



National Project On

EHSAS [एहसास]

Exploring **H**ealthy and **S**uccessful **A**geing in **S**mart India:
Integrating epigenetics, digital divide, and energy
expenditure with reference to IoT, AI and ML

**Anthropological Survey of India,
Ministry of Culture, Government of India**

ABOUT ANTHROPOLOGICAL SURVEY OF INDIA

For more information please visit <https://ansi.gov.in>



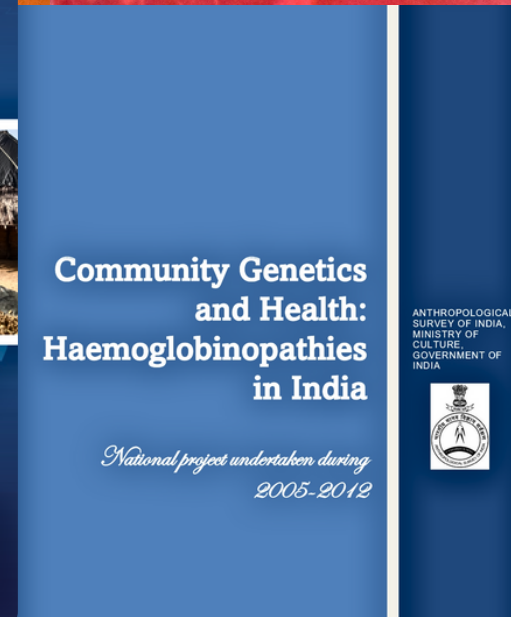
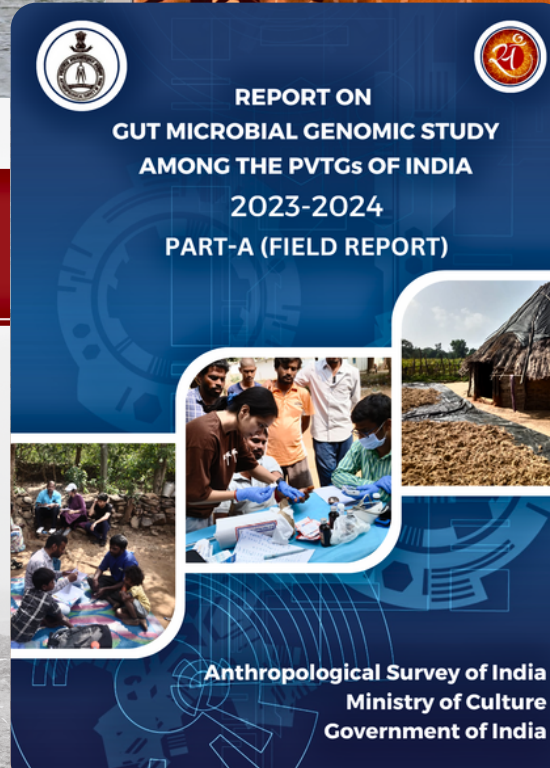
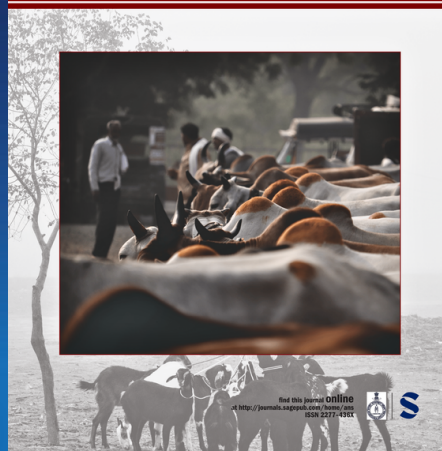
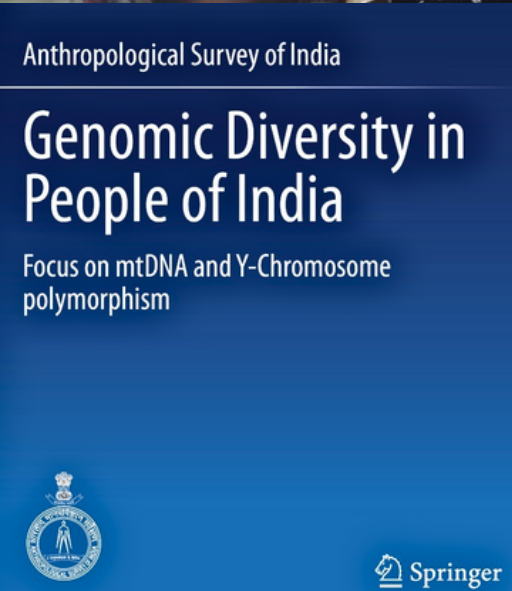
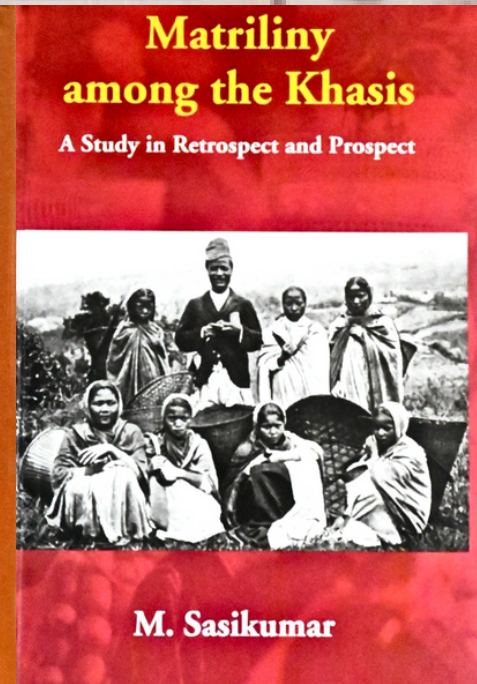
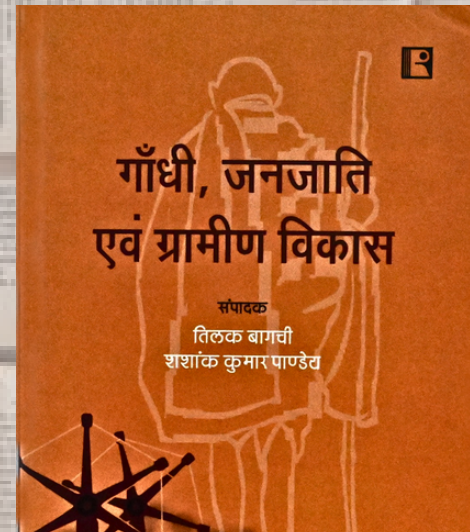
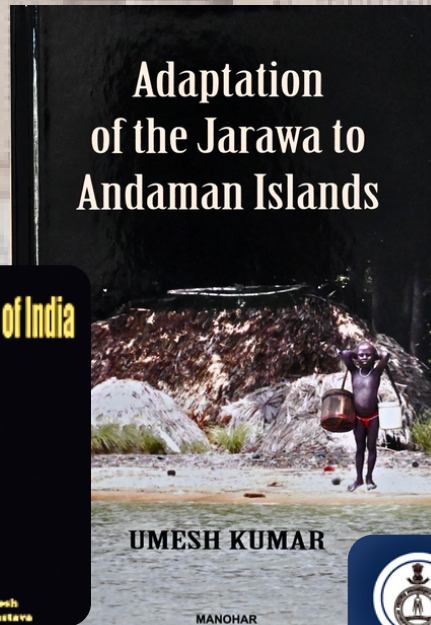
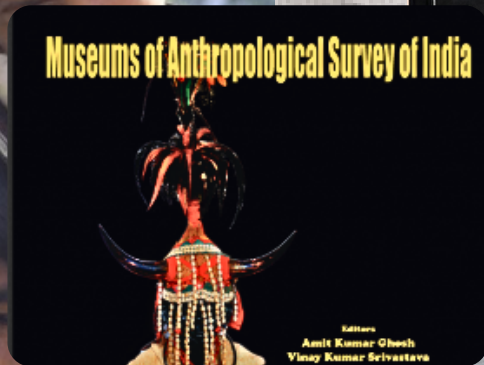
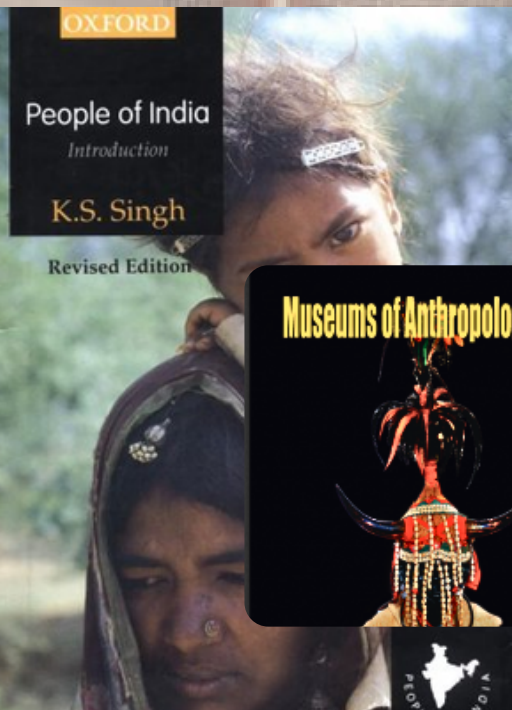
Flaunting its existence since 1945 as one of its kind in the entire world to pursue Anthropological research under Government setup

AnSI's mission extends beyond the pursuit of scientific knowledge, emphasizing practical applications for the nation's well-being.



Under the inspiring flagship of Ministry of Culture, AnSI has the primary assignment to document the cultural, biological, and linguistic diversity of Indian population groups. Since its inception, AnSI is playing a critical role in advancing the field of anthropology in India along with suggesting different policy implications for marginalized communities within the nation. By taking up major scientific projects like People of India, All India Anthropometric Survey, All India Bio-Anthropological Survey, DNA polymorphism among the contemporary Indian Population; Ethnographic study of Denotified, Nomadic and Semi-Nomadic Communities; Rural livestock markets in India: an anthropological exploration of economic, social and cultural facets; AnSI could strive to increase its visibility in public domain. AnSI's publication and distribution unit makes sure that the survey's informative publications are widely available to the public.

Anthropological Survey of India's RESEARCH REPORTS AND PUBLICATIONS



CONTEXT OF THE CURRENT RESEARCH



As we age, the feeling (Hindi=एहसास) of becoming older is inevitable. This poses challenges to a healthy and independent later life. Due to changing family structure, older adults mostly live on their own or with their spouse posing additional challenges to informal care and support. Taking cognizance with the same, the United Nations declared the present decade as the “Decade of Healthy Ageing (2021–2030)” with a global collaboration, aligned with the Sustainable Development Goals (SDGs). This is to improve the lives of older people, their families, and the communities in which they live. The prime concern is to maintain a healthy balance between health and wellbeing among the older adults.

In India, people aged 60 years and above, currently comprise a little over 10% of the population. The UNFPA projects that India's elderly population will grow from 158 million in 2025 to 319 million in 2050. This would make up 19.5% of the total population.

The policy landscape around population ageing has evolved over the last two decades, guided by multiple initiatives. There is no clear-cut idea of the present trend of affairs among the elderly while there is concern for post-covid environment too.

As the population of older adults continues to grow, the idea of "successful aging" has gained greater significance. From a geroscience standpoint, successful and healthy aging focuses on optimizing the biological aging process throughout a person's life. This approach aims to slow the progression of age-related functional decline, delay the onset of age-related diseases, and prolong the maintenance of physical and cognitive abilities. Ultimately, this promotes well-being in later life, aligning with the World Health Organization's definition of "healthy aging".

Smart India

The development of smart cities in India has the potential to greatly improve the quality of life for senior citizens by utilizing technology and tailored services that cater to their specific needs, allowing them to age actively and independently within their communities.

Smart City is a unique programme that has been implemented in India in June 2015 under Ministry of Urban Affairs. The idea was to use technology to introduce ease of living as well as inclusive and sustainable development. The core infrastructure elements of smart cities of India are: adequate water supply, assured electricity supply, sanitation, including solid waste management, efficient urban mobility and public transport, affordable housing, robust IT connectivity and digitalization, good governance, especially e-Governance and citizen participation, sustainable environment, safety and security of citizens, particularly women, children and the elderly with special focus on health and education.



By focusing on smart healthcare systems, home automation, community engagement, transportation, and safety, smart cities can create supportive environments for elderly residents. “Smart cities” in India offers promising avenues for enhancing elderly care. These cities integrate technology with healthcare, transportation, and housing systems, aiming to create supportive environments for seniors. The smart city Mission, combined with government initiatives like SAGE (Senior Aging Growth Engine by Ministry of Social Justice and Empowerment), digital India mission (Ministry of Electronics and information technology) offers innovative solutions tailored to successful aging. Smart cities have potentiality to improve the living standards of residents by improving healthcare, education, transportation, and agriculture.

A systematic analysis of the impact of Smart India mission on Indian population and its mechanism on elderly is lacking. Smart cities are expected to improve the technological advancements like AI, IOT, ML to create a technology friendly advanced city model along with having better social security, better citizen friendly parks for physical activity, better nutrition intake whereby giving wide opportunity to balance the daily energy expenditure, thereby impacting the telomere length and ultimately slowing down the biological aging. DNA methylation-based measures have been suggested as the most promising indicators for understanding biological page of ageing.



OBJECTIVES

- ▶ To have the first-hand data on the availability and utilization of technologies such as AI, IoT, ML in different smart cities under study.
- ▶ To understand the quality of life among the elderly in both smart and non-smart cities.
- ▶ To understand the energy balance among the elderly in two different setups (smart vs non-smart cities)
- ▶ To understand the social isolation among the elderly in the smart and non-smart cities.
- ▶ To understand the pace of aging in both the setup.

HYPOTHESIS

Based upon the objectives of the present study we have some testable hypothesis in our hand which includes the following:

- ▶ The quality of life among the older adults of India is not significantly different in smart and non-smart cities
- ▶ There is no significant difference in the energy balance in case of elderly people in smart and non-smart cities.
- ▶ Smart Cities have enhanced social connectedness among the elderly.
- ▶ Smart cities have been associated with delayed biological aging among the elderly population.

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**COMPETENT
RESEARCH**

2

**CREATIVE
RESEARCH**

3

**COLLABORATIVE
RESEARCH**



COMPOSITION

of the project

● Research Guidance

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University of Aberdeen
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● Principal Investigator

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Superintending Anthropologist, AnSI

