility rate simultaneously, with the Indian elderly population growing at the rate of 41% from 2021-2031 and reaching a number even more than that of children by 2046. (Perumal, 2023). However, some policies and agendas are working towards balancing this widening. Prime amongst them is the country's focus on its youth at present. Prime Minister Narendra Modi has been vocal about the youth's role in the country. Addressing the Kaushal Deekshant Samaroh 2023, Modi underlined the significance of present-day India in the globe and the role of youth in realising it. “Today, the whole world believes that this century is going to be India's century", the Prime Minister said as he praised the youth of India in this regard. Stating that while the elderly population is on the rise in many countries, he added how India is getting younger with each passing day. "India has this huge advantage", he urged that the world is focused on India for its skilled youth (Admin, 2023).

A statement regarding the National Population Policy was released in 2015, in which it estimated that India would overtake the Chinese population in 2022 by 10 million. The report said that the Family Planning Programme could curb the growth from 21.5% in 1991-2001 to 17.7% during 2001-2011, bringing down the Total Fertility Rate (TFR) from 3.2 in 2000 to 2.3 in 2013. Prerna Strategy, Santushti Strategy and National Helpline are mentioned in the Policy as counter-measures undertaken (Ministry of Health and Family Welfare, 2015). The policy had hoped to tame the population before it overtakes China or at least evenly distribute the new demographic.

According to S.D., the National Security Strategy is awaiting its update, covering traditional and nontraditional security issues, including financial, economic, food, and energy insecurity. Pradhan (2023), “The objective of an NSS is to guide all agencies to act in a coordinated manner for the protection of national interests, which include inter-alia its citizens in India or outside, their welfare, territorial integrity, and sovereignty, and ensuring economic growth while

maintaining strategic autonomy in external affairs to pursue an approach that will help in achieving its objectives. It aims to ensure the whole-of-government approach to face future internal and external challenges and a combination of the two." While policy analysts anticipate that prospects and agendas to counter-terrorism and other external threats such as Chinese expansionism, effects of regional conflicts, and extremism would be included in the Strategy, internal non-traditional security issues are not referred to or discussed.

In the Interim Budget, presented in February 2024, the financial minister announced a "high-powered committee to extensively consider the challenges arising from rapid population growth and demographic changes." She elaborated that it would be dealt with in consonance with the Viksit Bharat (or developed India) goals. The speech referred to the postponed Census, unearthing the lack of reliable data on public health, employment, education, and other socio-economic parameters. (Chandramouli, 2024)

Conclusion

India has taken the leash into its own hands to be a *Viswaguru*. A country as old and as new has an example to set forth if it has to proclaim itself to be a "world teacher". For the population to not be counter-current, India's policymakers have to act with immediate effect. Population growth should collaborate with economic and environmental development. There is no other alternative where India will overcome the burgeoning population without collateral damage.

India has many models to adhere to, such as the SDGs, that give value to human and environmental security. The country also has parameters parallel to the global principles mentioned in the work. India is certainly moving forward on its terms, as it has since the time of the bipolar world. Presently, the countries in the Global North face a multitude of demographic predicaments, spanning from low birth rates to growing median age and, hence, decreasing working capital. In these matters, India has an advantage, as specified in the sections above, with the right demographic apparatus favouring its economic growth and development.

The number of citizens, especially the youth, leaving the country can work as a push and pull factor regarding its effect on India. The UN DESA in 2020 reported that the UAE, the US, and Saudi Arabia host the largest number of migrants from India, accounting for about 18 million people. Indian students preferred Canada due to its smooth immigration and perks, followed by the US, Australia, and the UK. India also holds the record for remaining the world's top recipient of remittances. India crossed the annual remittances mark of $100 billion in 2022, becoming the largest remittance receiver in the world. (PIB Mumbai, 2023). The excess population displaces themselves, seeking better opportunities, which

can take some pressure off the country. However, this should be kept a tab over, ensuring the brain drain does not exhaust the talents and establishing cordial relations with foreign governments.

Within domestic politics, government-centric policies should shift to human-centric policies. Collaborating with the non-state entities working at the grassroots level, the state should incorporate a sensitised definition of human security on par with international viewpoints. While it is true that each nation will hold different parameters of measuring standards, it is important that the country also adheres to some of them. As in the case of SDGs, they are being indigenised by the Indian government by adopting different parameters through the Niti Ayog Report.

Following are some channels to ensure the population dilemma is dealt with properly:

1. Implementing a comprehensive population management program integrating family planning and reproductive health services, adhering to the country's recent announcement.
2. Revamp urban planning strategies to prioritise sustainable development, efficient infrastructure, and inclusive community spaces.
3. Launching targeted employment generation initiatives to address unemployment and boost economic opportunities.
4. Establishing a structured pathway from slums to education and from education to career development.
5. Introducing environment-focused initiatives, such as planting trees during a citizen's birth and death, to promote ecological sustainability and societal integration.
6. Promoting diversity awareness and fostering unity through educational programs and community engagement to demote violence and boost social cohesion.
7. Develop defined policies for refugees and migrants, including specialised job opportunities and equitable wages for the native and migrant populations.

A country's population becomes a non-traditional security issue if it is unaddressed and not included in policies. The best practice is tackling adversity head-on with a blueprint of various outcomes and remedies. There is a need for a holistic approach in terms of containing the overgrowth of the population of Generation Beta (to be born between 2025 and 2039) to reduce the strain on the country's resources and employ its strongest resources of all human resources. Sustainability is the key to mitigating the population impact, whether on the country's environment or the nation itself.

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Impact of Migration on Family Members of In-Migrants: A Case of Asansol City, West Bengal

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Abstract

Migration impacts people and places alike. Migrants undergo positive and negative impacts with variations across gender and age groups. In this spirit, this paper aims to analyse the age- and sex-wise impact on socio-cultural and economic aspects of family members of in-migrants in Asansol. This study is based on the primary data collected through a field survey in 2021, wherein the period of stay of the in-migrants at the destination spans from 1960 to 2021. For this, a well-designed questionnaire was prepared. A total of 2365 respondents were selected based on purposive random sampling technique. Analysis was done using two-way and three-way cross-tabulation using SPSS. The findings suggest that most females migrated to Asansol City because of marriage. Asansol city is no longer attractive for male migration because of the lack of lucrative employment opportunities. The closure of many coalfield plants and the absence of new investment plants are the main causes of poor conditions in the economic sectors of the study area.

***Keywords*:** migration, Asansol city, socio-cultural aspects, economic aspects, in-migrants, positive and negative impacts of migration.

Introduction

The impact of migration is an important aspect of human mobility in population geography. The major reason behind the movement of a person or group of people from a resource-deficient area to a resource-rich area is to earn a better and more sustainable livelihood and to seek a better lifestyle. Apart from this, several socio-cultural, political, and environmental factors also compel the migrants to move from one place to another. Topographically, Asansol City is a plain region where human factors related to social, cultural and economic aspects have mainly shaped

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the migration pattern. Therefore, in this study, the researchers have primarily focused on migration's positive and negative impact on the socio-cultural and economic aspects of family members of in-migrants in Asansol City. The period of stay of the in-migrants in Asansol city spans from 1960 to 2021. Several scholars have already worked on the impacts of migration. However, the approach of their study is different from that of this study because some of them have considered only the positive aspects of socio-cultural background.

In contrast, others have highlighted the adverse impacts of migration. Kipgen and Panda (2019, p.343) have highlighted the social relations in which an individual strengthens a social base, leading to a healthy social life. Social networks such as peer groups, family, relatives, and other social communities provide all possible support to the migrant so that they can easily cope with the initial difficulties in the alien environment (Zhang et al., 2023, pp.7-8; Wen & Hanley, 2016, p.84). Due to busy work schedules and longer working hours, many migrants cannot establish regular communication with their families residing in their birthplace. Because of prolonged separation from their place of origin, migrant's families face loneliness, emotional difficulties and psychological isolation (Fellmeth et al., 2018, p.2574; Som, 2022, p.119; Alm et al., 2019, p.8). Sometimes, the poor mental and physical conditions of migrants give birth to many infectious diseases that lead to prolonged illness. So, the emergence and re-emergence of many infectious diseases are very common phenomena at the place of in-migration. In short, it can be said that the migrants sometimes carry some infectious diseases that can pose a risk to the local population (Barnett & Walker, 2008, p. 1447). The change in food habits of migrants in new places plays a very significant role in their health. According to Ottesen and Wandel (2012, p. 9), many migrants from Southeast Asia have changed their dietary patterns after arriving in European countries. Instead of consuming traditional foods like cereals, legumes and tubers, they consume unhealthy diets like fatty and fast food, due to which they are very prone to diseases like hypertension, diabetes, and obesity. Kaur et al. (2011, p.462) opine that if migrants get decent jobs which provide them higher wages, job security, occupational prestige, and better and sustainable living opportunities, even then, they have to face many difficulties.

It is crucial to recognise the importance of education and training for migrants. Moreover, without higher educational qualifications and technical skills, migrants often find themselves in low-profile jobs with little job security and low pay, leading to poverty and misery (Wial, 1991, pp. 401-402; Benach et al. 2011, p. 2). Therefore, migrants need proper educational qualifications and proper training for the job at their destination. A reasonable educational qualification leads to stable wages,

but massive job competition between the locals and the migrants at the destination creates job-related problems (Raphael & Ronconi, 2007, pp. 429-430; Dadush, 2014, p.1).

Objectives

Objectives of the study are to: i) analyse the age and sex-wise multiple positive impacts on socio-cultural aspects of family members of in-migrants in Asansol city; ii) examine the age and sex-wise multiple negative impact on socio-cultural aspects of family members of in-migrants in Asansol city; iii) highlight the age and sex-wise multiple positive impact on economic aspects of family members of in-migrants in Asansol city; and iv) look at age and sex-wise multiple negative impact on economic aspects of family members of in-migrants in Asansol city.

Methodology

The present study is entirely based on the primary data collected through a well-prepared objective-based questionnaire in 2021. In this study, the number of respondents depended on the number of migrants who in-migrated to the concerned household and stayed between 1960 and 2021. At the time of the field survey, it was found that some households had one in-migrant and others had more than one. During the personal field survey, investigators considered not only one in-migrant from the respective selected household but also more than one in-migrant or the number of in-migrants available in the households. In this study, the focus is on in-migrants; we considered only those households which had at least one in-migrant. Finally, surveying the households, the total number of respondents (by selecting one respondent from each household) became 1250, who furnished information about 2365 in-migrants. This number is based on the purposive random sampling technique to serve the study's objectives. The collected data were processed, arranged, coded, and tabulated to meet the objectives. Data were analysed using two three-way cross-tabulations to see the impact of migration on the socio-cultural and economic aspects of in-migrants family members.

Study Area

Asansol City is located between 23° 24' and 23° 53' north latitude and 86° 48' and 87° 32' east longitude. It has an area of 125 square kilometres. As per the Census of India, 2011, the total population of Asansol City was 563917, out of which 292387 were males and 271530 were females.

The city is situated on the lower Chota Nagpur Plateau, which consists of meta-based rocks of Precambrian age, Rajmahal basalt, and Gondwana sedimentary rocks. The sediments of the Upper Tertiary age lie between the Damodar and Ajay rivers. Another river, the Barakar, joins the Damodar near Dishergarh, and a smaller river, the Nunia, flows through Asansol. Asansol is surrounded by a mineral-rich region, which affects its migration pattern. The other major reasons affecting the migration pattern in Asansol city are moderate climate, high level of urbanisation and industrialisation,

better educational facilities, political stability and security.

Asansol City has fifty wards, number 13 being the least populated and number 33 being the most populated. The reference map (Fig. 2) illustrates the locational aspects of the study area and methodological aspects concerning each ward's distributional pattern from the sample survey perspective. Of the 50 wards of Asansol, 25 households were selected from each ward. The selection was based on social group representation, with five households chosen from the General, OBC, SC, ST, and Muslim social groups. This sampling approach ensures diversity and inclusivity across various social categories, providing a comprehensive understanding of the demographic structure of the study area.

As the second-largest urban agglomeration in West Bengal after Kolkata, Asansol has boasted a diverse or multi-cultural population, significantly shaped by decades of in-migration. Its growth has been driven by its key industrial and commercial status. The city has a relatively young population, with a large portion of the population in the working-age group, highlighting its role as an economic centre. However, this also points to a high dependency ratio in some families, where younger members often rely on income from out-migrant workers.

While Asansol's industrial base provides employment, there are notable income disparities, with a significant portion of the population in the lower-income group. Differences in educational levels between native residents and migrants have impacted social integration and economic mobility, particularly for migrants' families. Migrants typically have settled in communities based on their origin, forming ethnic or linguistic enclaves. This cultural diversity has enriched Asansol but also posed challenges for social cohesion, as different groups have strived to maintain their distinct identities while integrating into the broader urban society.

The 1,250 surveyed households contained 7,714 family members; 3440 males and the remaining 4274 females. Males have out-migrated from the study area for employment. Most of the population was from within the 15-34 age group. Among them, 667 males and 792 females belonged to the general caste, 717 males and 829 females to the OBC category, 814 males and 1,136 females were Muslim, followed by SC and ST groups.

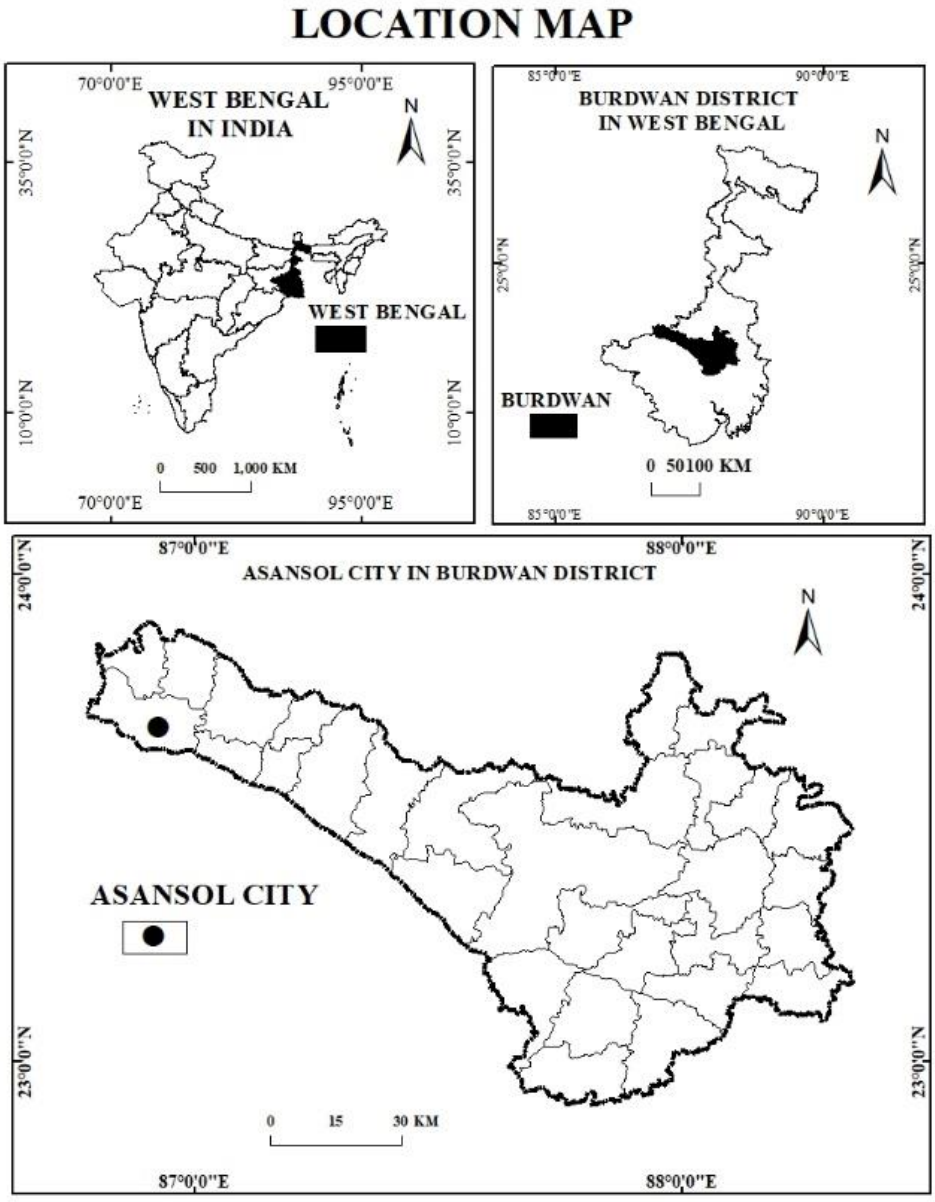
Of the total population (7714), 2213 were working males, and 422 were working females engaged in different economic activities. The total number of non-working males and females were 1227 and 3852, respectively. The majority of the working population's per capita earnings varied from ₹5,000 to ₹10,000.

So, it can be said that the socioeconomic conditions attract many in-migrants from the surrounding and remote rural areas.

The continuous movement from its surrounding rural areas to Asansol city affects the physical, socio-cultural, economic, political, and demographic aspects of the origin and recipient regions. Therefore, the city of Asansol has been selected for the present study.

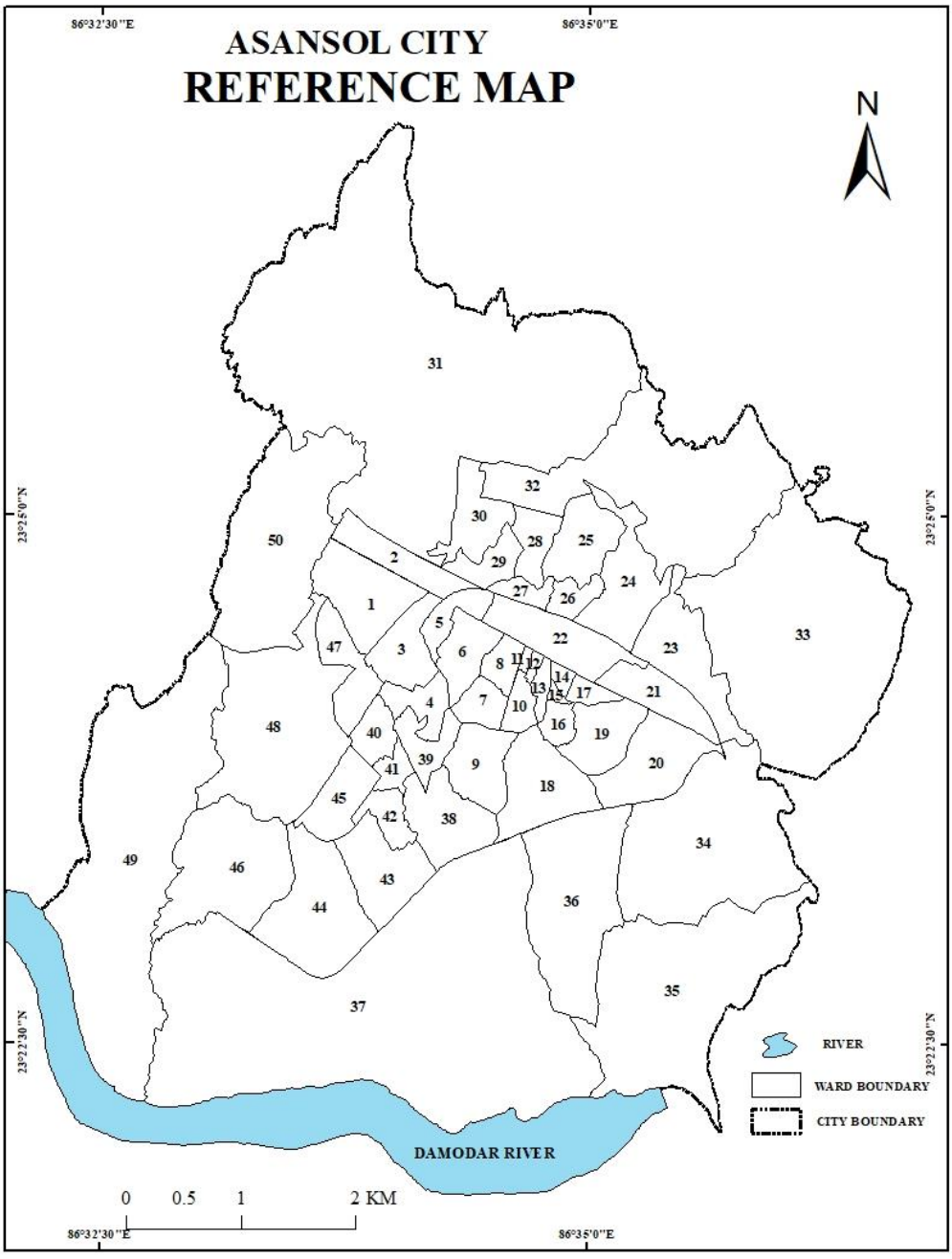
Figure 1

Location Map



Source: Prepared by the investigators based on the census's information (2011).

Figure 2
Asansol City: Reference Map



Source: Prepared by the investigators based on the Asansol Municipal Corporation data

Analysis

This section deals with the different age groups and sex-wise positive and negative impacts of migration on the socio-cultural and economic aspects of family members of in-migrants in Asansol City.

Age and Sex Composition of In-migrants in Asansol City

While discussing the impact of migration in Asansol City, it becomes important to discuss the demographic structure of respondents based on age and sex, as this is one of the most fundamental characteristics of an area's population at a given time, playing an important role in any society's social, cultural and economic development.

Table 1 shows the migration pattern according to age group and sex. At the aggregate level, the distribution pattern of in-migrants across age groups and sex appears to favour females.

Table 1

Age Group and Sex-wise Pattern of In-Migrants

Age Group	Sex		Total
	Male	Female	
0-4	1	-	1
	100.0*	-	(0.04) +
5-14	9	12	21
	42.9	57.1	(0.88)
15-34	105	676	781
	13.4	86.6	(33.02)
35-59	359	943	1302
	27.6	72.4	(55.05)
60 and above	123	137	260
	47.3	52.7	(10.99)
Grand Total	597	1768	2365
	(25.2)	(74.8)	(100.0)

Source: Author's field survey, 2021

Note: *Unbracketed lower decimal figures are the percentages to total males or females of respective age group

+Bracketed lower decimal figures are the percentages of total male or female In-migrants

Only one male child (infant) from the 0–4 year age group was reported in the category of in-migrants during the sample survey, which may be due to the movement of his parents. In the case of school-going children of 5–14 years, the percentage of girls was higher than boys. This may be because educated parents are less biased toward their girls and move with them to the city from the surrounding areas for better schooling. In other words, this can be attributed to the socio-cultural environment of West Bengal, particularly in Asansol, where

gender-based discrimination is relatively low. This is due to the effective implementation of various government schemes like Sikshashree, Sabooj Sathi, Sabla, Beti Bachao Beti Padhao, and Sukanya Samriddhi Yojana. These initiatives have promoted gender equality by providing education, financial support, and opportunities for girls and young women. (Saha and Sarkar, 2022, p.119; Basu, 2021, pp.6-7). Most (55.05%) immigrants fall within the 35–59 age group because younger people are generally more mobile (Kummitha et al. 2020, pp.80–81).

Among the age groups of 15-34 and 35-59, the percentage of female in-migrants significantly exceeds that of males. This is mainly due to marriage migration. Even in the 60 and above age group, the proportion of female in-migrants is higher, possibly because of past marriage migrations and the fact that women tend to live longer than men (Baum et al. 2021, pp.16–17; Ostan et al. 2016, pp. 1712–13). Most in-migrants in the city belong to the 35-59 and 15-34 age brackets.

Age and Sex-wise Positive Impact on Socio-cultural Aspects of Family Members of In-Migrants

In migration, the origin and destination places lose and gain something. Table 2 shows the multiple positive age and sex-wise impacts (regarding gain) on socio-cultural aspects of family members of in-migrants at their destination (Asansol City). 56.2% of women and 63.7% of men in the age group of 35-59 feel that women's status has improved after migration (Table 2).

The United Nations also highlights the rising status of women in the post-migration process. This may be due to their autonomy in decision-making and access to socio-cultural resources for their bright future (https://www.un.org).

Table 2

Age and Sex-wise Positive Impact on Socio-cultural Aspects of Family Members of In-Migrants at their Destination Place

Positive Impact on:	Age Group								Total Responses of Respondents	
	5-14		15-34		35-59		60 and above			
	M	F	M	F	M	F	M	F	M	F
Status of Women	6	7	71	413	288	639	87	78	452	1137
	1.3*	0.6	15.7	36.3	63.7	56.2	19.2	6.9	(9.3)+	(8.8)
Care of Elderly Persons	10	12	102	663	353	932	123	134	588	1741
	1.7	0.7	17.3	38.1	60.0	53.5	20.9	7.7	(12.1)	(13.5)
Care of Child	10	12	84	523	346	919	123	132	563	1586
	1.7	0.8	14.9	33.0	61.5	57.9	21.8	8.3	(11.6)	(12.3)
Social Network	1	1	55	126	268	277	89	13	413	417
	0.2	0.2	13.3	30.2	64.9	66.4	21.5	3.1	(8.5)	(3.2)
Health	6	8	88	565	337	894	122	131	553	1598
	1.1	0.5	15.9	35.4	60.9	55.9	22.1	8.2	(11.4)	(12.4)

Positive Impact on:	Age Group								Total Responses of Respondents	
	5-14		15-34		35-59		60 and above			
	M	F	M	F	M	F	M	F	M	F
Education	8	11	76	432	333	893	116	128	533	1464
	1.5	0.8	14.3	29.5	62.5	61.0	21.8	8.7	(11.0)	(11.3)
Adaption to Local Environment	9	12	102	661	354	935	123	135	588	1743
	1.5	0.7	17.3	37.9	60.2	53.6	20.9	7.7	(12.1)	(13.5)
Environmental Cleanliness	9	12	94	626	345	888	120	129	568	1655
	1.6	0.7	16.5	37.8	60.7	53.7	21.1	7.8	(11.7)	(12.8)
Changing Religious Belief	1	6	18	123	92	205	19	20	130	354
	0.8	1.7	13.8	34.7	70.8	57.9	14.6	5.6	(2.7)	(2.7)
Abating Orthodox	3	4	70	373	249	572	78	89	400	1038
	0.8	0.4	17.5	35.9	62.3	55.1	19.5	8.6	(8.2)	(8.0)
Promoting Inter-caste Marriage		1	11	76	34	86	17	13	62	176
		0.6	17.7	43.2	54.8	48.9	27.4	7.4	(1.3)	(1.4)
Grand Total Responses of Respondents	63	86	771	4581	2999	7240	1017	1002	4850	12909
	(1.3)	(0.7)	(15.9)	(35.5)	(61.8)	(56.1)	(21.0)	(7.8)	(100.0)	(100.0)

Source: Author's field survey, 2021

Note: *Unbracketed lower decimal figures are the percentages to total responses of respondents of respective positive sociocultural aspects
+Bracketed lower decimal figures are the percentages to total responses of male or female respondents

In the case of caring for the elderly, women from almost all age groups tend to shoulder a larger share of household and family responsibilities (National Academies of Sciences, Engineering, and Medicine, 2016, pp.50-51). Likewise, in child care, the percentage of responses of female respondents from the younger age group is relatively higher than that of male respondents. This is mainly because most married women have children, and young male respondents are college-going students or still unmarried. Further, slightly above 11 per cent of the total responses of male respondents and 12 per cent of total responses of female respondents opined that migration has helped them to get better healthcare facilities for their children and families (World Economic Forum, 2017, p. 126). Strong social networks help migrants while facing various social and cultural challenges in an unfamiliar environment. It also promotes a sense of self-confidence among migrants by reducing the feeling of emotional and psychological dilemmas such as stress, sadness, isolation, anxiety, depression, and apprehension (Kipgen and Panda, 2019, p.343). The table also shows that females have more social network affiliations than males across all age groups. This may be due to women's more communicative nature, as they tend to actively connect with those around

them (Szell and Thurner, 2013, pp. 4-5), while men often form social networks that are more work or business-oriented. Additionally, access to better healthcare and fewer socio-cultural restrictions at the destination has positively impacted the physical, emotional, and psychological well-being of the migrants (Virupaksha et al., 2014, pp. 236–237). In the clean environmental category, the lowest percentage of female responses was observed in the cells of older respondents and school-going children. In contrast, the highest proportion was observed in the age group of 35–59 years. On the other hand, the highest percentage of male responses is found in the older age group, followed by the old group, young age group, and school-going children.

The post-migration process also helps migrants to adopt other religious beliefs at their convenience (Jurado et al. 2017, p.51). Migration allows individuals to escape orthodox beliefs and socio-cultural issues like religious superstition and caste discrimination, which are often rigid in rural areas. By moving to the study area, in-migrants gain freedom of choice and experience greater openness, exposure to diverse cultures, and a more inclusive, tolerant way of living (Rao, 2010, pp. 141–142). Only 2.7 per cent of total female and 2.7 per cent of total male responses in the study area indicate a change in religious beliefs after reaching the destination. A higher proportion of responses are from the older age group. The proportion of female respondents in the older age group is highest, followed by the proportion of young age group, aged group, and school-going children. A similar pattern can also be seen for all age groups in adapting to the local environment and environmental cleanliness at the destination.

In other words, more young women believe in inter-caste marriages than their male counterparts. This trend is becoming more common among younger generations due to increased social cohesion, frequent social interactions, and closer cultural exchanges (Singh and Siddique, 2020, p.94). However, the total number of data related to inter-caste marriages constitutes very little, so it plays a less significant role in society. This is because caste, religious endogamy, and clan exogamy still play very important roles in Indian culture.

Age and Sex-wise Negative Impact on Socio-cultural Aspects of Family Members of In-Migrants

Table 3 shows the age and sex-wise pattern of multiple negative impacts on the sociocultural aspects of in-migrants at their destination.

In the category of living conditions, respondents from 35–59 year age group reported a higher percentage of deterioration in their living conditions. However, the percentage of young women is higher than that of young men in their respective age groups. The absolute number of female respondents is

greater than that of males, primarily due to the overall contribution of female migration to total migration being significantly higher than that of male migration (Lobo, 2001, p.309).

The change in food habits after migration signifies the mixing of two cultures. However, the post-migration process increases the consumption of ultra-processed and refined foods loaded with unnecessary harmful nutrients like fat and sugar. Moreover, the increased consumption of snacks, soft drinks, meat, and dairy products as compared to the high fibre, antioxidant, and micronutrient content of plant-based foods like fresh fruits and vegetables invites many harmful lifestyle-borne diseases in human life (World Economic Forum, 2017, p.34).

Table 3

Age and Sex-wise Negative Impact on Socio-cultural Aspects of Family Members of In-Migrants at their Destination Place

Negative Impact on:	Age Group								Total Responses of Respondents	
	5-14		15-34		35-59		60 and above			
	M	F	M	F	M	F	M	F	M	F
Living Condition	1	3	34	211	71	260	25	31	131	505
	0.8*	0.6	26.0	41.8	54.2	51.5	19.1	6.1	(8.6)+	(12.5)
Cultural Deterioration	6	8	63	281	210	445	75	76	354	810
	1.7	1.0	17.8	34.7	59.3	54.9	21.2	9.4	(23.3)	(20.0)
Food Habits	5	5	53	233	174	370	66	67	298	675
	1.7	0.7	17.8	34.5	58.4	54.8	22.1	9.9	(19.7)	(16.6)
Care of Child						1				1
						100.0				(0.0)
Care of Elderly Persons					4	3	1		5	3
					80.0	100.0	20.0		(0.3)	(0.1)
Alcoholic Habit or Addiction among Children				3	40	151	53	58	93	212
				1.4	43.0	71.2	57.0	27.4	(6.1)	(5.2)
Family Relationship	1	3	27	14	119	46	62	20	209	83
	0.5	3.6	12.9	16.9	56.9	55.4	29.7	24.1	(13.8)	(2.0)
Disease Transmission				7	23	63	18	33	41	103
				6.8	56.1	61.2	43.9	32.0	(2.7)	(2.5)
Anxiety for Left Behind Family	9	9	79	649	235	890	62	118	385	1666
	2.3	0.5	20.5	39.0	61.0	53.4	16.1	7.1	(25.4)	(41.1)
Grand Total Responses of Respondents	22	28	256	1398	876	2229	362	403	1516	4058
	1.6	0.6	17.6	35.8	58.4	54.5	22.3	9.1	(100.0)	(100.0)

Source: Author's field survey, 2021

Note: *Unbracketed lower decimal figures are the percentages of total responses of respondents of respective negative sociocultural aspects.
+Bracketed lower decimal figures are the percentages of total responses of male or female respondents.

These lifestyle-borne diseases result from the so-called modern urban lifestyle that migrants adopt after migration to their destination (Ottesen & Wandel, 2012, p. 9). The table shows that the overall response of the respondents to the respective category is higher among older men (58.4%) than older women (54.8%). On the other hand, the percentage of responses of old age group males is fairly higher than that of the young age group males, whereas this is reversed in the case of females. The percentage of responses of respondents below 15 years of age is very low compared to the responses of other age group respondents. Caring for children and the elderly is not a major concern among the respondents. However, in-migrant families often face inadequate elderly care and limited family time due to their demanding and low-paying work schedules (Bonizzoni, 2009, p.96). In the case of alcoholism among children, a higher proportion of 60 above year male respondents reported that their children are addicted to alcohol. In comparison, a higher proportion of females from 35–59 years of age said that their sons are involved in alcoholism.

In the case of poor family ties, a higher proportion of older migrants said they have almost no connection to their families at their place of origin, followed by 60 years and above, 15–34 years, and 5–14 years age group respondents. It may be because of the separation of the joint family. Low levels of family ties create stress or anxiety that leads to poor mental health conditions.

Among family members of migrants at the destination (Alm et al. 2019, p.8). Regarding migrant concerns among families left behind, 53.5 per cent of older women and a comparatively higher proportion (61 per cent) of older men were told that their left-behind families are always concerned for their well-being. As a result, anxiety creates isolation, sadness, depression, and low self-confidence among families left behind, which turn into a feeling of rejection and inferiority. A lower proportion of respondents are under 15 years of age group and 60 years and above.

Migration is often considered a factor in the spread of infectious diseases, primarily due to the poor socio-economic conditions that many migrants face at their destination (Barnett and Walker, 2008, p. 1447). In transmitting an infectious disease due to migration, it is significant to note that 2.5 per cent of total female responses and 2.7 per cent of total male responses fall into this category.

Age and Sex-wise Positive Impact on Economic Aspects of Family Members of In-Migrants in Asansol City

Migration is very much related to migrants' economic aspects as it often helps them get a job or start a business, improve income, improve the standard of living, repay loans,

provide employment to others, enhance purchasing power, increase saving amounts, and acquire movable assets, houses, or land (Table 4). This table exhibits the age and sex-wise pattern of multiple positive impacts on the economic aspects of the family members of immigrants in Asansol City.

From the Table, it is clear that the highest percentage of responses from male in-migrants in the 35–59 age group regarding getting a job or starting a business is from male in-migrants of 60 years and above and the 15–34 age group (Adger et al. 2023, p.1).

Among the women respondents, older married women show the highest tendency to remain employed consistently, followed by younger and aged women respondents (Palermo et al. 2024, p. 316). The low-cost migrant workers at the destination maintain construction and manufacturing activities. In-migrants serve the office in industries by providing an unskilled, semi-skilled, and skilled workforce (James et al., 1998, p.187). Almost a similar situation is observed in the category of improving income. 72.1 per cent of women and 64.4 per cent of men from the 35–59 year age group reported that migration provided them with better opportunities to increase their earnings to some extent (Amare et al. 2012, pp.10-11; Vengtachalapati, 2011).

The standard of living is largely dependent on high income. Most respondents from the 35–59 year age group felt that their relatives and friends' standard of living has increased due to higher pay after migration. This has changed their lifestyle to a great extent (Chitra, 2012, p.2). In the repayment of loans, the overall responses of male respondents are higher than the total responses of female respondents. Furthermore, age group-wise data shows that females dominate male respondents proportionally, but in terms of absolute numbers, male respondents outnumber female respondents. In employing others, the percentage of older and younger female migrants is higher than that of male respondents of the same age group. This is because a higher proportion of female migrants have hired local people as male/ maidservants for their household chores. 4.4 per cent of female and 21.6 per cent of male respondents from the age group of 60 and above provided jobs to people as shopkeepers in their shops. The table also shows that increased purchasing power reflects the prosperity and happiness of any individual or a whole society (Ottesen and Wandel, 2012, p. 9). The proportion of young and older female migrants is greater than that of males. Still, the proportion of responses from older female respondents decreased compared to older male respondents.

Table 4

Age and Sex-wise Positive Impact on Economic Aspects of Family Members of In-Migrants at their Destination Place

Positive Impact on:	Age Group						Total Responses of Respondents	
	15-34		35-59		60 and above			
	M	F	M	F	M	F	M	F
Getting Job/ Starting Business	9	3	106	21	21	1	136	25
	6.6*	12.0	77.9	84.0	15.5	4.0	(3.8) +	(1.8)
Improving Income	80	57	347	158	112	4	539	219
	14.8	26.0	64.4	72.1	20.8	1.8	(15.1)	(16.0)
Improving Standard of Living	80	57	346	158	111	4	537	219
	14.9	26.0	64.4	72.1	20.7	1.8	(15.1)	(16.0)
Repaying Loan	12	3	78	22	32	-	122	25
	9.8	12.0	63.9	88.0	26.2	-	(3.4)	(1.8)
Providing Jobs to Others	26	35	196	95	61	6	283	136
	9.2	25.7	69.3	69.9	21.6	4.4	(8.0)	(9.9)
Enhancing Purchasing Power	79	58	343	160	109	4	531	222
	14.9	26.1	64.6	72.1	20.5	1.8	(14.9)	(16.2)
Increasing Saving Amount	55	45	274	116	90	4	419	165
	13.1	27.3	65.4	70.3	21.5	2.4	(11.8)	(12.0)
Purchasing Movable Property	80	57	346	158	111	4	537	219
	14.9	26.0	64.4	72.1	20.7	1.8	(15.1)	(16.0)
Purchasing/Constructing House	37	29	217	97	107	4	361	130
	10.2	22.3	60.1	74.6	29.6	3.1	(10.1)	(9.5)
Purchasing Land	2	2	44	8	48	1	94	11
	2.1	18.2	46.8	72.7	51.1	9.1	(2.6)	(0.8)
Grand Total Responses of Respondents	460	346	2298	993	804	32	3562	1371
	(12.9)	(25.2)	(64.5)	(72.4)	(22.5)	(2.3)	(100.0)	(100.0)

Source: Author's field survey, 2021

Note: *Unbracketed lower decimal figures are the percentages to total responses of respondents of respective positive economic aspects +Bracketed lower decimal figures are the percentages to total responses of male or female respondents

It is observed that there are proportionately more females than males in each age group except the older respondents from 35-59 years. But in absolute numbers, male respondents outnumber females. In the case of saving money, proportionally more women tend to save money across most age groups except among older individuals. This discrepancy may be attributed to men utilising a wider variety of savings options, such as life insurance and provident funds, and having a higher risk tolerance, which increases their likelihood of saving regularly (Fisher, 2010, p.22). Also, some of the migrants tend to lend money at a higher rate of interest to save their money for future needs. On the other hand, the low number of women participating in savings is the onus of

saving on their husbands or sons (Lobo, 2001, p.297). 35–59 year age group constitutes the highest percentage of migrants buying movable assets, followed by the age group of 15-34 years and so on. In the related aspect, the proportion of older women informants is less than 2 per cent. Regarding buying or building houses, the percentage of male and female respondents is almost equal. Also, the proportion of migrants who purchase land is relatively low compared to the rest of the economic impacts. This may be due to the high market value of land, so most people need help to buy land.

Age and Sex-wise Negative Impact on Economic Aspects of Family Members of In-Migrants in Asansol City

Table 5 shows age and sex-wise multiple negative impacts on the economic aspect of family members of in-migrants in Asansol City. It can be seen that most people in the study area have migrated because of the better employment opportunities. The high demand for labour in the labour market and the growing prospect of skilled livelihoods have created job competition among migrants and natives of the study area. As a result, unemployed or unskilled workers suffer from a lack of social security, widespread social discrimination, poor sanitation, and lack of access to cooking fuel, which adversely affects the lives of migrants at the destination. Also, retrenchment and accountability of workers in the coal field plants and in other factories have made life more difficult for plant workers and daily wage earners (Khan & Arokkiaraj, 2021, pp.4-5; Som, 2022, p.119; Benach et al. 2011, p. 2).

In the case of the economic aspect of difficulty in finding a suitable job, 55.7 per cent of older men and 72.9 per cent of older women were still looking for better customary jobs like blue-collar jobs, accountants and clerical jobs because these jobs offer better job security, higher pay, equal opportunity, and more potential for long-term economic growth and development (Wial, 1991, pp. 401-402). Out of the respondents' total responses, 17.1 per cent of the male and 20 per cent of the female migrants reported facing job competition. Migrants need higher education and job training before moving to their destination. Because of the low level of educational qualification, massive labour job competition and unemployment among locals cause stagnant wages for migrants (Dadush, 2014, p.1).

Low per-capita monthly income and excessive expenditure on daily uses are indicators of the poor economic status of in-migrants (Nath et al. 2016, p. 73; Bonizzoni, 2009, p.96).

Table 5

Age and Sex-wise Negative Impact on Economic Aspects of Family Members of In-Migrants at their Destination Place

Negative Impacts on:	Age Group						Total Responses of Respondents	
	15-34		35-59		60 and above			
	M	F	M	F	M	F	M	F
Finding Proper Job	49	29	160	86	78	3	287	118
	17.1*	24.6	55.7	72.9	27.2	2.5	(14.9)+	(14.7)
Job Competition	56	42	193	115	81	4	330	161
	17.0	26.1	58.5	71.4	24.5	2.5	(17.1)	(20.0)
Day to Day Expenditure	76	58	344	158	110	4	530	220
	14.3	26.4	64.9	71.8	20.8	1.8	(27.5)	(27.4)
Burden of Loan	17	15	114	36	18	1	149	52
	11.4	28.8	76.5	69.2	12.1	1.9	(7.7)	(6.5)
Receiving wage	45	36	151	88	74	2	270	126
	16.7	28.6	55.9	69.8	27.4	1.6	(14.0)	(15.7)
Income	24	7	100	22	44	2	168	31
	8.0	3.4	8.5	3.8	9.7	10.5	(8.7)	(3.9)
Saving	29	15	78	51	27	1	134	67
	21.6	22.4	58.2	76.1	20.1	1.5	(6.9)	(8.3)
Child Labour	5	2	35	24	21	2	61	28
	8.2	7.1	57.4	85.7	34.4	7.1	(3.2)	(3.5)
Grand Total Responses of Respondents	301	204	1175	580	453	19	1929	803
	(15.6)	(25.4)	(60.9)	(72.2)	(23.5)	(2.4)	(100.0)	(100.0)

Source: Author's field survey, 2021

Note: *Unbracketed lower decimal figures are the percentages to total responses of respondents of respective negative economic aspects

+Bracketed lower decimal figures are the percentages to total responses of male or female respondents

Low per-capita monthly income and excessive expenditure on daily uses are indicators of the poor economic status of in-migrants (Nath et al. 2016, p. 73; Bonizzoni, 2009, p.96). Due to exorbitant expenditures on daily items or basic needs, migrants are often forced to take out loans at steep interest rates to cover educational expenses and to acquire movable or immovable assets for their families. This situation exists especially among the migrants who are daily wage earners. Regarding an increase in daily expenditure, the percentage share of respondents in the age group 35-59 (64.9% male and 71.8% female) was higher than the rest.

In the category of receiving low wages, a higher proportion of male and female respondents was from older age groups, while the remaining were from younger and old age groups (Benach et al. 2011, p. 2).

The negative impact of in-migration on income has also been noted. Some of the family members of in-migrants misuse the money to purchase cigarettes and alcohol and participate in gambling. In this case, the response of men from each age

group is higher than that of women. This may be because most of the migrants have a low level of educational qualification, and they easily get addicted to the above activities. They often suffer from stress, anxiety, psychological separation, and feelings of loneliness. Intoxicated gamblers lose control over their betting habits and lose most of their income from gambling (Taype-Rondan et al. 2017, p.2; Aung and Hong, 2019, p. 4).

Out of the total responses of the respondents, 3.2 per cent of the total male and 3.5 per cent of the total female in-migrants reported utilisation of child labour in their household chores, which is against the law of the Indian Constitution. About 86 per cent of older women and 57.4 per cent of older men reported using child labour in their offices, homes, and shops. This is followed by the second and third highest proportion of respondents from 60 years and above and 15-34 years. It was also observed that the school dropout children were engaged in carpet or garment weaving, embroidery, domestic services, food and refreshment services, horticulture, fisheries, etc. This is due to social norms of inequalities or disparities, poverty, lack of good employment opportunities, and seasonal employment schemes at the destination (https://www.unicef.org).

Variation in the total responses of the respondents across different tables is due to multiple responses given by the concerned respondents about his/her lifestyle, such as food habits, chewing, smoking, drinking, yoga, and exercise. For example, if respondent 'A' falls under the lifestyle categories of chewing, smoking, and drinking, their total responses would be 3; if respondent 'B' has only one lifestyle habit of chewing, their total response would be 1. Thus, the total number of responses of the respective in-migrants would naturally differ depending on the respondents' lifestyle habit(s) and as they reported. Therefore, variation in the total responses of the respondents from Tables 2 to 4 is the result of the single or multiple responses given by the respondents during the personal field survey in 2021.

Conclusion

From the above analysis, it can be concluded that a higher proportion of in-migrants belongs to the older age group, followed by youth who are older and younger than 15 years of age. Once, the study area was known for its high employability potential, but now the situation is unfavourable for the working age group population. Due to a gradual decline in job opportunities and poor economic conditions, people want to leave the city for better employment, higher education, etc. Out of the total respondents, the percentage of female in-migrant respondents was the highest. This is due to the high proportion of marriage migration of females in the study area.

Most female respondents take proper care of their elders and easily adapt to their surroundings. Some

positive impacts of migration are found in terms of the cleanliness of the environment, improvement in health conditions, proper care of children, rising status of women, looking for prospective areas, etc. Almost the same pattern remains in the case of male responses in the category of socio-cultural aspects.

In the case of a negative impact on the socio-cultural aspects of the family members of in-migrants, it is noticed that a high proportion of respondent's responses belongs to the concern for families left behind at their origin places, cultural degradation and adoption of poor food habits, after arrival at their destination. However, a significant proportion of respondents also responded about poor family relationships, poor living conditions, alcoholism among children, etc. In the case of positive impact on economic aspects of in-migrant's family members, the highest proportion of male respondents reported that their income and living standard improved and they purchased movable properties for their families after migration. Similarly, women in the majority reported an increase in their purchasing power, an enhancement in their wages or pay, and an improvement in their living standards after they migrate to the destination. Finally, it can be said that both the positive and negative aspects of migration are important to understanding the impact of migration on the study area. Out of the total responses of male respondents, 27.5 per cent responded in favour of an increase in expenditure on daily purchases but not any increase in their wages. The majority of migrants reported facing the problem of job competition, and some of them reported not having stable and high-paying jobs.

The migration pattern also encompasses factors such as the duration of migration, the distance travelled by migrants, the living conditions at their place of origin, and the location of the respective place of origin of the migrants. Our other research paper discusses the patterns of in and out-migration and the impact of in and out-migration on both the origin and destination places. This research paper focuses solely on the effects of in-migration to make the study more emphatic, meaningful, and explicit.

Suggestions

- In today's time, the rapid growth of industrialisation and urbanisation has created functional relationships among families. People always look for a better job and life outside their native place to help each other on important occasions like marriage or house building and in case of financial crisis. Therefore, it is suggested that the family should be organised functionally rather than structurally. Correct plans and policies of the local authority for creating jobs and better education not only for minorities but also for other weaker sections of the villagers and related fellowship programs sponsored

for rural students can prevent migration from various rural areas to the study area.

- The relatively low participation of women migrants in economic activities compared to men reflects the underutilisation of women's potential capacity for economic development. To solve this, equal participation of women in economic development in rural areas should be ensured to achieve a high economic growth rate and ensure proper participation, which may halt women's movement to the city.
- There is a need to promote socio-cultural and economic opportunities to reduce ill sanitation, insecurity, social discrimination, unemployment or underemployment and to enhance educational and health facilities in rural areas. This will also check rural-urban migration.
- Agriculture and natural resource-based cottage industries can be viable options for rural economic development to stop in-migration into the city. Local governments can develop some strategies to lower the cost of food production through the reform of land tenure rights. Additionally, business loans at affordable rates for rural residents will help support new land buyers and small businesses. This may also control the movement of people into the city. Overall, a sincere effort and realistic strategy to make the villages smart, ideal, and liveable with all the necessary amenities, services, and infrastructure at par with the city would be a workable way to curb the large-scale migration of people from rural to urban areas.

Researcher's Contribution

By examining the personal and familial impacts, our study has offered a more humanised view of migration, shedding light on changes in family dynamics, the emotional well-being of family members, and their adaptation to a new socio-cultural environment. This work can deepen the understanding of how migration fosters cultural continuity and change within family units and how these dynamics contribute to the broader cultural landscape of Asansol. Our work has highlighted both the positive and negative socio-economic outcomes for family members, offering a more nuanced understanding of the costs and benefits of migration. This also includes how family members navigate from economic hardships or gain opportunities, thereby informing future policy interventions. By incorporating gender and generational perspectives, our study can add a deeper understanding and novel ideas to the discourse on in-migration, highlighting the diverse ways family members are impacted and how they contribute to the adaptation process of migration. The findings obtained from our study can also provide a basis for advocating improved migration policies, focusing on family reunification, social welfare schemes, and economic assistance for families directly impacted by the process of in-migration.

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Quality of Life of Institutional and Non-Institutional Elderly Population in Mysuru City: A Comparative Analysis

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Abstract

The research paper examines the perceived quality of life (QOL) of elderly populations in both institutional and non-institutional settings in a specific area. It explores various dimensions of QOL, including social, economic, health, and public accessibility. Data were collected through a field survey using questionnaires and interviews with 100 elderly individuals, including 60 non-institutional and 40 institutional elders. The findings indicate that non-institutional male elders in the 60-70 age group reported higher social and economic QOL than institutional male elders. However, institutional female elders had better economic QOL than their non-institutional counterparts. Health issues were prevalent among both groups, with institutionalised elders experiencing more physical and psychological health problems. Access to public spaces was limited for institutionalised elders, particularly females, while non-institutional male elders had better access to public spaces. Overall, the study suggests no significant difference in the quality of life between institutional and non-institutional elders. Both groups face challenges and have specific needs that should be addressed to enhance their well-being. The study's recommendations, if implemented, could significantly improve the lives of the elderly, including interventions such as improving social support systems, enhancing economic support for non-institutional elders, strengthening healthcare services, improving public space accessibility, and promoting awareness and education among the elderly. These findings contribute to the understanding of the QOL of elderly populations in institutional and non-institutional settings and provide valuable insights for policymakers, organisations, and caregivers in developing initiatives to improve the well-being of the elderly.

***Keywords*:** institution, non-institution, elderly, QOL, health, public accessibility

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Introduction

Ageing and ageing-related issues are significant concerns in present-day Indian society. Previously, elders were highly respected and considered sources of wisdom, knowledge, and advice. The family system was strong and played a vital role in making family decisions.

However, in recent years, its importance has declined, leading to an increase in the number of old age homes. As a result, elderly individuals face various problems, such as loneliness, insufficient income, social insecurity, and disappointment, which greatly affect their quality of life across social, economic, and health dimensions.

The term "Quality of Life" (QOL) is used in various contexts, including Sociology, Economics, Geography, Medical/Health, and Politics. It differs from the concept of standard of living, which is primarily based on income. QOL encompasses wealth, employment, physical and mental health, education, happiness, leisure time, and social connections.

According to the World Health Organization (WHO), Quality of Life is an individual's perception of their position in life, considering the culture, values, goals, expectations, standards, and concerns within their context. Britannica Encyclopedia defines Quality of Life as the degree to which an individual is healthy, comfortable, and able to participate in and enjoy life events.

Objective

The study's main objective is to compare the perceived Quality of Life of institutionalised and non-institutionalised elderly populations in the study area.

Hypothesis

The study hypothesises that non-institutionalised elders have a higher perceived QOL than institutionalised elders.

Methodology

The study is based on primary data collected through a field survey using questionnaires and interviews. It is part of a cross-sectional study conducted among elderly individuals in both old age homes and with families in Mysuru city. The primary data was gathered from elderly residents in 65 wards and 34 old age homes in the city through interviews and observations. A simple random sampling method was used to collect the data, with a sample size of 100 aged individuals, consisting of 60 non-institutionalised elders and 40 institutionalised elders.

For data analysis, the WHOQOL Index was developed to assess the gender-specific perceived quality of life of elders of different age groups in institutional and non-institutional settings. The index was calculated using a five-point Likert response scale ranging from "Strongly agree" to "Strongly disagree," scores were coded from 1 to 5. Reverse coding was applied to positive opinions to calculate the index. Four dimensions comprising 47 indicators were used to determine the overall quality of life. Finally, the T-test was used to test the hypothesis.

Study area

Geographically, Mysuru is located between 12.18° North latitude and 76.42° East longitude, at 770 meters above Mean Sea Level.

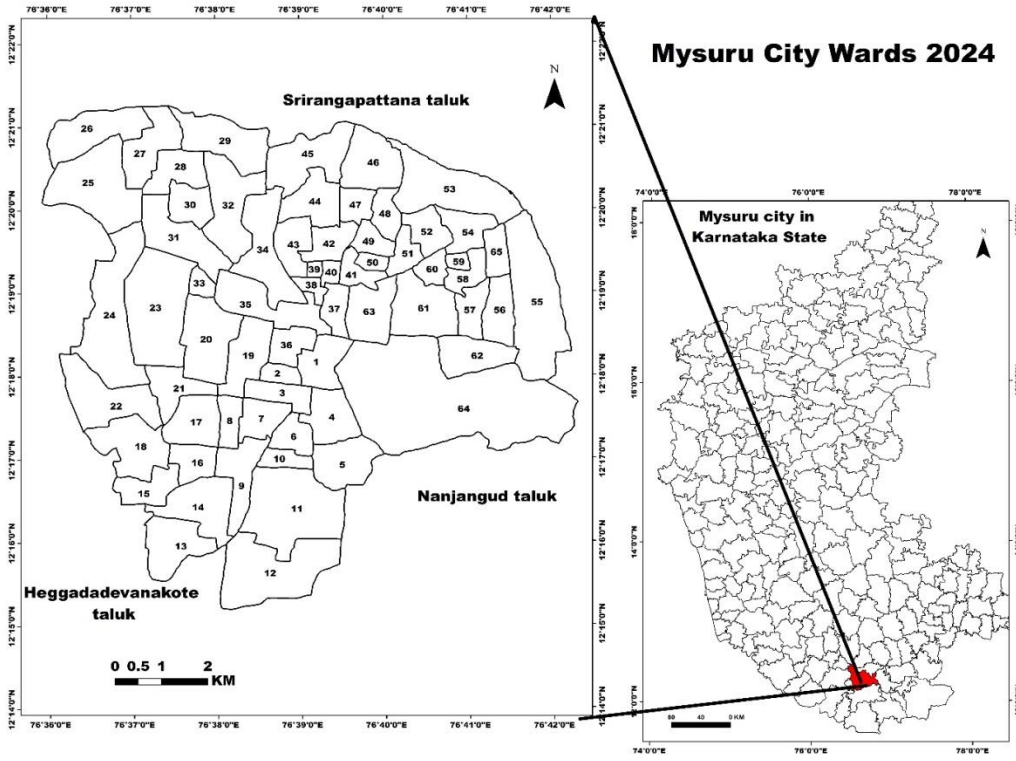
Perceived Quality of Life of Elders

A Quality of Life (QOL) index was created to evaluate how elders of different ages perceive their quality of life based on their gender and living situation (institutionalised or non-institutionalised). One hundred elderly individuals, including 60 non-institutionalised and 40 institutionalised elders, were selected for the study. The index was calculated using a five-point Likert response scale, with responses ranging from "Strongly agree" to "Strongly disagree," each response was assigned a score from 1 to 5. The index was adjusted to accommodate the reverse scoring of positive opinions.

The QOL index considered four important dimensions, featuring 47 indicators, to comprehensively assess the elders' quality of life. These dimensions are as follows:

- Social Dimensions
- Economic Dimensions
- Health Dimensions
- Public Accessibility

Map 1
Location of Mysuru City



Perceived Social Quality of Life of Elders

The social quality of life measures the extent to which daily life meets acceptable living standards for elders. Social status factors such as education, widowhood, age, gender, and lifestyle differ between

institutionalised and non-institutionalised elders, influencing their social QOL. Notably, as age increases, the social QOL of elders tends to decrease, particularly among institutionalised female elders.

The Social Quality of Life Index (SQOLI) was calculated using 17 variables, including the level of satisfaction with bonding among family members, freedom received from family, level of bonding with relatives and friends, and the ability to share feelings with family members and relatives.

SQOLI scores for each respondent were assigned a range between 1 and 5 for each question. The minimum (score -1) and maximum (5) scores would vary based on the total number of elders in each category.

To find out the SQOLI has been calculated with the following formula,

$$SQOLI = \frac{TOS\ of\ SV1+SV2+SV3+.....SV17}{MOS} \times 100$$

Whereas,
SQOLI = Social Quality of Life Index,
SV = SQOL variables,
TOS = Total Obtained Score,
MOS = Maximum Obtainable Score (17x5= 85 per person)

Table 1A
Perceived Social Quality of Life Index of Male Elders

Variables	Institutional			Non - Institutional		
	60-70	70-80	80+	60-70	70-80	80+
Receiving freedom from family	15	13	6	39	28	15
Satisfied level of bonding with family members	16	14	7	38	25	13
Satisfied level of bonding with relatives	13	10	5	34	18	9
Satisfied level of bonding with friends	16	13	7	40	30	12
Share feelings with family members	14	11	6	41	32	12
Share feelings with relatives	12	9	4	32	15	6
Happy with the living status	14	11	8	42	22	12
Satisfaction with living facilities	19	14	10	39	21	11
Taking Sufficient food	24	15	10	42	29	15
Family/old age members are taking care	23	19	13	39	31	16
Daily activities						
Going to the religious centre	12	10	8	41	23	14
Walking/ yoga/ exercise	22	14	10	35	26	14
Reading newspaper/books	24	19	9	39	24	13
Watch television	21	17	12	41	29	15
Writing habits	10	7	5	14	10	7
Cooking	9	7	4	19	14	8
Shopping	9	7	4	22	17	7
Total score	273	210	128	594	396	201
Index	48	44	40	62	56	50

Table 1B

Perceived Social Quality of Life Index of Female Elders

Variables	Institutional			Non - Institutional		
	60-70	70-80	80+	60-70	70-80	80+
Receiving freedom from family/care home	29	18	8	52	37	26
Satisfied level of bonding with family members	19	16	10	50	36	27
Satisfied level of bonding with relatives	13	13	9	45	27	20
Satisfied level of bonding with friends	26	19	13	47	33	24
Share feelings with family members	22	18	12	49	34	25
Share feelings with relatives	14	10	7	42	27	20
Happy with the living status	22	15	10	44	33	29
Satisfaction with living facilities	26	17	12	45	31	25
Taking Sufficient food	27	20	16	53	34	32
Daily activities						
Going to the religious centre	20	18	9	43	30	23
Walking/ yoga/ exercise	32	24	11	39	26	21
Reading newspaper/books	28	22	9	34	21	16
Watch tv	26	21	10	40	34	30
Writing habits	24	13	9	20	15	11
Cooking	12	13	7	50	28	28
Shopping	13	14	8	38	14	12
Total score	353	271	160	691	460	369
Index	44	42	40	54	52	49

Source: Tables 1A and 1B computed by the authors

Tables 1A and 1 B present the nature of the social quality of life perceived by the respondents. During the field survey, most respondents from institutional and non-institutional settings provided neutral answers for several variables, including satisfaction with bonding among relatives, happiness with living conditions, and sharing feelings with friends and relatives.

Table 1A indicates that non-institutional male elders between 60 and 70 have a higher Social Quality of Life Index (SQOLI). This can be attributed to various factors, such as having good relationships with family and friends, enjoying freedom, engaging in activities like reading books and newspapers, watching TV, shopping, and participating in family and spiritual events.

On the other hand, institutional male elders aged 80 years and above have a lower SQOLI of only 40. This

is primarily due to the lack of care and affection from family members, limited freedom within the family, and a hesitancy to share their problems with the family. Additionally, the social lives of institutional elders are significantly impacted by their age and widowhood, resulting in reduced participation in family functions and limited opportunities to go outside, further affecting their social well-being.

In Table 1B, it is evident that the level of SQOLI decreases as elders age, regardless of whether they are in institutional or non-institutional settings and regardless of gender. Non-institutional female elders aged 60-70 have an average SQOLI of 54, while institutional female elders have a lower SQOLI of only 44.

Additionally, female elders aged 80 and above experience lower SQOLI in both institutional (40) and non-institutional (49) settings. Institutional female elders demonstrate lower SQOLI compared to their non-institutional counterparts due to factors such as limited freedom, lack of family care, and weak social connections with family, friends, and relatives.

Elders' Perceived Economic Quality of Life (QOL)

The study evaluated elders' economic quality of life using seven variables: satisfaction with financial status, economic dependency, per capita income, involvement in financial decision-making, and contentment with family's financial support and assets.

The Economic Quality of Life Index (EQOLI) scores for each respondent for each question ranged from 1 to 5, with higher scores reflecting a positive response. The minimum score (1) and maximum score (5) varied based on the number of elders in each category. To find the Economic Quality of life, EQOLI has been calculated using the following formula,

$$EQOLI = \frac{TOS\ of\ EV1+EV2+EV3+.....+EV7}{MOS} \times 100$$

Whereas,
EQOLI = Economical Quality of Life Index, EV = EQOL Variables,
T O S = Total Obtained Score,
M O S = Maximum Obtainable Score (5x7= 35)

Tables 2A and 2B show the economic status of the city's elderly population as assessed by the EQOLI. There is a slight variation in the financial quality of life for institutionalised male elders between 60 and 70 years (score of 70) and 70 and 80 years (score of 68.5). However, these scores are lower than those of non-institutionalised elders, who scored 47 and 43 in the same age groups.

Most institutionalised elders are retired, financially secure, and independent due to their early planning for old age. However, it is worth noting that some of these elders seek permission from their

children to access their pension funds.

On the other hand, many non-institutionalised elders are financially dependent on their children and family. However, some supplement their income by engaging in manual labour or driving activities.

Tables 2A and 2B reveal that non-institutionalised female elders have significantly lower EQOLI scores than institutionalised female elders. In the age group of 60-70, non-institutionalised female elders score 46, while institutionalised female elders score 58. Similarly, in the age group of 70-80, non-institutionalised female elders score 42, while non-institutionalised female elders score 54. Lastly, in the age group above 80 years, non-institutionalised female elders score only 39, whereas institutionalised female elders score 50. This indicates that non-institutionalised female elders have limited financial freedom, support, and income compared to those who receive pensions.

It is worth noting that some elders, particularly those who are illiterate, have

not made earlier plans for their financial security and later life. Many of their children are not providing financial support to their parents, resulting in many elders expressing unhappiness with their economic status.

Table 2A

EQOLI of Male Elders

Variables	Institutional			Non – Institutional		
	60-70	70-80	80+	60-70	70-80	80+
Happy with financial status	28	24	18	29	23	9
An earlier plan for financial security	25	19	12	22	14	6
Economically fully dependent	14	12	10	37	16	7
Income (M)						
No income (1Score)	30	27	18	26	17	10
Below 5000 (2Score)						
5000-10000 (3Score)						
1000-15000 (4Score)						
15000 above (5Score)						
Are you taking any financial decision	29	23	12	27	22	7
Happy with the family's financial support	22	19	11	25	21	10
Any assets	24	20	12	24	23	8
Total	172	144	93	190	136	56
Index	70	68.5	66	47	43	41

Source: compiled by the authors

Table 2B

EQOLI of Female Elders

QOL of Economic status	Institutional			Non - Institutional		
	60-70	70-80	80+	60-70	70-80	80+
Happy with financial status	30	25	14	40	31	19
An earlier plan for financial security	27	21	12	35	24	16
Economically fully dependent	32	20	12	31	21	13
Income (M)						
No income (1Score)	23	20	11	32	19	12
Below 5000 (2Score)						
5000-10000 (3Score)						
1000-15000 (4Score)						
15000 above (5Score)						
Are you making a financial decision	22	19	11	28	18	11
Happy with the family's financial support	23	20	13	35	21	14
Any assets	28	21	15	38	23	12
Total	185	146	88	238	157	97
Index	58	54	50	46	42	39

Source: Compiled by the authors

Perceived Health QOL of Elders

Evaluating the health of elderly individuals is essential for understanding their quality of life. Common non-communicable health issues among the elderly include physical disabilities and mental or psychological health problems. In addition, chronic diseases like heart problems, diabetes, and high blood pressure can affect healthy ageing. Healthy ageing encompasses physical abilities, mental well-being, social connections, family relationships, and financial status.

Thirteen variables were selected to calculate the health QOL index.

$$HQOLI = \frac{TOS\ of\ HV_1+HV_2+HV_3+.....+HV_{13}}{MOS} \times 100$$

Whereas,
EQOLI = Health Quality of Life Index,
HV = HQOL Variables,
T O S = Total Obtained Score,
M O S = Maximum Obtainable Score (13x5= 65)

According to Tables 3A and 3B, most elderly individuals in institutional and non-institutional settings encounter vision problems, while fewer experience memory-related issues. Various factors, such as social integration, relationships, economic conditions, financial security, family background, environmental conditions, and living arrangements, influence the health status of the elderly.

Table 3A shows that male elders in institutional care have a lower health status, with an overall HQOLI (Health-Related Quality of Life Index) score of less than 50. On the other hand, male elders in non-institutional settings display better health status, with HQOLI scores exceeding 50 in all age groups.

Another significant finding from Tables 3A and 3B is that

institutionalised elders tend to experience more physical and psychological health problems compared to their non-institutionalised counterparts. Furthermore, the study indicates that HQOLI levels decrease as elders age in institutional and non-institutional settings.

During the field survey, most elderly individuals, especially those in institutions, reported experiencing common age-related ailments such as joint pain, dental problems, gastric issues, tiredness, headaches, and weakness. These health problems were often attributed to improper diet, insufficient food consumption, and weather conditions. Additionally, some elders reported chronic diseases such as high blood pressure, heart problems, and diabetes.

Many elderly individuals reported psychological problems, though the level and types of issues varied based on factors such as age, gender, marital status, living arrangements, and economic status. Elders who were living without a spouse, especially those living alone, faced issues of loneliness, fear, and a lack of family care, even in care centres. Overall, institutionalised elders reported higher levels of psychological problems. Non-institutionalised male elders in the 60-70 age group reported fewer psychological issues.

A significant observation is that female non-institutionalised elders reported better overall health conditions across all age groups. Conversely, institutionalised female elders reported significantly poorer psychological health, while institutionalised male elders reported more physical health problems compared to others.

Elder's Perceptions of the Accessibility of Public Space

Various government and non-government organisations have implemented programs to improve the accessibility and use of public spaces for the elderly. However, the level of use and accessibility to these spaces greatly impact the overall quality of life, which is crucial for quality, healthy, and active ageing.

Table 3A

Perceived HQOLI of Male Elders

Variables	Institutional			Non - Institutional		
	60-70	70-80	80+	60-70	70-80	80+
Can you do your daily activities	19	16	12	37	25	13
Receiving support from children	20	17	12	34	26	11
Receiving care from family	18	14	10	33	24	10
Are you happy with the environment	19	15	11	31	25	9
Normal sickness (joint pain, body pain)	14	12	8	21	15	8
Physical disability						
Vision problem	20	19	9	38	18	10
Speech	31	24	16	41	27	12
Loss of memory	24	20	9	41	29	9

Variables	Institutional			Non - Institutional		
	60-70	70-80	80+	60-70	70-80	80+
Chronic diseases No CD (3 score) One CD (2 score) Two CD (1 Core)	10	9	5	30	21	7
Psychological problems						
Loneliness	12	11	7	31	25	9
Sleeplessness	15	10	8	28	23	10
Fearness	12	9	6	29	24	9
Lack of care and affection	11	8	7	21	19	11
Total score	225	184	120	415	301	128
Index	49	47	46	53	51	50

Table 3B

Perceived HQOLI of Female Elders

Variable	Institutional			Non - Institutional		
	60-70	70-80	80+	60-70	70-80	80+
Can you do your daily activities	33	24	14	58	45	22
Receiving support from children	27	22	12	55	33	21
Receiving care from family	25	21	11	53	32	20
Normal sickness (joint pain, body pain)	31	19	15	48	25	15
Are you happy with the environment	24	22	10	56	34	18
Physical disability						
Vision problem	29	25	8	45	29	14
Speech	15	13	12	35	28	19
Loss of memory	16	13	10	32	27	15
Chronic diseases No CD (3 score) One CD (2 score) Two CD (1 Core)	13	15	9	35	26	9
Psychological problems						
Loneliness	27	28	12	38	28	18
Sleeplessness	29	26	11	42	26	22
Fear	30	24	14	37	30	20
Lack of care and affection	25	23	18	34	26	23
Total score	323	256	156	568	389	236
Index	50	49	48	55	54	52

Source: 3 A and 3B computed by the authors

Ten variables have been used to get accessibility of public space QOLI using the following formula,

$$APSQOLI = \frac{TOS\ of\ APSV1+.....+APSV10}{MOS} \times 100$$

Whereas,
APSQOLI = Accessibility of Public Space Quality of Life Index,
APSV = Accessibility of Public Space Variables,
T O S = Total Obtained Score,
M O S = Maximum Obtainable Score (10x5= 50)

Tables 4A and 4B show that many elderly people who are not living in institutions are satisfied with their access to health facilities. This is

because of the successful implementation of programs such as Sandhya Suraksha and Janashree medical shops and the assistance provided by Asha workers in different regions. On the other hand, only a few elderly people living in institutions are satisfied with the facilities in government offices, banks, and similar institutions. Those living in institutions, especially female elders, have limited access to public spaces due to restrictions on going outside, which prevents them from visiting religious centres, recreational facilities, markets, post offices, and other public spaces. In contrast, elderly men who are not institutionalised have better access to public spaces. The majority of them enjoy freedom (as shown in Table 1A), financial security (as shown in Table 2A), and better physical health (as shown in Table 3A).

During the field survey, the researcher found that many individuals, especially illiterate non-institutionalised elders and physically disabled institutionalised elders, relied heavily on the government to access necessary facilities.

However, they sometimes encountered challenges such as fraudulent practices and paying bribes to use these facilities. Institutionalised and non-institutionalised elders expressed similar opinions regarding the accessibility of public spaces.

An important finding from the data is that both institutionalised and non-institutionalised male and female elders reported better access to public spaces. Institutionalised male elders in the 60-70 age group scored 60, those in the 70-80 age group scored 57, and those aged 80 and above scored 54. Non-institutionalised female elders scored 59, 57, and 53 in the respective age groups.

Table 4A

QOLI for Male Elder's Perceptions of the Accessibility of Public Space

QOL of Health Status	Institutional			Non - Institutional		
	60-70	70-80	80+	60-70	70-80	80+
Are you happy with the accessibility of elderly-friendly transportation facilities	23	19	12	40	28	15
In railway station	22	18	11	38	26	15
Post offices	21	17	10	39	25	14
In banks	21	17	9	38	25	13
Market centers	18	15	10	36	24	13
Parks	18	15	11	35	27	14
In recreation centers	18	15	10	34	25	12
In religious centers	18	16	11	37	26	14
In other government offices	16	16	9	33	24	12
On the road/ footpath	18	15	11	31	25	13
Total	193	163	104	360	255	134
QOL Score	55	54	52	60	57	54

Source: Computed by the Authors

Table 4B

QOLI for Female Elders' Perceptions of the Accessibility of Public Space

QOL of Health Status	Institutional			Non - Institutional		
	60-70	70-80	80+	60-70	70-80	80+
Are you happy with the accessibility of elderly-friendly transportation facilities	22	19	13	54	35	21
In railway station	30	20	12	51	33	19
Post offices	29	23	12	50	34	20
In banks	30	21	13	49	33	21
Market centers	27	23	11	48	31	19
Parks	29	23	14	50	33	18
In recreation centers	27	21	14	46	28	15
In religious centers	29	24	15	47	29	20
In other government offices	31	22	14	46	28	16
On the road/ footpath	28	21	13	43	30	17
Total	281	217	131	484	314	199
Index	56	54	52	59	57	53

Source: Compiled by the Authors

Overall Quality of Life of Elders

The overall Quality of Life (QOL) index, which includes all dimensions, shows that elderly individuals living outside of institutions, especially men aged 60-70, have a higher overall quality of life score of 55 than other age groups. However, both institutionalised and non-institutionalised women aged 80 and above have a lower overall quality of life score, 46 and 49, respectively.

Table 5 shows that male elders between the ages of 60 and 70 living in institutions have a higher economic quality of life index, scoring 70, but a lower health quality of life, scoring 49. On the other hand, male elders in the same age group who are not living in institutions have a higher social quality of life, scoring 62. Furthermore, female elders in the 60-70 age group who are not living in institutions have a higher quality of health, with a score of 55.

To test the hypothesis that non-institutional elders enjoy a higher quality of life than institutional elders, independent samples t-tests were conducted for each dimension of the Quality-of-Life Index (QOLI). The results are as follows:

Social QOLI: t-statistic = -0.4339, p-value = 0.6755

Economic QOLI: t-statistic = -1.3296, p-value = 0.2186

Health QOLI: t-statistic = 0.5558, p-value = 0.5946

Public Space QOLI: t-statistic = -0.1633, p-value = 0.8754

Overall QOL Index: t-statistic = -0.5953, p-value = 0.5713

The p-values for all dimensions are greater than 0.05, indicating no significant difference in social, economic, health, public space, and overall quality of life between institutional and non-institutional elders.

In conclusion, based on the data and the results of the t-tests, the hypothesis that non-institutional elders enjoy a higher quality of life compared to institutional elders is rejected for all dimensions of quality of life. Therefore, this study finds no significant difference in the quality of life between institutional and non-institutional elders.

Table 5

Quality of Life of Elders by Different Age and Sex

QOLI	60-70 years				70-80 years				80+ years			
	Inst.		Non-Inst.		Inst.		Non-Inst.		Inst.		Non-Inst.	
	M	F	M	F	M	F	M	F	M	F	M	F
Social QOLI	48	44	62	52	44	42	56	52	40	40	50	49
Economic QOLI	70	58	68	54	66	50	47	46	44	42	42	39
Health QOLI	49	50	53	55	47	49	51	54	46	48	50	52
Public space QOLI	55	56	54	54	52	52	60	60	57	57	54	53
Overall QOL index	52	49	55	52	49	47	51	50	47	46	48	47

Source: Compiled by the Authors

Conclusion

The study examined the perceived quality of life (QOL) of older individuals living in institutions and those living in the community across various dimensions, such as social, economic, health, and public accessibility. The findings revealed several important insights.

Firstly, it was observed that as individuals grow older, their social QOL tends to decrease, especially among women living in institutions. Men aged 60-70 living in the community reported the highest social QOL, while women living in institutions had the lowest scores in this dimension.

Secondly, economic QOL varied between older individuals living in institutions and those in the community. Women living in the community reported poor economic. QOL, while women living in institutions had relatively higher

scores. Men living in the community reported better economic QOL.

Thirdly, both groups faced common health issues associated with ageing, such as joint pain and dental problems. Those living in institutions, particularly women, reported more physical and psychological health problems than those living in the community. Chronic diseases such as high

blood pressure, heart problems, and diabetes were also prevalent among the elderly population.

Additionally, access to public spaces was reported to be limited for those living in institutions, especially women, due to restrictions on freedom and mobility. Men living in the community had better access to public spaces than other groups.

Furthermore, the overall QOL index showed that men aged 60-70 living in the community enjoyed the highest overall QOL. In contrast, both women living in institutions and those living in the community aged 80 years and above reported poor overall QOL.

Suggestions

Based on the findings of this study, the following suggestions can be considered to enhance the quality of life for institutional and non-institutional elders:

- Improve social support systems: Implement programs and initiatives that promote social integration and reduce loneliness among institutionalised elders. Encourage family involvement, organise social gatherings, and provide opportunities for social interaction and bonding.
- Enhance economic support: Develop policies and interventions that address the financial needs of non-institutional elders, particularly females, which may include financial literacy programs, access to microfinance options, and support for income-generating activities to improve their economic independence.
- Strengthen healthcare services: Ensure easy access to healthcare facilities for institutional and non-institutional elders. Focus on preventive healthcare measures, regular health check-ups, and adequate medical resources to manage chronic diseases effectively.
- Improve public space accessibility: Create age-friendly environments that cater to the needs of elderly individuals, including accessible infrastructure, public transportation, and recreational spaces.
- Promote community engagement and participation of elders in public life.
- Foster awareness and education: Conduct awareness campaigns to educate the elderly about their rights, available support services, and ways to improve their well-being. Promote literacy programs to empower elders and enhance their decision-making capabilities.

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Research and Writing the 'Urban' in Indian Geography: A Critique of Pathways

Geo-Reflections-7

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Abstract

This piece of popular writing investigates the factors that influence the underrepresentation of urban geographers in mainstream urban studies scholarship in India. The factors I note down here are from my subjective experience of being in the field, both as an urban geographer engaged in teaching urban studies courses offered by an Indian university and as an urban studies scholar having experience working in collaboration with urban studies scholars from other disciplines on many different projects. The problems, as analysed, can be categorised into three broad heads: spatial pattern and scale, methodology, theoretical grounding and critical analysis. These three factors are not stand-alone, and the other two often influence one. Although the ideas I have introduced here come from my personal experience, I have tried my best to make the observations bias-free through the methods of reflexivity. Through this reflexive writing process, my personalised experience and observations are cross-checked to overcome the limitations of subjectivity. This popular piece may be useful for scholars of urban geography in India who believe that we collectively can take our discipline to a much higher level of scholarship.

***Keywords*:** urban geography, India, scale, methodology, critical analysis

Introduction

After being engaged in research and teaching in urban geography for nearly three decades, one question often bothers me—Why don't we, the urban geographers, show up in a big way in mainstream urban studies scholarship in India? Is there something seriously wrong with our work? Despite having a huge number of scholars engaged in research and writing within the disciplinary perimeter of urban geography taught in many geography departments in Indian universities, we are usually given a miss in the list of urban scholars in India. This article, written in popular mode, searches for the reasons for this phenomenon as

[1]Invited Article

observed over the years. Understanding and analysing these reasons is a form of soul-searching for me. Although the ideas I bring here come from my journey in both teaching and research in the field of urban geography, I have tried my level best to make the observations bias-free through the methods of reflexivity. Through this reflexive writing process, the personalised experience and observations are cross-checked to overcome the limitations of subjectivity.

This writing might help me and my fellow scholars of urban geography in India understand our mistakes, guide us to collectively learn, and elevate our discipline to a much higher level of scholarship.

Geography as a discipline is coherently holistic, and urban geography as part of the curriculum is no exception. 'Urban problems and prospects' and 'Urban issues and challenges' are generic terms often used in seminars and conferences organised by universities, colleges, and different associations of geography to accommodate the maximum number of papers. However, these generic terms become problematic when used for edited books often developed from such conferences and seminars. This gives scholars the opportunity and freedom to write about any aspect of the urban situation but simultaneously kills the agency of critical writing as there is no control over the quality of such writings. These books usually go to the printing press without a rigorous peer review. The number of such conferences and seminars is increasing at a fast rate, and so is the number of papers presented. This also means an increase in the number of papers each scholar writes annually. If the scholar is engaged in teaching, his/her time for writing is limited, but the number of publications cannot be reduced. It has become a normal demand from India's Higher Educational Institutes (HEI). We live in a superfast academic world where writing 20 to 30 papers per year has become a normal expectation from HEI for various kinds of national and international scoring done by different ranking organisations. These organisations prepare lists of 'leading scientists', and having one's name added to such lists is both prestigious and lucrative, spurring many scientists to join the race. Sitting on the boundary wall between natural and social sciences, geographers compete with the natural scientists in this race.

This model of research and writing usually takes a heavy toll on the quality of the publications. Young urban geographers entering the field of academic writing have started developing models from their scanty empirical research, whereas in the 20th century, accomplished urban scholars used to create one or two models during their lifetime, using their long experience of understanding cities through their longer-term grounded research. Theory and model building was a long-term affair in the career path of

urban scholars. Machine learning, an improved version of software-based analysis and programming, has become the new *mantra* for developing models without much understanding of the real world. Whenever I encounter scholars using machine learning in urban studies and ask for clarification on their observed model (a model completely disconnected from the empirical reality), their prompt answer is: 'this is the result I got from the software-based analysis'. Scholars who use such software-based models do not even know about the logical algorithm of the models, which actually refers to the process of how the specific model works and under which circumstances. Sometimes, I wonder about this particular trend of knowledge—is it the scholar who is learning or the machine itself? These model-building practices are also regressive in terms of scholarship, as they bring back positivism as the dominant philosophy in urban geography, which has been challenged by urban critical geographers for a long time, since the 1960s and 70s.

In writing too many articles and book chapters, the reading and research time is compromised. A 'Publish and Perish' group of paid journals are on the rise, and edited volumes have become the preferred version of the book for publishers as they can sell the book by individual chapters to maximise profit. Reading one full book in one go has probably become an old-fashioned idea. However, superficial and scattered reading does not take us anywhere in the scholarship. I have often observed that urban geographers quoted Henry Lefebvre's (1996/1968) ground-breaking work, "The Right to the City", to mean the citizen's individual or community rights to the city's services and infrastructure.

If we check the list of urban studies experts in India, we, the geographers, are the minority. Yet, the maximum number of papers presented in seminars and conferences under the discipline of geography belong to the domain of urban geography. This led me to think about and analyse what we are missing out in the research and writing within the field of urban geography. The big, data-oriented studies of urban India are predominantly under the domain of urban economics. On the other hand, good, in-depth, grounded studies on Indian cities are often done by scholars from other disciplines, such as sociology, anthropology, political science, planning and architecture.

As I understand it, the problems of research and writing in the urban geography of India lie in multiple factors, which I would like to discuss under a few broad categories: a) spatial pattern and scale, b) methodology, and c) theoretical grounding and critical analysis.

Spatial Pattern and Scale

Urban spaces are often studied in urban geography as discrete spaces, meaning that we treat the urban as separate from the non-urban—the peri-urban and the rural. This is the legacy of Burgess's model of the

Chicago school, which drew distinct urban boundaries from the rural and made specific zones within the city. In understanding cities in isolation, we often forget that studying one city/town disconnected from the other urban and non-urban areas in the neo-liberal world is not only difficult but next to impossible. In his studies, Neil Brenner brings up the question of the scale of urbanisation again and again. He argues (2019, p.14):

> "The city is only one element within and expression of the multiscalar, polymorphic and restlessly mutating geographies of capitalist urbanisation. These are constituted through the relentless *implosion* of sociospatial processes into dense centers of population, infrastructure, and economic activity and through the equally dynamic *explosion* of sociospatial relations across of vast territories, landscapes, and ecologies…."

In the theory of planetary urbanisation, Brenner and Schmid (2012) also claim that urbanisation is no longer limited within the territorial limit of the urban spaces; rather, the rural and the hinterland are also part of the urbanisation process. Brenner (2019, p.15) argued that we need a multiscalar yet territorially differentiated conceptualisation of urban space itself and the geographies of urbanisation to decipher the variegated patterns and scales in which the sociospatial processes work. Thus, in understanding urbanisation and cities, we need both up-scaling to have an extensive idea of how the urban is connected to other urban and non-urban areas and down-scaling as well to analyse how micro-level socio-spatial processes work even at the level below the well-defined territorial limits of a city, i.e., wards.

In the studies of urban geography in India, we are limited in both levels of scale. In studying a city, we cannot go beyond the territorial limit of that city because we study it at a fixed scale, considering the city as a discrete independent entity. We also do not find it applicable to understand how socio-spatial processes operate at a very micro level within a city, such as a small neighbourhood. This limitation is bounded by our focus on the spatial pattern rather than the spatial process, and in doing so, we fall back heavily on maps and diagrams. Making maps in the traditional sense requires territorial boundaries and their divisions, be it the boundary of a town or the boundaries of the wards of a town/city. For ease of making maps and diagrams, we prefer either remotely sensed data or quantitative data collected from the field through a structured questionnaire survey. However, these kinds of data never lead us to understand the economic, social and cultural transformations happening in a town/city. To understand those processes, we need a multiscalar approach beyond the traditional representation of maps, diagrams and high-end quantitative techniques. Neither of these helps us

understand urban processes, which is an agglomeration of various social, economic, and political forces. Understanding processes in an urban setting, which is highly dynamic in nature, starts with the 'how' question—and this 'how' question cannot be answered with the help of high-end statistical techniques or GIS platform-based modelling. The answers to this 'how' question can be obtained by conducting well-grounded research using qualitative methods and the critical analysis of phenomena.

To explain the problem in detail, we can take an example. We, the geographers, often use land use land cover (LULC) maps to show a city's land use land cover patterns and the changes therein. Scholars also try to predict future changes with the help of software-based model building techniques. This kind of remote sensing data-centric research does not tell us anything about the process of change in the land use and land cover of a town/city. It does not give us any information about whose land it is, who uses it, and for what reason. It also does not give us any information about who has access to those uses, how these transformations, i.e., land use land cover changes, are happening, and through which kinds of political and economic processes. We are too obsessed with the visible features of built-up areas and their spatial patterns. We hardly pay attention to the processes which bring about those transformations or changes in the LULC. Another example might be the case of studying transport in cities. In the study of transport, we make maps of the streets of a city but do not consider that streets are worth investigating for uses other than for transport and their spatial patterns. The streets are multi-dimensional spaces of a town/city, having specific social, cultural, political and economic activities depending on their location in different parts of the city. The study of streets, therefore, can be a proxy for understanding a city and its socio-spatial processes at a very micro scale. The study of streets also poses a difficulty in conceptualising an area of study because it has a linear geometry instead of a polygon, the traditional idea of an area. Rather than facing those difficulties, we prefer to leave those out as not worth studying.

Another problematic in our question of scale lies in the conceptualisation of a representative sample. We still believe that even in a big city, our sample size of research participants should be representative enough to validate the claim of the entire city as a case. In the name of that representation and a large number of sample surveys, our in-depth understanding of a phenomenon gets compromised. If we want to have a deeper understanding of the socio-spatial processes in a city, we need to utilise both scaling down and scaling up, depending on the research questions and the objectives. However, in the process of scaling down, sometimes we need to focus on a very micro scale, which may not be eligible for

map making or fit for diagrammatic presentation, like we do when showing spatial patterns. Scaling down sometimes requires a change in focus from 'population' to 'people', i.e., from the mass to individual/groups or from the general to the specific. This change of scale is important to understand the cityscape. We need to understand who decides to develop a city and in which ways. Each and every space of a city is a 'produced space' and is constantly being re-produced. Urban landscapes result from continuous interaction between power groups with multiple cross-cutting interests. People from diverse backgrounds come to the city to work and live and sometimes they also share the same neighbourhoods. The enormous tensions between them and the resultant socio-cultural conflicts raise the question of differential possessions and dispossessions in the city (Banerjee-Guha, 2010). All these processes have enormous impacts on the landscape/cityscape we study in geography. If we do not try to use a multiscalar approach in understanding the processes of city building and its transformations, then how can we claim a holistic approach in urban studies, which lies at the core of the discipline of geography?

Methodology

Because of the substantial influence of positivist philosophy and spatial science approach in geography, the common methods used in urban research within the discipline are dominantly quantitative techniques and RS/GIS tools. For data generation from field research, we heavily rely on the structured questionnaire (easily transferable to digits) and perception survey (often used with a Likert scale to facilitate quantification) as the data collection methods. However, the structured questionnaire does not help us understand complex phenomena inherently linked to research issues in urban spaces. Instead, semi-structured and open-ended questions are more useful if we stick to the questionnaire schedule as a dominant research method. Moreover, the questionnaire method can only tell us about the perceived space and cannot capture the conceived and lived experiences of the citizens vis-a-vis research participants. Therefore, we need to question the traditional methods we use in our research to gauge whether those methods are efficient enough to understand and analyse the complex world of urban spaces.

We have to remember that going beyond the questionnaire method is important. Questionnaires only help us to some extent at the beginning of grounded research to get the background data or information about the communities we interview, and also help us to get acquainted with the research participants for in-depth research afterwards. Repeated visits and conversations with the research participants are essential for in-depth empirical research, which we often neglect to do. I often wonder why we, the geographers, cannot stretch our methods beyond the questionnaire.

The answer lies in our disciplinary training. We do not train our Master's students to conduct research using qualitative methods and to write out of the data collected in the form of text instead of quantitative ones. Another problem linked to using qualitative methods is the scale and quantum of data. When we use qualitative methods, the area under research is bound to be small; the number of research participants will be smaller. This brings in the question of representation. We think that a small study area and a smaller size of research participants do not represent the case of a city. This claim comes from the idea of generalisation of observed phenomena. The idea of representative scale poses the problem of selection of research methods, and in that process, qualitative methods are often discarded. Unless we overcome the idea of generalisation in our research, we will not be able to welcome qualitative methods in studying urban spaces. Without the use of mixed methods (quantitative and qualitative), our studies will not be able to gain much depth in analysing highly complex and dynamic spaces like cities and towns.

In the process of empirical research, we have another limitation, which is interviewing one target group for a particular research. In that context, we often target the household for ease of getting answers from anyone present at home during our field survey. However, we cannot target one group of citizens for in-depth research in urban spaces, as each and every issue is the output of complex negotiations between different stakeholder groups in the city. Without including the voices of each of these stakeholders, the analysis of that issue remains superficial and incomplete. Moreover, good writing demands critical analysis and evaluation of information. That information should be collected from multiple sources to verify the responses given by one target group against the others to develop an argument. Using only one category of data might lead to a biased argument, to avoid which we must interview different target groups associated with an urban issue.

Another methodological problem lies in the map making process itself. We think that map making is an essential part of research, and without maps showing the spatial variations, the study does not qualify as part of geography research. The process of traditional map making always follows some fixed boundaries, such as boroughs or wards in a city. To satisfy that process, we often collect data from different wards to make maps and try to project that those data represent the entire ward, vis-a-vis the entire city. For the sake of map making, our empirical research generates scanty data from each area of the city, representing neither the neighbourhood nor the city. For map making, we do not need the division of space in the form of administrative

boundaries these days, and it can be done at any scale. There are numerous methods of making maps, even at a very micro scale, with the help of a Google Earth image and the GPS locator of an Android phone. With the help of these simple tools, we can map various social and cultural phenomena and their spatial processes. Remotely sensed data are generated by a satellite placed in the earth's orbit, which can give us only an idea of the visible phenomena of a city. These kinds of data cannot provide us with the stories of lived experiences and the negotiations over claims of space in a city.

Text gathered through qualitative-ethnographic research is also a form of powerful data that we, the urban geographers in India, have yet to recognise. We need to use better methods to understand urban spaces and issues critically. If we are not open enough in our methods, such as using open-ended questions, informal interviews, informal conversations/ discussions, participant and non-participant observations, and group discussions to explore the underlying processes associated with the spatial patterns of any urban issue, our works are not going to be acknowledged in a big way in the future either. To inculcate better methods, we must turn our focus from the 'spatial science' mode to the 'production of space' mode of critical urban geography.

Theoretical Grounding and Critical Analysis

The importance of empirics is overemphasised in India's current writing of urban geography. Given the high dependence on empirical research, the theoretical background often weakens. The findings in research writing are often laden with observed phenomena and their spatial variations without linking those observations to a stronger theoretical framework. The balance between empirics and theories is usually missing in these writings. The articles based on the literature review become a mere description of the earlier research without much critical reflection on the existing studies. The articles based on empirical research hardly take note of the existing literature and relevant theories. Some lower-grade social science journals follow the structure of articles used in the natural sciences, such as 'findings' and 'observations', which does not allow a researcher to bring up critical reflections from the research in the writing process. Research and writing based on our observations, without linking them with the current theoretical debates, also weaken the merit of the writing, and limit the prospects of being published in good journals of urban studies.

Now, the question arises: Why is the theoretical grounding of our research so weak? The answer lies in our badly framed curriculum and the lack of critical reading and writing in those curriculums. Our curriculum is often not updated to capture the current theoretical debates in urban studies. Language also becomes a bar for our students, who are not proficient enough in critically reading

the current urban theoretical literature. Critical analysis demands critical reading and writing, but we do not train our students well in either of these respects. They tend to read everything as facts and never learn to question the writing of others. This non-critical practice develops from our bad teaching method of one-way lectures, without encouraging students to question everything they hear, read or learn. Critical analysis requires solid arguments backed by strong evidence from critical empirical research and verified data sources. To critically analyse any urban phenomenon, we need to know how it functions, understand that we need to consider all sides, and evaluate and critique available information from all sources.

Our curriculum does not have much scope to develop critical writing skills either. The writing assignments, for the most part, include one Master's dissertation and the interpretation of maps and diagrams under their curriculum on quantitative techniques and map making. Because of the lack of training in writing as part of their learning process, they often write an interpretation of maps, diagrams or statistical analysis in the form of mere description, which is already observable from those maps, diagrams and statistics. The weak, uncritical writing practices limit their capacities in future research and writing. Critical understanding and analysis can only be possible when we explore the other disciplines engaged in urban studies and try to adopt some of their methods besides our traditional ones. To understand urban spaces well, we need the lens of political economy and political ecology, specifically the neo-liberal economy and its associated nexus with the current urbanisation and environmental discourses. We are failing on these counts to analyse the urban effectively. David Harvey's works become important in these approaches. Moreover, Henri Lefebvre's concepts of the production of space and the right to the city have become very important lenses for understanding the current urban transformation processes. It is necessary to analyse how the city is being built and transformed and who has the right in that city-building process. Who gains and who loses in that process? The answers to these questions lie in the critical understanding of space and spatiality.

Conclusion

In teaching and researching urban geography, we mostly follow a reductionist approach. In that process, we create categories and try to understand each as independent and completely separate from the other categories. There are many categories, such as urban economy, urban transport, urban environment, urban infrastructure, urban climate change, urban services, urban governance, etc. If we try to understand and analyse any urban phenomena with a critical lens, we can easily observe that categories are never discrete, as each is intricately

linked to some of the other categories. They are deeply enmeshed in such a web that trying to single out one and investigate it separately would be a misleading proposition. Despite this, researchers still tend to gravitate towards the earlier concept of boundaries because of their high reliance on reductionism. In this process, the holistic angle of research gets lost. Here, by 'holistic', I mean the practice of checking things outside the perimeter of one issue and explaining how this is influenced by other aspects as well. Through this process, we can probably restore the quality of research and writing practices in Indian urban geography.

In research and writing about cities, we must quickly move from understanding spatial patterns to critically analysing socio-spatial processes to restore our claim to urban studies scholarship. If we hesitate to take that turn, we will lose out. Our dilemma lies in giving up the identity of this discipline as a spatial science, something many of us are obsessed with. We often forget that perceived space is not the only space we must be concerned about. Instead, we need to reconsider the biased relations with positivism, spatial science and quantitative techniques with which we will be unable to analyse beyond the perceived space. Henri Lefebvre's (1974, translated in 1991) work on the production of space can guide us on why and how we need to understand and analyse the conceived and lived spaces to understand and analyse an urban space.

We also need a rigorous reading of Edward Soja's (1996) conceptualisation of 'third space'. Traditionally, spatiality was confined to binary approaches of either 'seen', as concrete material forms to be mapped, analysed, and explained (physical/material space), or as 'mental constructs', ideas about and representations of space and its social significance (imagined representation of space). By critically re-evaluating this dualism, Edward Soja (1996) developed the concept of a third space, a creative combination and extension of the first two perspectives and an extension beyond those to new and different modes of spatial thinking. To understand the changes in urbanisation and the transformation in cities under the neo-liberal economy, we also need an extensive reading of David Harvey (2001; 2012) to get a strong theoretical framework of political economy for urban explanation. We need to clarify our conceptual and theoretical understanding of Lefebvre's lived space, the third space of Soja, and the Marxist interpretation of cities by David Harvey before our research and writing will be critical enough to reach the required quality in urban scholarship. We need to revise our content and methods of teaching urban geography and then focus on improving the approaches and methods of research and writing the urban. If we cannot act on these points soon, we will continue to 'miss the bus'. The choice is ours!

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