



## IIPS International Seminar 2022

# POPULATION, HEALTH AND SUSTAINABLE DEVELOPMENT

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Seminar on Virtual Platform

## Abstracts

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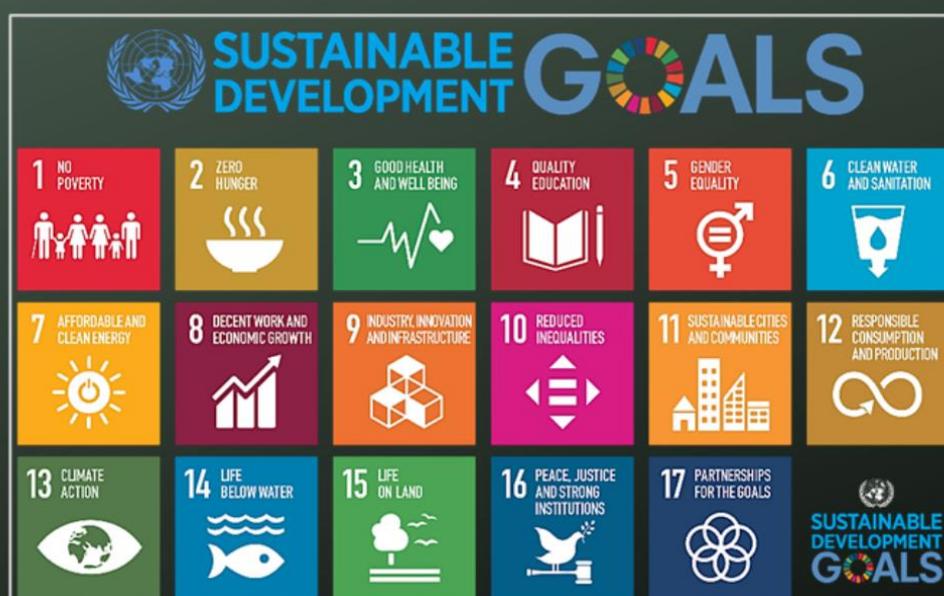
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# Objectives of the Seminar

In most parts of the world, the average life expectancy has increased, infant and child mortality rates have declined, and the proportion of malnourished children has decreased over the past decades. Many infectious diseases have receded, owing to improved sanitation, safe drinking water, nutrition, and vaccines. Despite undoubted health advances in many areas, poor health continues to be a constraint on developmental efforts in many developing countries, and India is no exception to this. As a result of economic and social upheaval, environmental degradation, and increasing inequities, human health suffers, particularly that of women and children.

Health has become a central concern in development, both as a contributor to, and an indicator of, sustainable development. Many of the key determinants of health and disease lie outside the direct control of the health sector such as environment, water and sanitation, education, employment, urban and rural livelihoods, and food security. Addressing the underlying determinants of health is key to ensuring sustainable development. It is also widely accepted that sustainable development and public health are intricately connected and closely interrelated. Sustainable development cannot occur in countries and regions marked by persistent socio-economic inequalities, widespread diseases and environmental degradation. This seminar explores the interlinkages between population, health and sustainable development, as well as the strategies and measures to achieve the sustainable development goals.



## Health and Migration during COVID

**Author:** Meera S

**Institution:** Birla Institute of Technology and Sciences, Goa

**Title:** Covid-19 and Internal Migrants Labourers in India: Rights and Migrant Vulnerabilities

**Abstract:** The Covid-19 pandemic has affected all sectors but it has had a largely disproportionate impact on the informal sector following the intermittent lockdowns, the hard-hit economy and the subsequent unemployment. Internal migrants were the worst affected among the informal sector workers. The lockdown prevented them from getting any form of employment in their work places and their poor living conditions made them highly vulnerable to Covid-19. The already suffocating rural economies hardly offered them any prospects of employment when they returned to their native places. This paper argues that the precarity of the internal migrant labourers which became evident during the pandemic exposed their condition which had existed earlier and the lockdown merely brought it to the attention of the public. The conditions which culminated in the crisis and the long walks back home by the internal migrant labourers have existed long before the pandemic. The internal migrant crisis in India during the lockdown induced by Covid-19 was the result of long-standing apathy shown by the government, those who reap the benefits of their cheap labour, and the society at large. The mobility of the migrant workers, a key aspect that provides them employment also denies them access to several rights that can be easily availed by an average citizen who is not frequently on the move in search of employment away from one's native place. By drawing examples from academic and journalistic articles this paper will analyse how the rights of migrant labourers were violated during the pandemic and the domicile-based nature of accessibility to rights in India deepens the inequality and poverty experienced by internal migrants in the country.

**Author:** Sunita Kumari

**Institution:** Central University Jharkhand

**Title:** COVID-19, Return Tribal Migrants and Resilient of Rural Livelihood in Giridih District, Jharkhand

**Abstract:** The COVID-19 is one of the biggest disasters of human history, and it affects all sections of society. However, it more affects the marginal section of society at a large. The loss of employment creates havoc for the tribal wage labourers, worked as casual labourers in the informal sector. They usually work on a contract basis. Due to COVID-19 led containment of activities in the country and fear of loss of life, it was reported to be hitting hard- more to the industrial and construction workers and those who engaged in petty jobs in the trade and service sectors. Against this backdrop, the paper analyzes the socioeconomic conditions of the Return Tribal Migrants, the pattern of migration, nature of works and skill mapping and their reemployment prospects in the state. Results show that most of the workers were in the working-age group and around one-fourth of the workers were eight passed. The income of more than one-third of workers at the destination was 6001-10000 rupees and more than two-thirds of workers were 0-.25 acre of agricultural land at the origin. Places of migration were Maharashtra followed by Gujarat They were worked as labourers and cotton factory workers. In such conditions, Skill mapping and further reemployment of the workers are important for the state.

**Author:** A. Sebastian

**Institution:** Dharmamurthi Rao Bahadur Calavala Cunnan Chetty Hindu College, Chennai, Tamil Nadu

**Title:** Psychological Wellbeing of Adolescents during COVID-19 Pandemic Situation in Thiruvallur District, Tamil Nadu

**Abstract:** Psychological wellbeing of adolescents has been highly affected by COVID-19. Adolescents who had experienced previous trauma with addition to social isolation/quarantine and loneliness were more prone towards anxiety and depression during and even after the enforced isolation ends. On the other hand, some protective factors were found to help adolescents stay away from any mental health adverse impacts due to COVID-19. Physical-psychosocial support provision, adequate and accurate information from credible source about COVID-19 and good motivation to obey physical distancing has shown to decrease the likelihood of negative mental health changes in adolescent. During times of uncertainty, it is crucial to focus on psychological well-being to navigate these difficult circumstances in a healthy way. Anxieties, depression, disturbances in sleep and appetite, as well as impairment in social interactions are the most common presentations. When adolescents struggle with emotional problems, they often turn to drug use to help them to manage painful or difficult feelings. The mechanisms that they use to cope with stressful situations are not distinct from those of adults. However, because adolescent's brains are still developing, the consequences of "self-medication" are more instantaneously challenging. Through this study, psychiatrist, parents, or other parties who accompany or take care of adolescents hopefully can raise awareness to detect mental health changes in order to decrease adverse mental health impacts in adolescent's future. Hence, this study is important in the aspect of a more holistic approach towards adolescents who are affected by COVID-19, whether directly or indirectly. In the long term, there might be a surging incidence and prevalence of psychological disorders which might be attributed to COVID-19 and hence empowering adolescents through awareness and interventions might require cooperation between the adolescents, families and government agencies.

**Author:** Monika Das

**Institution:** Rajasthan University Health Sciences, Jaipur

**Title:** Correlation between HRCT chest severity scores and RTPCT results as well as their clinical symptoms and post covid sequelae among the patients attending Covid Hospital.

**Abstract:** Introduction: Since, November 2019 the rapid outbreak of Coronavirus disease 2019 (COVID19), which arose from severe acute respiratory syndrome Coronavirus 2 (SARSCoV-2) infection, has become a public health emergency of international concern. First case of Covid 19 in India was reported on 30th January in Kerala. Infection by COVID 19 can result in a range of clinical outcomes, from asymptomatic to life threatening course or death. RTPCR and CT scan are major diagnostic component as per WHO and CDC guidelines. Diagnostic confirmation of Covid 19 in early stage is equally important for prognosis and treatment.

Objective: To correlate the HRCT chest scores with the RTPCR results. To find out the clinical symptoms and post Covid sequelae of the Covid 19 positive patients through telephonic conversation.

Methods: Study design: Cross Sectional Study, Study tool: Semi - structured Performa and Medical Records, Study duration: 1 month, Study population: Patients with HRCT scores, Statistical tests: MS excel & SPSS trial version 23, Sample Method : Simple Random method

Results: A total of 550 HRCT severity score were assessed. Nearly 2/3rd patients were RTPCR positive. Out of which 36.5%, 34.3% & 6.8% were mild, moderate, severe findings respectively and 22.5% were with zero score finding. 48.75% patients were symptomatic from RTPCR positive patients. Nearly 25% had post covid symptoms.

Conclusion: The present study depicted that the clinical symptoms of patients were directly correlated HRCT severity scoring.

## Technical Session II

# Sustainable Development Goals

**Author:** Amita Halder, Sanjay Kumar

**Institution:** Mahila Maha Vidyalaya, Banaras Hindu University, Varanasi

**Title:** Rural Tourism-An Opportunity to Achieve Sustainable Development Goals: A Study in Indian Context

**Abstract:** According to UNWTO 2012 (United Nation World Tourism Organization), “Tourism has a great potential to accelerate progress across the Sustainable Development Goals” (SDG). In India, tourism consists of various economic sectors. Rural tourism is one of the modern and emerging concepts in India gaining popularity for playing a significant role in rural development. This is an alternative livelihood through which local peoples are getting social, economic and cultural benefits. And, the Ministry of Tourism is also focusing on creating rural tourism projects. At present, Govt. of India has 107 projects in 29 States which is an initiative towards AtmaNirbhar Bharat and Sustainable Development. Many goals of Sustainable Development are directly and or indirectly related to the objectives of rural tourism. And the Govt. of India wants to rejuvenate this to gain self-economic growth after COVID-19 outbreak. So, this paper focused on how Sustainable Development Goals- Gender Equality, Decent Work and Economic Growth, Reduced Inequality etc. are connected with rural tourism. This paper is based on secondary data like reports of Ministry of Tourism, reports on evaluation cum impact study of rural tourism projects, India Tourism Statistics, National Sample Survey office report and National Tourism Policies. With regards to findings the paper provides an overview of rural tourism and SDGs and with the help of rural tourism we can achieve some sustainable development goals. Indian Government has been taken many policies and Step like National Tourism Policies, Report on Evaluation Cum Impact Study of Rural Tourism Projects, National Strategies and roadmap, SWOT analysis and Incredible India Campaign, Swadesh Darsan Scheme. The positive side of these Policies is Indian Govt. trying to achieve Sustainable Development.

**Author:** Jos Chathukulam

**Institution:** Centre for Rural Management, Kottayam, Kerala

**Title:** Localizing Sustainable Development Goals: The Case of Two Gram Panchayats in Kerala

**Abstract:** The Sustainable Development Goals (SDGs) are prescribed as the answer to address the development challenges in various countries including India. Localization in terms of SDGs refer to how local as well as sub-national governments can support the achievement of SDGs through bottom-up action as well as how it can provide a framework for local development policy. While localization of SDGs is a shared responsibility of all three levels of governments, for effective and speedy accomplishment of the goals outlined in the SDGs, the three-tier governance structure under Panchayati Raj Institutions (PRIs) should be mandated with planning, implementation and monitoring the function related to SDGs. Thus, in order to achieve the SDGs concerted efforts are required not only in national and state level but also at the local level. Attempts to localize SDGs led by local governments are slowly emerging in India and many Gram Panchayats in Kerala have already embarked on the process of localizing SDGs with the support of Kerala Institute of Local Administration (KILA).

This paper offers detail case studies on localizing SDGs in two Gram Panchayats in Kerala – Chelakkara Gram Panchayat in Thrissur district and Nellanadu Gram Panchayat in Thiruvanthapuram district. The paper will examine the experimentations undertaken in localizing SDGs in these two Panchayats from a theoretical perspective of Gandhi-Kumarappa framework on political economy of development and environment. The paper attempts to document the best practices emerged from localizing SDGs as in the case of Chelakkara and Nellanadu Panchayats and will look into the feasibility of scaling up this model across India. Kerala which has 25 years of experience in People's Plan Campaign (PPC) affords the best opportunity for localizing SDGs. The paper attempts to offer a fair trial for enhanced outcomes in sustainable development through localization of SDGs.

**Author:** Shewli Shabnam, Souvik Mondal, Suman Singh

**Institution:** Bidhannagar College, Kolkata, West Bengal

**Title:** Health related SDGs and the targets of National Health Policy 2017- Achievement and challenges of India

**Abstract:** India is committed to pursuing the goals and the targets of the UN Agenda 2030. In this paper, we have focussed on India's performance in achieving the targets mentioned in SDG 3 and the National Health Policy, 2017.

**Objectives:** To conceptualize how health is related to various Sustainable Development Agenda 2030, to evaluate the progress towards achieving the health-related targets of SDG 3 and the National Health Policy of India 2017.

**Method:** We have used the data from the reports of the National Family Health Survey (NFHS) - 4 and the factsheets of NFHS-5. Targets were taken from the Sustainable Development Goals, 2030 (United Nations, 2015) and the National Health Policy of India, 2017. To compute the rate of progress, we have used the following formula: Annual rate of progress =  $[(X_{t1} - X_{t0}) / X_{t0}] * [1 / (t1 - t0)]$  Where,  $t_0$  is the survey period of NFHS-4 and  $t_1$  is the survey period of NFHS-5. For convenience, we have taken the time difference as 5 years.  $X_{t1}$  and  $X_{t0}$  represent the indicator's values for the corresponding years. The rate of progress necessary to meet the target by the target year is calculated as:  $\alpha = (X_{tg} - X_{t0}) / X_{t0}$  The annual rate of progress required to achieve the goal is expressed as:  $\alpha / (tg - t1)$ . Where,  $tg$  is the target year and  $t1$  is the base year.

**Findings and conclusion:** From our analysis, we observed that in case of achieving full antenatal care of mothers, reduction of neonatal mortality rate and maternal mortality ratio, India needs to progress faster. The comprehensive knowledge regarding HIV/AIDS among men and women in India is substantially low. Government should urgently take into account these fields to achieve the health-related targets of SDG-3.

**Author:** Ravi D. Prasad

**Institution:** International Institute for Population Sciences, Mumbai

**Title:** Prevalence and determinants of behavioral risk factors of chronic non-communicable diseases among elderly in India: Findings from WHO-SAGE Wave 2

**Abstract:** Introduction: Though the prevalence of modifiable risk factors of chronic non-communicable diseases (NCDs) and its monitoring determinants of socio-economic groups are well established to help the target effective policy interventions in India, the research gap is to be fulfilled in this area.

Objectives: This study attempts to assess the prevalence of behavioural and concomitant risk factors of chronic NCDs and their associated factors by socioeconomic status (SES) and also, provides insights of comprehensive policy suggestions for the elderly in India.

Data and Methods: The study uses data from the Study on Global Ageing and Adult Health Wave 2, India (2015). Bivariate and logistic regression analyses have been used performed to assess the associations between socio-demographic determinants and NCD behavioural risk factors among the elderly in India.

Results: The results suggest that around one-third of respondents were using tobacco; one-tenth of them were consuming alcohol; Every four individuals out of five of them were not having adequate fruits and/or vegetables intake; and 45% of them were not having some sort of physical activity. About 57% of the older individuals were having at least two risk factors and about 13% of them had three concomitant risk factors for developing NCDs. Respondents those who were with normal BMI, overweight, and obese were 0.27% [95% CI: 0.62 - 0.86], 0.44% [95% CI: 0.42 - 0.75], and 0.60% [95% CI: 0.52 - 0.63] less likely to be tobacco users than underweight respondents.

Conclusion: Our results demonstrated that the higher proportion of respondents has insufficient servings of food and vegetable (80%), are less physically active (45%), and consume tobacco (34%) which are recognized as risk factors for NCDs and are major public health problems. Overall, this study calls for urgent attention towards health interventions at an early stage to reduce the risk of NCDs.

## Technical Session III

# Women Empowerment

**Author:** Anjali Sharma

**Institution:** Institute for Social and Economic Change, Bangalore

**Title:** Does economic downfall lead to greater women economic participation?

**Abstract:** In the view of COVID-19 pandemic, the world has been severely affected. Not only in terms of loss of life and poor health but also larger socio-economic and demographic implications. There have been serious disruptions to the global economy and India is not an exception to it. India witnessed a severe downfall of GDP as clearly mentioned in the government reports. Literatures have identified the national economic downfall is not about just the banks and government funds, it has impacted almost every household, mostly poor and middle class, in terms of family income consequently affecting the nutritional intake, access to health services, education etc. During COVID-19 lockdown all the economic activities were closed which affected particularly informal sectors and migrants through job loss. In response to these impacts on family, there is possibility that each potential member of household takes a step to search job and contribute for the economic wellbeing of their family. So, this paper attempts to understand the pattern of labour force market from a gendered perspective during economic downturn so that the impact of the COVID pandemic can be unravelled regarding gender gaps in labour force. The hypothesis of this paper is that women's economic participation increases and subsequently gender gaps in labour force decreases in order to deal with the devastating impacts of economic downfall. To test the hypothesis, Census and NSSO data on labour force participation as well as GDP data from government sources is been analysed from 1961 till present. This study contributes to the policy designing during economic downfall of COVID-19 as well as future pandemics from a gendered lens.

**Author:** Anjana Menon, Varuna C. V

**Institution:** Maharajas College, Cochin

**Title:** Preferences and ideologies of Partner choices: a paradox of development in Kerala

**Abstract:** The state of Kerala is a narrow strip of lush land flanked by the Arabian Sea on one side and the long mountain range named Western Ghats on the other. Located in the southwestern tip of the Indian peninsula, the place is known for social indices that favourably compare with those of European nations, diverse cultural traditions, vibrant religious groups/denominations and cultural symbiosis. Despite its progressive social indicators Kerala's attitude towards the conceptualisation of marriage and its approaches to expression of desire remain a source of concern. A brief review of the growth and development of women in Kerala reveals that girls substantially outnumber boys in higher education, more pointedly at the master's level, not a sudden change but a natural continuation of trend visible in schools. The gender shift in government employment also reflects the kind of giant leaps that woman cutting across classes and castes have achieved. When we take other indices into account, it is evident that Kerala differs from other states and Union Territories in India in the visibility, education, employment, empowerment and relative stature of women. This is a phenomenon widely noticed and discussed by social scientists. However, recently multiple cases of dowry related deaths were reported from the state in an unprecedented fashion commanding a review of the development process the state had witnessed. The present study attempts to introspect the imaginings of brides and grooms through an interdisciplinary perspective and attempts to reveal that the paradigm shift in the society has left the entrenched misogyny untouched, burdening upon women the need to be both a 'domestic' wife with fewer independent choices but at the same time a substantially contributing member to the economy.

**Author:** Poonam S. Yadav

**Institution:** Institute of Language Studies and Applied Social Sciences, Anand, Gujarat

**Title:** Impact of Gender Inequalities on Economic Growth in India

**Abstract:** Over the last decade or so, feminist studies concerned with Economic Growth and women Empowerment. Concern of these efforts in India, is to gain a better understanding of the impact of Economic reforms on Gender inequalities. Discriminatory attitude towards men and women have existed for generations. although the constitution of India has granted men and women equal rights, but gender gap remains. Female discrimination violates human rights. Women are perceived to be disadvantageous at work. Gender discrimination in India refers to health, education, economic and political inequalities between men and women. Gender inequalities, and its social causes impact India's sex ratio, women health over their lifetime, their educational attainment and economic conditions. We Hypothesize that reducing Gender Inequality should disproportionately benefit industries with typically higher female share in their employment relative to other Industries. Despite a large number of contributions on the topic empirically identifying a casual impact of economic growth is a major challenge.

**Research Significance:** Research highlights gender inequality in India and its impact on Economic Growth,

**Research Methodology** for research is indirect method, involving review of Research Reports and data available on government sites.

**Results:** Both factors are Interdependent, Gender Inequality and Economic Growth.

**Conclusion:** Economic Growth and Reforms can play a major role in reducing Gender Inequality; in the other direction, higher Gender Equality may support Vital growth.

**Author:** Jyoti Das

**Institution:** International Institute for Population Sciences, Mumbai

**Title:** An Analysis of Gender differential in In-Patient Care of NCDs: Evidences from NSSO 75th Round (2017-18)

**Abstract:** The consolidated effect of demographic transition and epidemiological transition has resulted in the increasing life expectancy which entails the larger share of ageing population. Studies have found that 21st century has witnessed the unrivalled upward shift of life expectancy in the Low- and Middle-Income countries. The revised World Population Prospect projected that globally the 65+ population will be twice from 2019 to 2050. India being the second largest populous country in the world and on the verge of becoming most populous country, the concern regarding ageing and its challenges in socio-economic frontiers has emerged to be a global matter of concern. There has been a research gap in the area of gender difference in hospitalisation focusing especially the elderly.

**Objective:** To examine the frequency of hospitalization due to NCDs among elderly, to identify the gender gap in the proportion of hospitalization due to NCDs, to identify the gender gap in the frequency of hospitalization among broad age groups of elderly.

**Methodology:** The current analysis uses data from the 75th round of the National Sample Survey (NSS), which was performed by the Government of India from July 2017 to June 2018. For the current analysis bivariate, multi-variate analysis has been carried away, further chi-square test has been done to verify significant relationship.

**Critical Findings and Conclusion:** Women having least share of hospitalization in all the strata of monthly per capita consumption expenditure emphasises on the economic vulnerability which further validates the old literature. At all the level of education the share of elderly man hospitalising goes on increasing and their counterparts goes on decreasing. the highest frequency is focused among the male belonging to young old age group of 60-64 years while irrespective of women it is focused in the age group of oldest old 70 and above.

## Technical Session IV

# Wellbeing of Elders

**Author:** Jitender Prasad

**Institution:** International Institute for Population Sciences, Mumbai

**Title:** Levels and Patterns of Multiple Health Risk Factors among Older Adults: A Study of SAGE Countries

**Abstract:** The existing evidence of health risk factors (HRF) and their associated factors indicates that the risk of morbidity and mortality among older adults will increase with the increase of the number of health risk factors. In this study, we examine the levels and patterns of health risk factors in six middle-income countries. We used WHO-SAGE survey Wave-1 (2007-2010) data, we analyzed 33,922 (15,594 males and 18,328 females) people aged 50 years or above. The number of HRF was created, using the row-total count of 16 HRF, further we divided into 4 categories. Bivariate and multivariate analyses were carried out to understand the prevalence and correlation of socio-economic status of MHRF among older adults. The relative risk ratio was obtained to examine the prevalence of MHRF on socio-economic status in all six SAGE countries. We found out of 16 HRF there is a maximum 12 risk factors exist together among older adults in SAGE countries. Approximately 5% of older adults do not have even a single HRF. China has 37% older adults are healthy, because they have less than 1 HRF, and approx. 2% have scored 6plus HRF. Country-wise analysis we found India (RRR=13.79) has more significant health risk as compared to other countries. In conclusion, socioeconomic status showed a significant negative association with HRF, better socioeconomic conditions play a significant role with improved awareness about the adverse consequences of HRF.

**Author:** Kinkar Mandal

**Institution:** Institute for Social and Economic Change, Bangalore

**Title:** Multidimensionality in functional limitations in India: Evidence from LASI Wave-1

**Abstract:** Functionality is an important determinant of the quality of life of the elderly and one way of assessing the health status with the use of two indicators such as activities of daily living (ADL) and instrumental activities of daily living (IADL). Longitudinal Ageing Study in India (LASI, 2017-18), survey data were used to measure the multidimensionality of ADL and IADL items of functional ability. A multidimensional factors structure was depicted, with two levels of functional ability possessing internal consistency. We found that ADL/IADL unidimensionality and hierarchy score are not valid, whereas ADL and IADL items should be measured in combination to capture the greater range of functional disability. Use factor loaded items into ordinary least squares (OLS) regression result shows that older age, female, living in urban area, widowed/separated, poor health was found to be factors associated with IADL limitation. The data also shows that the gender status of the elderly is significantly associated with functional disability with the increase of age were getting around is the most difficult task for older women. Further, the prevalence of performance of each IADL limitation by region shows that southern states elderly has higher levels of functional limitation.

**Author:** Pankaj Kamal Shankar Kumbhar

**Institution:** CHRIST University, Bangalore

**Title:** Welfare of Senior Citizens in India: A Situational Analysis

**Abstract:** It is a well-known fact that India is the second largest populous country around the world. Elderly population has been growing extraordinarily in India therefore India has been categorized under the Aging Country by the UN. Around 8.6% of the total is 60 and above years of age. The projected population of elderly to be around 20% of the total population in next 28 years i.e., it is expected to triple by 2050. It is expected by UNDESA (United Nations Department of Economic and Social Affairs) in 2008, that the Indian population of elderly 60 and above will grow up to 11.1 % in 2025. In today's context changing patterns of social systems such as shifting from Joint family to nuclear family leading elderly more vulnerable. Aging population is a crucial issue in India in order to provide care, support and welfare of this elderly population. Elderly are more affected due to lack of social and economic security, therefore the government has initiated various flagship welfare programmes like NSAP, IGNOAPS, NPHCE to lead Integrated and Inclusive welfare of the elderly. SDGs also addresses the issues concerning old age persons with its aim of Leaving No One Behind. In spite of many efforts right from Nation to Globe still old age Persons are more vulnerable and they face multiple problems in terms of accessibility of social services, health, welfare and support system at community level. The present paper has been planned with a view to discuss the situation of the Old Age in terms of their welfare and also focuses on various policies and welfare measures related to Integrated development of Old Age and to suggest proper measures for achieving comprehensive welfare of the Old Age Population.

**Author:** Papai Barman

**Institution:** International Institute for Population Science, Mumbai

**Title:** Impoverishment effect of Out-of-Pocket Health Expenditure in India: A Comparison between Households with Elderly and Households without Elderly using 75th round Social Consumption Survey, 2017-18

**Abstract:** The share of out-of-pocket health care expenditure (OOPHE) to household consumption expenditure is very high around 67 percent making health care costs catastrophic and leading to impoverishment effects in the medium to long run.

**Objective and Data:** The current study has examined the impoverishment effects of OOPHE on households with elderly and without elderly using the latest 75th round survey on social consumption released (November 2019) by the National Sample Survey Office in India.

**Methodology:** Our study extracted households with the hospitalized member in the last 365 days (N=80105) in the first phase and thereafter it divided households with elderly members (N = 23708), and households without elderly (N = 56397) respectively. Further, we have categorized a household's impoverishment as a binary variable after paying health services. In this study, we have linked the impoverishment effects of OOPHE on the poverty level of households using the latest consumer expenditure-based poverty line estimation of India. One uniqueness of this study is the categorization of samples across Indian states based on the Epidemiological Transition Level (ETL). The study has employed bivariate and logistics regression.

**Findings and Conclusion:** Our findings show that OOPHE among elderly households is on the upswing. By controlling for other factors, households with two elderly individuals are 6% more likely to be impoverished than the households without elderly. The prevalence of poverty among households with at least one elder person is 10.5%, while it is 9.8% among households with elderly. As a result of the greater out-of-pocket expenditure, a higher percentage of elderly households in the majority of Indian states are impoverished than households without elderly. The findings of the current study call for financial protection and regional level policies for the identified households.

**Author:** Priya Maurya

**Institution:** International Institute for Population Sciences, Mumbai

**Title:** Work participation and Life Satisfaction among Indian Elderly: Mediating role of Health and Personal Beliefs

**Abstract:** Productive aging through work participation can empower elderly to control their own lives better and maintain health, solve their problem caused by an ageing society, to gain greater life satisfaction and well-being for themselves and their families.

**Objective:** This paper attempts to assess the effect of work participation on life satisfaction mediating with physical health, mental health and personal beliefs (religiosity and spirituality) among elderly in India.

**Data and methods:** The data for this study were utilized from the first wave of Longitudinal Ageing Study in India (2017-2018) that deals with nationally representative sample of 31,464 of 60 plus elderly populations. Descriptive statistics and structural equation modelling (SEM) were applied.

**Results:** Physical health [ $\beta=-2.4$ ,  $p=0.68$ ] and mental health [ $\beta=-1.67$ ,  $p=0.52$ ] were negatively associated with life satisfaction whereas Spiritual Religiosity were also significantly associated with life satisfaction. In the path relationships from aged (70-79) [ $\beta=0.09$ ,  $p<0.01$ ] and aged 80 or more [ $\beta=0.19$ ,  $p<0.01$ ], female [ $\beta=0.06$ ,  $p<0.01$ ], who living with others [ $\beta=0.05$ ,  $p<0.01$ ] and those reported their health as good [ $\beta=0.21$ ,  $p<0.01$ ] were significantly positively associated with physical health. However, elderly who currently working [ $\beta=-0.02$ ,  $p<0.01$ ], having 10 or more years of schooling, from middle or poor wealth quantile and those experiencing financial discrimination [ $\beta=-0.01$ ,  $p<0.01$ ] were negatively associated with the physical health.

**Conclusion:** The findings of the study have practical implications for policy-makers and the government to promote quality of life and healthy ageing through productive engagement and meaningful engagement in activities of their choice in old age.

## Technical Session V

# Maternal and Child Health

**Author:** Abhishek Anand, Sourav Mandal, Niharika Awasthi, Bharati Singh, Manas Ranjan Pradhan

**Institution:** International Institute for Population Sciences, Mumbai

**Title:** Pregnancy registration in India: Does the pregnancy intention matters?

**Abstract:** Pregnancy registration is one of the most important components of reproductive health of women because it is the gateway of entering to continuum of care service such as antenatal care, institutional delivery, and postnatal care. There are several determinants of registration of pregnancy but there is lack of studies which explore the relationship between pregnancy intention with pregnancy registration, especially in Indian context. This study explores the relationship between last birth intention and pregnancy registration using the National Family Health Survey-4 (NFHS-4) data. The bivariate and multivariate (binary logistic regression) analysis has been carried out. Adjusting the effects of socio-demographic and economic characteristics, women with a mistimed pregnancy history had significantly lower odds of registration of pregnancy (OR = 0.60, 95% CI = 0.57-0.63) as well as registration of pregnancy in first trimester (OR = 0.59, 95% CI = 0.56-0.62) compared to their counterparts with an intended pregnancy. Women with an unwanted pregnancy history had significantly lower odds of registration of pregnancy (OR = 0.68, 95% CI = 0.63-0.72) as well as registration of pregnancy in first trimester (OR = 0.53, 95% CI = 0.51-0.56) than those with an intended pregnancy history. Pregnancy intention thus found to be a significant predictor of pregnancy registration as well as early registration in India. The grassroots level health workers may strengthen their efforts to highlight the benefits of pregnancy registration. Higher pregnancy registration may enhance the maternal health care utilization and reduce possible adverse health consequences to the mothers and children, thus ensuring better health for all.

**Author:** Himani Sharma, S. K. Singh

**Institution:** International Institute for Population Sciences, Mumbai

**Title:** Unintended pregnancy in India: A systematic review and meta-analysis of quantitative and qualitative studies

**Abstract:** Unintended pregnancy poses serious threats to the physical and mental wellbeing of women. This study has been done to synthesize the knowledge from the existing studies and determine the overall prevalence of unintended pregnancies and its key drivers in India. Electronic databases like Scopus, PubMed, JSTOR, Google Scholar, Science direct, web of science were used for this purpose. A systematic review of the eligible studies which met the inclusion criteria was performed along with the thematic analysis. The sub-group analysis was performed to visualize how the prevalence of unintended pregnancy varies across different groups of studies. The selected studies were accessed quality and inclusion through Newcastle-Ottawa Scale. Based on the inclusion and exclusion criteria, 25 full papers were assessed for the systematic review and meta-analysis. As a synthesis of all the studies, the present study found that the overall prevalence of unintended pregnancy was 20.6 per cent ranging from 8 per cent to 88 per cent. The present study identified age, number of children, education, wealth index, caste, religion, place of residence, parity, occupation, type of family and use of contraception as important and significant determinants of unintended pregnancy among women. The thematic review revealed that major studies revolve around the themes of intimate partner violence, contraceptive use and maternal and child health. The current study analyzed the existing evidence on key drivers of unintended pregnancies among women in India, to bring an improvement to set pathways for future studies on this subject. The findings of the current study are also focused on improving the intervention of health care providers and entertaining the targeted need of the women in future.

**Author:** Jayanta Kumar Bora

**Institution:** VART Consulting PVT LTD, New Delhi

**Title:** Treatment Seeking Behaviour and utilization of Health Care Services for Child Morbidities in India: Evidence from NFHS Data

**Abstract:** Objectives: Despite the global epidemiological transformation of diseases, child morbidity appears to be a problem in developing countries. Childhood morbidities such as diarrhea, fever, and cough have remained high as per NFHS-4 data, and regional and socio-economic inequality exists in India. The study aims to assess the treatment-seeking behaviour and utilization of health care services for child morbidities in India.

Data and Methods: National Family Health Survey-4 data were used. Prevalence in episodes of diarrhea, fever, and cough was calculated. The statistical significance of the associated factors with health care services for diarrhea and fever/cough was determined. Multinomial logistic regression analysis was employed to assess the effects of explanatory variables on health services utilization factors.

Results: The exciting finding of this analysis is that approximately one-third of children who reported having diarrhea and fever/cough did not receive any medical treatment during the study period. It is also surprising that more than 65% of sick children received treatment from private health care providers. Mother's education, socio-religious group affiliation, place of delivery of the mother, wealth of the household, health insurance scheme, availability of health provider, availability of drugs, and warning signs of illness were crucial factors associated with the choice of child health care providers in India.

Conclusion: The analysis of the study reveals that after implementation of the NRHM/NHM program, there is still a gap in service delivery of child health interventions aimed at reducing child mortality from preventable illnesses such as respiratory infections and diarrhea. Therefore, an upliftment of health system reforms may be required to implement IMNCI under the NHM intervention program effectively.

**Author:** Prakash. K, R. Jegankumar

**Institution:** Bharathidasan University, Trichy, Tamil Nadu

**Title:** Modelling the determinants of Child Health in India: A Geospatial approach

**Abstract:** In general, as defined by the World Health Organization (WHO), health is a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity. Although, there is much more care has to be provided in case of the children who are under the age 5. Child health is a fundamental important goal for the future generations to sustain healthy. Over the past few decades, the world has recorded a swift progress in improving the child health and reducing the child mortality. However, a UNICEF report 2019 states, 6.1 million children and young adults have died, mostly from preventable causes; of which 5.2 million were new-born babies. India accounts one fifth (25 million) of the world's annual child births. Nearly, 3.5 million children are born too early, among them 1.7 million are born with defects. India, despite the increase in the number of health care centres across the country, has to improve the quality of the health care services in those centres to reduce the child mortality. Also, health care systems in the remote tribal areas, where 21 percent of the total deliveries are recorded, need much more ambitious plans and budget to be expended to increase their access to the health care systems. The current study, with the application of geospatial technology, maps the state level health care systems across India and models the relationship and prioritize the states for immediate action plans to attain the goals of the National Health Policy. The study utilized select data from the Annual Reports of the year 2019-2020 of Healthcare Management Information System (HMIS) and Rural Health Survey (RHS).

**Author:** Chaitali Mandal

**Institution:** International Institute for Population Sciences, Mumbai

**Title:** Contraceptive use by marriage type in India

**Abstract:** Introduction: India was the first country to implement National Family Program in 1952. The practice of contraception in India is well documented in the literature. However, the extent to which the type of marriage affects contraceptive use has not yet received adequate academic attention.

**Objectives:** The objective of the study was to assess the contraceptive use by currently married women in non-polygynous and polygynous marriages.

**Methodology:** The study was based on data on reproductive women aged 15-49 sampled in the third and fourth round of the National Family Health Survey. Simple cross-tabulation and multivariate logistic regression were used for the analysis.

**Findings:** We obtained descriptive statistics of contraceptive use among women in non-polygynous and polygynous marriages. In both rounds of the NFHS, non-polygynous women were more likely to use contraception than polygynous women. In NFHS-4, 53.6% of non-polygynous women compared to 48.4% of polygynous women used contraceptives. The unadjusted odds ratio shows that the likelihood of contraceptive use was 27% (UOR = 0.73, CI = 0.70, 0.76) less likely among polygynous women than non-polygynous women in India. After controlling the effect of other variables, a similar result (with a lower AOR=0.71) was found in the adjusted model. Polygynous women of Scheduled Tribes, Muslims, secondary and highly educated and the poorest women living in rural areas had lower rates of contraceptive use.

**Conclusion:** Because of the diversity of contraceptive use by marriage type in India, the study concludes that policies and programs that encourage the use of contraceptives should be better considered to promote continued use of contraceptives, especially among polygamous union couples.

## Technical Session VI

# Impact of COVID-19

**Author:** M. Rex Sahayaraj

**Institution:** Dharmamurthi Rao Bahadur Calavala Cunnan Chetty Hindu College, Chennai, Tamil Nadu

**Title:** Economical and Psycho-Social Issues of Mothers of Primary School Children during Pandemic Lock down in Rural Community.

**Abstract:** The study aims to describe the Economical and Psychological problems faced by mothers who are taking care of their children between the age group of 5- to 10-year-old. In rural community in India, mothers are given more responsibility for providing the care to the children. They are held responsible for Children's holistic development. Hence this study focuses on Mothers than Fathers. Descriptive Research Design was being used in this study and purposive sampling method was used to select the respondents. This study focus to analyses how the respondents were able to meet over their day-to-day expenses, how far they were satisfied with Government benefits, their concern about children's education and its impact on psychological condition of the respondents. Rural Community were restricted with mobilization which hindrance their migration to work in urban community. These aspects were analyzed under this study and brought out the condition in the aspects of economy and psychosocial. The study revealed that there is increase in economic burden among Rural Community, worries were related to their children's primary education and unable bear the fees for home tuition where the major problems were identified Under this study the 85 respondents are from the rural community of Thiruvallur District of Tamil Nadu. The data are collected from using the Self Prepared Interview Schedule and Standardized Scale.

**Author:** Praveen Chetti

**Institution:** Andhra University, Vishakhapatnam

**Title:** COVID-19 Pandemic and Unemployment: Impact and Policy Issues in India

**Abstract:** The outbreak of COVID-19 pandemic is an unprecedented shock to the Indian economy, especially there was an adverse effect on the job market after the immediate impose of nationwide lockdown. India is the second most affected country in the world after the United States, which was estimated of 2 million to 10 million migrants were affected by this Covid-19 pandemic.

This study aims to ascertain the impact on unemployment due to the sudden imposition of national lockdown due to the COVID-19 pandemic to date and also provides comprehensive policy suggestions for retaining from the loss of employment.

This study used the monthly data on state-level unemployment rate from the Centre for Monitoring of Indian Economy (CMIE) from 2019 to 2021. The CMIE is a private organization, which provides high-frequency employment-unemployment statistics based on a large household survey. The study also used the workforce data from the National Statistical Office's Annual Report of Periodic Labour Force Survey (July 2018-June 2019).

The results show that the unemployment rate was increased from 7% to 24% within a span of one month (March-April 2020). Among states, Tamil Nadu, Jharkhand, and Bihar states have reported the highest rate of unemployment during the first lockdown period, which was about 50%, 47%, and 47% respectively. The age group 15-19 years reported the highest unemployment rate (about 54% and 62%) in the period of May-August 2020 and September-December 2020 respectively.

Overall, the pandemic induced the pressure of economic recession due to prolonged lockdown. Hence, the Government should implement a holistic approach to revive the economy and mitigate unemployment problems in both organized and unorganized sectors and also, need to focus on the self-help groups to create jobs for themselves in the form of self-employment during these COVID-19 disruptions of the country.

**Author:** Praveena K. V

**Institution:** Tata Institute of Social Sciences, Mumbai

**Title:** The survival of Transgender persons during Covid-19 pandemic: A study from Kerala

**Abstract:** The transgender community has been receiving increased media coverage in recent years. With the increased visibility of the community, it is vital to understand the unique experience faced by transgender people during Covid -19 pandemic in a well-educated state like Kerala. Also, it is indispensable to know how the government take care of the transgender community during the pandemic period. The deprivation of dignity, abuse, lack of opportunities makes a transgender person vulnerable in our society. The discrimination starts within their family and continues throughout their life. The lack of adequate support from their childhood makes their life difficult in each corner of society. Transgender people are socially marginalized individuals forced to live in slums where social distancing is challenging, making it the hotbed of Coronavirus.

Further, the absence of healthcare backup and lack of awareness increases the looming fear among the transgender community regarding the budding impact of Covid -19. The past experiences cause their mental health, financial hardship and lack of employment opportunities. In this paper, the researcher examines the survival experiences of transgender persons during the covid 19 pandemic in Kerala. It is a qualitative study included 15 In-depth interviews with transgender people across Kerala using the snowball method and reviewed journals and newspaper articles as secondary sources. Throughout the study, the researcher noted down their struggles, survival strategies and support from the government. The major problems faced by transgender people were lack of shelter and financial hardship, lack of employment, difficulty in accessing the hospitals and discrimination from mainstream society.

**Author:** Rajisha Sharma, Mohan Bera

**Institution:** Birla Institute of Technology and Sciences, Pilani K. K. Birla, Goa

**Title:** Group activity in higher education in the context of pandemic

**Abstract:** Due to the outbreak of the COVID 19 pandemic, pedagogy and learning have undergone various changes. Lockdown and social distancing protocol led to the closure of colleges and universities paving way for alternative educational modalities. While a lot of research has tried to explore the influence of the pandemic on individual learning outcomes, its' effect on group activity and peer learning remains unexplored. The National Education Policy (NEP, 2020) highlights on transformation of the teaching learning process from a traditional to a more active mode of learning. It's advocacy on inclusivity in education as well as development of problem-solving skills as part of curriculum has led to the adoption and usage of group learning pedagogical approaches. Group learning promotes critical thinking and active learning.

A qualitative research study has been conducted among the higher degree students in a technical college where group activities form an integral part of teaching and learning in the laboratory and classroom setting. The study seeks to understand the influence of the pandemic on group work and group learning. Amidst all the researches exploring the teaching -learning processes in the context of the pandemic there is hardly any mention of the nature and trajectory of group learning paving way for the present study which seeks to explore the experience of group work and group activities in higher education.

**Author:** M. V. Vaithilingam

**Institute:** International Institute for Population Sciences, Mumbai

**Title:** Health Information Systems: What, Why, and How?

**Abstract:** Sound and reliable information is the foundation of decision-making across all the health system building blocks and is essential for the health system policy development and implementation, governance and regulation, health research, human resource development, health education and training, service delivery, and financing. The health information system has been developed with the objective of enhancing the medical outcomes, quality of life, quality of care, and simultaneously reducing operations, morbidity, medical errors, and cost. These help in gathering, compiling, and analyzing the health data for the management of population health and reducing healthcare costs. Such systems are more helpful in managing health information, especially the emergency situations like pandemic COVID-19. This paper tries to explain the concept, importance, and functioning of health information systems in the changing information society of the ICT era.

## Adolescents and Youth

**Author:** Chanda Maurya

**Institution:** International Institute for Population sciences, Mumbai

**Title:** Longitudinal linkages between cyberbullying victimization in adolescence and mental health problems at young adulthood: evidence from India

**Abstract:** Introduction: Being bullied or a bully in adolescence is considered a global public health issue concerning the psychological development of adolescents that oftentimes persist into adulthood. So, there is a need to explore the relationship between cyberbullying victimization, depression, and suicidal ideation in adolescents, given the scarcity of studies in poor-resource settings like India.

Data and Methods: The study uses data from the Understanding the Lives of Adolescents and Young Adults (UDAYA) survey conducted in two Indian states of Uttar Pradesh and Bihar. We employed bivariate analysis and logistic regression to fulfil the aims and objectives of the study.

Result: About 3.76 percentage girls experienced cyberbullying at wave 1 and this percentage increases up to 6.43 % at wave 2, among boys this percentage increases from 1.86% to 5.62% from wave 1 to wave2. Nearly 16.62% of boys and 32.95% of girls have depressive symptoms. Almost 2.3% of boys and 7.54% of girls ever seriously consider attempting suicide. Adolescents who were victims of cyberbullying earlier were two times more likely to have depressive symptoms as well as suicidal ideation.

Conclusion: Although internet and smartphone use come up with numerous benefits, it also has negative consequences and public health concerns in the present time. Our findings confirm that cyberbullying victims are at higher risk of depression and suicidal thoughts and these adverse effects are stronger with time. Therefore, cyberbullying and related mental health problems need to be addressed with more efficient strategies as these interrelations are bidirectional.

**Author:** Radhey S. Goyal

**Institution:** Harshal Foundation, Dehradun, Uttarakhand

**Title:** Whether the Relative Poverty of Women in Childhood and Adult Ages Affect their Disease/Disability Burden in Later Years?

**Abstract:** This paper attempts a comparative analysis between disease and disability burden of men and women in old age against relative deprivations of women in nutrition, healthcare, education etc. in childhood and adult ages, taking India as a case.

The analysis is based on secondary data culled out from Indian census (1981, 1991 2001 and 2011) large scale surveys (NFHS: 1993, 1998, 2006, 2015), NSS: 1991, 2000 and 2009) and other sources. The reference period of the study is last three decades. The study variables are identified through a correlation analysis depicting linkage between quality of life in old age and access to necessities of life in childhood and adult ages. The variable chosen for studying the old age disabilities are; blindness, locomotion, amnesia, hearing and speech impairment. For studying the morbidity pattern, prevalence of pain in joints, tuberculosis, cough, blood pressure and heart problems are considered. Levels of nutrition, immunisation coverage, access to health care and primary education are chosen to depict the relative access of men and women to necessities of life in childhood. The variables chosen to depict the quality of life in adult ages are; domestic violence against women, proportion of men and women employed in organised sector, access to health care services, and household income/assets. It is a macro level analysis taking state as a unit of analysis.

Though, significant differences between men and women access to means of quality life in childhood and adult ages were noted, multiple regression analysis between variables depicting disease and disability burden in old age and deprivation in quality life in earlier ages, yielded low R squared. Not only women were living longer, their health status was also at par with men.

**Author:** Raisa Biswas

**Institution:** Tata Institute of Social Sciences, Mumbai

**Title:** Aging and mental health: A study among women violence survivors in a low-income settlement in India

**Abstract:** Introduction: Over the year, studies report that women living in adverse conditions experience more vulnerable life situations i.e Intimate Partner Violence (IPV) and Common Mental Disorders (CMDs) affecting health and well-being. It gets more vulnerable among aging women due to physiological and psychological changes they go through.

Objective: The prime objective of this paper is to explore mental health condition of aging women as an outcome of IPV.s

Methodology: This paper is part of author's doctoral work among IPV survivors and reports finding of the larger study. The Hindi version of Self Reporting questionnaire (SRQ-20) was used to assess CMDs among women survivors.

Findings: Study findings show that older women (35-50 years) with longer duration of marriage have experienced more incidences of IPV as well CMDs. Regular spells of crying, depression, anxiety and somatic consequences are reported by them. Consulting faith healer and over the counter medication was widely preferred. Older women's perception of stigma attached to mental illness in feminine gender is cited as prime reason for ignoring symptoms, delayed treatment and lower-self-esteem.

Conclusion: Findings conclude that sensitizing and equipping the community to deal with violence, mental health and older women's need should be prioritized at primary level.

**Author:** Tanya Lamba

**Institution:** Tata Institute of Social Sciences, Mumbai

**Title:** Understanding the use of emergency contraceptive pills within intimate relationships among urban middle-class young women

**Abstract:** Introduction: Contraception is a medium or a tool through which the sexuality and sexual experiences of individuals can be understood in various social, cultural, and individual contexts. One such contraception is a post-coital method of Emergency Contraceptive Pill (ECP), which can be used by a woman after having sexual intercourse. The ECP is a pill that is taken post-coitally, is a onetime pill and is available over the counter. ECP exists along with other contraceptives. There are various stakeholders in the contraceptive eco-system in India, be it the actual users of the contraceptives, the state, pharmaceutical companies, or the healthcare system. All have their own reasons for promoting and propagating contraceptive use. Though, it is eventually the individual users who really determine the actual use of these varied contraceptives. Hence, it becomes important to understand the perceptions, interpretations, meaning and interactions regarding contraceptives at the level of an individual's experience.

**Objectives:** To understand woman's control, choice and autonomy influencing her decision to use ECP, to understand how the intimate relationship context and its continuum are interrelated with the use of ECP for the woman, to understand the meaning of premarital sexual relations and ECP as ways of expressing sexual freedom and resistance to patriarchal structures.

**Methodology:** Paradigm: Social Constructivism

- Who are the participants?  Unmarried women  Age: 21 years to 35 years  In long-term or casual relationships  Have used emergency contraceptive  Live in any metropolitan city in India  Have completed minimum graduation
- How will the participants be selected?  Sharing the purpose and ethical procedures on social media account
- How will the research be conducted?  Interviews in person or online mode
- The ethical considerations for conducting the research  Institute Ethics Committee approval  Ensure privacy

**Author:** Atanu Ghosh

**Institution:** Bankura Christian College, Bankura, West Bengal

**Title:** Prevalence and Risk Factors of Anemia among Adolescents in West Bengal: Findings from a Cross-Sectional Study

**Abstract:** Introduction: Adolescence is a critical period of growth which includes reproductive maturation and developmental transition. They are not only the future workforce but also the bearers of the next generation. If they are not properly fed then the country will not only be able to reap the gain of demographic dividend but also suffer from vicious cycle of malnourishment. The CNNS study reveals that 28% of Indian adolescents are anaemic. West Bengal has the highest proportion of anaemic adolescents (45.6%) in the country.

**Aim and Objective:** To study the prevalence of anaemia among different subsection of population and risk factors of anaemia among adolescents in West Bengal.

**Materials and Methods:** Unit level data from the Comprehensive National Nutrition Survey (CNNS, 2016-18) was used for this study. A sub sample of 35830 adolescents aged 10-19 years were collected at national level and haemoglobin measurement was provided for 14669. For West Bengal the sample size were 1468 and 700 respectively. Observations were interpreted as per the WHO criteria. The data was analysed by stata version 16.

**Results:** Overall, 46.5% of adolescents were suffering from anaemia, higher proportion of girls (65.3%) were anaemic compared to boys (25.6%). Significant differences in anaemia status were observed among adolescents with respect to their hand wash knowledge. After controlling the possible covariates in logistic regression model, sex of adolescents and wealth quintile were identified as significant risk factors of anaemia. Adolescent girls were 5.7 times more likely to be anaemic compared boys (AOR: 5.70, 95% CI = 4.04-8.04, p-value = 0.000).

**Conclusion:** The present findings showed a sex and poverty are two important factors of anaemia among adolescents in West Bengal. Therefore, it requires a well thought poverty reduction and gender equality action to improve the anaemia status among the adolescents of West Bengal.

## Technical Session VIII

# Mortality and Morbidity

**Author:** Krishna Murthy Ponnappalli

**Institution:** Mekelle University, Mekelle, Ethiopia

**Title:** Estimated and Projected Life Tables for India and States

**Abstract:** In a recent study Ram et al. (2021) stated that “an important aspect relates to the accuracy of the life table columns due to erroneous input. It calls for a review of the existing SRS life tables to make necessary corrections/updates ensuring more accurate information. They further stated that “The visible effect of such error on  $e_{00}$  would be minimal since we assume no error in the rates at other ages (due to lack of data).” As a matter of fact, it is not the first time to criticise the SRS data on several aspects of reported fertility and mortality information. As a result, a number researchers tried to prepare their own life tables using the ASDRs reported in the SRS reports of various issues. (For instance, see Borah, 2021). The present researcher also attempted earlier to prepare abridged life tables and also model life tables for India using the SRS data. The objective of the present study is to provide selected reference tables of life expectancy at age  $x$  ( $LE(x)$ ) for estimating male, female abridged life tables for India, its states and districts, however not using any input data from the SRS reports. An attempt is also made to provide estimated and projected life tables for males, females and both sexes (or total) for India and major states using the only information on life expectancy at birth (LEB) and the reference tables. Required data on LEB has been collected from the latest RGI publication on “Report of the Technical Group on Population Projections, published in June 2020.” Perhaps, it is the first work of its kind to provide abridged life tables (in terms of life expectancy at age  $x$ ) from LEB for estimated as well as projected periods of different states in India reported by the RGI.

**Author:** Mihir Adhikary

**Institution:** International Institute for Population Sciences, Mumbai

**Title:** Double burden of Indoor and outdoor air pollution and its association with mortality and morbidity in India.

**Abstract:** India is seeing rapid urbanization and significant industrial expansion. Both the processes are positively associated with ambient air pollution. At the same time, excessive use of solid fuel in households produces substantial indoor air pollution. As a result, India bears a double burden of indoor and outdoor air pollution. This study aims to explore the association of indoor and outdoor air pollution with morbidity and mortality to quantify the burden. The ambient air pollution data provided by the CPCB-India, was used in this study. The study will depend on the most recent National Family Health Survey (NFHS) for indoor pollution, health, mortality, and other socio-demographic indicators. For district-level analysis, pollution data has been paired with NFHS-data. Statistical models have been generated to measure the association of air pollution with morbidity and mortality patterns by controlling other confounding socio-demographic variables, which has yielded more realistic estimates about mortality and morbidity burden attributed to air pollution. Analyses found that every 10-unit increase in PM10 level increased the risk of neonatal mortality by 6% (adjusted RR (95%CI): 1.02 (1.02 to 1.09)), and the odds of symptoms of ARI among children by 7% (adjusted OR (95%CI): 1.07 (1.03 to 1.12)), and premature births by 8% (adjusted OR (95%CI): 1.08 (1.03 to 1.12)). There was no statistically significant difference in the effect of PM10 on health regardless of the household's hygienic practices. For adult mortality also, we can see the same trend. Respiratory morbidity is highly associated with increasing PM10 levels. Besides this, heart disease also shows a significant association with air pollution. Exposure to PM10 and household solid fuel use regardless of hygienic practices increases the risk of adverse health outcomes. Given the increasing industrialization and urbanization, a systemic, coherent approach is required to address the issue of air pollution in India.

**Author:** Ronak Paul

**Institution:** International Institute for Population Sciences, Mumbai

**Title:** Temporal patterns in Infant Death Clustering Among Families in India Human Development Survey

**Abstract:** Introduction: Despite considerable research and knowledge about the determinants of infant mortality, the majority of the children are unable to 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.

Objective: The present study examined the clustering of infant deaths among Indian families.

Methodology: We used the entire birth history of mothers from the India Human Development Survey round-I (conducted during 2004-05) and round-II (conducted during 2011-12). 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, the use of 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).

Conclusion: From preliminary analysis, clustering of infant deaths was observed 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, preceding birth interval and socio-economic status were significant factors explaining the risk of infant deaths.

**Author:** Neha Kumari, Nandita Saikia

**Institution:** International Institute for Population Sciences, Mumbai

**Title:** Association between functional limitation and multimorbidity among tribal and non-tribal older adults in India: moderation effect of alcohol use.

**Abstract:** Background: Multimorbidity increases the likelihood of functional limitations. The contribution of predominant chronic diseases in determining functional difficulties is relatively underexplored among tribal older adults. This study examines the prevalence and association between chronic conditions and functional limitations among tribal and non-tribal older adults in India.

Data and Methods: The present study utilized data from the nationally representative Longitudinal Ageing Study in India (LASI-2017-18). The effective sample size was 30,089 older adults (Tribal= 5,105; non-tribal=24,984). Comparison between the tribal and non-tribal older adults is made to seek a deeper understanding of distinct patterns. Bivariate and ordered logistic regression analyses were carried out to identify the factors associated with functional health among tribal and non-tribal older adults. The outcome variable, functional limitations, was based on activities of daily living and categorized as no difficulty, one-two ADLs/IADLs, and three or more ADLs/IADLs. The main explanatory variable, multimorbidity, was grouped into no disease, one, two and three or more diseases.

Results: The number of chronic diseases was significantly positively associated with the functional limitations in tribal and non-tribal older adults. Non-tribal older adults have a greater prevalence of  $\geq 3$  functional limitations than tribal older adults (30.1% vs. 25.3%). We further assessed the moderation effects of alcohol use on the association between multimorbidity and functional limitations and found that magnitude of odds ratios in the tribal population was greater than that of non-tribal population.

Conclusion: The present study demonstrates that multimorbidity exerts a significant negative impact on functional health in both tribal and non-tribal older adults. Moreover, alcohol consumption behaviour can elevate the severity of multimorbidity on functional health, particularly among tribal older adults.

**Author:** Krishna Kumar

**Institution:** Jawaharlal Nehru University, New Delhi

**Title:** Estimation of completeness of death registration at the national and sub-national level using empirical method.

**Abstract:** Objectives: Civil Registration System (CRS) is the main source of birth, death and cause of death statistics at national and sub-national levels. The vital statistics are widely acceptable and relevant for micro-level planning, monitoring and evaluation of healthcare programmes. The existing literature on the estimation of completeness of death registration is primarily based on indirect techniques that provide biased results. We aim to estimate the completeness of death registration of India and its states.

**Methodology:** We used annual report of the CRS, 2016 for obtaining information on registered deaths. We estimated the completeness of all age death registration using the empirical method. The empirical method used logit model that is a function of registered crude death rate, estimates of under-five mortality rate, and the proportion of people aged above 65 years.

**Critical findings:** We found that completeness of death registration at the national level was 70 percent, ranging from 16.8 percent in Bihar to 99 percent in Kerala. Besides, we found out of eight, seven Empowered Action Groups states showed lower (<80%) completeness of death registration. Moreover, we found higher completeness of all age death registration in southern and western states of India. In addition, we found higher completeness of death registration in Chandigarh (98.7%), New Delhi (94.2%), Punjab (91.8%) and Odissa (90.4%). CRS provided estimates of completeness of death registration for 2016 at the national level was over-reported by 8 percent.

**Conclusions:** The empirical method fit better in the estimation of registered death completeness at the national and sub-national level and could be useful in comparison of death registration level with other administrative regions or nations. We suggest linkage of birth and death registration to healthcare institutions.

## Technical Session IX

# Education and Marriage

**Author:** Sunandita Das

**Institution:** International Institute for Population Studies, Mumbai

**Title:** Prevalence and Determinants of Divorce among ever-married women, India.

**Abstract:** Marriage is an important social institution so when people choose to get married, they do that with the intention to stay together “Forever”. But every coin has two sides and marriage is in the one side and divorce is on its opposite side. Since divorce is one of the most controversial topics to discuss in Indian societies for its existing stigmas, discussion on changing divorce rate trend, regional variation in prevalence of divorce, Socio-economic characteristics and determinants of divorce among ever-married women (15-49) in India will give more insights of it. To capture divorce, this study used NFHS 4 and 2011 Census. For analysis part, this study utilized two methods – Descriptive statistics and Binary Logistics Regression. At present India has low divorce rate compared to other countries though it is experiencing an increasing trend of divorce rate over time. Divorce rate variations can be seen among states. Compared to other states, a higher divorce rate among ever-married women is observed in Mizoram and Meghalaya. Socio-demographic characteristics analysis of divorced women gave much insight on which sectors women are more prone to divorce in India. Women who are in 15-19 age-group are more likely to be divorced than others. Urban women are more prone to divorce than rural women. Women who have no formal education have less likelihood to get divorced than higher educated women. Higher likelihood of getting divorced can be seen among Christian women than other religious communities. Women who are working are more prone to divorce than women who are not working. Those who got married before age 18 are less likely to get divorced than those who married beyond age 18. Lastly, results have shown that domestic violence is an important factor as women who experienced domestic violence go for divorce than those who don't.

**Author:** Dewaram Abhiman Nagdeve, Prashant Bhimrao Dongardive

**Institution:** International Institute for Population Studies, Mumbai

**Title:** Inter-Caste, Inter-ethnic and Inter religious Marriages in India.

**Abstract:** Inter-caste and inter-religious marriages are still considered as taboo in India. India has experienced a very low prevalence of inter-caste marriages. It is studied that inter-caste, and inter-religious marriages will abolish religious and the caste conflicts, but India is still struggling to come out of this social menace. The present paper aims to assess the prevalence of inter-caste and inter-religious marriages among ever married women. Additionally, determinants of inter-caste marriages has also been explored in the study. The data has been analysed from the fourth round of the National Family Health Survey (NFHS-4) conducted during 2015-2016 in India. The bivariate and multivariate analysis has been used in the study.

Results of the study shows that most of the inter-caste marriages took place within the same religion. Similarly, the inter-ethnic marriages are comparatively higher among inter-caste marriages. On the contrary, inter-caste and inter-ethnic marriages are quite low among the inter-religious group. Results indicate that the majority of inter-caste marriages are not crossing the boundaries of their religious belief. The analysis reveals that the inter-caste marriages are more significant between two nearest castes groups in the social hierarchy. It replicates that as any other phenomena, caste hierarchy is persisting in inter-caste marriages. Hence, the policymaker should develop the policy to reduce the gap between social groups and promote inter-caste and inter-religious marriages.

**Author:** D.P. Singh

**Institution:** Tata Institute of Social Sciences, Mumbai

**Title:** Educational differential in India: Does Caste matters?

**Abstract:** Caste system in India is as old as human settlement. Demand for caste enumeration is increasing from many political parties mostly to know the size of various caste in the country. The last 1931 Census of India provided the size of various caste in India. Present paper uses NFHS 4 data to examine caste group educational level and continuation by Gender, rural-urban and state variation. About 60 per cent of reported caste were grouped in major caste – Brahmin, upper caste, Trader (Banias), Yadavas, Patel, service caste, Sc, ST, Muslim upper group and general, Christian, Sikh, and Jains. The finding shows that among minority like Jain and Christian are highly educated while service caste, agricultural caste like Yadava, Patel and Muslims are still lagging to reach.

Out of 15 lakh individuals above 7 years, the Jain and Christian shows nearly 25 per cent were graduate and above while less than 10 per cent of Yadavas, Patel, Service caste, Muslim reached up to higher education level. Nearly a quarter of these caste were illiterate or incomplete primary. Similarly gender wise difference in educational attainment was at a lesser extent among Jain, Christian, Upper caste, Brahmin as compared to agricultural and service castes. Improvement in educational level during last two decade remarkably improved and enrolment of girls in higher education increased. However, women education and rural areas lag behind due to availability of higher education facility.

**Author:** Garima Sharma

**Institution:** Tata Institute of Social Sciences, Mumbai

**Title:** Culture and Education: A case study of Rajputs of Mewar.

**Abstract:** Culture is an integral part of any community and thus has a strong influence on the growth of the community and on its individual members. Studies show that the culture of a community affects its educational achievement to a large extent. Culture is a determining factor of the educational achievements of the community as the beliefs and values coming out of a particular culture determine the attitudes of the community towards various social, economic and political paradigms. Due to this very influencing nature of culture in our lives, the field of cultural studies has been growing and is being explored extensively. The research explores the influence of culture of the Rajput community of Mewar region of Rajasthan on their education. The methodology for the study was semi-ethnographic in nature and involved detailed interviews, focus group discussions and observations as a mode to data collection. The findings of the study indicate that the culture influences the meaning and significance that people of the community give to education which varies with various socio-economic and political backgrounds. The study highlights how culture is a major factor contributing to gender inequalities and how it impacts the educational achievement among men and women of the community covering aspects like accessibility, early marriages, values and beliefs, socio-economic conditions, etc.

## Implications of Migration

**Author:** Bijoy Bhattacharjee, Papia Raj

**Institution:** Indian Institute of Technology, Patna

**Title:** Scenario of youth migration in India.

**Abstract:** India is a developing country with a population of 1210 million and 455 million population are migrants. According to 2011 census, youth population (15-24 age group) in India is 231 million youth and 76 million youth are migrants. Hence, this section of population are more migratory in nature and it has an important contribution in development and socio-economic change in the country. The objective of the study is to understand the inter-state patterns and streams of youth migration based on their demographic, socio-economic characteristics, as well as reasons for migration. The study is based on the Census of India 2011, migration tables (D-4, D-5, D-6 and D-12) based on Place of Last residence (POLR) data and the analysis is done based on computation of rate and ratios. Based on the analysis certain interesting inter-state patterns of youth migration are noticed, as one third of the youth migrated from Uttar Pradesh, Bihar and Rajasthan to Maharashtra, Gujrat and Delhi as their destination. It was also observed that a significant percentage (11%) of male youth migrate for 'work and employment' and while 'marriage' is still the dominant reason for female youth migration in India. The findings of this study could be instrumental for designing policies for regional development for both places of destinations as well as places of origin.

**Author:** Grace Bahalen Mundu

**Institution:** Fakir Mohan University, Balasore, Odisha

**Title:** A Case Study on Seasonal Migrants: Bolangir District, Odisha

**Abstract:** Odisha is one of the 8 EAG states. Three districts of Odisha namely KBK (Koraput, Bolangir and Kalahandi) have witnessed increase in out-migration since past few decades. Poor farmers are migrating to other states like- Gujarat, Andhra Pradesh, Tamil Nadu and Chattisgarh.

Present study tries to explore seasonal migrant's working conditions at their place of destination. Purposively, 13 villages were selected out of three CD blocks (Muribahal, Belpada and Turekela) of Bolangir district. Data collection was carried out during the month of May to July, 2018. Out of these 13 villages, 200 seasonal migrants (137 males and 63 females) were selected for the study.

Descriptive and bivariate analysis had been performed to achieve objectives of the study.

Results suggest that majority of these migrants are in their younger ages, around 72% were in between 16-29 years and 21% were in between 30-34 years. Majority of them are migrating during summer season (41.5%). More than half of migrants' financial condition was extremely poor when they have decided to migrate. Around sixty-six percent migrants are earning in between 8000-12000 Rs. (monthly). Around 83% of them got employment with the help of friends and family members, followed by recruitment agency (16.5%) and themselves (1%).

Three fourth of them have reported that they are working for 26 days in a month and half of them are working for 12 hours in a day.

Around 79% of them are staying either in the working sites or within 1 km radius of their workplace. Only 38% of the migrant have washroom facility at their working place. Half of them have responded that they have moderate level of stress at workplace.

Majority of them experienced discrimination at their workplace as compared to locals. Eighty percent of them responded that their employer abuses them.

**Author:** Kiran Jha

**Institution:** Central University of Gujarat

**Title:** Impact of Forced Migration on Mental Health of Female Migrants

**Abstract:** Marriages in Indian society result in migration – internal and cross-border, where the bride is forced to leave her “home” and relocate to a new geographical location, people, family values, and culture. This forced migration leads to psychological and emotional turmoil. While moving to a new country, the bride must go through a drastic adjustment process that involves dealing with a new culture, food, language, behaviour, lifestyle, unfamiliar faces, etc. She also suffers from loss of identity and goes through the pangs of rootlessness. This uprootedness has a significant impact on the mental well being of the individual. There are numerous accounts of misery and alienation that befalls the newly wedded brides relocating abroad narrated in diasporic literature. This qualitative research paper explores the arduous mental journey of twenty Indian women who migrated to the USA after marriage. This analytical and descriptive research paper offers to highlight the psychological condition of women migrants documented in testimonials, articles, biographies, and autobiographies from South Asian American Digital Archive (SAADA) under First Days Project, which is a not-for-profit organisation operating in Philadelphia. The narratives help to establish the angst of the Indian diaspora settled in the USA after marriage.

**Author:** Pranamita Banerjee

**Institution:** Jawaharlal Nehru University, New Delhi

**Title:** Return Migration and Economic Re-integration: The Study of Return Migrants in Rural West Bengal, India

**Abstract:** Numerous works has been done to address the various issues of migration, like consequences, status of the migrants or status of the left behind families and so on, but return migration which is however an important part of migration has received very less attention till now. According to the definition of United Nation Statistics Division (UNSD, 1998). The paper mainly aims to investigate the process of economic re-integration of the return migrants and to attest the role of Government policies addressing the issues of migration. Snowball sampling technique has been used to collect information, cartographic techniques, bivariate analysis, descriptive statistics and multinomial regression has been used for quantitative analysis. For qualitative analysis, in-depth interview with key informant has been conducted.

Majority of the migrants has faced challenges in re-integrating with the society after their return. Re-integration into the economic sphere is the most common problem faced by the returnees. It has been reported that after returning they did not get any job immediately even after acquiring some special skills at the destination. One common thing which was reported by all the returnees is that the standard of living was high when they were at the place of destination but their income reduced as they returned to their native place even when they are doing the same job.

**Author:** Manoj Dakua

**Institution:** International Institute for Population Sciences, Mumbai

**Title:** Childrens migration and health status of older parents left behind in India: the moderating role of social capital

**Abstract:** Objective: To explore the connection between social capital and the health of male and female elder parents left behind in India.

Methods: The data for this research were obtained from the first wave of the Longitudinal Ageing Study in India (LASI, 2017-18). The overall number of respondents in this study was 4,736 older parents aged 60 and above (male=2299; female=2437) who had adult male children who live outside the state and country. The results of descriptive statistics and crosstabulation were displayed. The proportion test was used to see if there was a significant difference in depression, ADL, and IADL between the sexes of the elderly. The relationship between personal social capital and the health state of elder parents was studied using binary logistic regression.

Results: As per the findings, there was a significant gender difference in depression (male=8.26% and female=11.32% P=0.001), ADL (male=20.23% and female=25.75% P=0.032), and IADL (male=33.97% and female=54.13% P=0.001) among elderly who had adult male children who lived outside the state and country. Elderly people who had good personal social capital, have less likely to have depression, ADL, and IADL. The prevalence of depression 1.63 times significantly higher among men elderly who had no social participation, while female 1.38 times. Further older women who had no social participation have 2.47 times higher ADL prevalence, where male 2.20 times. Likelihood of IADL prevalence 1.78 times higher among male where 2.17 times among females those who had not talk with their friends.

Conclusion: Personal social capital is closely related to health of elderly those had adult's male child live outside the states and country. More emphasis should be given on building the stock of social capital in this particular group, with a special attention on the gender gap.

## Public Health and Health Financing

**Author:** Jeetendra Yadav

**Institution:** National Institute of Medical Statistics, ICMR, Delhi

**Title:** Benefit Incidence of Public Health Expenditure in India: Urban-Rural Equity Matters for Universal Health Coverage

**Abstract:** Background: Benefit Incidence Analysis (BIA) is a tool to estimate the equity of healthcare benefits accrued to individuals across socioeconomic groups. The results help to illustrate the extent of effectiveness of public health resource allocation on public health by the government in meeting the needs of the vulnerable populations. This paper represents the most recent BIA completed in India and presents analysis of the distribution of public spending in outpatient and inpatient care.

Methods: The data for conducting BIA was sourced from the 71st round of National Sample Survey Organisation (NSSO). Burden of disease, out-of-pocket expenditure (OOPE), and utilization were estimated along with reasons for non-utilization of public health services. Concentration curves and concentration indices were estimated for rural and urban. Analyses were reported for morbidity distribution, overall utilization, and gross benefits for outpatient and inpatient care.

Results: Our analysis shows that in rural areas, utilization for public health facilities for outpatient and inpatient care is concentrated among non-poor, but pro-poor for outpatient care. When both outpatient and inpatient care together are considered, public health spending approaches equality. However, for inpatient care public health spending is more pro-poor whereas for outpatient care is more pro-rich. In rural areas, public health spending for outpatient and inpatient care is pro-poor while public health spending trend towards pro-rich in urban areas.

Conclusion: Our analysis of equity between urban and rural health services using BIA reveals that public spending has not resulted in significantly pro-poor services. Our analysis could be useful for policy makers in India to monitor levels and equity trends in government health spending, thereby improving the allocation of government resources to better target the disadvantaged in rural and urban areas for achieving universal health coverage in India.

**Author:** Kumari Youkta

**Institution:** Indian Institute of Technology, Patna

**Title:** Convergence analysis of health expenditure in Indian states: Do political factors matter?

**Abstract:** Economic theory argues that most often the extent and pattern of expenditure by government is politically driven. In India, in spite of poor health indicators, public spending on health is inadequate which encourages to study the impact of political factors on the nexus between per-capita GDP and public health expenditure for Indian states during 1980-2016. States are categorized into two converging groups which have been identified on the basis of Phillips and Sul convergence analysis. Bihar was the only state among the 20 states, which was non-convergent. Each convergent group is further analysed with panel corrected standard error model since traditional fixed or random effect models were found to have cross interdependence of errors. Political factors like centre-state political affiliation, party continuation and political unanimity are taken as explanatory variables for this analysis. Empirical findings suggest that political factors play major role in determining health expenditure in each category group but strength of impact differs across two groups.

**Author:** Ranjan Karmakar

**Institution:** International Institute for Population Sciences, Mumbai

**Title:** Dynamics of spatial mobility of patients in India: a case study of Rashtriya Swasthya Bima Yojana (RSBY)

**Abstract:** A vast number of patients' mobility occurs across different places for treatment purposes. Apart from the choice-based factors, in developing countries, the availability of hospitals and health facilities are also important for spatial mobility of the patients, which remained unexplored. Thus, the aim of the study is to identify the role of specific healthcare facilities in spatial mobility of poor patients. To explore these factors, information on patients and (empanelled) hospitals was collected under Rashtriya Swasthya Bima Yojana (subsumed by Ayushman Bharat Scheme) in India. In addition, socio-demographic character of the patients in India has also been explored using NSS 72nd round dataset. Simple descriptive analysis, bivariate analysis, negative binomial regression (NBR) and log-linear regression (LLR) analysis has been performed. The results shows that there is a significant variation across different socio-demographic indicators. It has also been observed that the hospitals combined with primary, secondary, single speciality and multi-specialty care is important for spatial mobility of patients for treatment. Availability of specific services like emergency examination rooms (EER), day-care beds, trauma care units in public hospitals, and the number of beds, physicians, and EER in private hospitals comes out to be significant factors for inward mobility of patients. LLR analysis shows that high facility public health clusters are more attractive for patients than private facilities in RSBY.

**Author:** Shamrin Akhtar

**Institution:** International Institute for Population Sciences, Mumbai

**Title:** Catastrophic Health Expenditure and its impact on household consumption in India

**Abstract:** Background & Objective: Financial protection is a key dimension of universal health coverage (UHC), HC which is considered as one of the major health target under SDGs. Catastrophic health expenditure (CHE) is a reliable measure to capture the financial unpreparedness and performance of the health system in a country and is a useful indicator to monitor the progress towards UHC. Poor health conditions incur medical expense. Multiple studies have shown that healthcare expenditure can have a far-reaching impact on consumptions on other items like food, education, clothing, etc. The underlying process is simple: with a fixed total budget, when healthcare expenditure occurs leading to catastrophe, individuals and households can be forced to reduce other daily household consumptions, including, for example, food, education, farming expenses, other production means, recreation, and others. Such reductions may have a significant long-term impact. Hence it becomes necessary to examine the associations between catastrophic health expenditure and the household usual consumption expenditure.

**Data and Methods:** In this study catastrophic spending on health is monitored using the budget share method. All the methods select out-of-pocket payments as the numerator for calculating the incidence of catastrophic health spending, using the data from 75th round of National Sample Survey (NSS) conducted during June 2017 to July 2018. The 75th round collected data on “Social Consumption in India: Health” and “Household Social Consumption on Education in India”.

**Conclusion:** The catastrophic health expenditure in India is estimated to be in 19.98% of households. Generally, catastrophic health expenditure was more frequent among households in the richest quintile than among those in the poorest. It is to be noted that the out-of-pocket payment in urban sector is higher than that in the rural sector but the catastrophe faced in both the sectors are almost same.

**Author:** Babul Hossain, K. S. James, Varsha P. Nagargoje, Papai Barman

**Institution:** International Institute for Population Sciences, Mumbai

**Title:** Differentials in Private and Public Healthcare Service Utilization in later Life: Do Gender and Marital Status have any Association?

**Abstract:** Introduction: Previous studies emphasize widowhood and its association with physical health, subjective health, disability, and health care use, no study attempts to focus on the role of marital status on the differential health care use between private and public sectors

Objective: The present study investigates whether the differentials in private and public inpatient healthcare utilization are associated with marital status for men and women aged 60 years and above in India.

Methodology: Bivariate analysis was carried out and expenditure for private and public health sector by marital status was calculated. Binary logistic regression was applied to examine the association of private and public inpatient healthcare utilization with the marital status of the elderly. Critical findings & Conclusion: The study found that widowed men and women generally used public healthcare for hospitalization while married men and women preferred private healthcare. Our findings also indicated that private inpatient health services expenditure was higher for married elderly than widowed elderly. After controlling all covariates, widowhood was significantly associated with higher use of public healthcare services for women but not for men. India's current health care policy and program may be required to focus on improving the infrastructure quality of current public healthcare systems. It also needs to be favourable for vulnerable sections of society, especially widowed women, to avail better treatment at an affordable cost.

## Mental Health of Elderly

**Author:** Aparna Roy, Akancha Singh

**Institution:** International Institute for Population Sciences, Mumbai

**Title:** Gender differentials in cognitive functioning among the elderly: Evidence from Longitudinal Ageing Study in India

**Abstract:** Cognitive health is one of the major factors determining the quality of life of older adults. In India, there have been few studies on gender difference in cognitive health among older adults, and these report mixed results. This study aims to account for gender differences in cognitive functioning among elderly in India, utilizing an econometric method to decompose gender differences in cognitive functioning into endowments and other unexplained factors, from the viewpoint of behavioural risks and social determinants differences. Data from India's first nationally representative longitudinal Ageing survey (LASI-2017-18) is used for analysis. The effective sample size for the present study was 31464 older adults (14931 males and 16533 females) aged 60 years and above. We created a cognition score (outcome variable) by summing the variables-immediate word recall, delayed word recall, variables to measure orientation, verbal fluency, ability to draw overlapped pentagons and object naming. The behavioural, economic and socio-demographic characteristics were the independent variables. We decomposed gender differences in cognitive functioning using the Blinder–Oaxaca decomposition method. Results show that the mean of cognition scores is 13.3 for men and 12.8 for women, yielding a gap in cognition score of 0.50. The results showed mean decrease in women's cognition scores if they had the same characteristics as men. The decrease of 0.27 indicates that differences in independent variables account for about 55% of the gap in cognition score. The decrease in women's cognition scores when applying the men's coefficients to the women's characteristics is 0.02. The findings of the study suggest that cognitive differentials among elderly do exist between male and female. However, the decomposition results between elderly of the two sexes are not statistically significant and, hence, further detailed studies are required to obtain conclusive evidence on the same.

**Author:** Athira Madhu, T. S. Syamala

**Institution:** University of Kerala, Thiruvananthapuram

**Title:** Prevalence of depression among elderly in Kerala

**Abstract:** Among the various chronic diseases of elderly, depression requires special attention due to its high prevalence and its negatively affect the quality of life of elderly. In older person's depression often goes to along with other medical illness and disabilities and lasts longer. Its timely detection and treatment can reduce the disease burden of elderly. These issues need to be looked for the Indian state Kerala, because Kerala has the highest proportion of elderly state in India. According to 2011 census, the proportion of elderly in Kerala is 12.6 percent. The main aim of the study is to determine the prevalence of depression among elderly persons in Kerala and to identify the factors associated with depression. The study based by use of data from Longitudinal aging study of India(LASI),2017-2018. The total sample size of the present study is 1209 older individuals aged 60 and above. The score of Centre for epidemiologic studies Depression scale (CES-D) was used to calculate the prevalence of depression among elderly in Kerala. The multivariate regression analysis was used to find the factors affecting depression among elderly in Kerala. The study finds that prevalence of depressive symptoms among the elderly was 28.8 percent. That means more than 1/4th of the population under depression. The factors mainly associated with depression are age group, gender, marital status, educational qualification, living arrangements, working status, diabetes, neurological or psychological problem, smoking, alcoholic consumption and physical activities. The study concluded that depressive symptoms among the elderly population were quite high and prevalence of depression high among illiterate, females, living alone and people with co-morbidities like diabetes and neurological or psychiatric problem.

**Author:** Poulami Barman

**Institution:** International Institute for Population Sciences, Mumbai

**Title:** Association of Social Deprivation with Changes in Cognitive Abilities of Elderly in India

**Abstract:** The link between socioeconomic status and mental health is complex and overlapping. Although cognitive functioning declines with age and is directly linked to biological brain changes as people become older, socioeconomic factors play an important role in the level and change of cognitive functioning in the elderly. The purpose of this study was to look at the association between social deprivation, cognitive status, and depression among older persons in India. The LASI Wave 1, collected between 2017 and 2018 in India was used for this study. Social deprivation Index (SDI) was constructed. Education, wealth quintile, working status, living arrangements etc. were used as indicators of SDI. Multilevel logistic regression was used. The regression analysis was separately done for each SDI level. The result suggests with increasing social deprivation, poor cognitive health and depressive symptoms increased. The results of the analysis highlight the importance of social deprivation in cognitive health.

**Author:** Mohit Kumar Pandey, Puja Goswami, Mahadev Bramhankar

**Institution:** International Institute for Population Sciences, Mumbai

**Title:** Is social capital associated with the decline in the cognitive abilities of elderly in India: Evidence based on LASI data

**Abstract:** A vast literature on successful aging focuses on social networks or social capital on health. Social capital refers to friendliness or helpfulness of neighbours, residents' attachment to the neighbourhood, and the self-esteem and morale of the residents. Data used in the present study was collated from secondary existing data sources from the recent round of the Longitudinal Ageing Study in India (LASI Wave-1) conducted during 2017-18. Descriptive statistics and cross-tabulation were used in this study. Additionally, logistic regressions were used to establish the association between outcome and explanatory variables. At last dominance, analysis was used to find out the contribution of each variable in cognitive impairment. Further, currently married and living with a spouse have a higher level of social capital. The health behaviour did not show much impact on cognition impairment in both age groups. Further, the person who depends on the instrument (IADL) for their daily activities were more prone to cognition impairment than ADL in both age groups. Social capital was most dominant factor in terms of explain the variation in the Cognition status. The variation explained by social capital among total variation 50% and 38% among age group 45-59 and 60 and above, respectively. Social capital explains 12% more variation in 45-59 age group compared to 60 and above age group. Otherwise, the living arrangement explains the 13% more variation in 60 and above age group compared to 45-59 age group.

**Author:** Ruchira Chakraborty, Jhumki Kundu, Arjun Jana

**Institution:** International Institute for Population Sciences, Mumbai

**Title:** Factors Associated with Food Insecurity among Elderly in India: Impacts of Functional Impairments and Chronic Diseases

**Abstract:** Introduction: Food security is an important agenda in SDG goals for people of all age groups irrespective of socio-economic strata in all developing and developed countries. For India, with increasing hunger index, provision of food security among elderly population comes out to be a rising concern and matter of discussion.

Objective: This study aims to document the prevalence of food insecurity among population aged 60 years and above in India; How far having physical impairment (such as limitation in ADL/IADL, restrictions in mobility) and presence of chronic diseases (like diabetes, hypertension, bone or joint diseases etc.) increase vulnerability of being food insecure for the elderly age group in India.

Methodology: Descriptive analysis is done to fulfil the objective of calculating the prevalence of food insecurity with different socio-economic, demographic characteristics of elderly population. Bivariate logistic regression analysis helped to identify the controlling factors and likelihood of food insecurity with aforesaid physical health condition. The data used in this study are taken from Longitudinal Ageing Study in India (LASI Wave I, 2018-2020), a nationally representative survey.

Critical Findings: The analysis finds out that 10.6% of elderly population of India experience food insecurity which is higher in rural areas (12.6%) than urban (6.4%). Elderly living alone, in rural areas, with poor household income, with multimorbidity and functional impairments are more susceptible to be food insecure in India. With increasing functional limitations, the likelihood of being food insecure increases around 1.5 times. While presence of multimorbidity increases food insecurity; having diabetes and hypertension lowers food insecurity among elderly population.

Conclusion: Age-friendly living conditions for the elderly with functional limitations with social and financial security is needed to provide food security for the elderly.

## Health and Vulnerabilities

**Author:** Anjali Raj

**Institution:** Tata Institute of Social Sciences, Mumbai

**Title:** Interrogating the socio-cultural construction of the Polycystic Ovary Syndrome

**Abstract:** Polycystic Ovary Syndrome (PCOS) is one of the most common metabolic and endocrinal disorders that affect women in their reproductive age. It is a growing reproductive health concern in India especially among young women; its prevalence ranges from 3.7 to 22.5 per cent depending upon the population studied and criteria used for diagnosis.

The paper aims to do a feminist-sociological reading of the socio-cultural construction of PCOS. For that purpose, the paper looks at the already existing discourses around PCOS to understand the social construction of PCOS and argues that PCOS is yet another example of the general neglect that exists within the modern health care system against women's health. The name PCOS suggests that it primarily has to do with polycystic ovaries, but it is, in fact, a complex condition that goes well beyond the ovaries and affects every aspect of a woman's life especially the gendered and the life-course expectations.

The paper identifies two main frameworks which have been used to understand the socio-cultural framing of the disorder. These frameworks are not exclusive, and overlap each other; nonetheless, they remain vital to investigate PCOS and its consequences on women with PCOS. These framings are as follows:

- (a) PCOS as a lifestyle disorder
- (b) PCOS as a stigmatised disorder

By doing an in-depth analysis of existing discourses around PCOS, the paper provides a feminist critique of biomedicine by a) highlighting the problematics of the framing of PCOS as a disorder and b) arguing that PCOS as a condition is unique not only because of it hinders the life-course and gendered expectations that women are supposed to adhere to but also, highlights the fragile construction of femininity. It brings forth how the modern health care system is failing young women to provide the support and care that they need.

**Author:** Neha Jain, Srinivas Goli

**Institution:** Jawaharlal Nehru University, New Delhi

**Title:** Demographic Change and Private Savings in India

**Abstract:** India is on the edge of a demographic revolution with a rapidly rising working-age population. Besides, there are huge inter-state variations in the process of demographic transition in India. Some states from south and west India will find their demographic dividend phase closing in next few years while the window of opportunity is yet to commence in high fertility states like Bihar, Jharkhand, Madhya Pradesh, Rajasthan, and Uttar Pradesh. For the first time in this study, we investigate the role of the rising working-age population on per capita small savings in post offices and banks net of socio-economic characteristics using state-level panel data for the period 2001-2018.

Our primary objective is to answer three questions: (1) How much of the impressive increase in private savings in India can be explained by its increased working age population? (2) How much of the inter-state inequality in private savings can be explained by differences in the level of working age population across the states and over time? (3) What are the possible channels through which the increasing working age population can influence private savings?

The summary of the findings based on analysis of 16 major states of India for the period 2001-2018 using multiple econometric methods such as panel data regression model, regression-based inequality decomposition model, and instrumental variable regression (two-stage least square) is: First, our results confirm the life cycle hypothesis that larger working age population leads to a rise in the savings. Second, demographic factors explain around one-fourth of the per capita private savings inequality across states. Third, the demographic window of economic opportunity for India could result in higher per capita private savings if favourable socio-economic policy environment such as healthy and educated working age population, higher gender equity, and a higher level of per capita income is in place.

**Author:** P. Devika

**Institution:** University of Hyderabad, Hyderabad

**Title:** Availability, distribution and utilization of health care services in Kerala: an analysis of 75th NSSO rounds

**Abstract:** In India, healthcare is provided by both private and public sector. Private sector dominates the healthcare sector. People prefer private sector for treatment. Availability and accessibility of private sector is high compared. In Kerala, utilization of both private and public sector is high. Despite being huge public spending on health in Kerala, people utilize more private health care services. Objectives: The paper brings out the trends and pattern of utilization in Kerala and also examined determinants that affect the utilization. The paper also tries brings out the distribution and coverage of public health care facilities in the state. Methodology: Descriptive statistics and logistic regression was used for analysis. Data from 75th NSSO round was used. Findings: In case of inpatient care, share of public facilities in healthcare services has increased from 29.6% in 2014 (71st round) to 33.5% in 2017–18 (75th round) whereas in India it was 41.1% in 2014 (71st round) to 45% in 2017–18 (75th round). Only 4% increase in utilization of public facilities in Kerala. Share of private facilities has decreased from 67.4% (71st round) to 62.6% in Kerala (75th round). In India it around 51.5% (71st round) to 52.5% in 2017-18(75th round). Results of logistic regression showed that utilization of private hospital is high among all age group, both gender, among Scheduled caste, OBC and general category and among middle and higher quintile category. Utilization of private hospitals is high in Kerala. Supply side factors like quality of care, availability of facilities and availability of health personnel influence utilization.

**Author:** Priyanka Das

**Institution:** Banaras Hindu University, Varanasi

**Title:** Assessing the Impact of Waste Collection on the Morbidity Conundrum of Waste Collectors: A Study on Chandannagar City, West Bengal.

**Abstract:** This paper focuses on the shadowed section of the urban poor, namely the waste collectors and their occupational wellbeing and livelihood. The survey was conducted in the two wards of 11 and 12 in Chandannagar city, W.B. The two wards were selected based on the concept of 'IDENTITY TERRITORY'. My paper focused on the following research questions: What is the impact of occupational exposure in the waste collectors; Which age-sex is more exposed to health adversities and why; and do the waste collectors savour the government schemes and undercut privileges fully? Then stratified random sampling was applied to form a target population of 1500. Krejcie-Morgan table was used for estimating the sample population. The confidence interval and the confidence co-efficient were determined as +/-5% and 95% respectively. The non-response level of 5% leads to a sample size of 306. The sampled population constituted 207 and 99 males and females respectively and further the studied population was divided into four age groups. The analysis of the study was done using Work Ability Index (WAI) as a health impact assessment. Along with the index, a socio-economic survey was done to evaluate their socioeconomic status. The WAI of the studied population has a range from medium to good. The mid-age ranges i.e., 25-40 and 40-55-years population had a better working ability. A strong positive correlation is established between selected variables and signifies a need to address the void of structure in the lives of informal waste collectors. According to the respondents, due to the prevalence of non-BPL holders amongst them, they were not able to avail themselves of 'Rashtra Swastha Bima Yojana'. However, the state government's initiative of 'Swastha Sathi Scheme' provides an alternative to it. Workers exposed to solid waste exhibit a significant risk of ill health especially women waste collectors.

**Author:** Asharaf Abdul Salam

**Institution:** King Saud University Centre for Population Studies, Saudi Arabia

**Title:** Ageing in Saudi Arabia: New Dimensions and Intervention Strategies

**Abstract:** Ageing process of population passing through demographic dividend in many of the Arab countries, including Saudi Arabia, where the demographic transition process entered a progressive stage. This process has been accelerated with rapid reductions in fertility caused by various changes in the socio-economic and life style dimensions. Researches on population ageing in the country are rare and thus this analytic research aims at exploring population ageing trends at the backdrop of demographic transition to help build up strategies and policies in demand. This analysis explains a rapid native population ageing especially on absolute size: an increase in line with theoretical demographic transition process. Consequently, structural changes in age distribution accompanied a change in age pyramid from an expansive shape of the late 1990s to a constrictive shape in 2010 and further shrinking by 2016. Obviously, various age-related indices – age dependency, index of ageing, and median age – exemplify this trend. Still, the old aged population remain static in terms of percentages or indices, exemplifying that the movement of age cohorts continue in the early ages shall reach old age, soon, in this decade with a retirement boom and multiple pathologies compressed to last years of life. Thus, this is an ideal time to prepare for the challenges of ageing, learning from the experiences of similar demographic trend confronted nations. Old aged population deserves care, concern and compassion to ‘add life to years’ with dignity and independence. Informal care mechanisms, especially by families, play a vital role on this behalf, and so, deserve to be strengthened and empowered through welfare measures, rather than turning to improving formal care system.

## Disability and Homelessness

**Authors:** Dheeraj Kumar Ojha, Mahesh Nath Singh and Bal Govind Chauahan

**Institution:** Ministry of Petroleum and Natural Gas

**Title:** Quality of HMIS in India: A temporal Analysis

**Abstract:** Data is the new fuel, but just like oil, raw data isn't valuable in and of itself, but, rather, the value is created when it is gathered completely and accurately, connected to other relevant data, and done so in a timely manner. The introduction of the National Rural Health Mission later known as the Nation Health Mission has increased the demand for micro-level data on population and health for use in monitoring, planning and programme implementation. As it is known that the quality of healthcare data has an impact on every decision made along the patient care continuum. Therefore, the present study attempted to assess the quality of HMIS data from 2017 to 2021 using the data obtained from the HMIS portal of the Ministry of Health and family welfare. For quality check missing data components, validity analysis and outliers identification in the data elements have been done; median-based criterion has been used to identify possible outliers. The result of the analysis shows that over the period time quality of HMIS data has been improved substantially. From a policy point of view, Government should motivate researchers and policymakers to utilize this data so that confidence in the usability of HMIS data can be built like other national-level surveys such as NFHS.

**Author:** Margubur Rahaman

**Institution:** International Institute for Population Sciences, Mumbai

**Title:** Examining the socioeconomic and demographic characteristics of the homeless population: A study on megacities in India

**Abstract:** Homelessness, a quintessential example of 'social exclusion,' is neither new nor uncommon around the world. In terms of the growth rate of the homeless population between 2001 and 2011, data revealed that the overall growth rate was negative, but there was significant positive growth in the case of the urban homeless population. As a result, we attempted to investigate the socio-demographic profile of homeless people using Census 2011 data. The study's major findings were as follows: first, the overall sex ratio of houseless people in Kolkata and Mumbai was very low (less than 300 females/1000 males). Second, the houseless child sex ratio varies significantly across megacities. It was discovered to be the lowest in Kolkata (763 girls/1000 boys). Third, the proportion of houseless people who belong to a scheduled caste ranges from 1.8 percent in Kolkata to 48 percent in Chennai. Similarly, the percentage of people belonging to a Scheduled Tribe ranges from 0.2 percent in Kolkata to 26 percent in Ahmedabad. Fourth, they have a low level of literacy, which ranges from 30 to 55 percent. Fifth, nearly half of the homeless are unemployed. Half of the members of the working group are primary workers. Finally, among the homeless, there was a significant gender gap in literacy and labor participation. According to the findings of the current study, houseless people are socioeconomically backward, and their living conditions are deplorable. As a result, there is an urgent need to shift the focus of the debate away from general welfare policies and toward context-specific policies. Policies and schemes should target a specific subset of the population rather than the entire population.

**Author:** Praveen K. Chokhandre

**Institution:** Population Research Center (PRC), Dharwad, Karnataka

**Title:** Gender differentials in disability associated health care expenditure: Evidences from 76<sup>th</sup> round of NSS

**Abstract:** Background: There is extensive literature suggesting gender-based disparity in healthcare expenditure in India, however, there is limited evidence on gender differentials when it comes to disability associated healthcare expenditure (DAHE).

Objectives: This study examines the gender differentials in out-of-pocket expenditure on disability related health issues. Additionally, factors associated with catastrophic expenditure incurred due to disability related health issues have also been examined.

Data and Methods: Data has been taken from the 76<sup>th</sup> round of National Sample Survey on Persons with Disabilities in India, conducted during July-December, 2018. Along with the gender differentials in disability rates, gender disparity in catastrophic expenditure on disability (and its correlates) have also been presented. Univariate, bivariate and multivariate (two step model – probit followed by general linear model) methods have been used for estimation.

Results: Findings from the study suggest a significant gender-based difference in out-of-pocket DAHE with substantially higher expenditure on males. Similarly, share of out-of-pocket DAHE to total household non-medical expenditure was 7.4 percent and 6.1 percent, respectively for males and females. Further, the odds of incurring out-of-pocket catastrophic expenditure on disability suggest that the expenditure on males is significantly more likely to be catastrophic than on females when adjusted for socio-economic variables.

Conclusions: Findings of the study suggest that Indian households spend substantially less on DAHE on females compared to males. The findings from the study inform the policy makers and planners to devise policy considering equitable healthcare needs of disabled women which is generally ignored in India.

**Author:** Saswat Kumar Pradhan

**Institution:** Jawaharlal Nehru University, New Delhi

**Title:** Adolescence and Sexuality among People with Disability

**Abstract:** Disability is a complex category as it has been and still is understood and interpreted by different people in very different ways. As the term disability carries with it the connotation of a lack or deficiency, whether mental, physical, sensory, or some combination of these, it has been defined primarily in terms of medical deficit. A woman with a disability is considered incapable of fulfilling the normative feminine roles of homemaker, wife and mother. The study will reveal the insight view of disabled people towards their marriage planning, reproductive and role of family. This paper will discuss about sexuality among disabled people which didn't come directly but through the concept of marriage due to multifarious reasons. Present study also revealed people from different class, societies responded and civil society policies for person with disability. Some authors argue that disabled persons are expected to reject their bodies as asexual. Disabled people impose restrictions on themselves for not mingling with girls or boys friends as common notion of society towards disabled, as "asexual" or "hypersexual" and disapproval for sexual freedom might haunt her. Present study will explore the community perception towards disabled people and disabled people's viewpoint toward marriage and sexual health. The study was conducted in two schools of Gandhinagar district, Gujarat. The present study will use qualitative data for analysis and FGD & case study as study tools. In the concluding part, it observed that able-body persons may legitimately claim aspiration for the body beautiful and an exhilarating sex life, and many people think that disability automatically excludes those so afflicted from any hope of love and sex. Also, disabled women stay single and unmarried and it is also observed that there is delay in marriage and discrimination among disabled women.

**Author:** Baikunth Roy

**Institution:** Patliputra University, Patna, Bihar

**Title:** Status and Correlates of Employment for Persons with Disabilities in India

**Abstract:** The paper carried out a systematic analysis of employment experiences of different types of persons with disabilities (PWDs) in diverse age cohorts and across gender, regions and social groups. A comparative study is also undertaken between the two time periods using 2001 and 2011 Census data. In the last section of the study, the factors affecting work participation rates (WPR) for persons with disabilities is estimated, separately for rural and urban regions. The findings of the study suggest that there are lower employment outcomes for the PWDs. The WPR has significantly increased in 2011 but it is attributed to an increase in the number of marginal workers. Thus, it can be inferred that there is growing informalisation in the disability sector as well. The Scheduled Castes (SCs) have the lowest employment rates and Scheduled Tribes (STs) recorded the highest values of WPR. The female work force participation rates are far lower, however female WPR has slightly increased in 2011.

Further, the regression analysis of factors affecting the WPR for people with disabilities suggests that the rural and urban areas have different factors contributing to their employment. The findings reveal that individuals with disabilities have different employment outcomes depending on their disability types, gender and social compositions, levels of literacy, and whether they live in rural or urban regions. Understanding the economic experiences of PWDs is critical for designing specific public policies and leverage welfare measures in the disability sector. The state and society should be sensitive to the rights and needs of the PWDs to amalgamate them in mainstream society. The problems faced by persons with disabilities are multifaceted and require coordinated efforts to tackle them.

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