

XXVIII IIPS National Seminar - 2024

International Institute for Population Sciences (IIPS), Mumbai
In collaboration with
Department of Statistics, Banaras Hindu University (BHU), Varanasi



Tracking progress of
Sustainable Development Goals
with a focus on Uttar Pradesh



(स्थापना/ Established in 1956)
बेहतर भविष्य के लिए क्षमता निर्माण
Capacity Building for a Better Future



SEMINAR ORGANIZING COMMITTEE

IIPS, Mumbai

Patron

Dr. S.K. Singh
Director (Addl. Charge), IIPS

Coordinators

Dr. Sanjay K. Mohanty
Dr. Dipti Govil
Dr. Guru Vashisht

Dr. Abhishek Singh
Dr. Kaushalendra Kumar
Dr. Kunal Keshri

BHU, Varanasi
(Department of Statistics)

Patron

Dr. A.K. Tripathi
Director, Institute of Science, BHU

Coordinators

Dr. K.K. Singh
Dr. Alok Kumar

Dr. Brijesh P. Singh
Dr. A.K. Tiwari

Seminar Secretariat

Ms. Paramita Majumdar
Ms. Ayushi Singh
Mr. Manish Kumar
Mr. Vikash

Ms. Madhurima Sharma
Mr. Vikas K. Wadhve
Mr. Ketan D. Andhale

About the Seminar

The International Institute for Population Sciences (IIPS) is pleased to announce its XXVIII National Seminar with the theme, ***"Tracking progress of Sustainable Development Goals with a focus on Uttar Pradesh"*** in collaboration with Department of Statistics, Banaras Hindu University (BHU). Envisioned in 2015, the sustainable development goals (SDGs) list a set of 17 interconnected goals in a wide range of social, economic, and environmental spectrum. In India, the SDG indicators have been integrated in national and state planning framework. However, the progress in achieving the SDGs is largely uneven across the states and socio-economic groups. Demographic changes in Northern States of India may act as catalyst in realising the SDGs. The primary objective of this national seminar is to deliberate on India's progress in realizing the SDGs with a special emphasis on Uttar Pradesh.

This national seminar offers a valuable platform to academia, researchers, development sector, professionals and policymakers. It will serve as an ideal forum for these diverse stakeholders to engage in meaningful dialogues and deliberations regarding the future trajectory of Uttar Pradesh's development. The collaborative efforts can address the state's unique challenges and harness its potential for inclusive and sustainable development.

About International Institute for Population Sciences (IIPS), Mumbai

The IIPS was established in 1956 jointly by Government of India, United Nations and Sir Dorabji Tata Trust as Demographic Training Centre to serve as a regional centre for teaching, training and conducting research in the area of population studies for ESCAP region. Even today, IIPS is the only recognized Deemed University of its kind in the world completely devoted to teaching and research on population related areas. The institute is under the auspices of the Ministry of Health and Family Welfare, Government of India. IIPS offers six regular courses, namely, Diploma in Health Promotion Education (DHPE), Post-Graduate Diploma in Community Health Care (PGDCHC), M.A./M.Sc. in Population Studies (two-year), M.Sc. in Biostatistics and Demography (two-year), Master of Population Studies (MPS) (one-year), and Ph.D. The institute also conducts short-term courses from time-to-time for various international and national organizations on population and health issues.

About Banaras Hindu University and Dept. of Statistics

The Banaras Hindu University is an internationally reputed temple of learning, situated in the holy city of Varanasi. It was founded by the Pandit Madan Mohan Malviya, in 1916 with cooperation of great personalities like Dr Annie Besant, who viewed it as the University of India. The university has taken a leadership role in promoting new ideas, the spirit of integration of the world, and cultivation of intellect and culture.

The Department of Statistics, Banaras Hindu University (BHU) has been one of the leading departments in the country. It is dedicated to providing a comprehensive and high-quality education in statistics and related disciplines. It offers undergraduate, postgraduate, and doctoral programs, enabling students to gain a strong foundation in statistical theory, data analysis, and research methodologies. The University Grants Commission supported the department in the form of Special Assistance Programme (2009-14) and Department of Science and Technology, New Delhi helped it under its FIST Programme (2004-09). Besides, there is a Centre of Population Studies functioning under the Department by Population Council, USA in 1969.

Pre-Conference Workshop

Date: 11th February, 2024

Time: 11:00 am – 1:00 pm and 2:30 pm – 4:30 pm

Venue: Department of Statistics, BHU, Varanasi

National Transfer Accounts (NTA)

National Transfer Accounts is an analytical framework to access lifecycle deficit (LCD) from the age pattern of labour income, the monetary value of excess consumption for health, education and others by individuals across the lifecycle monetary resources of household (private) and that of the government (public). The framework facilitates to access how efficient and strong are the public funded programmes and social institutions to support the LCD in terms of monetary for any age including the period of young and old age dependents. As a byproduct the stages of demographic dividends can also be access and quantified. NTA framework is based on introducing age into the National Accounts and monetary inflow and outflow from the private and the public sectors are consistent with National Income and Product Accounts (NIPA) of financial accounting years.

Knowledge of National Income, Macro Economics, Large Scale Family Income & Expenditure Survey and conversant in STATA, SPSS and R are essential for learning NTA.

Resource Person:

Dr. Laishram Ladu Singh

Vice Chancellor, Bodoland University

Email: ladusingh2010@gmail.com

Programme Summary

Time Day / Date	08:30 – 10:00 am	10:00 – 11:30 am	11:30 – 11:40 am	11:40 am – 1:10 pm	1:10 – 2:15 pm	2:15 – 3:45 pm	3:45 – 4:00 pm	4:00 – 5:30 pm	5:30 – 6:30 pm	6:30 – 7:30 pm	7:30 – 9:00 pm
Day 1 12 th February, 2024	Registration (8:30 am onwards)	Inaugural Session*	High Tea (Ground Floor, Seminar Complex, Institute of Science, BHU)	Plenary Session I* Health related SDGs in Uttar Pradesh	Lunch (Ground Floor, Seminar Complex, Institute of Science, BHU)	T1: Child Health# T2: Migration and Urbanization – I# T3: Health and Health Care###	Tea Break (Ground Floor, Seminar Complex, Institute of Science, BHU)	T4: Progress of SDG in UP# T5: Political Demography## T6: Gender and Health###	Side Event** Population Studies in the context of New Education Policy	Cultural Programme*	Director's Dinner
	Poster Evaluation: 1:30 – 3:30 pm (Ground Floor, Seminar Complex, Institute of Science, BHU) ** Lecture Theatre I, Seminar Complex, Institute of Science, BHU *Mahamana Auditorium, Seminar Complex, Institute of Science, BHU, Varanasi										

Day 2 13 th February, 2024	09:30 – 11:15 am	11:15 – 11:30 am	11:30 – 1:00 pm	1:00 – 2:00 pm	2:00 – 3:30 pm	3:30 – 3:45 pm	3:45 – 5:15 pm	5:15-5:45 pm			
	T7: Population and Environment# T8: Malnutrition and Anemia## T9: Maternal Health###	High Tea (Ground Floor, Seminar Complex, Institute of Science, BHU)	Plenary Session II* One trillion- dollar economy of Uttar Pradesh	Lunch (Ground Floor, Seminar Complex, Institute of Science, BHU)	T10: Fertility and Family Planning# T11: Data and Methods## T12: Economic and Social Development###	Tea Break (Ground Floor, Seminar Complex, Institute of Science, BHU)	T13: Elderly Health# T14: Migration 2## T15: Health and Wellbeing###	Valedictory Session and Prize Distribution*			
	Poster Evaluation: 1:30 - 3:30 pm (Ground Floor, Seminar Complex, Institute of Science, BHU) Note: Posters to be kept at venue from 10:00 am to 5:00 pm. Presenters should be present at the venue during evaluation. *Mahamana Auditorium, Seminar Complex, Institute of Science, BHU, Varanasi										

Inaugural Programme

Date: 12.02.2024

Time: 10:00 – 11:30 am

**Mahamana Auditorium, Seminar Complex,
Institute of Science, BHU, Varanasi**

“BHU Kulgeet” Lighting of the Lamp (10:00 – 10:10 am)	
Welcome Address (10:10 – 10:20 am)	Dr. K.K. Singh Professor, Department of Statistics, Institute of Science, BHU, Varanasi
Honouring of Guests (10:20 – 10:30 am)	
Introduction to the Seminar (10:30 – 10:40 am)	Dr. S.K. Singh Professor & Director (Additional Charge), IIPS, Mumbai
Presidential Address (10:40 – 10:50 am)	Dr. Anil Kumar Tripathi Professor & Director, Institute of Science, BHU, Varanasi
Chief Guest’s Address (10:50 – 11:00 am)	Shri S.R. Meena DG (Stat), MoHFW, Delhi
Inaugural Address (11:00 – 11:10 am)	Dr. R.C. Yadava Former Professor, Department of Statistics, BHU, Varanasi
Demographic Transition in Uttar Pradesh (11:10 – 11:20 am)	Dr. Gyan Prakash Singh Professor & Head, Department of Statistics, Institute of Science, BHU, Varanasi
Vote of Thanks (11:20 – 11:25 am)	Dr. S.K. Mohanty Professor & Head, Department of Population and Development, IIPS, Mumbai
“National Anthem”	
High Tea (11:30 – 11:40 am)	

Plenary Sessions

Date: 12.02.2024 and 13.02.2024

**Venue: Mahamana Auditorium, Seminar Complex,
Institute of Science, BHU, Varanasi**

Plenary Session I

Health related SDGs in India

Day 1: 12.02.2024, Time: 11.40 am to 01.10 pm

Chair: Shri S.R. Meena DG (Stat), MoHFW, New Delhi Discussant: Dr. Niranjana Saggurti Country Director, Population Council, New Delhi	Speakers: Dr. S. K. Singh Professor & Director (Additional Charge), IIPS, Mumbai Dr. Hari Shankar Professor, IMS, BHU, Varanasi Dr. Faujdar Ram Former Director, IIPS Dr. Shireen J Jejeebhoy DASHRA, Mumbai Visiting Faculty, IIPS, Mumbai	Session Organiser: Sanjiv Singh, BHU, Varanasi Rapporteur: Paramita Majumdar, IIPS, Mumbai
---	--	---

Plenary Session II

One Trillion-dollar Economy of Uttar Pradesh

Day 2: 13.02.2024, Time: 11.30 am to 01.00 pm

Chair: Dr. Meena Khare Senior Advisor, National Center for Health Statistics, CDC, US Discussant: Dr. Mrutyunjaya Mishra HoD, Department of Economics, BHU, Varanasi	Speakers: Dr. Rajesh K. Chauhan Govt. of UP Dr. N.K. Mishra Professor, Department of Economics, BHU, Varanasi Dr. Rakesh Raman Professor, Department of Economics, BHU, Varanasi Dr. B. V. Singh Professor, Department of Economics, BHU, Varanasi	Session Organiser: Sanjiv Singh, BHU, Varanasi Rapporteur: Madhurima Sharma, IIPS, Mumbai
--	--	--

Side Event

Date: 12.02.2024, Time: 5:30 pm to 6:30 pm

Venue: Lecture Theatre I, Seminar Complex, Institute of Science, BHU, Varanasi
(with invitation only)

“Population Studies in the Context of New Education Policy (NEP)”

Chair: Dr. K.K. Singh Professor, Department of Statistics, BHU, Varanasi	
Dr. Aparajita Chattopadhyay Professor, IIPS, Mumbai	
<i>“Mainstreaming Population Studies at Undergraduate Level”</i>	
Dr. Faujdar Ram Former Director, IIPS, Mumbai	Dr. Mrutyunjaya Mishra HoD, Department of Economics, BHU, Varanasi
Dr. Indrani Roy Chowdhury Associate Professor, Jawaharlal Nehru University, New Delhi	Dr. Sandip Anand Associate Professor, University of Allahabad, Prayagraj
<i>“Employability of Under Graduates in Population Studies”</i>	
Dr. S. Irudaya Rajan Chair, IIMAD, India	Dr. Shankar Das Pro-Vice Chancellor, TISS, Mumbai
Dr. Ravi K. Verma Director, ICRW Asia, New Delhi	Dr. Niranjana Saggurti Country Director, Population Council, New Delhi

Technical Sessions

Day 1: 12th February 2024

T1-Child Health		
Time: 2.15 to 3.45 pm, Venue: Lecture Theatre I, Seminar Complex, Institute of Science, BHU		
TS. No.	Chairperson: Dr. Arvind Pandey Discussant: Dr. Murali Dhar	
	Session Organizer: Vikas Baranwal Rapporteur: Aditi B. Prasad	
	Presenter	Paper Title
T1.1	Usha Ram	<i>Progress In Under-5 Mortality In Uttar Pradesh And Its Districts: An Examination Through the Lens of Sustainable Development Goals</i>
T1.2	Utpal Kumar De	<i>Health Status of Under-5 Children in Four Metro Cities in India: A Comparative Analysis</i>
T1.3	Neha Shri	<i>Impact of High-Risk Fertility Behaviours on Under-Five Mortality in Uttar Pradesh: Insights from The Indian Demographic and Health Survey</i>
T1.4	Vaishnavi Gupta	<i>The Role of Breastfeeding History in The Development During Infancy and Childhood in Uttar Pradesh, India</i>
T1.5	Saurabh Singh	<i>Disparities In Child Anthropometric Failure: A Comparative Analysis of Aspirational and Non-Aspirational Districts in Uttar Pradesh</i>

T2-Migration and Urbanization - I		
Time: 2.15 to 3.45 pm, Venue: Lecture Theatre II, Seminar Complex, Institute of Science, BHU		
TS. No.	Chairperson: Dr. K.N.S Yadav Discussant: Dr. D.P. Singh	
	Session Organiser: Annpurna Rapporteur: Mihir Adhikary	
	Presenter	Paper Title
T2.1	Archana Roy	<i>Does Moving to A Parental Home Assure Pregnant Women Better Maternity Care? Evidence From NFHS-5 India</i>
T2.2	Reeti Debnath	<i>Seasonal Migrant Workers in Brick Kilns: A Mixed-Method Inquiry into Their Livelihood, Health, Well-Being</i>
T2.3	Vijaya Pradip Khairkar	<i>Changing Pattern of Female Out Migration In Uttar Pradesh: Issues and Challenges</i>
T2.4	Vijay Kumar	<i>Measuring Inequality Between Migrant and Non-Migrant People and Its Determinants: Evidence from Sectoral Decomposition Analysis Of Uttar Pradesh, India</i>
T2.5	Bittu Mandal	<i>Obesity Patterns in Indian Rural-To-Urban Migrants: Unravelling the Impact of Duration of Urban Residence Using a Nationally Representative Data</i>

Technical Sessions

Day 1: 12th February 2024

T3-Health and Healthcare		
Time: 2.15 to 3.45 pm, Venue: Lecture Theatre III, Seminar Complex, Institute of Science, BHU		
TS. No.	Chairperson: Dr. Shankar Das Discussant: Dr. Indrani R. Chaudhary	
	Session Organiser: Ashish Verma Rapporteur: Raza Muhammad	
	Presenter	Paper Title
T3.1	Dilip TR	<i>Public Spending on Health Care Services In Uttar Pradesh Since 2004</i>
T3.2	Suryakant Yadav	<i>Monthly Contributions to Life Expectancy and Lifespan Disparity: Analysing Seasonal Mortality Differentials in India</i>
T3.3	Mohit Kumar Pandey	<i>Caregiver Time Cost Associated with Stomach and Pancreatic Cancer Patients Care</i>
T3.4	Shruti Mishra	<i>Out-Of-Pocket Expenditure and Financial Hardships in India</i>
T3.5	Shakeel Ahmed	<i>Inequality In Healthcare Access in Uttar Pradesh</i>

T4-Progress of SDGs in UP		
Time: 4.00 to 5.30 pm, Venue: Lecture Theatre I, Seminar Complex, Institute of Science, BHU		
TS. No.	Chairperson: Dr. Ashwini Nanda Discussant: Mrs. Sheetal Verma	
	Session Organiser: Shilpa Minz Rapporteur: Sadanand Karun	
	Presenter	Paper Title
T4.1	Padmavathi Srinivasan	<i>Declining Lag Periods on Select Components of Health-Related SDG Goals of Uttar Pradesh Compared to Tamil Nadu in Recent Times</i>
T4.2	Shaveta Kohli	<i>Regional Dynamics: A Comprehensive Analysis Of Uttar Pradesh's Performance Towards SDGs In Comparison to North Indian States</i>
T4.3	Hiral K. Shah	<i>Exploring The Intersection of Health and Sustainable Development Goals: A Research Inquiry into Fostering Wellbeing in Rural Uttar Pradesh For Stronger Communities</i>
T4.4	Manoj Narayan	<i>Achieving SDG 3 (Good Health and Wellbeing) Target: Insights into Key Health Indicators with Special Reference To Uttar Pradesh</i>
T4.5	Deepali Mishra	<i>Assessing The Alignment of Education Outcomes In Uttar Pradesh With Sustainable Development Goals: A Comprehensive Analysis</i>

Technical Sessions

Day 1: 12th February 2024

T5-Political Demography		
Time: 4.00 to 5.30 pm, Venue: Lecture Theatre II, Seminar Complex, Institute of Science, BHU		
TS. No.	Chairperson: Dr. S. Lahiri Discussant: Dr. Udaya S. Mishra	
	Session Organiser: Avinash Shukla Rapporteur: Amiya Saha	
	Presenter	Paper Title
T5.1	Sandip Anand	Conscience Perceptions and Happiness among India Youth
T5.2	Nandita Saikia	Awareness And Impact of Prime Minister Narendra Modi's Mann Ki Baat Program's in India: A Mixed Method Study
T5.3	Ashok Mondal	Decoding Forced Dialogue and Ethnic Identity Erosion in India's Smallest State: A Literature Review
T5.4	Sunil Sarode	Review of Electoral Participation in Four States of India in Sequence of Development
T5.5	Souvik Mondal	Politics of Caste Census in India: A Discussion.

T6-Gender and Health		
Time: 4.00 to 5.30 pm, Venue: Lecture Theatre III, Seminar Complex, Institute of Science, BHU		
TS. No.	Chairperson: Dr. Ravi K. Verma Discussant: Dr. Niranjana Sagruti	
	Session Organiser: Chitra Saroj Rapporteur: Abhishek Anand	
	Presenter	Paper Title
T6.1	Vishal Dev Shastri	Bridging Gender Empowerment Gaps: A Comprehensive Analysis Using Multifaceted Data Sources
T6.2	Harihar Sahoo	Separation and Divorce in North India
T6.3	Manas Ranjan Pradhan	Consanguineous Marriage in India: A Geospatial Analysis
T6.4	Priti Kumari	Index of Gendered Differences: A Spatial Analysis for Uttar Pradesh
T6.5	Aditi B. Prasad	The Effect of Childcare on Occupational Mobility: Narratives of Stay-At-Home Mothers in Urban India

Technical Sessions

Day 2: 13th February 2024

T7-Population and Environment		
Time: 9.30-11.15 am, Venue: Lecture Theatre I, Seminar Complex, Institute of Science, BHU		
TS. No.	Chairperson: Dr. Mrutyunjaya Mishra Discussant: Dr. M. S. Panwar	
	Session Organiser: Anamika Tiwari Rapporteur: Ankita Roy	
	Presenter	Paper Title
T7.1	Sanatan Nayak	<i>Development Of Renewable Energy in India: State Level Analysis</i>
T7.2	Amlan Kanti Roy	<i>Ecological Wisdom in Vindya-Satpura Range: Praxis for Human Survival</i>
T7.3	Arumugam Sankaran	<i>To What Extent the Working Population Pollutes the Existing Environment in India? An Econometric Evidence for the Past Six Decades</i>
T7.4	Swati Sinha Babu	<i>Assessment of the Impact of Population Growth on Environmental Degradation: A Panel Data Analysis</i>
T7.5	Amiya Saha	<i>Assessment Of Public Open Spaces (POS) And Landscape Quality (LQ) in Kolkata Metro City Using Per Capita Pos Index: A Micro Level Spatial Analysis</i>
T7.6	Mihir Adhikary	<i>Air Pollution and Child Mortality at the Intersection of Social and Economic Class</i>

T8-Malnutrition and Anemia		
Time: 9.30-11.15 am, Venue: Lecture Theatre II, Seminar Complex, Institute of Science, BHU		
TS. No.	Chairperson: Dr. K. K. Singh Discussant: Dr. L. Ladusingh	
	Session Organiser: Ila Verma Rapporteur: Nandlal Mishra	
	Presenter	Paper Title
T8.1	Rahul Kumar	<i>Prevalence Of Sickel Cell Anemia in India: A Case Study in the Nagpur-City and its Neighbour Districts.</i>
T8.2	Sk Md Abul Basar	<i>Status of Nutrition Insecurity of the Poor and Non-Poor Households -A Study with Special Reference to Uttar Pradesh vis-a-vis Other States of India</i>
T8.3	Akancha Singh	<i>Association of Childhood Disadvantage with Malnutrition in Older Ages in India</i>
T8.4	Madhurima Sharma	<i>Prevalence and Detecting Spatial Clustering of Anaemia Among Children 6-59 Months in the Districts of Uttar Pradesh, India</i>
T8.5	Subhojit Let	<i>Exploring the Spatiotemporal Variations and Determinants of Overweight/Obesity Among Urban Indian Women of Reproductive Age from 2005 to 2021</i>
T8.6	Mahadev Bramhankar	<i>Anemia Burden Among Tribal and Non-Tribal Women and Children at the National and Sub-National Level and Their Determinants in India</i>

Technical Sessions

Day 2: 13th February 2024

T9-Maternal Health		
Time: 9.30-11.15 am, Venue: Lecture Theatre III, Seminar Complex, Institute of Science, BHU		
TS. No.	Chairperson: Dr. Uttam Singh Discussant: Dr. Akansha Gupta	
	Session Organiser: Debayan Koley Rapporteur: Somnath Jana	
	Presenter	Paper Title
T9.1	Ajay Verma	<i>Spatial Distribution and Influencing Factors of Zero Consumption of Iron Folic Acid (IFA) among Pregnant Women in India: Evidence from National Family Health Survey, 2019-21</i>
T9.2	Bashir Ahmad Bhat	<i>Do Increasing Number of ANC Visits Improve the Quality of ANC Services in India</i>
T9.3	Prashant Verma	<i>Unveiling Antenatal Care Utilization in India: Leveraging Machine Learning and Count Regression Modelling</i>
T9.4	Jagriti Annu	<i>Determinants Associated with Underutilization of Antenatal Care Visits In Uttar Pradesh: Results from National Family Health Survey 5</i>
T9.5	Sucharita Halder	<i>Spatial Distribution of Maternal Health Deprivation in Uttar Pradesh, India: A District Level Analysis Based on NFHS-4 And NFHS-5</i>
T9.6	Anshika Singh	<i>Socio-Economic Factors Contributing to the Short Birth Interval among Reproductive-Aged Women in India: An Inequality Decomposition Analysis</i>

T10-Fertility and Family Planning		
Time: 2.00-3.30 pm, Venue: Lecture Theatre I, Seminar Complex, Institute of Science, BHU		
TS. No.	Chairperson: Dr. R.C. Yadav Discussant: Dr. Poonam Singh	
	Session Organiser: Deepa Rapporteur: Vaishnavi Gupta	
	Presenter	Paper Title
T10.1	AK Sharma	<i>Changing Issues in Population Research in India</i>
T10.2	D.A. Nagdeve	<i>Levels, Trends and Fertility Differentials in Uttar Pradesh</i>
T10.3	R.S.Goyal	<i>Whether the Environmental Conditions of Living Constrain Urban Poor Ability to Benefits from Family Planning and Healthcare Services?</i>
T10.4	Hricha Rai	<i>Son Preference and Child Bearing Pattern in Uttar Pradesh</i>
T10.5	Shanu Priya	<i>Intergenerational Changes in Fertility Behaviour and Family Planning Services in Saharsa District, Bihar</i>

Technical Sessions

Day 2: 13th February 2024

T11-Data and Methods		
Time: 2.00-3.30 pm, Venue: Lecture Theatre II, Seminar Complex, Institute of Science, BHU		
TS. No.	Chairperson: Dr. S. N. Dwivedi	
	Discussant: Dr. Usha Ram	
	Session Organiser: Isha Singh	
	Rapporteur: Amit K. Goyal	
	Presenter	Paper Title
T11.1	Jayanta Kumar Basu	<i>Is Completeness in Death Registration Improving During Last Two Decades of Civil Registration and Vital Statistics (CRVS) System Strengthening in Uttar Pradesh, India?</i>
T11.2	Somnath Jana	<i>Unveiling Methodological Nuances: A Comparative Study on Design Effect and Intra-Class Correlation in NFHS And LASI</i>
T11.3	Nandlal Mishra	<i>Population Figures of Uttar Pradesh: Estimates in the Absence of Census 2021</i>
T11.4	Vandita Srivastava	<i>Predictive Analysis of Domestic Violence Using Machine Learning: Contribution Towards Goal 5 Of SDG.</i>
T11.5	Shalini Jaiswal	<i>Multilevel Survival Modelling of Neonatal Mortality under Some Prognostic Factors in Uttar Pradesh</i>
T11.6	Martin Enock Palamuleni	<i>Indirect Estimation of Fertility using Rele method: An Application to South Africa/Provinces/municipalities</i>

T12-Economic and Social Development		
Time: 2.00-3.30 pm, Venue: Lecture Theatre III, Seminar Complex, Institute of Science, BHU		
TS. No.	Chairperson: Dr. Tulika Seth	
	Discussant: Dr. U. S. Mishra	
	Session Organiser: Pappu K. Singh	
	Rapporteur: Shreyantika Nandi	
	Presenter	Paper Title
T12.1	Arjun K	<i>Family System and Ingrained Individualism as an Embodiment of Human and Knowledge Capital: A Serendipity of Long-Run GDP Per Capita Growth</i>
T12.2	Manik Kumar	<i>Not in Employment Education and Training (NEET) Profile of Youth in Uttar Pradesh: Demographic Dividend or Disaster</i>
T12.3	Suman Singh	<i>Examining Economic, Social Development of Uttar Pradesh</i>
T12.4	P. Murugesan	<i>Health System in India: Programs, Implementation and Challenges</i>
T12.5	Priyabrata Sahoo	<i>Is Growth Pro-Poor? : Analysis of Poverty Among Regions of Uttar Pradesh</i>

Technical Sessions

Day 2: 13th February 2024

T13-Elderly Health		
Time: 3.45-5:15 pm, Venue: Lecture Theatre I, Seminar Complex, Institute of Science, BHU		
TS. No.	Chairperson: Dr. Sulbha Parsuraman Discussant: Dr. Abhimanyu Singh Yadav	
	Session Organiser: Sunil Yadav Rapporteur: Mohit Kr Pandey	
	Presenter	Paper Title
T13.1	Bजारंग Bahadur	<i>Struggling for Dignity: Older Adults Confronting Discrimination in Contemporary India</i>
T13.2	Krishna Dornalpalle	<i>Understanding an Association Between Occupation and NCDs among Older Population in India</i>
T13.3	Paramita Majumdar	<i>Understanding Successful Aging in Central India: A Maslowian Perspective on Hierarchy of Needs</i>
T13.4	Amit Kumar Goyal	<i>Gender Differences in Chronic Pain and its Treatment among Middle-Aged and Older Adults of India</i>
T13.5	Umakanta Sahoo	<i>Inequality in Need Predicted Utilization of Healthcare Services Among Middle-Aged Adults and Elderly in India: A Secondary Analysis from LASI Wave-1</i>

T14-Migration and Urbanization - II		
Time: 3.45-5:15 pm, Venue: Lecture Theatre II, Seminar Complex, Institute of Science, BHU		
TS. No.	Chairperson: Dr. S. Irudaya Rajan Discussant: Dr. Vikas Sharma	
	Session Organiser: Shubham Pathak Rapporteur: Neelkamal Kalita	
	Presenter	Paper Title
T14.1	Dharmendra Pratap Singh	<i>Internal Migration in India: Emerging Trend and Some New Facts</i>
T14.2	Shinjini Ray	<i>The Role of Childrens' Migration in Social Network and Morbidity Status of Older Parents</i>
T14.3	Shahana Purveen	<i>Forming Occupational Niche: A Case Study of Migrant Drivers in Mumbai</i>
T14.4	Garima Jasrotia	<i>Assessing Environmental Sustainability of a Smart City: Case Study of Varanasi Towards Achieving SDG 11.3</i>
T14.5	Shivang Sharma	<i>Rethinking Mumbai's Development: Embracing Complexity and Fostering Sustainability</i>

Technical Sessions

Day 2: 13th February 2024

T15-Health and Wellbeing		
Time: 3.45-5:15 pm, Venue: Lecture Theatre III, Seminar Complex, Institute of Science, BHU		
TS. No.	Chairperson: Dr. UV Somayajulu Discussant: Dr. Ravi Prakash	
	Session Organiser: Garima Yadav Rapporteur: Javed Alam	
	Presenter	Paper Title
T15.1	Kamalesh K. Patel	<i>Burden of Disability in India, 2021 by Age, Sex and State: Evidence from NFHS-5 and Census Projected Data</i>
T15.2	Priyotosh Laha	<i>Regional Variation in Cataract Prevalence in India with Special Focus on Central India</i>
T15.3	Shamrin Akhtar	<i>Unravelling the Sequence of Chronic Diseases in Older Adults by Type of Industry</i>
T15.4	Priyamadhaba Behera	<i>Socioeconomic Gradient of Lean Diabetes in India: Evidence from National Family Health Survey, 2019-21</i>
T15.5	Sharatchandra Haobijam	<i>Spatial Variation of Chronic Disease Among Women Aged 15-49 In Northeast India: Evidence from National Family Health Survey</i>

Valedictory Session & Prize Distribution	
Day 2: 13.02.2024 Time: 05:15 pm to 05:45 pm	
Mahamana Auditorium, Seminar Complex, Institute of Science, BHU, Varanasi	
Guest of Honour's Remarks (05:15 – 05:20 pm)	Dr. Binod Kumar Singh Director, NATMO
Key Reflection (05:20 – 05:25 pm)	Dr. S.K. Mohanty Professor and Head, Department of Population and Development, IIPS, Mumbai
Concluding Remarks (05:25 - 05:30 pm)	Dr. S.K. Singh Professor & Director (Additional Charge), IIPS, Mumbai
Way Forward (05:30 – 05:35 pm)	Dr. K.K. Singh Professor, BHU, Varanasi
Prize Distribution – Best Poster Presentation (05:35 - 05:40 pm)	
Vote of Thanks (05:40 - 05:45 pm)	Dr. Brijesh P. Singh Professor, Department of Statistics, BHU, Varanasi

Poster Session – I

**Day 1: 12.02.2024, Time: 1:30 – 3:30 pm, Venue: Ground Floor, Seminar Complex,
Institute of Science, BHU**

Evaluation Committee: Dr. K.K. Singh, Dr. Aparajita Chattopadhyay, Dr. Archana K. Roy

Session Organiser: Hricha Rai and Ankush Singh

Sl. No.	Name of the Presenting Author	Title
P1.1	Neelam Singh	<i>Determinants of Temporal Migration and Perceived Satisfaction of Migrants</i>
P1.2	Tushar Dakua	<i>Cross-Border Mobility in South Asia: Exploring Factors Driving Indian Migration to Nepal and Analysing the Impact on Migrant Communities</i>
P1.3	Saumya Chauhan	<i>Patterns and Determinants of Short-Term Youth Migration in Uttar Pradesh</i>
P1.4	Shreya Nupur	<i>Resilient or Vulnerable to COVID-19 Shock: Does Migrants and Their Households' Characteristics Has Any Role to Play?</i>
P1.5	Neha Soni	<i>Population Projection of Uttar Pradesh: A Modelling Approach</i>
P1.6	Vishaka S Shetty	<i>Utilization of Contraceptive Methods and Its Impact on Low, Ideal, and High Fertility States in India</i>
P1.7	Sneha Verma	<i>Exploring Disparities between Women's Fertility and Social Structure in Eastern Uttar Pradesh, India</i>
P1.8	Pooja Tripathi	<i>Exposure To Family Planning Messages Through Mass Media as a Determinant of Reversible Modern Contraceptive Use Among Rural Women in the Empowered Action Group States of India</i>
P1.9	Roni Sikdar	<i>Unlocking the Secrets of Low Fertility in India: A Study of Fertility Preferences a Women's Choice or State Compliance?</i>
P1.10	Gwmsath Mushahary	<i>Impact of Labor Migration on Left-Behind Families: Evidence from the Tribal Villages of Assam</i>
P1.11	Javed Alam	<i>Analysing the Influential Factors: A Study on Determinants of Educational Expenditure in India</i>
P1.12	Ravi Tripathi	<i>Crowd Prediction in Ayodhya Using Machine Learning</i>
P1.13	Robin Raj	<i>Time Use of Elderly Persons in India</i>
P1.14	Satyam Kumar Rai	<i>Spatial Distribution and Associated Factors of Malnutrition among Under-Five Children in Uttar Pradesh</i>
P1.15	Shreyantika Nandi	<i>Social Capital and Psychological Distress in Widowhood Evidence from a Cross-Sectional Study</i>
P1.16	Sourav Dey	<i>Is Health Insurance Coverage Linked to Household's Health Risk Composition in India: An Exploration Based on National Sample Survey</i>

Poster Session – I

**Day 1: 12.02.2024, Time: 1:30 – 3:30 pm, Venue: Ground Floor, Seminar Complex,
Institute of Science, BHU**

Evaluation Committee: Dr. K.K. Singh, Dr. Aparajita Chattopadhyay, Dr. Archana K. Roy

Session Organiser: Hricha Rai and Ankush Singh

Sl. No.	Name of the Presenting Author	Title
P1.17	Abhishek Bajpai	<i>Growth and Impact of Online Services in India</i>
P1.18	Anurag Yadav	<i>A Review of Extreme Weather Events and Nutritional Outcomes: A Bibliometric Analysis</i>
P1.19	Babita	<i>Assessing Opportunities For M-Health in Uttar Pradesh: Mobile Phones Ownership and Internet Use among Women in Reproductive Age</i>
P1.20	Abhishek Gupta	<i>Regional Variation of Child Malnutrition Indicators in Uttar Pradesh.</i>
P1.21	Mukesh Vishwakarma	<i>Mapping and Analyzing Undernutrition in Children Under-Five across Low Socio-Demographic States of India.</i>
P1.22	Prateek Singh	<i>Is Income More Relevant Than Education? Dynamic of Determinants of Inequality Child Undernutrition Indicator in India 2006-21</i>
P1.23	Ankita Roy	<i>Malnutrition among the Elderly in India: An Evidence from Longitudinal Ageing Study</i>
P1.24	Indrajit Goswami	<i>Conducting an Exploratory Spatial Analysis of Low Birth Weight and Its Influencing Factors In Uttar Pradesh</i>
P1.25	Keshav Vishal Singh	<i>The Role of Agriculture Sector in Poverty Alleviation and Employment Generation: Study of Uttar Pradesh</i>
P1.26	Abhiyan Chaudhari	<i>Decomposing The Gap in Intimate Partner Violence Between Scheduled Caste and General Caste Women in Uttar Pradesh: An Analysis of NFHS-5 Data</i>
P1.27	Manisha	<i>Social Inequality: Comparing Cross-Region Marriage Migrants with Local Women</i>
P1.28	Vikash Singh Patel	<i>Intimate Partner Violence and its Socioeconomic Correlates among Ever- Married Women in Karnataka: Evidence Based on NFHS-5</i>
P1.29	Priya Srivastava	<i>Beyond Demographics: A Holistic Examination of Health Behaviors Among Male Youths in the Digital Era in India through NFHS-5</i>
P1.30	Ravi Rakesh Singh	<i>A Study of E-Commerce Awareness Among Youth in Uttar Pradesh, With A Special Reference to Varanasi City</i>
P1.31	Sourav Biswas	<i>Assessing Groundwater Quality and its Association with Child Undernutrition in India: A Study of 22426 Groundwater Sites</i>
P1.32	Rachana Ramesh Shetty	<i>Age At Marriage and Its Determinants: A Region-Wise Comparative Study Between Kerala and Bihar</i>
P1.33	Neelkamal Alomayan Kalita	<i>Analysis of Variations in Accessibility of Public Health Facilities: A Comparative Study Based on Chamoli & Rudraprayag Districts.</i>

Poster Session – II

**Day 2: 13.02.2024, Time: 1:30 – 3:30 pm, Venue: Ground Floor, Seminar Complex,
Institute of Science, BHU**

Evaluation Committee: Dr. K.C. Das, Dr. Brijesh P. Singh, Dr. Mayanka Ambade

Session Organiser: Abhijeet and Puja Maurya

Sl. No.	Name of the Presenting Author	Title
P2.1	Abhishek Anand	<i>Exploring Multimorbidity Clusters in Relation to Healthcare Use and Its Impact on Self-Rated Health among Older People in India</i>
P2.2	Aratrika Saha	<i>Examining Dominant Factors of Hysterectomy among Older Women: Evidence from NFHS-5</i>
P2.3	Renuka E. Asagi	<i>Psychosocial Problems among Parents of Children with Multiple Disabilities</i>
P2.4	Binod Bihari Jena	<i>Morbidity and Cost of Health Care Services among Tribal Population in South Odisha</i>
P2.5	Chandan Kumar Hansda	<i>Participation of Men in Maternal and Child Healthcare Utilization in Uttar Pradesh</i>
P2.6	Vishal	<i>Evaluating the Vulnerable Population's Health and Wellbeing. Examining the Factors of Health Insurance Subscription among the Schedule Caste In Uttar Pradesh: Implications for Policy to Meet SDG3</i>
P2.7	Ganapati Y Sabhahit	<i>Statistical Model for Socio-Demographic and Economic Factors of Hypertension Among Men in India</i>
P2.8	Jyotsana Agarwala	<i>A Study on Consumer Buying Behaviour Towards Organic Produce and its Benefits on Health in Varanasi, Uttar Pradesh</i>
P2.9	Koushik Roy Pramanik	<i>Assessing the Financial Burden: A Comprehensive Study of Cancer Related Premature Mortality and Its Effect on India's Economic Productivity</i>
P2.10	Mahashweta Chakrabarty	<i>Evaluating The Impact of Period Products Use During Menstruation on Reproductive Tract Infections Among Young Women in India: A Propensity Score Matching Approach</i>
P2.11	Mandeep Singh Gill	<i>Trends And Patterns of Health Expenditure in U.P. Policy Implications to Achieve SDG 3.</i>
P2.12	Manish Mamgai	<i>A Crisis in Disguise: Socioeconomic Disparities in Obesity Prevalence among Adults In Uttar Pradesh: A Cross-Sectional Study Using National Family Health Survey</i>
P2.13	Md. Juel Rana	<i>Health Status and Healthcare Across the Districts of Uttar Pradesh, India</i>
P2.14	Nishu Kesh	<i>Health Seeking Behavior among Delayed Cancer Patients Receiving Treatment at Tertiary Care Hospital, Varanasi</i>
P2.15	Nitin Kumar	<i>Assessing The Impact of Aspirational District Programme on MCH Indicators in Uttar Pradesh from NFHS 4 to NFHS 5</i>
P2.16	Papai Barman	<i>Functional Health of Older Grandparents in India: A Comparative Study of Skipped and Multi-Generational Households Amidst Varying Intensities, Reason and Working Status for Caregiving</i>

Poster Session – II

**Day 2: 13.02.2024, Time: 1:30 – 3:30 pm, Venue: Ground Floor, Seminar Complex,
Institute of Science, BHU**

Evaluation Committee: Dr. K.C. Das, Dr. Brijesh P. Singh, Dr. Mayanka Ambade

Session Organiser: Abhijeet and Puja Maurya

Sl. No.	Name of the Presenting Author	Title
P2.17	Pranjal Mishra	<i>Identification of Hotspot Clustering of Intimate Partner Violence, Physical, Sexual and Emotional Violence and Geographically Weighted Logistic Regression Analysis to Assess Its Predictors among Women in Uttar Pradesh, India</i>
P2.18	Rajeev Ranjan Singh	<i>Awareness, Treatment and Control of Visual Impairments among Older Adults in India</i>
P2.19	Ranjan Singha	<i>Assessing The Incidence of Acute Respiratory Infections among Under-Five Children in Uttar Pradesh, India: Evidence from NFHS-5</i>
P 2.20	Rasika .S. Mahagaonkar	<i>Hypertension in Reproductive Women in India: A Study of Interaction Between Tobacco and Diabetes</i>
P2.21	Raza Mohammad	<i>Hypertension in India: A Gender-Based Study of Prevalence and Associated Risk Factors</i>
P2.22	Ruchi Yadav	<i>Association Between Personality Traits and Internet Addiction Among College Students: A Systematic Review</i>
P2.23	Rufi Shaikh	<i>Mortality Fractions Attributable to Tobacco Consumption: A State and Gender Differential Analysis Between 1998-99 and 2019-2021</i>
P2.24	Sadanand Karun	<i>Inequality in Cognitive Health among Tribal and Non-Tribal Older Adults in India: A Blinder - Oaxaca Decomposition Analysis using LASI Data</i>
P2.25	Sabina Bano	<i>Assessment of Contraception Use and Its Interrelationship with Pregnancy Loss in Uttar Pradesh: A Cross-Sectional Study</i>
P2.26	Sanjay Kumar Pal	<i>Progress and Equity in Informed Choice Methods Received by Women in Uttar Pradesh and its Districts</i>
P2.27	Sarika Rai	<i>Association of Life-Course Risk Factors and Multimorbidity Among Older Adults in India: Evidence from LASI-1</i>
P2.28	Shikha Singh	<i>Unveiling The Nexus: A Comprehensive Empirical Exploration of Health Expenditure's Influence on SDG Indicator in Uttar Pradesh and India</i>
P2.29	Sneh Shrivastava	<i>Determinants of and Socio-Economic Disparity in Health Status among Older Adults in India</i>
P2.30	Swati Sneha	<i>Tracking The Progress of The Health-Related SDGs in Uttar Pradesh, India</i>
P2.31	Ujjwal Das	<i>Prevalence and Pattern of Morbidity Triads among the Elderly Population: A Cross-Sectional Study in Bankura District, West Bengal</i>
P2.32	Vasim Ahamad	<i>Social Support and Economic Conditions among Older Migrants in India: Does Migration Distance and Duration Play a Role in Later Life?</i>

ABSTRACTS FOR ORAL PRESENTATION

Technical Session 1: Child Health

T1.1 Progress in under-5 mortality in Uttar Pradesh and its districts: an examination through the lens of sustainable development goals

Usha Ram, Prakash Kumar, Anamika Chakraborty
International Institute for Population Sciences
Email: usharamagrawal@gmail.com

The cumulative annual average rate of reduction in maternal and child mortality rates showed that Uttar Pradesh stood at 3rd place among the higher mortality states (comprising of EAG states including Assam) and 9th place among all the major states of India. The state is crucial for India's overall performance as it accounted 17% of the country's total population in 2011. This paper attempts to identify status of each district with respect to achieving the SDG target for child mortality. The study use data from large scale nationally representative demographic and health surveys conducted during 2002-21 to estimate district specific child mortality using syncmrates method. The levels and changes in coverage indicators has been evaluated for each district in view of their status with respect to achieving SDG target for child mortality. Between 2002-04 and 2019-21, the U5MR in Uttar Pradesh declined by 63 points. The state may attain the child mortality goal by 2035 or so if follows the current decline. Not a single district had a U5MR of less than 40 per 1000 livebirths in 2002-04. However, 13 districts achieved this in 2019-21. In 2019-21, districts in Basti and Varanasi divisions have attained a U5MR of 40 or below. The study notes a clear spatial pattern for districts with respect to the U5MR levels which has undergone change during the analysis period. Thirty-six districts showed AARC more than the state average. Assuming that the AARC observed during the past five year will continue in future, it is encouraging to note that more than half of the districts in the state (37 out of 71) are expected to achieve the SDG target for U5MR of 25 per 1000 live births by 2030. The analysis of MCH service uptake indicates that the levels varied significantly across districts.

T1.2 Health Status of Under-5 Children in Four Metro Cities in India: A Comparative Analysis

Utpal Kumar De
North Eastern Hill University
Email: utpalkde@gmail.com

Studies on health and healthcare have assumed a new dimension with plenty of studies coming on diverse aspects on status of health and healthcare across time and place. While very few studies have been made only on urban areas in India, no study relating to the comparison of health status of children in different metro cities in India has so far been found in the literature. This paper investigates the Status of Health of Under-5 Children of Four Metro Cities in India and finds its relationship with socio-demographic variables. The Fourth National Family Health Survey (NFHS-4) data has been used for finding the health status of children. The sample size for (0-59)-month children is 2215 in four metro cities and 60488 in all India urban areas. The paper considers Height-for-age, Weight-for-age, Weight-for-height, Hemoglobin level, BMI as the health-related variables and birth order, family size, mother's education (for awareness), wealth index of the household, sex of child as the socio-demographic variables, which are assumed to affect health of under-5 children well. About 55 per cent of under-5 children in urban India is anemic. Among the four metros, Delhi records the highest percentage of severely anemic under-5 children, followed by Mumbai, Kolkata and Chennai. As per Body Mass Index (BMI) Mumbai tops among the four metro cities. Chennai occupies the second position while Kolkata is at par with all India urban and Delhi fall below that level. The logistic regression reveals significant positive impacts of wealth and mother's education on the child's growth in terms of height and weight though there are some variations in the values of the coefficients at all India urban areas and in Metro cities under consideration. Also, birth order adversely affects the growth of child.

T1.3 Impact of High-Risk Fertility Behaviours on Under-Five Mortality in Uttar Pradesh: Insights from the Indian Demographic and Health Survey

Neha Shri

International Institute for Population Sciences
Email: nshri793@gmail.com

Background: Uttar Pradesh, like many regions in Asia and Africa, faces significant challenges related to under-five mortality. High-risk fertility behaviors (HRFBs), including maternal age below 18 or above 34 years, short inter-pregnancy intervals, and higher birth orders, have been identified as critical factors influencing child mortality. This study aims to analyze the association between HRFBs and under-five mortality in Uttar Pradesh, utilizing data from the Indian Demographic and Health Surveys. Methods: The study employed data from the Indian Demographic and Health Surveys, focusing on Uttar Pradesh from 2019-21 (N=35,766). Logistic regression was used to analyse the odds of under-five mortality in relation to HRFBs, both individually and in combination. Results: Overall, 21% had high risk fertility behaviour, 32% had an unavoidable high-risk fertility behaviour and the total under-5 mortality was around 5.46%. It was found that among women who had MHRFBs, U5M was majorly prevalent (7%), particularly in young maternal age (Mother's age at birth of index child < 18 years were significant risk factors of under-five mortality, while a child's birth order > 3 was a protective factor. In the unadjusted model, presence of HRFB was associated with 2.33 times higher risk of under-five mortality (OR 1.50; 95% CI 1.34-1.68). in the adjusted model, presence of HRFBs was associated with 2.33 times higher risk of under-five mortality (OR 2.33; 95% CI 1.29-3.21). Normal birth weight of the child, and higher order births (>2), mass media exposure significantly reduced the risk of under-five mortality. Conclusion: Emphasis should be placed on legislative measures to prevent child marriages and on increasing investment in reproductive healthcare, particularly focusing on contraceptive use for optimal birth spacing.

T1.4 The role of breastfeeding history in the development during infancy and childhood in Uttar Pradesh, India

Vaishnavi Gupta, Murali Dhar

International Institute for Population Sciences
Email: gtvaish101016@gmail.com

Background and Objectives - Maternal and child-health continues to remain the focus area in low-middle-income countries in general and India in particular which is more so in EAG-States including Uttar-Pradesh. Breastfeeding pattern plays a major role in overall development of children. The present study was conducted with the objective of examining the role of early-initiation of breastfeeding (EIBF), exclusive breastfeeding (EBF) and complimentary breastfeeding (CBF) in health development during infancy and childhood. In last few decades there has been improvement in quality of data and there are limited studies on breastfeeding duration with focus on Uttar-Pradesh. Data and Methods - This study was based on the latest round of NFHS which was conducted in 2019-20. Bivariate analysis and chi-square test were carried out to examine the significance of association between dependent and independent variables. Data is analysed to assess the relationship between breastfeeding duration and nutritional status of children in Uttar Pradesh using multivariate logistic regression. Results- The prevalence of stunting, wasting and underweight were 40%, 17% and 32% respectively while 16%, 6.5% and 10.2% had severe forms of stunting, wasting, and underweight respectively in Uttar-Pradesh. The Odds of being stunted was 1.10, 1.23, 1.08 times more for children not EIBF, EBF and CBF resp. The Odds of being wasted was 0.86, 0.82 times for not EBF and CBF resp. The Odds of being underweight was 1.83 times for not EIBF. There was no significant association between EBF and CBF with underweight and EIBF with wasting. Conclusion and discussion- The study highlights relatively high levels of stunting, wasting and underweight in Uttar-Pradesh. There is need to strengthen the health education programs for potential mothers to educate them about ideal breastfeeding and address the nutritional status of children to overcome burden of undernutrition in Uttar-Pradesh.

T1.5 Disparities in Child Anthropometric Failure: A Comparative Analysis of Aspirational and Non-aspirational Districts in Uttar Pradesh

Saurabh Singh

International Institute for Population Sciences

Email: sorvphd@gmail.com

Uttar Pradesh bears a substantial burden of child undernutrition in India, with aspirational districts facing even higher rates. Addressing undernutrition is fundamental to achieving SDGs 2 (Zero Hunger) and 3 (Good Health and Well-being). The study aims to provide comprehensive insights into undernutrition prevalence in these districts and guide targeted interventions for nutritional improvement in this demographic. Utilizing data from the National Family Health Survey-5 (NFHS-5), this research analyses various factors contributing to Composite Index of Anthropometric Failure (CIAF) among children aged 6-59 months (N=28,178) in Uttar Pradesh. Logistic regression analysis and Fairlie decomposition was used to identify the factors contributing to differences in CIAF in aspirational and non-aspirational districts of UP. Children aged 24-35 months have a higher odd (OR: 1.45) of CIAF, significantly increasing with age. Female children are less likely (OR: 0.89) to experience CIAF than males. A normal birth weight significantly reduced the odds of CIAF (OR: 0.73) and higher birth orders are associated with increased odds of CIAF, but the effect diminished with the fourth child. The major positive contributor to the differences in CIAF in aspirational and non-aspirational districts of UP were the household wealth (54%) followed by mother's educational attainment (25%) and mother's height (17%). The model explains about -8.50% of the total difference between the groups in the outcome variable. Aspirational districts have higher percentages of children with stunting, wasting, and multiple anthropometric failures, indicating a greater burden of undernutrition in these areas. The findings underscore the urgent need for multifaceted nutritional interventions and policy reforms in Uttar Pradesh. The study provides valuable insights for healthcare practitioners and policymakers, highlighting the importance of integrated strategies to combat child malnutrition and promote overall child health in the region.

Technical Session 2: Migration and Urbanization - I

T2.1 Does moving to a parental home assure pregnant women better maternity care? Evidence from NFHS-5 India

Archana Roy, Manoj Paul

International Institute for Population Sciences

Email: royarchana@iipsindia.ac.in

Background: The practice of temporary residential mobility of a woman during the perinatal period is a very common cultural practice in India. Many pregnant women temporarily moved to their parental home during their 7 to 9 months of pregnancy for better health care before, during and after childbirth. **Objective:** This study aims to whether moving to a parental house on accessibility to maternal health care services among Indian women. **Methods:** A total of 10,922 ever-married women (15-49 years) with less than six months of child was obtained from NFHS-5 (2019-21). Out of which 783 women were living in natal places and 10133 women were living with in-laws or husbands' houses. Descriptive statistics and multivariate analysis were used to analyze the data. **Results:** The migration status of women during pregnancy plays a key role in determining accessibility to maternal health care services. Socio-economic background such as wealth index, female education, birth order and most importantly relationship with household plays a crucial role utilizing maternal health care services. **Conclusion:** Women moved to parental house during pregnancy have better access to maternal healthcare services than who deliver in marital home. However, these women couldn't avail benefits of JSY due to change of residence in mid-term of the pregnancy. Therefore, awareness programme and mass campaign promoting a safe environment and healthy relationship with in-laws is required for better maternal health outcomes. **Keywords:** Pregnancy, delivery migration, migration, maternity care and health services, maternal and marital home

T2.2 Seasonal Migrant Workers in Brick Kilns: A Mixed-Method Inquiry into Their Livelihood, Health, Well-being

Reeti Debnath, Pinaki Sensarma
Maulana Abul Kalam Azad University of Technology
Email: reeti.debnath@gmail.com

Introduction: The Indian brick industry is one of the largest employers, conservatively projected to employ more than one crore workers. Contractors from brick kilns visit impoverished and marginalized villages in off-season to recruit labourers. Studies from several parts of the country have confirmed that these workers suffer from workplace abuse, exploitation, injuries apart from addiction and poor health. **Methodology & Objectives:** The present study was undertaken in six functioning kilns located in Borough XV of Kolkata Municipal Corporation. The objective was to collect information about the migrants' livelihood, workplace conditions, awareness about health and well-being, social security measures and entitlements. The respondents included ninety brick kiln owners and their workers. **Findings:** The researchers identified that a small fraction of workers were locals, but majority were migrants from neighbouring States like Bihar, Jharkhand, Orissa and tribal populated districts of the State itself. The migrants work during the dry season from January till June. A large percentage of these seasonal migrants belong to Schedule caste/Schedule tribe, and are women having children below five years of age. Many mothers do not have a MCP card. Vaccination history is undertaken by memory recollection. During FGDs, workers reported working for an average of ten hours every day and provision of some basic amenities by the brick kiln owners, but lack of access to satisfactory health services. Information is missing about their health-seeking behaviour, immunization and coverage of health services. The researchers identified cases of diarrhea in children, fungal infections and eczema apart from exposure to occupational hazards. **Conclusion:** From a public health perspective, the researchers suggest initiation of appropriate intervention programmes related to awareness about nutrition, health, living conditions and sanitation to help improve livelihood of the migrants.

T2.3 Changing pattern of female out migration in Uttar Pradesh: Issues and challenges

Vijaya Pradip Khairkar
Savitribai Phule Pune University
Email: khairkarvp123@gmail.com

Uttar Pradesh is major sending region in India as far as male migration is concern. Usually, migrants migrate alone keeping their families back home. Wives of migrants take care of agriculture, children and in-laws. In recent years girls getting education and migrate for higher education and jobs. As a result, traditional trend has been changed. It leads to woman empowerment. Simultaneously, some social issues and challenges are arisen in the traditional society of Uttar Pradesh. The research on changing pattern of female out migration from Uttar Pradesh is challenging for policymakers, academicians and experts of human rights. It needs conversations on cultural diversity, social integration, and assimilation. Therefore, an attempt has been made to analyse the change in female out migration from Uttar Pradesh. **Objective –** 1. To analyse the pattern of female out migration in Uttar Pradesh. 2. To indicate the factors affecting the changes of out migration among female. 3. To throw light on consequences of female out migration on sending and receiving regions. **Methodology –** To understand the factors affecting female out migration correlation matrix and regression analysis have been used. Female migration has taken as a dependent variable and socio-economic factors have been used as independent variable. **Study area –** Uttar Pradesh with a population size of around 200 million (199, 812, 341 persons), and constitutes around 16.52 per cent of the total population of India. The state also has a very high population density of 828 per sq. km compared to the national average of 382 per sq. km (Census 2011). **Sources of data -** Migration tables of Census of India have been used for the research. **Conclusion –** Young women, especially those between the ages of 0 and 24, exhibit notable migration patterns that are frequently motivated by educational goals, and better job opportunities.

T2.4 Measuring Inequality between Migrant and Non-Migrant People and Its Determinants: Evidence from Sectoral Decomposition analysis of Uttar Pradesh, India

Vijay Kumar, Kalandi Charan Pradhan
Indian Institute of Technology Indore
Email: phd2201161008@iiti.ac.in

This study highlights the economic inequality between migrants and non-migrants through Gini inequality index and Lorenz graph. Additionally, shows the decomposition of economic inequality gap between migrants and non-migrants by employing the Oaxaca-Blinder mean decomposition analysis. Furthermore, the study examines determinants of migration and the patterns of migration. The analysis uses consumption expenditure deviation as a proxy of economic inequality to describe the factors that determine economic inequality as well as economic inequality gap between migrants and non-migrants across the NIC sectors of Uttar Pradesh. For the analysis, the paper uses migration round of Periodic Labor Force Survey data 2020-21. The findings indicate a significant gap in economic inequality between migrants and non-migrants across the NIC sector of Uttar Pradesh. Notably, there exists a 1.7% in primary sector, 38.9% in secondary sector and 27.2% in tertiary sector difference of Gini Inequality index between migrants and non-migrants. The gap indicates that migrants are having more economic inequality than non-migrants. The Lorenz and contrast graph also confirms the inequality gap between migrants and non-migrants. The factors that are significantly affecting the inequality between these two groups (migrants and non-migrants) are socio demographic characteristics of an individuals in Uttar Pradesh NIC sectors. This study provides significant evidence of the need for policymakers to address effective delivery of social protection policies. Hence, our policy recommendations align with SDG goals 10.1, 10.2, and 10.7, emphasizing the reduction of economic disparities, fostering socio-economic integration of migrants at their destinations, and ensuring the rights and welfare of migrant entities. Also, intra-government and inter-government cooperation on mechanisms of integration, and portability of these policies.

T2.5 Obesity Patterns in Indian Rural-to-Urban Migrants: Unravelling the Impact of Duration of Urban Residence Using a Nationally Representative Data

Bittu Mandal
Indian Institute of Technology Indore
Email: mbittu545@gmail.com

Introduction- With rapid urbanization and extensive rural-urban migration, obesity has become an increasingly prevalent health risk in low and middle-income countries. Previous research has consistently indicated that exposure to urban environments has adverse effects on health, with a particular emphasis on its association with obesity. However, it remains unclear whether such patterns exist in India. **Objective-** To investigate the role of rural-to-urban migration and the duration of urban residence in their association with the increasing likelihood of obesity among migrants. **Methodology-** This study utilized data from the Longitudinal Ageing Study in India to examine obesity and abdominal obesity among middle-aged and older adults (n = 31, 694). BMI (>25 kg/m²) and waist circumference (>102cm and >88cm for men and women, respectively) were employed to assess obesity and abdominal obesity. This study utilized logistic and quintile regression techniques to fulfil the study objective. **Critical findings-** The prevalence of obesity was 3.31% and 11.34%, and abdominal obesity was 10.44% and 31.18% for rural non-migrants and rural-to-urban migrants, respectively. The study reveals that individuals migrating from rural to urban areas have notably higher chances of experiencing obesity compared to those who remain in rural regions. Moreover, within the group of rural-urban migrants, prolonged urban residence was a strong and cumulative predictor for obesity. The risk of obesity was 1.91 times higher (those who lived five or fewer years in urban areas), 2.05 times higher (for 6-10 years), and 2.40 times higher (for more than ten years) compared to their rural counterparts. **Conclusion-** This study identified rural-to-urban migration and prolonged urban exposure as crucial risk factors for the development of obesity. This study suggests intervention programs for healthier weight among rural-urban migrants in India.

Technical Session 3: Health and Health Care

T3.1 Public spending on health care services in Uttar Pradesh since 2004

Dilip TR

International Institute for Population Sciences

Email: diliptr@iipsindia.ac.in

Introduction: Uttar Pradesh has always been one of the high focus states for health programs because of its large population size and due to the lag in attaining developmental goals. Despite making several strides in recent years, most of the key health services coverage indicators for this state continues to be below the national average. One indicator about the governmental commitment to health sector is the level of public spending on health, about which only limited information is available for Uttar Pradesh. Objective: This paper is an attempt to provide a deeper understanding of government spending on health in last 20 years in Uttar Pradesh. Paper will examine both the levels and uses of public spending using data from governmental budgets and other relevant statistical reports. Conclusion: A preliminary analysis shows that the state government expenditure on health as a percentage of overall state government expenditure is hovering around 5 percent since 2004-05. Whatever growth in public expenditure on health in last two decades will be contrasted against the overall economic growth in the state, population growth, age structural changes, household of pocket spending and demand health care.

T3.2 Monthly Contributions to Life Expectancy and Lifespan Disparity: Analysing Seasonal Mortality Differentials in India

Suryakant Yadav

International Institute for Population Sciences

Email: suryakantyadav@iipsindia.ac.in

Seasonal variation in mortality has been investigated in many countries but not until recently in India. There are some base for reckoning that in India seasonal mortality pattern may be different than other developed nations. The debate continues as to what role was played by other factors such as regional and locational factors and the significance of seasonal mortality variations in the annual mortality levels in India. In what way do these factors intercorrelate and form a causal relationship? This study attempts to throw light on this question by analysing monthly mortality in India. The main objectives of the study are as follows: (1) Examining the regional variation in e_0 and e_{\dagger} , (2) Assessing the age-month-specific contributions to rural-urban differentials in by sex and region, (3) Assessing the age-month-specific contributions to male-female differentials in by residence and regions. Overall, the study examines the monthly contributions to sex, residence and regional mortality differentials in India in the year 2015-16 using National Family Health Survey (NFHS) data. The results of the sex differentials in e_0 and e_{\dagger} shows moderate contributions in infant, child, and adolescent ages and exceptional contributions in old-adult and middle age groups and it has remained similar across the regions of India with a few exceptions. In rural and urban area older age group has made small contributions to e_{\dagger} across the regions of India. The population from both rural and urban areas shows sex differentials in e_0 and e_{\dagger} is negatively skewed towards men and it's evaluated across most of the regions of India. Month wise contributions to sex differentials in e_0 and e_{\dagger} shows urban regions have more deaths during second and third quarters of a calendar year while in rural region have more deaths during first and second quarters among men than women. The age-month specific contributions to rural-urban differentials in e_0 and e_{\dagger} shows that male than female infants contribute significantly in many months for a stronger rural-urban differential. Female children than male children show sizeable age-month-specific contributions during first quarter followed during third quarter for a stronger rural-urban differential. By regions, the rural-urban differential in e_0 were unusually large for men living in northeast regions that were positively as well as negatively contributed in many age groups throughout year. The results reveal that regions and months/quarters more strongly explain the rural-urban differential in e_0 and e_{\dagger} as compared to age groups. The larger age-month-specific contributions to rural-urban differential in e_0 and e_{\dagger} is contributed by the early and young-adult ages during the first and

fourth quarters of a calendar year. The findings show that gradient in age specific mortality in the middle age groups rather than months/quarters is the determining factor for sex differential in e0 and e†.

T3.3 Caregiver time cost associated with Stomach and Pancreatic Cancer Patients Care

Mohit Kumar Pandey, Mahadev Bramhankar, Abhishek Anand
International Institute for Population Sciences
Email: mohitpandeybhadhi94@gmail.com

Background – The current study will examine the Informal caregiver time cost association with Stomach and Pancreatic Cancer Patients Care. **Methods** – We intend to select a sample of 350 patients, which represents approximately 18 percent of the overall gastrointestinal cancer patient of Tata Memorial Hospital (TMH), India one of the largest cancer hospitals in Mumbai. However, among them, we selected 200 patient’s caregivers and collected the data for three points of times. The value of an hour of work and it can also be viewed as the opportunity cost of not working to engage in another activity. We will use the national average wage rate in the current time as our base-case method for valuing the time because this does not require any assumption type of productivity by age and sex, etc. **Results:** This study shows that burden experienced by caregivers, who often grapple with emotional and financial distress. Notably, 37% of caregivers report greater financial distress than emotional strain, emphasizing the dire need for support in both domains. Spouses constituted the highest percentage of caregiving, accounting for 64% of caregivers, followed by sons and daughters at 15%. The opportunity cost is higher for stage III (â,143237919), IV (â,137502582) stage, for pancreatic cancer (â,134931775), and public visit (â,145813352) patient care. **Conclusion** – Spouses constitute the majority of caregivers, followed by sons and daughters, underscoring the familial nature of caregiving responsibilities. Additionally, the financial burden seems to be significantly higher in later stages of disease such as pancreatic cancer, with stage III and IV incurring notably higher opportunity costs. The urgency of implementing support systems that address both the emotional and financial needs of caregivers, especially considering the higher costs associated with advanced stages of illnesses.

T3.4 Out-of-Pocket Expenditure and Financial Hardships in India

Shruti Mishra
B.R.A Bihar University
Email: shrutibhu28@gmail.com

Using data from the latest three health rounds of NSSO, viz., 52nd round (1995-96), 60th round (2004) and 71st round (2014), an attempt is made to estimate the socio-economic and regional differentials in catastrophic health expenditure (CHE) in India. Also, effort has been made to present a comparative analysis of the difference in CHE for communicable and non-communicable disease separately and their possible predictors. Bi-variate analysis is carried out to study the changing trend and pattern of CHE among socio-economic group and regions in India. The bi-variate analysis explained the unadjusted association of various explanatory variables with the outcome variables. To model individual catastrophic health expenditure, we used a two-part multivariate regression model to assess the independent association of outcome variables with the explanatory variables. The major findings of the study suggest that the share of health in MPCE stands high for all the socio-economic groups and states in India in 2014. However, the share has reduced during 2004-14, higher reduction in CDs is observed against NCDs. The estimates of CHE have shown that high OPE is causing huge financial risk to the individuals making them vulnerable, which has severe impact on ability to move out of the vicious circle of poverty (Mahal et al., 2010; Kumar et al., 2012). The CHE is found to be higher for NCDs in comparison to CDs. Household size, place of residence, sex, type of health facility, insurance and wealth quintile are the key predictors of CHE for CDs and NCDs in India.

Shakeel Ahmed

A N Sinha Institute of Social Studies

Email: shakeel0884@gmail.com

Objective: The objective of this study is to analyze the inequality in healthcare access across socioeconomic determinants in Uttar Pradesh. Inequality in healthcare access in Uttar Pradesh is compared with similar results on all India levels to determine where the state stands at providing equal healthcare access to all. **Methods:** The study uses the National Sample Survey (NSS) 75th round data (2017-18) on expenditure on health for outpatients only and the household sample sizes for Uttar Pradesh and India are 4419 and 43240 respectively. Since there is no direct variable on the non-access to healthcare in the dataset, it is derived by combining two variables (i) no treatment at all, and (ii) treatment not on medical advice. A logistic regression model is used to determine significant socioeconomic variables that are associated with non-access to healthcare. Further, the Concentration Index (CI) and Concentration Curve (CC) are determined to measure the inequality in healthcare access in both Uttar Pradesh and India. **Results:** The analysis shows a significant difference in healthcare access across socioeconomic determinants such as income class, gender, caste, religion, education level, and others. The non-access to healthcare in Uttar Pradesh is higher than on all India levels across most of the socioeconomic determinants. The regression result shows household size, gender, and income class are three significant factors to non-access to healthcare in Uttar Pradesh. An encouraging result is higher healthcare access among women than men. Further, the CI and CC show a higher inequality in healthcare access in Uttar Pradesh than on all India levels. **Conclusion:** In Uttar Pradesh, only three socioeconomic variables Household size, gender, and income class are significantly associated with healthcare access which is better than India position. Inequality in healthcare access persists in Uttar Pradesh but is lower than in all India levels.

Technical Session 4: Progress of SDGs in UP

T4.1 Declining Lag Periods on Select Components of Health Related SDG Goals Of Uttar Pradesh Compared To Tamil Nadu In Recent Times

Padmavathi Srinivasan

Email: psrinivasan.srinivasan@gmail.com

It is well known that the state of Uttar Pradesh is lagging behind the rest of India, probably with the exception of the state of Bihar, in terms of demographic transition, health conditions, gender empowerment, economic growth, and social development. In 2013, in many of the indicators pertaining to these four dimensions, the state of Uttar Pradesh lagged behind Tamil Nadu by 10 to 20 years. First, I analyze fertility and mortality indices such as TFR, IMR, and life expectancies, as well as select components of HDI, GDI, and Multi-dimensional poverty index (MPI) of Uttar Pradesh and Tamil Nadu. Tamil Nadu which is advanced in most of these parameters is taken as a base and data at three points of time, 2000, 2013, and the year for which the most recent data is available, for the two states are compared to see where Uttar Pradesh stands at present with respect to its developmental goals and how far the lags have come down over the past ten years. For example, the lags in TFR, IMR, and Life expectancy at birth of Uttar Pradesh, compared to Tamil Nadu, in 2013 was 18, 13, and 11 years respectively. With regard to IMR, Uttar Pradesh had a level of 50 in 2013 whereas Tamil Nadu had this level in the year 2000, leaving Uttar Pradesh with a lag of 13 years. The lag periods for various indices are computed and plotted along a time trend line to help us understand how different the developmental trajectory has been for the two states. Second, I calculate the time lag in the attainment of select SDG goals by Uttar Pradesh to see whether the state can attain the goals by the year 2030, set as the year by which the countries are expected to achieve the goals, and if not, how much longer the state will take to attain the select targets. The outcomes of the study show that although Uttar Pradesh is currently lagging behind Tamil Nadu in almost all the parameters and is still considerably far off

from achieving many of the SDG goals, there has been a substantial catching up effect since the last 10 years, with reductions in the lag periods in some of the parameters.

T4.2 Regional Dynamics: A Comprehensive Analysis of Uttar Pradesh's Performance towards SDGs in Comparison to North Indian States

Shaveta Kohli

Central University of Jammu

Email: shaveta.eco@cuammu.ac.in

Sustainability is an all-encompassing strategy that takes into account social, economic, and environmental factors. For the purpose of bringing more sustainability to Uttar Pradesh, a regional research is needed to identify which dimensions need to be prioritised. To determine this, an analysis was undertaken on the basis of the NITI Aayog database for the northern region for the years 2018, 2019, and 2020. Data demonstrates that during the years from 2018 to 2020, Uttar Pradesh has made substantial progress in the areas of Goals 3, 5, 7, 11, 12, 16, which fall under the social and environmental dimensions of the Sustainable Development Goals (SDGs). Despite the fact that the economic dimension of Uttar Pradesh is crucial to attain the goals of sustainable development, there has been no discernible improvement. Thus, in order to attain the SDGs, Uttar Pradesh must also focus on the economic dimension (Goals 8, 9, and 10) as well. Moreover, every goal scored by Uttar Pradesh falls short of the average score for the country. In contrast to the national average of 55.39, 61.78, and 64.56 for the Social, Economic, and Environment dimensions, respectively, the Uttar Pradesh's score is 46.94, 47.89, and 60.14 for these dimensions. This indicates that Uttar Pradesh needs to focus on all three dimensions, particularly the economic one, in order to achieve greater sustainability. Comparing Uttar Pradesh to other states of northern region, study has revealed state's slow progress in all areas of sustainable development. With the top scores in every category - 66.78 for social, 72.56 for economic, and 70.5 for environmental, Himachal Pradesh has demonstrated exceptional achievement. Study suggested that to realise the objectives of sustainable development, policies must be changed while keeping in mind its intended dimensions. Furthermore, it is imperative to draw insights from the neighbourhood that has demonstrated remarkable achievement in achieving these objectives.

T4.3 Exploring the Intersection of Health and Sustainable Development Goals: A Research Inquiry into Fostering Wellbeing in Rural Uttar Pradesh for Stronger Communities

Hiral K. Shah, Ajay Darekar

Savitribai Phule Pune University

Email: hiralshah.adv@gmail.com

This research endeavors to unravel the intricate interplay between health and the Sustainable Development Goals (SDGs) within this context, seeking pathways for improved health outcomes and fortified communities. Objectives: 1. Current State Analysis: Scrutinize the existing health and wellbeing landscape in rural Uttar Pradesh. 2. Initiative Alignment: Evaluate the congruence of ongoing health initiatives with pertinent SDGs. 3. Challenges and Opportunities: Identify pivotal challenges and opportunities for advancing health and wellbeing through the SDGs. 4. Recommendation Development: Formulate evidence-based recommendations to fortify health systems and champion community wellbeing in rural Uttar Pradesh. Methodology: Employing a comprehensive mixed-methods approach, this research integrates quantitative data analysis of health indicators with qualitative fieldwork in rural communities. Surveys, interviews, and focus group discussions will capture insights from community members, healthcare providers, and policymakers. Expected Outcomes: Anticipated insights encompass a nuanced understanding of the interdependencies between health, community wellbeing, and the SDGs in rural Uttar Pradesh. The research will furnish policymakers and stakeholders with recommendations to: Strengthen Infrastructure: Enhance health systems and infrastructure. Promote Healthy Lifestyles: Encourage healthy behaviors and lifestyles. Community Empowerment: Empower communities to actively participate in their health and development. Significance: This research

enriches the ongoing discourse on SDG achievement and community wellbeing in rural settings. Through a targeted examination of rural Uttar Pradesh, it delivers bespoke insights and actionable recommendations for policymakers and stakeholders committed to ushering in a healthier and more sustainable future for these communities in India.

T4.4 Achieving SDG 3 (Good Health and Wellbeing) target: Insights into key health indicators with special reference to Uttar Pradesh

Manoj Narayan
UNICEF-PRC Project
Email: nmanoj22@rediffmail.com

Introduction: Sustainable development Goal 3 (good health and wellbeing) established by UN in 2015 aims to achieve universal health coverage and equitable access of healthcare services to all men and women and to end preventable new-born, infant and children under five deaths and end epidemic. Healthy population contributes to a nation's socio-economic growth so; India has a huge responsibility of taking care of the health needs of its people. Objective: The paper attempts to know the present status of health and wellbeing indicators set according to SDG3 of the people of India with special focus on a large populous state Uttar Pradesh and to find out whether we are on track to achieve the sustainable development goal (SDG 3) by 2030. Data and Methods: Data were collected from the SDG India Index Reports, National MPI Progress Review 2023 of NITI Aayog and SRS Reports. Comparative analysis was carried out for the key health indicators within SDG 3 (2018-2021) and Multidimensional Poverty Index (MPI) for Uttar Pradesh. Findings: SDG3 index for India registered the improvement of 22 points and Uttar Pradesh 35 points during 2018 and 2021. On percentile scale India reached the score of 74 and Uttar Pradesh of 60 in 2020-21. As per MPI report the deprivation in maternal health has reduced by 5 percent point for India and more than 9 percent point for Uttar Pradesh during 2015-16 and 2019-20. Conclusion: Results reveal that the present status of SDG3 key health indicators for Uttar Pradesh in comparison to India shows that the health and wellbeing indicators are in increasing direction and their possibility of reaching the SDG target by 2030. But there are some challenges as well because anaemia in children has increased over the years both in Uttar Pradesh and India.

T4.5 Assessing the Alignment of Education Outcomes in Uttar Pradesh with Sustainable Development Goals: A Comprehensive Analysis

Deepali Mishra, Jaya Khatri, R.K. Maheshwari
University of Lucknow
Email: deepalimishra632@gmail.com

Education is a fundamental pillar for societal progress, and aligning it with global sustainability goals is essential. Being one of the most populous states in India, Uttar Pradesh presents a unique case for evaluating educational performance in relation to the aspirational Sustainable Development Goals. This research presents a comprehensive evaluation of the alignment of education outcomes in Uttar Pradesh with the Sustainable Development Goals (SDGs) and national education objectives, drawing insights exclusively from secondary sources of data. The study, guided by four principal objectives, seeks to utilize existing datasets and scholarly works to accomplish its research aims: firstly, to assess educational outcomes in Uttar Pradesh across primary, secondary, and higher education levels; secondly, to examine key indicators such as literacy rates, enrollment rates, and dropout rates; thirdly, to scrutinize the alignment of education outcomes in Uttar Pradesh with both national education goals and the SDGs; and finally, to identify areas where the state's alignment deviates from the broader national agenda. Leveraging available statistical reports, government publications from Ministry of Education and academic studies, the research employs quantitative analyses to provide a comprehensive overview of educational outcomes in the state. It examines enrollment rates to comprehend participation dynamics, drop-out rates to uncover obstacles faced by students at various educational levels, and literacy rates to find patterns in literacy across demographic variables.

The research, based on secondary sources, attempts to contribute valuable insights to the discourse on aligning education outcomes with sustainable development, providing a nuanced understanding of the state of education in Uttar Pradesh and suggesting evidence-based recommendations for policy enhancements and strategic interventions.

Technical Session 5: Political Demography

T5.1 Conscience Perceptions and Happiness Among India Youth

Sandip Anand, Ibha Kumar, Jay Singh, Narsingh Kumar
Allahabad University
Email: Dr.SandipAnand@allduniv.ac.in

Indian society has been under transition for the past many decades. Changes in demographic reality have been accompanied by changes in socio-economic psychological factors, Complexity in the society has increased a lot. In the present circumstances, youth in India is continuously faced with many dilemmas, e.g., in marriage decision making context, in the context of child birth, divorce, etc. In such situations, youth may listen to their conscience depending upon their perceptions about conscience. In this study we have tried to find out whether youth's perceptions of their conscience impact their happiness, and whether the relationship between conscience perceptions and happiness get mediated by accompanied problems related to life such as stress, anxiety, and depression. Study covered 340 urban youth in the age group of 18-30 living in different parts of India and engaged in different occupations. Findings indicate that higher level of conscience perceptions has positive effect on happiness. Mediation effect of stress, anxiety and depression are also confirmed.

T5.2 Awareness and Impact of Prime Minister Narendra Modi's Mann Ki Baat Program's in India: A mixed method study

Nandita Saikia, Jayanta Kumar Bora
International Institute for Population Sciences
Email: nanditasts@gmail.com

Background: 'Maan ki Baat (MKB)' is a radio-based program through which Indian Prime Minister Narendra Modi connects with the common people of India on many contemporary issues of India. While there is a general notion that the MKB is a unique and effective method of communication between the Prime Minister and the common people in India, to our knowledge, no previous empirical study has been conducted to evaluate the impact of this program. Objective: This study aims to assess the awareness and impact of Prime Minister Narendra Modi's Mann Ki Baat in India. Data: We used primary qualitative and quantitative surveys across the states of India. We used a structured questionnaire with 22 questions developed for the primary survey. We used *KoboToolbox*, which allows us to develop digital data collection forms that work on both mobile devices and web browsers. We used snowball-sampling techniques and circulated the survey link through social media like WhatsApp, and Facebook. We also emailed the known contacts for the response. Further, to get maximum responses we recruited field data collectors in the states of Assam, Rajasthan, Uttar Pradesh, Uttarakhand, Maharashtra, and Odisha. The data collection started on March 2023 and continued until we get 700 respondents (of age 15 and above) from different states of India. We conducted in-depth interviews with 28 adults from different parts of India. Method: We used univariate, bivariate, and ordinal logistic regression analysis of the quantitative data. We did a thematic analysis of the qualitative in-depth interviews. Key Findings: The sample participants for this study belong to 23 states of India with maximum coverage in Odisha (20.5%) followed by Maharashtra (19.7%) and Uttarakhand (15.8%). Among northeastern states, Assam has the maximum coverage (7.6%) followed by Nagaland (3.7%). 90% of the sample participants are aware of the program MKB, and about 81% think that PM's MKB through Radio is a good medium to communicate with the common people of India. While 9% of the participants listened to the program regularly, 72% listened either regularly/occasionally/sometimes, and 28% of the participants never listened to

MKB. About 41% learned about “women’s empowerment”, 33% learned about “government schemes”, and 29% learned about “inspiring people of India”. About 13% of the participants said that MKB inspired a lot to them and changed their life whereas 45% of respondents said that they got some inspiration from MKB. The majority of the listeners said the content of the MKB was very useful, practical, and inspiring. Participants learned about a variety of issues such as women’s empowerment, tribal population, government schemes, Swatch Bharat, India’s diversity, North East Populations, inspiring persons from India, Sports personnel, etc. overall. In general, there is a positive impact on a majority of the population who listen to the MKB. Ordinal logistic regression analysis shows that the impact of MKB was higher among people of higher age, among lesser-educated people, among government service holders, and among the people who received government schemes. Compared to the Hindu population, this program is found to be lesser impactful among Muslims and other religious populations. We extracted four themes from qualitative data analysis: 1) People’s view on MKB; 2) Motivation and inspiration from the MKB 3) The impact of the MKB 4) Positive aspects and shortcomings and suggestions. We found that respondents have a positive view of the program despite they may not listen regularly. The program inspired a majority of the listeners. The participants gave feedback to improve the MKB further. Conclusion: In general, people are aware of the program MKB; they have a positive view of the program and they learned about contemporary issues from this program. Both quantitative and qualitative findings reveal that MKB is a highly impactful program. The study findings suggest that Prime Minister Narendra Modi is successful to communicate his vision, mission, and actions of his government to the common people through MKB. However, there is still scope to increase the reach out of the program, as per the participants of the study.

T5.3 Decoding Forced Dialogue and Ethnic Identity Erosion in India’s Smallest State: A Literature Review

Ashok Mondal

National Institute of Design, Ahmedabad

Email: ashokmondal@nid.edu

This research scrutinizes the intricate relationship between enforced dialogue initiatives and the potential erosion of ethnic identities in Goa, India's smallest state. Through a thorough literature review, it delves into the historical context, socio-political underpinnings, and cultural ramifications of state-led attempts to foster inter-cultural communication. The paper critically analyzes existing literature to expose how forced dialogue, ostensibly promoting inclusivity, can act as a tool for homogenization, silencing marginalized voices, and eroding distinct ethnic identities. Situated on the Western coast, Goa embodies a rich blend of Portuguese, Hindu, and Konkani cultural elements, shaped by colonial legacies and waves of migration. Despite its multicultural landscape, tensions prompted the implementation of dialogue initiatives aimed at bridging cultural divides. The paper questions the agenda and unintended consequences of these initiatives, arguing that while intercultural understanding is a noble goal, state-directed efforts may overshadow the complexities of identity formation within minority communities. The literature review spans disciplines like postcolonial studies, anthropology, political science, and cultural studies, drawing on works by Bhabha, Spivak, Said, Da Cunha, Menezes, Fernandes, and Sardesai. It employs a critical postcolonial lens and the concept of hybridity to analyze the phenomenon of forced dialogue, exploring power dynamics and cultural homogenization. Guided by a mixed-methods approach, incorporating qualitative and quantitative data analysis, the study aims to answer key research questions regarding the framing of "Goanness," impact on marginalized ethnic groups, power dynamics, and the potential for reimagining initiatives. Expected outcomes include a critical analysis of forced dialogue initiatives, nuanced understanding of fostering intercultural understanding, recommendations for inclusive approaches, and contributions to broader academic discourse. In conclusion, the research sheds light on the challenges in navigating cultural diversity and potential ethnic identity erosion in Goa

T5.4 Review of Electoral Participation in Four States of India in Sequence of Development

Sunil Sarode

International Institute for Population Sciences

Email: sunilsober@gmail.com

This study delves into the intricate relationship between the development of Indian states and the voting behaviour of their citizens. The investigation utilizes data from diverse sources, including the Niti Ayog report of state development based on 17 sustainable development goals and Lok Sabha elections report published by the election commission of India. Initial findings suggest that states exhibiting higher levels of development, tend to witness higher voting percentages compared to their less developed counterparts. The report of Niti Ayog reveal that out of the four states of Bihar, Uttar Pradesh, Maharashtra and Karnataka, the least developed is Bihar then Uttar Pradesh, Karnataka is among the highest developed states and Maharashtra is average developed and lies between Uttar Pradesh and Karnataka in the hierarchy of development. Similar trend could be seen in the polling percentage among the four above mentioned states. In 2019, 57.3% electors casted vote in the Lok Sabha elections which is the least among the four states considered in this study. Karnataka shows the highest polling percentage of 68.8% followed by Maharashtra (61.0%) and Uttar Pradesh (59.2%). The study explores potential causal mechanisms underlying this positive association, considering factors such as increased awareness and political consciousness among well-educated populations, improved infrastructure leading to enhanced civic engagement, and the role of economic prosperity in shaping voter preferences. This research contributes to the existing literature on Indian electoral dynamics by shedding light on the interplay between development and voting behaviour. The findings have implications for policymakers, suggesting that investments in socio-economic development may not only contribute to overall prosperity but could also positively influence the democratic participation and decision-making of citizens.

T5.5 Politics of Caste Census in India: A Discussion

Souvik Mondal, Sachin Kalamkar

International Institute for Population Sciences

Email: souvikips@gmail.com

Introduction: During the British colonial era in India, the British administration conducted several censuses with the aim of collecting demographic and socio-economic data for governance and administrative purposes to rule the forcibly Colonized India for generating more revenue for the betterment of Britain by looting the wealth of Indians. The first comprehensive census was conducted in 1872 under Lord Mayo, but it did not include information on caste and also it was not properly done. From 1882 Census the Colonial British administration started the Census in Planned manner and the enumeration was done successfully. **Objectives:** 1. To explore the existing literature on the "Caste Based Census in India". 2. To check the historical motive and future consequences of the "Caste Based Census in India". **Methodology:** Systematic Review of the existing literature. **Discussion:** After World War I, the British colonial administration in India used the caste census to adapt to changing governance and social dynamics. The 1931 census, driven by administrative, social, and political factors, met colonial government needs and socio-political demands, impacting caste-based policies in independent India. The intersection of caste census and politics in India remains a contentious issue, shaping political dynamics, electoral strategies, and social policies. **Conclusion:** The caste census raises concerns about reinforcing social divisions and stereotypes, potentially leading to polarization and identity politics. It also raises concerns about political misuse, with politicians targeting specific caste groups during election campaigns. The data may also contribute to stigmatization and discrimination, potentially causing prejudice or bias. Despite its intended purpose, the caste census could also be used for political manipulation, focusing on electoral dynamics rather than broader development and governance issues.

Technical Session 6: Gender and Health

T6.1 Bridging Gender Empowerment Gaps: A Comprehensive Analysis Using Multifaceted Data Sources

Vishal Dev Shastri

USAID Advancing the U.S.- India Partnership Platform (APP) Activity

Email: vishaldshastri@gmail.com

This research paper addresses the pressing issue of disparities in gender empowerment, leveraging data from the National Family Health Survey (NFHS) and other relevant sources. Our analysis spans several critical sectors including health, economic stability, decision-making power, gender-based violence, child marriage, and education. By integrating data from diverse sources, such as NFHS 4 and 5, NAS, and National Sample Survey data on economic sector participation, along with information from CMIE, CSR, and donor-funded programs, this research aims to construct a comprehensive overview of the landscape of gender empowerment and economic development. We employ detailed statistical and geospatial analysis of the NFHS data, supplemented with additional datasets, to present a thorough picture of gender disparities, utilizing geospatial analysis techniques. Our findings highlight substantial inequalities in various areas: health disparities underscore unequal access and outcomes; economic sections point out differences in job and income opportunities; analysis of decision-making roles reveals imbalances in domestic and societal power dynamics; and data on gender-based violence and child marriage shed light on the ongoing challenges faced by women in society. In the education sector, we scrutinize gender differences in terms of enrollment, persistence, and the quality of educational opportunities. Our analysis situates these findings within a wider socio-economic and cultural context, acknowledging the myriad of factors that influence gender empowerment. Our study not only pinpoints these disparities but also examines the connections between these domains, offering insights into how advancements in one area can positively affect others. This holistic approach is essential for developing comprehensive strategies to close the gender empowerment gaps. The paper culminates with practical suggestions for policy measures and community initiatives aimed at fostering gender equality and empowerment. By capitalizing on insights gleaned from data, this research adds to the ongoing conversation about gender equality, providing data-backed methods to empower women and girls in various fields.

T6.2 Separation and Divorce in North India

Harihar Sahoo

International Institute for Population Sciences

Email: harihar@iipsindia.ac.in

Separation and divorce are becoming increasingly common in many parts of Asia. Although the level of marital dissolution in India is low from a global perspective, the level of separation is far larger than that of divorce. The aim of this study is to estimate the prevalence, trends, variations, and determinants of marital disintegration in north India. Using the data from NFHS 5, findings revealed that women lived in urban areas are more prone to separation and divorce and it was found to be higher among the poor than the non-poor, and among the childless than among women with at least one child. Infertility, poverty, child marriage, educational gap among spouses, urbanization, and spousal violence are the risk factors that can lead to marital disintegration. These sections of the population need special attention in order to promote marital stability.

T6.3

Consanguineous Marriage in India: A Geospatial Analysis

Manas Ranjan Pradhan, Chander Shekhar, Harihar Sahoo, Prasenjit De
International Institute for Population Sciences
Email: manasiips@gmail.com

Consanguineous marriage is a marital union between close-blood relatives and has been practiced in various communities around the globe at varying rates based on geography, culture, and religion. The present study examines the spatial heterogeneity of consanguineous marriage across India's districts and its socioeconomic and demographic factors. This study utilized the data from the fifth round of the National Family Health Survey (NFHS-5), 2019-21. The analytical sample size was 542,830 ever-married women aged 15-49. Bivariate analysis and geospatial techniques- Moran's I, univariate and bivariate local indicator of spatial association (LISA), and spatial regression models were carried out for 707 districts in India. The basic analysis was completed using Stata, ArcMap 10.5 for prevalence mapping, and GeoDA for spatial regression analysis. About one out of every tenth marriages are consanguineous in India. In general, southern parts of India, except Kerala, had the highest prevalence of consanguineous marriage, and north-eastern parts had the lowest prevalence. The clustering of consanguineous marriage was significantly higher in the districts belonging to the states of Tamil Nadu, Andhra Pradesh, Karnataka, and some districts of Maharashtra, Telangana, and Odisha. There is a marked geographical gradient in the prevalence of consanguineous marriages across the districts. Regional disparities, religious affiliations, age at marriage, and Scheduled Caste (SC) status are the significant spatial correlates of consanguineous marriage in the country.

T6.4

Index of Gendered Differences: A Spatial analysis for Uttar Pradesh

Priti Kumari, Apala Saha
Banaras Hindu University
Email: prasadpriti776@gmail.com

Gender equality is a foundational human entitlement ensuring that all individuals have the right to access basics like education, employment and decision making with parity and dignity. It can most certainly be justified as an indicator for sustainable development of a nation or a state as it defines the status of socio-economic well-being of a population. Unfortunately, gender inequality is a strong and a more obvious reality that thrives on the unequal treatment of individuals based on an intrinsic aspect of their identity often resulting in disparities in opportunities, resources, and social roles. This paper intends to construct an inequality index based on Eduardo Bericat's method used for Europe (2012) and analyse the spatial variation in the same, thereby contextualising the notion of "space" as an intervening factor in constructing and concretising gendered roles. The analysis incorporates all the 75 districts of Uttar Pradesh across the three Es (education, employment and empowerment) along with constituent sub-indicators. The selection of indicators has been adapted to the context of developing societies in general and in particular to the availability and relevance of data in the Indian context. The final findings are based on both mathematical results and cartographic representations. The study thus intends to re-assert that the ideas of what is "sustainable", what is "development", what "realities" are and what "goals" can be need to be are more intrinsic than universal. Keywords: gender, inequality, index, Uttar Pradesh, India.

T6.5

The Effect of Childcare on Occupational Mobility: Narratives of Stay-at-home Mothers in Urban India

Aditi B. Prasad, Aparajita Chattopadhyay
International Institute for Population Sciences
Email: aditibhagwatprasad@gmail.com

In the urban landscape of India, the role of women, particularly as stay-at-home mothers constitutes a dynamic intersection of tradition evolving societal norms and personal agency. This

study investigates the intricate relationship between childcare responsibilities and the pursuit of occupational mobility among urban stay-at-home mothers. Through a qualitative exploration of their narratives, this research seeks to elucidate the underlying complexities that influence their choices and opportunities within this context. In this study, we incorporate the narratives of 20 stay-at-home mothers from New Delhi, the capital of India. Our focus centres on young mothers aged 25-35 with at least one child aged five or below, thereby capturing a pivotal life transition into motherhood and exploring how these mothers navigate this significant life event. The study revealed that the mobility of young mothers is intricately tied to the strength of the support systems available to them. Mothers with access to reliable and comprehensive support networks, including extended family, community resources, and organized childcare facilities, reported greater freedom of movement. These support systems played a pivotal role in alleviating the constraints imposed by childcare responsibilities, enabling these mothers to engage in a broader range of activities beyond their homes. A notable finding was the considerable challenge posed by the existing childcare infrastructure. Participants frequently cited limited availability, high costs, and concerns about the quality of childcare services as significant barriers to their mobility. The dearth of accessible and affordable childcare options in urban areas disproportionately impacted stay-at-home mothers, leading to a sense of confinement within their homes. The failing public childcare infrastructure and overpriced private facilities pigeonhole young mothers into their homes, forcing them to choose between their careers and family.

Technical Session 7: Population and Environment

T7.1

Development of Renewable energy in India: State Level Analysis

Sanatan Nayak

National University of Jammu

Email: nayak.sanatan123@gmail.com

Development for a robust renewable energy sector primarily benefits for rapid economic development, improve the access to energy and security, and mitigate climate change. In recent years, India has been significantly transitioning its energy sector from conventional fossil fuels to renewable to achieve mitigating climate change target of containing 1.5^o C, net zero emission by 2070 and cost-effective energy use vis-à-vis economic development. In this context, the paper highlights extent and dimensions of renewable energy and technologies adopted across states in India in recent years. Further, the study aims to assess the changing nature of financing by various institutions towards renewable energy and possible challenges for financing of renewable energy. Secondary level data are collected from various Ministries of Central Government sources, reports and articles from International and National level. Our analysis of data confirms, (a) the share of renewable energy is increasing rapidly in recent years largely due to increase in the generation of solar and wind energy, (b) Karnataka, Rajasthan, Tamil Nadu and Gujarat are the leading states in case installed capacity of renewable energy, whereas, Jharkhand, Bihar, Delhi and West Bengal are lagging substantially. In Uttar Pradesh, only 15% of the total installed capacity is from Renewable sources lagged behind the targets. (c) The weighted average of pollution rate of fossil fuels (coal, lignite, natural gas, diesel) is declining in India, (c) the average of pollution rate of coal is declining but higher than weighted average of other fossil fuels, (d) the investment pattern for financing the conventional energy has been declining. Our recommendations are on both short and long run for improvement in terms of developing awareness in demand for transitioning towards renewable energy, public sector needs to take a lead role in creating substantial supply of green energy, technology, allocation of enough finance towards climate control agenda, establishing subsidiary institutions, creating enough provision for e-waste management and creation for efficient circular economy.

Amlan Kanti Ray, Binod Kumar Singh
Diverse Genomics Pvt. Ltd.
Email: humanedestiny@gmail.com

The understanding of the ecological wisdom (EW), attributed to the long-resident people of Vindya-Satpura range over many generations have found in the corpus of scientific literatures in respective geographical location. What can be argued about the accountability of EW bestows on the 'people' to sustain their embedded life to be duly unrelentingly undisturbed by cross-cultural and cross-situational collaborations in the guise of the commercial encroachment. In light of such debate, the present paper under the theme of population and environment is to converge our findings into kinetics of EW down to the contextually of EW with the understanding of biology and ecology at the backdrop of anthropological arguments in the location of Vindya-Satpura range to appraise the intergenerational importance of EW. It has estimated the frequent diseases in the region and the herbs used to treat them. But we contemplate and we have designed this paper as a contribution to the 'ecological wisdom' in both the places covering those aspects, which appear on the surface of tribal life in 'everyday reality', rest we have used secondary information on different diseases, which are retrieved from the archival materials and other sources of secondary data. Findings showed more than ten most common diseases, namely fever, respiratory, gut, reproductive, hepatitis, inflammatory, ENT & dental, wound & worm, and systemic state of affairs have been treated with both the aerial (aP) and underground part of plant (uP). It serves to invoke collaborators of both (long-residents and urban residents) the side to continually learn from one another how each assumption approaches the body of knowledge of EW and modern science as a *longue durée* learning procedures to deliver the action plan of UN-SDG 30 to slow down the climate breakdown with the utmost care at the backdrop of WHO's mandate. Ecological Wisdom, medicine, healer, medicinal plant, Indigenous knowledge, traditional medical systems, tribe

T7.3 To What Extent the Working Population Pollutes the Existing Environment in India? An Econometric Evidence for the Past Six Decades

Arumugam Sankaran, Ponnusamy Rajkumar, Arjun.K, Esakki Suresh, Navaneetha Krishna,
Mari Anand
Pondicherry University
Email: sankaranecopu@gmail.com

The trend of environmental pollution and its determinants has been debated among social scientists and policymakers for quite a long time. More specifically, the repercussions of environmental pollution attract the attention of environmentalists, policymakers, and academicians. By following the footprints of the previous researches, the present study is an attempt to estimate the effect of the working population on environmental pollution in the Indian context. Secondary data have been sourced from the World Development Indicator published by the World Bank and the Global Carbon Project published by the UN to execute the study. The present study covers around six decades, from 1961 to 2022. It is hypothesized that the working population are very vibrantly involving in economic activities and hence, they may pollute the environment. To execute the research, as customary, we examined the nature of the data by conducting two appropriate tests, ADF and PP. The output from these tests confirmed that all variables are stationary at first difference. At the same time, the conditions of linear regression, such as linearity, homoscedasticity and normality have not been satisfied. Hence, we employed the quantile regression model. The result observed from the quantile regression model demonstrated that population significantly affects the existing environment. Meanwhile, a one per cent increase in credit increases the carbon emission by 0.7 per cent. The trade openness has significantly impacted the existing environment but, the magnitude is very trifling. Hence a gradual transition of production mechanism from fossil fuel-based to green energy will likely help to lift the standard of life and achieve late stages of inverted Kuznets curve in a fast-track manner.

T7.4 Assessment of the impact of population growth on environmental degradation: a panel data analysis

Swati Sinha Babu

Sidho Kanho Birsha University

Email: swatisinhababu@rediffmail.com

Introduction: Exponential growth of population and increased anthropogenic activities has led to severe environmental degradation particularly in the last two decades. Asia is home to 4.7 billion people, roughly 60% of the world's population. Thus, it has to cater to the demands for food, clothing, shelter, energy and other requirements of these many people. Again, with every production and consumption activity there is some amount of associated environmental degradation. Objective: - The paper tries to assess the impact of population growth, economic growth, crop production, livestock production, agricultural land expansion, trade openness and urbanisation on forest area and methane (CH₄) emission. Methodology: We have employed panel generalization method of moment (GMM) on data from 12 selected Asian countries covering the period 1990-2020. The dependent variables - forest area is an ecological variable and any decrease implies deforestation and depletion of environmental resources, while, methane emission is the second most important greenhouse gas having a strong effect on global warming. Critical findings and Conclusion: Results indicated that economic growth, agricultural land expansion, crop production and population growth has significantly negative impact on forest area while livestock production and urbanisation have positive impact on it. This implies that economic growth in Asian countries is at the expense of depleting forest resources. In case of methane emission, we observed that agricultural land expansion and urbanisation had positive impact on it while the effects were significantly negative for crop production, trade openness and population growth rate. Thus, we see that while population growth is a significant driver of deforestation (forest area declines by 0.83% for 1% increase in it), it leads to decline in methane emission by 0.9% for every 1% increase. We failed to obtain any significant impact of growth and livestock production on CH₄.

T7.5 Assessment of Public Open Spaces (POS) and Landscape Quality (LQ) in Kolkata Metro City Using Per Capita POS Index: A Micro Level Spatial Analysis

Amiya Saha, Dipti Govil

International Institute for Population Sciences

Email: amiyasaha.iipsphd@gmail.com

Objectives - The study aims to investigate the impact of population density and ward location on the distribution of public open spaces (POS) and green cover in urban areas, emphasizing their pivotal role in maintaining the quality of the urban landscape by fostering a connection between people and nature. The challenges arising from rapid urban growth and population expansion pose significant threats to POS, resulting in a decline in overall urban landscape quality. Data and methods - The study employs a combination of secondary data and high-resolution satellite imagery of the Kolkata Municipal Corporation (KMC) obtained from Google Earth. Five variables are selected to assess landscape quality, with assigned weights that are multiplied by the respective z score of each variable to compute a composite index score. Main findings- The findings reveal a concerning trend in wards with high population density, where the ratio of public open spaces is notably low, failing to meet WHO and UN criteria for per capita availability. The landscape quality index underscores subpar quality in over two-thirds of the wards, particularly in central and northern regions characterized by dense populations and insufficient public open spaces. In contrast, wards in south eastern and eastern areas, marked by lower population density, exhibit higher landscape quality index scores. Conclusions- The study concludes that urgent intervention is necessary to increase open spaces or green open spaces, or both, to enhance landscape quality, thereby positively impacting the quality of life for the city's residents. The distribution of public open spaces is found to be significantly influenced by population density and ward location, highlighting the need for targeted measures to address the observed disparities and improve overall urban landscape quality.

T7.6 Air Pollution and Child Mortality at the Intersection of Social and Economic Class

Mihir Adhikary, Nandita Saikia
International Institute for Population Sciences
Email: mihiradhikary363rk@gmail.com

Although some studies have assessed the health effects of PM_{2.5} exposures among subpopulations defined by either racial (or social class) or economic position (income), none have considered effects among subpopulations defined by both. Doing so is important because structural racism and social exclusion can marginalise Indians differently. The Ministry of Environment lacks critical data to support its regulatory rulemaking for PM_{2.5} standards because information on exposure-response curves for PM_{2.5} exposure and mortality across marginalised subpopulations classified according to race and socioeconomic status is inadequate. We linked gridded PM_{2.5} data with the Indian version of DHS survey data and analysed 492,547 children's data from two rounds (DHS-2015-16, 2019-21) of the survey to estimate associations between annual PM_{2.5} exposure and mortality in subpopulations defined simultaneously by racial identity (Scheduled caste- SC*, Scheduled Tribe-ST*, Other Backward Castes-OBC*, and Higher Caste) and income-level (poor, middle and wealthy) [*deprived social groups]. Increased levels of PM_{2.5} were linked to a higher mortality rate in the overall population. However, marginalised subgroups seemed to benefit as the levels of PM_{2.5} decreased. For example, the hazard ratio associated with decreasing PM_{2.5} from 50 $\mu\text{g}/\text{m}^3$ to 10 $\mu\text{g}/\text{m}^3$ for the higher caste-wealthy subpopulation was 0.961 (95%CI, 0.955 to 0.972), whereas equivalent hazard-ratios for marginalised subpopulations were lower, i.e. 0.921 (95%CI, 0.912 to 0.930) for SC-poor, and 0.930 (95%CI, 0.922 to 0.936) for OBC-poor. The findings highlight the importance of considering both income and social identity when examining health disparities. Implementing and strengthening targeted economic support program, providing financial assistance for low-income families to access clean technologies, and promoting sustainable livelihood opportunities in sectors that prioritize environmental stewardship.

Technical Session 8: Malnutrition and Anemia

T8.1 Prevalence of Sickle Cell Anemia in India: A case study in the Nagpur-City and its Neighbour Districts.

Shouryarghya Patra, Vinay Ambulkar, **Rahul Kumar**
Lokkalyan Diagnostics Vyankatesh
Email: ambulkarvinay@gmail.com

Sickle Cell Anemia, a hereditary blood disorder resulting from abnormal haemoglobin, presents a significant health challenge in specific tribal and non-tribal communities across India, particularly in the vicinity of Nagpur City. This abstract provides a concise overview of the prevalence, genetic underpinnings, health implications, and public health initiatives related to sickle cell anemia in India, focusing on the neighbouring areas of Nagpur City, utilizing both primary and secondary datasets. The genetic basis of sickle cell anemia involves an autosomal recessive inheritance pattern, with the Gond, Bhil, Kol, and Warli tribes showing a higher prevalence in states such as Madhya Pradesh, Chhattisgarh, Maharashtra, Odisha, Andhra Pradesh, Telangana, and Gujarat. Beyond individual health consequences, sickle cell anemia has broader socio-economic ramifications, leading to increased healthcare expenditures and reduced productivity in affected communities. Health impacts include chronic anemia, pain crises, increased susceptibility to infections, and organ damage.

T8.2 Status of Nutrition Insecurity of the Poor and Non-Poor Households -A Study with Special Reference to Uttar Pradesh vis-a-vis Other States of India

Sk Md Abul Basar, Pinaki Das
SKB University
Email: skmdbasar022@gmail.com

Objectives: The present study analyses the status of nutrition insecurity in relation to the status of poverty in Uttar Pradesh vis-à-vis other states of India and also examines the role of the Public Distribution System (PDS) along with other socioeconomic indicators for reducing nutrition insecurity of non-poor as well as poor households on the basis of National Sample Survey Organization (NSSO) unit level data of Consumer Expenditure Survey of the latest rounds. In the past couple of decades, the Indian economy has experienced relatively high economic growth and a decline in poverty over the past two decades. However, this transformation has not been matched by improvements in nutritional status. This research addresses a critical gap by assessing the nutrition status of non-poor households at the disaggregate level of India. **Methods/Analyses:** Foster, Gree, and Therbecke's (1984) methodology is used to measure the status of Poverty and nutrition security. We have used a multinomial logit model to analyze the evolving landscape of nutritional insecurity of both poor as well non-poor households at the disaggregate level of India. **Findings:** The incidence of poverty as well as nutrition insecurity at the state level has declined significantly from 2004-05 to 2011-12. In Uttar Pradesh, it was much higher than the all-India level. As much as 24.4 per cent of non-poor households in 2011-12 still remained nutritionally insecure in India whereas this share was 24.1 Percent in the case of Uttar Pradesh. Level of education, food consumption expenditure, PDS benefits, and cultivable land have favourable impacts on the nutritional status of non-poor households. An increase in monthly food expenditure does not ensure nutrition security but an increase in PDS benefits in kind overcomes the nutrition insecurity. Therefore, the study strongly recommends the continuation of PDS benefits in kind to achieve the SDGs concerning nutrition.

T8.3 Association of childhood disadvantage with malnutrition in older ages in India

Akancha Singh, Aparajita Chattopadhyay, Neha Shri
International Institute for Population Sciences
Email: aksin176@gmail.com

Introduction: Much research on the association between childhood status and adult health has been focussed on high income countries and, hence, these findings cannot be generalised for all developing economies. **Objective:** Therefore, this study is an attempt to systematically examine the impact of multiple domains of early disadvantage on nutrition status during old age in India, while testing for potential mediation by adult health, socio-economic status, and lifestyle. **Methodology:** Binary logistic regression was used to assess the adjusted association of childhood and adulthood conditions with nutrition status. Two separate models were run for underweight and overweight. We used the structural equation modelling (SEM) approach to test our hypothetical model. **Results:** The SEM explained 78 percent of the variance in underweight. The direct effect of education on underweight was significant. A one-unit increase in working status was associated with an increase of 0.03 units in the likelihood of being underweight in old age. The direct effect of childhood conditions on underweight was also significant. For each unit increase in childhood conditions, there is a total decrease of 0.19 units in the likelihood of being underweight in old age. The SEM explained 68 percent of the variance in overweight. Results show that the direct effect of education and working status on overweight was significant. A one-unit increase in childhood conditions leads to a 0.11-unit increase in the likelihood of being overweight in old age. The indirect and total effect of childhood conditions on overweight was significant. **Conclusion:** It underscores the importance of considering both direct and indirect effects in understanding the pathways through which early life experiences influence nutritional status in old age.

T8.4 Prevalence and detecting spatial clustering of anaemia among children 6-59 months in the districts of Uttar Pradesh, India

Madhurima Sharma

International Institute for Population Sciences

Email: madhurimasharma1@gmail.com

In the previous decade, India held the position of being the foremost contributor to childhood anemia among developing nations. In India, 89 million children aged 6-59 months suffer from anaemia. As per NFHS-5, the prevalence of anaemia in Uttar Pradesh was 66%. It exerts numerous detrimental effects on children's lives by reducing learning capacity, attentiveness and intelligence. The study attempts to identify the spatial prevalence and detect the clustering of anaemia in Uttar Pradesh and also tries to identify the determinants of anaemia among children aged 6-59 months. The study utilized secondary data from the National Family Health Survey-5 conducted in 2019-2021. It employed spatial analysis software, including ArcGIS 10.8 and GeoDa 1.22, incorporating Moran's index. The assessment of factors predicting the prevalence of anemia among children involved the application of a logistic regression model using STATA-17, considering socio-economic, demographic, maternal, and child characteristics. The anaemia prevalence is highest in Kanshiram Nagar and lowest in Allahabad districts. A total of 38 districts of Uttar Pradesh are having more than the national level average (67.1% NFHS-5) of anaemia. Results also shows that 66.7% and 65.3% children 6-59 months' age group were anaemic in urban and rural areas respectively. Around 70.7 % of children belonging to poorest wealth status and 69.4% of children who lived in rural areas were anaemic. Increase of mothers age, education, receipt of full ANC and richer wealth status reduce the risk of childhood anaemia. The research proposes directing efforts towards districts in Uttar Pradesh identified as hot-spots with a higher prevalence of anemia. Policy-level interventions, such as the Integrated Child Development Scheme, should aim to mitigate micronutrient deficiencies, thereby lowering the risk of childhood anemia.

T8.5 Exploring the spatiotemporal variations and determinants of overweight/obesity among urban Indian women of reproductive age from 2005 to 2021

Subhojit Let

Banaras Hindu University

Email: subhojitlet123@gmail.com

Background: Despite government attempts to reduce overweight/obesity, the prevalence among women of reproductive age (WRA) in India have increased, especially in urban areas. This study seeks to evaluate trends and determinants of overweight/obesity prevalence among WRA in urban India and its states from 2005 to 2021. Methods: The study used 44,882, 171,443, and 135,272 WRA aged 15-49 from NFHS-3 (2005-06), NFHS-4 (2015-16), and NFHS-5 (2019-21). Chi-square and multivariable logistic regression were used for analysis. Results: The prevalence of overweight/obesity among WRA in urban India has increased from 23% in NFHS-3 to 33% in NFHS-5. Furthermore, among states, it was even wider. For instance, Punjab (35.74%), Andhra Pradesh (42.27%), and Tamil Nadu (45.86%) had the highest prevalence rates in NFHS 3, NFHS-4 and NFHS-5, respectively while Meghalaya had the lowest in all rounds. Overweight/obesity rates increased in all states over the study periods. Notably, Odisha had the highest increase of overweight/obesity nearly 22 percentage points while Gujarat has the mere increase in overweight/obesity of three percentage points between NFHS-3 and NFHS-5. Moreover, 14 states have witnessed an overweight/obesity increase exceeding ten percentage points, surpassing the national trend. Pooled regression identified women aged 40-49 years [AOR: 5.98, 95% CI: 5.71- 6.27] having three to four children [AOR: 1.28, 95% CI: 1.23-1.33] from the richest quintile [AOR: 4.23, 95% CI: 3.95- 4.54], lives in south India [AOR: 1.77, 95% CI: 1.72-1.82], those have diabetes [AOR: 1.92, 95% CI: 1.83-2.02] and those have mass media exposure [AOR: 1.13, 95% CI: 1.09-1.17] more likely to be overweight/obese. Conclusion: Given the rise in overweight/obesity among urban women in India with wide variations across the states, the government should consider state specific strategies and determinants-based policies to reduce the overweight/obesity.

T8.6 Anemia burden among tribal and non-tribal women and children at the national and sub-national level and their determinants in India

Mahadev Bramhankar, Pankaj Kumar Patel, Badal Thool, Kajal Rathod
International Institute for Population Sciences
Email: bramhankarakash@gmail.com

Objective: Our study investigates anaemia prevalence in tribal and non-tribal women and children in India, examining determinants influencing anaemia within the tribal community. Additionally, we explored the relationship between maternal anaemia and the risk of anaemia observed in their children. **Methods:** Our analysis drew upon data from the fifth National Family Health Survey (NFHS-5) conducted between 2019 and 2021. The study focused on tribal women aged (15-49) and children aged (6-59) months from different Indian states. Anaemia prevalence was estimated through bivariate descriptive analysis. We employed the Chi-Square test to examine associations between predictor variables and anaemia status. In addition, a multiple regression analysis was conducted to explore the likelihood of maternal anaemia impacting the risk of anaemia in children. **Results:** Study revealed 57% of women and 67% of children are anaemic in India. There is a significant gap in the prevalence of any-anaemia among women tribal [64%: (3% severe, 35% moderate, 26% mild)] and non-tribal (56%). Similarly, tribal children [72%: (2% severe, 41% moderate, 29% mild)] compared to non-tribal (66%) were any-anaemic. There were significant variations across the state level. Regression analysis showed that tribal children were more likely to have anaemia among those whose mothers had severe anaemia by (AOR: 2.96) times, moderate by 2, and 1.64 times among mild anaemic mothers. **Conclusion:** The study evident that there is a compelling need for significant enhancements in the general health status, focusing on the nutritional well-being of women and children, primarily in tribal population at the national and state levels in India. To mitigate anaemia, it is recommended to establish anaemia monitoring and intervention initiatives designed to address the unique needs of specific target groups and population at a high risk of anaemia.

Technical Session 9: Maternal Health

T9.1 Spatial distribution and influencing factors of zero consumption of iron folic acid (IFA) among pregnant women in India: Evidence from National Family Health Survey, 2019-21

Ajay Verma, Jadi Bala Komaraiah, William Joe, Achal Kumar Gaur, Adrita Banerjee
Banaras Hindu University
Email: ajaykum.verma@gmail.com

Pregnancy necessitates an increased need for nutritional support. Iron supplementation during pregnancy is crucial for the health of the mother and the child. Iron deficiency during pregnancy can lead to adverse outcomes. This study investigates the prevalence and determinants of zero consumption of Iron and Folic Acid (IFA) tablets among pregnant women in India. The study employs data from the 2019-21 National Family Health Survey (NFHS-5) and conducts a multilevel multivariate logistic regression analysis to identify factors associated with zero IFA tablet consumption. The results reveal several significant findings. Overall, 15.7% women aged 15-49 years did not consume IFA tablets during her last pregnancy in India. The spatial analysis showed clusters of zero IFA consumption, with hotspots in the northern, central, eastern, and north-eastern districts of India. Conversely, low prevalence clusters were mainly in southern districts of India. The factors significantly associated with zero consumption of IFA tablets among pregnant women includes unintended pregnancies (OR=1.21, 95% CI: 1.16, 1.28), not receiving nutritional supplementation from ICDS (OR=1.50, 95% CI: 1.44, 1.55) and no visits for ANC (OR= 2.97, 95% CI: 2.84, 3.11), no counselling on health and nutrition (OR=1.34, 95% CI: 1.29, 1.39). Additionally, women with no media exposure, from lower wealth quintiles, belonging to the Other Backward Class (OBC), of the Muslim faith, and with lower education levels were also statistically significant determinant factors of not consuming IFA tablets. The results of this analysis pinpoint areas where immediate intervention is crucial to enhance the uptake of IFA tablets during pregnancy. These interventions should also focus on raising awareness of family planning, promoting the utilization of ICDS facilities, increasing the coverage of visits, and

addressing cultural and socio-economic disparities to improve IFA tablet consumption among pregnant women.

T9.2 Do Increasing Number of ANC Visits Improve the Quality of ANC Services in India

Bashir Ahmad Bhat, Showkat Anwar Bhat
Population Research Centre, University of Kashmir
Email: babhat@rediffmail.com

Objectives– The objective of the study was to study the State trends in the No. of ANC visits and utilization of full ANC coverage and to analyse the socio-economic and demographic correlates of 4+ANC visits and full ANC coverage in India in general and Jammu and Kashmir in particular. **Methodology** – The study is based on the data from various rounds of NFHS collected in India during 1992-93 and 2019-21. The study covered J&K, MP, West, Gujarat and Tamil Nadu. NFHS surveys have collected information on the utilization of ANC services, number of visits, TT injections, IFA, weight, diagnostics of anaemia, ANC complications, danger signs and advice on the importance of institutional delivery, cord care, breastfeeding, family planning etc. In this study, the performance of different components of the quality of ANC care has been evaluated, which include: full ANC, information received on different pregnancy complications, selected diagnostic services received during pregnancy, and information received on delivery and postnatal care. **Findings** – The results show that a higher number of ANC visits in J&K do not result in an improvement in the full range of ANC services. One reason for this is that IFA tablets are not provided to few women during pregnancy. There is a need to see whether there are supply issues with IFA availability or whether our health workers at the various health facilities do not provide IFA to pregnant women. It was also found that both at the National level and in the selected States, more than 40 percent of pregnant women have not received information about vaginal bleeding or convulsions. Therefore, it is recommended that our front-line health workers like ASHA and ANM be reoriented with a full package of ANC services so that they can provide information to pregnant women on all components of pregnancy complications like vaginal bleeding and convulsions so that they can be protected from any type of pregnancy complications.

T9.3 Unveiling Antenatal Care Utilization in India: Leveraging Machine Learning and Count Regression Modeling

Prashant Verma, Mukti Khetan
University of Allahabad
Email: prashantvermag@gmail.com

The Sustainable Development Goal targets reducing the global maternal mortality ratio to 70 per 100,000 live births by 2030. The World Health Organization (WHO) advocates a minimum of four Antenatal Care visits to support this objective. In this article, we investigate the utilization of antenatal care services by pregnant women in various states of India. The foremost objective is to study the relationship between the number of ANC visits and socio-economic and demographic factors using the National Family Health Survey-5 (DHS-India, 2019-21). A range of statistical methods, including count data regression models like Poisson and Negative Binomial, are employed to achieve this. Furthermore, for in-depth analysis, machine learning techniques such as Random Forest, Artificial Neural Networks (ANNs), Extreme Gradient Boosting (XG-Boost), and Logistic Regression are leveraged to predict patterns of insufficient ANC visits, as defined by the WHO, based on various predictor variables. This study illuminated the essential factors influencing access to maternal and child healthcare services through count modeling. The study suggests that the negative binomial count regression model provides the best estimates for the count prediction of ANC visits among women in northern India. Furthermore, we have employed machine learning models to predict insufficient ANC visits. Additionally, our evaluation of these machine learning models suggests that the XG Boost model, consisting of the highest accuracy, sensitivity, and specificity, is best for predicting insufficient ANC visits in northern India. In conclusion, gaining a profound understanding of ANC utilization

dynamics is imperative for improving the health outcomes of both mothers and children in India. Comprehensive analysis reveals essential insights into ANC utilization, highlighting patterns and disparities crucial for planning maternal and child healthcare, policymaking, and targeted interventions.

T9.4 Determinants associated with Underutilization of Antenatal Care Visits in Uttar Pradesh: Results from National Family Health Survey 5

Jagriti Annu
Banaras Hindu University
Email: jagritiannu6@gmail.com

Introduction - Despite progress in maternal and health care in recent years, antenatal care (ANC) visits in India continues to be relatively low and inequitable, particularly between states. In 2015-2016, for example, only 26.4 % women of Uttar Pradesh (U.P) has taken at least four antenatal visits. Using data from the fifth round of demographic Health Survey, this study aims to explore determinants related to antenatal visits in U.P. **Methodology** - Data from the most recent live birth in the last five years among women aged 15-49 years were included in this analysis (n = 25,774). Outcome variable is 'at least four antenatal care visits'. Logistic regression method has used to analyze the association between explanatory variables and ANC visits. Associations were considered statistically significant if $p < 0.05$. **Critical Findings**: Only 41.6% women from had taken at least four ANC visits in U.P. Regression analysis showed women with higher education level, from higher wealth quintile, living in urban area, having less than or equal to two children, in the age group of (25-29) and their husband's education level is higher had higher odds of taking at least four ANC visits. **Conclusion**: - Nearly 58% of the pregnant women did not receive the minimum number of recommended ANC visits in U.P. Taking into consideration the factors associated with not taking at least four ANC visits, it is important to design strategies, in order the achieve the recommendation of government at the earliest so that every pregnant woman of Uttar Pradesh will take at least four antenatal visits in their pregnancy.

T9.5 Spatial Distribution of Maternal Health Deprivation in Uttar Pradesh, India: A District Level Analysis Based on NFHS-4 and NFHS-5

Sucharita Halder, Partha Sarathi De
University of Kalyani
Email: sucharitalhalder.31@gmail.com

Uttar Pradesh (UP) is the most populated state in India, it shares 16.5 percent of the total population and it is the 4th largest state sharing 7.3 percent of total area in India. It does not belong to socio-economically developed states in India. According to the Special Bulletin on MMR in India 2018-20, UP has recorded the 3rd highest MMR, 167. Such a high MMR is caused by poor reproductive and maternal health parameters. The present study estimates the maternal health deprivation index (MHDI) using six maternal and reproductive health deprivation parameters (like early marriage of girls, married women who are not using family planning methods, mothers who do not have 3 ante-natal care visits, non-institutional delivery, mothers suffering from low BMI and mothers who are anemic in the reproductive age-group) across 75 districts of Uttar Pradesh over two time points using NFHS-4(2015-16) and NFHS-5(2019-21) data. All the six maternal and reproductive health deprivation parameters are measured in percentage terms. Following the methodology of Human Poverty Index (HPI) used by UNDP (1997), we have estimated the MHDI assuming equal weights to each parameter. The MHDI at the state level is found to be high around 40.27 in NFHS-4 but it declines remarkably to 27.92 in NFHS-5; however, the MHDI across the districts vary to a large extent in both the time points. The inequality of the MHDI and its constituents decreases sharply from NFHS-4 to NFHS-5; except one parameter viz. non-institutional delivery. Our results support that the MHDI is spatially integrated that means high-high and low-low clusters of districts in respect of MHDI is prominent and it is statistically significant. Therefore, broadly we can conclude that the districts are converging in respect of

MHDI; it is a welcome move in UP since the success of demographic dividend largely depends on the reproductive health of the mothers.

T9.6 Socio-economic factors contributing to the short birth interval among reproductive-aged women in India: An inequality decomposition analysis

Anshika Singh

Banaras Hindu University

Email: anshikasinghbhu1@gmail.com

Background - World Health Organisation recommends at least 33 months of spacing between two consecutive live births (birth-to-birth). A birth-to-birth interval of fewer than 33 months, a short birth interval, can cause adverse health problems for both mother and child. This study attempts to investigate wealth-based inequality in the short birth interval and what are the contributing factors to the inequality. **Methods** - The study included one hundred nine thousand four hundred thirty-nine women of reproductive age from the fifth round of the National Family Health Survey dataset. Erreygers concentration index was applied to examine wealth-based inequality in the short birth interval, and the decomposition of the Erreygers normalized concentration index was used to investigate contributing factors in wealth-based inequality of short birth interval. **Findings** - The Erreygers normalized concentration index (ECI) was -0.1326 (SE=0.0035, p value <0.001) which points out that the short birth interval was more concentrated among the poor household women. Further, the Erreygers concentration index decomposition indicated that the place of residence (53.5%), age of mother (11.8%), the total number of children before the index child (25%), and mass media exposure (5%) were the major contributors of the pro-poor inequalities in the short birth interval. **Conclusion** - The Erreygers normalized concentration index revealed that the short birth interval is concentrated among poor wealth women. Therefore, creating awareness through mass media about the benefits of an adequate birth interval between consecutive live births, especially among rural young mothers and strengthening pre-existing government policies and initiatives are necessary to reduce the short birth interval proportion. **Keywords** - Short birth interval, wealth-based inequality, NFHS-5, Erreygers normalized concentration index, decomposition.

Technical Session 10: Fertility and Family Planning

T10.2 Levels, Trends and Fertility Differentials in Uttar Pradesh

D.A. Nagdeve

International Institute for Population Sciences

Email: dnagdeve@iipsindia.ac.in

India had experienced fertility transition and substantial fertility decline in all the states but the levels and trends of fertility vary considerably from state to state. Uttar Pradesh among five of the nine high focus states still have fertility rate as high as above two children per woman with considerable variations in the levels and trends of fertility. This paper has examined the levels, trends and fertility differentials in Uttar Pradesh using data from the Sample Registration System and National Family Health Surveys. An analysis of changes and trends has been conducted from 1981 to 2021. The analysis revealed that the total fertility rate in Uttar Pradesh declined from 5.8 in 1981 to 2.8 in 2020, according to Sample Registration System estimates. The results confirm the persistence of differences in fertility. The pattern of fertility decline was not uniform in rural and urban areas and rural areas were lagging behind. It also shows that fertility is declining slowly in Uttar Pradesh. The fertility decline was mainly due to the education, decrease in higher order births of three and above. There has not been any significant decline in first and second order births in Uttar Pradesh. There is a negative relationship between education and fertility. This indicates the education of women is contributed to lower fertility. Therefore, education of the girls needs to be encouraged. There is a need to give more thrust on rural areas with high fertility for achieving universal below replacement fertility in Uttar Pradesh.

T10.3 Whether the Environmental conditions of living Constrain Urban Poor Ability to benefits from Family planning and Healthcare Services?

R.S. Goyal

Email: rsgoyal52@gmail.com

In many countries programs for strengthening family planning outcomes in urban poor localities have poor results. Is it because of their poor socio-economic status and environment conditions of living, or interventions are not penetrating to all people? Or there are other structural factors? This paper examines this phenomenon by taking India as a case. The research is based on data drawn from two nationwide health surveys and segregated for urban poor and non-poor. Outcome indicators include; child mortality and morbidity family planning and fertility level, program interventions are; access to flush toilet, children's complete immunization, institutional deliveries and higher order births. Study notes that program inputs make a difference in family planning outcomes in these localities. A multiple correlation analysis between inputs and outputs variables also indicates a positive association between inputs and some health outcomes, the study also shows that structural factors are critical in this context.

T10.4 Indirect Estimation of Fertility using Rele method: An Application to South Africa/Provinces/municipalities

Hricha Rai, Brijesh P. Singh

Banaras Hindu University

Email: raihricha321@gmail.com

Objective: Many researchers found that most Indian families have a strong preference for sons over daughters in childbearing. In order to have their preferred number of sons they continue to have the child even if they have achieved the desired family size. This leads to an increase in fertility. The strength of son preference is more prevalent in northern and central India. In this study, we have examined whether son preference is affecting women's desire to have more children or not using the data from NFHS-V (2019-2021). In this article, we have shown the prevalence of son preference in India as a whole and the most populous and traditional state of India i.e. Uttar Pradesh. This article compares the reported son preference across different states of India between NFHS-1 and NFHS-5. Data & Methods: Data was taken from the National Family Health Survey-5 (NFHS-5) and NFHS-1 for this study. The analysis uses the Binary logistics regression model. The unit of analysis for this study is women of age group 15 to 49 having parity 2 and 3. Findings: Results revealed that the son preference is considerably declined over all the states between NFHS-1 and NFHS-5. Although in all the states of India except Meghalaya son preference is still persistent to some extent. Furthermore, we find strong evidence for significantly differential behaviour of women towards the desire for more children of those having their first or second child as a son than those whose first and second child are daughters. In conclusion, the results show that couples still have some preferred sex composition in childbearing and having a preferred sex composition of children influences both fertility desire and sterilization behaviour that results into excess fertility.

T10.5 Intergenerational Changes in Fertility Behaviour and Family Planning Services in Saharsa District, Bihar

Shanu Priya, Anuradha Banerjee

Jawaharlal Nehru University

Email: shanu.priya13@gmail.com

Introduction- A small primary field survey was done in Saharsa district of Bihar among two generations of mother-in-law and daughter-in-law to capture the fertility behaviour among the generations and the use of contraceptives. This was an anthropological approach to see how the complexities of societies have been impacting the fertility behaviour of one generation after another. Methodology- mixed-method approach, multinomial logistic regression, and descriptive

statistics. Critical findings: there has been hardly any change in the family size between the generations; the age at first marriage among both generations has remained same over a period of time, the preference of number and gender of children varied from caste to class, there is huge dominance of mother-in-law on their daughter-in-law on family planning issue; there is dearth of contraceptives from the supply side as well. The overall family size of previous generation was around 4 to 5, which was 3 to 4 in the current generations. Conclusion- the process of family planning is too slow in rural and underdeveloped district of Bihar, people often complaint about the failure of health systems, but there is multiple reason behind it, one of the most prominent reasons of high fertility in Bihar is familial issues, which has been prominent since ages, the influence of elder family members on the younger ones, undoubtedly has been triggering cause behind high fertility in Bihar.

Technical Session 11: Data and Methods

T11.1 Is completeness in death registration improving during last two decades of Civil Registration and Vital Statistics (CRVS) system strengthening in Uttar Pradesh, India?

Jayanta Kumar Basu

UNICEF-PRC Patna

Email: jayantakumar.basu@gmail.com

Background - In Uttar Pradesh, the number of registered deaths increased to some extent in recent years, improving the potential of the CRVS system to be the primary source of mortality data and to provide the benefits of the issuance of a death certificate. This study aims to identify whether the level and recent trends in death registration completeness in Uttar Pradesh, including by sex, have really shown some improvement during the period of Civil Registration and Vital Statistics system strengthening since 2000. Methods - Data used in this study are registered deaths from 2000 to 2018 (and by sex from 2009 to 2018) reported in the Civil Registration Reports published by ORGI. Completeness of death registration is calculated using the empirical completeness method (Adair-Lopez). Levels and trends in completeness are measured using two socio-economic indicators: The Socio-Demographic Index and Multi-Dimensional Poverty Indicator. Results - Estimated completeness of death registration in Uttar Pradesh increased from 12% in 2000 to 26% in 2018. Male completeness rose from 9% in 2009 to 29% in 2018. There is decline in female completeness level from 45% to 25% in the same period. Although state-level inequalities in completeness by gender remain, there was a narrowing of inequalities by SDI and to a lesser extent MPI during the period. Conclusions - Increase in completeness of death registration in Uttar Pradesh is not substantial achievement and diminishes the potential of the death registration system as a routine source of mortality data. Although narrowing of inequalities by gender in completeness demonstrates that the benefits of higher levels of death registration have spread to all cross-section of the population in recent years, the continued low completeness level is concerning. Uttar Pradesh CRVS system also needs to increase the number of registered deaths with age at death reported to improve their usability for mortality statistics.

T11.2 Unveiling Methodological Nuances: A Comparative Study on Design Effect and Intra-Class Correlation in NFHS and LASI

Somnath Jana

International Institute for Population Sciences

Email: somnathjana443@gmail.com

Background: - DHS surveys utilise discrete sampling zones with a similar design to the full sample, resulting in regional design effects comparable to total sample design effects. It's difficult to say whether the estimate is more accurate. Still, the research seeks to explain why estimates differ in surveys by looking at the design for potential sampling and non-sampling errors. Hypertension is one of the major public health concerns in India, with high adult prevalence rates. Large-scale surveys such as the National Family Health Survey (NFHS-5) and LASI wave 1

provide valuable data on hypertension state levels. Objective: This study seeks to explain if there is a substantial variation in estimate owing to two alternative stratification structures for survey design and to emphasise the loss in precision and the net gain in the intra-class correlation between the two studies. Methods: Two methods for estimating standard errors were tested. Bootstrap variance for the ratio approach of simple random sample estimation and design-based asymptotic variances for multilevel structure. Also, we estimate the design effect and gain in precision to compare two different multilevel studies. Results: The ICC values for the indicator varied from 0.03 to 0.20 in most states. Larger states such as Gujarat, Madhya Pradesh, Uttar Pradesh, and Maharashtra had greater ICCs in the prevalence of hypertension in rural regions for both NFHS and LASI. The study found that the design effect for both NFHS and LASI varied between 1.5 to 2.5. Conclusion: In estimating indicators with varied stratification structures, LASI design generates higher accuracy loss than NFHS design. Proper stratification is vital in survey design to minimise bias induced by the selection process. PSU size stratification should be carefully considered in two-stage sample designs, especially in India, where PSU size is highly connected to demographic factors.

T11.3 Population Figures of Uttar Pradesh: Estimates in the Absence of Census 2021

Nandlal Mishra, S.K. Singh
International Institute for Population Sciences
Email: nandlal.iips@gmail.com

Accurate population estimates are vital for effective development planning and program implementation, requiring continuous monitoring. The absence of Census 2021 data has left a void in reliable demographic indicators, such as population size, growth rate, density, age-sex structure, sex ratios, and the distribution of religion and caste at state and district levels. Our study draws from diverse data sources, including the Census of India, Sample Registration System, Civil Registration System, National Family Health Surveys, and Geographic Information Systems. Using cohort component methods and robust mathematical model, we conducted a comprehensive analysis to refine the base population, project fertility and mortality indicators, and derive dependable demographic insights. GIS techniques were systematically employed to estimate district-level populations for 2021 and 2026, integrating spatial data for accurate and geographically specific estimates. The estimated population was meticulously disaggregated by residence, age, sex, religion, and caste, with insights refined using National Family Health Survey data. - In 2021, Uttar Pradesh's population reached 22.7 crore, with Allahabad as the most populous district and Morba having the lowest population. The urban population constituted 23.9%, with a median age of 24.8 years, a dependency ratio of 619, and a sex ratio of 920. Projections for 2021-2026 anticipate a 1% annual growth rate, with the Total Fertility Rate falling below replacement levels. Life expectancy is expected to increase to 69.8 years for males and 69.0 years for females. The religious composition reveals 82.8% Hindus, 16.7% Muslims, 26.0% Scheduled Castes, 2% Scheduled Tribes, and 50.4% Other Backward Classes. In conclusion, our study provides invaluable age-sex-specific population estimates at the district level, serving as a crucial resource for computing development indicators and facilitating the design, monitoring, and evaluation.

T11.4 Predictive Analysis of Domestic Violence using Machine Learning: Contribution towards Goal 5 of SDG

Vandita Srivastava, Prashant Verma
University of Allahabad
Email: vanditasrivastava29@gmail.com

Goal 5 of Sustainable Development, aims to ensure an end to all forms of discrimination against women and girls everywhere. Often this discrimination result in domestic violence against women. Domestic violence remains a persistent societal issue, and its prevalence in Uttar Pradesh is of significant concern. This study employs a machine learning approach to analyze and predict instances of domestic violence using data sourced by the National Family Health

Survey (NFHS - 5), which provides information on the population, health, and nutrition for India. The study aims to develop a predictive model for assessing the occurrence of domestic violence. Leveraging various features and indicators available in the NFHS dataset, the study endeavors to identify patterns and key determinants associated with domestic violence incidents. The analysis involves preprocessing the dataset, performing Exploratory Data Analysis, feature selection, model building, and evaluation using appropriate machine learning algorithms. Various Machine Algorithms are used, such as logistic regression, Bayes, K-nearest neighbor, support vector machine, random forest, artificial neural network. The paper aims to contribute to the understanding of the factors influencing domestic violence, thereby offering insights that can inform interventions and policy initiatives aimed at achieving our targets for gender equality. Findings highlight that Random Forest model is more suitable among other machine learning models and also shows that the importance of education of both respondent and husband/partner of the respondent, occupation, and lesser the husband's/partner's control over the respondent, is the need for more targeted efforts to condemn the act of violence within the household.

T11.5 Multilevel Survival Modelling of Neonatal Mortality under Some Prognostic Factors in Uttar Pradesh

Shalini Jaiswal, Shambhavi Mishra
University of Lucknow
Email: shalinij343@gmail.com

Child survival remains a critical global health challenge despite significant progress in reducing child mortality. The neonatal period, in particular, is a crucial stage demanding attention. Statistical analysis of lifetime data, known as time-to-event or duration data, is highly valuable in numerous fields, including biology, sociology, economics, and healthcare. Researchers in developing countries have extensively explored the links between neonatal mortality and various factors, including socioeconomic, demographic, biological, and environmental conditions. Recognizing the inherent hierarchical structure of data, where individuals are nested within larger units with potentially distinct characteristics influencing survival outcomes, this study employs multilevel survival modelling to identify prognostic factors associated with neonatal mortality in Uttar Pradesh, India. Data on newborn children (0-28 days) from the National Family Health Survey (NFHS-5) (2019-2021) serves as the basis for this analysis. A Cox regression analysis was conducted to identify the main associated factors of neonatal mortality. The multilevel mixed-effect parametric model was fitted for the significant factors associated with neonatal mortality. The Cox-proportional hazard model investigation revealed that, within the socioeconomic and demographic factors, Religion, Occupation and the Respondent's current employment status were identified as significantly associated prognostic factors for neonatal mortality in Uttar Pradesh. In the realm of biological factors, the place of delivery, the birth weight of the child, and the mother's current breastfeeding status were also found to be significant contributors. Comparing different multilevel survival models, namely the Weibull and exponential models, the three-level exponential mixed-effects model demonstrated the best fit for neonatal mortality in Uttar Pradesh. This determination was based on the minimum AIC value (1068.574).

T11.6 Indirect Estimation of Fertility using Rele method: An Application to South Africa/Provinces/municipalities

Martin Enock Palamuleni, Monica Ewomazino Akokuwebe, Abiel M. Lekulo
Northwest University
Email: martin.palamuleni@nwu.ac.za

Introduction: Fertility is one of the components of population change, the other two being mortality and migration. In statistically underdeveloped countries to estimate these components is a nightmare and there is continued reliance of indirect estimation procedures. As a result of this acceptable estimates of demographic parameters are only available at national level.

However, there is now and increased demand to have reliable estimates of demographic parameters at subnational levels. Objective: As such the main objective of this study is to estimate fertility for South Africa as a whole at its province and municipality using the Rele method a technique that require age-sex populations distributions. Methodology: - The study used age statistics from the 1996, 2001 and 2011 population censuses. Rele method was used to derive estimates of fertility at national, provincial and municipality levels. Critical findings: At national level, TFR has remained constant at 3.3 children per woman between 1996 and 2001 but declined to 2.8 in 2011. There are variations in fertility by province, population group and municipality. Fertility is lower among the affluent provinces and municipalities (such as Gauteng, Western Cape and Free State) than the disadvantaged provinces of Limpopo, Mpumalanga, Eastern Cape and North West. Further, the national and provincial estimates of fertility were compared with the estimates by other researchers and were found to be within acceptable range. This means that Rele method provides reliable estimate of TFR. Conclusion: Estimating fertility at subnation levels will help to understand fertility transition at the local level and monitor the success of population and development programs. Key words: Fertility, Rele method, indirect estimation, South Africa

Technical Session 12: Economic and Social Development

T12.1 Family System and Ingrained Individualism as an Embodiment of Human and Knowledge Capital: A Serendipity of long-run GDP Per Capita Growth

Arjun K, Arumugam Sankaran
Pondicherry University
Email: arjunk25891@gmail.com

The research paper is classed into 3 evidence-seeking empirical inquiries. To begin with, we instituted a correlational study of 70 countries, succeeded by an OLS regression on 129 countries. We solicited a panel ARDL co-integration approach categorically to 23 developed countries worldwide to complement the supplementary cross-sectional evidence. The gamut of panel data is from 1990 to 2021. The absence of data in certain countries and variables for a few years is simulated using extrapolation and interpolation techniques. The analysis reveals that the family system and an individualistic culture promote innovation and skilled human capital, which transpires short-run growth through the amalgamation of factors such as labour and capital into sustained long-term per-capita growth through productivity leaps. It insulates the classical Armageddon of stationarity, which brings forth a pessimistic aphorism that economic growth will fall in congruence to population growth, resulting in perpetual maintenance of the Status Quo. The current study subscribing to the endogenous growth notion invalidating classical pessimistic aphorism adds empirically and philosophically to the endogenous legacy, expanding its horizon. The study concludes liberal family structure and US model individualism premised on self-assertiveness, self-reliance, innovativeness, and self-actualization are the creative spaces of growth and hence following the late Japanese ex-prime minister Shinzo Abe's Abenomics encapsulating family-centric policies for growth has a philosophical apriori to the conclusive convictions of our study and thus could be emulated across the world.

T12.2 Not in Employment Education and Training (NEET) Profile of Youth in Uttar Pradesh: Demographic Dividend or Disaster

Manik Kumar
Govind Ballabh Pant Social Science Institute
Email: manik.gbpssi@gmail.com

The 8th SDG goal is broadly related to inclusive and sustainable economic growth, productive employment, and decent work for all. In the context of employment SDG 8.6 targets sustainable reduction in the proportion of youth in Not in Employment, Education and Training (NEET) by 2020. In this preview present study explore the pattern of NEET rate in Uttar Pradesh during the past two decades, that is from 2004-05 to 2022-23. The study also finds socio-economic factors

which force youth to be in NEET. To analyse the trend and pattern present study use National Sample Survey Office (NSSO) Employment Unemployment and Periodic labour Force Survey (PLFS) unit level data. In this study we use multinomial logit model to know direction and magnitude of socio-economic factors that influence youth to be in NEET. Our finding describes that 34.3 per cent of youth were in NEET in 2011-12 and that became 36.5 per cent in 2022-23 in rural area. In case of urban area NEET rate were 43.1 per cent in 2022-23. Our logit result shows youth from comparatively affluent castes and class more likely to participate in NEET. A regional analysis in the state to decompose the trends in different regions of the state that are so diverse economically and socially is crucial, given the findings of this article. To create this demographic advantage for dividends, we must have efficient educational institutions that make youth employable and an economic environment in favor of large as well as small businesses.

T12.3

Examining Economic, Social Development of Uttar Pradesh

Suman Singh, Shewli Shabnam, Shivang Sharma
International Institute for Population Sciences
Email: sumansauri@gmail.com

Uttar Pradesh's journey of socio-economic development has been multifaceted, characterized by a blend of progress and challenges. From grappling with socio-economic challenges to emerging as the second largest contributor to India's economy, its journey reflects a compelling narrative of resilience, policy reforms, and strategic interventions. Uttar Pradesh itself has targeted to achieve a Trillion-dollar economy by 2027. Though policies and infrastructure development initiatives have been implemented, studies assessing their actual impact on economic growth, employment generation, and social development indicators are limited. A deeper analysis is needed to understand the causes of disparities across regions and sectors and their impact on overall development. Using the data from various secondary sources, we have examined the economic and social growth of UP in terms of per-capita GDP, per-capita roads and railways, unemployment, per-capita Energy production and consumption, Number of hospitals, per-capita facilities available in the hospitals and the budget allocated in these sectors over the year. Preliminary result shows that the GDP has increased by 57.44% between 2019-20 to 2011-12, however, the income per capita has increased by only 39.42% for the same duration. The contribution of the service sector has increased to half in the state's GDP, however, Agriculture, remains the largest contributor followed by Real Estate/Ownership of Dwellings/Professional Services and Manufacturing. The contribution of the primary sector has increased slightly since covid pandemic. The spatial distribution shows a clear disparity in GDP contribution between eastern and western UP. Other indicators are showing mixed results and the growth is not proportional to the budget allocated to those specific areas. There is an urgent need to look at the basic needs at the grassroots level to achieve future goals.

T12.4

Health System in India: Programs, Implementation and Challenges

P. Murugesan
International Institute for Population Sciences
Email: pmurugesan@iipsindia.ac.in

Background: Health and Socio-economic developments are so closely intertwined that it is impossible to achieve one without the other. While the economic development in India has been gaining momentum over the last decade, our health system is at crossroads today. Even though Government initiatives in public health have recorded some noteworthy successes over time, the Indian health system is ranked 118 among 191 WHO member countries on overall health performance. Building Health Systems that are responsive to community needs, particularly for the poor, requires politically difficult and administratively demanding choices. Health is a priority goal in its own right, as well as a central input into economic development and poverty reduction. Objectives: India is well placed now to develop a uniquely Indian set of health sector reforms to enable the health system in meeting the increasing expectations of its users. Keeping in the view the present study makes an attempt to provides its improvement of health system in

the country. Particularly the maternal indicators of Antenatal, Postnatal and delivery care taken into consideration of the preset study. And also, to see its achievements in the country over period of time. Data and Analysis: The National Health Surveys (NFHSs) data has been used for in this present study, around one lakh currently married women have interviewed in each survey to provide information on the use of safe motherhood services. Among the indicators the antenatal, postnatal and delivery care have been taken to study in this paper in all three rounds of the data. It has been observed that 44 percent of the women received antenatal services in the survey round one as well as two and it has increased to 51 percent in the round three. Likewise, the other indicators also have increased its own levels. According to the information received from different States, 7283 camps have been organized in the States up to date. As a result of these interventions, a recent survey results of which have come for 50% of the districts indicates that Institutional Delivery has increased from 78.9% (NFHS-4) to 88.6% (NFHS-5). Conclusion: In this paper, we describe the status of our health system, suggest a few health measures of maternal health indicators provided by three rounds of National Family Health Surveys (NFHSs), and conclude by identifying its increase health systems in India has improved and it necessary to the community needs, particularly for the poor.

T12.5 Is Growth Pro-poor? Analysis of Poverty among regions of Uttar Pradesh

Priyabrata Sahoo

Banaras Hindu University

Email: priyabrata.s@bhu.ac.in

This paper examines whether the growth in the regions of Uttar Pradesh (UP) are pro-poor since 2000's. The National Sample Survey Organisation (NSSO) unit level data of Consumer Expenditure Survey (CES) for 2004-05(61st) and 2011-12(68th) rounds have been used to estimate and pro-poor indices among the rural and urban regions of UP and poverty and decomposition of annual changes in poverty among the rural and urban regions of UP. While the poverty reduction is higher in the northern, southern upper Ganga plain, the reduction is slower in the eastern, southern region and increases for the central region. The annual change in poverty among the region can be decomposed into the annual change in poverty in the state, difference in poverty elasticity between the state, the region and difference in MPCE growth of a region with the state average. The poverty has been decomposed into growth in income and redistribution to have a look into the pro-poorness among the regions of Uttar Pradesh. Over the period of analysis, the growth effect of poverty reduction outweighs the inequality effect causing reduction in poverty in Uttar Pradesh. While regions like eastern, southern though are having higher MPCE growth than the state average, the lower poverty elasticity in these region causes slower reduction in poverty and the growth in this region are not pro-poor. Both the southern, northern upper Ganga plain is having high poverty elasticity causing faster reduction in poverty during this period and the growth in these regions are pro-poor. This study finds that the central region of Uttar Pradesh has facing a critical problem with increase in HCR and Declining MPCE, hence growth is anti-poor in this region.

Technical Session 13: Elderly Health

T13.1 Struggling for Dignity: Older Adults Confronting Discrimination in Contemporary India

Bajarang Bahadur, Vinod Kumar, Harshita Chari

Banaras Hindu University

Email: bajarang7894@gmail.com

Introduction - Discrimination against the older adults is often an overlooked issue in contemporary societies, and as the world's second most populous nation, India has an increasing proportion of ageing population. This particular group of population face various forms of discrimination in their daily lives, and this research endeavours to delve into these experiences. Objective - This study seeks to unveil the factors influencing discrimination and provide insights for interventions that promote social justice and protect human rights in the context of India's

increasing elderly population. Data and Methods - The data used in this study is from the first wave of the Longitudinal Ageing Study in India (LASI) conducted in 2017-18. This present study focuses on the elderly aged 60 years and above, which has a total sample size of 31, 902 elderly. The discrimination is assessed using six questions asked on facing discrimination in day-to-day life. The methodology used are descriptive analysis, binary logistic regression and multivariate decomposition. Results - There are 18% of older adults who face everyday discrimination, the likelihood of which is higher among females and the ones who live with his spouse or with spouse and children. There is a higher likelihood of facing discrimination among older adults who have mobility restrictions, difficulty in ADL and IADL, poorer self-rated health and lower life satisfaction. The major reasons that the older adults perceive are the ones due to which they face discrimination are their age, followed by their financial status and their caste. Conclusion - Addressing age-based discrimination is imperative for upholding principles of social justice and safeguarding human rights. The distinct hurdles confronted by older individuals, especially within the context of a country like India, demand urgent and focused consideration.

T13.2 Understanding an association between occupation and NCDs among older population in India

Krishna Dornalpalle

International Institute for Population Sciences

Email: dornalpallekrishna@gmail.com

Background: This study aims to examine the prevalence of CVD, Diabetes, and Chronic Lung Diseases by occupation, health, and sociodemographic characteristics among older adults in India. Data and Methods: The study uses secondary data from Longitudinal Ageing Study in India (LASI, WAVE-I, 2017-2018). Analysis based on a sample of older adults aged 45 years and above. Bivariate and multiple regression analyses have been carried out to understand the association between Occupation and selected NCDs (CVD, Chronic Lung Diseases, and Diabetes). Further Propensity score matching is used to understand the effect of Occupations on the prevalence of NCDs in Older Adults in India. Findings: Study shows that the prevalence of NCDs varies across different occupational categories. Non-workers have the highest prevalence of CVD at 33.79%, followed by Legislators and Professional Clerks at 31.13%, and Service, Craft, Plant, and Machine Workers have the lowest prevalence of CVD at 18%. Pertaining to Chronic lung diseases have the highest prevalence among Legislators and Professional Clerks at 7.27%, while Agriculture, Fishery, and Elementary (5.56%). Correspondingly, the occupational grouping of Service, Craft, Plant, and Machine Workers has the lowest prevalence of chronic lung diseases (4.81%). After Matching the Treatment effect of Service, Craft, Plant, Machine Related Workers shown Significantly increase in the Prevalence of Chronic Lung Diseases and CVD as Compare to untreated group, when Professional/Legislature/Clerks/Managers, as a treatment then the effect on CVD and diabetes is Shows nearly 10%, and 6% more as Compare to untreated group. Conclusion and Policy Implication: The study revealed that occupation stands as an autonomous risk determinant for Chronic Diseases. Policymakers and Health Care Providers should think about occupational health and labor laws; there must be a multi-sectorial approach based on policies.

T13.3 Understanding Successful Aging in Central India: A Maslowian Perspective on Hierarchy of Needs

Paramita Majumdar, Aparajita Chattopadhyay

International Institute for Population Sciences

Email: prmtmajumdar@gmail.com

Introduction: Ageing is a universal phenomenon, and as populations around the world age, understanding the nuances of successful ageing becomes important. With over 100 million elderly individuals, India stands at the juncture of demographic change. Each region of India presents unique socio-cultural, economic, and varied factors that influence ageing experience. While there is a growing body of research on ageing in India, there remains a gap in

understanding the specificities of successful ageing in different regions, especially in Central India. Objective: This study aims to understand the factors influencing successful ageing in Central India. Data and Methods: This study utilized the data from Longitudinal Ageing Study (LASI, 2017-18) Wave-I. The outcome variable is “successful ageing”. It has been measured using a multidimensional measurement model. Descriptive statistics, Pearson Correlation and logistic regressions were used to assess the associations between background characteristics and successful ageing. Results: Out of the three states of Central India, Madhya Pradesh (13.9%) has the highest prevalence of successful ageing whereas Uttar Pradesh (7.62%) has the least prevalence of successful ageing. Several factors are found to be associated with successful ageing in overall Central India. Education level, perception about safety in home and neighbourhood, recent hospitalization, frequency of physical activity, childhood health and spirituality have shown to be significantly associated with successful ageing in Central India. Conclusion: Successful Ageing is slowly gaining currency in the arena of ageing research. Particularly, in the context of India which stands at a demographic crossroad, the issue of ageing cannot be simply pushed aside. This issue of healthy and successful ageing cross paths with various of the SDG Goals and indicators. Thus, it becomes utmost important to understand this issue to work towards the fulfilment of SDG goals.

T13.4 Gender differences in chronic pain and its treatment among middle-aged and older adults of India

Amit Kumar Goyal

International Institute for Population Sciences

Email: amitsks123@gmail.com

Significant disparities exist in the prevalence of chronic pain between the genders, with females consistently reporting higher rates compared to their male counterparts. These disparities are primarily - linked to the biological and physiological characteristics of females. However, there is a notable lack of exploration regarding disparities in treatment, particularly among middle-aged and older adults in India. The study aims to assess the prevalence of chronic pain and its treatment, focusing on the differences between genders. The present study used data from the first wave of the Longitudinal Aging Study in India (LASI), conducted in 2017-2018. LASI is a nationally representative prospective cohort study that surveyed adults aged 45 years and above and their spouses, regardless of age. Females (41.81%; 95% CI: 39.99 - 43.62) exhibit a notably higher chronic pain prevalence than males (29.54%; 95% CI: 28.05 - 31.02), regardless of other contributing factors. This discrepancy may arise from a complex interplay of biological, psychological, and social differences between the genders. Surprisingly, only three-fourths of women experiencing chronic pain receive any form of treatment, including analgesics (Oral/Injectable), therapy, or external (Ointment, cream, gel, balm, spray, oil, etc.) interventions, and this figure is even lower among men (69.95%; 95% CI: 68.16 - 71.74). These findings underscore the presence of biases within the healthcare system, potentially perpetuating disparities in pain management. In conclusion, our study sheds light on the significant disparities in the prevalence of chronic pain between middle-aged and older adults in India, with women consistently reporting higher rates compared to men. Moreover, there are existing biases within the healthcare system that may contribute to the under-treatment of chronic pain, thereby perpetuating gender-based disparities in pain management.

T13.5 Inequality in Need Predicted Utilization of Healthcare Services among Middle-Aged Adults and Elderly in India: A Secondary Analysis from LASI Wave-1

Umakanta Sahoo, Sanjay K Mohanty

Sambalpur University

Email: sahooumakanta0@gmail.com

Background - Middle aged adults and elderly are more prone to suffer with chronic non-communicable diseases (NCDs) and there is an extent of socioeconomic inequality over access to health services and health outcome. Data and Methods - Using the first ever micro level data

with a total of 70, 663 individuals from Longitudinal Ageing Study India (LASI, 2017-18), this paper aims to understand the inequity in healthcare utilization by need predicted factors associated with chronic NCDs among middle-aged adults and elderly in India. Bivariate analysis, Probit regression model and concentration index were used in the analysis. Results - Due to chronic NCDs about 28% adults and elderly aged 45+ were using inpatient care, 45.5% outpatient care, 38.8% both inpatient and outpatient care and 47.9% either inpatient and outpatient care. Stroke is the leading cause of inpatient care (21.1%) and asthma was for outpatient care (37.7%) among all chronic NCDs. The higher probability of using inpatient care due to chronic NCDs was found among older adults with aged 75 and above, male, having difficulty in daily living activities, reside in urban area, belong to richest MPCE quintile, widowed and not covered with health insurance. Further, there was a pro-rich inequality observed for utilization of actual health services, need-predicted use and need-standardised use of either inpatient or outpatient care due to chronic NCDs. Conclusion - Inequality in health services due to chronic NCDs remains largely by the richest quintile and it indicates a need and strengthening policies and programs in favour of poorer section. Key Words: Inpatient; Outpatient; chronic NCDs; LASI; India

Technical Session 14: Migration and Urbanization – II

T14.1 Internal migration in India: emerging trend and some new facts

Dharmendra Pratap Singh, Shalini Sen
Tata Institute of Social Sciences
Email: dpsingh1212@gmail.com

This paper is based on Multiple Indicator Survey of the 78th round of the National Sample Survey 2020 covering first time more than 2,76,000 households. After a long gap of last 64th NSS round of 2007-08 this data was made available to measure changes in migration level, emerging trend and characteristics of individuals. A total of 29.1% of the total population were found to be migrants (34.6% urban and 26.8% in rural areas). According to the data collected during the lockdowns about 25% male and 4% female migrants have returned from their place of last residence. Out of migrants who reported as earning member before migration 58% of male reported an increase of income due to migration, a portion of 24% reported a loss of income and only 17% reported no change. Women reported in a similar trend. About 86% male from rural to urban migrant reported increase in income as well migrant moved between states. About 60 per cent male migrant reported to had own freehold dwelling unit (rural 50% and urban 67%). Rural to rural migration declined from 2007-08 by 5.9 percent and urban to rural migration increased by 3.8 per cent. Both urban bound stream shows marginal increases. Male reported higher percentage decline in R-R and R-U migration stream over the period. The most significant increase was reported in the Urban to rural migration stream mostly male. This can be attributed to the COVID-19 epidemic which affected the data collection period. Most of migrants reported transfer of ration card and few of voting card. The migrants should be able to access and maintain the poverty alleviation schemes while they are travelling even when they are not within their state domicile.

T14.2 The role of children's migration in social network and morbidity status of older parents

Shinjini Ray, R. Nagarajan
International Institute for Population Sciences
Email: shinjiniray24@gmail.com

Introduction: Massive rural-to-urban migration combining with swift population ageing has resulted in a rise in the number of older parents left-behind in migrant-sending areas. After children's migration, the left-behind older parents may experience weakened social ties, which may result in some form of social disconnection. Objective: This study investigates whether and how children's migration impacts social networks and the health of the left-behind older parents residing in an ecologically fragile region. Methodology: A field survey was conducted during

October-December, 2020 among 400 left-behind older parents (LBOP) and 200 non-left-behind older parents (NLBOP) aged 60+ years residing in Sundarban delta region, West Bengal, India. A modified Lubben Social Network Scale-18 (LSNS-18) was adopted to measure older parents' social ties with families, friends, and neighbours. Morbidity status was determined by the presence/absence of five chronic diseases: hypertension, stroke, COPD, diabetes, and arthritis. - Results: Smaller social network and lower frequency of social interactions were more common among LBOP. Multivariable regression results show that NLBOP with larger social network were less likely to report diabetes and hypertension than LBOP. SEM analysis revealed some potential pathways between network ties and morbidity. For example, the feelings of loneliness, depression and anxiety were significantly higher among LBOP, whereas regular health check-up and medical treatment seeking were lower. Conclusion: Both size of social networks and frequency of social interaction were significantly lower among left-behind elderly and were negatively associated with a number of morbid conditions (e.g., diabetes and hypertension). Policy aimed at restoration of social networks can serve to broaden the social connections of left-behind older parents, potentially improving their overall quality of life.

T14.3 Forming Occupational Niche: A Case Study of Migrant Drivers in Mumbai

Shahana Purveen

Tata Institute of Social Sciences

Email: shahana.tiss@gmail.com

This paper tries to explore the role of social networks and cultural factors in the emergence and solidification of taxi driving as an ethnic occupational niche among migrants from Uttar Pradesh despite of stigma associated with them in Mumbai. The city is known for its "cult of violence against migrants" that came into prominence in the 1960s with the rise of Shiv Sena and its leader Bal Thackeray. In the 2000s similar politics was played by Maharashtra Navnirman Sena, leader Raj Thackeray against migrants from Uttar Pradesh and Bihar (commonly called as migrants from Bhaiya land) to fit his foot in state politics. Yet, the dominance of migrants does not change in taxi occupation. Therefore, the present paper examines the factors that affect the entrance of first-generation migrants into this occupation and then after they dominate the taxi industry. To achieve the mentioned objective, I used in-depth interview and observation methods to collect the data from two taxi stands in Mumbai. The taxi stands were selected based on two criteria. Firstly, the size of the stand, and secondly, the number of drivers associated with the stand. I took twenty in-depth interviews with primary participants. Apart of it, I also interviewed leaders of taxi unions and officials of Regional Transport Offices. The data has been analyzed with the help of thematic analysis. The research reveals that mixed embeddedness or the interplay of structural factors such as blocked mobility as well as strong social networks that exist among migrants were important in the induction of new migrants into taxi driving and to overcome adverse government policies and unfavorable political environment. Keywords: Migrants, Mumbai, Occupational Niche, Social Networks, Taxi Drivers.

T14.4 Assessing Environmental Sustainability of a Smart city: Case study of Varanasi towards achieving SDG 11.3

Garima Jasrotia, Kiran Kumari Singh

Central University of Punjab

Email: jasrotia.garima@gmail.com

Cities are centres of population concentration and economic growth worldwide. The rapid population growth and resultant enormous burden on the urban landscape and resources have led to challenges of pollution, liveability, resilience and sustainability. Thus, the idea of building cities that are not only environmentally sustainable and resilient, economic powerhouses, but also technologically advanced and inclusive i.e. smart, has emerged as a possible solution in the last decade of the 20th century. Although seen as a method of achieving city sustainability, smart city plans in India pay little attention to the environment component of sustainability focusing mainly on the economic and socio-governance aspects of urban development. With this disparity

in mind, this research focuses on Varanasi (a heritage smart city) and Target 11.3 of SDG 11 (sustainable cities and communities) to study the extent to which elements of environmental sustainability are incorporated into its planning and development. The objectives of this work are (i) to analyse dynamics of land use and land cover (LULC) and ecosystem services (ESVs) over 2011, 2015, and 2021, and (ii) to study the distribution of the above across the wards of different socio-economic status. This study will be carried out using high resolution satellite imagery, population data, and other geospatial data for spatial and statistical analysis. For LULC classification, median Landsat imagery of 30m resolution of years 2011, 2015 and 2021 will be processed and classified using SVM algorithm in ArcGIS pro. ESVs will be calculated using LULC classes as proxies. The socio-economic categorisation of wards will be done by conducting Principal Component Analysis on 11 census variables to generate a socio-economic status index of the wards. The study, thus, aims to contribute to the SDG monitoring database at local level and provide suggestions to ensure equitable environmental planning of Varanasi smart city.

T14.5 Rethinking Mumbai's Development: Embracing Complexity and Fostering Sustainability

Shivang Sharma, Ashish Dwivedi
International Institute for Population Sciences
Email: shivang220531@iipsindia.ac.in

Background: Mumbai, the pulsing heart of India is facing a crucial juncture. Beneath its dynamic past and service-oriented economy, complex issues necessitate a fresh approach to growth and the management of its demography. Its soaring skyscrapers and busy streets conceal a complicated reality that is full of urgent difficulties as well as enormous possibilities. Reevaluating Mumbai's growth necessitates a sophisticated comprehension of the city's distinct past, a fabric woven from economic, demographic, and historical factors. This analysis explores the intricacies of the city, looking at important indicators and suggesting strategies for a sustainable and inclusive future. **Objective:** 1. The analysis aims to unveil the narratives shaping Mumbai, understand its production landscape, assess policy imperatives. 2. Identify strategies for effective governance, robust Infrastructure, Environmental sustainability, Unwanted Migration and Huge Demography. **Data Sources and Methodology:** The data is collected from a variety of sources, including economic reports, government statistics, academic research, and news articles. Policy imperatives need rethinking to align with economic principles. Beyond infrastructure, Mumbai's future requires affordable housing, slum redevelopment, cultural landscape, and transportation networks. A holistic approach, involving public-private partnerships, citizen engagement, and technology, is crucial for navigating the city's complexities. Environmental sustainability, including renewable energy, green building practices, and a circular economy, is essential for a resilient future. **Conclusion:** Rethinking Mumbai's development is not just about infrastructure or policies; it's about embracing complexity, fostering inclusion, and creating a sustainable future for its people. By addressing the identified challenges and implementing innovative solutions, Mumbai can rise as a thriving, inclusive, and resilient city on the world stage.

Technical Session 15: Health and Well-being

T15.1 Burden of Disability in India, 2021 by Age, Sex and State: Evidence from NFHS-5 and Census Projected Data

Kamalesh Kumar Patel, Kiran Devi
All India Institute of Medical Sciences
Email: kamaleshkumar.patel@gmail.com

Introduction: The disabled population in India faces numerous challenges, including limited access to infrastructure, employment, and quality education. Government negligence and lack of public sensitization have contributed to an underestimation of the disabled population. Existing laws, such as the Rights of Persons with Disabilities Act, 2016, seek to address these issues, but implementation gaps persist. **Objective:** This research aims to assess the burden of disability in

India in 2021, examining age, sex, and state differentials. The study utilizes data from the National Family Health Survey-5 (NFHS-5) and population projections from the Census, employing the Cohort Component method for accurate projections. Methods: Population projections for 2021 were derived using the Cohort Component method, integrating demographic factors. Data on disability prevalence were sourced from NFHS-5, and state-wise population projections were obtained from the Registrar General of India. The study calculated the burden of disability in India and its states, considering both prevalence and total numbers. Finding: The national prevalence of disability in India is 0.96%, representing approximately 1.3 crore (13 million) individuals. States with the highest prevalence include Lakshadweep (1.69%), Tamil Nadu (1.28%), Maharashtra (1.21%), and Punjab (1.22%). Conversely, Arunachal Pradesh (0.55%), Jharkhand (0.63%), and NCT of Delhi (0.65%) exhibit the lowest prevalence. Significant state-level variations underscore the need for targeted interventions based on healthcare, education, and social support availability. Conclusion: Understanding the prevalence of disability in India is crucial for developing effective policies and interventions. The study emphasizes the disparities across states, signaling the importance of tailored approaches to address the diverse needs of individuals with disabilities.

T15.2 Regional Variation in Cataract Prevalence in India with Special Focus on Central India

Priyotosh Laha, Aparajita Chattopadhyay
International Institute for Population Sciences
Email: plaha3001@gmail.com

Cataracts are the leading cause of visual impairment accounting for 17.7 million globally and 80% of blindness in India. The risk of getting cataracts increases with age but various medical, socio-environmental, and lifestyle factors can accelerate it. In India, the prevalence of cataracts varies by region due to varying risk factors and socio-environmental conditions. National Blindness and Visual Impairment Survey (2015-16) shows a higher blindness prevalence rate in the central Indian states. This study tries to capture the regional variation of Cataract prevalence in India with a special focus on Central India and the factors associated with it. The present study uses data from the Longitudinal Aging Study in India (LASI) Wave-I. The outcome variable for the study is "cataract" whereas explanatory variables ranged from individual and household factors like age, and place of residence to health and exposure variables like presence of diabetes, exposure to indoor air pollution, etc. Descriptive statistics and multivariable logistic regressions have been used for the analysis. The study found that, Western region (18.4%) has the highest prevalence of cataracts followed by Central India (13.4%). Among the central Indian states, Uttar Pradesh has the highest prevalence (15%) of cataracts. In both overall and central India, females are more likely to get cataracts and the likelihood increases with age and certain health issues like diabetes or hypertension. Whereas place of residence, regular use of smoke-emitting products (mosquito repellents, agarbattis), and type of internal environment of the house are significantly associated with cataracts in India. In India, household exposure like smoking substances, dampness is found to be significantly associated whereas in central India it is individual and health-related factors. This study highlights the need for local-needs-based policies and programs to combat this silent pandemic of cataract.

T15.3 Unravelling The Sequence of Chronic Diseases in Older Adults by Type of Industry

Shamrin Akhtar
International Institute for Population Sciences
Email: ishamrinakhtar@gmail.com

This research paper delves into the intricate temporal aspects of chronic disease epidemiology by introducing and elucidating the concepts of co-occurrence of chronic morbidities. The co-occurrence of chronic morbidity is studied as the sequence in which the disease is occurring. This temporal parameter encapsulates which diseases mostly occur together and in which order. Further, the study examines the linkages between the identified patterns and the type of industries they work in. Methodology: The present findings rest on a large nationally

representative sample from a cross-sectional study. The study used data from the Longitudinal Ageing Study in India, 2017–2018. The study incorporated a list of 8 chronic diseases to identify commonly occurring patterns using latent class analysis. Results: The present study demonstrates that middle aged and older adults in the country can be segmented into three patterns: ‘relatively healthy’, ‘arthritis-hypertension’ and ‘hypertension-diabetes’. A number of industries are significantly associated with the identified disease patterns. Discussion: The concept of co-occurrence of chronic morbidities contributes valuable insights into the dynamic nature of chronic disease comorbidity, acknowledging that individuals may experience the onset of additional chronic conditions during the period under consideration. This conceptualization facilitates a more nuanced understanding of the evolving health status of individuals over time. Moreover, the identification and characterization of co-occurrence of chronic morbidities underscore the need for a comprehensive assessment of the temporal relationships between distinct chronic diseases and development of interventions at workplace.

T15.4 Socioeconomic Gradient of lean Diabetes in India: Evidence from National Family Health Survey, 2019-21

Priyamadhava Behera

All India Institute of Medical Sciences

Email: priya.madhaba@gmail.com

Background: - Diabetes is a global public health challenge, particularly in India, affecting millions. Within this, lean type 2 diabetes has emerged as a severe subtype with higher microvascular complication risks. While India bears a substantial burden of diabetes, there has been limited research into the prevalence, variations, and socioeconomic disparities specifically related to lean diabetes. Methods: This study used NFHS-5 data, including 700, 564 females (aged 15-49) and 651, 946 males (aged 15-54). It analyzed random blood glucose levels, height, and weight. Descriptive and multivariate analyses were conducted to understand lean diabetes variations and related factors. Socioeconomic disparities were measured using concentration curves and the concentration index. Results: The study unveiled important insights into lean diabetes in India. 8.2% of men and 6.0% of women had - elevated blood glucose levels, indicating a significant diabetes burden. Notably, 2.9% of men and 2.4% of - women were diagnosed with lean diabetes, highlighting its significance. Among type 2 diabetics, 52.56% of - males and 43.57% of females had lean type 2 diabetes. Lean diabetes prevalence varied across - socioeconomic groups, ranging from 11.6% in the poorest quintile to 1.1% in the richest. Those in the poorest quintile were at a significantly higher risk of lean diabetes, with an odds ratio of 6.7. The concentration index revealed substantial socioeconomic inequality, with values of 0.42 for men and 0.39 for women, indicating a disproportionate impact on lower socioeconomic groups. Conclusion: This study advances our understanding of the complex interplay between socioeconomic factors and lean - type 2 diabetes in India. To address the rising burden of lean diabetes among lower socioeconomic strata, policymakers and healthcare professionals must prioritize initiatives enhancing healthcare access.

T15.5 Spatial variation of Chronic disease among women aged 15-49 in Northeast India: Evidence from National Family Health Survey

Sharatchandra Haobijam, Meena Hijam, Kh Jitenkumar Singh

Manipur University

Email: haobijamsharatchandra@gmail.com

Background: Diabetes, thyroid, asthma and heart disease are widely recognised chronic disease, which affect one's quality of life. The prevalence of self-reported thyroid disorder as per National Family Health Survey in India was 2.2% in 2015-16, which increased to 2.9% in 2019-2021. Further, the prevalence of asthma was reported to be ranging from 2% to 23% which may be due to the enormous geographical and environmental variations across the country, especially in the north-eastern region. Objectives: The prevalence of chronic disease like Diabetes, thyroid, asthma and heart disease among the states and districts wise clustering of chronic diseases in

Northeast India. Methods: Bivariate analysis and multivariate logistic regression analysis were employed for data analysis, utilizing STATA software version 18, R version 4.3.2 and QGIS. Results: The highest prevalence and risk factors for diabetes, thyroid, asthma and heart disease are observed in Tripura and Mizoram. Higher age, wealth quintile, marital status and place of residence were found to be important determinants. Hotspot analysis shows that there is significant increase in the number of hotspots from NFHS-4 to NFHS-5, mainly in the state of Arunachal Pradesh, Assam, Tripura, Meghalaya and Mizoram. Conclusion: The increase in the prevalence and hotspot clusters for NCDs among women in NE region is a concern. Intervention should work on modifying some of the risk factors such as unhealthy lifestyle choices as this may help reduce the burden of diseases among women of NE India. Ensuring all the above will not only help target health issues among women but will also have implications for maternal and child health related policies. Further, implementation of programs can be made more effective if it is done through women's group and organisations in the community level. Keywords: Chronic disease, Diabetes, thyroid, asthma and heart disease.

ABSTRACTS FOR POSTER PRESENTATION

Poster Session – I

P1.1 Determinants of temporal migration and perceived satisfaction of migrants

Neelam Singh

Banaras Hindu University

Email: kvneelamsingh@gmail.com

Migration has been a key component of the evolution of human beings as an economic being. It has gained significance in deficient economies and works as a fuel for their economic growth, often the nature and determinant of migration differs from the nature of migrant, their place of origin, their destination and the choice of work they are employed in. The recent study focuses on destination-based migrant workers and peanut sellers from western UP who migrate to Varanasi and nearby regions during winter; it is entirely based on a primary field survey with snowball sampling. This study aims to analyze the underlying causes of temporal labor migration and their economic and social well-being, the study also focuses on the perceived satisfaction of migrant workers at their place of destination using a structured interview schedule. An attempt has been made to analyze comparatively the living standard, economic and social well-being and further growth aspects of temporary and permanent migrant peanut sellers using focus group discussion. The push and pull factors are found different among temporary and permanent migrants. The major push factors found for temporary migrants are low land holding, lower educational attainment, lower wage rate, lack of any skill, social status in terms of caste, etc. People feel ashamed of selling peanuts and any other such activities in their hometown whereas in far-off places they are ready to do any work. Comparatively, the living conditions of temporary migrants are very poor at their destination.

P1.2 Cross-Border Mobility in South Asia: Exploring Factors Driving Indian Migration to Nepal and Analysing the Impact on Migrant Communities

Tushar Dakua

International Institute for Population Sciences

Email: tdakua1994@gmail.com

Background- Nepal experiences a decadal increase of 7 percent Indian migrants (17.1% to 24.4%). As per census of Nepal 2011, out of total 26 million Nepali population 0.4 million are Indian migrants. Further, census of Nepal 2021 also shows that out of total 29 million Nepali population 0.7 million are Indian migrants respectively. The International migration stock also shows that compared to other country citizens (2.8%) in Nepal, Indian migrants share (97.2%) of Nepal's immigration in 2021. Data source and Methodology - This study uses primary data collected from the field survey in Nepal from December 2022 to February 2023. Snowball sampling is deployed to collect 390 respondents. This study defined Indian immigrants as people working in Nepal for at least a month to one year before the survey date. Bivariate analysis is done along with logistic regression to examine the effect of background variables on Indian migrating to Nepal. Findings - Major drivers of migration are occupational mobility in Nepal 30%, followed by availability of Dadan "Advance money" 23% and Nepal is near to home 20%. Cost of migration mostly incurred in recruitment cost with average 4 to 5 thousand 24%, followed by accommodation cost 2 to 3 thousand 26%, and Travel cost less than 1 thousand 46%. In the ethical recruitment process 56% migrants reported they do not have any job contract and 26% migrants are recruited through non-institutional channels. Conclusion- The cost breakdown emphasizes the economic facets of migration. Ethical concerns in the recruitment process underscore the need for attention of the Indian government to safeguard the rights and well-being of migrants in this Indo-Nepal migration landscape.

P1.3 Patterns and Determinants of Short-Term Youth Migration in Uttar Pradesh

Saumya Chauhan

Central University of Tamil Nadu
Email: saumyachauhan101@gmail.com

This study investigates short-term internal migration patterns among young adults in Uttar Pradesh, focusing on age-sex wise reasons and migration streams in the state. The research specifically targets migrants aged 15-34, identified based on their last residence, with a focus on durations less than one year. This age bracket has been chosen for its heightened likelihood of engaging in migration, forming the core demographic base under investigation. The analysis has been categorized in four streams of migration - Rural to Rural, Rural to Urban, Urban to Rural and Urban to Urban. Utilizing 2011 Census data, the research identifies rural-to-rural migration as dominant, led by marriage-induced movements. The analysis reveals distinct gender disparities, with male migrants more prevalent, especially in rural-to-urban and urban-to-urban streams. Work/employment emerges as a significant factor in migration decisions, while education-related migration remains low. The findings shed light on societal dynamics, emphasizing the pivotal role of marriage and employment in shaping migration trends among Uttar Pradesh's young population.

P1.4 Resilient Or Vulnerable To COVID-19 Shock: Does Migrants and Their Households' Characteristics Has Any Role to Play?

Shreya Nupur, Meghna Dutta, Niladri Sekhar Dhar

Indian Institute of Technology Patna
Email: nupur.shreya13@gmail.com

The COVID-19 crisis re-shaped many livelihood options and placed significant burdens on those with precarious incomes exacerbating persisting vulnerabilities, especially among a large section of the migrant population. This group faced a dual threat both to their livelihood and health. To understand - the consequences of this pandemic on the income of the migrant population, a household level survey was conducted in the state of Bihar, India, which is one of the highest migrant-sending states. We examine the role of differences in the socio-economic status of migrants and their households in determining the extent of vulnerability caused by the COVID-19 crisis. Vulnerability is proxied by the income lost by migrants during the lockdown. The results suggest- that households with diversified income portfolio, larger landholdings, and those receiving government benefits suffered significantly lower income loss whereas, larger household size and greater distance from town tended to escalate income loss. Additionally, private salaried workers faced higher income loss and an increment in years of education lowers the losses significantly. It is observed that individual-level characteristics also played a significant role in determining economic loss due to the lockdown. Our findings suggest a binding necessity to actively shape policies considering the financial insecurity of vulnerable migrants at their destination and the household members at the origin.

P1.5 Population Projection of Uttar Pradesh: A Modelling Approach

Neha Soni, Prashant Verma

University of Allahabad
Email: nsoni90131@gmail.com

People are the most important and valuable resources of any nation. Population growth has become one of the most critical problems in the world. Uttar Pradesh (UP) is the most populous state in the country, accounting for 16.40 percent of the country's total population. An increased population is always a major problem for developing countries like India because it affects all parameters of a country, especially health and economy. Therefore, it is necessary to estimate the future population precisely. The objective of the present study is to provide estimates of the future population and sex-specific population of Uttar Pradesh from 2021 to

2051 by using nonlinear growth models. A similar study was made by the technical group of the Registrar General of India entitled- "Population Projection for India and States, 2011-2036". In this study, the projection technique is based on the decennial population data of UP, and different growth models are used to get the population projection of UP from 2021 to 2051. The decennial population data was taken from different censuses from 1901 to 2011, conducted under the control of the Registrar General of India, government of India. The present study uses polynomial, exponential, and logistic growth models to project the population. As mentioned above, the three growth models were fitted separately. Out of these three models, the performance of the logistic growth model was observed to be best fitted based on the absolute mean error and residual sum of squares; hence, logistic growth model was chosen for future population projection. According to this model, the population of UP will be 23.18, 25.81, 27.6 and 29.12 (in crores) in the years 2021, 2031, 2041, and 2051, respectively.

P1.6 Utilization of Contraceptive methods and its impact on low, ideal, and high fertility states in India

Vishaka S Shetty

Jawaharlal Nehru Medical College
Email: shettyvishaka349@gmail.com

Background: India is a country with a rapidly increasing population and with more prone to first birth at a relatively younger age after marriage. **Objective:** This study aims to determine contraceptive methods usage among women in low, ideal, and high fertility states by using the NFHS-5 survey. **Materials and Methods:** The study includes 542830 married women from age 15 to 49 in India which was obtained National Family Health Survey 5th round, both bivariate and multivariate approaches were used to analyze the effect of modern contraceptive methods in low, ideal and states of India. **Result:** The prevalence of modern contraception methods is higher compared to traditional methods in low and ideal fertility states, but traditional contraception methods were most used in high fertility states. The association was found between contraception methods and explanatory variables. The Highest odds of usage of contraceptive methods were found in 45 above age married women in the low and ideal fertility states (OR: 1.21; CI: 1.16-1.26 and OR: 1.79; CI: 1.65-1.93) as compared to the younger age group. While Muslim married women have lower odds of using contraceptive methods in both ideal and high fertility states (OR: 0.77; CI: 0.71-0.83 and OR: 0.67; CI: 0.64-0.69) than the Hindu married women. **Conclusion:** This study demonstrated the percentage of usage of contraceptive methods among women is low, ideal and high fertility states, which will assist decision-makers in developing interventions to control fertility in India. **Keywords:** India, fertility, married women.

P1.7 Exploring Disparities Between Women's Fertility and Social Structure in Eastern Uttar Pradesh, India

Sneha Verma, Sanjay Kumar Singh

Deendayal Udadhya Gorakhpur University
Email: snehaverma795@gmail.com

Understanding fertility patterns across world, particularly within India, is a significant focal point in assessing regional demographics and holistic economic and social development. India, as a dominant player in this region, showcases a distinct pattern in Total Fertility Rates (TFR). The latest National Family Health Survey (NFHS-5) reports a declining TFR in India to 2.0. However, this figure masks the intriguing regional disparities prevalent within the country. While southern states in India exhibit comparatively lower TFRs, the key regions in the north, including Uttar Pradesh (3.59), Bihar (4.24), Jharkhand (3.48), Rajasthan (3.42), reflect significantly higher rates. Among the northern Indian states, exploring the fertility rate in Eastern Uttar Pradesh serves as a crucial investigation due to the region's strikingly high Total Fertility Rates (TFR) compared to the national average. Several Districts in Eastern Uttar Pradesh, such as Balarampur, Siddharth Nagar, Bahraich, Shravasti, Kaushambi, and Faizabad,

showing total fertility rate of 4.7, 4.6, 4.6, 4.5, 4, 3 and 4 that is more than twice of the replacement level (2.1). Unfortunately, not much research has been done to examine one of the key parameters of socio-economic development - women fertility. We aim to fill this gap here using qualitative and quantitative research methodologies. We relied on secondary data from the 2011 census supplemented by NFHS-5 subsequently analysed using MS Excel, Stata, and ArcGIS 10.7 is used for mapping. Spatial analysis techniques were utilized to map the TFR and other pertinent social indicators across the districts, offering nuanced insights into the spatial variations observed in eastern Uttar Pradesh region.

P1.8 Exposure to Family Planning Messages Through Mass Media as a Determinant of Reversible Modern Contraceptive Use among Rural Women in the Empowered Action Group States of India

Pooja Tripathi

Banaras Hindu University

Email: tripathipooja0048@gmail.com

Background: Despite family planning (FP) programs, the use of reversible modern contraception among rural women in India's Empowered Action Group (EAG) states is less. Mass media exposure to FP messages may increase reversible modern contraceptive use. This study examined the relationship between mass media FP messages and reversible modern contraceptive use in rural EAG states of India. **Methods:** The sample included 292, 180 women aged 15-49 from eight EAG states and Assam, obtained from the National Family Health Survey (NFHS-5) conducted during 2019-21. Bivariate analysis and multivariable binary logistic regression were used to investigate the relationship between predictor variables and reversible modern contraceptive use among women of reproductive age in rural EAG states of India. **Results:** When adjusted for biodemographic, socioeconomic, and geographical characteristics, women exposed to FP messaging via the internet, radio, or television were more likely to use reversible contemporary contraceptives. Online FP messages increased reversible contraception use by 26%. Radio and TV FP messaging increased the probability of adopting reversible modern contraception by 23% and 21%, respectively. Newspaper and magazine FP messages increased reversible contraception use by 11%. **Conclusions:** Exposure to FP messages through mass media, particularly the internet, radio, and TV, can increase the odds of reversible modern contraceptive use among rural women in the EAG states of India. This highlights the need for policymakers to invest in mass media campaigns to improve awareness and uptake of FP services in rural areas.

P1.9 Unlocking the Secrets of Low Fertility in India: A Study of Fertility Preferences a Women's Choice or State Compliance?

Roni Sikdar, Dhananjay W. Bansod

International Institute for Population Sciences

Email: ronisikdar16@gmail.com

Introduction: Low fertility is relatively new phenomenon in the majority of societies in developing countries. Since 1970, the world has been witnessed a decline in fertility. India, as a developing country, has been also documented the same. In the late 1990s, Indian health and population policies shifted from fertility control to a rights-based approach. **Objective:** The research underscores the importance of women's autonomy in reproductive decisions and advocates for policies prioritizing safe and effective contraceptive methods. **Data and methods:** The data inputs for the select indicators have been collected from different sources for the period 1991-2021. For the analysis, chi-square and multinomial logistic regression were used. A comparison is drawn between individuals who express regret and those who do not, with the objective of determining if any of these characteristics can account for regret among sterilization users. **Finding:** The mean Children Ever Born (CEB) is consistently lower across diverse factors. Modern contraceptive use is higher among wealthier women (21.30%) compared to the poorest (16.34%) ($p < 0.001$). Urban Christian and Hindu women have greater

modern contraceptive use (40.92%) than Muslim counterparts (21.93%). Education and employment positively correlate with increased modern contraceptive prevalence. However, female sterilization remains dominant choice nationally. Five percent of sterilized women express regret with lower regret reported among those sterilized at or after 30. Mothers with only daughters are more likely to regret (odds ratio 1.3) compared to those with both sons and daughters (odds ratio 0.8). Conclusion: The study concludes by addressing challenges in contraceptive resource availability, especially in rural areas, leading to coercive sterilization. It calls for shift toward delaying sterilization and enhancing the availability of alternative contraceptive methods to empower women's reproductive autonomy.

P1.10 Impact of Labor Migration on Left-behind Families: Evidence from the Tribal Villages of Assam

Gwmsath Mushahary, Pralip Kumar Narzary
Bodoland University
Email: gwmsathm@gmail.com

Migration is the movement of a person away from their place of usual residence, either across an international border or within a state. A migrant worker is a person who is to be engaged, is engaged, or has been engaged in a remunerated activity in a state in which he or she is not a national. The Bodo tribe is one of the marginalized communities dominantly inhabited in the Bodoland Territorial Region of Assam. The lack of industry and other amenities in the region has led many youths to migrate to other parts of the nation. Thousands of households rely on remittances from migration and have adopted migration as their primary source of income. This paper aims to highlight the magnitude of remittances and the pattern of their utilization at the place of origin. The study is based on a primary survey conducted in 33 forest villages from March 2023 to August 2023, using composite indices. The study consisted of 462 individuals, with half of them being left-behind parents with at least one young child. The SPSS statistical software was used to analyze the collected data. It is found that migrants send remittances every month and remittances are sent online. Remittances were being received and controlled by the parents followed by the spouse, and siblings. The study also indicates that remittances are the main sources of income being used to meet daily requirements, followed by house construction or repair, repaying debts or loans, expenditures on health, and expenditures on education for children. The study also demonstrates that the characteristics of both migrants and their left-behind parents have a substantial impact on the size and use of remittances. Keywords: migration, youth migrants, remittances, left-behind parents, Bodo tribe.

P1.11 Analysing the Influential Factors: A Study on Determinants of Educational Expenditure in India

Javed Alam, Preeti Dhillon
International Institute for Population Sciences
Email: javed2015aug@gmail.com

Background - This study aims to analyze the factors affecting educational expenditure within the household in India with its implications on various age groups, genders, and regions. Data and Methods: This study utilizes data from the 75th round of the National Sample Survey Organisation (NSSO), 2017-18, focusing on 152306 individuals aged 3 to 35 years and who are currently attending at the pre-primary and above level of education. The outcome variable was the total expenditure on education within the households of India. Bivariate and trend analyses were performed to examine per capita educational expenditure and public and private scenario of educational expenditure along with age group, sociodemographic. A multiple-level model was used. Results: Findings reveal that household consumer expenditure, respondent's age, medium of instruction, private coaching, and household computer affect expenditure on education positively, and, rural, female, social group, minority religion, and type of school affect expenditure on education negatively. The educational expenditure declines if the household

members who attend school are increased. The paper also throws light on trends in intra-sectoral allocation of educational expenditure i.e. expenditure on primary, secondary, higher education, and technical education. Southern region has the highest percentage of expenditure on education at 11.2% followed by West (8.3%) and North (7.4%). As the occurrence of professional education and private institutions is higher in SO and WE the average percentage of expenditure is also higher in these regions. Conclusion: - This study clearly shows that families with more resources and better human capital can spend more resources on their children's education. The present study recommends increasing the share of public sources of educational expenditure. Finally, it is suggested that the educational budget allocation should be based on the demographic composition of the states.

P1.12

Crowd Prediction in Ayodhya Using Machine Learning

Ravi Tripathi

University of Mumbai

Email: ravi24tripathi@gmail.com

Introduction: The main objective of this machine learning project on crowd prediction in Ayodhya is to develop an accurate and robust system that can forecast crowd behavior in different contexts. By analyzing historical data, incorporating real-time inputs, and considering various environmental factors, we aim to build a predictive model that can anticipate crowd densities, movement - directions, and potential crowd-related incidents. **Objective:** The project addresses the challenge of accurately predicting crowd behavior, including crowd density, movement patterns, and flow, in real-time. Traditional methods often rely on manual observations or simplistic statistical models, which are limited in their accuracy and scalability. Machine learning techniques offer a promising solution to improve crowd prediction accuracy and enable proactive decision-making. **Methodology :** 1. Regression Models (I) Linear Regression (II) Support Vector Regression (SVR) 2. Time Series Analysis 3. Deep Learning Models (I) Convolutional Neural Networks (CNNs) (II) Recurrent Neural Networks (RNNs) (III) Long Short-Term Memory (LSTM) networks 4. Ensemble Methods (I) Random Forest (II) Gradient Boosting 5. Clustering (I) K-Means Clustering (II) Density-Based Spatial Clustering of Applications with Noise (DBSCAN) 6. Anomaly Detection 7. Reinforcement Learning (RL). **Conclusion:** In conclusion, the machine learning project focused on crowd prediction has aimed to address - the challenges associated with understanding and predicting crowd behavior in various scenarios. Through data collection, model development, and evaluation, the project has successfully created predictive models that can estimate crowd density, movement or flow.

P1.13

Time Use of Elderly Persons in India

Robin Raj, Dipti Govil

Indian Council of Social Science Research

Email: robinraj063@gmail.com

Introduction- Time Use describes the order, duration and characteristics of the various different sorts of daily activities. It describes the pattern and sequence of activities performed by the individuals in a day. This research paper examines the patterns and sequences of time use among older adults in India. **Objective:** - The study aims to analyze the variation in time allocation of elderly individuals based on gender, age, place of residence, literacy level, and Monthly per capita expenditure (MPCE) quantile. Additionally, it investigates the association between various socio-economic and demographic factors and the time allocation of older adults across different activities. **Data and Methods:** - The study relies on data from the 2019 Time Use Survey conducted by the National Statistical Office, encompassing 52, 414 individuals aged 60 and above. The research employs statistical analyses, including Ordinary Least Squares (OLS) regression and Tobit regression, to examine the association between socio-economic factors and time spent on leisure, maintenance, and subsistence activities. **Findings:** The findings reveal that older adults in India primarily allocate their time to activities such as sleep, self-care, social participation, and passive leisure. Moreover, the analysis demonstrates

significant variations in time use based on individual characteristics. Socio-economic and demographic factors, including gender, age, place of residence, living arrangement, and household size, exhibit substantial associations with the activity profiles of senior citizens. By shedding light on the time allocation patterns of older adults, this research enhances our understanding of the factors influencing their daily routines. The findings have implications for policymakers and practitioners seeking to design targeted interventions and services to support the well-being and quality of life of older adults in India.

P1.14 Spatial Distribution and Associated Factors of Malnutrition Among Under-Five Children in Uttar Pradesh

Satyam Kumar Rai, Rakesh Chandra, Divyansh Chandel
Tata Institute of Social Sciences
Email: mp2023ds004@stud.tiss.edu

Childhood malnutrition remains a pressing global public health challenge, particularly affecting under-5-year-olds. This study focuses on Uttar Pradesh, India's most populous state, where despite a decrease in malnutrition rates, they persistently exceed the national average. Alarming statistics reveal that 40% of children under five in Uttar Pradesh suffer from stunting, 17% from wasting, and 7.3% from severe wasting. This research, based on National Family Health Survey-5 data, analyzes the spatial distribution of malnutrition, considering stunting, wasting, and underweight across 75 districts. Employing bivariate analysis and Pearson's correlation coefficient, the study explores associations between malnutrition and various factors such as birth size, mother's education, BMI, age at childbirth, residence, caste, and wealth quintiles. Spatial analysis tools unveil significant clustering patterns, particularly in Western UP displaying low stunting surrounded by similar districts, and Central UP with high stunting areas. Regression models, including Ordinary Least Square (OLS) and spatial error regression, identify key risk factors. Improved maternal age, education, and higher wealth index correlate with reduced stunting, while urban residence shows a positive link. Underweight is positively associated with OBC caste, and wasting exhibits positive links with primary education and the richest wealth index. The findings indicate a slow reduction in childhood malnutrition over the past five years, with substantial district-level disparities. Two-thirds of districts experience high stunting prevalence, particularly in Purvanchal, Avadh, and Bundelkhand regions. The study recommends prioritizing high-prevalence districts for resource allocation and involving community representatives and health workers in awareness programs. Addressing district-level inequalities is crucial for tailored interventions in underprivileged areas.

P1.15 Social Capital and Psychological Distress in Widowhood Evidence from a Cross-sectional Study

Shreyantika Nandi, Harihar Sahoo
International Institute for Population Sciences
Email: nandi.shreyantika@gmail.com

Transition to widowhood remains a stressful event in late life and has been associated with an elevated risk of psychological distress due to issues of financial insecurity, social detachment, and emotional strain. The objective of the present study is to examine if social capital plays any role in determining psychological distress among the widowed elderly. The present study uses Longitudinal Ageing Study in India, Wave 1 2017-18 data of 10,845 widowed elderly aged 60 and above. The study takes social capital among the widowed elderly as the main independent variable which has been assessed considering 17 variables like frequency of meeting and talking with friends, member of any organization, participation in social gatherings, attending cultural activities, attending religious activities, attending political activities, etc. For the dependent variable, psychological distress was assessed using the CES-D Depression scale consisting of 10 questions. Age, gender, place of residence, caste, religion, education, work, MPCE_Quintile, living arrangement satisfaction, grandparenting status, importance of religion,

subjective social position, discrimination, food insecurity, physical activity, self-rated-health, multimorbidity status, health insurance coverage has been taken as covariates. Descriptive statistics for sample characteristics were used. Binary logistic regression and Propensity score matching analysis have been carried out to show the association between social capital and psychological distress. Results from logistic regression show that those having high social capital have a 1.50 times higher chance of not having depression. Propensity score matching results confirm the earlier findings showing that if those having high social capital would not have the treatment then the chances of not being depressed increase. The ATT difference is 0.016 that indicates if the widowed individuals had got the treatment the chances of not being depressed increase.

P1.16 Is health insurance coverage linked to household's health risk composition in India: An exploration based on National Sample Survey

Sourav Dey, Udaya S Mishra
International Institute for Population Sciences
Email: souravk97dey@gmail.com

Introduction - Realising the dream goal of universal health coverage (UHC) in an environment of rising healthcare costs has led to systematic efforts in developing protection measures to address the adverse consequences of disproportionate healthcare spending, resulting in poverty and impoverishment. Objective - Hence an exercise towards identifying the combined influence of household's health risk perception and affordability in health insurance coverage using the National Sample Survey's household Morbidity and healthcare data may help in designing protection that need not be provisioning alone. - Methodology - Towards verifying the health risk composition among Indian households, a household risk score is computed according to the selected household members' NCD exposure. Further, a Structural equation model is adopted to analyse the relationship between observed risk perception and adherence to insurance with the formulation of latent variable. Critical Findings, Conclusion - In this nexus between affordability and perceived risk, a definite clue emerges as a certain segment of households cannot genuinely afford insurance (25.8%), and another segment who can afford has a miscalculated risk perception (13.03%). Hence the need for affordable insurance amounts to a substantial share of households that needs enabling. At the same time, those households with greater risk and lack of affordability require provisioning to realise the required penetration of insurance coverage. Efforts at expanding insurance coverage need a parallel focus on enabling those who can afford and provisioning for those who cannot afford based on their risk composition.

P1.17 Growth and Impact of Online Services in India

Abhishek Bajpai, Disha Baranwal, Prateek Somvanshi, Prashant Verma
University of Allahabad
Email: bajpaiabhishek827@gmail.com

It is imperative to acknowledge the significant transformations that have taken place in recent years. We are witnessing a remarkable ascent, propelling us towards becoming one of the most powerful nations globally. Concurrently, we are embracing new traditions, notably digitization, which is pivotal in our continuous growth. The evolution of online services has dramatically changed our traditions, youth, culture, business, health, environment, banking, and more. In this new era, the impact of online services on Sustainable Development Goals cannot be overlooked. The study seeks to reveal insights into the dynamics of online services in India, considering factors such as internet penetration rate, mobile device usage, e-commerce transactions, digital payment adoption. In this connection, we have selected and explored variables affecting the growth and impact of online services in India. For each variable identified, we formulated specific questions. Using Structural Equation Modelling (SEM) and Confirmatory Factor Analysis (CFA), we analyzed the factor loads of different variables. Subsequently, we applied the Amos software to construct the model and draw inferences. We

identified several variables influencing the growth and impact of online services in India, including low-cost internet and affordable smartphones, time spent online, cost-effectiveness, ease of use, security and privacy concerns, and the impact of the COVID-19 pandemic on growth. For the impact of online services, we considered variables such as local business, health, and the environment. Our findings revealed that the growth of online services was predominantly driven by the adult (young) age generation, with health concerns emerging as a significant issue. Additionally, the impact on the environment and local businesses was notable.

P1.18 A Review of Extreme Weather Events and Nutritional Outcomes: A Bibliometric Analysis

Anurag Yadav, Md. Juel Rana
Govind Ballabh Pant Social Science Institute
Email: anuragy910@gmail.com

In 2023, daily global mean temperature has exceeded the threshold of 1.50 centigrade 38 times before September 12. This increase in mean temperature of the earth is resulting in the increased frequency and severity of extreme weather events (EWE's) which is causing more drought and flooding events. This is evident in the flooding of south-Asia and Africa, drought in amazon rainforest. Floods are causing catastrophic damage to crop and infrastructure results in decreased food supply and increased food inflation, causing inaccessibility of safe, sufficient, and nutritious meals among peoples of lower socio-economic class. 85% peoples in low and middle-income nations are experiencing drought, which is having an impact on their dietary intake. The research on the issues is varied across the regions and countries of the world. This review paper aims to shed light on the bibliometric analyses of the relationship between extreme weather events and their far-reaching nutritional outcomes. By fostering interdisciplinary collaborations and knowledge exchange, through the database of ScienceDirect, Google Scholar and Web of Sciences, this review paper seeks to advance our understanding of the multifaceted impacts of extreme weather on human nutrition. The findings shows that the research trend in this area has increased in recent decades and USA has been main centre for this. Research is still focused on impact analysis and crop yield. Although less research is conducted on nutritional outcomes of increasing extreme weather events. Countries USA and China had done better research in this field, but India's research contribution is not satisfactory. India needs to increase its multidisciplinary and international collaboration research, so we could have better insight on nutritional outcome of extreme weather events.

P1.19 Assessing Opportunities for m-Health in Uttar Pradesh: Mobile Phones Ownership and Internet Use among Women in Reproductive Age

Babita
PRC CRRID Chandigarh
Email: chauhan.babita2397@gmail.com

With rapid technological transformation, digital platforms are leveraging health interventions in all parts of the country including remote and inaccessible areas though the progress has not been uniform across the states. The COVID-19 pandemic saw a big spike in use of mobile phones for accessing health care needs when the health centres remained closed and the mobility was restricted due to state imposed lockdowns. Mobile devices are important instruments of accessing health care facility not only from public sector but also from private sources. Through mobiles it is easier to enhance health awareness, to connect the health care providers, book and get results of diagnostic tests, know about a range of government programmes, identify nearby sources of healthcare, link with telemedicine for better medical opinion and treatment, etc. The programmes of government are also m-Health friendly and push the digitalization programmes to a higher level. Little research has been done in recent times to understand the dimension of m-Health among populations particularly in the state of

Uttar Pradesh. In this background, the present paper based on National Family Health Survey (NFHS) as available in its 5th round (2019-21) analyzes the determinants, potentials and implication among women in the reproductive age group (15-49 years) in the state of Uttar Pradesh.

P1.20 Regional Variation of Child Malnutrition Indicators in Uttar Pradesh

Abhishek Gupta, Kunal Keshri
International Institute for Population Sciences
Email: abhishekgupta.iipsindia@gmail.com

Child malnutrition is commonly defined as a state of inadequate nourishment, manifesting as stunting, wasting and underweight conditions in children. The World Health Organization (WHO) underscores malnutrition as a predominant factor contributing to over 50% of global child mortality. Previous research endeavours have sought to elucidate the fundamental causes of child malnutrition. This study delves into the regional variation in child malnutrition within Uttar Pradesh, leveraging data from the National Family Health Survey-5 (NFHS-5). While economic disparity, social structures, food and water accessibility, and parental livelihoods are acknowledged as pivotal determinants of child health, recent scholarly discourse has incorporated the impact of geography and climate on health outcomes in the pursuit of enduring solutions to health challenges. As the most populous state in India, Uttar Pradesh wields considerable influence on the nation's demographic landscape, economic dynamics, and political scenario. Insights gleaned from NFHS-5 data underscore the precarious state of child health in Uttar Pradesh, Children under 5 years who are stunted, wasted and underweight are 39.7%, 24.6%, 32.1% respectively. Certain regions within the state grapple with severe drought conditions, while others contend with recurring floods during the monsoon season. This paper illuminates the intricate interplay between geographical factors and child malnutrition in the context of Uttar Pradesh. Keywords: Child malnutrition, NFHS-5, Regional Variation, Population, Climate, Health, Uttar Pradesh, India.

P1.21 Mapping and Analyzing Undernutrition in Children Under-Five across Low Socio-Demographic States of India

Mukesh Vishwakarma, Gargi Tyagi, Pawan Kumar Dubey, Sabrina Sultana Rahman, Deepak Tanwar
Banasthali Vidyapith
Email: vishwakarma.m96@gmail.com

Introduction: Child undernutrition remains a pressing challenge in India, with millions affected despite economic growth, leading to stunted growth, cognitive impairments, and disease susceptibility. The NFHS-5 (2019-21) reports 38% of under-five children facing chronic malnutrition and 21% experiencing acute malnutrition, underscoring the need for targeted interventions. Despite economic progress, poverty, inadequate sanitation, and limited access to nutritious food persist as barriers, necessitating comprehensive strategies. **Methods:** This study used NFHS-5 (2019-21) data, analyzing 65,967 under-five children. General spatial analysis explored malnutrition distribution within low sociodemographic index states. Spatial Lag and Error models assessed spatial dependence between stunting, wasting, and underweight. Geographically Weighted Regression estimated relationships between malnutrition and determinants across regions and within clusters. **- Results:** Among under-five children, 33.3% were stunted, 16.5% wasted, and 30.3% underweight. The Global Moran Index showed significant spatial variation in malnutrition across states (Stunting, $I = 0.457$; Wasting, $I = 0.395$; Underweight, $I = 0.581$; $p\text{-value} < 0.01$). Determinants included mother's education, water and toilet facilities, household size, wealth index, child size at birth, maternal BMI, region, residence, and infectious diseases. **Conclusion:** Malnutrition in low sociodemographic states is spatially clustered. Addressing this requires a multifaceted approach, including poverty reduction, improved women's education and health, sanitation, and targeted interventions in malnutrition hotspots.

P1.22 Is Income More Relevant Than Education? Dynamic of Determinants of Inequality Child Undernutrition Indicator in India 2006-21

Prateek Singh, William Joe
Institute of Economic Growth
Email: prateeksingh22120810@gmail.com

Stunting remains a pressing issue, particularly among undernourished children, recognized as a significant global health challenge. A staggering 149.2 million children under the age of five worldwide suffer from stunting, a condition with far-reaching and enduring health consequences, including metabolic disorders and chronic ailments. To combat this, there's a widespread agreement on the need for nutrition-sensitive programs to combat malnutrition. This research investigates whether the community and individual-level factors, which impacted stunting 15 years ago, still influence it or if the effectiveness has changed. By examining shifting income and education dynamics, it aims to identify current priorities and assess persistent influences. - Our analysis utilized data from three NFHS surveys (NFHS-3, NFHS-4, and NFHS-5), focusing on different age groups. Employing logistic regression models, we assessed the independent and combined associations between these factors and anthropometric failure, ultimately determining the Population Attributable Risk (PAR) for stunting. - Stunting has shown a declining trend from 2006 (48.0%) to 2021 (35.5%), yet the mean Z-score remained steady over five years (-3.2 in 2006, -3.0 in 2016, and -3.1 in 2021). In 2006, short maternal stature (OR>2.0) and maternal education (OR>1.3) were primary stunting factors, but in 2016 and 2021, household wealth (OR>1.4) also became significant contributors. - Over the past decade and a half, stunted children's condition has not improved. In poor families and under-literate mothers, children are more likely to suffer from several anthropological disorders, whereas wasting is a problem for all socioeconomic groups. Times are changing, and so are the factors that contribute to stunting. The quality of household air, the height of the mother, the BMI of the mother, the level of education of the mother, and the wealth of the household are all factors that need to be considered.

P1.23 Malnutrition among the Elderly in India: An Evidence from Longitudinal Ageing Study

Ankita Roy, Dipti Govil
International Institute for Population Sciences
Email: royankita697@gmail.com

Background: Low and middle-income countries, such as India, grapple with a multitude of aging-related challenges, including malnutrition, multimorbidity, and chronic diseases. So, there is a pressing need to assess the nutritional status of the elderly to promote healthy aging. This study aims to evaluate the nutritional status among individuals aged 60 and above in India and explore the factors associated with malnutrition in old age. Method: This study utilizes Longitudinal Ageing Study (LASI) wave 1 survey data. Nutritional assessment is conducted using the Mini Nutritional Assessment Screening Form (MNA-SF) based on LASI data. Employing a multinomial logistic regression model, we examine the relationship between malnutrition and health (disability) and household economic conditions (food insecurity level), while controlling for individual and household characteristics. Results: Results suggest that 15.56% of the elderly in India aged 60 years and above are malnourished and 51.49% have the risk of malnutrition. Similarly, unadjusted models reveal that disability and severe food insecurity significantly increase the prevalence of malnutrition among the elderly. Furthermore, factors such as age, sex, education, place of residence, wealth quintile, region, indoor air pollution, etc., are identified as determinants of elderly malnutrition. - Conclusion: - A targeted nutrition program tailored to the specific needs of these vulnerable groups is imperative, given their heightened susceptibility to malnutrition. Regular health assessments or check-ups, coupled with increased awareness about government schemes and programs, are essential components for addressing this pressing public health concern.

P1.24 Conducting an Exploratory Spatial Analysis of Low Birth Weight and Its Influencing Factors in Uttar Pradesh

Indrajit Goswami

International Institute for Population Sciences

Email: indrajitgoswami124@gmail.com

Background: In Uttar Pradesh, a major public health concern is low birth weight (LBW), which is defined as a live delivery weighing less than 2500 g. This problem's complexity is not entirely grasped. Furthermore, there are notable differences in the prevalence of LBW not just across districts of Uttar Pradesh but also between different socioeconomic categories. Determining the spatial patterns of low birth weight and its contributing factors is crucial to comprehending the epidemiology of this public health issue. Objective: This study looks at the factors that influence LBW prevalence and its patterns at district level in Uttar Pradesh. Methods: Regression and spatial analysis have been carried out using STATA 17, QGIS and GeoDa software using fifth round of the NFHS data. Results: The findings indicate that mothers who are educated, mothers have had more than four antenatal visits, mothers who used IFA tablets during their pregnancy, mothers with a normal body mass index, mothers who are older than 20 years had lower odds of LBW prevalence. Among the districts of Uttar Pradesh Mahamaya Nagar, Jyotiba Phule Nagar, Banda, Gautam Buddha Nagar, and Aligarh have the highest prevalence of LBW. The Moran's I for LBW is 0.745. It indicates strong positive spatial autocorrelation in LBW over the districts of Uttar Pradesh. The bivariate LISA maps obtained indicate spatial distribution of LBW and independent variables systematically contrasts the districts of central and eastern Uttar Pradesh with those of the southern districts. Conclusion: Our findings underscore the necessity for increased focus on maternal and child healthcare, particularly in the disadvantaged districts of Uttar Pradesh. Various maternal and societal factors contribute to the prevalence of LBW. Prioritizing efforts to enhance the nutritional well-being of mothers is essential. Keywords: Low birth weight (LBW), Antenatal Care (ANC), IFA tablets, Moran's I, LISA.

P1.25 The Role of Agriculture Sector in Poverty Alleviation and Employment Generation: Study of Uttar Pradesh

Keshav Vishal Singh, Archana Singh

Lucknow University

Email: keshavsinghanav@gmail.com

This research digs in into the important role of the agricultural sector in Uttar Pradesh, India, as a stimulus for employment generation and poverty alleviation. The study aims to explore the future of the agricultural industry in creating sustainable livelihoods and reducing poverty rates in the region. The research relies on a comprehensive data methodology, utilizing secondary sources such as RBI Handbook of Statistic on Indian States and the Uttar Pradesh Development and Employment Survey (UPDES) website to extract relevant information on agricultural income and poverty. The primary objective of the study is to analysis of trends in the agricultural sector's performance and its impact on employment opportunities and poverty levels. The research employs both trend analysis and regression analysis techniques to discover the patterns and establish relationships within the collected data. By using these methodologies, the study seeks to identify key factors that contribute to the sector's ability to generate employment and mitigate poverty in Uttar Pradesh. The choice of Uttar Pradesh as the focus of the study is strategic, given its significant agricultural contributions and the prevalence of poverty in the state. The findings of this research aim to provide insights into policy implications and interventions that can further enhance the positive impact of the agricultural sector on employment and poverty alleviation. Additionally, the study contributes to the existing body of knowledge by offering an exact understanding of the complex dynamics between agricultural development, income generation, and poverty reduction in a specific regional context. Through examination of secondary data sources and the application of robust analytical tools, this research aspires to contribute valuable insights that can inform evidence-

based policies, foster sustainable agricultural practices, and ultimately enhance the well-being of the population in Uttar Pradesh

P1.26 Decomposing The Gap in Intimate Partner Violence Between Scheduled Caste and General Caste Women in Uttar Pradesh: An Analysis of NFHS-5 Data

Abhiyan Chaudhari

International Institute for Population Sciences
Email: chaudhariabhiyan96@gmail.com

Scheduled Caste (SC) women, one of India's most oppressed and neglected population groups, are the most vulnerable to intimate partner violence (IPV). IPV, on the other hand, is less common among women in the general category. No study has been conducted to measure the gap in IPV between these two groups in Uttar Pradesh. The objective of this study is to fill this gap. This study aims to comprehensively explore the factors that underlie and explain the gap in IPV between SC and general women. Information on 1,817 ever-married SC and 1,358 ever-married general women aged 15-49 from the fifth round of the National Family Health Survey was analyzed. The Fairlie decomposition (Blinder-Oaxaca decomposition modified for binary outcomes) was used in this study to explain the gap in ever-experienced IPV prevalence between SC and general women. About 63.11% and 36.89% of ever-married SC and general women in India suffered either physical, mental, or sexual violence from their husbands. The large part of the gap in IPV between SC and general women was due to differences in husbands' alcohol consumption (50.63% gap), women's education (24.30% gap), controlling behavior by husbands (21.77%), and acceptance of IPV by women (16.36% gap). With the introduction of appropriate interventions and programs, these gaps can be reduced. Interventions aimed at reducing alcoholism should be emphasized.

P1.27 Social Inequality: Comparing cross-region marriage migrants with local women

Manisha, Kailash Chandra Das

International Institute for Population Sciences
Email: kaushikmanisha104@gmail.com

Strong son preference and sex-selective abortion of foetus in some developed states of India raise concern about the gender imbalance in the society. One significant consequence of this is the disproportionately high number of men compared to women. Therefore, there is a shortage of marriageable women. To combat this, unmarried males have started importing poor brides from other less-developed states. This phenomenon is known as cross-region or cross-cultural bride migration. Much has been discussed in the previous literature about this marriage migration. But till now, no study has covered the social inequality among cross-region and local brides. We conducted a household survey in Haryana with 150 cross-region and 150 local brides in 2022. Further, 20 In-depth Interview with cross-region and 10 In-depth interviews with local brides has been done. The study found that being an outsider, belonging to a culturally different society, and poor economic status of the natal family were the primary causes of social inequality among cross-region brides compared to local brides. Further, the research found a broader gap in education attainment, age at marriage and spousal age gap in cross-region brides than local brides. The spouse of the cross-region brides mainly engages in daily wage labour work and is often alcoholic. The husband's family of cross-region brides does not get any governmental support like local brides. Cross-region brides have less access to economic resources and technology than counterpart. In the empowerment, we have found that local brides have less decision-making power and freedom of movement. Due to distant cross-region, brides rarely visit their family. On the other hand, Local brides frequently visit their homes. Also, cross-region brides often face social stigma, discrimination and domestic violence from the conjugal family and society. This study explored the various forms of social inequality among cross-region brides.

P1.28 Intimate Partner Violence and its Socioeconomic Correlates among ever- married women in Karnataka: Evidence Based on NFHS-5

Vikash Singh Patel
Banaras Hindu University
Email: pvikash885@gmail.com

Background, Objective: Karnataka, India has higher rates of Intimate partner violence (IPV) relative to India as a whole. IPV are major public health problem and is still serious issue in Indian context. This paper aims to identify the factors associated with IPV using a nationally representative sample of ever-married in India. Methods: We have analyzed the National Family Health Survey (NFHS-5) data of 2737 ever-married women aged 15 to 49 years. To identify the factors associated with IPV in Karnataka, we have used binary logistic regression to estimate four models. The outcome variables are women facing physical violence, emotional violence, sexual violence, and overall violence in the model. The explanatory variables are broadly socio-economic indicators related to the women and a few other indicators related to the characteristics of the household. Results: Lifetime prevalence of IPV in Karnataka was nearly 50 %. Physical violence was the most common form accounting for 44% of victims followed by emotional (25.6%) and sexual violence (11%). We found that Controlling attitude of husband and IPV justifying attitude have higher odds of IPV. Alcohol consumption by the husband increases the risks of IPV, whereas risk decreases with increasing the women's autonomy. Conclusions: Approximately half of ever-married women reported experiencing any form of violence during their lifetime. Current or former husbands are main perpetrators of violence against a woman. Wealth index, employment status, and place of residence are prone factors for developing IPV while education level of woman act as protective factors for IPV. The findings and insights from this study can help the readers, researchers and policy makers alike to identify more critical areas for in depth understanding and increasing the community awareness regarding risk factors for IPV. Keywords: IPV, Violence, NFHS, Karnataka.

P1.29 Beyond Demographics: A Holistic Examination of Health Behaviors among Male Youths in the Digital Era in India through NFHS-5

Priya Srivastava, Manushi Srivastava
Banaras Hindu University
Email: srivastava.priya6975@gmail.com

Introduction: India is undergoing a profound transformation in the digital age, marked by widespread internet access and increased smartphone ownership, particularly among the youth demographic. As the nation embraces digital connectivity, there is a growing need to understand how these technological shifts influence the health behaviors of young individuals. Objective: This study aims to provide a comprehensive analysis of health behaviors in contemporary India, considering the influence of both demographic factors and digital technologies. The research utilizes data from the National Family Health Survey 5 (NFHS-5) to explore patterns and predictors related to smoking, drinking, diet intake, sleep pattern and contraceptive use. Methods: - A nationally representative sample from NFHS-5 is employed to conduct a detailed examination of health behaviors. The study employs statistical methods (chi square, regression, etc) to analyze the impact of demographic factors, internet use, and smartphone ownership on the selected health behaviors. The holistic approach encompasses both traditional socio-demographic aspects and emerging digital influences. Results: - The results show that how people behave with their health is connected to how much they use digital technology. We found some patterns that highlight how using the internet and owning a smartphone can affect decisions about smoking, drinking, what people eat, and whether they use condoms. The analysis goes beyond demographics, providing a more holistic understanding of the factors shaping health behaviors in the digital era. Conclusion: This research contributes valuable insights into the evolving landscape of health behaviors in India. By adopting a holistic perspective, the study underscores the need to consider digital influences alongside traditional demographic factors.

P1.30 A Study of E-Commerce Awareness Among Youth in Uttar Pradesh, With A Special Reference to Varanasi City

Ravi Rakesh Singh, Vishal R. Tomar
University of Mumbai
Email: rav9629@gmail.com

This research investigates the landscape of e-commerce awareness among the youth in Varanasi City, Uttar Pradesh, with a particular focus on understanding their engagement with popular online platforms. Employing a descriptive and cross-sectional design, the study targets a sample of 100 participants aged 18-35, utilizing a convenient random sampling technique to ensure diversity across age groups, education levels, and income brackets. Data collection involves a structured questionnaire administered through online platforms, complemented by a review of secondary data from existing literature and reports on e-commerce trends in Varanasi City. The study's scope encompasses an exploration of socio-demographic factors influencing e-commerce awareness and adoption, including age, education, and income. Various statistical tests will be employed to test hypotheses related to e-commerce awareness, engagement and the impact of socio-demographics. Anticipated outcomes include a nuanced understanding of e-commerce dynamics in Varanasi City, insights into challenges faced by the youth in online shopping, and the identification of factors influencing their engagement. The study's findings are expected to contribute to the development of strategies for enhancing e-commerce experiences and addressing challenges specific to the youth demographic in this culturally rich region. While the study acknowledges limitation, such as the relatively small sample size and potential biases in self-reported data, it aims to provide valuable insights into e-commerce awareness among Varanasi City's youth. The conclusions drawn from this research are expected to inform future initiatives and research endeavors aimed at fostering a more inclusive and secure e-commerce environment in Varanasi City and similar urban settings. Overall, this study adds to the ongoing discourse on the intersection of technology, commerce, and youth engagement in contemporary urban contexts.

P1.31 Assessing groundwater quality and its association with child undernutrition in India: A study of 22426 groundwater sites

Sourav Biswas, Aparajita Chattopadhyay, Subhojit Shaw, Hoffmann Roman
International Institute for Population Sciences
Email: souravbiswas3198@gmail.com

Groundwater contamination is a pertinent challenge in India with important health implications for children. As of today, limited research has been conducted to understand the possible relationship between groundwater and child nutrition outcomes in the country. This study fills this knowledge gap by examining the association between groundwater quality and child undernutrition in India providing relevant insights for policymakers. The study uses data from the fifth round of the National Family Health Survey and the Central Groundwater Board to analyze the association between groundwater quality and child nutritional status. The groundwater quality data were collected by nationwide monitoring stations programmed by CGWB, and the child nutrition data were obtained from the NFHS-5, 2019-21. The analysis included descriptive and multivariate statistics. The study also considers various demographic and socio-economic factors as potential moderators of the relationship between groundwater quality and child undernutrition. There is significant variation in groundwater quality across different parts of India with many regions performing poorly. We find a strong association between poor water quality and higher rates of stunting, underweight, and wasting among children with regions in Central, East, Northeast, and West India being particularly affected. Children who depend on groundwater as primary water source had a significantly poorer nutritional status compared to children whose primary water source was piped water. The negative impacts of poor groundwater quality were considerably weaker for wealthier households contributing to the substantive social inequalities in nutrition observed in India. - Groundwater quality needs to be monitored and improved in regions with poor water quality.

Policies can focus on promoting safe sanitation practices and increasing public awareness about the importance of safe drinking water to improve child health.

P1.32 Age at marriage and its determinants: A Region-wise comparative study between Kerala and Bihar

Rachana Ramesh Shetty

Jawaharlal Nehru Medical College
Email: rachanashetty53@gmail.com

Background: The Total Fertility Rate (TFR) tends to decline as women delay marriage in favour of pursuing their education and job. As the country has passed through significant changes in socioeconomic, cultural, and demographic spheres in recent decades, it is reflected on marriage. Objective: This study aimed to understand the age at first marriage in relation to selected factors by selected states from north and south region in India. Methods and materials: The bivariate and multivariate approaches were used to analyse the effect of socio-demographic and economic factors on age at marriage, this study includes total of 41,392 married women from Kerala and Bihar, which was obtained from National Family Health Survey 5th round. Result: The significant association was found between explanatory factors and outcome variable in selected state of India. In Bihar, educated women from the poorest families had a higher rate of early marriages. Conversely, in Kerala, uneducated women from non-majority religions and larger households (more than 6 members) were more likely to be married before 21. After accounting major effects of background characteristics, the adjusted odds ratio showed that women who are uneducated have a higher odd of getting married before 21 in both the states (OR: 2.46, CI: 1.52-3.97 and OR:1.4, CI: 1.36-1.60) than the women who are educated. While women of other religions in Bihar have a lower chance of marrying before turning 21 (OR: 0.66, CI: 0.81-0.96), women of other religions in Kerala have higher odds of marrying before turning 21 (OR: 1.84, CI: 1.66-2.03) than Hindu women. Conclusion: Due to socioeconomic and traditional reasons, women in North India (Bihar) usually marry younger, whereas in South India (Kerala), women marry later as a result of a greater emphasis on education and a more progressive social outlook.

P1.33 Analysis of variations in accessibility of public health Facilities: A comparative study based on Chamoli, Rudraprayag Districts

Neelkamal Alomayan Kalita

International Institute for Population Sciences
Email: neelkamalkalita20@gmail.com

Objective - To assess and compare accessibility of Primary Health Centre (PHC) and its impact on institutional delivery of the hill districts of (Chamoli, Rudraprayag). Data and Methods - The data used in this study taken from 5th round of National Family Health Survey conducted during 2019-2021, and the population data is taken from the Census of India -2011. Maternal-mortality data is taken from Sample Registration Survey. The data of the PHCs taken from the Department of Medical Health and Family Welfare, Government of Uttarakhand. Enhanced Two Step Floating Catchment Area (E2SFCA) model to assess the accessibility of the PHCs. Findings: In Chamoli district 70% of the deliveries were held in health institutions whereas still 30% deliveries were non-institutional deliveries, although it has 8 PHCs but is mostly overburdened as the PHC/Population ratio is almost 2.5 times higher than the required no of PHCs. It is also found that the average catchment area of a PHCs varies from 20-25 sq.km approximately which is very large for a terrain which has an average altitude of 3472m. Although Rudraprayag district is somewhat performing better than Chamoli district where 88% deliveries were institutional deliveries, it has 5 PHCs and the PHC/population ratio is also similar, both the districts have almost same terrain but the catchment area of PHC is 10-13 sq.km, also the average elevation is 895m above mean sea level. Policy Implications - This research shows that there is a severe shortfall in the required number of Public Health Centres according to the NRHM norms, so in order to improve the health indicators (IMR, MMR,

Immunisation) new potential areas should be identified for the allocation of PHCs in the districts. - Based on the terrain and elevation of the region, a dynamic population threshold for setting up PHCs, focussing mainly on accessibility should be adopted.

Poster Session – II

P2.1 Exploring multimorbidity clusters in relation to healthcare use and its impact on self-rated health among older people in India

Abhishek Anand, Salmaan Ansari, Babul Hossain
International Institute for Population Sciences
Email: anandabhishek361@gmail.com

Background - The current study aimed to empirically identify multimorbidity clusters in relation to healthcare use and to examine whether healthcare use improves the self-rated health (SRH) of people with different multimorbidity clusters. **Data and Methods** - This study extracted information from cross-sectional data of the first wave of the Longitudinal Ageing Study in India (LASI) conducted in 2017-18. The study participants were 31,373 people aged 60 years. A total of nineteen chronic diseases were incorporated to identify the multimorbidity clusters using latent class analysis (LCA) in the study. Multivariable logistic regression was used to examine the association between identified clusters and healthcare use. A propensity score matching (PSM) analysis was utilised to further examine the health benefit (i.e., SRH) of using healthcare in each identified cluster. **Results** - LCA analysis identified five different multimorbidity clusters: relatively healthy (68.72%), metabolic disorder (16.26%), hypertension-gastrointestinal-musculoskeletal (9.02%), hypertension-gastrointestinal (4.07%), complex multimorbidity (1.92%). Older people belonging to the complex multimorbidity [aOR:7.03, 95% CI: 3.54 - 13.96] and hypertension-gastrointestinal-musculoskeletal [aOR:3.27, 95% CI: 2.74 - 3.91] clusters were more likely to use healthcare. Using the nearest neighbor matching method demonstrated that healthcare use was significantly associated with a decline in SRH in each multimorbidity cluster. **Conclusion** - Our findings support the creation of clinical practice guidelines (CPGs) focusing on a patient-centric approach to optimize multimorbidity management in older people. Additionally, finding suggest the urgency of inclusion of counseling and therapies for addressing well-being when treating patients with multimorbidity.

P2.2 Examining Dominant Factors of Hysterectomy Among Older Women: Evidence from NFHS-5

Aratrika Saha
International Institute for Population Sciences
Email: sahaaratrika8@gmail.com

Background: Over the past couple of years' certain media reports have highlighted a sudden surge in the number of cases of hysterectomy. The recent National Family Health Survey report has also reported an increased number of cases among older women. In light of these facts, this study aims to assess the socio-economic and socio-demographic determinants of hysterectomy among women in the age group 30-49 years and identify potentially dominant ones. - **Data and Methods:** The study has used the data from the fifth round of the National Family Health Survey. Multivariable logistic regression is used to assess the significance of the predictor variables and Dominance Analysis is used to calculate the relative importance of the variables. - **Results:** The study found the estimated rate of hysterectomy to be 6.34 per 100 women. Key findings from logistic regression include higher odds of hysterectomy among rural women [Odds Ratio:1.28 (1.23-1.53)] and those belonging to OBC category [Odds Ratio:1.38(1.33-1.43)]. Compared to those with no education, women with secondary and higher education are 47% and 25% less likely to get a hysterectomy. Wealthier women, those with health insurance, those with history of abortion, those having high age at first cohabitation, and higher parity are associated with high odds of hysterectomy. Dominance

Analysis revealed that women's education, age at first cohabitation, and place of residence are the three highest-ranked predictors for hysterectomy prevalence, accounting for 78.81% of predicted variance (35.68%, 34.78%, and 8.35% respectively). Discussion: The study underscores the interrelationship among dominant factors of hysterectomy among older women in India. In conjunction with place of residence and age at first cohabitation, education emerges as paramount, fostering personal agency and empowerment in decision-making, enabling women to comprehend the reasons for and against hysterectomy, potential risks, and alternative treatments.

P2.3 Psychosocial Problems among parents of children with multiple disabilities

Ashok Kori, **Renuka E. Asagi**
Karnatak University
Email: renureshmi@gmail.com

Introduction: The World Health Organization (WHO) works with many partners worldwide to celebrate the International Day for Persons with Disabilities on 3rd December of each year. The organization calls for innovation and transformative solutions to achieve Health for ALL. A good health is important for all including children in the world. Children with multiple disabilities face different kinds of problems in the families where parents are not supportive and show less care towards them. Other barriers in health system may lead to different kinds of problems in our society. Objectives of the Study: To understand the various problems facing in parents of children with multiple disabilities, to grasp the impact of disability on families of children with disability, to understand preventive measures for children with disability in India. Methodology: Secondary data has been used for the current study. Online search has made by using Google Scholar, relevant Government website, Government reports, reports of World Health Organization, published articles, online newspapers, online blogs, statistical report related disability. Important secondary data has been considered for this study. Findings: As per the World Health Organization an estimated 1.3 billion people experience significant disability. This represents 16% of the world's population, or 1 in 6 of us. Persons with disabilities find inaccessible and unaffordable transportation 15 times more difficult than for those without disabilities. Persons with disabilities face many health inequities. Psychosocial issues such as stress, family burden, stigma, anxiety and negative thoughts can be found among parents of children with multiple disabilities based on some literature. Conclusion: Psychosocial interventions like counseling, group counseling/therapy and other interventions are required for needed families of children with multiple disabilities.

P2.4 Morbidity and Cost of Health Care Services among Tribal Population in South Odisha

Binod Bihari Jena, Rabi Narayan Patra
Govt. College Koraput
Email: binodjena.eco@gmail.com

Universal Health Coverage is one of the important objectives of Sustainable Development Goals. It emphasizes the importance of access to quality health care for all population without risking financial hardship. In India the health care financing is dominated by out-of-pocket spending which constitutes two-thirds of the total health spending (NHA, 2013-14). In this backdrop this paper aims to study the status of morbidity and cost of health care services among the tribal population in south Odisha. The southern Odisha consists of seven southern districts of Odisha which is one of the most backward regions of the country in terms of socio-economic development and has the highest concentration of ST/SC population. As per 2011 census STs and SCs constitute 50.93% (ST: 34.36% and SC: 16.57%) of total population of south region. The study uses the unit level data of NSS 71st round survey on social consumption on health, 2014 to examine the above objectives. Results show that the morbidity level in south Odisha (65/1000) was much lower than rest of Odisha (112) and state average (102). The prevalence of morbidity in ST and SC population was comparatively higher than rest of the social groups. 97% tribal population in south Odisha were availing

health care services from public health facilities and the cost of out-patient and in-patient care was much less among tribal population compared to general population. Though the coverage of health insurance was much higher among tribal population in south Odisha (36%), compared to tribal population of rest of Odisha (20%), but the proportion of reimbursed cases was very less in tribal population of south Odisha (0.3%) compared to the tribal population of rest of Odisha (4.2%). In south Odisha marginally more people were resorting to borrowing (27.1%) to finance out-of-pocket spending for hospitalization compared to rest of Odisha (24.4%).

P2.5 Participation of men in maternal and child healthcare utilization in Uttar Pradesh

Chandan Kumar Hansda, Pradeep Salve
International Institute for Population Sciences
Email: hansdachandan2812@gmail.com

Introduction: The World Health Organization (WHO) defines maternal health as women's health during pregnancy, childbirth, and the postnatal period. It is a vital part of every country's growth. Maternal and child healthcare is predominantly considered a feminine matter. Men's awareness of pregnancy-related care increases maternal healthcare use and women's healthcare decision-making. In contrast, male presence during antenatal care visits improves the likelihood of women giving birth in institutions significantly. **Data Source and Methodology:** The data used in this study are from the two rounds of the National Family Health Survey (NFHS), NFHS-4, and NFHS-5. The National Family Health Survey (NFHS) is a multi-round, large-scale survey that is performed on a representative sample of Indian households. The men's file has been used in this study. The study focuses on the Uttar Pradesh. **Dependent variables:** Antenatal care for the mother of the most recent child and place of delivery of the most recent child. **Independent variables:** Place of residence, respondent's age, education, wealth quintile and children ever born. The relationship between the dependent and independent variables has been analyzed using logistic regression. **Findings:** The results show a significant increase in hospital delivery and antenatal care from NFHS-4 to NFHS-5. The participation of men in maternal and child health care has also increased from NFHS-4 to NFHS-5, the percentage of men receiving advice regarding pregnancy complications was nearly 45% (India) and 27% (Uttar Pradesh) in NFHS-4 which increased up to 64% and 60 % respectively in NFHS-5. **Conclusion:** There is a disparity in the utilization of MCH services. Most maternal deaths are caused by a delay in seeking care for morbidity issues. Through active participation and supportive behavior, the husband, as the closest male member in the marital household, can make a valuable impact on his wife's and children's health.

P2.6 Evaluating the vulnerable population's health and wellbeing. Examining the factors of health Insurance subscription among the Schedule Caste in Uttar Pradesh: Implications for policy to meet SDG3

Vishal, Sheetal Kundu
Central University of Jammu
Email: vishalsinghmr@yahoo.com

Economic conditions significantly impact human health. The relationship between the two are also moderated by insurance coverage particularly in the settings where out-of-pocket health expenditure (OOPHE) is substantial and routinely beyond the paying capacity of the individuals. To keep the OOPHE relatively low, the states have been increasingly taking recourse to health insurance as a policy measure. In India, patronage of the health insurance by the central as well as state governments has led to an uptick in its prevalence from 25.6 percent in 2015-16 to 42.6 percent in 2019-21 (IIPS, 2022). In this context, the current paper intends to not only discuss the level in insurance coverage among the SC households but also the determinants of such coverage in the state of Uttar Pradesh. The data suggest that 25.9 percent of the households in India were covered by any type of health insurance/scheme in 2015-16, whereas it has significantly increased to 42.6 percent in 2019-21. The analysis

indicates that 15.8 percent of the households reported to be covered under any health insurance (public or private or both) in 2019-21 as against 22.5 percent of all the SC households in UP. Logistic regression indicates that health insurance coverage among the SC households in UP is largely determined by the sex of the HH head, Place of residence, educational level of HH head, wealth index, religion, agricultural land ownership and type of health facility used for treatment. The results also are likely to contribute to building a knowledge base on the subject. The other potential benefits for policy and programmes relate to course correction of the existing health insurance schemes and rollout of the new insurance programmes for the specific target groups such as the SCs and their households to achieve the SDG goal-3: Health and well-being for all.

P2.7 Statistical model for Socio-Demographic and Economic factors of Hypertension among Men in India

Ganapati Y Sabhahit

Jawaharlal Nehru Medical College

Email: ganapatisabhahit716@gmail.com

Background: Hypertension, the most significant risk factor for cardiovascular disease, is an increasing contributor to the global health burden, particularly in low- and middle-income countries (LMICs) such as India. Objective: This study aims to examine the change in the prevalence of Hypertension and to develop a statistical model for risk factors of Hypertension among Men in India. Materials and Methods: This study used data from the National Family Health Survey (NFHS 4 and 5) in India. The analysis is based on a nationally representative sample of men aged 15-54 years whose blood pressure (BP) was measured during the survey. The Bivariate analysis was used to determine the association between the outcome variable and explanatory variable and logistic regression to examine the effect of explanatory variables on outcome variables. Results: The study shows that the prevalence of Hypertension among men increased from 16.8% to 21.3% from NFHS-4 to 5 and we also found an increase in the prevalence of Hypertension and association across selected socio-demographic and economic variables for hypertension. It was found in both NFHS 4 and 5 that the odds of hypertension were higher (OR: 5.20, C.I: 4.82-5.60 and OR: 5.84, C.I: 5.40-6.31) in the 45-54 age group compared to younger age. Men who consume alcohol had higher odds (OR: 1.32, C.I: 1.27-1.37 and OR: 1.42, C.I: 1.37-1.48) of getting hypertension than those who do not consume alcohol and Education, Employment, marital status, and residence were showing significantly associated and higher odds with hypertension among Men. Certain Indian states and union territories (UTs) exhibit a Sharp increase in the prevalence of hypertension in India.

P2.8 A Study on Consumer Buying Behaviour towards Organic Produce and its Benefits on Health in Varanasi, Uttar Pradesh

Jyotsana Agarwala, Vishal R Tomar

University of Mumbai

Email: jyotsanaagarwala1@gmail.com

Purpose: The main purpose of this paper is to identify consumer buying behaviour towards organic produce in Varanasi, Uttar Pradesh. Organic refers to how certain foods are produced without using chemicals and pesticides. Organic foods have been grown or farmed without using artificial chemicals, hormones, antibiotics, or genetically modified organisms. Consumers have a great interest in their food habits like healthy, tasty, and high nutrition. This need can be fulfilled by consuming organic products. The objective of the paper is to study consumer buying behaviour towards organic produce with special reference to Varanasi. The study is based on primary data concerning Varanasi through a set of Questionnaires. Secondary data is also considered for the Review of Literature. It concludes that there is no relation between the income level of the consumer and the buying behaviour toward organic produce in Varanasi. Recent changes in the environment also are a matter of concern. There is a gender-wise difference in consumer buying behaviour toward organic products in

Varanasi. Different factors affect consumer buying behavior. It is suggested that further research can take place concerning the impact of availability, authenticity, and promotional activity of organic products on consumer buying behaviour. Research shows that the income level of consumers has no relationship with the buying behaviour of organic products in Varanasi, Uttar Pradesh. There is a gender-wise difference in consumer buying behavior towards organic food in Varanasi, Uttar Pradesh, and the five most important factors like friendliness to the environment, quality of food, hygiene, and protection, and maintaining good health and better taste feelings affect consumer buying behavior. Research Limitation: As the research is based on primary and secondary data, there may be a lack of accuracy depending on the sources and the reporting stages.

P2.9 Assessing The Financial Burden: A Comprehensive Study of Cancer Related Premature Mortality and Its Effect on India's Economic Productivity

Koushik Roy Pramanik

International Institute for Population Sciences

Email: koushik.jee1@gmail.com

Background and Objectives: Over two-thirds of the world's 8.2 million cancer deaths occur in low- and middle-income countries. The burden of cancer in developing countries has been described using incidence, mortality, and survival. Also, economic costs incurred due to productivity, necessitating policy measures. Our aim was to estimate the value of productivity lost in 2020 due to cancer-related premature mortality in India. **Methods:** Using the human capital approach, we employed an incidence-based framework. The Friction Cost Approach was developed to assess actual rather than potential productivity loss in response to critiques of this Approach. We used annual adult cancer deaths from GLOBOCAN2020 to estimate the years of productive life lost between cancer death and pensionable age in India, valued using ILO and World Bank data for wages, and workforce statistics. **Findings:** The total cost of lost productivity due to premature cancer mortality in India in 2020 was \$7.5 billion, representing 0.36% of its gross domestic product. Proportional to country's population size, India had 5.6 million YPLL (Years of Productive Life Lost), with \$21, 939 per cancer death. In India, total costs and cost per death among females (total \$2.1 billion, \$11, 988 per death) were less than half of those of males (total \$5.4 billion; \$32,950 per death). Total productivity losses were greatest for lip and oral cavity cancers (\$0.75 billion) in India. In India, increasing female employment participation by 1% annually led to an increase in productivity losses and enhanced equity between male and female productivity losses. **Policy Implications:** In such developing economies like India, specific localized methods are needed to lessen the financial toll of cancer. The public health and economic performance of India might be significantly improved by concentrating on tobacco control, vaccine campaigns, and cancer screening, along with availability of adequate treatment.

P2.10 Evaluating the impact of period products use during menstruation on reproductive tract infections among young women in India: a propensity score matching approach

Mahashweta Chakrabarty

Banaras Hindu University

Email: mahashweta.c1997@gmail.com

Background: Reproductive tract infections (RTIs) pose a significant health risk for women, particularly in low- and middle-income countries like India, where limited access to adequate sanitation and hygiene facilities often leads to poor menstrual health and hygiene. This study aimed to evaluate the impact of hygienic period products use on RTIs among women, using a quasi-experimental method called Propensity Score Matching (PSM). **Methods:** The study used data from the National Family Health Survey (NFHS-5) conducted between 2019-21, which included a sample of 27,983 women aged 15-24 years. The prevalence of self-reported RTIs was analysed for each state, and PSM was used to evaluate the impact of hygienic period products use on RTIs among women in India. **Results:** Our study revealed four out of 100

women reporting RTIs. RTIs among women is not homogeneously distributed across the Indian states. Highest prevalence of self-reported RTI among young women is observed in West Bengal (9.3%) followed by Himachal Pradesh, Rajasthan, Uttar Pradesh, and Gujarat (> 4%). Whereas, lowest prevalence of RTI is identified in Odisha (1.3%), followed by Uttarakhand. The PSM analysis estimates indicated that among women who did not use hygienic period products (control group), 41 out of 1000 women reported RTI symptoms (ATT:0.0416). Conversely, among the women who used hygienic period products (treated group), 31 out of 1000 women reported symptoms of RTIs (ATT:0.0315). This implies that there is a significant difference of 10 out of 1000 RTI cases between women who used hygienic period products during menstruation and those who did not. Conclusions: The study highlights the importance of use of period products in preventing RTIs among young women in India. The findings also suggest that targeted interventions aimed at promoting period products use can play a critical role in reducing the burden of RTIs among young women in India.

P2.11 Trends and Patterns of Health Expenditure in U.P. Policy Implications to Achieve SDG 3

Mandeep Singh Gill

Panjab University

Email: gillmandeep2820@gmail.com

Sustainable Development Goal 3 focuses on ensuring healthy lives and promoting well-being for all at all ages. It reflects a holistic approach by aiming to address a wide range of health issues such as achieving universal health coverage and increasing health financing. Understanding the dynamic landscape of disease prevalence and the financing of treatment is fundamental to shaping effective healthcare policies and their interventions. This research paper examines the evolving trends and patterns in the health expenditure using data from the 71st and the 75th round of the NSS. Additionally, it delves into the diverse sources of financing for treatment, thereby providing insights into socioeconomic factors that influence the funding mechanisms for healthcare. By juxtaposing state level data with national statistics, the study aims to describe variations in health dynamics. Data shows that the number of reported cases of hospitalisation reduced in urban areas of U.P. for the age-group 15-69, however, the number for 70 years and above category are higher than the national figure in both the rounds. Household saving as a source of financing treatment have steadily increased in both rural and urban areas of U.P., although in rural areas, percentage of people taking borrowings and contributions from friends and relatives is still higher than that of urban areas. The results of this study are aimed at improving the penetration of health insurance across all ages with special focus on Uttar Pradesh.

P2.12 A Crisis in Disguise: Socioeconomic disparities in obesity prevalence among adults in Uttar Pradesh: A cross-sectional study using National Family Health Survey

Manish Mamgai, Kunal Keshri

International Institute for Population Sciences

Email: mmamgai.007@gmail.com

Developing countries across the globe are going through rapid industrialization and urbanization coterminous with the process of modernization, with such changes these societies are undergoing a rapid change in their dietary patterns. With the rising standard of living people are experiencing weight gain, and obesity is beginning to pose a growing health problem for people living therein. These countries are yet to solve the existing problem of undernutrition, and the emerging epidemic of obesity poses a major health challenge. This paper is one such attempt to focus on understanding the socioeconomic disparities in the prevalence of obesity in rural and urban areas of India's largest state Uttar Pradesh. Using the National Family Health Survey (2019-21) it aims to analyse the prevalence of obesity among adults (female and male) in the state across various demographic, social and economic

background variables in the population. Using multivariate statistical techniques, it presents a disaggregated analysis to estimate the prevalence and predictors of obesity in the state. The analysis found that urban females (30.55) had a higher prevalence of obesity in comparison to rural females (18.3), similarly, the prevalence of obesity among males was higher in urban (24.89) than in rural (16.24). But a lesser number of males are obese than females indicating that females are at greater risk of obesity. Further, socio-economic characteristics such as caste, religion, marital status, wealth quintile and alcohol consumption were found to be the major predictors of obesity among males and females. It also looks into the spatial analysis of obesity across various districts of the state. This study helps not just in bringing forth a major health issue but also signals towards identifying emerging public health challenges as a result of the obesity crisis in the future.

P2.13 Health status and healthcare across the districts of Uttar Pradesh, India

Md. Juel Rana

G. B. Pant Social Science Institute

Email: mdjuelrana@gbpssi.in

Introduction: The health and healthcare play a crucial role in gauging both human and sustainable development, influencing economic and social advancements. Consequently, health has become a central focus in developmental planning and policies. **Objectives:** The study aims to achieve three main objectives. Firstly, to scrutinize recent changes in selected health indicators in Uttar Pradesh and compare them with the national average. Secondly, to evaluate regional disparities in various health indicators across the districts of Uttar Pradesh. Lastly, to monitor changes in key health indicators across these districts. **Methodology:** The health status and utilization of healthcare services were assessed through multiple indicators. The study analysed the progress in the indicators across Uttar Pradesh's districts, utilizing data from two recent rounds of the National Family Health Surveys conducted in 2015-16 and 2019-21. **Findings:** Noteworthy progress has been observed in the health status and accessibility of healthcare in Uttar Pradesh in recent years, attributed to new public health initiatives. However, persistent high mortality rates highlight the ongoing need for sustained efforts to enhance healthcare access and infrastructure. The rise in non-communicable diseases, coupled with a sluggish decline in communicable diseases, indicates a continuing dual burden. Addressing avoidable mortality and nutritional challenges remains an unfinished task. Positive improvements are noted in social determinants of health, such as safe drinking water and improved sanitation. Yet, heavy reliance on out-of-pocket payments for healthcare creates financial barriers to affordable healthcare access. **Conclusions:** The findings underscore the importance of aligning health schemes with the National Health Policy (2017) frameworks, improving healthcare financing mechanisms, and tailoring interventions to address regional and social disparities.

P2.14 Health seeking behavior among delayed cancer patients receiving treatment at tertiary care hospital, Varanasi

Nishu Kesh, Sangeeta Kansal, Manoj Pandey

Banaras Hindu University

Email: nishukesh94@gmail.com

Background: Cancer is one of the leading causes of death worldwide, and to prevent it, it is vital to understand cancer patients' health-seeking behavior that contributes to patient delays in receiving cancer treatment globally; however, no comparable studies have been conducted in India. Therefore, this study made an effort to understand health-seeking behavior among delayed cancer patients. **Methods:** It was a hospital-based cross-sectional study. Interviews with 440 newly registered cancer patients were done at random. Chi-square and Logistic regression analysis were used to analyze data using STATA. And developing a model to determine which health-seeking behavior variables have the most influence on cancer treatment delay. The study included newly registered patients who presented to the

Department of Surgical Oncology. Results: A total of 440 patients were included. In this study, there were 207 (47.05%) males and 233 (52.95%) females. Patients median age was 49.5 years. We found that 215 (50%) of patients had been suffering from the disease for at least four months (120 days). 29.55 % of patients have not known any symptoms of cancer. 268 (67.73%) of patients who are referred. Out of referral patients, 40.5% were referred from a homeopathic practitioner; followed by a GP (38%). In Chi-square analysis, there is a significant association between Self-medication ($p=0.036$), Visiting Screening program ($p=0.043$), and source of treatment before diagnosis ($p=0.039$) with delayed presentation of cancer. In logistic analysis, the odds of delay of cancer are 78% lower for visiting screened programs ($OR= 0.53$, $p=0.046$) patients as compared to those who do not. Conclusion: Diagnosis and treatment of cancer were significantly delayed and highly affected by patients' awareness and lack of knowledge about the symptoms of cancer. Various aspects may be changed, such as education and awareness, that can help in avoiding the initial delay.

P2.15 Assessing the impact of Aspirational District Programme on MCH Indicators in Uttar Pradesh from NFHS 4 to NFHS 5

Nitin Kumar, Paramita Majumdar
LAMP Fellow
Email: 1947nitink@gmail.com

Introduction: The Aspiration District Programme (ADP) was launched by Government of India in 2018. The ADP aims to effectively transform 112 of the most under-developed districts across country. To measure the progress, government made 49 key performance indicators under 5 broad socio-economic themes like Health, Nutrition, Education, etc. Objective: In this study, we will try to understand the correlates of the health and nutrition indicators in the aspirational districts of Uttar Pradesh and try to assess the changes in the selected indicators post ADP. Data & Methods: Data from the various rounds of the National Family Health Survey (NFHS) were used. Multivariable logistic regression was conducted to examine the correlates of health indicators and Difference in Difference was used to understand the change in those, pre and post ADP. Findings: Aspirational districts generally lag behind in maternal health indicators, such as 4 or more ANC visits (40.22%) and ANC visits within the first trimester (53.86%) and child nutritional indicators like stunting (45.02%), wasting (20.41%), and underweight (38.03%). Age of the women, education, wealth quintile and place of residence are highly associated with number of antenatal care visits, institutional delivery etc. As far as the effect of the ADP is concerned, maternal and child health indicators significantly improved as a result of the programme in the eight aspirational districts of the state. Conclusion: Maternal and child health form the core of the Sustainable Goal 3. ADP thus becomes an important step in improving the lives of women and child in the backward districts of India, a step closer toward realising the SDG goal. However, there exists a research gap in understanding how maternal and child health situations progressed in those districts of UP after the ADP. This is exactly what this study wants to address.

P2.16 Functional health of older grandparents in India: a comparative study of Skipped and Multi-Generational Households amidst varying intensities, reason, and working status for caregiving

Papai Barman
International Institute for Population Sciences
Email: papai138@gmail.com

Introduction - Globally, the increasing prevalence of aging populations, coupled with the challenges posed by skipped and multi-generational households, and the state of functional health, constitutes a burgeoning issue. Objective - This study investigates the association between grandparent caregiving and functional health among the individuals aged 60 and above in both SGH and MGH settings. Methodology - Using both secondary data from the Longitudinal Ageing Study in India (2017-18) and primary in-depth interviews, the study

examines functional health in SGH and MGH and the moderating role of caregiving intensity, motive behind grandchild caring, and working status. Functional health was measured using Mobility (ML), Activities of Daily Living (ADL), and Instrumental Activities of Daily Living (IADL). SGH was defined as the nuclear household where grandparents and grandchildren live together without present of middle generation, and MGH as the joint household where more than two generations cohabitating altogether. Bivariate, logistic regression, interaction effect, and partial least square structural equation modelling were employed. Findings - Findings indicated that grandparents in SGH had higher functional limitations, as evidenced by 81.3%, 35.3%, and 50.5% in ML, ADL, and IADL respectively. In contrast, those in MGH settings recorded 72.1% for ML, 17.5% for ADL, and 42.2% for IADL. In-depth interviews echoed these findings. Notably, regression analyses revealed increased odds of functional limitations for grandparents in SGH compared to MGH. For example, grandparents in SGH had a 1.20 times greater likelihood (OR: 1.20) of experiencing ML compared to their counterparts in MGH. Furthermore, caregiving hours, reasons for grandchild care, and employment status emerged as significant moderators. Conclusion - To achieve Sustainable Development Goal 3, necessary interventions to the challenges faced by caregiving grandparents in both households are imperative.

P2.17 Identification of Hotspot Clustering of Intimate Partner Violence, Physical, Sexual and Emotional Violence and Geographically Weighted Logistic Regression Analysis to Assess its Predictors among Women in Uttar Pradesh, India

Pranjal Mishra, Krishna Kumar
 Banaras Hindu University
 Email: pranjalmishra0011@gmail.com

Introduction: World Health Organization defines intimate partner violence (IPV) as intimate partner's behavior that causes physical, sexual and emotional harm to woman. IPV gained global attention as a preventable public health menace affecting significant proportion of women around the world. However, limited literature showed demographic and socioeconomic factors associated with IPV in Uttar Pradesh. Objectives: This study investigates prevalence and hotspot clustering of IPV, physical, sexual and emotional in Uttar Pradesh. Data and methods: This study used fifth round of NFHS data. We used descriptive, bivariate, Geographically Weighted Logistic Regression (GWLR). Findings: This study showed higher prevalence of IPV (42%) and physical (39%) among age-group 30-34 years as compared to young women (18-24 years). Besides, we found prevalence of IPV, physical, sexual and emotional were higher among illiterate women, women with 3+ parity and poorest household. Interestingly, all forms of violence, mentioned above, were significantly higher among woman whose husband drinks alcohol. GWLR results showed that higher odds of IPV associate with illiteracy among women in western region of Uttar Pradesh. Besides, poorest wealth quintile among women appeared to increase likelihood of IPV in eastern Uttar Pradesh. In addition, partner's alcohol drinking habit significantly contributed to higher likelihood of IPV in eastern and western Uttar Pradesh. Looking at physical violence, partner's alcohol drinking appeared to increase likelihood of IPV in eastern and western Uttar Pradesh. We also found higher odds of sexual violence among women in association with partner's alcohol drinking in western and lower eastern region of Uttar Pradesh. We suggest regulating policies related to excessive alcohol drinking, lowering family size, increasing education level among women would contribute to decrease IPV, physical, sexual and emotional violence in Uttar Pradesh.

P2.18 Awareness, Treatment, and Control of Visual Impairments among Older Adults in India

Rajeev Ranjan Singh

International Institute for Population Sciences

Email: rajeevs210@gmail.com

Backgrounds: Visual impairment is a significant public health concern, affecting millions of individuals worldwide. The prevalence of visual impairment has been increasing worldwide, studies on awareness, treatment and control of visual impairment are limited. India with 295 million older adults (45 and above) population is vulnerable to increasing visual impairment. This paper examines the socio-economic variations in awareness, treatment and control of visual impairment among older adults across socioeconomic groups in India. **Methods:** The study utilised data from the first round of the Longitudinal Ageing Study of India (LASI), 2017-18, from a representative sample of 66,606 older adults 45 and above. The visual acuity was measured using a computer-assisted personal interview (CAPI) based tumbling E log medicine administration record (MAR) chart or log mart, and self-reported visual impairment was recorded. Individuals with low distance vision, low near vision or blindness were defined as visually impaired. An individual was defined as (a) aware if he/she has been measured as visually impaired during the survey or diagnosed by a medical professional before the date of the survey and older adults were aware of their visual acuity, (b) treated if he/she has been taken treatment after being diagnosed, (c) control if he/she has had a better visual acuity after treatment. Bivariate analysis, logistic regression, concentration index, and concentration curve were used in the analyses. **- Results:** About 64.36% of older adults had any form of visual impairment, and 74.53% were aware of the visual impairment. Among those with visual impairment, 26.80% had taken treatment, and 19.12% had corrected visual impairment. The prevalence of visual impairment was higher among educated urban residents and females.

P2.19 Assessing the Incidence of Acute Respiratory Infections among Under-Five Children in Uttar Pradesh, India: Evidence from NFHS-5

Ranjan Singha, Dhananjay W. Bansod

International Institute for Population Sciences

Email: ranjansingha408@gmail.com

Introduction: - Uttar Pradesh is the most populous state of India, with 3.54% of children having symptoms of Acute Respiratory Infections (ARI) is taking the third position after Meghalaya (4.80%) and Jammu & Kashmir (3.85%) where the average prevalence of ARI in India is 2.79%. **Objectives:** - This study aims to determine and quantify the prevalence of ARI among under-five children and to analyze the likelihood of ARI based on different risk factors and characteristics. **Data and methods:** Data on under-five children was obtained from the National Family Health Survey-5 (2019-2021) of India. Child file where a total sample of 35,766 children of Uttar Pradesh were considered in this study. The prevalence of ARI was calculated using bivariate analysis and a logistic regression model was employed to assess the likelihood of ARI. **Findings:** About 3.65 and 3.53% of children from families using clean fuel and unclean fuel respectively had symptoms of ARI. Whose mothers smoke, there 5.9% had symptoms of ARI compared to 3.46% whose mothers do not smoke. The prevalence of ARI symptoms was higher in aspirational districts than in non-aspirational districts. The likelihood of ARI was high when households used clean fuel compared to unclean fuel (Odds Ratio (OR)=0.78, Confidence Interval (CI)=0.67-0.92). Children whose mothers smoked had 1.68 times more likelihood (OR=1.68, CI=1.25-2.25) than children whose mothers did not smoke. Children of less than one year of age, in poor households, without electricity had more likelihood of ARI. The likelihood of ARI was higher for children residing in rural areas (OR=1.5, CI=1.20-1.87). Surveys conducted in the winter had a higher likelihood of ARI compared to the spring (OR=0.76, CI=0.65-0.88) and autumn (OR=0.75, CI=0.33-1.70) seasons. **Conclusion:** - Households using cleaner fuel indicate a higher incidence of ARI compared to unclean fuel. This unexpected outcome challenges conventional assumptions and requires further investigation.

P 2.20 Hypertension in reproductive women in India: A study of interaction between tobacco and diabetes

Rasika .S. Mahagaonkar

Jawaharlal Nehru Medical college

Email: mahagaonkarrasika90355@gmail.com

Background: Evidence is limited regarding the association of tobacco consumption and diabetes among women of reproductive age with hypertension. High Blood Pressure is one of the leading risk factors for global mortality in women. Hence, we aimed to investigate the risk of hypertension and its interaction between tobacco and diabetes. Material and methods: The National Family Health Survey (2019-2021) data was used to meet the study aim. The nationally representative sample of 695,707 women were analysed using univariate, bivariate and multivariate techniques. Result: In India prevalence of hypertension is 13.3% in women of reproductive age. Those women who consume tobacco and has increased blood glucose level among them 28.3% are hypertensive. The adjusted odds ratio showed that women who consume tobacco and has increased BGL (OR=1.64, CI=1.36-1.99, <0.05) has higher odd of having hypertension than the those who don't consume tobacco and has not increased BGL. Those who don't consume tobacco but has increased BGL has the higher odds of having hypertension than the reference group (OR=1.58, CI=1.48-1.68, <0.05). Those women who consume tobacco but has not increased BGL the odds of having hypertension are higher than the reference group (OR=1.12, CI=1.03-1.21, <0.05) Conclusion: The finding suggests the interaction of tobacco consumption and increased blood Glucose level on hypertension is significant, which will help for better engagement with health services in health management. Key words: Hypertension, Blood Glucose level, tobacco.

P2.21 Hypertension in India: A Gender-Based Study of Prevalence and Associated Risk Factors

Raza Mohammad, Dhananjay W. Bansod

International Institute for Population Sciences

Email: razamdiips@gmail.com

Hypertension, a major non-communicable disease, is responsible for a substantial global health burden, with approximately 17.9 million annual deaths, accounting for 19% of global mortality. India, with its massive population exceeding 1.4 billion, faces a critical challenge in addressing this silent yet lethal health issue. This study examines the prevalence of hypertension in India and its associated risk factors. Analyzing data from the fifth National Family Health Survey (NFHS-5), around 636, 699 households across all Indian states and union territories, the study includes standardized blood pressure measurements for 1,708,241 individuals aged 15 and above. Statistical analysis was conducted using Stata 17.0, employing logistic regression to identify predictors of hypertension. The study reveals that the overall prevalence of hypertension in India stands at 22.6%, with a slightly higher prevalence in men (24.1%) than in women (21.2%). The prevalence increases with age, peaking at 48.4% in individuals aged 60 and above. Urban residents have a slightly higher prevalence (25.0%) compared to rural residents (21.4%). The association of hypertension with increasing age, urban residence, specific religious affiliations, and belonging to Scheduled Tribes. Conversely, belonging to Scheduled Castes or Other Backward Classes, being currently unmarried, and having higher education were linked to a lower likelihood of hypertension. Furthermore, Individuals in the wealthiest quintile or higher BMI exhibited higher odds of hypertension. In conclusion, hypertension is a significant health issue in India, affecting both men and women. This study underscores the importance of addressing age, BMI, urban living, and educational attainment as major predictors. It emphasizes the need for health education and awareness campaigns, particularly in rural areas, and urges policymakers to prioritize preventive measures, targeting lifestyle modifications and improved healthcare access.

P2.22 Association between Personality Traits and Internet Addiction Among College Students: A Systematic Review

Ruchi Yadav, Ashish Kumar Yadav
Banaras Hindu University
Email: ruchiyadav207@gmail.com

Background: With the increasing digital connectivity, the problem of internet addiction among college students has become more severe. This review systematically examines the relationship between personality traits and internet addiction among college students. The aim is to bring together existing knowledge and suggest interventions that promote a healthy balance between technology use and well-being. **Objective:** The purpose of this review is to give an overview of the personality traits that make an individual more prone to internet addiction. It also aims to identify the personality traits that act as protective factors against internet addiction. Additionally, the review examines the level of addiction based on gender and its impact on academic performance. **Methods:** Using terms linked to personality traits, internet addiction, problematic internet use, students, and academic achievement, a comprehensive search was carried out on PubMed and Google Scholar. After that, a narrative synthesis was carried out. **Result:** The majority of research points to a favourable relationship between personality characteristics and internet addiction. **Conclusion:** After reviewing several studies, it was found that certain personality traits are associated with internet addiction among college students. Extraversion was consistently found to be a predictor, with extroverted individuals more likely to excessively use the internet. Neuroticism was positively correlated with internet addiction, indicating emotional instability in those who engage in excessive online behaviour. On the other hand, conscientiousness was found to be a protective factor, with higher levels linked to lower susceptibility to internet addiction. The review also highlighted gaps in the current literature and the need for longitudinal studies and cross-cultural investigations to make the findings more generalisable.

P2.23 Mortality Fractions Attributable to Tobacco Consumption: A State and Gender Differential analysis between 1998-99 and 2019-2021

Rufi Shaikh, Tobias Vogt, Nandita Saikia, Fanny Janssen, Mangesh Pednekar, Prakash Gupta, Dr. K.S. James
International Institute for Population Sciences
Email: rufi.shaikh95@yahoo.com

Introduction: Tobacco is the single most important preventable cause of premature mortality. Population level studies on mortality-attributable to tobacco consumption remains fragmented in India which underestimates the true burden of mortality attributable to tobacco. **Objectives:** Since, distinct gender and regional differences exist in consumption of various tobacco products, we aim to estimate mortality attributable to smoked, smokeless and dual-use of tobacco among men and women across Indian states and union territories over time. **Methodology:** We obtained age-specific prevalence of tobacco use, smoking, and smokeless tobacco use for men and women aged 15-54 years across India between 1998 and 2021 from the National Family Health Survey (NFHS). Relative Risk of mortality-attributable to different tobacco products was obtained from the Mumbai Cohort Study. We used Levin's formula to estimate mortality fractions attributable to different tobacco products across gender, state and time. **Findings:** A clear wave pattern of an increase between 1998-99 and 2005-06 followed by a decline from 2005-06 and 2019-21 was observed for men while a declining trend was witnessed among women in India, with exceptions to few states. Mortality attributable to smoked tobacco, smokeless tobacco and dual use of smoked and smokeless tobacco was highest among men and women residing in Mizoram (a state in Northeast India). Mortality fractions attributable to tobacco consumption between 1998-99 and 2019-2021 was also observed to increase in few northeastern, Western and Southern states across India. **Conclusion:** Despite attempts to lower mortality-attributable to tobacco consumption, it remains relatively high (greater than the national level) among major Indian

states and is increasing in few states for both men and women. Target oriented approach to reduce prevalence of tobacco use and thereby its associated mortality is highly recommended for India.

P2.24 Inequality in cognitive health among tribal and non-tribal older adults in India: A Blinder - Oaxaca decomposition analysis using LASI data

Sadanand Karun, Dipti Govil
International institute for Population Sciences
Email: sadanandkarun40@gmail.com

Background, Objectives: Cognitive health disparities among older adults, particularly those aged 60 and above, pose a significant public health concern. In India, tribal older adults emerge as a vulnerable social group, exhibiting lower cognitive health levels compared to their non-tribal counterparts. This study aimed to assess the cognitive health inequality between tribal and non-tribal older adults and explore the contributing factors. Methods: Using data from the Longitudinal Ageing Survey in India (LASI) 2017-18, with a total sample size of 30,712 (4,424 tribal and 26,288 non-tribal) older adults, we employed multiple linear regression to examine the association of cognitive health with socio-economic, demographic, and health factors. The Blinder-Oaxaca decomposition model was utilized to assess factors contributing to cognitive health inequality among tribal and non-tribal groups. Results: Our findings revealed a significant inequality in cognitive health, measured by mean composite cognitive index (CCI), among tribal and non-tribal elderly. We found a statistically significant inequality of 3.7 in the mean CCI between the two groups, with tribal older adults exhibiting a mean CCI of 19.2 compared to 22.9 for non-tribals. Tribal older adults were significantly more likely to experience poor cognitive health ($\beta = -2.19$; 95%CI = -2.57, -1.81) even after adjusting for their socio-economic, demographic, and health factors. The Blinder-Oaxaca decomposition illustrated that 83% of the cognitive health inequality was explained, with education (37.8%), body mass index (18.9%), place of residence (14.9%), wealth (5.2%), and working status (4.8%) identified as the major contributors. However, 17% of the inequality remained unexplained, possibly due to factors not included in the model. Conclusion: Tribal older adults face a notable cognitive health disparity compared to non-tribals, signifying a pressing public health concern regarding their mental well-being.

P2.25 Assessment of Contraception Use and its Interrelationship with Pregnancy Loss in Uttar Pradesh: A Cross-Sectional Study

Sakshi, Riti Deshmukh, Sabina Bano
Banaras Hindu University
Email: sabina.dhn@gmail.com

Background: Uttar Pradesh is widely recognised as the most densely populated state in India, grappling with substantial difficulties in the realm of reproductive health. Comprehending the link between contraceptive methods and the occurrence of pregnancy loss is imperative for devising impactful public health interventions in the sphere of fertility management. Methods: The study utilises secondary data from the NFHS fifth round, India (2019-21). Sample consists of 7, 151 people aged between 15 and 49. A chi-squared test is used to determine the statistical significance of the relationship between contraceptive use and pregnancy loss in relation to their background profile. Furthermore, the study used a multivariate binary logistic regression model to explore the correlations between contraceptive methods and pregnancy loss, including occurrences such as abortion, stillbirth, and miscarriage, as well as the corresponding background characteristics. ArcGIS and Stata 14.2 are utilised for the visual representation and analysis of data. Results: Preliminary findings reveal a complex interplay between contraceptive practises and pregnancy loss. The study identifies variations in contraceptive use across different socio-demographic strata. Factors such as age, education level of women, wealth status of the household, number of alive children, number of household members, religion, residence of the respondents, and

husband's desire for children including socio-economic and demographic factors are found to influence both contraceptive choices with special proxy of the incidence of pregnancy loss. Notably, certain contraceptive methods exhibit varying degrees of effectiveness in preventing pregnancy loss, adding nuance to existing knowledge. - Conclusion: The findings can help guide reproductive health programs, emphasising the importance of customised interventions that take into account regional, cultural, and socioeconomic differences.

P2.26 Progress and Equity in Informed Choice Methods Received by Women in Uttar Pradesh and its Districts

Sanjay Kumar Pal, Vasim Ahamad
International Institute for Population Sciences
Email: sanjay19@iipsindia.ac.in

Introduction: The information shared during a contraceptive visit is crucial because it helps clinicians understand the clients' goals regarding reproduction and ensures that clients are adequately informed about available techniques, potential side effects, and issues linked to them. Objective: This study aims to analyze the progress and equity in informed choice methods received by women in Uttar Pradesh and its districts. Methodology: The fourth and fifth rounds of National Family Health Survey data with sample sizes 97, 661 and 93124, respectively, from Uttar Pradesh, were used to calculate the Method Information Index (MII), a Family Planning 2020 indicator that reflects some aspects of contraceptive information exchanged between providers and clients. For each district, the MII was calculated from two surveys about five years apart to examine change in the indicator over time. Afterward, univariate, bivariate, and difference methods were used for the analysis. Critical Findings & Conclusions: The results show substantial progress in contraception-related information exchange: side effects increased from 47% to about 70%, what to do when experienced side effects rose from 36% to 58%, information of other methods to use grew by 23 percentage points, and the comprehensive MII surged by 23 percentage points. Results show a notable 32-point increase in information for pill users, exceeding gains for IUD (12 points) and female sterilization (20 points). Women obtaining contraceptives informally exhibit a higher MII at 62%. Younger women (15-19) saw a substantial increase to 67%, a rise of over 50 points. Balrampur, Hamirpur, Sultanpur, and Siddharthnagar experienced significant MII increases, while Allahabad (Prayagraj), Moradabad, and Firozabad witnessed significant decreases. Many districts have room to increase provider-client information exchange based on the MII. Programs and donors would need to work together to make such improvements.

P2.27 Association of Life-course risk factors and Multimorbidity among Older adults in India: Evidence from LASI-1

Sarika Rai, Dolly Kumari
International Institute for Population Sciences
Email: sarika.iipsindia@gmail.com

The main goal of this study is to assess early life risk factors associated with multimorbidity in older adults using the life-course approach. The LASI Wave -1 data is used in this study, and it covers 72, 250 individuals. Descriptive analysis and multinomial logistic regression have been done. The dependent variable is the relative risk ratio of having any one morbidity and multimorbidity and early life-risk factors such as poor health, financial status, and other factors were used as predictors. The multinomial logistic regression results show that single morbidity and multi morbidity significantly increase with age. Females, in comparison to males, were significantly more likely to have one morbidity and multimorbidity. The risk of multi morbidity was nearly 3.08 times higher in people aged 75 or above than aged 45 to 54. Uneducated people had 0.89 times less chance of having multi morbidity than their counterparts. Fair health during childhood had significantly 1.151 times more chance to had multi morbidity than people who had good health during childhood. There was a significantly higher rate of single morbidity and multi morbidity problems in the following groups: the

elderly, women, the lonely, those with lower income, those who are currently unmarried, those with lower levels of physical activity, those who did not exercise, and those who live in urban areas, those who belong to highest wealth category. So, special focus is needed on this group to improve these people's quality of life, and action can be taken in the care of elderly people.

P2.28 Unveiling the Nexus: A comprehensive empirical exploration of health expenditure's influence on SDG indicator in Uttar Pradesh and India

Shikha Singh

University of Lucknow

Email: shikha3146@gmail.com

Keeping in track to attain sustainable development goals till 2030 following sustainable development agenda by the government of India and state governments. To ensure good health and well-being to all the government primarily focused on improving the Sustainable development goals indicators performance through allocation of funds in health sector. The study primarily focused on assessing the trends of public expenditure on health sector, status of health infrastructure in India and Uttar Pradesh during 2013 to 2020 and investigating the impact of public health expenditure on SDG performance indicators using multiple linear regression analysis for the time period 2013-2019. The independent variables considered for the study are total health expenditure and government health expenditure whereas for the dependent variable the IMR (Infant mortality rate) and MMR (Maternal mortality rate) considered for the study as they are key indicators for the health expenditure and tracing SDG performance in India and Uttar Pradesh. The findings interpret that with the state of rise in health expenditure by the government it helps in significant reduction in Infant mortality rate and Maternal mortality rate in India and Uttar Pradesh. Additionally, the government policies in this direction helping to meet the SDG goals till 2030. Keywords: Health expenditure, Infant mortality rate, Maternal mortality rate.

P2.29 Determinants of and Socio-Economic Disparity in Health Status among Older Adults in India

Sneh Shrivastava

A. N. Sinha Institute of Social Studies

Email: snehshri01@gmail.com

Population ageing is emerging as a major demographic issue for India with wide socio-economic implications. The poor health status of the older population poses a challenge. This study examines (i) the self-reported health Status of older adults in India; (ii) the Determinants of self-rated health among older adults in India; (iii) Evaluate the factors that account for variations in self-rated health among older adults. Data was derived from the Longitudinal Ageing Study of India (LASI 2017-18). The outcome variable taken into account is self-rated health as it is not only used to measure health status and health inequality but also as a strong predictor of morbidity and mortality. The determinants of self-rated health were analysed across four main dimensions: Demographic characteristics, Socio-Economic variables, Lifestyle, and Health Variables, and Psychosocial factors. Multivariate odds ratios for poor self-rated health were calculated for different variables to analyse the determinants. A sub-sample analysis was done to evaluate the factors that account for variations in poor self-rated health. 59 percent of older adults report their health as poor. Age, education, marital status, religion, occupational status, chronic diseases, functional status, BMI, and psychosocial factors were significant correlates of self-rated poor health. The elderly with two or more chronic diseases were more likely to rate their health as poor than those who faced fewer problems. Factors such as living arrangements and place of residence also were significant predictors of poor self-rated health. A variation in self-rated health was observed across gender and age groups. The present findings support the notion that both socioeconomic and lifestyle factors were related to the health status of older adults in India.

Given that, more older adults report poor self-rated health the health care services and social security programs for the elderly should be strengthened.

P2.30 Tracking the Progress of the Health-related SDGs in Uttar Pradesh, India

Swati Sneha, Nandlal Mishra, S K Singh
Banaras Hindu University
Email: swatisneha1022@gmail.com

In September 2015, the UN General Assembly established the Sustainable Development Goals (SDGs) comprising 17 universal goals, 169 targets, and 230 indicators to be achieved by 2030. The tracking of health-related SDG indicators necessitates comprehensive, coherent, comparable, and up-to-date estimates. This study presents baseline and midline assessments of health-related SDGs in Indian states, analysing 38 indicators. Various data sources, including NFHS 2015-16 and 2019-21, GBD India Study, Census of India, SRS Reports, GATS, and reports from MoHFW, WHO, NITI Aayog, etc., were utilized. Statistical methods were applied to systematically compile and estimate the performance of these indicators for all states and union territories in 2015-16 and 2019-21. Each indicator was rescaled on a 0 to 100 scale, and the health-related SDG index, computed as the geometric mean of rescaled indicators by SDG target, provided an overall assessment. Spline regressions were employed to explore the relationship between the Human Development Index and other development indices. The results reveal a distinct disparity in health-related SDG achievements among Indian states, with the southern and north-western regions excelling, while the northern heartland faces challenges. The study emphasizes the integral connection between human health and overall development, encompassing human development, poverty reduction, social inclusion, and environmental sustainability. Offering an independent and comparable method for monitoring progress, this study emphasizes the importance of independent measurement as a crucial aspect of accountability. However, it underscores that these findings should serve as a foundation for review and action at the subnational levels.

P2.31 Prevalence and Pattern of Morbidity Triads among the Elderly Population: A Cross-sectional Study in Bankura District, West Bengal

Ujjwal Das, Nishamani Kar
Fakir Mohan University
Email: ujjwaldas608@gmail.com

Background: The multi-morbidity in the elderly is a major public health challenge in most of developing countries. The elderly suffers from multiple chronic health conditions due to differential socio-economic and demographic conditions in the household. The present study examines the prevalence and pattern of triad morbidity among the elderly in the Bankura district of West Bengal. **Methods:** A cross-sectional study was conducted among elderly men and women aged 55 years and above in five blocks of Bankura by using a multi-stage sampling design. Descriptive statistics was used to identify the prevalence of disease-specific burden of triad morbidity. Multivariate logistic regression was used to explore the factors associated with morbidities. **Results:** Out of the 462 elderly persons, 222 (48.05%) were males and 240 (51.95%) were females; 360 (77.9%) were affected by more than one disease. The mean age of affecting triad morbidity among the elderly was 61 years. The highest prevalence of triad morbidity among the elderly was arthritis, hypertension, and heart disease (79.6%) followed by diabetes, hypertension, and depression (78%). The overall disease prevalences were more prominent among the female elderly than males. The prevalence of triad morbidities was strongly correlated with key lifestyle factors such as excess intake of alcohol, smoking, and tobacco consumption and higher food choices of non-vegetarians. **Conclusion:** The health problems of the elderly are aggravated by the no education, lack of physical work, poor socio-economic condition, and Western types of lifestyle. There is an urgent need to develop comprehensive public health strategies to address the high burden of NCDs in Bankura. - **Keywords:** Socio-economic; Logistic regression, Diabetes; Hypertension and Depression

Social support and economic conditions among older migrants in India: Does migration distance and duration play a role in later life?**Vasim Ahamad**

International Institute for Population Sciences

Email: vaseem3006@gmail.com

Abstract: Being aged and having a migrant feature might cause a double risk of vulnerability in poor economic, social support, and health status at the place of destination. This study examines the association of migration on the social support and economic condition of older persons in India. Longitudinal Ageing Study in India, Wave-I (LASI, 2017-2018) data with total samples of 66, 156 older adults aged 45+ with 30, 869 and 35, 287 male and female samples, respectively, used in this study. Descriptive and bivariate analyses have been performed to examine the pattern of older migrants, and multinomial logistic regression analysis has been used to establish the associations between migration, social support, and economic condition. Over half (57.5%) of the population aged 45+ in India have migrant characteristics; 80.1% migrated before 25 years. Of all migrants, 89.6% migrated within the state (Intra-state) and 9.2% migrated to another (Inter-state). The association between social support and migration by distance and the adjusted result shows that immigrants are less likely to have medium [RRR=0.56 (CI; 0.46-0.68)] and high [RRR=0.39 (CI; 0.30-0.50)] social support. The interstate migrants are also less likely to have high [RRR=0.90 (CI; 0.83-0.98)] social support. the association between economic status and migration by distance, and the adjusted result shows that immigrants are more likely to have richer [RRR=1.41 (CI; 1.14-1.73)] than intrastate and interstate migrants, respectively, concerning non-migrants. The findings of this study suggest that international and internal migration have a negative association with social support and a positive impact on economic status in later life. In exploring migrations effect on social and economic status, the policymakers should prioritize migrants in their agenda to maintain the socioeconomic and health of older persons in India to achieve the sustainable goal of active and healthy aging.

List of Presenters

Session	Presenters	Session	Presenters
P2.1	Abhishek Anand	P2.9	Koushik Roy Pramanik
P1.17	Abhishek Bajpai	T13.2	Krishna Dornalpalle
P1.20	Abhishek Gupta	T8.4	Madhurima Sharma
P1.26	Abhiyan Chaudhari	T8.6	Mahadev Bramhankar
T6.5	Aditi B. Prasad	P2.10	Mahashweta Chakrabarty
T9.1	Ajay Verma	T6.3	Manas Ranjan Pradhan
T10.1	AK Sharma	P2.11	Mandeep Singh Gill
T8.3	Akancha Singh	T12.2	Manik Kumar
T13.4	Amit Kumar Goyal	P2.12	Manish Mamgai
T7.5	Amiya Saha	P1.27	Manisha
P1.23	Ankita Roy	T4.4	Manoj Narayan
T7.2	Amlan Kanti Ray	T11.6	Martin Enock Palamuleni
T9.6	Anshika Singh	P2.13	Md. Juel Rana
P1.18	Anurag Yadav	T7.6	Mihir Adhikary
P2.2	Aratrika Saha	T3.3	Mohit Kumar Pandey
T2.1	Archana Roy	P1.21	Mukesh Vishwakarma
T12.1	Arjun K	T5.2	Nandita Saikia
T7.3	Arumugam Sankaran	T11.3	Nandlal Mishra
T5.3	Ashok Mondal	P1.1	Neelam Singh
P1.19	Babita	P1.33	Neelkamal Alomayan Kalita
T13.1	Bajarang Bahadur	T1.3	Neha Shri
T9.2	Bashir Ahmad Bhat	P1.5	Neha Soni
P2.4	Binod Bihari Jena	P2.14	Nishu Kesh
T2.5	Bittu Mandal	P2.15	Nitin Kumar
P2.5	Chandan Kumar Hansda	T12.4	P. Murugesan
T10.2	D.A. Nagdeve	T4.1	Padmavathi Srinivasan
T4.5	Deepali Mishra	P2.16	Papai Barman
T14.1	Dharmendra Pratap Singh	T13.3	Paramita Majumdar
T3.1	Dilip TR	P1.8	Pooja Tripathi
P2.7	Ganapati Y Sabhahit	P2.17	Pranjal Mishra
T14.4	Garima Jasrotia	T9.3	Prashant Verma
P1.10	Gwmsath Mushahary	P1.22	Prateek Singh
T6.2	Harihar Sahoo	T6.4	Priti Kumari
T4.3	Hiral K. Shah	P1.29	Priya Srivastava
T10.4	Hricha Rai	T12.5	Priyabrata Sahoo
P1.24	Indrajit Goswami	T15.4	Priyamadhaba Behera
T9.4	Jagriti Annu	T15.2	Priyotosh Laha
P1.11	Javed Alam	T10.3	R.S.Goyal
T11.1	Jayanta Kumar Basu	P1.32	Rachana Ramesh Shetty
P2.8	Jyotsana Agarwala	T8.1	Rahul Kumar (Vinay Ambulkar)
T15.1	Kamalesh Kumar Patel	P2.18	Rajeev Ranjan Singh
P1.25	Keshav Vishal Singh	P2.19	Ranjan Singha

P 2.20	Rasika .S. Mahagaonkar	T11.2	Somnath Jana
P1.30	Ravi Rakesh Singh	P1.31	Sourav Biswas
P1.12	Ravi Tripathi	P1.16	Sourav Dey
P2.21	Raza Mohammad	T5.5	Souvik Mondal
T2.2	Reeti Debnath	T8.5	Subhojit Let
P2.3	Renuka E. Asagi	T9.5	Sucharita Halder
P1.13	Robin Raj	T12.3	Suman Singh
P1.9	Roni Sikdar	T5.4	Sunil Sarode
P2.22	Ruchi Yadav	T3.2	Suryakant Yadav
P2.23	Rufi Shaikh	T7.4	Swati Sinha Babu
P2.25	Sabina Bano	P2.30	Swati Sneha
P2.24	Sadanand Karun	P1.2	Tushar Dakua
T7.1	Sanatan Nayak	P2.31	Ujjwal Das
T5.1	Sandip Anand	T13.5	Umakanta Sahoo
P2.26	Sanjay Kumar Pal	T1.1	Usha Ram
P2.27	Sarika Rai	T1.2	Utpal Kumar De
P1.14	Satyam Kumar Rai	T1.4	Vaishnavi Gupta
P1.3	Saumya Chauhan	T11.4	Vandita Srivastava
T1.5	Saurabh Singh	P2.32	Vasim Ahamad
T14.3	Shahana Purveen	T2.4	Vijay Kumar
T3.5	Shakeel Ahmed	T2.3	Vijaya Pradip Khairkar
T11.5	Shalini Jaiswal	P1.28	Vikash Singh Patel
T15.3	Shamrin Akhtar	P1.6	Vishaka S Shetty
T10.5	Shanu Priya	P2.6	Vishal
T15.5	Sharatchandra Haobijam	T6.1	Vishal Dev Shastri
T4.2	Shaveta Kohli	Note: T stands for Technical (Oral) Sessions and P stands for Poster Sessions. Please refer to session timing and venue provided above.	
P2.28	Shikha Singh		
T14.2	Shinjini Ray		
T14.5	Shivang Sharma		
P1.4	Shreya Nupur		
P1.15	Shreyantika Nandi		
T3.4	Shruti Mishra		
T8.2	Sk Md Abul Basar		
P2.29	Sneh Shrivastava		
P1.7	Sneha Verma		



INTERNATIONAL INSTITUTE FOR POPULATION SCIENCES

Govandi Station Road, B.S. Devashi Marg, Deonar
Mumbai-400088, Maharashtra.

Website : <http://www.iipsindia.ac.in>



BANARAS HINDU UNIVERSITY

Varanasi, Uttar Pradesh – 221005

Website : www.bhu.ac.in