XXVII IIPS NATIONAL SEMINAR – 2023

International Institute for Population Sciences, Mumbai
&
Institute for Social and Economic Change, Bengaluru

75 Years of India's Demographic Changes: Processes and Consequences

PROGRAMME AND ABSTRACTS

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

Azadi Ka Amrit Mahotsav

GOLDEN JUBILEE
1972-2022

Date: 23-25 February 2023
Venue: ISEC, Nagarabhavi, Bengaluru- 560072

Seminar Organizing Committee

IIPS, Mumbai

Patron:

Prof. K.S. James

Director & Sr. Professor

Coordinators:

Prof. H. Lhungdim

Prof. Archana K. Roy

Prof. Dhananjay Bansod

Dr. Dilip T.R.

Dr. Pradeep Salve

ISEC, Bengaluru

Patron:

Prof. D. Rajasekhar

Director

Coordinators:

Prof. T. S. Syamala

Dr. Lekha Subaiya

Ms. B. P. Vani

Seminar Secretariat:

Mr. Manish Kumar

Ms. Priya Mudaliar

Ms. Sheetal Zore

Mr. Devendra Kumar Yadav

ABOUT THE SEMINAR

In the past 75 years, India has undergone remarkable socio-economic and demographic transition. The long standing national goal of replacement level fertility has been achieved and life expectancy has more than doubled, yet we face several socio-economic, demographic and environmental challenges.

While commemorating 75 years of India's independence, there is a need to introspect on the processes of demographic transition and their implications for future generations. Despite the fact that the discipline of demography has contributed significantly to public policies which address population related challenges, there is a need for further cross disciplinary learning, innovative approaches and expansion of the learning horizon to address current and future challenges.

In this context, IIPS is organizing its twenty-seventh annual seminar which will focus on the various drivers of population change centering on cross-cutting issues related to population, health, environment and development. The seminar is being organized jointly with the Institute for Social and Economic Change, Bengaluru as part of ISECs Golden Jubilee celebrations during the year 2022-23.

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 HealthCare (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.

Institute for Social and Economic Change (ISEC), Bengaluru

The Institute for Social and Economic Change (ISEC) is an All India Institute for Interdisciplinary Research and Training in the Social Sciences, established in 1972 by the late Professor V K R V Rao.

One of nine research centres at ISEC, the Population Research Centre (PRC) is an interdisciplinary community of scholars engaged in population research and training. The main financial support for the Centre comes from the Ministry of Health and Family Welfare (MOHFW), New Delhi. The PRC is actively engaged in research relating to contemporary issues of demography and health in India. The centre offers a post graduate (Ph.D.) training programme which emphasises research using demographic tools and techniques grounded in population theory and knowledge.

Programme Summary

<table>
<tr><td>Time
Day & Date</td><td>08.30 - 11.00 AM</td><td>11:00-
11:30 AM</td><td>11:30 AM - 1:00 PM</td><td rowspan="8">L
U
N
C
H</td><td>01:00 -
02:00 PM</td><td>02:00 - 03:30 PM</td><td>03:30 -
03.45 PM</td><td>03:45 - 05:30 PM</td></tr>
<tr><td rowspan="2">Day 1
23rd Feb 2023</td><td>Registration
(08.30 am onwards)</td><td rowspan="2">High Tea</td><td rowspan="2">Plenary Session I -
75 years of India's Demographic Change
(Auditorium)</td><td rowspan="2"></td><td rowspan="2">T1: Elderly and Health
(Seminar Room -1, GF)
T2: Demographic and Health Transition
(Seminar Room -2, GF)
T3: Child Health & Education
(Seminar Room -3, FF)</td><td rowspan="2">Tea
Break</td><td rowspan="2">T4: Internal Migration
(Seminar Room -1, GF)
T5: Mortality Transition (Seminar Room -2, GF)
T6: Fertility and Family Planning
(Seminar Room -3, FF)</td></tr>
<tr><td>Inauguration
(Auditorium)
(09.45 am onwards)</td></tr>
<tr><td colspan="4">Poster Session I (10.00 am to 05.00 pm)</td><td colspan="4">Poster Session I (10.00 am to 05.00 pm)</td></tr>
<tr><td>Time
Day & Date</td><td>09:30 - 11:15 AM</td><td>11:15 -
11:30AM</td><td>11:30 AM - 1:00 PM</td><td>02:00 - 03:30 PM</td><td>03:30-
03.45 PM</td><td>03:45 - 05:30 PM</td></tr>
<tr><td rowspan="2">Day 2
24th Feb 2023</td><td>Plenary Session II -
Nutrition Issues in Karnataka
(Auditorium)</td><td>Tea
Break</td><td>T7: Migration Issues
(Seminar Room -1, GF)
T8: Morbidity and Quality of Life
(Seminar Room -2, GF)
T9: South Asia Migration: SALAM-I
(Seminar Room -3, FF)</td><td>Plenary Session III -
Maternal & Neonatal Health, India study
(Auditorium)</td><td>Tea
Break</td><td>T10: Swabhimaan
(Seminar Room -1, GF)
T11: Nutrition
(Seminar Room -2,GF)
T12: South Asia Migration: SALAM-II
(Seminar Room -3, FF)</td></tr>
<tr><td colspan="3">Poster Session II (10.00 am to 05.00 pm)</td><td colspan="3">Poster Session II (10.00 am to 05.00 pm)</td></tr>
<tr><td>Time
Day & Date</td><td>09:30 - 11:15 AM</td><td>11:15 -
11:30AM</td><td>11:30 AM - 01:15 PM</td><td colspan="4" rowspan="2">Note: GF: Ground Floor, FF: First Floor</td></tr>
<tr><td>Day 3
25th Feb 2023</td><td>T13: Maternal Health
(Seminar Room -1, GF)
T14: Livelihood and Healthcare
(Seminar Room -2, GF)
T15: Elderly Wellbeing
(Seminar Room -3, FF)</td><td>Tea
Break</td><td>Plenary Session IV -
Population Research Centre's vision: Past to Future
Followed by
Valedictory Session & Prize Distribution
(Auditorium)</td></tr>
</table>

INAUGURAL PROGRAMME

Date: 23.02.2023

Time: 09:30 to 11:00 AM

ISEC, Auditorium

Lighting of the lamp	
Welcome: **9:30 - 9:35 AM**	*Prof. D. Rajasekhar* Director and HAG Professor Institute for Social and Economic Change, Bangalore
About the Conference: **9:35 - 9:45 AM**	*Prof. K.S. James* Director and Sr. Professor International Institute for Population Sciences, Mumbai
Chairman's address: **9:45 - 9:50 AM** **(online)**	*Prof. Sukhadeo Thorat* Chairperson, Board of Governors, ISEC
Inaugural address: **9:50 - 10:15 AM**	*Dr. K. Sudhakar* Minister of Health and Family Welfare and Medical Education of Karnataka
Felicitation: **10:15 - 10:55 AM**	*Prof. K. Srinivasan* 2023 IUSSP Laureate awardee Honorary Visiting Professor, ISEC, Bangalore Former Director of IIPS, Mumbai Honorary Visiting Professor, ISEC, Bangalore
	Prof. R.S. Deshpande Honorary Visiting Professor, ISEC, Bangalore *Prof. P.M. Kulkarni* Retired Professor, CSRD, JNU, New Delhi *Prof. T.V. Sekhar* IIPS, Mumbai *Prof. T.S. Syamala* PRC, ISEC, Bangalore *Remarks by Prof. K. Srinivasan*
Vote of Thanks: **10:55 - 11:00 AM**	*Prof. H. Lhungdim* IIPS, Mumbai

Plenary Sessions

Plenary Session I **Day 1 23.02.2023 Time: 11.30 am to 01.00 pm** **75 Years of India's Demographic Change: Processes and Consequences**		
Chair: **Prof. K.S. James**	**Speakers:** Prof. K. Srinivasan Prof. P.M. Kulkarni Prof. F. Ram Dr. Suneeta Krishnan	**Rapporteurs:** Prem Shankar Shamrin Akhtar
Plenary Session II **Day 2 24.02.2023 Time: 09.30 to 11.15 am** **Nutritional issues in Karnataka: Policies and Programmes**		
Chair: **Prof. D. Rajasekhar**	**Speakers:** Prof. Brinda Viswanathan Mr. T.K. Anil Kumar, IAS Ms. Veena Rao, IAS (Retd) Prof. Tara M.S.	**Rapporteurs:** Madhubrota Chatterjee Puja Das
Plenary Session III **Day 2 24.02.2023 Time: 02.00 to 03.30 pm** **Maternal and Neonatal mortality transition framework in India and states**		
Chair: **Dr. Himanshu Bhushan**	**Speakers:** Dr. B.M. Ramesh Dr. Usha Ram Dr. M. Alagarajan Dr. K I Shajy	**Rapporteurs:** Bikram Barman Sruthi Anilkumar
Plenary Session IV **Day 3 25.02.2023 Time: 11.30 am to 01.15 pm** **Population Research Centre's Vision: Past to Future**		
Chair: **Prof. K.S. James**	**Speakers:** Prof. K. Srinivasan Prof. P.M. Kulkarni Prof. U.S. Mishra Dr. William Joe	**Rapporteurs:** Ranjita Ghosh Amrutha G S

Technical Sessions

DAY 1 : 23-Feb-2023

Technical Session 1: Elderly and Health		
Time: 2.00 to 3.30 pm		
Chair: Prof. T.V. Sekher		Rapporteurs: Ronak Paul & Aditi B. Prasad
Discussant: Dr. Lekha Subaiya		
TS.no.	Presenters Name	Title of the Paper
T 1.1	Dr. Ravisankar Athimulam Kulasekaran	Self-Rated Health Status And Its Correlates: A Study Among Elderly People In Tamil Nadu & India
T 1.2	Amrutha G S	Multimorbidity in Elderly: Risk Factors and Disease Combinations
T 1.3	Jyoti Choubey	Prevalence of Everyday Discrimination and its association with Life Satisfaction among older adults in India: An Analysis from Longitudinal Aging Study in India (LASI)
T 1.4	Amit Kumar Goyal	Association of Pain and Depression among middle-aged and older adults of India.
T 1.5	Bandita Boro	The influence of childhood socio-economic conditions and behavioural factors on multimorbidity among older adults in India: A life- course perspective

Technical Session 2: Demographic and Health Transition		
Time: 2.00 to 3.30 pm		
Chair: Prof. K.C. Das		Rapporteurs: Raghunath Mandi & Palak Sharma
Discussant: Dr. T.S. Syamala		
TS.no.	Presenters Name	Title of the Paper
T 2.1	Prof. Murali Dhar	Projection Of District Level Annual Population In India By Age And Sex From 2012 To 2031
T 2.2	Mary Shenk	Which Aspects of Religiosity Affect Fertility & A Tale of Two Bengals
T 2.3	Dr. Manas Ranjan Pradhan	Social group dynamics and early childbearing in India: A three-decade perspective
T 2.4	Dr. Suresh Jungari	Beyond reproductive life: Transition in women reproductive health problems, trends and burden of premature menopause, female sterilization and hysterectomy in India
T 2.5	Tolivi H Sumi	Exploring a Transition in the Healthcare System of Nagaland
T 2.6	Dr. Asharaf Abdul Salam	Demographic Lag in Saudi Arabia Explained

Technical Sessions

DAY 1 : 23-Feb-2023

Technical Session 3: Child Health & Education		
Time: 2.00 to 3.30 pm		
Chair: Prof. H. Lhungdim		Rapporteurs: Nand Lal Mishra & Niharika Awasthi
Discussant: Dr.Sobin George		
TS.no.	Presenters Name	Title of the Paper
T 3.1	Dr. Vachaspati Shukla	Reading progress in Attainment of Higher Education in India: Features and Characteristics
T 3.2	Dr. P.Murugesan	Maternal and Child Health Services in India: A Study of National Family Health Survey
T 3.3	Soilalsiem Gangte	Coverage of Basic Vaccinations of Children aged 12-23 months in North-East India: Trend & Pattern and Influencing Factors
T 3.4	Tejal Ravindra Lakhan	Association Between Social Maturity and Autistic Features in Children With Autism Spectrum Disorder: An Experience From A Tertiary Care Hospital In Mumbai
T 3.5	Kinkar Mandal	Impact of childhood disadvantage in health and social condition on later life health of the older persons in India
T 3.6	Akif Mustafa	Offspring education and its association with parental life satisfaction in India: Evidence from LASI

Technical Session 4 : Internal Migration		
Time: 03.45 to 05.30 pm		
Chair: Prof. Usha Ram		Rapporteurs: Mahadevrao B & Ruchira C
Discussant: Prof. Supriya Roy Chowdhury		
TS.no.	Presenters Name	Title of the Paper
T 4.1	Prof. D.P. Singh	Internal Migration among Religious and Social Groups in India: Evidence from Census and National Sample survey
T 4.2	Prof. K.C. Das	Listening to the voice of children: A study of the children of the season migrant families in Jalna
T 4.3	Dr. Grace Bahalen Mundu	Geographical Patterns of Internal Migration in India: Evidences from Census Data
T 4.4	Bichitra Shit	Impact Of Circulatory Labour Migration On Livelihood Strategies Among Tribal Migrant And Non-Migrant Households In Paschim Medinipur District & West Bengal
T 4.5	Sankar Varma	How do the Seasonal Migrants Migrate to Urban Spaces: Evidence from IHDS Data

Technical Sessions

DAY 1 : 23-Feb-2023

Technical Session 5: Mortality Transition		
Time: 03.45 to 05.30 pm		
Chair: Prof. F. Ram		**Rapporteurs: Abhishek Kumar & Pragati Ubale**
Discussant: Dr. Dilip T.R.		
TS.no.	**Presenters Name**	**Title of the Paper**
T 5.1	Prof. R.S. Goyal	Political Commitment and Health outcomes in India
T 5.2	Dr. Subrata Mukherjee	Quality of life and death of the elderly in India: Evidence from pooled national cross-sectional data (1995-2018)
T 5.3	Dr. Suryakant Yadav	Inequality in Mortality by Causes of Death: The negligible role of NCDs in India
T 5.4	Dr. Sarvesh Kumar	Death Clustering of Under-Five Mortality in Empowered Action Group (EAG) States of INDIA: Evidence from National Family Health Survey
T 5.5	Sourav Dey	Estimation of Infant and Child mortality across districts of India over the past 30 years: A cross-sectional birth history data application

Technical Session 6: Fertility and Family Planning		
Time: 03.45 to 05.30 pm		
Chair: Prof. P.M. Kulkarni		**Rapporteurs: Deepak & Anandi Shukla**
Discussant: Dr. Ravisankar A. Kulasekaran		
TS.no.	**Presenters Name**	**Title of the Paper**
T 6.1	Prof. Dewaram Abhiman Nagdeve	Levels, Trends and Fertility Differentials in Karnataka
T 6.2	Dr. Manoj Alagarajan	Contraceptive use and Decision Making Among Adolescent Women in India
T 6.3	Dr. Bashir Ahmad Bhat	Contraceptive Use and Method Mix among Muslims in India.
T 6.4	Kakoli Das	Responsibility & Social Aspirations & and Contemporary Low Fertility in Rural West Bengal & India
T 6.5	Chandni Bhambhani	Contraceptive Decision-making Process of Childfree Couples: An Exploratory Study
T 6.6	Ram Prasad Dhakal	Utilization of Contraceptive Methods and their Associated Factors in Nepal

Technical Sessions

DAY 2 : 24-Feb-2023

Technical Session 7: Migration Issues		
Time: 11.30 am to 01.00 pm		
Chair: Prof. D.P. Singh		**Rapporteurs: Mahtab Alam & Roni Sikdar**
Discussant: Prof. Brinda Vishwanathan		
TS.no.	**Presenters Name**	**Title of the Paper**
T 7.1	Prof. R.B. Bhagat	Population, Migration and Citizenship in India
T 7.2	Dr. Sunil Sarode	Understanding Return Migrants in MGP with regard to Post Return Scenario: Satisfaction, Awareness and Expectations
T 7.3	Dr. Amit Kumar	Caste, Land, and Migration in Rural Bihar
T 7.4	Dr. Preetha V Mohan	Health and Hygiene practice of Female Interstate Migrant Workers in Kerala
T 7.5	Jesbin S Thomas	Economic Interactions of Migrants and their Households of Origin: Are women more reliable supporters?

Technical Session 8: Morbidity and Quality of Life		
Time: 11.30 am to 01.00 pm		
Chair: Prof. M.R. Narayana		**Rapporteurs: Abhishek Anand & Bharti Singh**
Discussant: Dr. Sukanya Rangamani		
TS.no.	**Presenters Name**	**Title of the Paper**
T 8.1	Dr. Nanigopal Kapasia	Academic satisfaction level and psychological stress among students of higher education during COVID-19 pandemic
T 8.2	Dr. Kalosona Paul	The Declining Nature of Self-reported Morbidity in India (1995-2018)
T 8.3	Mr. Shekhar Chauhan	Gender differentials in cognitive impairments among older adults in India: A multivariate decomposition approach
T 8.4	Shamrin Akhtar	Chronic Disease And Productivity Loss Among Middle-Aged And Elderly In India
T 8.5	Noel George	COVID-19 pandemic and its average recovery time in Indian states
T 8.6	Gayathri B	Cardiovascular Diseases and Ageing in India: A propensity score matching analysis of the effects of various risk factors

Technical Sessions

DAY 2 : 24-Feb-2023

Technical Session 9: South Asia Migration: SALAM -I		
Time: 11.30 am to 01.00 pm		
Chair: Prof. U.S. Mishra		**Rapporteurs: Ajay Murmu & Neha Kumari**
Discussant: Prof. R.B. Bhagat and Dr. Madhuri Sharma		
TS.no.	**Presenters Name**	**Title of the Paper**
T 9.1	Dr. Tasmia Persoob	Return and Reintegration of Migrant Workers in Bangladesh
T 9.2	Mr. Kashif Majeed Salik	Sustainable Labour Migration and Development in Pakistan: Linkages and Trends in Times of COVID-19 and beyond
T 9.3	Dr. Reshmi R S	Data for Labour Migration Governance in India: Gaps, Challenges, and Needs
T 9.4	Dr.Bilesha Weerathne	Understanding Informal Remittances: Experience from Sri Lanka
T 9.5	Dr. Arjun Kharel	Migration cost and debt burden among migrant households in Nepal

Technical Session 10: Findings from Swabhimaan Intervention Study		
Time: 03:45 to 5:30 pm		
Chair: Prof. K.N.M. Raju		**Rapporteurs: Mohit Kumar Pandey & Rashmi**
Discussant: Prof. Usha Manjunath		
TS.no.	**Presenters Name**	**Title of the Paper**
T 10.1	Prof. Sayeed Unisa	Swabhimaan Nutrition Demonstration Programme: Outcome on nutritional status of Women and their utilisation of health services
T 10.2	Dr. Sarang Pedgaonkar	Utilisation of ANC services before and after the COVID-19 pandemic in selected resource-poor blocks of India: Role of community health workers in Swabhimaan programme Area
T 10.3	Dr. Reshmi R S	Pre- and Post-Pandemic Period Seasonal Migration and Food Security Status in three Indian States (Migration Paper)
T 10.4	Dr. Manas Pradhan	Women empowerment through involvement in community-based health and nutrition interventions: Evidence from a qualitative study in India
T 10.5	Mr. Ajay Gupta	Tele- Swabhimaan Nutrition Demonstration Programme in Telangana: Baseline Findings from Quantitative and Qualitative Survey

Technical Sessions

DAY 2 : 24-Feb-2023

Technical Session 11: Nutrition & Health		
Time: 03.45 to 05.30 pm		
Chair: Prof. M.S. Tara		**Rapporteurs: Vinod Kumar & Komal Gajbhiye**
Discussant: Prof. F. Ram		
TS.no.	**Presenters Name**	**Title of the Paper**
T 11.1	Dr. Gyan Chandra Kashyap	Impact of Spirulina Chikki Supplementation on Nutritional Status of Adolescent Girls in Kolar District of Karnataka
T 11.2	Dr. Priyanka Pareek	Cross sectional study to assess dietary iron intake among rural women of reproductive age
T 11.3	Dr. Ram Gopal	Demographic Transition and Nutritional Health in India
T 11.4	Anirudha Mohapatra	Prevalence of Consanguineous Marriage and Child Nutritional Outcomes in India
T 11.5	Ajay Kumar Singh	Exploring the role of Health Insurance on Catastrophic Health Expenditures among the Urban Poor Population in India
T 11.6	Akram Khan	Knowledge about and barriers in the functioning of the RBSK programme in Maharashtra: Perspective from Health Care Providers

Technical Session 12: South Asia Migration: SALAM -II		
Time: 03.45 to 05.30 pm		
Chair: Prof. S. Madheswaran		**Rapporteurs: Ritankar C & Varsha**
Discussant: Prof. R.B. Bhagat and Dr. Madhuri Sharma		
TS.no.	**Presenters Name**	**Title of the Paper**
T 12.1	Dr. Sayeda Rozana Rashid	Return and Reintegration of Migrant Workers: South Asian Policy and Practices
T 12.2	Ms.Khansa Naeem	South Asian women on the move: Labour Trend and Avenues for the Inter-regional Cooperation
T 12.3	Ms.Sadikshya Bhattarai	Labour Migration Cost and Debt Burden in Migrant Households in South Asia
T 12.4	Prof. Archana K.Roy	International Migration and Autonomy of Left behind Women: A Perspective from South Asia

Technical Sessions

DAY 3 : 25-Feb-2023

Technical Session 13: Maternal Health		
Time: 09.30 to 11.15 am		
Chair: Prof. Mala Ramanathan		**Rapporteurs: Arjun Jana & Sunandita Das**
Discussant: Prof. C M Lakshmana		
TS.no.	**Presenters Name**	**Title of the Paper**
T 13.1	Prof. Martin Enock Palamuleni	Levels & Trends and Determinants of Skilled care during delivery in Malawi: Evidences from Demographic and Health Surveys & 1992-2016
T 13.2	Dr. Sarang Pedgaonkar	Demystifying increase in the caesarean section deliveries in India
T 13.3	Puja Das	Transition of Menstrual Health Practices in India in last two decades (2007-08 to 2019-21)
T 13.4	Dr. Akhilesh Kumar Pandey	Bio-demographic aspects of post-partum amenorrhea period: A hospital-based cohort study
T 13.5	Aradhana Kumari	Geographical Pattern of Pre and Post-natal Care among Tribal Women in India: A Study based on National Family Health Survey (2005-06 to 2019-21)
T 13.6	Ranjita Ghosh	Growing Concerns of Hysterectomy among Older Women in India: Evidence from National Family Health Surveys

Technical Session 14: Livelihood and Healthcare		
Time: 09.30 to 11.15 am		
Chair: Prof. U.S. Mishra		**Rapporteurs: Rishabh Kumar & Puja Goswami**
Discussant: Dr. Subrata Mukherjee		
TS.no.	**Presenters Name**	**Title of the Paper**
T 14.1	Dr. Madhuri Sharma	Domestic Work, Livelihoods and COVID-19: An Analysis of 38 Domestic Workers in Titwala
T 14.2	Dr. Praveen K. Chokhandre	Non Communicable Diseases services through Health and Wellness Centers A service users perspective from Districts of Karnataka
T 14.3	Dr. Farhana Khatoon	Employment Status and Socio-Demographic Characteristics of Person with Disabilities in India: An Estimates of Household Survey Data (2018-2019)
T 14.4	Dr. Raghavendra Kumar C	Unpaid Burden Among Women Of Working Age Group Residing In Rural Areas Of Mandya District: A Cross Sectional Analytical Study
T 14.5	Shivani Giri	Middle class in India: Issues and Challenges
T 14.6	Liza Kumari Gouda	Association between digital literacy and utilization of healthcare services among women in India

Technical Sessions

DAY 3 : 25-Feb-2023

Technical Session 15: Elderly wellbeing		
Time: 09.30 to 11.15 am		
Chair: Prof. D.A. Nagdeve		**Rapporteurs: Chandan K Hansda & Diksha Rani**
Discussant: Dr. William Joe		
TS.no.	**Presenters Name**	**Title of the Paper**
T 15.1	Prof. T.V. Sekher	Social security programs for elderly in India: Awareness, utilization and barriers
T 15.2	Dr. Lekha Subaiya	Experiences of age norms and ageism among older persons in urban India
T 15.3	Dr. Dipti Govil	Economic Health of Elderly Households in India: An evidence from LASI
T 15.4	Madhurima Sharma	Socioeconomic inequality in cognitive impairment among elderly and its determinants in India: Evidence from Longitudinal Aging Study in India & 2017-18
T 15.5	A.H. Sruthi Anilkumar	Physical and Psychosocial Health of Sandwich Generation Caregiving Couples in Mumbai City
T 15.6	Madhubrota Chatterjee	Living Arrangements and Care Needs among the Older Population in India

VALEDICTORY SESSION

&

Prize Distribution

Day 3: 25.02.2023

Time: 01.00 to 01:30 PM

ISEC, Auditorium

Poster Session – I

DAY 1 : 23-Feb-2023

Time: 10.00 am to 05.00 pm

Evaluation Time: 2.00 - 5.00 pm

Sr. No.	Abstract ID	Name	Title
P 1.1	8318	Roni Sikdar	The Contribution Of The Backward Group On The Fertility Lowering NFHS-1 to NFHS-5
P 1.2	8011	Aslama M J	A Study On Fertility Transition In India And Major States From 1971 To 2020: Using Reproduction Rates.
P 1.3	8160	Prateek Singh	Measuring change over half a decade in the prevalence of risk factors associated with child stunting in India: evidence from the three rounds of the National Family Health Survey
P 1.4	8051	Itishree Naik	An assessment of reasons of high child under-nutrition in India
P 1.5	8136	Mahtab Alam	Trends in Absolute and Relative Health Inequalities in India & 1980-2022: Do Inequalities Are Swimming Against the Progress in Average Health Status?
P 1.6	8139	Abhishek Anand	Understanding changes in trends and inequalities in hospitalisation in India - Evidence from the national sample survey
P 1.7	8168	Ananya Kundu	Epidemiological surveillance of self-reported heart disease among men in India
P 1.8	8068	Mahashweta Chakrabarty	Role of intimate partner violence in increasing sexually transmitted infection-related risk among women in India: A propensity score matching analysis
P 1.9	8223	Atma Prakash	International Migration in Bihar: Emerging Trends and Challenges
P 1.10	8271	Ajay Murmu	Urbanization of Scheduled Tribes in India
P 1.11	8114	Renuka Sanbal	Analysis Of Rural Urban Migration In India and Impact of COVID -19
P 1.12	7947	Papai Barman	Reason behind grandchild caring and it's effect on grandparent's mental health at later life in different household settings in India: using a mixed method approach
P 1.13	8359	Sandip Das	Association of Functional Ability (ADL/IADL) and Depression among the older adults in India: a state-level analysis of LASI & 2018
P 1.14	8156	Mohit Kumar Pandey	Health and disability status among middle-aged and older adult cancer survivors: a case-control study
P 1.15	8027	Bharti Singh	Effect of Women Empowerment on their Nutritional Status: Evidence from NFHS 4 and NFHS 5

Poster Session – I

DAY 1 : 23-Feb-2023

Time: 10.00 am to 05.00 pm

Evaluation Time: 2.00 - 5.00 pm

Sr. No.	Abstract ID	Name	Title
P 1.16	8258	Neha Kumari	Linkages between Single motherhood and Child Health in India - Evidence from NFHS-5
P 1.17	8297	Vinod Kumar	Economic growth or Environment protection: Which is important? A study based on World Values Survey Wave-7
P 1.18	8256	Rashmi	Early childhood circumstances and educational wellbeing inequality among tribal and non-tribal children in India: evidence from a panel study
P 1.19	7899	Ritankar Chakraborty	Integrated Child Development Service (ICDS) Coverage Among Severe Acute Malnourished (Sam) Children In India: A Multilevel Analysis Based Of National Family Health Survey 5
P 1.20	8133	Arjun Jana	Female Sterilisation in India Examining the Role of Women Own Decision Making and Information Given to Client
P 1.21	8232	Vikas Ashok Kamble	Classification And Prediction Of Low Birth Weight In India By Using Machine Learning: Evidence NFHS 5
P 1.22	8227	Gursimran Singh Rana	Burden Of Unpaid Childcare Work On Women In India: An Exploration Of Indian Time Use Survey & 2019.
P 1.23	8185	Rishabh Kumar	Factors Affecting Undernutrition among Under-Five Children in the Most Populous State of India: A Situation Analysis
P 1.24	8097	Neethumol S.S.	Prevalence And Determinants Of Hysterectomy Among Women In Reproductive Age Group In Kerala
P 1.25	8188	Chandan Kumar Hansda	Participation of men in maternal and child healthcare utilization among the tribal community in India
P 1.26	8173	Deepak Kumar	Nutrient Intake and ANC Services Affecting Prevalence of Anaemia among Pregnant Women in EAG States
P 1.27	8169	Bikash Barman	Exploring the Causes of Low Level of Male Involvement in the Utilization of Maternal Health Care (MHC) Services among the Muslims of Maldah district & West Bengal & India
P 1.28	8225	Dr Swathi	Prevalence and Risk Factors Associated with the Domestic Violence among Pregnant Women in Karnataka: A Case Study

Poster Session – II

DAY 2 : 24-Feb-2023

Time: 10.00 am to 05.00 pm

Evaluation Time: 2.00 - 5.00 pm

Sr. No.	Abstract ID	Name	Title
P 2.1	8166	Aditi B. Prasad	Socio-demographic determinants of primary and secondary infertility in India
P 2.2	8171	Palak Sharma	Incidence and Prevalence of Diabetes in Mumbai: Results from a ten-year retrospective cohort study
P 2.3	8262	Prakash K	Modelling Perinatal Mortality in India A Geospatial Approach
P 2.4	8144	Nowaj Sharif	Prevalence of Anemia among reproductive women in different Social Group in India: Cross-sectional study using nationally representative data
P 2.5	8179	Javed Alam	The effects of low fertility and low mortality on India's Economy A National Transfer Accounts Approach
P 2.6	8246	Ronak Paul	Temporal patterns in Infant Death Clustering Among Families: Findings from National Family Health Survey 1992-2021
P 2.7	8170	Subhankar Singha	Impact of Women Autonomy and Hygiene on Under-Five Child Health in India
P 2.8	8086	Varsha	Level and Pattern of Urbanisation in Rajasthan: A Regional and District level Analysis
P 2.9	8152	Niharika Awasthi	Spousal Age Gap and Autonomy of Mobility Among Wives Left Behind: Kerala Migration Survey & 2018
P 2.10	8030	Raghunath Mandi	Lifestyle Predictors of Healthy Ageing Among the Elderly in India
P 2.11	8131	Ruchira Chakraborty	Gender differentials in receiving informal financial support among elderly in Indian households
P 2.12	8228	Komal Sureshrao Gajbhiye	Does the hysterectomy have an association with chronic diseases? An Evidence from the LASI Wave-1 data.
P 2.13	8210	Manish Kumar	The role of social engagement in the relationship between mental disorders and cognitive functioning: Evidence from LASI survey
P 2.14	8028	Anjana Vasthava	Disability Structure and Gender Differentials in Empowered Action Group (EAG) States and India-A 2011 CENSUS Analysis

Poster Session – II

DAY 2 : 24-Feb-2023

Time: 10.00 am to 05.00 pm

Evaluation Time: 2.00 - 5.00 pm

Sr. No.	Abstract ID	Name	Title
P 2.15	8356	Pragati Ubale	Evidences of Paradigm Shift in Marriage and Mate Preferences in Mumbai City.
P 2.16	8176	Nand Lal Mishra	Prohibition of the child-marriage act for girls below age 21 in India: Perspectives emerging from NFHS-5 (2019-21)
P 2.17	8229	Anandi Shukla	Disability & Education & Work Status And Work-Friendly Environment In India
P 2.18	7885	Ashish Vijaykumar Pardhi	Understanding Men's Masculine Attitude towards Women's Roles and Activities in Rural Pune & India: A Cross-sectional Study
P 2.19	8143	Mahadevrao Bramhankar	An assessment of chronic diseases and first-degree family medical history as a predictor for NCDs risk among older adults in India
P 2.20	8174	Abhishek Kumar	The Association Between Unintended Births and Adolescents Development in India: Evidence from A Longitudinal Study
P 2.21	8292	Riya Chaudhary	Implementation challenges in digitizing frontline health worker payments: A comparative case study of ASHA Soft in Rajasthan and ASHWIN portal in Bihar
P 2.22	8193	Sunandita Das	Reflection of Crimes against Scheduled Castes and Scheduled Tribes women in Rajasthan: Evidence from National Crime Record Bureau (2021)
P 2.23	8045	Pallabi Gogoi	Exploring wealth related inequalities in maternal and child health coverage in India with special reference to Assam
P 2.24	7996	Chandan Roy	Assessment of drinking water quality in Palghat village of South 24 Parganas District & West Bengal: a Case Study
P 2.25	8194	Deepak	Disparities in Maternal Healthcare Utilization among women in Bihar: Does Caste matters?
P 2.26	8362	Puja Goswami	Impact of diabetes on healthcare utilization and expenditure among older adults in India
P 2.27	8238	Diksha Rani	Age wise Growth Pattern of Indian Children and their Correlates Evidence from NFHS-5

Content of Abstracts

Technical Session 1: Elderly and Health

T 1.1 Self-Rated Health Status And Its Correlates: A Study Among Elderly People In Tamil Nadu, India

Ravisankar Athimulam Kulasekaran, Ramesh
Annamalai University
Email: akravishankar.pop@gmail.com

In India, elderly peoples are at a greater health risks mainly because of their peculiar socio-economic and cultural characteristics. Self-Rated Health (SRH) is increasing interest as a health indicator in both health policy and research. The SRH is a subjective indicator of health status that assimilates social, biological, psychological, and functional aspects of a person, including individual and cultural beliefs and health behaviours. This article aims to examine the prevalence and determinants of SRH among the elderly people in Tamil Nadu using data from the LASI (wave 1-2017-18). The prevalence of multimorbidity (any one chronic disease) was around two-third of the elderly in Tamilnadu state (65.2percent). About one-fourth of the elderly had difficulties with at least one ADL and about half of the elderly in Tamilnadu rated their health as poor. These findings help to improve the understanding of the impact of socio-economic and demographic characteristics, ADL, and multimorbidity on SRH.

T 1.2 Multimorbidity in Elderly: Risk Factors and Disease Combinations

Amrutha G.S.
International Institute for Population Sciences
Email: mail.amruthags@gmail.com

The global chronic disease scenario is shifting from single morbidity conditions to co-morbid or multimorbid conditions resulting in increased disability and mortality among the elderly. Social, economic, demographic, environmental and genetic factors are reported to significantly affect multimorbidity progression. However, the co-occurrence of highly prevalent chronic diseases such as hypertension and diabetes remains conspicuously underexplored in Indian context. In this study, the prevalence, risk factors and disease combinations of multimorbidity among the Indian elderly were investigated using Longitudinal Ageing Study in India (LASI) dataset. Using binary logistic regression, the risk factors of the condition were explored. The results suggested that 22% of the elderly suffer from multimorbidity. The dyad of hypertension and diabetes and the triad of hypertension, diabetes and bone diseases are the frequently observed combinations. Furthermore, the analysis indicated hypertension as the most accompanying disease. Interestingly, the elderly belonging to the urban residence [OR=1.51, CI= (1.32, 1.72) at 95%] and those belonging to the richest wealth quintile [OR=2.13, CI= (1.76, 2.57) at 95%]) were reported at a higher risk of being multimorbid. Ten or more years of schooling [OR=1.53, CI= (1.25, 1.87) at 95%], currently working [OR=0.49, CI= (0.43, 0.56) at 95%] and currently married [OR=0.87, CI= (0.76, 0.99) at 95%] depicted good prediction of comorbidity where no schooling, currently unemployed and currently unmarried were found to be at higher risk of multimorbidity. Religion and caste also depicted an association with the condition. Overweight [OR=1.60, CI= (1.41, 1.83) at 95%] and obese [OR=2.97, CI= (2.40, 3.67) at 95%] remained at a higher risk of being multimorbid. This work strongly suggests providing individual health care based on the prevalent combinations of diseases.

T 1.3 Prevalence of Everyday Discrimination and its association with Life Satisfaction among older adults in India: An Analysis from Longitudinal Aging Study in India (LASI)

Jyoti Choubey
Email: jyotichoubey54@gmail.com

Population aging has become a significant global phenomenon due to increased life expectancy with the decline in fertility and improvement in mortality conditions in recent decades. United Nations Ageing report (2017) states that the total older population (60 years and above) was 962 million in 2017 globally. Age is one of the most important reasons for discrimination other than gender, social categories, physical disabilities, financial status, and others (LASI, 2019). This paper aims to examine the association between Everyday Discrimination and Life Satisfaction among older adults in India using the Longitudinal Ageing Survey of India (LASI). Moreover, various prevalent reasons for Everyday Discrimination among elderly in India will be explored. Data for the present study were drawn from the first wave of Longitudinal Study of Ageing in India (LASI wave-1) conducted during 2017-18. It shows that those who have never faced Everyday Discrimination have a high level of Satisfaction i.e., 48.5%, while those who have faced everyday discrimination 1-2 times, and more than 3 times, have a medium level and low level of life satisfaction. Further, several reasons for discrimination were identified in this study, which revealed age and financial status as prominent reasons. However, the study cannot be generalized as it focuses on a specific age group among older adults, and it is mainly based on the LASI data of India. - Keywords: Everyday discrimination, Life Satisfaction, Elderly.

T 1.4 Association of Pain and Depression among middle-aged and older adults of India.

Amit Kumar Goyal, Sanjay K. Mohanty
International Institute for Population Sciences
Email: amitsks123@gmail.com

India is ageing and it is estimated that the population aged 45 and above will account for over 40% of the population by 2050. Ageing is associated with a high burden of chronic diseases. About a quarter (23%) of the elderly aged 60 and above have been diagnosed with multi-morbidity disorders. Approximately one-third of the population aged 45+ are also suffering from pain and depressive symptoms. Epidemiological studies have shown that pain and depression are closely related. We didn't find any nationally representative study establishing this relationship of pain and depression. Therefore, this study aims to examine the association between pain and depression among middle-aged and older adults in India. This study uses the individual level data from the Longitudinal Ageing Survey of India (LASI), Wave 1, 2017-18. This study is restricted to 59, 416 individuals who have responded to all the variables of interest. Methods: We used the Center for Epidemiologic Studies Depression (CES-D) Scale short form to measure depression with a threshold of ≥4 symptoms. Descriptive statistics were reported by proportions or mean. Independent chi-square tests were used to compare the categorical variables between those with and without pain and depression. The logistic regression model was used with depression as the outcome variable and pain and socio-demographic covariates as predictor variables. Our study highlights the high prevalence of depression as it typically affects 25% of the middle aged and older adults without pain, but among patients with pain, 32% experience depression. Depression are more common among the adults suffering from headache followed by ankle/feet pain. The predicted probability of depression among those with pain was 0.31compared to 0.25 among those without pain Considering the older adults with pain, there is a huge variation in the prevalence of depression among states of India ranging from 56.5% to 8.8%.

T 1.5 The influence of childhood socio-economic conditions and behavioural factors on multimorbidity among older adults in India: A life- course perspective

Bandita Boro, Nandita Saikia
Email: borobandita908@gmail.com

Childhood socioeconomic conditions (SES) affect health at a later stage of life in many ways. The chance of remaining healthy at older ages is also affected by pre-natal conditions and other birth defects. Also, behavioral factors starting at an early age has detrimental effects on health at older ages. This study aims to understand the influence of childhood SES, behavioral risk factors and family history on Non-Communicable Diseases(NCD) multi-morbidity in the older population of India. Data from the Longitudinal Aging Study in India (LASI) which was conducted in the year 2017-2018 has been utilized. Three multinomial logistic regression models were applied to fulfill the objectives. Results shows that better childhood socioeconomic conditions and family history were significantly more likely to have multi-morbidity at older ages and were independent of current SES conditions. The study has also found that childhood socio-economic status can have long-term effects on health across the life course even after controlling for lifestyle factors across life such as smoking and alcohol consumption, current socio-economic status and family history. Additionally, older adults who experienced childhood illnesses were also more likely to develop multimorbidity. This study illustrates the need to stimulate policies and clinical innovations to address the determinants of multi-morbidity.

Technical Session 2: Demographic and Health Transition

T 2.1 Projection Of District Level Annual Population In India By Age And Sex From 2012 To 2031

Murali Dhar, Sanjay Kumar Pal, Kamalesh Kumar Patel And Salmaan Ansari
International Institute for Population Sciences
Email: m.dhar@iipsindia.ac.in

The development planning process in India emphasizes the devolution of power to local-self-governments. This approach considers bottom-up planning as most optimum approach. For the execution of this process, data on population for small areas are necessary. Thus the need of population figures at district level in micro level planning by policy planners is beyond any contention and the same is well documented. Another requirement of district level population is in the field of cancer registration for deriving cancer incidence rates. Aim of the study was to assess the district level population in India from 2012 to 2031 by age and sex. Objectives were to (a) evaluate the suitability of different population projection methods and select the most suitable one, and (b) project the district level population in India by age and sex from 2012 to 2031. District-wise population by age and sex for 1991, 2001 and 2011 were obtained from respective censuses. Population of all the States/UTs for the projection period was obtained from the latest projections of population by Registrar General of India. Population for 2011 was projected applying different methods on 1991 and 2001 Census population and the same was compared with the population according to 2011 Census to select the most suitable one. Average absolute relative difference (AARD) was calculated to compare the projected and Census population. Ratio method was associated with lowest AARD, so the same was selected for the district-wise projection throughout the projection period. Detailed projected population by quinquennial age group (single year till 14) and sex for all the districts in India has been presented in the project report available on the IIPS website. This study contributes in bottom-up planning approach and cancer registration by providing district level population, denominator for deriving various rates. In view of changes pertaining to districts, it may be recommended to make the assessment and projection of district level population a regular activity. More research on methodological development may also be recommended.

T 2.2 Which Aspects of Religiosity Affect Fertility, A Tale of Two Bengals

Mary Shenk
Pennsylvania State University
Email: mks74@psu.edu

The relationship between religion and fertility is well-studied, with the general finding that religious affiliation and/or practice is associated with higher fertility. The relationship between religiosity and fertility, however, is understudied thus there is significant debate regarding why religion shows this pattern.We use detailed new data on women from HDSS sites in Birbhum (West Bengal, India) and Matlab (Chandpur District, Bangladesh) to examine the relationship between fertility and multiple dimensions of religiosity. A random sample of women stratified by religion was recruited in each HDSS site. We analyze data on 1,023 women with completed fertility from Birbhum (508 Hindus, 515 Muslims) alongside 902 women (447 Muslims, 455 Hindus) with completed fertility from Matlab. We use logistic regression to predict a bivariate measure of lower (1 or 2) vs. higher (3+) fertility controlling for women's age, religion, education, mobile phone use, and husband's occupation. We evaluate 24 measures of religiosity independently then as part of 7 theoretically-based dimensions of religiosity. We find that (1) public practice of religion is associated with higher fertility in both Bangladesh and West Bengal, (2) measures of self-reported religiosity and religious identity are associated with higher fertility in West Bengal, and (3) relationships with people in one's own and other religions is associated with higher fertility in West Bengal. The association of public practice with higher fertility across religions and regions is consistent with theories that public practice strengthens cooperation and altruism among group members. The associations of self-rated religiosity, religious identity, and social relationships with fertility in West Bengal are consistent with theories of secularism and theories emphasizing the effects of marginalization on religious minorities.

T 2.3 Social group dynamics and early childbearing in India: A three-decade perspective

Manas Ranjan Pradhan
International Institute for Population Sciences
Email: manasiips@gmail.com

In India, caste/social groups affect health and are often explained through factors such as genetics, early environment, and opportunities due to social mobility. Lower caste/tribes have inadequate access to healthcare, poor maternal health, greater risk of neonatal and infant mortality, and higher fertility. However, empirical evidence of the role of caste in influencing early childbearing is limited. The study analyzes the association between caste and early childbearing in India. Descriptive, bivariate and multivariate analyses were performed on women aged 15-49 years from all five rounds of the National Family Health Survey- NFHS-1 (n=89, 777), NFHS-2 (n=90, 303), NFHS-3 (n=124, 385), NFHS-4 (n=699, 686) and NFHS-5 (n=724, 115). STATA was used for the analyses, with a 5% significance level. The study found inter-caste disparity in early childbearing, and the backward castes continue to have a higher prevalence. There has been a steady decline in early childbearing across the castes over the last three decades-56% for scheduled castes, 57% for scheduled tribes, and 59% for the forward castes. Despite a sizable reduction over the last three decades, scheduled caste women continue to have a higher risk of early childbearing than their counterparts from the forward caste. The study concludes that the caste of women is a significant predictor of early childbearing in India.

T 2.4 Beyond reproductive life: Transition in women reproductive health problems, trends and burden of premature menopause, female sterilization and hysterectomy in India

Suresh Jungari
International Institute for Population Sciences
Email: sbjungari@iipsindia.ac.in

India achieved some crucial milestones in reducing maternal, infant, and child mortality. The life expectancy of women has increased considerably and overtaken men recently, In India, fertility declined in the last decade, particularly in southern states has seen a sharp decline. However, this achievement are accompanied by several other problems for women after completing their reproductive period or family size. Issues such as premature menopause, female sterilization and hysterectomy are emerging in recent times. Therefore, the current study aims to explore the changes in women health problems of beyond reproductive health issues. The study used data from the National Family Health Survey rounds 4 and 5 to fulfil the study objectives. Three indicators of premature menopause, female sterilization and hysterectomy considered as outcome variables. Results also indicate that rampant female sterilization, and increased rates of premature menopause and hysterectomy in India. Policies and programmes must include women who completed their family size and reproduction their issues also given due importance.

T 2.5 Exploring a Transition in the Healthcare System of Nagaland

Tolivi H Sumi
Nagaland University
Email: tolivihsumi@gmail.com

The emergence of new diseases every day and the pandemic has made us prepare the healthcare system for any emergencies. Thus, in this direction, the paper explores Nagaland healthcare system and analyses the changes in healthcare facilities over the years. It also evaluates the health outcomes and the trends in the public health expenditure of the state over the years. The variables for healthcare facilities are healthcare infrastructure such as beds, hospital buildings and health personnel such as doctors, nurses, pharmacists, and lab. technicians. The variables for health outcomes are life expectancy, maternal mortality, infant mortality, institutional delivery, death rate and birth rate. It uses secondary data from different government sources such as the Statistical Handbook of Nagaland, NFHS report, RBI data on the Indian economy and other government publications. The data on different variables studied are taken from the inception of the state until the year 2020-2021. The study applied the simple ratio method, Population to bed density estimation, Compound Annual Growth Rate (CAGR), and the per capita method. The result is shown with the help of a simple bar diagram and other multiple-bar diagrams. It is also explained using a simple tabular method to show the results. The study found that at the time of statehood in 1963, the state inherited a rudimentary infrastructure with 27 hospitals and 33 Primary Health Centres with a 689 hospital beds including a handful of doctors and nurses. However, as of 2020-2021, the state has seen an increase in healthcare facilities. The state also sees an improvement in maternal and infant mortality while institutional delivery remained low. Thus, the paper explores the transition of the state's healthcare system over the years, to see the robustness of the healthcare system to any pandemic or disease.

T 2.6 Demographic Lag in Saudi Arabia Explained

Asharaf Abdul Salam
King Saud University Center for Population Studies
Email: asalam@ksu.edu.sa

Demography of Saudi Arabia has been discussed many times, but its conflict with the theories of transition, and associated structural changes are unexplained. This research attempts to explain the demographic differentials - real and theoretical – separately for native and total population. Adopting a secondary data method, utilizing General Authority of Statistics census data, survey data, and recent estimate and other online data, this research developed demographic indicators to explain trends and patterns. The demographic transition of Saudi Arabia is in line with the theoretical contentions explaining pre-transition and transition (early, mid and late) stages with definite time intervals. Not only the absolute size of population but also the annual growth rate and percentage change in population are explanatory, while looking at natives separately. Moreover, structural changes in population are very revealing across the transition stage from an expansive to near expansive to constricting and stabilizing. Furthermore, broad age groups indicate rapid decline in percent of children, a rapid increase in young adults, slow increase in older adults, and no change in older persons. Even the sex ratios of natives are at par with other populations in transition. Thus, it could be concluded for a demographic transition with structural changes as per theories; flawless growth rates and demographic dividend bringing issues of integration of migrants into society endorsing family life, social and demographic balance thereby improving labour sector and productivity.

Technical Session 3: Child Health, Education

T 3.1 Reading progress in Attainment of Higher Education in India: Features and Characteristics

Vachaspati Shukla
Sardar Patel Institute of Economic and Social Research
Email: vachaspatishukla@gmail.com

Group disparities in socio-economic outcomes are often associated with the evaluation of progress in such outcomes. Progress is said to be ideal when accompanied by reduced disparities and vice versa. This study is an effort towards unfolding this aspect while evaluating the progress in higher education attainment in India. It argues that mapping of higher education attainment across age cohorts would offer a robust understanding of educational progress, as it would inform on the change in the likelihood of being educated for every younger age cohort in comparison to older ones. This is an attempt at evaluating differential progress in higher education attainment across population sub-groups based on age cohorts. The population subgroups considered here are not based on a single characteristic, but rather a combination of them as every individual has multiple characteristics. It reveals that group disparities tend to be lower among the younger age groups. Nature of Social and gender disparities appear to be different in rural and urban sector. Gender disparity disappears in the youngest age cohort for urban sector while it is significant in rural sector. Moreover, rural-urban disparity is quite large.

T 3.2 Maternal and Child Health Services in India: A Study of National Family Health Survey

P.Murugesan, Thangavelu Pugalenthi, Pazhanivel Murugesan, Ramesh
Email: pmuruiips@gmail.com

In order to improve maternal health at the community level a cadre of community level skilled birth attendant who will attend to the pregnant women in the community is being considered. The need for bringing down maternal mortality rate significantly and improving maternal health in general has been strongly stressed in the National Population Policy 2000. This policy recommends a holistic strategy for bringing about total inter sectoral coordination at the grass root level and involving the NGOs, Civil Societies, Panchayati Raj Institutions and Women's Group in bringing down Maternal Mortality Ratio and Infant Mortality Rate. The Maternal Mortality Ratio in India is 103 per 100,000 live births in order to provide the RCH services to people living in remote areas where the existing services are underutilized, a scheme for holding camps have been initiated during the year 2001. The scheme is implemented in the 10 weak states and also in the Eastern States. Report received from the States suggested that the scheme is well appreciated in the Rural Community and large number of people is attending these camps. On the request of the State Governments, the scheme has been extended to 76 additional districts during 2001-02 for which an amount of Rs.1887.40 lakhs to the States have been released. 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).

T 3.3 Coverage of Basic Vaccinations of Children aged 12-23 months in North-East India: Trend, Pattern and Influencing Factors

Soilalsiem Gangte, Avijit Mistri
Manipur University
Email: soilalsiem01@gmail.com

Around three-quarters of children aged 12-23 months in India received all basic vaccinations in NFHS-5, 2019-21. Basic vaccination includes one dose of BCG, three doses of DPT, three doses of Polio and one dose of Measles. The NE region, which includes eight sister states, covered 68.4 per cent of all basic vaccinations of children in 2019-21, whereas 81.70, 81.68, 81.58, 81.0 and 75.66 per cent for western, northern, southern, eastern and central Indian states, respectively. North-East region has remained poor coverage of full vaccination of children since the first round of NFHS (1992-93), and there is a wide variation among the sister states. The present study investigates the level, trends, pattern and influencing factors for low coverage of basic vaccinations of children (12-23 years) in NE India based on published reports and unit-level data of NFHS- 1 to 5. The study suggests that the NE region improved the coverage of all basic vaccinations from 22.8 per cent in 1992-93 to 40.8 per cent in 2005-06 to 54.5 per cent in 2015-16, and finally, to 68.4 per cent in 2019-21. However, it is still far below the national level, 77 per cent. Sikkim is the only state in NE that has performed well since the beginning, and Nagaland and Arunachal Pradesh have witnessed poor performers since the first round of NFHS. Ordinary Logistic Regression model (OLR) model reveals that the background characteristics such as birth order, mother's schooling, age and media exposure, type of residence and religion play a significant role for basic vaccination coverage. Decreasing birth order, higher level of mother's schooling, increase of mother's age, and exposure to media improve the coverage of full vaccination among the children in North-East India. Finally, state-specific policy and health infrastructure play a crucial role in child vaccination coverage in NE.

T 3.4 Association Between Social Maturity and Autistic Features in Children With Autism Spectrum Disorder: An Experience From A Tertiary Care Hospital In Mumbai

Tejal Ravindra Lakhan, Sayeed Unisa
International Institute for Population Sciences
Email: tejallakhan@gmail.com

Autism spectrum disorder (ASD) is characterised by impairments in social interaction, communication, restricted interest, and repetitive abnormal movements in children. The study's main purpose was to investigate the association between social maturity on Vineland Social Maturity Scale (VSMS) and various modalities of Indian Scale for Assessment of Autism(ISAA). The study also sought to ascertain the relationship between social maturity, different domains of ISAA, and age, gender, and severity of ASD in children with Autism Spectrum Disorder. The study focuses on the analysis of primary data on children with ASD from a tertiary care paediatric hospital in Mumbai. There is a significant difference in the mean VSMS scores across ASD children of various age groups as well as between mild and moderate ASD. Children over the age of six had higher mean scores than children under the age of six in the categories of emotional responsiveness, speech-language and communication which shows the lost of opportunity window during early years of life when the intervention is much needed. This is much common in the resource poor country like India where there is crunch of resources for early diagnosis and intervention. The Pearson correlation co-efficient (r) was calculated, and it was discovered that social maturity has a negative correlation with emotional responsiveness ($r = -0.354$, $p<0.01$) and speech-language and communication domains ($r = -0.226$, $p<0.10$) of ISAA scores in children with autism spectrum disorders. There was a significant association between gender, grade of ASD and number of symptoms presented in an autistic child. There is a growing need for intervention-oriented strategies to support behaviour management and social skill development in children with autism spectrum disorders at early ages of life. Children with ASD deteriorate in emotional response, spoken language, communication in the absence of intervention, demonstrating that ASD is a progressive condition.

T 3.5 Impact of childhood disadvantage in health and social condition on later life health of the older persons in India

Kinkar Mandal, Lekha Subaiya
Email: kinkar.mandal.1991@gmail.com

Life course perspective were essential in understanding the childhood disadvantage of health and social condition were determining the later life-health of the elderly. This study uses data from Longitudinal Ageing Study in India (LASI 2017-18) a nationally representative survey of the elderly age 60 years and above, to examined the association between childhood socio-economic conditions and later-life health. Association between cumulative disadvantages of health and social conditions were investigates by multinomial logistic regression. Our result highlighted that low levels of education, childhood health condition and poor family financial condition were growing up poor health in later-life. The current health conditions are in turn shaped by the individual, psychological and social aspects, as well as by the health conditions from childhood to adulthood and old age. In addition, historical events and institutional factors too influence the development of the individual thereby affecting health.

T 3.6 Offspring education and its association with parental life satisfaction in India: Evidence from LASI

Akif Mustafa, Chander Shekhar
International Institute for Population Sciences
Email: akifmustafa13@gmail.com

Life satisfaction is a vital element of successful ageing and an important construct in the psycho-social study of ageing. In previous research, resources of social network members have been found to be associated with one's life satisfaction. In this study, we investigated whether having educated children relate to parental life satisfaction or not. The study also examines gender differences in the association between offspring education and parental life satisfaction. Data from the Longitudinal Ageing Study in India (LASI, 2017-18) wave-1 were derived for this study. A total of 28, 649 older parents aged 60 years or more were included in the analyses. Multivariable Ordinary Least Square (OLS) regression models with interaction analyses were used to meet the objectives. Education of the highest educated child was found to be significantly associated with parental life satisfaction. A one-year increase in years of education of the highest educated child was associated with 0.12 ($\hat{I}^2$ = 0.12, SE = 0.01) unit increase in life satisfaction score among the older parents. According to the interaction estimates, increase in parental life satisfaction for every unit increase in child education was 0.05 ($\hat{I}^2$ = 0.05, SE = 0.02) units higher among mothers than fathers. The association between child education and parental life satisfaction was independent of child's sex. The findings of the study imply that children's education is a significant predictor of parental life satisfaction, and it could play a crucial role in shaping the health and well-being of older adults in India.

Technical Session 4: Internal Migration

T 4.1 Internal Migration among Religious and Social Groups in India: Evidence from Census and National Sample survey

D.P. Singh,
Tata Institute of Social Sciences
Email: dpsingh1212@gmail.com

Paper examines the migration level and pattern among religious and social groups - Schedule Caste, Schedule Tribes and Others Social groups in India. Census migration data from 2001 and 2011 and National Sample Survey of 1983 to 2020-21 are used. The migration rate was observed higher among Other social group than SC's and ST's. For the first time in 2001 and 2011 census, some information on migration of SC's and ST's are provided which indicates that around one forth per cent had reported to move within the state. Out of which about two third of SC's and one-fifth of ST's moved from rural to rural areas. The urban ward movement from rural as well as urban areas was much less among SC's and ST's. The proportion SC's and ST's movement in short distance migration was more pronounced than others groups. - The NSS data from 1983 to 2020-21 are analyzed in detail and show changing pattern of migration within social groups and religious groups in terms of distance moved. Recent migration data of 2020-21 indicates impact of COVID-19 on changing pattern of migration in the country.

4.2 Listening to the voice of children: A study of the children of the season migrant families in Jalna

K.C. Das, Archana K Roy and Kokila Shetty
International Institute for Population Sciences
Email: kailash.das@iipsindia.ac.in

Seasonal migration has been a common livelihood approach as well as a survival strategy for several households in the semi-arid regions of the state of Maharashtra. Every year, at the end of the rainy season (September), several households migrate to work in sugarcane harvesting agricultural fields in the neighbouring state of Karnataka and other districts within Maharashtra. In seasonal migration, children are the worst affected, irrespective of whether they accompany their parents or are left behind in the villages with the care givers. Both the groups face multiple challenges and increased vulnerabilities. Several households, mostly those with less or marginal land- holdings, migrate seasonally to work in sugarcane harvesting, brick kilns, stone quarries, cotton ginning mills and construction work. Families migrate for seasonal work post-monsoon (October- November) and return to their place of origin on completion of work at destination worksites (March-May). While all members of seasonal migrant families face challenges in accessing essential entitlements and amenities, children are generally at a greater risk of losing out on education, nutrition, healthcare, and protection. Their likelihood of joining the labour force or getting married early is also high. Against this backdrop, the current paper attempts to understand the effect of seasonal migration on the safety and protection of children of seasonal migrant families. The study adopted a qualitative approach. Data was collected from 24 villages which had experienced high volumes of outmigration, covering all the eight blocks of Jalna district of Maharashtra. The Participatory Rural Appraisal (PRA) tool was used to collect necessary information from children who are above the age of 12 but below the age of 18. Most of the vulnerabilities of migrant children stemmed from poor living conditions (makeshift temporary dwellings), lack of potable water, absence of sanitation facilities and electricity. Thus, seasonal migration has a long-term disruptive effect on the overall development of all children from seasonal migrant families, thereby increasing their chances of becoming victims of abuse, violence, and neglect.

T 4.3 Geographical Patterns of Internal Migration in India: Evidences from Census Data

Grace Bahalen Mundu, Gita Naik
Fakir Mohan University
Email: grace.mundu@gmail.com

In India 453.6 million people were internal migrants (2011), i.e. 37 percent of the total population. Bulk of the internal migrant are females (70 percent), however reasons for migration alters by sex and among the males work and employment (25.8 percent) whereas for females marriage was the prime reason for migration (69.7 percent). This paper tries to examines the reasons for internal migration in India by sex, further it examines geographical pattern of migrant women who moved for education and employment related reasons.

Present study is based on secondary data sources, such as Census of India (2011), Reserve Bank of India (2011-12), SRS and NSSO 68th Round. Univariate and bivariate analyses have been performed to achieve the objectives of the study. In India women primarily migrate for marriage and family reasons, whereas women moved for employment or business (2.4%) and education (0.7%) was very low in India (2011). Results suggest that proportion of North-eastern women moved for education and employment is higher as compared to other regions. Results reveal that proportion of ST/SC population, mean age at marriage, headship status and literacy have positive relationship with female migrant moved for education and employment. However, net domestic product and unemployment rate has inversely related.

T 4.4 Impact Of Circulatory Labour Migration On Livelihood Strategies Among Tribal Migrant And Non-Migrant Households In Paschim Medinipur District, West Bengal

Bichitra Shit
Fakir Mohan University
Email: bichitrashit2017@gmail.com

Seasonal and circular migration, which is also called cyclical or oscillatory migration, has been a way for poor people in India to make a living for a long time. During the agricultural lean period, when revenue is low, people are expected to migrate when they find better living conditions elsewhere. This study aims to draw a comparative picture of the livelihood strategies adopted by the migrating and non-migrating tribal households in the study area. A cross-sectional study was carried out among tribal migrant and non-migrant workers in Paschim Medinipur district in September 2019. A total of 200 samples were taken from the Bhumij and Santal tribes. This study employed primary and secondary data. Tribal settlements and respondents were selected using purposive and simple random sampling. Standardized household survey schedules and in-depth interviews were employed to analyse the difficulties. In the West Midnapore district of India, tribal natives migrate to other places for higher earnings because they do not have sufficient cultivated land. We found that non-migrant inhabitants are more advanced in terms of housing types, drinking water, and electricity than migrant households. A maximum number of cultivators from both categories are choosing tractors for land ploughing and the rest of them choose cattle instead. When we analysed the level of income, we found that most of the migrant inhabitants belong to middle-class income group, and most of the non-migrant inhabitants belong to low-income group, but very few non-migrants belong to high-income group. The income of the migrants is a unique source of household livelihood, and they cannot manage household livelihood without circular migration. Circulatory migration has played a vital role in rural livelihood, and the migrants cannot provide household needs based on the rural source.

T 4.5 How do the Seasonal Migrants Migrate to Urban Spaces: Evidence from IHDS Data

Sankar Varma, Rajib Sutradhar
Christ University
Email: sankarvarma93@yahoo.com

Among the migrant workforce in India, Seasonal migrants are the most invisible, as they keep moving back and forth from the source area to the urban destination or from one urban destination to another one, without settling down in anywhere. They lack the urban footing, with modicum of entitlements and rights that are available to the urban poor inaccessible to them. The number of such seasonal migrants are growing with a bulk of them migrating to urban places across states. As many as 8 million (39.8%) seasonal labour migrants move to urban areas of other states while 5 million seasonal migrants move to urban areas of same state (24.3%) (Srivastava et.al, 2020). How they migrate to the destination has implications for their wellbeing at the workplace. There is, however, no systematic study of factors that influence choice of the channel of migrations adopted by seasonal migrants. The present study draws upon IHDS survey data to explore the different variants of channels of migration. The study finds that most seasonal migrants are dominated by disadvantaged social and religious groups and migrate through 3 main channels which is - migration through contractors (52%), followed by migration with a job or self-employed status (37%), followed by those without any job (11%). Multinomial Logistic Regression our results show that seasonal migrants migrating for a shorter duration and over longer distance are more likely to migrate through contractors, who perhaps provide the readily available jobs. Adivasis are more likely to be part of the organized pattern of migration mediated by contractors. They are also more likely to belong to areas lacking in access to irrigation facilities, which makes farming throughout the year. In contrast,

seasonal migrants visiting destination without jobs are also asset poor, but have higher confidence in civil institutions at the destination.

Technical Session 5: Mortality Transition

T 5.1 Political Commitment and Health outcomes in India

R.S. Goyal
Harshal Foundation
Email: rsgoyal52@gmail.com

In democratic setups, political commitment is critical for the success of development programs. Commitment is desired for people oriented policies, budgetary allocations, efficient delivery mechanism (to guarantee reach of services to the last person) and close monitoring of the program implementation process and outcomes. During past few decades, Indian healthcare sector has made significant strides in improving primary healthcare outreach and building a huge network of hospitals. Its' vital statistics pertaining to mortality, fertility and longevity have also improved a great deal, yet in international comparison it leg behind in several critical healthcare indices. This paper examines aspects of political commitments and initiatives by successive Indian Governments in healthcare sector that affected the outcomes. The analysis is based on secondary data culled out from published papers, official statistics and surveys. Studies on people's priority concerns in India show that healthcare was second most important issue, after jobs. Access to drinking water which directly impacts sanitation and health, was third most important issue. However, there was a huge disconnect between what people want, what political commitments are and what is actually provided. Interestingly, different political parties in India have invariably made huge promises to provide for healthcare of all people in their election manifestos; however, after coming to power they could never muster desired strength to fulfill their promises. - Conclusion - The analysis indicates that: (a) Indian political system is not fully alive to people's need. Popular measures invariably triumph over the real needs. (b) None of successive Governments could commit desired budgetary resources for healthcare sector (c) Health is a provincial subject. Huge variations in priorities, efficiency of delivery and monitoring mechanism across the states affect overall outcomes.

T 5.2 Quality of life and death of the elderly in India: Evidence from pooled national cross-sectional data (1995-2018)

Subrata Mukherjee
Institute Of Development Studies Kolkata
Email: msubrata100@gmail.com

Although quality of life of the elderly has been a subject of study in literature, studies combining the quality of life as well as quality of death is almost absent in Indian context. The Objectives are (i) how the quality of life of the elderly are correlated to their socio-economic and demographic attributes? (ii) how is the inpatient care utilization by the elderly different for alive and dead conditional on various factors? (iii) What are the important correlates of the parameter 'medical attention before death'? Data from four rounds of National Sample Surveys (52nd, 60th, 71st and 75th rounds) for the elderly are used. Quality of life covers four non-health and four health aspects of elderly's life. Access to and utilization explores the utilization details. Dead aspect analyses the information on its distribution across socio-economic and demographic groups and focuses on medical attention before death. There is a strong connection between non-health related and health-related quality of the life of the elderly and the connection has not weakened over the years. Quality of life of the elderly has improved over the years but still significant class, caste and gender-based difference exist. For all these parameters significant economic and social class gradients exists. Significant rural-urban, gender, economic status and caste differences exist in elderly's medical attention before death but influence of place, gender, economic status and class identities have

weakened over the years. Quality of life and death shows systematic class, caste, gender and place of residence differences though some of these differences have weakened with time. Future health surveys in the country should take into account this inadequacy as quality of life and death are integrated aspects to study the lives of the elderly in totality.

T 5.3 Inequality in Mortality by Causes of Death: The negligible role of NCDs in India

Suryakant Yadav, Dilip T. R., U.S. Mishra , Pawan Kumar Yadav
International Institute for Population Sciences
Email: drsuryakantyadaviips@gmail.com

Developed nations show a large contribution of communicable (CDs) and noncommunicable diseases (NCDs) for a low inequality in age at death. The epidemiological transition apace in India is attributed mainly to reducing the burden of communicable diseases. The study aims to examine the inequality in mortality causes of death by causes of death. The Gini coefficient at birth (G0) as a measure of inequality in age at death and life expectancy at birth (e0) were decomposed by causes of death and age groups using mortality rates retrieved from the GBD (2019) study. The results reveal that the G0 values for men and women declined from 0.219 and 0.225 in 1990-1994 to 0.154 and 0.146 in 2015-2019. Amongst NCDs, cardiovascular diseases and chronic respiratory diseases in adult through old ages contributed 7.7 and 6.4% to $\Delta e0$ and 0.0 and -1.3% to $\Delta G0$. On the other hand, amongst CDs, respiratory infection and tuberculosis together with enteric (diarrhea and typhoid) infections in infant through old ages contributed a share of 43.2 and 45.7% to $\Delta e0$ and contributed 39.1 and 38% to $\Delta G0$ in men and women, respectively, between 1990-1994 and 2015-2019. The significant contribution of CDs to $\Delta G0$ in infant through old age groups confirms their role in reducing inequality in age at death. NCDs in adult through old ages show a negligible role in lowering the inequality in age at death. The outcomes of the study unravel a high level of inequality in age at death. A significant contribution from the NCDs is lacking in the progress of inequality in age at death.

T 5.4 Death Clustering of Under-Five Mortality in Empowered Action Group (EAG) States of INDIA: Evidence from National Family Health Survey

Sarvesh Kumar, Damodar Sahu
Sarojini Naidu Medical College, Agra
Email: awasthi.sarvesh@gmail.com

Death clustering has been described as an expression of heterogeneity in the risk of child deaths between sub-groups of the population. It is also explained as the number of women with different number of child deaths exceeds that which would be expected if the risk were constant for all women and their children. We have used data from NFHS-4 to study the assessment of death clustering of under-five mortality in EAG states including Assam and restricted the analytical sample for those birth which have occurred in the ten years preceding the survey. Out of total 3, 25, 296 women in EAG states, more than 3/4th of women i.e., 78% belonged to the age group of 20-34. Little less than 50 percent of women were illiterate (46%), 32% had secondary education, and only 6% of women had attended high school and above Overall, about 16% women experienced one child death followed by 4% and 2% women with two and two or more deaths. Across the selected states, highest one child death was experienced by women in Uttar Pradesh 19% followed by 16% in Bihar and Chhattisgarh, respectively. Further, two or more under-five deaths experienced by women was relatively higher in Uttar Pradesh 3% followed by Madhya Pradesh 2% and lowest 1% in Uttarakhand, Assam, Odisha, and Rajasthan. The results further confirmed that child deaths were clustered among low socioeconomic status categories such as amongst poor, illiterate or women with low education, residents of rural areas. Multiple child deaths were also clustered among women with higher parties and who gave birth at higher ages. In order to eliminate the health inequalities and to achieve the Sustainable development goals (SDGs), we need to focus on reducing the clustering of deaths along with reducing mortality rates.

T 5.5 Estimation of Infant and Child mortality across districts of India over the past 30 years: A cross-sectional birth history data application

Sourav Dey, Suryakant Yadav
International Institute for Population Sciences
Email: souravk97dey@gmail.com

Infant and Child Mortality is the most direct and vital indicator of health at the population level in the world's second most populous and fastest-growing developing country, and it remains a major problem to be eradicated. A great deal of effort and resources have been expended to achieve the SDG goals at the national level, but to get an accurate picture, we must go deeper into the throat (at the subnational level) and look at its past trends. From the fifth round of NFHS (2019-21) birth history information, all infant and child mortality across districts was estimated using a component probability approach (five-year period) and a Bayesian Discrete hazard model (single-year period). Moran's I measure of spatial autocorrelation has been calculated across the districts over the specified period for observing geographical disparity and neighbourhood effect. Again, the total variance of the observed data has been decomposed using Random walk models, and each quantity represents the variance due to random effect. It has been discovered that districts in Northern India have more clusters of child death over time than districts in Southern India. The scenario also gets scattered from post-natal mortality to infant mortality over time. Positive spatial correlation has also been found between districts across all the districts, and interestingly it has remained nearly constant over the period, with the exception of some new clustering. Meanwhile, northern and eastern state districts have the least variance, while southern state districts have the highest variance in the infant and child mortality estimate. This study's geographically precise estimates can be used to identify areas that require the most attention and resources or to highlight areas that have performed well and can be mined for effective strategies for meeting SDG targets.

Technical Session 6: Fertility and Family Planning

T 6.1 Levels, Trends and Fertility Differentials in Karnataka

Dewaram Abhiman Nagdeve
International Institute for Population Sciences
Email: dnagdeve@iipsindia.ac.in

Almost all the developing countries including India are experiencing demographic transition, at varying pace and levels. India is country of demographic diversity and heterogeneity. The levels and stages of fertility decline very significantly from state to state and according to socio-economic characteristics of the population. The south Indian states including Karnataka has experienced faster fertility decline as compared to India but the levels and trends of fertility vary considerably in Karnataka. This paper has examined the levels, trends and fertility differentials in Karnataka. The data has been used from the Sample Registration System and an analysis of changes and trends has been conducted from 1971 to 2020. The analysis revealed that the fertility declined from more than four children to less than two children in Karnataka during 1971-2020. It also shows that fertility declined at a rapid pace after 1991 in Karnataka. The pattern of fertility decline was not uniform in rural and urban areas and rural areas were lagging behind. The fertility decline was mainly due to the education, decrease in higher order births of three and above and decrease in fertility among older women in age group 30 and above. Female education plays an important role in declining fertility of Karnataka. There is an inverse relationship between education and fertility 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 in Karnataka.

T 6.2 Contraceptive use and Decision Making Among Adolescent Women in India

Manoj Alagarajan, Dhananjay W. Bansod, Sarang Pradipkumar Pedgaonkar
International Institute for Population Sciences
Email: alagarajan@rediffmail.com

The prevalence of condom (27 percent) is higher than the other methods followed by the female sterilization (21 percent) and pill (19 percent). The female sterilization is the most preferred method to stop the child bearing. The prevalence of female sterilization as a choice is considered by husband alone (25 percent). The decision in using the spacing method, the male dependent method condom is taken jointly and by husband alone (27 percent respectively). The prevalence of women centric method pill is considered mostly by the adolescent women and also by husbands of the adolescent, 22 and 21 percent respectively. - The contraceptives were grouped into three categories as: female spacing methods (Pill, IUD, Injections, Rhythm /Periodic Abstinence, Lactational amenorrhea, Female Condom, Standard Days), female sterilization and Male dependent method (Condom, Withdrawal, Male Sterilization). The analysis shows that decision of adolescent women has higher use of female spacing method whereas the decision of husband and joint decision have higher use of male dependent method. - The results of the logistic regression analysis show that decision on the use of female spacing method among individual adolescent women is significantly higher compared to joint decisions whereas the use is lower when the decisions are taken by husbands of adolescents even after controlling for other socio-economic and demographic characteristics. The prevalence of male dependent contraception is significantly lower for the decisions made among individual adolescent women than the decision taken jointly; however, decision of husband have significantly higher prevalence than joint decision.

T 6.3 Contraceptive Use and Method Mix among Muslims in India.

Bashir Ahmad Bhat
University of Kashmir
Email: babhat@rediffmail.com

India introduced a nationwide family planning program in the early 1950s, and various approaches have been developed and implemented until 1996 to increase the acceptance of family planning methods and reduce fertility. The enactment of the Reproductive and Child Health program in 1996 brought a significant change in the culture of the family welfare program. The results of various rounds of NFHS show that although use of contraception among Muslims during 1992-2016 has increased significantly, but there is limited research to know as to what extent the methods used by Muslims have changed overtime. The objective of this study is to analyse the changes in method mix among Muslims and examine the influence of factors associated with contraceptive use among Muslims in the country during 1992-93 to 2015-16. The study used data from all the five rounds of National Family Health Survey (NFHS). - Binary logistic regression was used in the pooled data of contraceptive users of four rounds of the survey to examine the adjusted contribution of various socioeconomic and demographic factors in explaining use of modern methods of family planning. - Results show that the share of female sterilization method among Muslims has declined but continues to be high and male sterilization seems to have vanished. The use of pills and condoms has considerably increased, and use of IUDs has declined. The role of traditional method has generally declined but continues to be high. Use of traditional methods declined. Age, education, surviving son, social group, household size, region, and economic condition of the woman remained as significant determinants of contraceptive use during the study period. Increased use of modern spacing methods albeit continuous dominance of female sterilization and traditional methods in method mix suggests relooking at the family planning implementation strategy among Muslims in the country.

T 6.4 Responsibility, Social Aspirations, and Contemporary Low Fertility in Rural West Bengal, India

Kakoli Das, Saswata Ghosh, Mary K. Shenk
Institute of Development Studies Kolkata
Email: itudas2014d@gmail.com

West Bengal, a middle-ranking Indian state in terms of development indicators with more than two-thirds rural population, is on the verge of becoming the lowest low fertility zone. While the rural TFR (Total Fertility Rate) of West Bengal (1.6 births/woman) is on par with many developed countries (Norway, Germany, Netherlands, Belgium, etc.), its developmental stage is not - which poses a paradox. Using data from a primary survey of 405 mothers aged 15 to 35 years alongside focus group data of parents, the present study employs a society-specific approach to explain contemporary low fertility in rural West Bengal. We argue that the presence of high aspirations for children in an economically insecure setting initiates a distinctive sense of parental responsibility that generates a unique local socio-ecology of low fertility not previously observed in the context of rural fertility decline in India. Responsibility-laden aspirations toward children and reasoned-rational deliberations regarding fertility outcomes act as subliminal motives to have a small family, challenging common assumptions regarding the relationship between economic hardship, rurality, and fertility.

T 6.5 Contraceptive Decision-making Process of Childfree Couples: An Exploratory Study

Chandni Bhambhani
Institute for Social and Economic Change
Email: chandni@isec.ac.in

To explore the contraceptive decision-making process of couples who voluntarily choose to remain without children in two distinctly pronatalist societies of India and Canada. The advancement in and availability of effective means to control fertility underpins individuals and couples desire to forego having children and parenthood. Yet even in the context of countries (largely western countries) with a rising trend of voluntary childlessness, to the best of our knowledge no researches have explored the contraceptive decision-making process of voluntarily childfree couples. Further, the differences in the contraceptive use in India and Canada, reflect the distinct cultural and structural factors within which individuals and couples indulge in contraceptive decision-making. Against this backdrop, we examined the experiences of distinct considerations and challenges childfree couples in India and Canada faced in the process of choosing various birth-control measures. Thirty-six heteronormatively married and self-reported voluntarily childfree couples residing in India and Canada were jointly interviewed as couples, and their narratives were thematically analysed to identify patterns of meanings they assigned to their contraceptive decision-making trajectories. The family planning measures used and responsibility for contraception were significantly different between Indian and the Canadian participant couples, and reflected the underlying cultural and structural factors causing such disparity. Among Canadian participants, the utilisation of a range of contraceptives at different stages of their relationship was noted. Whereas the majority of Indian participant couples preferred and relied on the male barrier method since the beginning of their relationship. Only a few participants who had articulated desire to remain childfree early on in relationship with their spouses underwent sterilisation.

T 6.6 Utilization of Contraceptive Methods and their Associated Factors in Nepal

Ram Prasad Dhakal
Jawaharlal Nehru University
Email: rppu.dhakal@gmail.com

Fertility is sharply declining in Nepal where the total fertility rate was 2.2 per woman in 2016. On the other hand, the use of contraceptive methods is stagnant in Nepal between 2011-2016. Moreover, the limiting methods have decreased over the period. Objectives: The paper explores the factors determining the different types of contraceptive methods in Nepal during the period. Nepal demographic and health survey data 2016 were used in which the multivariate logistic regression was employed for analysing the overall use of contraceptives whereas the multinomial logistic regression models were used to assess the factors associated with different contraceptive methods separately among currently married women of reproductive ages. Data reveal that all selected 10 variables i.e. women's age and literacy, religion, caste groups, living children, partner's residence, wealth quintiles, media exposure, Province and ecology were significant with the use of any or specific contraceptives. Logistic regression indicates that the odds ratio of using the family planning method was 1.36 times (CI 1.225-1.520) more in women who have mass media exposure as compared to the women who had no mass media exposure. The husband's presence at home was extremely significant (CI 99.9%) for all contraceptive usage. The odds ratio of using natural methods relative to not using any methods was 16.24 times among women whose husbands were staying with them as compared to those whose husbands were not staying with them. The tailor-made programs are essential to raising contraceptive use for different castes, religions, age cohorts, geography and wealth groups. Media exposure, women's education and easy access to contraceptives are essential to raising contraceptive use.

Technical Session 7: Migration Issues

T 7.1 Population, Migration and Citizenship in India

R.B. Bhagat
International Institute for Population Sciences
Email: rbbhagat@iipsindia.ac.in

The state, an important political institution, consists of four pillars namely population, territory, government, and sovereignty. The state took a new form after French Revolution in 1789. The ideas of liberty, equality, and fraternity emerged as defining features of the relationship between population and state, and the concept of citizenship came into existence with the dawn of the nation-state. Citizenship is defined as a legal status categorising the population into citizens and non-citizens privileging the former over the latter. Non-citizens largely constitute migrants, refugees, asylum seekers, stateless persons, and the diaspora.
The composition of population based on citizenship and political rights has been changing. This paper attempts to study the changing nature of the idea of citizenship and legislative acts in enumerating and categorising population in India.

T 7.2 Understanding Return Migrants in MGP with regard to Post Return Scenario: Satisfaction, Awareness and Expectations

Sunil Sarode
International Institute for Population Sciences
Email: ssarode@iipsindia.ac.in, sunilsober@gmail.com

Return migration can be defined as the movement of emigrants back to their homeland. Operational definition of return migrants in MGP report states that- 'return migrant is a household member who

has migrated earlier for the employment for one year or more but later returned home and currently living in this household for six months or more.' The data used in this study is based on a report on 'Causes and Consequences of Out-migration from Middle Ganga Plain' released in 2021, which covers the region of eastern Uttar Pradesh and Bihar. The study aims at highlighting reasons behind return migrants being satisfied with their return. It also focuses on the the awareness and level of utilization among return migrants of programs and policies run by government/NGOs. Also, the study tries to understand the expectations the return migrants have from the government. Out of the 390 return migrants surveyed, 270 (69%) reported themselves happy with their return. The major reasons behind their happiness is found to be getting united and taking care of spouse, children and family. Reasons of unhappiness as stated by the 120 (31%) return migrants who considered themselves not happy with their decision to return. 80% of them were unhappy because of loss of income due to their return. The employment status of return migrants reveals that after returning to the place of origin only 50% migrants got absorbed in some sort of economic activity out of which only 4% could be seen having a regular salaried job. 83% of the 390 return migrants have no knowledge about any programmes and policies run by the government/NGO for return migrants. Only a handful of 21 return migrants out of 390 who knew about the policies for return migrants are getting some sort of benefit from it.

T 7.3 Caste, Land, and Migration in Rural Bihar

Amit Kumar
R D College, Sheikhpura
Email: amitgeoiips@gmail.com

This paper explores migration from Bihar, one of the most underdeveloped states in India, by paying particular attention to social class (caste) and landholdings. For describe details of individual migrants, we present our preliminary findings on the determinants of migration, based on our field survey of 300 households in six villages of Siwan district in 2016. Siwan is the second-highest male out-migration district in Bihar. This study has been carried Bi-variate and Multivariate statistical techniques for analysis. In terms of social class, Muslims are more likely to migrate, but Scheduled Castes do not show a high propensity to migrate as is stated in some of the existing literature where the underclass is said to be more mobile. In terms of landholdings, the probability that someone will migrate is high among the landless and smaller landholders but it decreases as the size of the landholding increases. However, as the size of the landholding increases still further, a reverse effect of landholding on decisions regarding migration moves in, with the decline in probability becoming less and less. This result confirms a non-linear relationship between landholdings and the decision to migrate. Some further research questions are raised in the paper.

T 7.4 Health and Hygiene practice of Female Interstate Migrant Workers in Kerala

Preetha V Mohan
Centre for Development Studies
Email: preethavmohan@gmail.com

The present study analyses the various demographic profile of the inter-state female migrant workers and to evaluate the hygiene habits and health status of female migrant workers in Kerala. Kerala Institute of Labour and Employment (KILE), under the Government of Kerala has conducted a large-scale study to assess the working life of interstate migrant labourers in Kerala. A sample of 5720 migrant labourers from different parts of India has been selected randomly from all 14 districts across Kerala. The survey has covered information on 562 migrant female labourers, especially their health and working life. Primary data collection was done through direct interview methods using a structured schedule. The present study has used a sub-sample (inter-state migrant female workers) of 562 from a total of 5720 persons. The study reveals that nearly 25 percent of the migrant female labours are illiterate and surprisingly, a vast majority are youngsters. And also, 40 percent of female

migrants are unmarried. It is interesting to note that 99 percent of female migrants are unskilled workers. Generally, the female migrants are engaged in fish peeling, plantation activities, and in textile manufacturing. It is reported that nearly 19 percent of the women respondents do not practice measures for maintaining hygiene during menstrual. And also nearly 18 percent of the females have menstruation problems. The study calls for the need for health awareness programmes for the female migrant workers at their camps or working places on regular basis. These women's menstrual hygiene and reproductive health are neglected due to the poor working atmosphere. Two-fifth of the respondents have not entered their actual reproductive life; hence, it is important to take healthy measures to improve their health and hygiene practices.

T 7.5 Economic Interactions of Migrants and their Households of Origin: Are women more reliable supporters?

Jesbin S Thomas, Vini Sivanandan
Gokhale Institute Of Politics And Economics
Email: jesbin.thomas@gipe.ac.in

It is not always, international migration from developing countries is a male subject, but women too have a significant business in that. Before, migrant women were only thought of as family members or companions, and factors such as where they settled, how long they stayed, and other factors were based on the gender relationship they had. Now, however, migrant women are considered independent entities who migrate differently from men. That is not just women go behind men as housewives or housemaids, but the migration with autonomy. The number of women migrating from Kerala has been increasing rapidly, especially in the post covid time. To understand the characteristics of migrant women sending households, to understand the determinants of International migration of women and to understand the gender differentials of remittance sent by international migrants. The approach here is to understand the socio-economical characteristics of migrant women sending households , determinants of women migrants at place of origin and gender differentials of remittance. Kerala Migration survey 2018, data have been taken for this study. International Migration of women is mainly because of family migration driven and for Better Employment. Exposure to the Migration experience of close family members plays a major role in her migration. Family exposure and background characteristics of a women have a vital role in her migration. Economic activity at place of origin , marital status, relationship to the head of the households, religion, education level, migrant family member in the family. The flow of money and goods into migrant-sending households are substantial and essential supplements for the economic well- being of households. Thus, as the new economics of labour migration posits, migration function as a survival strategy of many Malayalee Households.

Technical Session 8: Morbidity and Quality of Life

T 8.1 Academic satisfaction level and psychological stress among students of higher education during COVID-19 pandemic

Nanigopal Kapasia, Pradip Chouhan
Malda College
Email: nanigopal.kapasia@gmail.com

Education and mental health outcomes have been significantly disrupted by the Covid-19 epidemic. Covid-19 affects nearly 1.6 billion students in more than 200 nations throughout the world. Therefore, students were feeling psychological stress like sleeplessness, anxiety, headache, frustration, irritation, and inability to do the study that affecting on their mental health. In light of Covid-19 pandemic, the aims of present study to explore the factors associated with perceived academic satisfaction and psychological stress among students of higher education in West Bengal, India. An online survey was conducted by framing a structured questionnaire among students of higher education. Multivariate ordered logistic regression models were used to predict the predictors

associated with perceived academic satisfaction level and psychological stress among the participants. Among the 570 participants, the majority of the students (40%) had moderate levels of academic satisfaction. Over one-thirds of participants (42.6%) had a high level of stress in their academic career. The multivariate logistic regression models show that the likelihood of psychological stress was significantly higher among students aged above 25 years, researchers, and those who belong to broken families. Besides, the higher probability of satisfaction level is associated with female students, undergraduates, belonging to economically well-off families, and rural residents. Our study suggests various psychological health problems out break during Covid-19 pandemic. Therefore, students' highly satisfaction with online classes preserves mental health of their individuals. So, finally psychological interventions can improve the mental health of students during the Covid-19 pandemic.

T 8.2 The Declining Nature of Self-reported Morbidity in India (1995-2018)

Kalosona Paul, Bristi Ghosh
Sidho-Kanho-Birsha University
Email: kalosonapaul@gmail.com

Health is a multidimensional concept. Illness or sickness, disability, physical, social, and mental well-beings constitute critical dimensions of health. India has remarkably achieved the below replacement level increased life expectancy and reduced the infant mortality rate. The main objective of this study is to examine the level, trend, patterns of morbidity prevalence and the burden of infectious, NCDs in India with explaining the factors associated to it. The study used unit level data from 52nd round, 60th), 71s and 75th round of the NSS, Government of India in the analysis to meet the objectives. Information on morbidity was collected with a reference period of 15 days. To fulfil the requirements of this study, the prevalence rate of morbidity along with logistic regression have been computed. As a whole the prevalence of morbidity of India had portrayed significant increase during 1995-2014 with a decline in 2018. The prevalence of morbidity among the females was always more than the males. Besides the rural people, people with little educational status are more prone to it than the people in urban area and well educated persons. The younger population had major risk of infectious disease while the aging people were affected by mainly CVD and NCD. The richest group of people reported morbidity more as comparison with poor. The economically and socially developed states such as Kerala showed greater reporting of it while economically backward states indicated lower prevalence. The BIMARU states are in developing stage and shows lack of consciousness about health that led to the less reported morbidity prevalence. Gender gap along with regional variation prevailed in India. So the findings of our study will likely to promote healthy India.

T 8.3 Gender differentials in cognitive impairments among older adults in India: A multivariate decomposition approach

Shekhar Chauhan
International Institute for Population Sciences
Email: shekhariips2486@gmail.com

Increasing life expectancy and declining fertility rates have increased the ageing population around the world. The ageing process brings significant cognitive challenges, which further transforms into poor well-being and might aggravate chronic illness among older adults and subsequent mortality. The literature lacks a consensus regarding the risk of cognitive impairments by gender. This study aims to identify differences in cognition impairments between male and female older adults in India. Data for 31, 464 older adults, aged 60 years and above (male-15, 098 and female-16, 366), from the recent Longitudinal Ageing Study in India (LASI) Wave-1 has been used. Cognitive impairment is measured through five broad domains (memory, orientation, arithmetic function, executive function, and object naming). Overall score ranges between 0 and 43; a higher score indicates better cognitive functioning. A proportion test was used to evaluate the gender differentials and find the significance

level. A multivariate decomposition analysis was used to identify covariates' contributions, which explain the group differences to average predictions. Results show significant gender differences in cognitive impairment among older adults disfavouring females (differences: 13.4; $p<0.001$). About 62 percent of the overall gender inequalities in the cognitive impairment were explained by the differences in compositional characteristics (Endowments) between males and females, remaining 38 percent was due to the difference in the effect of characteristics (Coefficient). Findings support the hypothesis that the female gender is positively associated with higher cognitive impairments. Gender-responsive interventions improving education access among the female gender would bring relevant and desired results.

T 8.4 Chronic Disease and Productivity Loss among Middle-Aged and Elderly in India

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

Chronic diseases are growing in India and largely affecting the middle-aged and elderly population; especially working age. There are no nationally representative studies on productivity loss due to health problems. This paper examined the pattern and prevalence of productivity loss, due to chronic diseases among middle-aged and elderly in India. The first wave of the Longitudinal Ageing Study in India (LASI) was used. Outcome variables, limiting-paid work and ever-stopped-work due to ill health were used. We have estimated the age-sex-adjusted prevalence of ever-stopped working and limiting-paid work across MPCE quintile and socio-demographic characteristics. Propensity Score Matching (PSM) examined the effect of chronic diseases on outcome variables. Logistic-regression performed as a robustness analysis. Among middle-aged adults in 45-64 years, 6.9% had ever-stopped work and 22.7% had limiting-paid work in India. The proportion of outcome variables increased significantly with age and the number of chronic diseases. Limiting-paid work is higher among females (25.1%), whereas ever-stopped is lower among females (5.7%) than their male counterparts. Limiting-paid-work is significantly higher in urban areas (24%) than the rural whereas ever-stopped working is comparatively lower in urban areas (4.9%). Stroke (21.1%) and neurological problems (18%) were significantly associated with the outcome variables. Those with chronic diseases are 4% and 11% more likely to stop and limit their work respectively. More than one chronic disease had a consistent and significant positive impact on stopping-work for over a year across all three models. Despite having a better health infrastructure, availability and utilization of services, knowledge and understanding of issues, urban areas shows a higher prevalence of limiting paid work due to chronic diseases. Policy interventions focusing on productivity loss due to chronic must place.

T 8.5 COVID-19 pandemic and its average recovery time in Indian states

Noel George
KLE University
Email: noelgeorge2007@gmail.com

Many studies have been carried out in modelling COVID-19 pandemic. However, region-wise - average duration of recovery from COVID-19 has not been attempted; hence, an effort has been - made to estimate state-wise recovery duration of India's COVID-19 patients. Determining the - recovery time in each region is intended to assist healthcare professionals in providing better - care and planning of logistics. - Methods - This study used database provided by Kaggle, which takes data from the Ministry of Health, - Family Welfare. The simple Linear Regression model between incidence, prevalence, and - duration was used to assess the duration of COVID-19 disease in various Indian states. The fitted model suits ideal for most of the states, except for some union territories and - northeastern states. The average time to recover from disease was ranging from 5 to 36 days in - Indian states/union territories except for Madhya Pradesh. Tamil Nadu has an average

recovery - time of 7 days with an value of 0.96, followed by Odisha, Karnataka, West Bengal, Kerala and - Chhattisgarh and the average recovery duration was estimated as 7, 13, 17, 11, 14 and 12 days - respectively. The average recovery from COVID-19 was ten or less days in twenty percentage of states, - whereas in forty-four percentage of states/union territories had an average recovery duration - between ten to twenty days. However, around twentyfour percentage of states/union territory - recovered between twenty to thirty days. In the rest of Indian states/union territories, the - average duration of recovery was more than thirty days.

T 8.6 Cardiovascular Diseases and Ageing in India: A propensity score matching analysis of the effects of various risk factors

Gayathri B, Sujata, Ramna Thakur
Indian Institute Of Technology Mandi
Email: d21004@students.iitmandi.ac.in

Cardiovascular diseases (CVDs) are one of the major causes of mortality and morbidity worldwide, with a significant burden, especially on older adults. This study aims to estimate the exclusive effects of various risk factors of CVDs such as environmental, behavioural, physiological, and genetic risk factors among older adults aged 45 years and above in India. This study utilized data on 59, 068 older adults from wave 1 (2017-19) of the Longitudinal Ageing Study in India. Propensity score matching (PSM) has been used which estimates the effects (Average Treatment effect on the Treated group, ATT) of various risk factors on CVDs. This analysis has been extended separately to different components of CVDs, such as hypertension, heart disease, and stroke. Further, balance diagnostics have been carried out to ensure successful matching. Results indicate that risk factors groups such as environmental (ATT=0.015), behavioural (ATT=0.018), physiological (ATT=0.205), and genetic (ATT=0.093) have a positive and significant impact on CVDs. In the case of independent risk factor effects, diabetes has the highest effect on CVDs, followed by overweight, cholesterol, family history, alcohol consumption, and depression. In contrast, indoor smoke exposure and physical inactivity have shown minimal effects. Moreover, ATT is positive and significant for all risk factor groups on different components of CVDs except for environmental risk factors on heart diseases. In the case of independent risk factors, results are positive and significant, except for smoking habit on hypertension, depression on hypertension, indoor smoke exposure on heart disease and overweight on stroke. We conclude that physiological risk factors among older adults are more severe than other factors. A healthy and proper diet, regular exercise, and use of clean energy are effective steps that can be adapted to shrink the burden of CVDs among older adults.

Technical Session 9: South Asia Migration: SALAM –I

T 9.1 Return and Reintegration of Migrant Workers in Bangladesh

Tasmia Persoob
Email: tuba.rmmru@gmail.com

Labour migration is an integral part of Bangladesh's economy. Not only it has an immense contribution on the economic development but also plays a crucial role on various social aspects. This paper principally focuses on the two major phases of migration: 'return' and 'reintegration' in the context of Bangladesh. Although many researches have been conducted on the impact of labour migration on Bangladesh's economic progress, on the members of the families of the migrant workers but the areas of 'return' and 'reintegration' are yet to get enough attention from the researchers and policymakers. During COVID-19, Bangladesh experienced return of unprecedented number of migrant workers and this emergency return created serious difficulties not only for the migrants themselves but for the communities as well. In this backdrop, this paper has gathered important information related to both 'return' and 'reintegration' to fill out the existing gaps in these two arenas. Major portion of information has been gathered from previous literatures and the rest are from the interviews of several Key Informants. The paper contains an introductory chapter, followed by an

analysis of existing national legal frameworks relating to the two concepts. Major push factors behind the return, immediate and long-term challenges upon return, structural and other impediments to reintegration and guidelines to a sustainable reintegration in the society have been discussed in this paper. The phase of the pandemic and the unique challenges it posed, have been discussed thoroughly. Each chapter also contains the experience of female migrant workers, the challenges they faced upon return and reintegration and the existing policies to protect them. Researchers and policymakers will be benefitted from this paper which is a convenient document on 'return' and 'reintegration' of the migrant workers in a regular and crisis situation.

T 9.2 Sustainable Labour Migration and Development in Pakistan: Linkages and Trends in Times of COVID-19 and beyond

Kashif Majeed Salik, Khansa Naeem
Email: kashif@sdpi.org

Sustainable Development Goals (SDGs) envisaged migration as a key driver for development at the local to global scales. Migration, on the one hand, has perceived to improve migrants and communities' well-being, reduce poverty and inequalities, and enhance economic opportunities and investments, and on the other, may see as to reduce labour market imbalances, strengthen relevant skills and human resources in the countries of origin and destination. However, migration-development targets have many potential challenges. The most crucial is how to deal with complex socio-economic and political processes and national policy changes to ensure safe, orderly, responsible migration and mobility of the people (SDG target 10.7). In this regard, the 2030 sustainable development agenda calls for better migration management policies within and across countries. Nevertheless, this requires comprehensive approaches to monitor and assess key patterns and trends shaping migration futures under diverse geographical, environmental, and political spheres around the globe. The Global Compact for Safe, Orderly, and Regular Migration (GCM) agreement, adopted by 152 countries in 2018, provides a series of holistic approaches to understand migration-development outcomes alongside looking into potential risks and challenges for migrants and communities in origin and destination countries.

The agreement particularly emphasised the collection of reliable international migration data of multiple dimensions and categories (on the achievement of SDG target 10.7) and assessments of migration patterns and trends and their impact on (national) development. In this regard, national-level assessments on migration data collection approaches and gaps; mapping skills, and labour market information (at national and international scales) are critical for informed policy actions. Such assessments are particularly important in the context of the COVID-19 pandemic. Many scientific inquiries are emerging to understand how pandemic has impacted trends and patterns of migration and mobility across the globe. However, there is a dearth of national-level studies, particularly concerning migrants sending countries, that how COVID-19 impacts the labour migrant's mobility patterns, layoffs, return migration, reintegration, and well-being issues. Sustainable Development Goals (SDGs) envisaged migration as a key driver for development at the local to global scales. Migration, on the one hand, has perceived to improve migrants and communities' well-being, reduce poverty and inequalities, and enhance economic opportunities and investments, and on the other, may see as to reduce labour market imbalances, strengthen relevant skills and human resources in the countries of origin and destination. However, migration-development targets have many potential challenges. The most crucial is how to deal with complex socio-economic and political processes and national policy changes to ensure safe, orderly, responsible migration and mobility of the people (SDG target 10.7). In this regard, the 2030 sustainable development agenda calls for better migration management policies within and across countries. Nevertheless, this requires comprehensive approaches to monitor and assess key patterns and trends shaping migration futures under diverse geographical, environmental, and political spheres around the globe.

The Global Compact for Safe, Orderly, and Regular Migration (GCM) agreement, adopted by 152 countries in 2018, provides a series of holistic approaches to understand migration-development outcomes alongside looking into potential risks and challenges for migrants and communities in origin and destination countries. The agreement particularly emphasised the collection of reliable international migration data of multiple dimensions and categories (on the achievement of SDG target

10.7) and assessments of migration patterns and trends and their impact on (national) development. In this regard, national-level assessments on migration data collection approaches and gaps; mapping skills, and labour market information (at national and international scales) are critical for informed policy actions. Such assessments are particularly important in the context of the COVID-19 pandemic. Many scientific inquiries are emerging to understand how pandemic has impacted trends and patterns of migration and mobility across the globe. However, there is a dearth of national-level studies, particularly concerning migrants sending countries, that how COVID-19 impacts the labour migrant's mobility patterns, layoffs, return migration, reintegration, and well-being issues. These objectives would help to understand national re-emigration prospects in a post-COVID-19 scenario when mobility and workplace restrictions started to lift in key countries of destinations (CoDs). In this regard, what does re-emigrants need such as financial support to cover mobility costs or information regarding new procedural needs (like vaccination certificate or other technical needs from a public health point of view). Moreover, how COVID-19 has induced or will induce changes in the economy and ways of production and ultimately on labour demand for international out-migrants, how do such changes will affect Pakistan as a migrant-sending country? Likewise, how the government is analyzing or foreseeing the changes in international labour migration due to COVID-19; what international development agencies can provide support to the government to explore better out-migration prospects and negotiate better deals with CoDs for better wages, living and working conditions, and better integration prospects, higher social and financial remittances flows, etc. for national out-migration labour. How the public institutions (BISP, EHSAAS, SMEDA, NAVTCC, and TEVTA) can support the government by providing skills to migrant workers which are in high demand in CoDs, particularly during and after COVID-19? Moreover, reintegration issues are also critical for the country.

In-depth understanding is essential to answer some of the emerging questions like how the government of Pakistan can best respond to worries of return migrant workers (particularly from the GCC countries), what should be the likely outcome impact on the current and future employment opportunities for Pakistani migrant workers amid the COVID19 spread. Many Pakistani migrant workers are still abroad, so how the government can limit and delay their potential returns. A mixed-method approach will be utilized to achieve the study objectives. The study will carry a detailed literature review for understanding the context and knowledge gaps regarding labour migration and development in Pakistan. The secondary data will also be collected to identify key trends and patterns on international labour migration and financial remittances flow. Some qualitative information will also be collected to explore linkages, impacts of COVID-19 on labour migrants, remittances, and government initiatives, particularly focusing on re-integration issues. The qualitative data will be collected through semi-structured interviews with government, international organisations, academia, and labour migrants (in CoDs as well as returnees)

T 9.3 Data for Labour Migration Governance in India: Gaps, Challenges, and Needs

Reshmi R. S.
International Institute for Population Sciences
Email: reshmi@iipsindia.ac.in

Over the past few years, return and reintegration issues of South Asian labour migrants have received policy and research attention due to the pandemic, war and global economic crisis. The diversity in the patterns and drivers of return migration and the lack of reliable data and knowledge remained critical points, among other issues, to reach a standard and integrated policy. Against this backdrop, this paper seeks to analyse the return and reintegration policies and practices of the South Asian migrant-sending countries, namely Bangladesh, India, Nepal, Pakistan and Sri Lank. It will rely primarily on an extensive survey of existing data, research and documents. Both online and physically available study materials will be collected from government organisations, NGOs and concerned international organisations. Expert interviews will be conducted as required to validate collected data and information. A critical review of the existing national, regional and international normative and legal frameworks of South Asian countries regarding the return and reintegration of

migrants, pre- and post-pandemic drivers of return and reintegration strategies of the countries concerned will inform the paper. The paper will also highlight the good practices and the challenges of low-skilled workers' return and reintegration. The aim is to fill out the knowledge gap and identify the appropriate policies for making return beneficial for South Asian men and women migrants and ensuring their psychological, economic and social integration upon return during regular and crisis periods. The paper will provide food for thought for further research, advocacy and policies.

T 9.4 Understanding Informal Remittances: Experience from Sri Lanka

Bilesha Weerathne, Thilini Bandara, Thisuri Ekanayake
Institute of Policy Studies of Sri Lanka
Email: bilesha@ips.lk

Remitting money back to the home country is an important motive behind international migration. Remittances contribute towards the micro level well-being of the recipient, while remittances can be channelled via either formal or informal channels. Given the inherent characteristics of hidden activities taking place in informal remittance markets, there is limited understanding and severe limitations with respect to data and evidence. While acknowledging these gaps in the literature, this study aims to expand the understanding on informal remittances by focusing on the case of Sri Lanka. This study provides empirical evidence for the use of informal channels in receiving and sending remittances from and to Sri Lanka by focusing on three specific research questions. They are: "Why do informal remittance channels exist?", "How do informal remittance channels operate?", "What is the nexus between irregular migration and informal remittances?" The analysis is based on qualitative data and a thematic analysis. The study finds that the widening difference in cost of remitting through formal versus informal channels, during the economic crisis attracted more migrant workers towards the informal sector. Other general factors affecting the choice of remittance channels included the convenience and accessibility of informal systems, as they offer door-to-door services, require no documentation, less time-consuming than banking channels, offer greater speed and have no limitations for the transaction amount. Moreover, the anonymity of informal channels is especially beneficial for irregular migrants. Once informal channels proliferate, controlling their use is a challenging prospect. To discourage the use of informal channels, the study provides recommendations along the two broad approaches of increasing the use of formal channels and decreasing the use of informal channels.

T 9.5 Migration cost and debt burden among migrant households in Nepal

Arjun Kharel , Sadikshya Bhattarai and Bipin Upadhya
Centre for the Study of Labour and Mobility (CESLAM)
Social Science Baha
Email: akharel@ceslam.org

The study contributes to the literature on debt migration, an overlooked area in need of academic and political attention, by assessing the magnitude of migration cost and loan dependency among Nepali migrant workers while pursuing overseas employment. Using data from a nationally representative survey conducted in 2020 on 4830 households in Nepal, the paper specifically examines the trends in labour migration costs, debt burden associated with labour migration, the loan repayment methods used, and loan default rate among Nepali migrant households. The study finds that Nepali migrant workers spend on an average over NPR 130,000 (c. USD 990) for labour migration to Gulf Cooperation Council (GCC) countries and Malaysia, the major destinations of Nepali workers beyond India. The average migration cost to India was, as expected, lowest, at NPR 8,123 (c. USD 60), thanks to the open borders between Nepal and India allowing free movement of their citizens across the borders and no requirement of labour permit for employment in either country. A high labour migration cost to the GCC countries and Malaysia persisted despite Nepal government's efforts at curbing recruitment costs by imposing a ceiling of NPR 10,000 (c. USD 75) in recruitment fees under the 'free visa, free ticket' policy adopted in 2015. Labour migration has become pricier

for Nepali workers. Nepali workers paid on average NPR 36,000 more for migration to GCC countries in 2018-21019 compared to 2015 and before, although the migration cost may have increased in accordance with the inflation rate rather than due to the reverse impact of the policy. Over two-thirds of the migrant households took loans to pay for their member's migration to GCC countries and Malaysia, and the average loan size was commensurate with the cost of migration. Many households struggled to pay back the staggering amount of loans even several years after the migration of their member/s. The loan was repaid mainly through the remittance sent by migrant workers, but some households also resorted to selling of assets, such as land, livestock and jewelleries. Without a significant reduction in the cost of migration, investment in any economic activities that regenerate capital will continue to remain constrained for migrant households. The study calls for efforts from both labour sending and labour receiving countries as well as international agencies to address the conditions of debt stress and debt bondage among migrant workers.

Technical Session 10: Findings from Swabhimaan Intervention Study (IIPS, UNICEF)

T 10.1 Swabhimaan Nutrition Demonstration Programme: Outcome on nutritional status of Women and their utilisation of health services

Sayeed Unisa, Abhishek Saraswat, Laxmikant Dwivedi, Reshmi, R.S, Preeti Dhillon, Sarang Padgoankar, Ajay Gupta, Sutapa Agarwal, Vani Sethi
Email: sayeed.unisa@iipsindia.ac.in

Swabhimaan, a five-year initiative launched in 2016, aimed to improve nutrition of adolescent girls and women before, during and after pregnancy through a package of 18 nutrition-specific and nutrition-sensitive interventions delivered through a combination of community-led and systems-led interventions. This study describes the outcomes of Swabhimaan Nutrition Demonstration Programme on nutritional status of adolescent girls (10-19 years) and women (15-49 years) and utilization of health services by them in three selected states of India namely Bihar, Odisha and Chhattisgarh during 2016-22. Swabhimaan conducted three rounds of cross-sectional surveys – baseline (2017), midline evaluation (2018-19) and endline survey (2021-22). In each round of the survey, eligible women who were adolescent girls (10-19 years), pregnant women (15-49 years) and mothers of children under age two years (15-49 years) were selected. Swabhimaan programme achieved its primary outcome of increasing the mean MUAC of pregnant women by 0.4 cm in the intervention area during 2016-2021. The programme also managed to reduce the prevalence of low BMI (<18.5 kg/m2) among mothers of children under age two years by 19%. A significant net change of 5–29% was recorded in maternal health indicators like availing ANC services, institutional delivery, and use of contraception during baseline to endline survey (2016-2021) in all three states. Swabhimaan programme was able to achieve its primary and secondary outcomes. The demonstration programme shows that, delivery of health and nutrition interventions through women-collectives embedded in the Government's agri-livelihood programme can play a key role in improving the last mile delivery of health and nutrition services in low-resource settings. Further, convergence of various government department and related programmes can be beneficial in the successful delivery of services or its improvements.

T 10.2 Utilisation of ANC services before and after the COVID-19 pandemic in selected resource-poor blocks of India: Role of community health workers in Swabhimaan programme Area

Preeti Dhillon, Sayeed Unisa, Ajay Gupta, Abhishek Saraswat, Sulaiman KM, **Sarang Pedgoankar**
Email: sarang@iipsindia.ac.in

COVID-19 has disrupted maternal and child health services. Community Health Workers (CHW) supported the women by visiting pregnant women's homes and providing the MCH services as required. This study attempts to understand the role of CHW and its impact on the Ante-Natal Care (ANC) services pre-pandemic and post-Pandemic in the poor resource setting. Swabhimaan Programme was a community-based non-randomised controlled study. The Swabhimaan programme interventions were carried out in the selected blocks in the Indian States of Bihar, Odisha and Chhattisgarh with the objective to improve the nutritional status of mothers, pregnant women and adolescents living in resource-poor blocks of three selected states during 2016-2022. Cross-sectional surveys, namely pre-pandemic (2018-19) and post-pandemic (2021-22) of pregnant and mothers of under two children, utilised to fulfil the objectives of this study. The ANC services received by women have increased over time from 2015 to 2022. Our findings confirm that the ground-level community and health systems were active during the pandemic, and the results show significant improvement. Additionally, the women supported by the CHW have substantially improved pregnancy registration, first ANC, Tetanus injection, consumption of Iron Folic Acid, Calcium and deworming tablets than those who did not. Propensity Score Matching analysis shows that the average treatment effect on the various ANC services of having the support of CHW is significant. This study shows the vital role of CHWs in utilising various Maternal and Child Health services. Better linkage and networking of the CHWs with the community will ensure health service delivery regularly and in an emergency like a pandemic and develop resilience.

T 10.3 Pre- and Post-Pandemic Period Seasonal Migration and Food Security Status in three Indian States (Migration Paper)

Reshmi R.S., Sayeed Unisa, Kanchan Negi, Ajay Gupta, Laxmikant Dwivedi, R.B.Bhagat
Email: reshmi@iipsindia.ac.in

The covid-19 pandemic has significantly affected migrants' livelihoods regarding food scarcity, basic amenities, and health care. Many studies have shown that households adopt a migration strategy to overcome food insecurity. This paper presents the migration status of the household during the pandemic and its linkages with food security in three Indian states. The paper is based on data collected to evaluate a community-based programme called the Swabhimaan Programme, which aims to improve the nutrition of women and adolescents. The study from three resource-poor states depicts that mainly seasonal migration is prevailing in these states, which continued during the pandemic. However, the magnitude of seasonal migration was lower during the post-pandemic period. The probability of seasonal migrants was more from food insecure households, households without agricultural land and ration cards, and large families with poor economic status. Determinants of seasonal migration were similar for pre and post-pandemic periods. It shows that households adopt the seasonal migration strategy as a necessity for survival.

T 10.4 Women empowerment through involvement in community-based health and nutrition interventions: Evidence from a qualitative study in India

Manas Ranjan Pradhan, Sayeed Unisa, Ramu Rawat, Somila Surabhi, Abhishek Saraswat, R.S. Reshmi, Vani Sethi
Email: manas.pradhan@iipsindia.ac.in

Women's empowerment is fundamental for realising unalienable human rights and is key to sustainable development outcomes. The SWABHIMAAN intervention program was an integrated multisectoral strategy to improve girls and women's nutrition before conception, during pregnancy, and after birth in India. This study aims to assess women's empowerment through involvement in community-based SWABHIMAAN health and nutrition intervention. Qualitative data were used for analysis from in-depth interviews with community-based self-help group (SHG) members involved as Nutrition Friends (Poshan Sakhi-PS) in the SWABHIMAAN program in 2018. Informed consent procedures were followed, and only those who voluntarily consented to the interview were interviewed. Twenty-five in-depth interviews of purposively selected PSs in three states (Bihar, n=9; Chhattisgarh, n=8; and Odisha, n=8) were analysed thematically, according to Braun, Clarke (2006). NVivo 12 software was used for organising and coding data. Three central themes that emerged to explain women's empowerment were (1) Barriers, redressal mechanisms adopted by PS, (2) PS as a change-maker, and (3) Changes in the life of PS. The study found that women perceive themselves as more empowered through involvement in the SWABHIMAN intervention program, besides improving the nutritional status of the community and their households. The results suggest that policies and programs on health and nutrition interventions need to involve peer women from the community, leading to more effective outcomes. Empowering women and closing gender gaps in employment/work are critical to achieving the 2030 Sustainable Development Goals.

T 10.5 Tele- Swabhimaan Nutrition Demonstration Programme in Telangana: Baseline Findings from Quantitative and Qualitative Survey

Ajay Gupta and UNICEF Telangana
Email: ajaygiips@gmail.com

Tele-Swabhimaan program, launched in 2022, is a package of interventions addressing multiple deprivations of health, nutrition, mental health, and psychosocial support amongst the most vulnerable communities in Urban Municipalities of Telangana. The intervention targets men and women of reproductive age to create awareness on discriminatory gender norms and behaviours by encouraging male involvement in shared workload, enhancing perceived familial support by women, challenging normalization of gender-based violence', and women's self-efficacy, empowerment, and decision-making power. This study outlines the results from the baseline survey conducted at the Tele Swabhimaan intervention municipalities. The study focuses on indicators such as nutritional status of mothers (15-49 years) of children under two years and utilization of health and nutrition services by them during perinatal period. A baseline survey was carried out during June - September 2022 covering 4152 mothers in urban slums of two selected municipalities of Sangareddy district. The Zaheerabad municipal area was the intervention site and Sangareddy municipality was the Control Area. The findings indicate that 25 percent of the slum residents live in kachha/ semi-pucca houses in Zaheerabad while one-third of the slum dwellers of Sangareddy block stay in kachha/semi-pucca houses. Around 44 percent households in Zaheerabad slums are food-insecure while Sangareddy has only 10 percent of food insecure households. Around 15 percent of the mothers in both the blocks are underweight while more than one-fourth of mothers in Sangareddy are overweight. More than 84 percent of mothers in Zaheerabad have a dietary diversity score of six or more while only half of the Sangareddy mothers had the same. More than 90 percent of the mothers registered pregnancy and sought ANC services during the last pregnancy while less than half went for 4 ANC check-ups. Less than 10 percent of the mothers received 180 IFA tablets in Zaheerabad while only 12 percent consumed 100 IFA tablets. Around 30 percent of the mothers in Zaheerabad

reported symptoms of moderate - severe depression while less than 3 percent in Sangareddy have such symptoms. Around 7 in 10 women have experienced gender based discrimination and emotional distress in Zaheerabad. Around 8 percent mothers in Zaheerabad also showed symptoms of severe anxiety. It is also found that one-fourth of the mothers in Zaheerabad worked in the last 12 months compared to only 8 percent in Sangareddy but only 35 percent of the working mothers in Zaheerabad were able to decide on the usage of their earned money compared to 71 percent mothers of working women of Sanagreddy block. Tele-Swabhimaan programme is implemented to improve the nutritional and health status of the women through the platform of women collectives. Indicators related to service delivery, gender equality and mental health require immediate attention and the convergence of various government departments for successful implementation of the interventions targeting these areas.

Technical Session 11: Nutrition, Health

T 11.1 Impact of Spirulina Chikki Supplementation on Nutritional Status of Adolescent Girls in Kolar District of Karnataka

Gyan Chandra Kashyap, Sarala R, Usha Manjunath
IIHMR Bangalore
Email: gyan.ck@iihmrbangalore.edu.in

Anemia accounts for a majority of the nutritional problem across the globe. In developing countries, the adolescent group is more exposed to nutritional challenges and are vulnerable to varied diseases. Anaemia affects not only the growth of adolescents but also their attentiveness, memory, and school performance. Two out of five targets of POSHAN Abhiyaan are related to reducing anaemia prevalence: among young children (6-59 months) and adolescent girls and women (15-49 yrs.) by 3% per year. Against this backdrop, the Objective of the study was to assess the impact of spirulina chikki supplementation on the nutritional and anemia status among adolescent girls. Data and Methods: A cross-sectional study and multi-stage random sampling design was adopted. Baseline and endline assessments were carried out from Jan - Feb 2020 and Dec 2021, respectively, in the Kolar district, Karnataka. A total of 174 and 93 adolescent girls (13-18 years) were covered during baseline and endline correspondingly. Primary data was collected viz., anthropometric measurement, interview and 5 ml of blood was drawn through the venous method for Hb testing from the adolescents before and after an intervention. Around two-thirds of adolescent girls ate chikki for more than 12 months. Improvement in nutritional and anaemia status was observed among the beneficiaries. A significant proportion (23%) of adolescent girls shifted from underweight to the normal category at the end line. A significant improvement was observed in the mild category from baseline (4.3%) to end line (18%). Conclusions: Consumption of spirulina chikki had impacted the nutritional status of adolescent girls positively. Strengthening health literacy among the beneficiaries and their families about the importance of spirulina chikki is critical for the acceptance, creating demand, and sustainability of the program and, consequently, for a greater impact on nutritional status.

T 11.2 Cross sectional study to assess dietary iron intake among rural women of reproductive age

Priyanka Pareek, Rashmi Kulkarni
MGM Institute of Health Sciences
Email: priyankafn1681@yahoo.com

In India more than fifty percent of the women under reproductive age suffering from anemia and Iron deficiency is one of the major causes of anemia. Therefore, the present study has been conducted to

assess the nutritional status and dietary iron intake of rural women under reproductive age and also to analyse it's associations with sociodemographic attributes and socio For the cross sectional study 371 women of reproductive age (15-49years) were randomly selected from Nere village of Raigad district. A structured questionnaire was used to collect the general profile of the participants and Kuppuswamy Scale was used to assess socio economic status. The height, weight, waist and hip circumference were measured by standardized methods and BMI was calculated. The hemoglobin level of the participants were estimated through standardized method. A food frequency questionnaire and 24 hours diet recall (3 days) were taken to determine dietary iron intake of the participants. The data was analyzed by IBM SPSS Statistics for Windows version 24.0. Pearson Correlation was used to assess the association between different variables. In the study 45% of participant were normal 15% were overweight and 8% were obese remaining were in underweight category. The 30%, 12% and 8% of the participants were having mild moderate and severe anemia respectively rest were normal. Energy, protein, iron, vitamin C, B12, folic acid, calcium and zinc were inadequate among participants, may lead to iron deficiency anemia. Hemoglobin levels were significantly ($p \leq 0.05$) associated with education, family size, socioeconomic status and BMI of the participants. Significant positive correlation ($p \leq 0.05$) was found between hemoglobin and protein iron, vitamin C, zinc, calcium, folic acid intake Conclusion: There is a need to plan an integrated comprehensive nutrition intervention program to improvise the overall nutritional status of rural women of reproductive age.

T 11.3 Demographic Transition and Nutritional Health in India

Ram Gopal, M.K. Agarwal
PRC Lucknow
Email: rgopal95@gmail.com

India is a country in the southern part of the Asian continent. With nearly 1.3 billion people, it has the world's second largest population after China. It is the world's largest democracy. It is also the largest country in South Asia by area and the seventh largest in the world. The cost of living will rise exponentially as demand for resources worsens with population growth. The conflict will increase, with cascading social and economic consequences. The objectives of this paper are to examine the growth and trends of population and health nutritional issues in India, as well as analyze the relationship between literacy rate, infant mortality rate, and life expectancy rate at national levels, and analyze the policy implications of population transition and health nutritional issues and their consequences in India. The data for the present study has been retrieved from various secondary data sources published by the Government of India (GoI). The present study covers broadly the period between 1951 to 2021 to analyze growth and trends of population transition and health nutritional in India. The main sources of secondary data are such as Ministry of Agriculture, Farmers Welfare, Govt. of India, Directorate of Economics and Statistics, DAC, FW, Reserve Bank of India, the United Nations World Population and Census Government of India. For the analysis, we have estimated the growth rate, mean, correlation, and interpolation of various parameters of population and nutritional health in India.

This paper analyses the Demographic transition and health nutritional in India by using secondary data. The growth of the population is very high, which poses serious challenges for economic growth and nutrition. The need to increase production and consumption of goods puts India in a challenging position. Population growth and health improvement are the primary concerns of demographic transition and nutrition. The result shows a positive correlation (0.988) between literacy rate and life expectancy, and a negative correlation (-0.991) between infant mortality rates in India during 1991 to 2022. India's birth rate declined by -82.837 percentage points from 1991 to 2022. The literacy rate has increased more in Madhya Pradesh and Maharashtra than in Uttar Pradesh, Bihar, and Rajasthan. There is a negative correlation between the literacy rate and the infant mortality rate. In Maharashtra, the change is the lowest in comparison to India. India's population has increased from 361.1 million in 1951 to 1345 million in 2021, but the per-capita net availability of food grains has less increased in comparison to population. The value of the correlation coefficient among the population and its

influencing factors was found to be mixed and significant at the one percent level of significance in India. Population was discovered to be negatively correlated with per capita water availability, followed by positively correlated with energy consumption and net availability of food grains. Thus, it was found that population is negatively correlated with per capita water availability (r =-9858), followed by positively with per capita energy consumption (r =0.9677), and per capita net availability of Food grains (r = 0.1802). Per capita water availability was negatively correlated with per capita energy consumption (r = -0.937) and per capita net availability of food grains (r = -0.0201). Similarly, per capita energy consumption was positively correlated with the per capita net availability of food grains (r = 0.3744). The government has initiated several programmes and policies to improve health and nutrition. As a result, there will be a greater need in the future for food availability, employment opportunities, health, and environmental sustainability.

T 11.4 Prevalence of Consanguineous Marriage and Child Nutritional Outcomes in India

Anirudha Mohapatra, Mahima Agarwala
Fakir Mohan University
Email: anirudhamohapatra030@gmail.com

Consanguineous marriage is defined as the unions or marriages between blood relatives. It has been practiced from ancient times by many communities. Consanguinity is both a social and genetic concept. Generally, it refers to marriage or a reproductive relationship between two closely related individuals. Consanguinity increases the chances of rare genetic congenital abnormalities and nearly doubles the risk of childhood mortality, mental disabilities. Some scientific studies have shown that consanguinity increases the deaths of infants. This study aims to portray the prevalence of consanguineous marriage and its impact on child health in Indian society. Using data from National Family Health Survey-5, we employed bivariate and logistic regressions on a sample of 18, 033 under-5 children to fulfil the aims and objective of the paper. About 26% of women in India and 30% of women from southern region states are in a consanguineous marriage followed by 25% women in central region states. Similarly, 30.95% children are stunted, and 36.01% children are underweight who are born to women married to their blood relatives. About 45% of consanguineous marriage have recorded from OBC communities whereas 15% in STs. The findings suggests that Consanguineous marriage is associated with child under nutrition includes underweight and stunting. It must be recognised as a key public health issue for Indian population. It is important that primary health care providers, specifically in highly consanguineous communities, have clear evidence-based guidelines in counselling a consanguineous couple to minimize their risks for having affected offspring. We need to make a national policy to reduce consanguineous marriage by educating public on the health risks associated with consanguineous marriage.

T 11.5 Exploring the role of Health Insurance on Catastrophic Health Expenditures among the Urban Poor Population in India

Ajay Kumar Singh
The Asia Foundation
Email: krsajay@gmail.com

In India more than fifty percent of the women under reproductive age suffering from anemia and Iron deficiency is one of the major causes of anemia. Therefore, the present study has been conducted to assess the nutritional status and dietary iron intake of rural women under reproductive age and also to analyse it's associations with sociodemographic attributes and socio. For the cross sectional study 371 women of reproductive age (15-49years) were randomly selected from Nere village of Raigad district. A structured questionnaire was used to collect the general profile of the participants and Kuppuswamy Scale was used to assess socio economic status. The height, weight, waist and hip

circumference were measured by standardized methods and BMI was calculated. The hemoglobin level of the participants were estimated through standardized method. A food frequency questionnaire and 24 hours diet recall (3 days) were taken to determine dietary iron intake of the participants. The data was analyzed by IBM SPSS Statistics for Windows version 24.0. Pearson Correlation was used to assess the association between different variables. In the study 45% of participant were normal 15% were overweight and 8% were obese remaining were in underweight category. The 30%, 12% and 8% of the participants were having mild moderate and severe anemia respectively rest were normal. Energy, protein, iron, vitamin C, B12, folic acid, calcium and zinc were inadequate among participants, may lead to iron deficiency anemia. Hemoglobin levels were significantly ($p \leq 0.05$) associated with education, family size, socioeconomic status and BMI of the participants. Significant positive correlation ($p \leq 0.05$) was found between hemoglobin and protein iron, vitamin C, zinc, calcium, folic acid intake. There is a need to plan an integrated comprehensive nutrition intervention program to improvise the overall nutritional status of rural women of reproductive age.

T 11.6 Knowledge about and barriers in the functioning of the RBSK programme in Maharashtra: Perspective from Health Care Providers

Akram Khan, R. S. Pol, Bal Govind Chauhan, Vini Sivanandan
Gokhale Institute of Politics and Economics
Email: akram.khan@gipe.ac.in

The present study tries to assess the knowledge practice among health care provider of RBSK in Maharashtra state. To fulfil the study objectives data from the field have been collected using the GOOGLE form from Jalgaon and Nanded district of Maharashtra. The quantitative and qualitative findings of the study indicate that unavailability of staffs, dissatisfaction among the all team members of RBSK regarding less remuneration and insecurity of the job, lack of coordination among the all line departments working for the welfare of the children are the major barriers in the functioning of the RBSK in both the districts. Moreover, the knowledge about the components and functioning of the RBSK among the health care providers was also the not at the satisfactory level. Based on the finding it is recommended that RBSK programme must be handled at PHC level to reduce the gap between students and parents with the RBSK team. There should be a separate RBSK section at the taluka level like CDPO and BEO, which should be full-time dedicated to the health care of 0 to 18 years' children. It is also recommended to enhance the coordination of all departments at block BEO, CDPO, THO, Nagarpalika and BDO.

Technical Session 12: South Asia Migration: SALAM –II

T 12.1 Return and Reintegration of Migrant Workers: South Asian Policy and Practices

Sayeda Rozana Rashid
Email: tuba.rmmru@gmail.com

Over the past few years, return and reintegration issues of South Asian labour migrants have received policy and research attention due to the pandemic, war and global economic crisis. The diversity in the patterns and drivers of return migration and the lack of reliable data and knowledge remained critical points, among other issues, to reach a standard and integrated policy. Against this backdrop, this paper seeks to analyse the return and reintegration policies and practices of the South Asian migrant-sending countries, namely Bangladesh, India, Nepal, Pakistan and Sri Lank. It will rely primarily on an extensive survey of existing data, research and documents. Both online and physically available study materials will be collected from government organisations, NGOs and

concerned international organisations. Expert interviews will be conducted as required to validate collected data and information. A critical review of the existing national, regional and international normative and legal frameworks of South Asian countries regarding the return and reintegration of migrants, pre- and post-pandemic drivers of return and reintegration strategies of the countries concerned will inform the paper. The paper will also highlight the good practices and the challenges of low-skilled workers' return and reintegration. The aim is to fill out the knowledge gap and identify the appropriate policies for making return beneficial for South Asian men and women migrants and ensuring their psychological, economic and social integration upon return during regular and crisis periods. The paper will provide food for thought for further research, advocacy and policies.

T 12.2 South Asian women on the move: Labour Trend and Avenues for the Inter-regional Cooperation

Khansa Naeem, Kashif Majeed Salik
Email: khansa@sdpi.org

The paper analyses the recruitment costs borne by migrant workers from the South Asian countries of Bangladesh, India, Nepal, Pakistan and Sri Lanka for labour migration to particularly Gulf Cooperation Council (GCC) countries, a major destination of labour migrants from the region. It provides a comparative perspective on migration costs and policy frameworks in the South Asian countries for governing labour migration and discusses their efforts and challenges in reducing costs of labour migration. The analysis is based on the data available from the websites and data portals of government and non-government agencies, and a review of academic and grey literatures available in the public sphere. The study finds a lot of similarities in recruitment practices and labour migration governance across the five South Asian countries selected for the study. All countries do seem to be concerned about the excessive recruitment fees and all of them express their commitments in curbing migration costs by setting up a maximum limit on recruitment fees. However, the record of policy implementation is poor. The recruitment agencies in every country collect significantly higher amount from migrant workers than they are authorised. Several factors have hindered the efforts at reducing recruitment costs for migrant workers in the South Asia: involvement of layers of informal agents/sub-agents in labour recruitment, unethical business practices of many recruitment agencies, poor implementation of existing policies on migration costs, unhealthy competition among recruitment agencies across the region in securing job demand from employer companies, lack of substantive support from destination countries and weak regional collaboration among labour sending countries. The study highlights the need for collaboration among labour sending countries and proactive roles of employer companies and destination countries in curbing high recruitment fees that have contributed to debt-migration and increased vulnerability of migrant workers. In South Asia, the ratio of female labour emigrants is significantly higher in Sri Lanka (39.4 per cent2), followed by Bangladesh (10.1 per cent3), India (0.3 per cent4), and Pakistan (0.2 per cent). Women face discrimination in legal and governing practices, making it impossible for them to participate fully and equally in labour migration. Furthermore, they are more vulnerable to gendered risks of exploitation, gendered working conditions such as pay disparities, a lack of social protection, and limited access to labour and human rights. These risks influence all stages of migration. To protect female workers, gendered emigration policies and practices must be prioritized by identifying gender gaps and providing legal assistance, social protection, and training to female migrants. Several international instruments aim to protect labour migrants on a global scale. Gender dimensions are reflected in the Sustainable Development Goals (SDGs) through Goal 5 (gender equality), Goal 10 (reducing inequality), Goal 16 (justice for all), and Goal 17. (Global partnership on sustainable development). These SDGs' targets reflect labour migration and employment, migration governance, social protection, and improved migrant workers' access to financial institutions through well-planned and managed policies. These targets, however, are gender-blind and ignore the ways in which gender influences migration. Similarly, the Global Compact on Migration (GCM) is gender sensitive, as evidenced by Goal 7. (Vulnerable groups). Gender, like human rights, does not have an object. Women continue to be apprehended as a special group (like children or migrants with

disabilities). The framework prioritizes protection over rights. It demonstrates that gender responsiveness as a guiding principle is still being mainstreamed unevenly and in the document. To effectively implement these instruments, a gender lens is required to capture the specific needs of female migrant workers. In this regard, this paper will investigate the nuances of feminization of migration as well as aspects of female migration in South Asia. It will begin with an overview of the increasing numbers of women in migratory flows, followed by a discussion of the key factors that keep women vulnerable and more vulnerable to exploitation, despite rising numbers and increased participation of women in the developmental dynamics of migration. The paper will also highlight some of the relevant governments' critical policy decisions. The paper will go over the regional migration governance model through the lens of gender.

T 12.3 Labour Migration Cost and Debt Burden in Migrant Households in South Asia

Sadikshya Bhattarai, Sujit Maharjan, Madina Rai and Arjun Kharel
Centre for the Study of Labour and Mobility (CESLAM)
Social Science Baha
Email: sbhattarai@ceslam.org

The paper analyses the recruitment costs borne by migrant workers from the South Asian countries of Bangladesh, India, Nepal, Pakistan and Sri Lanka for labour migration to particularly Gulf Cooperation Council (GCC) countries, a major destination of labour migrants from the region. It provides a comparative perspective on migration costs and policy frameworks in the South Asian countries for governing labour migration and discusses their efforts and challenges in reducing costs of labour migration. The analysis is based on the data available from the websites and data portals of government and non-government agencies, and a review of academic and grey literatures available in the public sphere. The study finds a lot of similarities in recruitment practices and labour migration governance across the five South Asian countries selected for the study. All countries do seem to be concerned about the excessive recruitment fees and all of them express their commitments in curbing migration costs by setting up a maximum limit on recruitment fees. However, the record of policy implementation is poor. The recruitment agencies in every country collect significantly higher amount from migrant workers than they are authorised. Several factors have hindered the efforts at reducing recruitment costs for migrant workers in the South Asia: involvement of layers of informal agents/sub-agents in labour recruitment, unethical business practices of many recruitment agencies, poor implementation of existing policies on migration costs, unhealthy competition among recruitment agencies across the region in securing job demand from employer companies, lack of substantive support from destination countries and weak regional collaboration among labour sending countries. The study highlights the need for collaboration among labour sending countries and proactive roles of employer companies and destination countries in curbing high recruitment fees that have contributed to debt-migration and increased vulnerability of migrant workers.

T 12.4 International Migration and Autonomy of Left behind Women: A Perspective from South Asia

Archana K Roy, KC Das, Reshmi RS, Kunal Keshri, Chandan Kumar and Kokila Shetty
International Institute for Population Sciences
Email: royarchana@iipsindia.ac.in

South Asia is the source country for the world’s largest stock of international migrants and the top recipient of remittances in the world ($163 billion in 2022). Physical separation of males from their families due to international labour migration is a predominant feature in the region. It has a profound effect on the left behind families, particularly on the women who stay back. Society becomes more equitable than earlier in terms of women’s rights, autonomy and access to resources. This paper

examines the consequences of international labour migration on the autonomy and decision-making of women in migrant households in India, Pakistan and Nepal. This Study is based on the Pakistan Demographic Health Survey 2017-18, and Nepal Demographic Health Survey 2016 which contains a set of questions on migration. For India data has been taken for a pocket of high international migration i.e., Eastern Uttar Pradesh, Bihar (2019-20) and Kerala (2018). Women's say in household expenditure, health care, mobility and access to the internet and banking are used as indicator of autonomy. The study compares the women from emigrant households with the women living in households with no migration. The result shows that though international labour migration is adopted as a temporary household's livelihood strategy, it plays a significant role in the autonomy of women, who live at the place of origin. However, the variation is observed in access to banking and mobile phone.

Technical Session 13: Maternal Health

T 13.1 Levels, Trends and Determinants of Skilled care during delivery in Malawi: Evidences from Demographic and Health Surveys, 1992-2016

Martin Enock Palamuleni
North West University
Email: mpalamuleni@gmail.com

The purpose of this study is to investigate the trends and factors influencing use of skilled attendants during delivery in Malawi. The study used data from the 1992, 2000, 2004 and 2010 and 2015-2016 Malawi Demographic and Health Surveys. The study focuses on the most recent births to women that took place during the five years prior to the date of the survey. Chi-square test and Logistic regression models were used to estimate the determinants of skilled attendants during delivery in Malawi. The study indicates that delivery by a skilled attendant increased from 53.9% in 1992 to 55.8% in 2000, remaining unchanged to 55% in 2004 and thereafter it increased to 75% in 2010 and 90% in 2015. Region, rural-urban residence, use of family planning and wealth status showed significant association with use of skilled care at delivery even after controlling for confounding factors. The findings of the study are used to provide insights for planning of maternal health service delivery in order to increase the pace towards achieving the SDG targets. Specifically, the Government of Malawi should intensify the process of improving the socioeconomic status of the women in the country.

T 13.2 Demystifying increase in the caesarean section deliveries in India

Sarang Pedgaonkar, Dhananjay Bansod, Manoj Alagrajan
International Institute for Population Sciences
Email: sarang@iipsindia.ac.in

The proportion of births delivered by caesarean section (C-section) is on rise in India. NFHS data over the years show that proportion C-section in five years prior to survey has increased from 9% in 2005-06 to 17% in 2015-16 to 22% in 2019-21. The proportion of C-sections is particularly high among deliveries conducted in private health facilities. Although C-sections are life saving for mother as well as child and can prevent many adverse outcomes associated with complicated deliveries, unwarranted C-section can cause profound damage to physical and mental health of a woman. Like most of the medical procedures, the need for C-sections is advised by the health care provider themselves and therefore, in popular explanation, the unethical practice and greed of medical professionals is held responsible for rising number of caesarean sections. Though this cannot be dismissed as entirely false allegation, a comprehensive approach is required to understand this complex phenomenon to arrive at some sustainable solutions. The indications for which C-sections is recommended by doctor and accepted by pregnant woman may vary based on number of children

desired and subsequent want to reduce the risks associated with even minor complications that can arise by opting normal vaginal delivery. Therefore, it becomes necessary to understand the characteristics of women utilizing C-section deliveries as compared to those who do not. The present study aims to understand variations of the contraceptive preferences, desired and actual fertility, ante-natal care received, and socioeconomic background among the women undergoing C-section for better comprehension of rising trend and to examine the possible linkages of recipient side determinants that may contribute to rising number of C-section deliveries. The present study has used secondary data from fourth round of National Family Health Survey (NFHS-4). Data from fifth round of NFHS (2019-21) will be added to analysis if unit level data becomes available within prescribed timeframe. NFHS provides information on population, health, and nutrition for India and it's each state and union territory. Each successive round of the NFHS aims to provide essential data on health and family welfare required by the Ministry of Health and Family Welfare and other agencies for policy and programme purposes, and to provide information on important emerginghealth and family welfare issues. n NFHS-4, from 28,583 primary sampling units across India, a total of 601,509 households, 699,686 women age 15-49 years, 112,122 men age 15-54 years were successfully interviewed. A two-stage sampling design was adopted in each district to ensure representation from urban-rural areas and every section of the society. The sample size is this study is 42884 women age 15-49 years who have undergone C-section in 5 years prior to survey. The association of C-section delivery and use of contraception, desired and actual fertility, and socioeconomic background, and socioeconomic background will be assessed using bivariate and multivariate techniques. Preliminary results reveal that C-sections were more common among women aged 25 to 34 years, residing in urban areas (28%) than rural areas (13%), belonging to households in wealthiest quintile (36%) than poorest (4%), and higher educated (39%) illiterate (6%) or less educated (12%). A little more than half (51%) of women who have undergone C-section reported use of any contraceptive method which was 40% among those who have not undergone C-section. In most of the women (85%) who have undergone C-section, the total number of children ever born were 2 or less than 2. These findings suggest women who are utilizing C-section are mainly urban dwelling, better educated, belong to wealthier households, willing to reduce fertility, and using contraception. The overall fertility of these women is also low. Such differences among women opting for C-section would not have been apparent if decisions to undergo C-section would have been based absolutely upon the greed affected recommendations of medical practitioners. In fact, it is very unlikely that these well informed women will opt for C-section solely on recommendation of medical practitioners that too on medically invalid reasons, as they do have knowledge and possess means to seek for second opinion. What this indirect evidence suggests is that, given the desire for small family and limited children, the overall tendency, of both practitioner as well as recipient, is to avoid any risk to the mother and the child. This ultimately results in practitioner recommending and utilizer accepting to undergo C-section over vaginal delivery even for many not-so-absolute indications of C-section. Thus the plausible reason for rise C-section delivery numbers can be the provider as well as utilizer side impetus to opt for C-section over normal vaginal delivery for many not-so-absolute medical indications of C-section and to certain extent some non-medical reasons for C-section.

T 13.3 Transition of Menstrual Health Practices in India in last two decades (2007-08 to 2019-21)

Puja Das, Suresh Jungari
International Institute for Population Sciences
Email: puja.dasiips1994@gmail.com

After the 75th year of Independence in India a significant change has occurred in India's overall demography such as fertility reduced, mortality decline, improvement in health care system due to economic progression and policy interventions. Despite of these improvements, India need to look at the menstrual health which is the unmet area of reproductive health. This study is going to explore transition in menstrual health in India. District Level Household Facility Survey data is used for trends analysis of menstrual disorders. Present study uses fourth and fifth round national Family

Health Survey (NFHS-4 and NFHS5) and Three and fourth round District Level Household Facility Survey (DLHS-3 and DLHS-4) to explore transition of menstrual health comprises disorders and menstrual hygiene from 2007-08 to 2020-21. NFHS data has been used to analysis transition in menstrual hygiene in India. Bivariate, logistic regression model and trend analysis have been applied for this study. This study has found that about 60% improvement happened in hygienic menstrual absorbents using young women in present time in India which seems sound four times more of DLHS-3 (2007-08). By using trend analysis, menstrual disorders decreased 10% in DLHS-4 as compare to DLHS-3. Menstrual hygiene improvement is associated with high wealth quantile, accessibility of toilet, higher educated women, belong from urban area, contact with community health worker regarding menstruation. Still regional disparity of menstruation hygienic practices exist in Central and Eastern India. This study reveals that menstrual hygiene is improved and 77% of young women use hygienic absorbents in India. Significant improvements occurred in menstrual hygiene in India due to launch of Swachh Bharat Mission and WASH programme. Government needs to launch policy specially focused on betterment of menstrual health management.

T 13.4 Bio-demographic aspects of post-partum amenorrhea period: A hospital-based cohort study

Akhilesh Kumar Pandey, Uttam Singh, C.M. Pandey, Vinita Das, Smriti Agarwal
Kasturba Medical College Manipal, Mahe, Karnataka
Email: akhileshstats@gmail.com

The current prevalence of contraceptive use of any method is 67 % among currently married women aged 15-49 in India. Also, the unmet need for family planning is 9 % for India and 13% for Uttar Pradesh (NFHS-5, 2022). There is a need to promote natural methods of family planning along with modern methods of contraceptives. Social and demographic factors for human fertility have been explained earlier, but biological factors associated with the PPA are not explored well. Thus, there is a need to investigate the biological determinants of PPA and propose appropriate interventions to delay PPA. Objectives: 1. To estimate the impact of socio-demographic factors on the duration of PPA - 2. To study the biological determinants of PPA. The study has implemented the observational prospective cohort study design . Data have been collected from a pre-designed and pre-tested structured questionnaire prospectively from 334 pregnant women whose pregnancy was in the third trimester, and registered for ANC to Queen Mary hospital, KGMU, Lucknow for current pregnancy during 2015 to 2017. Blood samples have been taken at 6th-weeks of follow-up of delivery and followed-up at 3rd month, 6th month, and 9th month after delivery or up to the resumption of menstruation but not more than 18 months of delivery. Multivariable logistic regression was used to find the factors associated with longer PPA. Out of a total of 334 women, 39.8% were having their PPA >6 months and PPA duration (in months) of 3.46 Â± 1.12, whereas 60.2% had <6 months and PPA duration (in months) of 10.07Â± 1.63. Illiterate mother [OR=5.67 (1.218-26.394)], fewer surviving children, second parity, exclusive breastfeeding, and increased prolactin levels are the important factors to prolong the PPA.

T 13.5 Geographical Pattern of Pre and Post-natal Care among Tribal Women in India: A Study based on National Family Health Survey (2005-06 to 2019-21)

Aradhana Kumari
Jawaharlal Nehru University
Email: aradhanas113@gmail.com

Till today, the tribal population lag behind in several vital health indicators from national average with females and new born being the most vulnerable. The persistent discrimination and violation of rights for decades made tribal women stands far behind the national population in economic, social and health spheres. In India, more than 50 percent of total maternal deaths occur among tribal. In

recent years India has shown a decline in Maternal Mortality Rate and increase in Antenatal care (ANC), while the MDG target has not been achieved yet but still it is encouraging to note that there has been over a 50-percent decline in the last two decades. At an outset, we have three-fold objectives for this study which will utilise NFHS data. First objective is to analyse the geographical pattern of the utilization of ANC, delivery care and Post-natal Care (PNC) services among tribal in India. The second objective is to access the socio-economic group wise utilization and the third is to estimate the recent correlates of ANC, PNC and Institutional delivery. The results shows that the percentage of tribal women taking hundred Iron and Folic Acid tablets during pregnancy has been increased from 11.1% in 2005-06 to 45.83% in 2019-21. Also, the percentage of tribal women with at least four ANC visits and two Tetanus Toxoid has also been increased from 2005-06 to 2019-2021. The institutional delivery and PNC also shows a increasing trend from 2005-06 to 2019-21. The analysis of socio-economic background wise coverage of full ANC, PNC and institutional delivery shows that it is higher among the tribal women living in urban India, highly educated women, Hindu tribal women and the richer tribal women.

T 13.6 Growing Concerns of Hysterectomy among Older Women in India: Evidence from National Family Health Surveys

Ranjita Ghosh, T S Syamala, Arupendra Mozumdar
Institute for Social and Economic Change
Email: ranjita@isec.ac.in

India has been experiencing a life expectancy increase, particularly among females indicating that there will be a sizable number of women passing through reproductive ages and living in their menopausal ages. Recent NFHS data shows that hysterectomy has become a growing concern among older women. However, it has received less focus. Moreover, there is a lack of studies investigating predictors of hysterectomy separately across the 30-40 years and above 40 years age group. Thus, this present study will investigate these issues. The main objective of this paper is to understand the level, trends, and spatial variation of hysterectomy in India and its socio-economic correlates. Further, it tries to understand the predictors of hysterectomy. The study used different rounds of NFHS data for analysis. Choropleth maps were made to show spatial variation. Bivariate analysis and binary logistic regression were used to understand the correlates and predictors of hysterectomy. Spatial analysis showed that Bihar, Telangana, Andhra Pradesh and Karnataka have a high percentage of women undergoing hysterectomy. Excessive menstrual bleeding was the major cause of hysterectomy. Binary logistic regression found different socio-economic factors, such as residing in rural areas, being uneducated and being in a poor wealth quintile, to be significant for undergoing hysterectomy. While among other correlates, being obese, having four or more children, being anaemic and contraception use were significant predictors for hysterectomy. The study recommends improving the educational and nutritional status of women. Educating women about their gynaecological health can help them understand their bodily changes to identify gynaecological issues earlier, reducing hysterectomy. Focus on women's gynaecological health should be given in the states where hysterectomy is high and public health programmes should focus on women's gynaecological health during the later phase of life.

Technical Session 14: Livelihood and Healthcare

T 14.1 Domestic Work, Livelihoods and COVID-19: An Analysis of 38 Domestic Workers in Titwala

Madhuri Sharma, Sujayita Bhattacharjee
The University of Tennessee, Knoxville, USA
Email: msharma3@utk.edu

This study uses semi-structured interviews and other secondary data from journals, news reports, and books to delve into the nexus of the pandemic, gender, and livelihoods of 38 domestic workers in Titwala, an extended suburb of Mumbai Metropolitan Region (MMR) in India. We chose these domestic workers in this analysis as their lives and livelihoods were totally changed due to the onset of the COVID-19 pandemic-induced lockdowns. Through use of multi-tiered qualitative and basic quantitative approaches, we explore the impact of livelihood losses, and other related impacts on the lives of these domestic workers and their families. Titwala had recently emerged as a preferred residential area of the MMR and due to fast growth of residential real estate within the last decade, this area too had witnessed a tremendous influx of households where many female domestic workers found employment—a supply-induced-demand due to the typical lifestyle maintained by most middle-class families in Indian society. Due to the pandemic-induced lockdown in Mumbai and all over India, many of these domestic workers not only lost their livelihoods, but also other types of impacts including their children's education. After the end of the lockdown, the return of these domestic workers' back to work was largely marked by underemployment, reduced wages, loss of bargaining power, accumulated debts, COVID-19-induced social discrimination, and children's loss of access to education--a side effect of lack of access to Internet for their school-going children. The loss of bargaining power and social discrimination faced by these domestic workers during the lockdown once again brought to limelight the inherent insecurities embedded in the varieties of informal economy, where a significantly larger share of women end up engaging in. In discussing the loss of livelihoods by these 38 domestic workers, we draw the attention of the government toward proposing legal pathways for recognizing not only the domestic work, but a wide variety of informal work, workers and informal economy as that comprise a significantly larger share of total employed in this country. We propose recognizing domestic workers and other informal workers because right to work is a basic human right, and right to earn a livelihood to provide a decent quality of life should be a basic human right too.

T 14.2 Non Communicable Diseases services through Health and Wellness Centers A service users perspective from Districts of Karnataka

Praveen K. Chokhandre, M S Kampli, H R Channakki
PRC Dharwad
Email: praveenchokhandre@gmail.com

A recently launched AB-HWC is crucial for realization of aspiration for Universal Health Coverage. The specific objective of the study is to understand the service users' experiences and their feedback as it is utmost important to devise further strategy. A primary cross-sectional survey data has been collected during February, 2022 using a mix method approach. A structured interview schedule has been design to capture the information on socio-demographic and access to healthcare services. Similarly, qualitative tool developed to garner the information on experiences of healthcare services as well to capture their feedback. Two district from Karnataka State i.e. Yadgiri and Raichur were selected. A stratified sampling design has been applied to select the HWCs. In the first stage, two blocks from each district and in the second stage, from each block two HWCs were randomly selected. A total of 220 interviews were conducted. Findings from the study suggest that service users were reasonably satisfied with services related to HTN/DM through HWCs, but expecting additional

services particularly related to geriatric care and for general ailment. Regarding initial screening experiences, most of the service users reported that the health staff screened them patiently (94%) and about 88% of respondent suggest that healthcare services are available whenever it is required such as screening, drugs, diagnostic and counselling services in HWCs. Similarly, 90 percent of respondent reported that health staff have asked to visit for next follow-up. Strikingly 95 percent of respondents were not aware of tele-consultation services. Further, service users' share their concerns and feedback related to additional required services, transportation related issues, concerns related to outreach activity, shortage of HTN/DM medicines, behavior of health staff and tele-consultation services.

T 14.3 Employment Status and Socio-Demographic Characteristics of Person with Disabilities in India: An Estimates of Household Survey Data (2018-2019)

Farhana Khatoon
Vivekananda College
Email: farhana.khushi@gmail.com

Disability is the physical, mental and sensory impairment of the whole or part of the body. Data shows that people with disabilities face greater barriers to education and employment opportunities than people without disabilities. Since independence India has experienced tremendous economic, social and political change which in turn has placed the country on the path of modernization and development, however, the most of these changes have not percolated well across all sections and strata of the population. In this background the study examines the prevalence, difficulties faced in access to public transport and the employment status of Person with disabilities (PWD). The primary goal is to assess the employment status as well as the socio-demographic characteristics of people with disabilities aged 15 to 59 years. The National Sample Survey (NSS) database of the 76th round survey on Persons with Disabilities in India (Unit Level Records) for the years 2018 was used in the study. The total number of people with disabilities surveyed in this survey is 1, 06, 894. (74, 946 in rural areas and 31, 948 in urban areas). When analyzing employment characteristics, both the Principal Activity Status and the Subsidiary Activity Status were taken into account. A person employed in 'Usual Principal Status' (UPS) or 'Usual Subsidiary Status' (USS) is considered to be in 'Usual Status' (UPSS). We have used descriptive statistics, bivariate analysis to assess the employment status of PWDs. The result suggests a significantly higher prevalence of locomotor, visual and hearing disabilities. Among persons with disabilities work participation rates are only 22.8 per cent. It was found that several factors such as residence, caste, educational levels, income, difficulties in assessing public building and public transport has an impact on the employment status of PWD.

T 14.4 Unpaid Burden Among Women Of Working Age Group Residing In Rural Areas Of Mandya District: A Cross Sectional Analytical Study

Raghavendra Kumar C, Vijayashree S. R
Mandya Institute Of Medical Sciences
Email: raghavendra.hims@gmail.com

Gender dividend is increase in the volume of market (paid) work and the level of productivity of the female population. It suggests that economies could be more productive and equitable by closing gender gaps in the labour market. Unpaid burden refers to women performing the bulk of unpaid dependent care and household work. The Periodic Labour Force Survey (PLFS) by National Statistical Office showed that Labour Force Participation Rate (LFPR) in India for women in working age group is 33% in rural areas. To determine the unpaid burden among women of working age group residing in rural areas of Mandya district and to determine the factors associated with the unpaid burden among women of working age group. Cross-sectional analysis of data collected from a

community based cross-sectional study was conducted rural areas of Mandya district. Women of working age group (≥16 years and ≤ 64 years) in selected PHC areas of Mandya District were recruited into the study. Total of 1110 participants were recruited. Unpaid burden among rural women was found to be 62% (95% CI: 59.1 to 64.9). Unpaid burden was found to be higher among married women (74.3%). Unpaid burden was found to be lesser among rural women who have studied up to Graduate level (32.1%) and Post graduate level (18.5%). Unpaid burden among rural women was higher among age group 30-39 years (65.8%) and > 60 years (75.0%). Among women who are < 19 years of age unpaid burden was found to be 7.8%. It was found that the Unpaid Burden among rural women of working age group is 62%. The age, marital status and level of education are factors that are found significantly associated with Unpaid Burden among rural women.

T 14.5 Middle class in India: Issues and Challenges

Shivani Giri, Subramanian S
Christ University
Email: shivani.giri@res.christuniversity.in

The Middle class in India is an economically significant group that supports and balances the aspirations of the rich and opportunities for the poor. A class that accelerates not only economic growth but also supports vibrant political democracy and social harmony. The middle class is too diverse regarding salaries, social position, occupations, skills, and educational credentials. As per the Pew, Research centre report, the middle class in India is estimated to have shrunk by 32 million in 2020 as a consequence of the downturn and economic slowdown. Considering the importance of middle class in India's economic development, this paper focuses on the status of the middle class, its structure and the significance of the labour market. The study explores and traces the middle-class and their employment and unemployment status based on the NSSO's Employment and Unemployment Surveys (EUS) and Periodic Labour Force survey (PLFs). The study traces the development of the middle class from the 1990s till date. The composition of the middle class is very diverse in every perspective most often, and people use income as an important indicator to identify or measure the middle class. In this paper, we used consumption thresholds based on the 2011 Purchasing power parity (PPP) terms to define different groups within the middle class like, from the emerging middle class to the higher middle class. We also looked into the various problems and challenges faced by the middle class.

T 14.6 Association between digital literacy and utilization of healthcare services among women in India

Liza Kumari Gouda, Grace Mundu
Fakir Mohan Universit
Email: liza.odisha@gmail.com

Digital literacy is the ability to use information and communication technologies like social media, internet platforms and mobile devices to find, create, evaluate, and communicate pieces of information. The potential of mobile phones in catalysing development is increasingly being recognized. However, numerous gaps remain in access to phones and their influence on health care utilization. Multiple studies support the idea that mobile phones are a tool for economic growth, and empowering women improves the overall wellbeing of families from an economic perspective. Empowering more women with mobile phones has the potential to accelerate social and economic development and the same has been extrapolated to health as well. To explore the association between Digital Literacy and utilization of healthcare services among women in India. This study utilized secondary data from the fifth round of the National Family Health Survey-V (NFHS-5), conducted during 2019-2021 in India. Descriptive statistics and multinomial logistic regression were used for statistical analyses of the data. Current study found in India 54.5% women have access to

mobile phone and they are using it and 66.8% women have ever used internet. Likewise, Mobile phone use is high in Goa (91%), Kerala (86%) and Lakshadweep (84%). Whereas state like Madhya Pradesh (36%), Chhattisgarh (39.2%) and Gujrat (45%) women are having low access and use. This study shows significant association between digital literacy and healthcare utilization among women in India. Phone access and use of internet was positively associated with skilled birth attendance, postnatal care, and use of modern contraceptives. Phone access was not associated with improvements in utilization indicators in rural settings.

Technical Session 15: Elderly wellbeing

T 15.1 Social security programs for elderly in India: Awareness, utilization and barriers

T.V. Sekher
International Institute for Population Sciences
Email: tvsekher@iipsindia.ac.in

This paper deals with emerging ageing scenario in the country and its implications for providing social security measures for rapidly growing aged population. With just 100 million elderly in 2011, the country poised to have around 300 million elderly by 2050. This demographic shift will have considerable challenges on social, economic and health dimensions of aged, particularly the poor among them. The paper specifically examines various ongoing social security programs for elderly and issues related to its awareness, coverage and problems in implementations. Various concessions/ benefits given to senior citizens in India is also examined in terms of their awareness and utilization, as well as legislations like Maintenance and Welfare of Parents and Senior Citizens Act. The available evidence from Longitudinal Ageing Study in India (LASI) indicates that the coverage and targeting of welfare schemes, including old age pensions, need to be improved considerably and both central and state governments need to coordinate effectively. The two main reasons reported for not availing the social security schemes is that the process of enrolment in the scheme is cumbersome and because of not having the required documents. The social security measures for elderly on the whole is inadequate and caters only a segment of the needy population. Better targeting of national programs with special focus on elderly women (more so on elderly widows) is required to address the extent of poverty and income insecurity.

T 15.2 Experiences of age norms and ageism among older persons in urban India

Lekha Subaiya, Divya Sivaramakrishnan, Vani B P, Syamala T S
Institute for Social and Economic Change
Email: lekha@isec.ac.in

Ageism (directed at older persons) has been defined as stereotypes, prejudice or discrimination against older persons on the basis of their chronological age or the perception of them as being ‘old’. Age norms are social rules for age-appropriate behaviour and socially expected roles. Ageism can have a detrimental effect on health, and has been shown to impact cognitive and physical functioning of older persons. During the Covid-19 pandemic, older adults have been portrayed as a homogeneously frail and helpless group in public discourse, reinforcing age-divides in society. While researchers have contemplated and theorised about ageism and age norms relating to older age groups in India, these have not been explored qualitatively to understand experiences and context. This study aims to explore positive and negative experiences of ageism and the influence of age-norms on the lives of older adults in India. To this end, focus groups and interviews were conducted with a total of 21 older adults from Bangalore, Mumbai and Chennai (11 female and 10 male, mean (SD) = 73.52 (8.84) years). Older adults were recruited through convenience and snowball sampling.Online focus groups and interviews were conducted over MS Teams. Thematic analysis

method was used to analyse the data using Nvivo. We found that the norm of children having to look after their parents is changing in urban India, and older adults see themselves as financially independent with rich lives and diverse interests. While ageism is not explicit, it is present in institutions such as healthcare and the lack of age friendly cities. Recommendations include promoting a positive view of retirement homes among older people and their children and ensuring that infrastructure and services such as roads, public transport, healthcare and insurance meet the needs of a generation of older adults who are seeking new experiences, learning and fulfilling lives.

T 15.3 Economic Health of Elderly Households in India: An evidence from LASI

Dipti Govil, Harihar Sahoo, K.S. James and Srei Chanda
International Institute for Population Sciences
Email: dgovil@iipsindia.ac.in

Using data from Longitudinal Aging Study in India (Wave-I), 2017-18, the paper examines the monthly per capita household expenditure and health spending among 41,100 elderly and non-elderly households in India. The households are classified into four categories based on type of headship and family composition: non-elderly households (households with no elderly member), exclusively elderly households (with elderly head) and multigenerational households with non-elderly head and with elderly head. Three outcome variables like monthly per capita expenditure (MPCE), monthly per capita health expenditure (MPCHE) - standardised for 30 days and health expenditure adjusted MPCE, are considered. Descriptive statistics, linear regression and a two-part model are used to measure the differentials in expenditures across households. Results indicate that the MPCE, health adjusted MPCE and MPCHE were higher among exclusively elderly households than other households. Proportion of non-food expenditure was also higher among these households. The expenditure increased with educational attainment, satisfaction with financial condition of the household, age, members with chronic disease, and place of residence. Among elderly households, the health adjusted and not adjusted expenditure declined with increase in number of elderly in the household while MPCHE increased. Controlling different socio-economic and demographic characteristics, the month per-capita household expenditure among elderly households was significantly greater than non-elderly households, while health adjusted MPCE was lower in exclusively elderly households. The health expenditure is catastrophic for households with elderly members especially exclusively elderly households. Based on the findings, the paper suggests to strengthen the social security system, access to health insurance and spending on geriatric care to strengthen the quality of life of elderly in India.

T 15.4 Socioeconomic inequality in cognitive impairment among elderly and its determinants in India: Evidence from Longitudinal Aging Study in India, 2017-18

Madhurima Sharma, Manas Ranjan Pradhan
International Institute for Population Sciences
Email: madhurimasharma1@gmail.com

Cognitive impairment (CoI) is a significant risk factor among the elderly and a major burden on public health. CoI is a condition in which a person struggles to recall, learn new things, focus, or make decisions that have an impact on his or her daily activities. This study unearths the degree of socioeconomic inequalities and assesses the determinants of CoI among the elderly in India. Elderly aged 60+ years (n=31, 646) data gathered in a nationally representative LASI (2017-18) was analysed through STATA 16.1. Binary logistic regression, concentration index and curve, and Wagstaff Decomposition analysis were performed to assess the socioeconomic inequalities and the determinants of CoI. Sixteen percent of the elderly had CoI. Females (OR=1.88, 95% CI= 1.70-2.09), those aged 80 plus years (OR= 3.98, 95%CI = 3.56-4.44), from ST (OR=2.65, 95%CI=2.32-

3.02), with perceived poor health (OR=1.61, 95%CI=1.45-1.79), with depression (OR=1.32, 95%CI=1.21-1.43), with no schooling (OR=16.46, 95%CI= 11.31-23.97) with 1+ADL (OR=1.43, 95%CI=1.31-1.57) and 1+IADL (OR=1.30, 95%CI=1.19-1.41) had higher odds of CoI than their respective counterparts. Elderly from urban areas, higher income groups (OR=0.61, 95%CI= 0.53-0.70) and higher education level with sources of financial support less likely to experience CoI. Economic inequalities exist in the distribution of CoI-the poorest being the most disadvantaged (concentration index value= -0.118). The findings advise raising awareness and developing more customized policies/programs to reduce socioeconomic inequalities in CoI among India's elderly. The improved mental health of the elderly will contribute to achieving Sustainable Development Goals, including Goal 3 on guaranteeing good health and well-being for all.

T 15.5 Physical and Psychosocial Health of Sandwich Generation Caregiving Couples in Mumbai City

A.H. Sruthi Anilkumar, T.V. Sekher
International Institute for Population Sciences
Email: shrutz91@gmail.com

While the importance of caregiving for the quality of life of older adults is recognized, a lesser-researched area is the effect of caregiving on the life of caregivers. Caregivers can suffer health problems due to insufficient time or energy to care for themselves. Hence, it is essential to understand how providing care to two generations simultaneously affects the caregiver's physical and mental well-being. Thus, this study's primary objective is to comprehensively understand the effects of being in three-generation households on the health status of sandwich-generation couples. Additionally, the paper explores the different burdens that sandwich-generation couples face. The study uses primary data from 300 multigenerational households and, for comparison, 100 two-generation/one-generation households in Mumbai. We have considered four health variables to analyze health status levels and differentials. To understand the effect of caregiving on health and well-being, we have considered the different burdens experienced by caregivers. Both bivariate and multivariate analysis has been performed in the study. Results show that the morbidity prevalence is high among both types of households; the extent of both short-term and long-term morbidity is greater among three-generation households, and the difference is significant for all types of morbidities. The share of those suffering from objective and subjective burdens in the sample is relatively high; there are considerable gender differences. The association of many of the selected background variables is statistically significant; age, education, income, and work status were among the significant correlates. Caregiving to two generations simultaneously is a task for middle-aged couples. India, which has been witnessing an increase in the aging population in the last few years, needs to be prepared for the burdens these middle-aged couples will face in the coming years.

T 15.6 Living Arrangements and Care Needs among the Older Population in India

Madhubrota Chatterjee, T.S. Syamala
Institute for Social and Economic Change
Email: madhubrota@isec.ac.in

As the Indian population continues to grow old, the demand for integrated care is increasing. There is a linkage between living arrangements and care, more contested for older persons. In India, the well-being of the elderly critically depends upon the care provided by the family rather than any other form of care. However, as the family's ability to provide elderly care diminishes when children move out, the proportion of elders living alone is increasing. Thus, knowing how their care needs are managed when they choose to live by themselves is crucial. This paper studies the functional care needs of older people and their provision of care across age, gender, and living arrangements. Using the Longitudinal Ageing Survey of India (LASI), wave 1 data, the samples considered for this study

are from the age of 60 years and above comprising 31, 902 older people. Both bi-variate analysis and chi-square analysis are employed to demonstrate the association across age, gender, and living arrangements. Results show that females have a higher incidence of functional limitations than males, which increases with increasing age groups. Co-habitation with spouses has shown a lesser incidence of facing limitations among the living arrangements, similarly, the spouse is the most valuable caregiver. Children are the major caregiver for older adults living alone. The elders living alone are receiving more paid help from non-household caregivers. In conclusion, the findings suggest more female-centered policies since females are more susceptible to functional limitations. There is a dire need for proper programs for those elders who live by themselves. At the same time, as informal care is gradually reducing due to changing socio-demographic contexts, there will be a high demand for market-based or any other professional care, hence policy imperatives towards making aging in India smooth should be mandated.

Poster Session I

P 1.1 The Contribution of the Backward Group on the Fertility Lowering NFHS-1 to NFHS-5

Roni Sikdar, Dhananjay W. Bansod
International Institute for Population Sciences
Email: ronisikdar16@gmail.com

Although the mean children ever born (CEB) to women has been decreasing over the years across the different groups, the contribution of the various groups is not similar. Although, women from better off groups achieved lower fertility level which is observed, the declining in fertility level among the women from socially backward and their contribution is still ignored by previous works. We are interested to understand the differentials of mean CEB to women age 15-49 by different distal factors and the contribution of the socially backward women on the declined mean CEB in India. Two rounds conducted in 1992-93 and 2019-21 of National Family Health Surveys (NFHS 1 and 5) were utilized. Mean CEB was defined as the number of children ever born to a woman aged 15-49 age cohort. Distal factors such as age, gender, education, social category, religious community, wealth condition, place of residence, and geographical region were included. Schedule caste (SC) and Schedule tribe (ST) were defined as socially backward group. Descriptive statistics, poission regression, and Oaxaca decomposition were employed. The mean CEB was found lower across the different distal factors. The percentage of decrement of mean CEB from NFHS 1 to 5 was found higher among the socially backward SC women (27.2%), followed by other (26.0%), and ST (22.9%). Result from Poisson regression showed that ST (IRR: 0.96, $p<0.001$) and other (IRR: 0.93, $p<0.001$) women were lower likely to have higher children than women from SC group. Decomposition result showed that social group had 25% contribution on the declined fertility (1992-93 to 2019-2021). Although, each distal factor, including SC category, contributes almost equally to decreasing the fertility level among women, still SC women are having more children and social group holds a substantial contribution on declining fertility in India.

P 1.2 A Study on Fertility Transition in India and Major States from 1971 to 2020: Using Reproduction Rates.

Aslama M J, P. Mohanachandran Nair
University of Kerala
Email: aslamamjaslama@gmail.com

The reproduction of the population refers to a change of a generation into a new one. Fertility has been declining in India for some time now. Decline in fertility rate is an integral part of demographic transition. Fertility is likely to continue to decline and it is estimated that replacement TFR of 2.1 would soon be, if not already, reached for India as a whole. As fertility declines, so does the population growth rate. The timing and speed of fertility transition in Indian states are different. (a) To estimate the various measures of reproductivity and observe their trends in India and its major states. (b) To analyze the percentage of decline in reproductive measures and the Reproduction survival ratio in India and the major states. This study used the data from the published reports of Sample registration system (SRS) and life table constructed elsewhere for the period 1971 to 2020 are utilized for utilized for the analysis. The measures for the analysis are: Total Fertility Rate (TFR), Net Reproduction Rate (NRR), Gross Reproduction Rate (GRR), Mean Age of child bearing (MAC) and Reproduction Survival Ratio (RSR). 15 major states namely, Kerala, Tamil Nadu, Karnataka, Andhra Pradesh, Madhya Pradesh, Maharashtra, Utter Pradesh, Rajasthan, Bihar, Punjab, Odisha, West Bengal, Haryana, Gujarat, and Assam are selected for this study. Percentage of changes in reproductive measures such as GRR, NRR, MAC and RSR , in India had shown GRR is declined to 52 percentage over the decade 1971 to 2020.Compared to other states and national level value the

RSR shows gradual increase in Kerala. In 2011, the RSR of Kerala is 0.9797. RSR helps to explain the survival status of women in the reproductive period at national and state level.

P 1.3 Measuring change over half a decade in the prevalence of risk factors associated with child stunting in India: evidence from the three rounds of the National Family Health Survey

Prateek Singh, Sabarisakthi M
Institute of Economic Growth
Email: prateeksingh22120810@gmail.com

Stunting is a cross-cutting problem that is highly prevalent in undernourished children and is identified as a major global health problem. Globally 149.2 million children under the age of five are suffering from stunting. In this study, we tried to understand whether the community and individual-level maternal and child factors that influenced it 15 years ago are still affecting stunting or if there has been any change in its effectiveness. We used three waves of NFHS (NFHS-3, NFHS-4, NFHS-5) conducted by the international institute for population sciences. We ran a series of logistic regression models to assess the independent and joint associations between the identified correlations. Stunting Showing a decline trend (48.0% in 2006, 38.4% in 2016, and 35.5% in 2021) from 2006 to 2021 but the mean Z-score (-3.2 in 2006, -3.0 in 2016 and -3.1 in 2021) have no change in half s decade. Short Maternal stature (OR>2.0) and Maternal education (OR>1.3) are main factors of stunting in 2006 but in 2016 and 2021 household wealth (OR>1.4) is also playing a major role. 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 to ensure that children reach their maximum potential as they grow up.

P 1.4 An assessment of reasons of high child under-nutrition in India

Itishree Naik, Jagannath Behera
Fakir Mohan University
Email: itishreenaik17@gmail.com

The nutritional status of children has not improved as expected with rapid economic development even if there are many policies to improve nutritional status of children. ICDS is one of the most important supplementary nutrition programmes which will fill the unmet need for nutrition among children. However, the effect of supplementary food programme is not effective. Objective The paper tried to assess the transition of under-nutrition among children in India. Further, this paper tried to understand the role of supplementary nutrition and reasons of high child under-nutrition in India. Methods We have used both secondary and primary data for the analysis. NFHS-V data is used as secondary source, while the field survey data from Odisha is used as primary source. Both bivariate analysis and logistic regressions have been carried out for the data analysis purpose. Result This study shows, over the last three decades the percentage of under-weight children declined by only 18 percent point. The status of stunting among children has declined by 14 percent point over three decades. There is no significant change in wasted children. Further, two thirds of children only access to supplementary nutrition given by the ICDS centres. The children are using supplementary food as complementary to their home food. Conclusion Current study reveals that the access to supplementary nutrition is not improved since last two decade (from 2005 to 2021) as revealed by NFHS. There is no significant difference in nutritional status between those access and those who don’t access food from ICDS among children belonging to poor households. The absence of home visits by AWC for nutrition education; and poor feeding practices at Anganwadi centres as well as

home are the major reasons of child under-nutrition. The current situation on child under-nutrition calls for in-depth analysis of the impact of supplementary nutrition.

P 1.5 Trends in Absolute and Relative Health Inequalities in India, 1980-2022: Do Inequalities Are Swimming Against the Progress in Average Health Status?

Mahtab Alam, Srinivas Goli
International Institute for Population Sciences
Email: mahtabalam7861231@gmail.com

Measuring trends in health inequalities provide a critical assessment tool for monitoring the health progress of differently placed individuals. This study examines inter-state health inequalities in India over the last three decades (1980-2021) using both absolute and relative measures of health inequalities. We use two indicators of health: Life Expectancy at Birth (LEB) and Infant Mortality Rate (IMR). The former represents overall health status and the latter is considered a sensitive measure of state health status. We use population-weighted Average Inter-Individual Difference (AID) and Gini index representing measures of absolute and relative inequality, respectively. The findings showed significant progress in terms of reduction in IMR. Also, the increase in LEB suggests decent progress over the last three decades. For LEB, inequality estimates suggest a reduction in both absolute and relative inequalities. While in the case of IMR, absolute inequalities are declining, but relative inequalities are rising. However, the picture is different for rural and urban areas. In the case of LEB, absolute and relative inequalities declined in Urban areas, while in rural areas, both increased for the recent period, 2011 to 2021. For IMR, absolute inequalities are declining in rural and urban areas, while relative inequalities are rising. Overall, the findings suggest a setback in progress toward reduction in health inequalities, especially the relative inequalities, are the cause of concern.

P 1.6 Understanding changes in trends and inequalities in hospitalisation in India - Evidence from the national sample survey

Abhishek Anand, T.R. Dilip
International Institute for Population Sciences
Email: anandabhishek361@gmail.com

Hospitalization or inpatient care is an important factor in determining the efficacy of a healthcare system. However, evidence on inpatient care, including the trends and socioeconomic inequality on a macro level, is limited in India. This study aims to explore trends, differentials, and inequality in hospitalisation in India for over two decades. Data from the 52nd round (1995-96) and the 75th round (2017-18) of the national sample survey were used to examine trends and inequality in hospitalisation in India. Multivariable binary logistic regression and multivariate decomposition were conducted to examine the correlates and contribution of correlates to the change in hospitalisation over two time periods. Additionally, the concentration index was used to assess the wealth-related inequality and further, the inequality was decomposed to obtain the factors contributing to the inequality. The hospitalisation cases in India increased from 1.6% in 1995-96 to 2.8% in 2017-18. The hospitalisation percentage has almost doubled among older adults during 1995-96 to 2017-18. Additionally, income-related inequality in hospitalisation was reduced significantly by almost half in those two decades. Results from multivariate decomposition show that of the total change in hospitalisation between two rounds of surveys, 36% was accounted by endowment effects. Change in the MPCE quintile of the population contributed to the largest increase in hospitalisation, followed by the change in the population's age composition, which also contributed a substantial amount to the change in hospitalisation between surveys. This study provides evidence of changes in trends and inequalities of hospitalisation cases over two decades and confirms the decline of pro-rich inequality in

hospitalisation in India. However, inequality still exists, and government programs providing financial assistance to the vulnerable may help reduce this inequality.

P 1.7 Epidemiological surveillance of self-reported heart disease among men in India

Ananya Kundu
University of Calcutta
Email: kunduananya55@gmail.com

One of the growing public health concerns in India is heart disease among men. Significantly, 24% of non-communicable deaths in India are attributable to heart disease (CVDs). Though women outlive men in heart disease, there is scarcity of studies stressing on heart disease in men in India. Therefore, this study intends to close this research gap by examining the risk factors for heart disease among males in urban India. Using data from the latest round of National Family Health Survey (NFHS-5), a cross-sectional sample of 1529 men between the ages of 15 and 54 years was analyzed. Bivariate statistics and multivariate logistic regression were employed to evaluate the determinants of heart disease. Prevalence of self-reported heart disease among urban men was 1050 per 100000 in India. Men belonging to the elderly age bracket of 50-54 years (OR: 4.68, 95% CI: 2.92-7.49), Muslim religious affiliation (OR:1.53, 95% CI: 1.20-1.95), the poorest households (OR: 1.67, 95% CI: 1.19-2.33), rural areas (OR: 1.32, 95% CI: 1.07-1.63), southern (OR: 2.06, 95 % CI: 1.50-2.84) and northern (OR: 1.59, CI 95%: 1.16-2.19) region of the country, consumed tobacco (OR: 1.40, 95% CI 1.19-1.65) and those suffering from cancer (OR: 50.99, 95% CI: 34.66-75.03) and diabetes (OR: 5.29, 95% CI: 4.23-6.62) were more likely to develop heart disease. Whereas men with higher education (OR: 0.85, 95% CI: 1.10-1.66), Christian (OR: 0.69, 95% CI: 0.46-1.04), Scheduled Caste (OR: 0.87, 95% CI: 0.68-1.12), Scheduled Tribes 14% (OR: 0.86, 95% CI: 0.65-1.13) had lower odds of suffering from heart disease. Findings reported significant differentials by socioeconomic, biological geographic and behavioral factors in prevalence of heart disease among men. Therefore, it is crucial to consider the aforementioned determinants of heart disease among men while framing any health intervention.

P 1.8 Role of intimate partner violence in increasing sexually transmitted infection-related risk among women in India: A propensity score matching analysis

Mahashweta Chakrabarty, Aditya Singh
Banaras Hindu University
Email: mahashweta.c1997@gmail.com

Intimate Partner Violence (IPV) against women can have direct consequences on women's health. Despite evidence from many developing nations that IPV is linked to both reproductive tract diseases and sexually transmitted infections (STIs), no research has yet been done to prove this connection in the context of India. Therefore, quasi-experimental approach known as propensity score matching (PSM) is used to explore the causal link between IPV and self-reported STIs in India. Data, methods: A nationally representative sample of 63851 women age 15 to 49 years is obtained from the National Family Health Survey-5 (2019-21). In this study, the treatment variable is taken as "ever experience of physical, emotional, or sexual violence". The outcome is self-reported STIs. The study uses PSM with common support to accomplish the objective of the study. Based on the available literature, many available variables have been included in the model for matching. Critical findings: About 32% of sampled women reported any physical, emotional, or sexual violence at the time of the survey. Among all sorts of IPVs the prevalence of physical violence is highest among women (29%). Women who experienced IPV in the last 12 months were 2 times more likely to self-report STIs compared to those who did not experience any IPV. After PSM, it is found that the women who suffered IPV,

especially sexual and emotional violence, had 15% and 11% higher STIs than those who did not experience any sort of IPV. Conclusion: To reduce the burden of STIs in women which is one of the key health targets of the Sustainable Development Goals 2030, imperative efforts and interventions must be intensified in India to reduce IPV. Also, it is important to screen for STIs among women who present with IPV particularly those with sexual violence.

P 1.9 International Migration in Bihar: Emerging Trends and Challenges

Atma Prakash, Soumya M
Centre for Economic Policy and Public Finance
Email: atma.ceppf@adriindia.org

Historically, migration to the Middle East from Bihar has been a long-term phenomenon. Particularly for the lower-income households, migration has historically been a means of livelihood. In this context, the paper seeks to understand the skill pattern of international migrants from Bihar. Data was collected in two high-outmigration districts of Bihar, i.e., Siwan and Gopalganj during 2022 using purposive random sampling. The findings of the survey indicate that majority of the emigrants moved to UAE (39 percent) and Saudi Arabia (31 percent) and were employed in low-skilled and semi-skilled jobs, such as helpers in service jobs, welders, plumbers, and labourers in the construction sector. Also, close to three-quarters of the emigrants had completed only secondary education and only 46 percent of them had undergone some kind of formal training on the job before migration. Examining how social networks affect access to jobs and information, the study discovers that the sample emigrants typically learned about the job opportunity from local agents in Bihar. The emigrants also find it challenging to fund their migration expenses as they come from poor economic strata. Economic considerations such as better wages, job security and living conditions are the most likely cause of migration, particularly for middle-aged migrants. Offering youth specialized training may be a viable course of action in a labour-surplus state like Bihar in order to increase their employability in high-skilled occupations in the global market.

P 1.10 Urbanization of Scheduled Tribes in India

Ajay Murmu
International Institute for Population Sciences
Email: ajaymurmuasn@gmail.com

Level of urbanization in India is highly unequal distribution among states, districts. There also has unique level of urbanization, trends and spatial pattern among scheduled tribe population. Generally tribal people are live in geographically well demarcated territory like forest, hill area. The change of socio-cultural, economic and political among tribal people have important role for bring them to modern urban society from their traditional isolated area. The development project also contributes to the tribal urbanization in tribal area. Objectives are 1) To study the level, trend and pattern of tribal urbanization at state level in India. 2) To study the variations in tribal urbanization by urban administrative status and size class of urban centers. 3) To find out the contribution of migration in tribal urbanization. Methodology are 1) Level of Urbanization 2) Growth of Urbanization 3) Measuring intra-state migration among Scheduled Tribes in India. Urbanization in national level is achieved high growth in the prior time but among tribal population, urbanization is not taken high rate in before 2001. After 2001 they are urbanized at a very fast. Based on administrative status of urban, tribal people are mostly settled in census town, municipality, Nagar panchayat etc. Share of tribal urbanization is concentrated in small and medium town, but general urbanization is taken place in large city. Migration plays a significant role for contributing urbanization at any region. Tribal Population are mostly migrated in their nearest small and medium town for surviving better economic life. Mostly tribal population are migrated in small and medium rather than large cities. So, there are another needed policy implication for small and medium town wherein tribal people surviving their live at their social, economic and cultural rights.

P 1.11 Analysis Of Rural Urban Migration In India and Impact of COVID -19

Renuka Sanbal, Jayashree
N.V.P.U College Gulabrga
Email: sanbalrenuka@gmail.com

This paper examines the Rural –Urban Migration in India and the Impact of the Covid-19 pandemic on the Migrants and the governmental stance and policies on migration during the global pandemic A major resolution of migration is the higher anticipate wages offered in the Urban Sector along with better employment opportunities as outline by the the academical framework in Harris-Todaro Model. A Case Study of Karnataka State is also presented to out line the migrants' situation in the view of this model Further, the paper examines the current patterns of Migration for the Census Year 2001 and 2011 and analyses the reasons behind inter-state migration through an econometric viewpoint. The results correspond to the Harris-Todaro Model depicting an inverse relation between In Migration Rate and Unemployment trite in contrast to positive relation with poverty rate and State's Net Domestic Product. While there has been a significant jump in all the streams of migration except Urban to Rural from 2001 to2011, a close analysis of the data reflects that employment is not a major factor responsible movement in developing countries rather sociological factors also influence a substantial flow of migration. The migration of persons represents one of the most important social phenomena of the late twentieth and early twenty-first centuries. Closely linked with migration is the rapid urbanization that is happening in so many parts of the world. As migrants leave rural lifestyle home economics opportunities in cities, urban areas are growing at an rampant pace. Both trends have profound effects on family life, family relationships, and family practices Policies and migration and well-planned and well-managed sustainable urbanization are closely created to the successful realization of the United Nations Agenda 2030 and the embedded Sustainable Development Goals (SDGs).

P 1.12 Reason behind grandchild caring and it's effect on grandparent's mental health at later life in different household settings in India: using a mixed method approach

Papai Barman
International Institute for Population Sciences
Email: papai15@iipsindia.ac.in

Grandchild caring (GCC) at later life is a common thing that is wanted, but while older grandparents (GP) need care from adult child, they are obliged to take care for grandchildren (GC). Therefore, one may expect negative effect on mental health. The study investigated the prevalence of elderly GP aged 60 and above living in skipped-generation (SGH) and multigeneration households (MGH) and caring grandchild, as well as the association between GCC and mental health at different household structures in India. Longitudinal Aging Study in India, 2017-18) and In-depth Interview-(IDI) data were utilized. Household structure was defined as SGH (GP and GC lived together without middle generation) and MGH (more than two generations lived together). GCC reason was defined as compulsive (SC) and non-compulsive situations (NSC). CES-D depression scale was utilized to measure mental health. Bivariate, Biprobit regression and it's marginal effect, and IDI information were used. Around 4.0% and 25.4% of older people lived in SGH and reported CS for GCC, respectively. While only 23.8% grandparent from MGH reported CS, nearly 45.0% from GH reported CS and similar pattern was found from IDIs belonged to SGH. Prevalence of depressions was found nearly 25.9.1% and 32.7% among the GPs reported NSC and SC (respectively) and 28.0% and 34.8% among GP lived in MGH and SGH (respectively). While around 8 out of 10 of IDIs lived in SGH reported tension and depression, around 5 out of 10 IDIs from MGH reported depression. Considering marginal effect of Biprobit, GPs reported CS for grandchild caring in SGH were 0.066 times ($dy/dx=0.066$, $p<0.001$) more likely to report depression than GPs reported NCS in MGH. Grandchild caring has a negative effect on mental health when it is related to compulsive situation and skipped generation household.

P 1.13 Association of Functional Ability (ADL/IADL) and Depression among the older adults in India: a state-level analysis of LASI, 2018

Sandip Das, Dhananjay W. Bansod
International Institute for Population Sciences
Email: sdas16462@gmail.com

In India, the older population increasing rapidly and the Functional disability has biological relation with ageing. The main objective of this study is to examine the association between functional ability (ADL/IADL) and depression. The data used were obtained from wave 1 of the Longitudinal Ageing Study in India, conducted in 2017-2018. 30695 individuals aged 60 and above, from all the states are included in this study. Depression was assessed using the Composite International Diagnostic Interview-Short Form (CIDI-SF). Furthermore, descriptive statistics and logistic regression models were used to show the association between functional ability and depression. The results indicate that the prevalence of depression is higher among the completely dependent person at 18.80%[OR4.19(CI:3.65-4.82)]. Depression prevalence is higher among younger adults aged 60+ years 57.31% and females 58.77% [OR1.05(CI0.93-1.18)]. Older adults with no education background are higher in depression 62.59%. Among the regions, the central states have more prevalence among older adults at 36.12%[OR 1.88 (CI: 1.62-2.19)] Functional disability increases depression among older adults. The results of the study have important implications for the policymakers. States with higher prevalence of depression due to functional disability need to focus on vulnerable populations.

P 1.14 Health and disability status among middle-aged and older adult cancer survivors: a case-control study

Mohit Kumar Pandey
International Institute for Population Sciences
Email: mohitpandeybhadohi94@gmail.com

This paper characterizes a population-based sample of middle-aged and older adult reporting a history of cancer in terms of their sociodemographic and health characteristics. With these we will address these questions, first: is a history of cancer a risk factor for poor health and disability? Second, among cancer survivors, what characteristics are associated with poor health and disability? This study used case and control methods. Cancer survivors and controls were matched on a range of criteria, including marital status, caste, religion, educational position, domicile, gender, and whether or not a member of the family was insured by social/private/government insurance. Further, the descriptive statistics, and logistic regression have been used in this study. The result showed that the poor SRH in cancer survivors and matched control (43.7% vs. 14.8%), have two or more other chronic medical conditions (25.9% vs. 17.9%), depression (34.0% vs. 26.2%), having ADL (25.5% vs. 12.9%), having IADL (54.2 vs. 43.4), physical activity (50.7% vs. 61.4%) and unsatisfied with life (15.1% vs. 7.4%). The result from logistic regression shows that individuals reported poor SRH (odds: 0.42 CI: 0.30-0.59) among cancer survivors compared to matched control survivors. Further, the result showed that depression was 20 percent more likely in cancer survivors than matched control survivors. Life satisfaction was lower among cancer survivors (odds:0.52 CI:0.33-0.82) than matched control survivors. Furthermore, the result also showed that physical activity was lower among cancer survivors (odds:0.73 CI:0.55-0.96) than matched control survivors. Providers caring for cancer survivors should be made aware of the long-term health consequences of cancer and consider appropriate supportive care for their patients. The identification of long-term effects of cancer that contribute to disability and the interventions needed to to ameliorate these.

P 1.15 Effect of Women Empowerment on their Nutritional Status: Evidence from NFHS 4 and NFHS 5

Bharti Singh
International Institute for Population Sciences
Email: bs09547@gmail.com

Empowerment has been defined as the capacity to manipulate one's environment through control over resources and information to make decisions about one's concerns or close family members. Thus, women's empowerment is intellectualized as the ability to regulate the actions of their lives. The nutritional status of women and empowerment expressions are often misunderstood in the context of the Indian healthcare system. Women may be empowered in one area of life while not in others. This study aims to decode the nature of the association between women's empowerment and nutrition status of women and analyze the socioeconomic inequalities in women's nutrition status in India for two time periods 2015-16 and 2019-21. Using a range of statistical tools, from descriptive analysis to decomposition analysis. This study is conducted on NFHS-4 and NFHS-5 datasets. The finding of the study portrays that empowerment has a different effect on the indicators of the nutritional status of women. It has been seen that underweight and anaemia are higher among women without/low levels of empowerment, whereas obesity is higher in the autonomous class of women. - Decomposition analysis shows that there is economic inequality in the poor class of society in the year 2015-16. The concentration Index of women who are too thin is -0.193 ($p<0.000$), which indicates that women who are too thin are suffering economic inequality in the poor class of society, whereas the concentration index of obese women is 0.259. The positive concentration index value shows that there is economic inequality in the wealth class of society. Similarly, the concentration index for anaemic women is -0.091 signifies that anaemic women face economic inequality more in the poor class of society but less than the women who are too thin (underweight).

P 1.16 Linkages between Single motherhood and Child Health in India - Evidence from NFHS-5

Neha Kumari
International Institute for Population Sciences
Email: nehakumari11796@gmail.com

Childhood stunting, diarrhea, and acute respiratory infections are essential components of child health. Lone mothers, as compared to lone fathers, are considered more vulnerable and have more difficulty while child care. Moreover, around 84 per cent of single-parent households are comprised of single mothers. This study aimed to examine the association between single motherhood and childhood stunting in India. Furthermore, we assessed the relationship between single motherhood with diarrheal status and Acute Respiratory Infections (ARI) among children in India. This study used data from the recent National Family Health Survey (NFHS-5) round conducted in 2019-21. Bivariate analysis and multivariable regression analysis were used in the study. We observed that children of single mothers have 32 per cent higher odds of being stunted than children of married mothers (OR = 1.32; 95% CI: 1.20, 1.44). Furthermore, results suggest that children of single mothers have 14 per cent lower odds of being diarrheal than children of married mothers (OR = 0.86; 95% CI: 0.74, 0.99). Lastly, children of single mothers have 28 per cent higher odds of having ARI than children of married mothers (OR = 1.28; 95% CI: 1.04, 1.59). Our study suggests that single motherhood influence the child's health, but the challenges can be reduced if single-mother families have access to improve parental resource, more economic resources, and health behaviour. The findings strongly recommend the need for welfare benefits for single mothers raising their under-5 children in India. The study further underlines the family-based public health interventions for particularly single mother households. Although there are many ways to achieve healthy surviving children, interventions targeted at single-mother households may take longer to reduce childhood stunting.

P 1.17 Economic growth or Environment protection: Which is important? A study based on World Values Survey Wave-7

Vinod Kumar, Harshita Chari
International Institute for Population Sciences
Email: vinodgeo98@gmail.com

The links between the economy and the environment are manifold: the environment provides resources and acts as a sink for emissions and waste from the economy. Humans are gradually understanding the impact of economic decisions on the planet's sustainability and quality. The environmental impact of economic growth includes increased consumption of non-renewable resources, higher levels of pollution, global warming, and potential loss of environmental habitats. However, on the other side, it is not necessary that all forms of economic growth cause damage to the environment. The environmental change that can be brought is on the shoulders of the human race, making it all the more critical that we understand the perception that the population has on prioritizing between the environment and the economic growth. The study is based on the World Values Survey (WVS) Wave-7 (2019-21) was conducted in 59 countries with a minimum sample size of 1200 from each country. In the survey, two statements were put forward to people to discuss the environment and economic growth, and they were asked which of them was closer to their point of view. - The study tries to assess the difference in the population's perceptions towards the economy and environment by their socio-demographic characteristics and the level of development of the countries. A higher chance of protecting the environment is seen among the respondents from developed countries, with better education, more wealth and post-materialistic values.

P 1.18 Early childhood circumstances and educational wellbeing inequality among tribal and non-tribal children in India: evidence from a panel study

Rashmi, Ronak Paul
International Institute for Population Sciences
Email: mishti.5may@gmail.com

Despite efforts towards bridging the education gap between tribal (Scheduled Tribe) and non-tribal (Non-Scheduled Tribe) children, contrasting poor-quality education questioned the tribal children's educational well-being in India. Early childhood circumstances render a remarkable impact on the educational well-being of children in later years. This study examined the influence of early childhood circumstances (child, household, and community characteristics) during 2005 on the educational well-being inequality (among India's tribal and non-tribal children) during 2012 using the India Human Development Survey panel dataset of 8611 children. The Educational well-being score was obtained from reading, mathematical, and writing test scores using Principal Component Factor Analysis. We performed the Blinder-Oaxaca decomposition of the educational well-being inequality among India's tribal and non-tribal children. The ST children's average educational well-being score (−0.41) was much lower than the non-ST children's (0.04). Findings from the Blinder-Oaxaca decomposition show that the household economic condition in children's early ages contributed to 24% of educational well-being inequality among tribal and non-tribal children. Further, the education status of male and female adults and the sanitation condition of families considerably impacted educational well-being. The present study concludes that caste antagonism has not been reduced with time. The missing focus on minority groups resulted in deteriorated educational well-being.

P 1.19 Integrated Child Development Service (ICDS) Coverage among Severe Acute Malnourished (SAM) Childreni India: A Multilevel analysis based on National Family Health Survey 5

Ritankar Chakraborty, William Joe
International Institute for Population Sciences
Email: chakrabortyritankar@gmail.com

Severe acute malnutrition (SAM) is fatal for children, and those who survive are maimed both intellectually and physically. The last three National Family Health Survey in India shows an increase in the prevalence of SAM among under-five children. Given the specific mandates under ICDS (Integrated Child Development Service) for SAM children, it is important to validate the coverage efficiency of ICDS on SAM children. Therefore, this is an attempt at examining the possible association between the coverage efficiency of ICDS on SAM children. This study also tries to find out the determinants of ICDS service utilization among SAM children. The study uses data from the National Family Health Survey 5. Descriptive statistics was used to estimate the SAM coverage under ICDS. Multilevel Logistic Regression was used to identify the determinants of ICDS service utilization among SAM children. The burden of SAM is more among older children (3+ age). Coverage of ICDS was more among younger children and among the poorest households in the rural areas. Results from multilevel logistic regression showed that age had a significant relationship with the outcome variable. SAM children living in the rural areas had a significantly higher odds of being covered under ICDS service (OR 1.57; CI: (1.35, 1.82)) than their urban counterparts. Pregnant and lactating mothers who received ICDS services were significant determinants of SAM coverage under ICDS. There is no evidence that ICDS is more efficient in identifying and covering SAM children than other non-SAM children. Despite special provisioning in place for SAM children, coverage of different ICDS services was similar to that of non-SAM children, and were lower than non-SAM children for some categories. The study suggests that improving coverage of ICDS services among pregnant and lactating mothers would increase the coverage of ICDS services among SAM children.

P 1.20 Female Sterilisation in India Examining the Role of Women Own Decision Making and Information Given to Client

Arjun Jana, Chander Shekhar
International Institute for Population Sciences
Email: arjunjana1996@gmail.com

India has a very high prevalence of female sterilisation compared to other countries in the world, with a prevailing situation of very low level of information about contraceptive options given to women. It is well established in demographic research that, there exists a strong association between knowledge of contraceptive methods and type of contraception chosen. The main objective of the study is to find out the role of information given to respondents and contraceptive decision-making power in choice of female sterilisation. And also how increase in contraceptive information contributes in the choice of female sterilisation over time. Present study uses data from 3 consecutive rounds of National Family Health Survey (3, 4, 5). The sample contains currently married women who started using the current method 5 years prior to each round of survey. Multilevel Logistic Regression and Fairlie Decomposition Model are used to analyse the effect of information given to respondents and decision-making power regarding contraceptive methods on choice of female sterilisation. Women, who are informed about available methods, have lower chance (45.8%, 37.5%, 40% for NFHS 3, 4, 5 respectively) to opt for sterilisation after controlling all other factors. If woman is the sole decision maker for contraceptive choice, the chance of sterilisation reduces than cases where decision is taken only by husband or jointly. Information about other methods also contributes towards reducing the chance of female sterilisation over the time. From the research it can be concluded that to minimalise the over dependency on female sterilisation, women empowerment, and complete information of other available contraceptive methods along with the side effects and its management needs to be focused by policy makers.

P 1.21 Classification And Prediction Of Low Birth Weight In India By Using Machine Learning: Evidence NFHS 5

Vikas Ashok Kamble, Praful Hiwale
International Institute for Population Sciences
Email: vk583019@gmail.com

Low Birth Weight (LBW) infants are more likely to experience serious short and long-term health consequences. Machine learning (ML) algorithms have made significant progress in the field of medical diagnosis. Birth weight as a key metric for tracking crucial health objectives. In developing nations, particularly in Southern Asia, low birth weight is one of the leading causes of infant mortality and other illnesses that affect Life Expectancy. The primary objective of this paper is to identify the main factors associated with low birth weight and use machine learning algorithms to predict precision of low-birth-weight children. The study of Machine Learning (ML) focuses on the analysis of data using various statistical tools and machine learning techniques in order to learn more from the data. This research conducts two ML tasks; including prediction and classification. All predictive models of LBW were trained on training data of 80% and tested on a test dataset of 20%. The binary target category in this study is the Normal and LBW. The total sample size 232000.The average age of mothers in the sample is 27 years and the youngest age of mothers is 15 years, oldest mother age is 49 years. According to the study, the Random Forest Classifier was the best classifier and could accurately predict LBW with a 78.60 percent accuracy rate, 78.18 percent, precision and recall rate of 78 percent. In this study, we presented a comprehensive performance evaluation of multiple ML models for LBW classification using the maternal features obtained from pregnant women. Machine Learning models were used with different feature subsets and the combinations of subsets with and without the imputation of missing values.

P 1.22 Burden Of Unpaid Childcare Work On Women In India: An Exploration Of Indian Time Use Survey, 2019.

Gursimran Singh Rana
International Institute for Population Sciences
Email: gsranaphdwork@gmail.com

The purpose of this study is to estimate the proportion of unpaid childcare work done by each individual in the household and understand the factors responsible for it. The study uses the secondary data available from the first nationwide Time Use Survey (TUS) conducted by the National Statistical Office (NSO) in 2019. The sample size of our study is restricted to households with at least one child aged less than 18. The chi-square test and fractional logistic regression were used to understand the factors responsible for the share in the intrahousehold unpaid childcare work. It was found that for persons belonging to the age group 6-17, women have 5.5 percentage points higher share in total childcare work done in the household than men. The share in total childcare work done in the household was 3.1 percent points less for those living in the household with the youngest child between 6, 18 years of age as compared to households with an age of youngest child less than six years. Currently-married persons had 24.1 percentage points higher share than never-married persons. In the age group 60, above, women had a 21.1 percent point higher share in total childcare work done in households than men. The study found that women perform the major proportion of unpaid childcare done in the household. There is an urgent need to recognize the unpaid care work performed by women and reduce the male-female gap in unpaid childcare work time.

P 1.23 Factors Affecting Undernutrition among Under-Five Children in the Most Populous State of India: A Situation Analysis

Rishabh Kumar
International Institute for Population Sciences
Email: rishkphd@gmail.com

Globally, undernutrition is a cause of at least half of all childhood deaths and is a significant public health problem across the world. Uttar Pradesh (UP), an Indian state is India's most populous state with population roughly equal in size to Brazil. The state holds a significant high proportion of adolescents in the country and performed poorly in various health indicators such as child undernutrition, under-5 and infant mortality, higher adolescents births poses significant challenges to the existing public health systems. This study aimed to understand the prevalence of nutrition indicators i.e., stunting, wasting and underweight among children under age of five years and the factors affecting malnutrition in Uttar Pradesh. This study utilizes data from the fifth round of National Family Health Survey (NFHS-5). The eligible respondents were children under the age of five years with a sample size of 38, 945. Descriptive characteristics and bivariate analysis have been done to understand the prevalence of stunting, wasting and undernutrition by socio-economic and other demographic characteristics. Logistic regression analysis is used to see the significance association and risk of having a malnutrition status between socio-demographic characteristics and child undernutrition. The prevalence of Stunting, Wasting and underweight among Under 5 children in UP are 39.8%, 17.4% and 32.3% respectively which is higher than all India level. Results from the logistic regression confirm that age of child, weight at birth of child, mother's education, BMI of mother and wealth quintiles showed a significant association with stunting, wasting and underweight among the children in Uttar Pradesh. There is a need to open more Anganwadi / Integrated Child Development Services (ICDS) centers in each district of Uttar Pradesh to achieve the maximum coverage of needy and poor households.

P 1.24 Prevalence And Determinants Of Hysterectomy Among Women In Reproductive Age Group In Kerala

Neethumol S.S., Anjana Aneesh
Centre for Development Studies
Email: neethumolmsc@gmail.com

Hysterectomy, the surgical removal of uterus, is the second most frequently performed non obstetric surgery after cesarean section in many parts of the world. Common medical indications of hysterectomy include gynecological ailments such as fibroids, dysfunctional uterine bleeding and uterine prolapse. In other words, most hysterectomies are performed for being gynecological reasons. India rate of women undergoing hysterectomy is high in southern region compared to other regions. The operation is reported to have negative health impacts on the physical and socio-psychological well-being of women, particularly ausal young women. This study used the data from NFHS-5 (2019-20) that involved a sample of 10969 women in the age group of 15-49 years of Kerala. In the sample, 215 women have undergone hysterectomy. Major objectives of the study s to analyze the prevalence of hysterectomy, factors determining hysterectomy, to understand the reasons for doing hysterectomy and to find the compression in reproductive age span of women in Kerala. Univariate and bivariate techniques were used to identify the factors responsible for the hysterectomy. Logistic regression is used for the analysis. Chi-square test is used for determining the significance level of each variable with the dependent variable. The preliminary results show that the prevalence of hysterectomy among females in reproductive age group is 2 percent in Kerala. About 5.8 percent women of age group 40-49 years have undergone hysterectomy than the age group 30-39 (0.4 percent). More than half of the women underwent the operation in private hospitals (64.6 percent) compared to those who did in public hospitals (34.7 percent). Most hysterectomy were performed for the reasons like fibroids/cysts (49 percent) and excessive bleeding/pain (39.6 percent). Other reasons are uterine disorder (10.8), uterine prolapse (5.9), severe post-partum hemorrhage (3.7 percent), cancer (0.7 percent).

P 1.25 Participation of men in maternal and child healthcare utilization among the tribal community in India

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

The World Health Organization (WHO) defines maternal health as the health of women during pregnancy, childbirth, and the postnatal period. Survival and well-being of mothers and children are important not only for individuals but also for any society's economic, social, and developmental issues. Maternal healthcare is a significant component of India's family welfare programmes. Infant and child mortality rates are crucial indicators of a nation's socioeconomic development and quality of life. Men's awareness of pregnancy-related care and a favourable gender attitude increase maternal healthcare use. Tribal women's use of healthcare facilities differs from the general population. The lack of participation in reproductive health by Indian tribal males harms not only their personal health but also the reproductive health of their female partners and children. The main objective of this study is to see how much tribal men participate in utilizing maternal and child healthcare, the reasons behind this, and the socioeconomic characteristics determining them. The data used in this study are from the last three rounds of the National Family Health Survey (NFHS), NFHS-3, NFHS-4, NFHS-5. Logistic regression has been used to see the relation between the dependent and independent variables. The results show that there is a significant change in the participation of men the maternal and child healthcare utilization. But still, some are not availing the facilities; the cost and the distance of MCH services are the main reasons. Most maternal deaths are caused by a delay in seeking care for morbidity issues; the reason is a lack of understanding and awareness among family members. Through his active participation and supportive behaviour, the husband, as the closest male member in the marital household, can make a valuable impact on the health of the wife and child.

P 1.26 Nutrient Intake and ANC Services Affecting Prevalence of Anaemia among Pregnant Women in EAG States

Deepak Kumar
International Institute for Population Sciences
Email: deepak.kumargupta77580@gmail.com

There is high Prevalence of Anaemia among the women of reproductive age group (15-49), specifically for the pregnant women in India which makes it crucial to understand anaemia and its associated factors for better understanding of women health. To examine the effect of Nutrients intake and ANC in reducing the risk of anaemia among the Pregnant women in EAG states. The Study utilizes the data obtained from NFHS-4 (2015-16) for pregnant women among the EAG states (n= 18148). Bivariate analysis is used to assess the prevalence of anaemia with socioeconomic factors and different food intakes. Bivariate and multinomial logistic Regression were estimated to examine the effects of ANC and Nutrient intake respectively on Anaemia among pregnant women at 5% Level of significance using STATA 16.0. Study shows that the prevalence of anaemia among pregnant women is associated with and different socioeconomic factors. Logistic regression estimates shows that women who are taking good nutrition diet are less likely to be anaemic [-0.076, 95%CI (-0.137, -0.014)], also educated women [-0.368, 95%CI (-0.497, -0.239)] and women getting ANC [-0.399, 95%CI (-0.607, -0.191)] are less likely to be at risk of being anaemic than those uneducated and those who are not getting ANC respectively. All results are significant at both 5% and 1% level of significance). Socioeconomic disparities affects the anaemia level and its prevalence among the pregnant women which is a serious health problem as more than 50 % of the pregnant women are anemic in EAG states. To control the high prevalence of anaemia in EAG states a short and effective program that targets a promotion of ANC services and reduction in the differences existing in socioeconomic as well as nutrition that influence the anaemia level of pregnant woman and their health would be optimal prerequisite.

P 1.27 Exploring the Causes of Low Level of Male Involvement in the Utilization of Maternal Health Care (MHC) Services among the Muslims of Maldah district, West Bengal, India

Bikash Barman, Mithun Sarkar
University of Gour Banga
Email: barmanbikash2013@gmail.com

Maternal mortality and infant mortality now regarded as key problem over the underdeveloped and developing countries, which may cause for the improper utilization of maternal health care services. Proper utilization of maternal health care (MHC) services helps to reduce the delivery complications as well as risk of maternal and infant death. Male involvement (Spouse of the women) is one of the important part of the utilization of maternal health care services. The present study attempt to show the degree of involvement and the controlling factors of male involvement among the Muslim women of Maldah district of West Bengal. The entire study based on primary data collected from 816 Muslim spouse from that family where the women had at least one live birth within 5 years at the time of survey. Bivariate (Chi-square analysis) and multivariate analysis (Binary logistic regression analysis) has been used for depiction of the result. The results shows that the involvement of spouses in the utilization of MHC services is negligible manner; near about 33% and about 20% spouses are going to health facility with their wives for antenatal care and postnatal care respectively. Near about 20% spouse, know the importance of MHC services for mother and newborn baby. The involvement of male is determine by their education, age at marriage, occupation, and place of residence, standard of living and media exposure. The chi-square analysis shows the significant association between the different socio-demographic factors and the male involvement in the utilization of MHC services and the results of binary logistic regression analysis shows the significant difference in the likelihood of involvement among the spouse by their socio-demographic characteristics. - Keywords: Maternal health vulnerability, Male involvement, Antenatal Care (ANC), Delivery Care, Postnatal Care (PNC), Binary Logistic Regression (BLR).

P 1.28 Prevalence and Risk Factors Associated with the Domestic Violence among Pregnant Women in Karnataka: A Case Study

Swathi, Gyan Chandra Kashyap
Institute of Health Management Research Bangalore
Email: swathi.pgdm22@iihmrbangalore.edu.in, swaatii9902@gmail.com

Globally, a significant proportion of married women aged 15-49 years experienced physical or sexual, or both, intimate partner violence in their lifetime. This violence starts early, affecting adolescent girls (15-19 years) and young women (19-24 years) who have experienced this violence at least once since the age of 15. Most of the cases are reported in low-income countries. Domestic violence includes physical, sexual, and emotional violence of any form. To study the socio-economic status and estimate the prevalence and determinants of physical, sexual, and emotional violence among pregnant women. We have utilized the recent round of National Family Health Survey (NFHS-5, 2019-21) data for this exploration. The NFHS-5 survey adopted a stratified two-stage sample design to reach the survey households. A total of 72, 056 married women are included in the analysis comprising women of 15-49 years. Multivariate techniques have been applied to understand the adjusted effects of socio-economic and demographic variables on control over their sexuality and sexual violence. Twenty qualitative data (in-depth interviews) were conducted as the primary data for the study. According to NFHS 5, pregnant women aged 18-49 who have experienced domestic violence during any pregnancy were 16.7%. Domestic violence is a long-standing problem in the relationship that will continue even after the woman becomes pregnant. Results from the primary study stated that pregnant women highlighted the reasons for experiencing violence, such as husbands' alcoholism, low income, due to unwanted pregnancy, reproductive coercion, being less able to contribute to household chores and being overwhelmed by responsibilities. Domestic violence against pregnant women threatens the mother and foetus' physical and psychological health. Thus, diagnosing and preventing violence against pregnant women is very crucial.

Poster Session II

P 2.1 Socio-demographic determinants of primary and secondary infertility in India

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

Infertility is a global public health issue that remains neglected both in the field of reproductive sciences and also on the social level even when infertility affects a large proportion of couples worldwide. While there has been much work in the field of medicine, infertility is yet to be closely studied from the social and cultural angles. The objective of this study is to explore the socio-demographic determinants of primary and secondary infertility among the currently married women (aged 20-49) in India, as well as, the possible consequences of infertility. This study used the data from National Family Health Survey (NFHS) - 5 (2019-21) to determine the determinants of primary and secondary infertility. Bivariate and multivariate analyses were conducted to assess the factors affecting primary and secondary infertility among the currently married women in India. Furthermore, chi-square tests were carried out to check the association between primary and secondary infertile women and the possible consequences of infertility. Age of women, age at first marriage, husband/partner's age, the standard of living, working status of women, and region are some of the variables that significantly affect infertility. Women in urban areas are more likely to have primary and secondary infertility. This could be due to delayed age of marriage or lifestyle changes. The educational and wealth status have of the couple has a negative relationship with infertility, possibly due to better access to information and resources. In the present study, the association of primary and secondary infertility with marital dissolution and domestic abuse is significant. The first step in addressing infertility is to acknowledge that infertility is a problem for which no single cause is known. Thus, there needs to be a targeted approach to address infertility, backed by further research and relevant policies.

P 2.2 Incidence and Prevalence of Diabetes in Mumbai: Results from a ten-year retrospective cohort study

Palak Sharma, T R Dilip, Anjali Kulkarni, Yogesh Shejul, U S Mishra
International Institute for Population Sciences
Email: pal3193@gmail.com

India is known to be the Diabetes Capital of the world, being the second country with the highest number of individuals (77 million) with diabetes. Of various measures of morbidity, incidence and prevalence are the most fundamental measures in epidemiology. There is ample literature on the prevalence of self-reported diabetes, whereas there is a dearth of research on the clinically examined incidence of diabetes in India based on longitudinal data. Given the lack of evidence on incidence, this study aimed to estimate the incidence of diabetes based on a ten-year retrospective cohort. The study used data from a Hospital Management Information System of a government hospital wherein universal coverage is in place. The study is based on 1669 individuals free from diabetes in the year 2012, who were followed up for ten years. Age and sex-standardized Incidence rates were calculated using the survival analysis techniques. The study found that the age and sex-adjusted prevalence in the study population was 9.7% in 2010, which increased to 10.6% in 2012. The age-sex-adjusted incidence rate of diabetes from 2010-2012 was 28.7 cases per 1000 PYs. Further, a total of 552 individuals were diagnosed with diabetes in the next nine years, yielding an incidence rate of 29.7 per 1000 PYs. The rates of incidence and prevalence were found to be higher in the study population even after adjusting for the age and sex structure of Mumbai's 2012 population (~19.2 cases per 1000PYs). The ten-year incidence rate of diabetes was found to be higher among males and was observed to be highest among males aged 55-59 years and females 65-69 years. A long-term follow-up study on diabetes incidence using a retrospective cohort yielded reliable estimates with an additional strength that relates to the uniform provisioning of care in the facility without differential access or inequality.

P 2.3 Modelling Perinatal Mortality in India A Geospatial Approach

Prakash K, Jegankumar. R, Libina Rs
Bharathidasan University
Email: prakash.gis@bdu.ac.in

Perinatal mortality has been a crucial element indicating the public health systems in many of the developing countries. Controlling perinatal mortality rates has been a challenging task in the Lower- and Middle-Income Countries (LMICs). WHO states that children who die within the first 28 days of birth suffer from conditions and diseases associated with lack of quality care immediately after birth and in the first days of life. According to WHO - 2020 report, 47% of under 5 years age mortality are recorded in neonatal deaths (deaths within 28 days from birth). From 1990, there has been a remarkable decline in under 5 years mortality, however neonatal deaths have increased from 40% to 47%. India is one of the major countries accounting high perinatal deaths across the world. 5.4% (85024) of deaths in India are contributed from perinatal deaths alone during the year 2019. Some of the states in India have recorded nearly 25% of deaths from perinatal mortality. This emphasizes the huge need of understanding, planning and policy making to effectively combat the perinatal deaths. The current study implements geospatial approach to correlate the state level perinatal mortality with the maternal health, maternal and infant health care availed to understand the intricate relationship. The study used Medical Certification of Cause of Death (MCCD) - 2019 report and National Family Health Survey (NFHS) - 5 data at state level for conducting the study. The geospatial analysis utilized the Getis-Ord Gi method to cluster and Ordinary Least Square (OLS) to describe the relationship between the variables. The results provide vital information to draw efficient planning to attain the Sustainable Development Goal 3.2 regarding under 5 and neonatal mortality by 2030.

P 2.4 Prevalence of Anemia among reproductive women in different Social Group in India: Cross-sectional study using nationally representative data

Nowaj Sharif, Bhaswati Das
Jawaharlal Nehru University
Email: nowaj.sarif007@gmail.com

The common cause of anemia is iron deficiency. Anemia is adversely affecting women of reproductive age which in turn results in increased morbidity and maternal death and also hampers social-economic growth. This study examined the level and trend of anemia prevalence among the socially disadvantaged group (SC&ST, OBC) of women as compared to the general women and identified the main responsible factors behind this. The data for this analysis has been taken from three rounds of NFHS conducted during 2005-06 (NFHS 3), 2015-16 (NFHS 4), and 2019-21 (NFHS 5). Univariate, bivariate, and multivariate analyses were used to assess the main confounding factor on the occurrence of anemia. GIS technique used for graphical representation of anemia prevalence rate among different social groups of women in different states of India. In India, more than 15 states belong to the high prevalence of anemia among socially backward groups in 2019-21. The anemia prevalence was high (>55%) in all social groups observed in 7 states in NFHS-3, 4 in NFHS-4, and 11 states in NFHS-5. That means majority of the states suffer from high anemia prevalence rate and it increases over time. The overall result reveals that the SC&ST women were more prone to anemia than other women. Anemia prevalence of the poor and poorest group of general women were much worse than the women of richer and richest groups of SC&ST, OBC. The odds of women having anemia were lower among higher educated and urban women as compared to the non-educated and rural women, irrespective of social group. It is observed that multiple socio-demographic factors are responsible for predicting anemia levels among the social groups of women in India. To eradicate this problem India should improve women's overall nutrition status and their income. Meanwhile, GOI should be more focused on the existing policies.

P 2.5 The effects of low fertility and low mortality on India's Economy A National Transfer Accounts Approach

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

This study aims to examines the effects of low fertility and low mortality on India's economy with its implications on different age groups. Data and Methods: This study utilized macro data from second round of India Human Development Survey (IHDS-II) conducted during 2011-12, and from Indian Account statistics. Population projections were taken from World Population Prospects. We adopted National Transfer Accounts (NTA) approach and used a decomposition model to measuring the respective effects of fertility and mortality on separate aspects of the economy such as labour income, private and public consumption, and public and private transfers. We also estimated the results of supported ratio (SR) and demographic dividend (DD). The results showed that the effects of low fertility and low mortality on the economy are very different in direction, magnitude, timing, and impact by age group. The only effect of an aging population that is the same in all circumstances is the effect on the public pension system: low fertility and mortality will increase pressure on the public pension system of India. Conclusion: Due to low fertility and long life, the population is aging rapidly, so the government should be focused on health and pension policies for elderly. The Indian government should take initiated "The Basic Plan on Low Fertility and an Aging Society". The five-year nationwide program incorporated a wide variety of pro-natal policies and welfare programs for the elderly.

P 2.6 Temporal patterns in Infant Death Clustering Among Families: Findings from National Family Health Survey 1992-2021

Ronak Paul
International Institute for Population Sciences
Email: greenophenn@gmail.com

Despite considerable research and knowledge about the determinants of infant mortality, most children cannot survive their first birthday. Abundant evidence shows that the risk of dying is never shared equally among the population, and some families have a greater risk of infant mortality than others. The present study examined the clustering of infant deaths among Indian families over an extended period (1970-2021). Further, we examined the temporal pattern in the role of death scarring behind excess deaths. We used the pooled birth history of mothers from five rounds of the National Family Health Survey conducted during 1992-93, 1998-99, 2005-06, 2015-16 and 2019-21, respectively. All the datasets would be harmonized such that our study variables have consistent categorization and label codes. The analytical sample size of this study is 33, 16, 290 children born to 12, 07, 304 mothers. We performed bivariate analysis and estimated random-intercept dynamic regression models to complete the study objectives. The use of dynamic models allows us to adjust the fact that the index child's mortality risk depends on the mortality risk of preceding children. Further, using two-level random-intercept models allows us to account for the variation in the risk of infant mortality due to unobserved characteristics at the family level (mother-level). From the formal analysis, we observed that infant deaths were clustered among children born to the same mothers. Further, the risk of infant deaths of index children was correlated with the mortality risk of the preceding child. Additionally, we found that the effect of death scarring (i.e., the dependence of the survival status of the current child on the survival status of the preceding sibling) increases from the older to the newer birth cohorts of children.

P 2.7 Impact of Women Autonomy and Hygiene on Under-Five Child Health in India

Subhankar Singha, Rahul Mallick
University of Gour Banga
Email: subhankarugb1@gmail.com

The main cause of child malnutrition in India is the lack of proper nutrition at the right time. This work is an attempt to show how the mother's decision has affected her baby's health. Various socioeconomic and physical autonomy variables have been used to indicate women's autonomy status in India. As indicated for child health three basic indicators are used these are stunting, wasting, and underweight. To find out the impact of women's autonomy, sanitation, and water facility on under-five child health in India based on NFHS-4 (2015-16) data and also find out the nutritional status of under-five children in India and the status of water and sanitation facility in India. The binary logistics regression was used to show the association between women's autonomy, sanitation facility, water availability, and child health using STATA software (Version 16.0). And all the data collected from National Family Health Survey (NFHS 4) was conducted 2015-16. The prevalence of stunted, wasted, and underweight children under-five was 38.4%, 21%, 35.7% respectively. And also found the trend analysis of child nutrition from NFHS-3 (2005-06) to NFHS-4 (2015-16). And also see that almost 90% of the people drink improved water and only 36.7% use improved sanitation facilities and almost 50% of the people can use sanitation in the open field. The result indicates that all the physical and socio-economic autonomy adopted in the case of women's autonomy has had a positive impact on child health. But there are some limitations to physical autonomy rather than socioeconomic autonomy. The study pointed out that women's level of autonomy has a direct impact on child nutritional conditions. So, it is quite essential to provide women with more autonomy in household decision-making, socioeconomic autonomy, and physical autonomy.

P 2.8 Level and Pattern of Urbanisation in Rajasthan: A Regional and District level Analysis

Varsha, K.C. Das
International Institute for Population Sciences
Email: varshakaswan59@gmail.com

Urbanisation is an indicator of socio-economic development. Level of urbanization and socio-economic development related to proportionality. According to the 2011 census, 75 new towns have emerged in Rajasthan. Therefore it is important to understand the urbanization in Rajasthan. This paper try to find out the link between the level of urbanization and socio-economic development and the level of urbanization along with the growth of towns and pattern of urbanization between the districts of Rajasthan. The data required for the study on urbanization level and growth of cities in Rajasthan is taken from the Census of India from 1951 to 2011. The data on the pattern of urbanization in Rajasthan was calculated from the District Census Handbook (1991, 2001 and 2011). ArcGIS software has been used for the choropleth map. The level of urbanization in the state of Rajasthan has increased from 17.1 percent in 1951 to 24.87 percent in 2011. The number of towns has increased from 222 in 1991 to 297 in 2011 in the state. Kota (60.3%), Jaipur (52.4%), and Ajmer (40.1%) are the most urbanized district. Dungarpur (6.4%), Barmer (7.0%), and Banswara (7.1%) are the least urbanized districts in Rajasthan. Rajasthan displays a lower level of urbanization (24.87%) as compared to the national level (31.1%). The study reveals that Kota, Jaipur, and Ajmer are more urbanized due to agricultural development, good transport connectivity, industrial development, higher level of literacy and higher standard of living. On the other hand, Dungarpur, Barmer, and Banswara, display lower level of urbanization due to high proportion of Scheduled Tribes population, social and economic backwardness, low level of literacy and poor transport facilities etc.

P 2.9 Spousal Age Gap and Autonomy of Mobility Among Wives Left Behind: Kerala Migration Survey, 2018

Niharika Awasthi, Sourav Mondal, Sunil Sarode
International Institute for Population Sciences
Email: awasthinick.13@gmail.com

The autonomy of women in Kerala is among the top performing states in India from 81% women exercising it till 2016 to about 87% till 2020. Kerala is also among the top-most emigrating state of India. Kerala, contrary of the fact of being an educationally and socially advanced state, has not shown much shift in the age at marriage for women but has pushed Keralite men to marry in late 20s. So, the study here will focus on the role of both the spousal age gap and left behind women on autonomy of mobility (AOM) in them in Kerala, India. The study is based on the data of eighth round of Kerala Migration Survey held in 2018 (n=1249). Results shows that compared to the women with spousal age gap three years or less, the women with spousal age gap of ten years or more and 7 to 9 years and 4 to 6 years have higher odds of practicing AOM, especially for spousal age gap 4 to 6 years where a more than two-fold increase could be seen in the odds of women practicing AOM as compared to those with spousal age gap of three years or less.

P 2.10 Lifestyle Predictors of Healthy Ageing Among the Elderly in India

Raghunath Mandi, Dhananjay W Bansod
International Institute for Population Sciences
Email: raghunathvb1997@gmail.com

Understanding health and developing trends within the older population is prerequisite if countries are to tackle the challenges of ageing population and formulate relevant policies. Healthy ageing, is "the process of developing and maintaining the functional ability that enables wellbeing in old age(WHO)", where "functional ability comprises health-related attributes that enable people to be and to do what they have reason to value". The ageing pathways are different for everyone depending on genetic profile and life-course health risk exposures. Ageing, more specifically healthy ageing largely depends on individual lifestyle choices. Hence objective of our study was to evaluate the influence of lifestyle behavior and socio-demographic conditions on healthy ageing among elderly in India. In accordance with WHO definition of healthy ageing, we conceptualized healthy ageing within the functional ability framework based on LASI (wave 1). We created a healthy ageing index(HAI) using principal component analysis employing information from 28 domains (covering psychological health, physical capabilities, cognitive ability, psychological well-being, and social engagement) and transformed the score on scale of 0-100, with higher values indicating better health. Multiple linear regression analyses were used to identify the significant relationships between lifestyle behaviors and healthy ageing. The mean HAI score was 82.80, indicating the study population is healthier. The results show there are socioeconomic inequalities in healthy ageing. Healthy lifestyle behavior(engage in physical activities is associated with better health outcome(β=3.31, 95% CI=3.09-3.52) in compare to those without any physical activity. Health authorities, policymakers, and stakeholders should establish healthy ageing strategies through various interventions taking into account lifestyle behaviors along with actual health.

P 2.11 Gender differentials in receiving informal financial support among elderly in Indian households

Ruchira Chakraborty, T.V.Sekher
International Institute for Population Sciences
Email: ruchirachakraborty71@gmail.com

In a country like India, at a developing stage the increasing share of older population can be a burden if the pace of rising dependency ratio is higher than the rate of economic development. After having a certain age, the population, unable to engage in economic activity, requires strong social security to rely on. But in absence of pension or other security coverage, the only source of help is family or say informal source of financial support. To understand, whether gender of the dependent plays any role in receiving informal financial support, this study analysed the association of different socio-economic and demographic characteristics with financial help for older persons in household, using data from Longitudinal Ageing Study in India (wave I). Bivariate and Multivariable regression analysis along with Fairlie decomposition analysis is applied. On an average, women receive higher (1.2 times on an average) informal financial support than male. Having higher number of children increases the likelihood of receiving informal financial support almost 1.3 (AOR 1.277; 95% CI 1.159-1.297) times. Similarly, having restrictions in daily living conditions also ensure higher probability of receiving inhouse financial support. on the other hand, those who are widowed, residing in urban areas and receiving any kind of pension have lower likelihood to receive financial support. The decomposition model adopted here is able to explain 86.30% of the prevailing gender gap, which concludes that being widowed (21.59%) living with spouse or children (33.82%), receiving pension (17.92%) and having restrictions in instrumental activities (17.25%) like shopping, cooking food, buying medicine etc. contributes positively in increasing the gender gap in receiving informal financial support. But age, having higher education, belonging to poor and scheduled caste category happens to contribute in reducing the gender differentials in this context.

P 2.12 Does the hysterectomy have an association with chronic diseases? An Evidence from the LASI Wave-1 data.

Komal Sureshrao Gajbhiye
International Institute for Population Sciences
Email: kmlgajbhiye@gmail.com

A hysterectomy is a medical procedure to completely or partially remove the uterus. This study is aimed to assess the prevalence of hysterectomy and its causes; does the hysterectomy have any association with chronic diseases among Indian women aged 45 and older? Methods: The study utilized information from 35,410 older adults (22,830 in rural and 12,580 in urban) aged 45 years and above from the recent released, cross-sectional data, the Longitudinal Ageing Study in India (LASI) wave-1 (2017-18). Descriptive, bivariate, and multivariate regression analysis techniques were used. The data were analyzed in STATA 16.0 and ArcGIS. Result: In India, 10.36% of women aged 45 years and above had hysterectomies. It was 9.44% in the 45-59 age group and 7.68% in the 60+ age group. Findings reveal that the prevalence of hysterectomy have huge variation across the states, the higher in Andhra Pradesh (25%), whereas the lower prevalence in Meghalaya (0.8%). Age, education, caste, religion, wealth, place of residence, age of marriage, and the number of pregnancies were all positively associated with the occurrence of hysterectomy. It has found that the primary cause of hysterectomy is associated with excessive menstrual bleeding or pain, which is responsible for approximately 30 % of the cases, followed by fibroids cyst (29 %), uterine prolapse (16%), and uterine disease or injury (9%). The multivariate analysis findings suggest that major chronic disorders have been significantly associated with the hysterectomy. It found that the women who went for hysterectomy had Hypertension (40%), chronic joint/bone disease (21%), diabetes (17%), high cholesterol (6%), neurological/psychiatric issues (3%), and cancer (2%). Conclusion: A high percentage and risk of undergoing hysterectomy are associated with primary education, scheduled caste, Sikh, urban regions, highest wealth, and age at marriage below 15 years, and more than three pregnancies.

P 2.13 The role of social engagement in the relationship between mental disorders and cognitive functioning: Evidence from LASI survey

Manish Kumar
Population Research Centre
Email: kumarmanishiips@gmail.com

This study aimed to examine the mediating and moderating effects of social engagement on the association between psychological disorders and cognitive functioning in older Indian adults by utilizing a national representative survey. The study used data from the first wave of the Longitudinal Aging Study in India (LASI) conducted during 2017-18. The analytical sample included 26, 757 older adults. Structural Equation Modelling (SEM) was used to assess the mediating effects of the social engagement in the association between psychological disorders and cognitive functioning. For SEM analysis, Spearman's correlation coefficient was used to calculate the correlations between observed variables. Furthermore, linear regression analysis was used to derive the association of individual social engagement factors and psychological disorders with cognitive functioning. Furthermore, moderating effects of social engagement on the relationship between psychological disorders and cognitive functioning was assessed. The results for the adjusted models depict that older adult with greater social engagements had significantly greater cognitive functioning than individuals with low social engagement. Moreover, indirect effect of social engagement in the relationship between psychological disorders and cognitive functioning was significant and indicated that 16% (-0.011/-0.071) of the variance in the cognitive functioning was produced by the social engagement as a mediator. Moreover, the interaction between high psychological disorders and high social engagement. After adjusting for various covariates, a significant high social engagement moderating effects were obtained on the cognitive functioning (0.79; 95%CI: 0.24, 1.35). The current study provides an empirical framework for researchers through testing the mediating and moderating effects of social engagement between psychological disorders and cognitive functioning in older Indian adults.

P 2.14 Disability Structure and Gender Differentials in Empowered Action Group (EAG) States and India-A 2011 CENSUS Analysis

Anjana Vasthava, Dany S
University of Kerala
Email: anjanavasthava99@gmail.com

Disabilities are an umbrella term, covering impairments, activity limitations, and participation restrictions. Impairment is a problem in body function or structure; an activity limitation is a difficulty encountered by an individual in executing a task or action; while a participation restriction is a problem experienced by an individual in involvement in life situations. In 2011 census, eight types of disability were included. The disabled people belong to the unprivileged category, that is, deprived of some form of social, economic and cultural discrimination. For the regional planning for overall socio-economic and demographic development an analysis of the disability structure is greater importance in the EAG states and India. Hence the objectives of the present paper are: 1) To study the relative degree of unevenness of each disability group. 2) To study the extent of disability differentials by sex. Secondary data is used for the analysis. The data required for the study is taken from the census of India 2011. The index suggested by Martin and Poston (1968) is adopted to measure the differentials by sex. Standardization by sex is accomplished by making the female disability equal to the male disability and then distributing this number throughout the eight disability categories. Concentration index is used to measure the relative degree of distribution of each of the disability groups, in relation to the distribution of India and EAG states population. The study shows that state wise share of population and disabled persons for both sexes, the percent is highest in Uttar Pradesh (11.42) and the least percent in Chhattisgarh (2.40). The percentage of disabled females is

more than that of males in Rajasthan, Madhya Pradesh, Assam, Odisha. This study will be useful for the implementation of development measures of the society, particularly for the disabled Population.

P 2.15 Evidences of Paradigm Shift in Marriage and Mate Preferences in Mumbai City.

Pragati Ubale, T. V. Sekher
International Institute for Population Sciences
Email: ubalerag@gmail.com

In India, the arranged marriage system seems to cross all caste and religious lines, regional boundaries and language barriers. However, with changing times due to technological advancements and modernization, it is essential to understand the preferences of the current generation when it comes to marriage. This study attempts to understand youth preferences regarding marriage and mate selection. Data for this study is collected through an online survey from 844 college-going unmarried youth between the ages of 20-30 years in Mumbai. We have used univariate and bivariate analysis methods to elicit the results. This data is also analyzed for examining Ecological theory, where internal and external factors influence individuals. This study also makes an attempt to re-examine Darwin's treatise on mate selection in relation to sex. - This study shows that 88% percent of youth think that one should select a mate for themselves, and 60% of youth prefer love marriage. Mutual attraction and love, pleasing disposition, dependable character, emotional stability and maturity are the preferred characteristics of a mate. Men prefer younger wives and women prefer elder husbands. In addition, the result showed that youth are liberal in marrying across caste, religion and economic classes but not their parents. This study generates evidence of a paradigm shift in the dimensions of marriage in India through changing youth attitudes. Boundaries of caste, religion and class are blurring for youth but still rigid for parents. Youth's preferences are different from those in traditional arranged marriages, which look for the same socio-economic status. - The present study proves the Ecological Theory and Darwin's theory of mate selection. Youth are becoming more independent when it comes to finding a mate for marriage and the norm of arranged marriages is slowly disappearing.

P 2.16 Prohibition of the child-marriage act for girls below age 21 in India: Perspectives emerging from NFHS-5 (2019-21)

Nand Lal Mishra, S K Singh, Vibhuti Patel, Aditi
International Institute for Population Sciences
Email: nandlal.iips@gmail.com

In India, child marriage continues to be widespread, notwithstanding various efforts by the Government of India (GOI) at different stages in the past century. Child marriage is the act of performing the marriage of any individual below the prescribed minimum age by the government. Recently the GOI introduced an amendment to the Child Marriage Prohibition Act of 2006 (PCMA) proposing to raise the minimum age at marriage of women in the country to par with that of men at 21 years. This article attempts to critically assess the prospects of the act perpetuating to reduce child marriages, potential barriers and strategies to mitigate those, based on evidence from different rounds of NFHS. Data from last 3 rounds of NFHS (2005-06, 2015-16 and 2019-20) is analysed to get the trends and patterns of girl child marriages in India. Descriptive analysis is conducted to explore the changes in the prevalence at state and district levels as well as for selected background characteristics. Additionally, multivariate binary logistic analysis is conducted to identify the key drivers of child marriages in India. Since 1978 when the minimum age for a female to get married was increased from 15 to 18 years, there has been a sharp decline in child marriage trends across various age cohorts leading to less than 25 percent of underage marriages in the 1995-2000 birth cohort. In 2005-06 as per NFHS-3, it was 47 percent, this decreased by half to 23 percent in NFHS-

5. Results show that cofactors like caste and religion do not have significant differences in recent periods. The key drivers continue to be education, wealth, and place of residence.

P 2.17 Disability, Education, Work Status And Work-Friendly Environment In India

Anandi Shukla
International Institute for Population Sciences
Email: anandi01@iipsindia.ac.in

India consists of about 26.8 million of disabled population (Census 2011). In this study, we try to find the status of disabled people in the context of education enrollment and work status. Most of people have to leave their work because of the difficulty faced in the workplace or transportation. Here, we will try to see the association between a work-friendly environment and work status. We will also try to analyze the effect of training and aid received on their work status. Objectives- (a)To examine the educational and working status of disabled people. (b) To examine the effect of aid, technical/vocational training, and ease of usage/ accessing the public building and transport on the working status of a disabled person aged 15-59. The Survey of Persons with Disabilities in India was conducted during NSS 76th round (July - December 2018). The bivariate and multivariate analyses have been done for different factors. Propensity Score Matching Analysis is used for objective 2. There are around 20% more people will be working if they haven't faced any difficulty in accessing the public building. For those who have used/ accessed public transport, we see that those who are at ease in using them have a 17% more chance of working. Employment is a major problem for people having a disability. They are likely to lose their jobs after the onset of disability. Most of the people with a disability don't have any education and nor have they ever enrolled in any school. In our study, we found that if they have easy accessibility, they can work. Similarly, if they are provided with any training, they are more likely to continue to work.

P 2.18 Understanding Men's Masculine Attitude towards Women's Roles and Activities in Rural Pune, India: A Cross-sectional Study

Ashish Vijaykumar Pardhi, Vahhida Pinjari
Tata Institute of Social Sciences
Email: ashutisspardhi@gmail.com

The United Nations (UN) fifth Sustainable Development Goals (SDGs) emphasised gender equality, empowerment of all women and girls, and ending all forms of discrimination against women and girls globally. Men's proclivity for abuse is founded on patriarchy, which enables men to be superior to and subject to women and control women's access to resources and decision-making power. We sought to understand men's masculine attitudes toward the roles and activities of women in rural homes and society. We conducted a cross-sectional survey of 593 never-married men aged 18-49 years living in rural Pune, India, from January 2018 to August 2018. A fully structured interview schedule was used to collect information on sociodemographic, socioeconomic, IPV, and gender equity attitudes related questions. Based on their GEMS scores, men's attitudes toward gender equity were classified as high, moderate, and low equity attitudes. We used multinomial logistic regression to evaluate the relationship between men's opinions toward gender equity and their socioeconomic level. Overall, nearly 26% of men reported high gender-equity attitudes. According to responses on women's roles in households, more than 90% of men believe women should tolerate domestic violence to keep their families together. Almost two-thirds of men believe that wives should adhere to their husband's rules (83%). According to the adjusted multinomial regression analysis findings, the likelihood of men having high gender equity attitudes decrease with age. The adjusted multinomial odds ratio for GEM Scale indicates that men from the 21-25 age group had a high odds of gender equity attitude (AOR = 15.40; 95% CI: 4.812, 44.322) compared to men aged 30-35 years

(AOR = 4.06; 95% CI: 2.010, 12.526). The study's findings indicate that many men adhere to particle norms which influence men's attitude toward gender equity.

P 2.19 An assessment of chronic diseases and first-degree family medical history as a predictor for NCDs risk among older adults in India

Mahadevrao Bramhankar, Mohit Pandey, Rishabh Tyagi, Rachel Gaikwad
International Institute for Population Sciences
Email: mahadev14.iips@gmail.com

This study aims to assess and compare the prevalence of chronic diseases as per the status of first-degree (FMH) among older adults aged 45 and above in India. Furthermore, the study explores the relationship between FMH and selected Non-Communicable diseases (NCDs). The present study uses secondary data of the Longitudinal Ageing Survey's first wave in India (LASI, 2017-18). For this study, the nationally representative sample for older adults 45 and above 65562 was considered for the analysis. LASI dataset collected self-reported diseases are hypertension, stroke, heart diseases, cancer, and diabetes. Along with diseases status, responds' first-degree relatives FMH was used in the study. Descriptive statistical analysis and multiple logistic regressions techniques were used to assess the prevalence and predict the risk of non-communicable diseases by FMH. The study found that the prevalence of selected NCDs was significantly higher among older adults with FMH than those without FMH. Based on the multivariate-adjusted model, significantly higher odds are observed for developing the risk when the respondents are having FMH among at least one of the first-degree relatives, the likelihood risk for hypertension (AOR: 2.058, 95% CI: 1.96, 2.15), diabetes (AOR: 2.94, 95%CI: 2.7, 3.11), heart diseases (AOR:2.39, 95%CI: 2.15, 2.67), stroke (AOR:1.62, 95%CI: 1.1, 2.47) and cancer (AOR:2.32, 95%CI: 1.7, 3.17) was high compared to no FMH of respective diseases. Similar results were observed as per the different stratification among the first-degree relatives. The present study demonstrated that first-degree relatives' FMH is indeed a dominant independent risk factor for chronic disease among the older adults of India. This study supports the promotion of a diseases history tool for chronic diseases prevention and early detection approaches as a valuable measure of NCDs risk.

P 2.20 The Association Between Unintended Births and Adolescents Development in India: Evidence from A Longitudinal Study

Abhishek Kumar
International Institute for Population Sciences
Email: dhakadabhishek97@gmail.com

Pregnancy intention may affect parents' attitudes and behaviour like how they are concerning a pregnancy which is unwanted and thing related to child health and consequently a change in behaviour towards their children which eventually may lead to adverse impacts on child development. To examine the association of unintended births with adolescents' development. Data from first, fourth and fifth wave of Youngs lives Study (A longitudinal dataset) for younger cohort (n=1890) is used. A series of multivariable linear regression and binary logistic regression were estimated to examine the association between unintended births and Adolescent's development Outcomes (BMI for age z score (BAZ), Height for age Z score (HAZ), Mathematics achievement test score (MAT), Peabody picture vocabulary test score (PPVT), composite scores for positive attitude (PAS)and negative attitude (NAS)) at 5% Level of significance using STATA. Multivariable linear regression estimates for BAZ [-1.17, 95%CI (-1.96, -0.1785)], MAT [-0.91, 95%CI (-1.78, -0.04)], PPVT [-1.95, 95%CI (-3.26, -0.64)] and binary logistic regression estimates for PAS [OR= 0.63, 95%CI (0.44, 0.91)] and for NAS [OR =4.39, 95%CI (0.96, 19.91)] by taking intended births as base outcome. All results are significant at 5% level of significance which concluding that all the development outcomes have lower values for those children who were unintended at birth as compared to those who were intended except for the negative attitude score which is higher for those which have unintended births. Adolescents who were unintended at birth have poorer health,

cognitive skills as well as social attitude as compared with intended births which ultimately inferring that adolescents' development is likely to pe poorer for those who were unintended at birth in comparison to the intended births.

P 2.21 Implementation challenges in digitizing frontline health worker payments: A comparative case study of ASHA Soft in Rajasthan and ASHWIN portal in Bihar

Riya Chaudhary
Indian Institute of Management Ahmedabad
Email: riyac@iima.ac.in

To enhance the efficacy of the healthcare system, the government must ensure that the frontline staff is motivated, well-trained, and paid on time. The Accredited Social Health Activist (ASHA) programme was launched by the National Rural Health Mission (NRHM) in 2005. Currently, there are limited standardized payment protocols which require lengthy approval processes and offer no transparency in the payment process; hence, ASHA experiences substantial payment delays. The frequent payment delays directly affect the motivation of the ASHAs, which undermines their ability to perform well. Consistent with the global expansion of digital financial services, public sectors in various nations have been digitizing frontline worker payments. While benefits of payment digitization in other industries have received attention, in-depth process studies in the context of frontline health workers are still limited (McConnell et al., 2022). Among other states in India, Rajasthan and Bihar have introduced ASHA Soft and ASHWIN portal, online payment and performance tracking systems, respectively. ASHA workers in Rajasthan do not directly utilize ASHA Soft, but those in Bihar directly use the ASHWIN portal. Therefore, the two provide interesting cases to compare and contrast. We study the implementation experiences of these two digital systems by telephonic survey of 278 ASHAs and in-depth interviews with 25 frontline workers and supervisors. While generally praised for improving transparency, our survey finds a large share of frontline workers still facing issues with timeliness of payments. In terms of aspects of their work that served to demotivate them, the delay in payments is the second most cited reason after the amount of compensation received by them. Drawing on the in-depth interviews, we probe reasons for the delays and suggest improvements to the process that could help both these systems as well as other similar efforts.

P 2.22 Reflection of Crimes against Scheduled Castes and Scheduled Tribes women in Rajasthan: Evidence from National Crime Record Bureau (2021)

Sunandita Das
International Institute for Population Sciences
Email: dassunandita60@gmail.com

India has become an incongruous country for women due to the rising number of assaults, sexual harassment, and gruesome rapes reported in the country every year. These crimes are rooted in the prevalent patriarchy and its well-defined gender discrimination. Historically, the Indian caste system oppressed the Scheduled Castes and Scheduled Tribes. Women from these categories become more vulnerable to crimes based on caste, class, and gender in India. The scenario is more alarming in the Rajasthan of India. This paper has tried to highlight the forms of sexual and gender-based crime against Scheduled Castes and

Scheduled Tribes women in Rajasthan. Using National Crime Record Bureau (2001-2021) report data, this paper has employed descriptive and thematic analysis to fulfill the study objectives. Result: Crimes against Scheduled Castes and Scheduled Tribes have grown exponentially in Rajasthan. The most predominant form of reported crime is Assault and Rape among Scheduled Caste and Scheduled Tribes women, respectively. Crimes have taken place more in women above 18 years old than those who are below 18 years. Contrary to Scheduled Tribes women, Scheduled Castes women experience more crimes in their below-18 age group. Jaipur, Kota, Ganganagar, Bikaner, and Ajmer are some unsafe districts. Crimes against Scheduled Castes women were more common in Jaipur, Kota, and Ganganagar, while crimes against Scheduled Tribes women were more frequent in Udaipur, Jaipur, and Kota. Conclusion: Crime is a crime, whether committed against an upper-class person or a lower class, and it must be prevented. To eradicate violence against these vulnerable categories of women, a systemic transformation in culture, attitude, norms, and practices is required, along with government initiatives to improve education, awareness, and economic empowerment.

P 2.23 Exploring wealth related inequalities in maternal and child health coverage in India with special reference to Assam

Pallabi Gogoi
Jawaharlal Nehru University
Email: pallabi.gogoi.01@gmail.com

Using the National Family Health Survey (NFHS) Round 5 data conducted in 2019-21, the present study analyses the magnitude of inequalities in the coverage of various Reproductive, Maternal, Newborn, Child, and Adolescent Health (RMNCH+A) interventions in India with particular reference to Assam, a high-focused state. The composite coverage index (CCI) derived from using 8 RMNCH indicators was used to explore the extent of coverage across Indian states and measures like difference, ratio, slope index of inequality (SII), and relative index of inequality (RII) were used to quantify the inequality pattern. The findings underscore an erratic distribution in terms of coverage of CCI across states and across wealth-quantiles. It reveals a pattern of pro-rich inequality in the state-wise analysis. However, the disaggregated analysis for Assam shows pro-poor inequality despite lower coverage compared to the national average. It suggests that the success of various schemes depends on the utilization of improved healthcare services among the poor section of society. However, the more inadequate coverage still calls for special attention to increase the utilization of various RMNCH interventions as the country as we embark on a journey towards the attainment of SDGs.

P 2.24 Assessment of drinking water quality in Palghat village of South 24 Parganas District, West Bengal: a Case Study

Chandan Roy
Mizoram University
Email: chandan96.roy@gmail.com

Groundwater pollution from toxic and emerging pollutants is a major concern across the world. Further, if the drinking water is contaminated with arsenic (As), it can cause cancer. Non-carcinogenic health risks are linked with the ingestion of iron and high exposure to iron may cause severe problems such as liver cancer, diabetes, cirrhosis of the liver, diseases related to the heart and central nervous system, infertility, etc. This study examines the quality of drinking water in Palghat village, South 24 Parganas District, West Bengal. A cross-sectional research design was used and a purposive sampling method was applied to conduct the households' survey. A total of 78

households (15%) were selected out of 520. In order to assess water quality, twelve (12) physicochemical parameters were examined. Besides, water quality was determined using the Weighted Arithmetic Water Quality Index (WAWQI). The study shows that 53.8% of households in the village rely on tube wells for their drinking water. Another 62.7% of households reported directly consuming drinking water without purification. In addition, our result shows that the ordinary tube well (S3) was slightly contaminated with arsenic (0.05 mg/L). In addition, a strong positive correlation was found between arsenic (As) and hardness (CaCo3) ($r=0.817$; $p<0.05$). According to our study, the water quality of the village is 'unfit for consumption' (WQI: 187.9) and if people continued to drink contaminated water, they may experience many health problems. Finally, the authors suggested some alternative measures to reduce the contamination of drinking water. However, effective implementation of the above measures will help households' to receive safe drinking water and reduce the impact of contaminated drinking water on the human health.

P 2.25 Disparities in Maternal Healthcare Utilization among women in Bihar: Does Caste matters?

Deepak, Dhananjay W. Bansod
International Institute for Population Sciences
Email: deepakpihal08@gmail.com

In Indian society, people are recognized by their castes, even today also. The gap between advantaged and disadvantaged people is not only restricted socially but it has intricated in our healthcare facilities where maternal healthcare service utilization is significantly linked. The broad objective of the proposed study is to examine the average disparity among the caste category in the use of complete antenatal care (ANC), skill birth attendant (SBA), institutional birth, and post-natal care (PNC) in Bihar. By using National Family Health Survey-5 (2019-21) data, this paper employed descriptive statistics, bivariate logistic regression, and decomposition analysis to meet the study objectives. To make the estimates uniform and minimize the recall bias, we have focused on the most recent births of women five years before the survey. The findings demonstrate that usage of maternity services is influenced by education, family economic position, and area of residence. Women from the General Castes used maternal healthcare facilities more frequently than women from the Scheduled Castes. For all four services, the mean differences were significant (p 0.05). The average gap between General Castes and Schedule Castes for utilizing maternal healthcare services in Bihar is also attributable to differences in the distribution of the determinants. The study concludes that caste disparities exist while utilizing maternal healthcare services in Bihar. The degree of discrepancies varies with different health care indicators as well as socio-economic underpinning elements such as Household economic status, women's place of residence and spousal educational achievement. To reduce gaps, government initiatives should concentrate on decreasing the age of marriage and equalizing educational attainment.

P 2.26 Impact of diabetes on healthcare utilization and expenditure among older adults in India

Puja Goswami
International Institute for Population Sciences
Email: pujagoswami.ghy@gmail.com

Diabetes, along with additional complications, can not only limit the ability to self-manage but also create competing healthcare demands. The aim of the study is to investigate the prevalence of diabetes-related comorbidities among diabetics and non-diabetics. The study also tries to understand the impact of diabetes on healthcare needs and expenditures. The prevalence of at least one chronic comorbidity, the prevalence of diabetes-related comorbidities, the proportion of the population hospitalized in the last 12 months, and the mean number of days hospitalized during the last

hospitalization is summarised by sex, age group, educational levels, residence, geographical regions, economic status, and caste. Logistic regression is used to find the trend in the prevalence of morbidities both in diabetic and non-diabetic groups. The association between the presence of diabetes and the risk of excess healthcare expenditure was studied through out-of-pocket expenditure for hospitalization and expenditure on medicines; quantile regression was used. In some cases, OOPE for hospitalization and expenditure on medicine was reported as zero, so a two parts model and zero-inflated negative binomial model were used to conduct sensitivity analysis on the zero-inflated nature of the outcome variables. The results show that diabetes increases the risk of being hospitalized. The mean number of days was found to be more among the diabetic group compared to non-diabetics. The results present the need for an awareness program on diabetes, especially educating the population about the multifaceted risk involving other comorbidities. Diabetes-focused interventions should be integrated into health policies at the national level. A positive association between diabetes and OOPE for hospitalization and medicine expenditures across the cost distribution provides much-needed evidence to emphasize the need to address the risk of financial impoverishment among diabetes patients.

P 2.27 Age wise Growth Pattern of Indian Children and their Correlates Evidence from NFHS-5

Diksha Rani, H. Lhungdim
International Institute for Population Sciences
Email: diksha08@iipsindia.ac.in

Globally 144 million i.e., 21.3% of under 5 children are Stunted, 47 million are Wasted and 38 million are Overweight. This Paper has 3 objectives. First, to compare the height of the Indian Children with the WHO Standard and the second, to study the Birth Weight of Stunted and Non-Stunted Children. Third, to analyse the growth pattern, distribution and factors of stunted children by age across India Data from WHO MCGRS and NFHS 5 were taken. Binary logistic regression undertaken to determine which background characteristics have a statistically net association with the prevalence of stunting and severe stunting. Adjusted odds ratios from a logistic model are presented with 95% confidence intervals. The dependent variable 'stunting' assumes a value of 1 if the study population is stunted, and 0 for not stunted. Likewise, for dependent variable 'severe stunting' a value of 1 is taken if the study population is severely stunted, and 0 for not severely stunted. With limited data and time for analysis, the study however could explore certain fundamental issues related to child growth, and highlights risk factors of stunting, based on selected household wealth quintile, mother's education, child's weight at birth, mothers' height and child anaemia. In addition to the policies and programmes aimed at improving maternal and child nutrition, equal focus should be given to improving mothers' education. Findings also suggest that Indian children grow like any other child in developed countries, but as age increases growth becomes a casualty due mainly to poverty and lack of access to healthy and nutritious diets. Also, it is important to address income inequality when implementing nutritional interventions.

Presenting Authors by Session No.

Name of Presenting Author	Session No.
Akhtar S	T 8.4
Alagarajan M	T 6.2
Alam J	P 2.5
Alam M	P 1.5
Amrutha G S	T 1.2
Anand A	P 1.6
Anilkumar A S	T 15.5
Aslama M J	P 1.2
Awasthi N	P 2.9
Barman B	P 1.27
Barman P	P 1.12
Bhagat R B	T 7.1
Bhambhani C	T 6.5
Bhat B A	T 6.3
Bhattarai S	T 12.3
Boro B	T 1.5
Bramhankar M	P 2.19
Chakrabarty M	P 1.8
Chakraborty R	P 1.19
Chakraborty R	P 2.11
Chatterjee M	T 15.6
Chaudhary R	P 2.21
Chauhan S	T 8.3
Chokhandre P K	T 14.2
Choubey J	T 1.3
Das K	T 6.4
Das K C	T 4.2
Das P	T 13.3
Das S	P 1.13
Das S	P 2.22
Deepak	P 2.25
Dey S	T 5.5
Dhakal R P	T 6.6
Dhar M	T 2.1

Presenting Authors by Session No.

Name of Presenting Author	Session No.
Gajbhiye K S	P 2.12
Gangte S	T 3.3
Gayathri B	T 8.6
George N	T 8.5
Ghosh R	T 13.6
Giri S	T 14.5
Gogoi P	P 2.23
Gopal R	T 11.3
Goswami P	P 2.26
Gouda L K	T 14.6
Govil D	T 15.3
Goyal A K	T 1.4
Goyal R S	T 5.1
Gupta A	T 10.5
Hansda C K	P 1.25
Jana A	P 1.20
Jungari S	T 2.4
Kamble V A	P 1.21
Kapasia N	T 8.1
Kashyap G C	T 11.1
Khan A	T 11.6
Kharel A	T 9.5
Khatoon F	T 14.3
Kulasekaran R A	T 1.1
Kumar A	T 7.3
Kumar A	P 2.20
Kumar D	P 1.26
Kumar M	P 2.13
Kumar R	T 14.4
Kumar R	P 1.23
Kumar S	T 5.4
Kumar V	P 1.17
Kumari A	T 13.5
Kumari N	P 1.16
Kundu A	P 1.7

Presenting Authors by Session No.

Name of Presenting Author	Session No.
Lakhan T R	T 3.4
Mandal K	T 3.5
Mandi R	P 2.10
Mishra N L	P 2.16
Mohan P V	T 7.4
Mohapatra A	T 11.4
Mukherjee S	T 5.2
Mundu G B	T 4.3
Murmu A	P 1.10
Murugesan P	T 3.2
Mustafa A	T 3.6
Naeem M	T 12.2
Nagdeve D A	T 6.1
Naik I	P 1.4
Neethumol S S	P 1.24
Palamuleni M E	T 13.1
Pandey A K	T 13.4
Pandey M K	P 1.14
Pardhi A V	P 2.18
Pareek P	T 11.2
Paul K	T 8.2
Paul R	P 2.6
Pedgaonkar S	T 10.2
Pedgaonkar S	T 13.2
Persoob T	T 9.1
Pradhan M	T 10.4
Pradhan M R	T 2.3
Prakash A	P 1.9
Prakash K	P 2.3
Prasad A B	P 2.1
R S Reshmi	T 10.3
R S Reshmi	T 9.3
Rana G S	P 1.22
Rani D	P 2.27

Presenting Authors by Session No.

Name of Presenting Author	Session No.
Rashid S R	T 12.1
Rashmi	P 1.18
Roy A K	T 12.4
Roy C	P 2.24
Salam A A	T 2.6
Salik K M	T 9.2
Sanbal R	P 1.11
Sarode S	T 7.2
Sekher T V	T 15.1
Sharif N	P 2.4
Sharma M	T 14.1
Sharma M	T 15.4
Sharma P	P 2.2
Shenk M	T 2.2
Shit B	T 4.4
Shukla A	P 2.17
Shukla V	T 3.1
Sikdar R	P 1.1
Singh A K	T 11.5
Singh B	P 1.15
Singh D P	T 4.1
Singh P	P 1.3
Singha S	P 2.7
Subaiya L S	T 15.2
Sumi T H	T 2.5
Swathi	P 1.28
Thomas J S	T 7.5
Ubale P	P 2.15
Unisa S	T 10.1
Varma S	T 4.5
Varsha	P 2.8
Vasthava A	P 2.14
Weerathne B	T 9.4
Yadav S	T 5.3

IIPS Admission announcement
Academic Year 2023-2024

The International Institute for Population Sciences (IIPS), an autonomous organisation established in 1956 under the Ministry of Health & Family Welfare, Government of India, invites applications for admission to the following programmes for the Academic Year 2023-2024.

- **M.A/M.Sc. in Population Studies [Monthly Fellowship Rs. 5,000/-]***
- **M.Sc. in Bio-statistics and Demography [Monthly Fellowship Rs. 5,000/-]***
- **Master of Population Studies (MPS) [Monthly Fellowship Rs. 5,000/-]***
- **Ph.D. in Population Studies / Bio-statistics & Demography [GoI-IIPS, UGC-JRF fellowship etc.]**
- **Part-time Ph.D. Programme**
- **Post-Doctoral Programme (PDF) [Monthly Fellowship Rs. 50,000/-+ HRA]**

Last date to submit application online: 02nd April 2023
Date of Entrance Test: 30th April 2023

Candidates appearing for final semester exams can also apply.
Application registration Link:
https://apply.registernow.in/IIPS/Registration/

For more details, please visit: www.iipsindia.ac.in

ISEC Bengaluru

Institute for Social and Economic Change

Dr. VKRV Rao Rd, Teachers Colony, Nagarabhavi,
Bengaluru- 560072, Karnataka.
Website: http://www.isec.ac.in/

IIPS, Mumbai

International Institute for Population Sciences

Govandi Station Road, B.S. Devashi Marg, Deonar,
Mumbai-400088, Maharashtra.
Website : http://www.iipsindia.ac.in