

# Aging and Disability Research

The research unit works extensively on lifestyle and socio-behavioral risk factors with reference to midlife, health of elderly and persons with disabilities.

Currently the research team is working on

- Reference values of gait parameters
- Fall risk identification and prevention
- Musculoskeletal health, Functionality, and sarcopenia
- Frailty progression and subphenotype of frailty
- Midlife health and disability
- Health of and healthcare for people with disabilities

## Research team



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PhD



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Fall prevention



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Frailty subphenotypes



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Disabilities and access to care

## Field Area





# Current studies

## Fall Prevention

The feasibility of using wearable sensor technology to detect risk of fall in community-dwelling older adults

Funded by: Department of Science and Technology, Women scientist scheme-B, Government of India.

Objectives: To determine the prevalence of fall and risk factors for fall in Older adults. To test the feasibility of wearable sensors to measure risk of fall in community dwelling older adults and to assess short term and long-term efficacy of the intervention in older adults who are at risk of fall

Outcome: Fall prevention, change in balance and gait among those in the intervention groups, improvement in carrying out daily activities and reduction in fall episodes

## Diabetes and Frailty

A prospective case-control study of frailty progression and its determinants in diabetic and non-diabetic community dwelling older adults

Funded by: Indian Council of Medical Research, Senior research fellowship scheme

Objectives: To study frailty progression in diabetic and non-diabetic pre-frail older adults and to study the demographic, physical, social, medical and health related factors affecting frailty progression in diabetic and non-diabetic pre-frail older adults

Outcome: Identify patterns of frailty progression patterns in diabetic and non-diabetic older adults and factors affecting frailty progression among diabetic and non-diabetic older adults

## Frailty progression

Characterization of frailty syndrome in geriatric population:  
A prospective randomised control trial to prevent frailty

Funded by: Rashtriya Uchchar Shiksha Abhiyan

Objectives: To characterise frailty in older adults above 60 years of age in India and test the efficacy of multicomponent intervention for preventing frailty progression in prefrail older adults.

Outcome: Characterization of Frailty, development of frailty Risk Index to predict frailty in Indian older adults. Development and implementation of a multifactorial intervention to prevent frailty progression in community-dwelling older adults

## Disability and Access to healthcare

A Study on Enablers and Barriers in Accessing Healthcare for People with Disabilities

Funded by: Indian Council of Medical Research (ICMR), Extramural Ad-hoc projects

Objectives: To gain insight in the pathways of intersectionality (gender, socio-economic class, geographic location) which determine access to healthcare and to explore the enablers and barriers of access to healthcare services for persons with disabilities in Pune district

Outcome: A diverse range of lived experienced by person with disabilities when accessing healthcare services. The study will also gain insight into the positive and negative experiences of public and private health care stakeholders working for persons with disability will be recorded.



## Measurements and Assessments



Assessment of mobility  
Gait and balance assessment using wearable sensors



Musculoskeletal assessment  
Handgrip using handgrip dynamometer and body composition using bioelectrical impedance



Assessment of functionality  
Activities of daily living and instrumented activities of daily living using activity activity monitors



Assessment of social and behavioral factors: Lifestyle, socialization, living arrangements



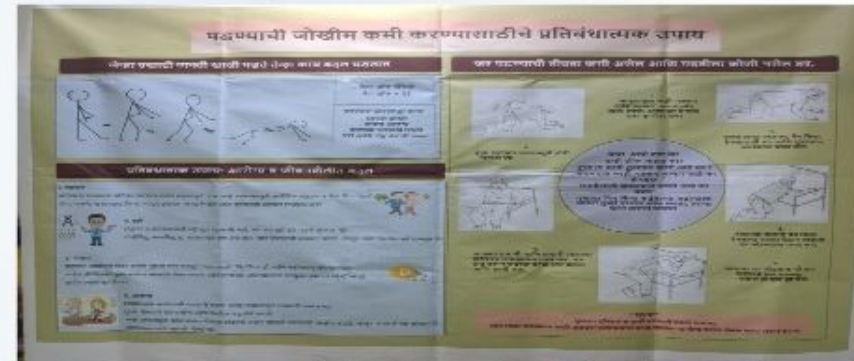
Evidence based intervention to improve mobility and functionality  
Home based exercise programs, home modifications, education and awareness



## Fall and frailty prevention programs



## Education and awareness activities



## Community extension activities





## Publications

1. Challenges and concerns for older adults in India regarding COVID-19 pandemic. *J of Geron Social work*, **2020** :63 (4), 259-261.
2. Correlates of functional limitations in midlife: A cross-sectional study in middle-aged men (45–59 years) from Pune. *J Mid-life Health*. **2020**: 11(3):144-148. doi: [10.4103/jmh.JMH\\_79\\_19](https://doi.org/10.4103/jmh.JMH_79_19)
3. Bio-social determinants of health -related quality of life of middle aged (45-59 years) population in India. *Post Reproductive Health* ,**2020**: 26(1),19-25 DOI <https://doi.org/10.1177/2053369120904300>
4. Risk Factors for fear of falling among older adults in India. *Journal of Public Health*. **2020**: 28 (2),123-129. DOI; 10.1007/S10389-2019-01061-9
5. Lived experiences Of people with mobility related disability using assistive devices. *Disability and rehabilitation: Assistive Technology* **2019** Dec 13:1-5. doi: [10.1080/17483107.2019.1701105](https://doi.org/10.1080/17483107.2019.1701105).
6. Obesity and its effects on health in middle -aged women from slums of Pune. *J Mid-life Health*. **2018**: 9(2): 79-84.
7. A qualitative study exploring women's journeys to becoming smokers in the social context of urban India. *Women Health*. **2018** : 58 (4) 466-482 doi: <https://doi.org/10.1080/03630242.2017.1310171>.
8. Does short duration of hospitalization for acute illnesses affect functional outcome in older adults? *Indian Journal of gerontology*, **2018**; 32 (1) : 78-90.
9. Determinants of reproductive tract infections among women in urban slums of India. *Women's reproductive health*. 4(2) **2017**, 106-114. <https://doi.org/10.1080.23293691.2017.1326251>
10. Predictors of functional disability with focus on activities of daily living: A community based follow-up study in older adults in India. *Arch. Gerontol. Geriatr.* 69 (1), **2017**, Doi.org/[10.1016/j.archger.2016.11.015](https://doi.org/10.1016/j.archger.2016.11.015)
11. Prevalence and determinants of frailty in older adults in India. *Indian Journal of Gerontology* , Vol. 30 (3), **2016**; pp. 364–381
12. Association between social participation and self rated health among older adults in Pune (Maharashtra). *Indian Journal of Gerontology*, vol 29 (4), **2015**; 432-444.
13. Unforgotten: Love and the Culture of Dementia Care in India by Bianca Brijnath. Book review . *American Anthropologist*, vol. 117, No. 2, June **2015**, 416-417.
15. Development and preliminary validation of a new scale to assess functional ability of older population in India. *Arch. Gerontol. Geriatr.* Vol. 58 No 2, **2014**,263-8.
15. Chronic Diseases and Functional Decline among Older Adults in India : A Cross Sectional Study. *Indian Journal of Gerontology*, Vol. 28, No. 1, **2014**, 37–50.
16. Age at Menopause and Menopausal Symptoms Among urban women in Maharashtra, *Journal of Obstetrics and Gynecology of India*. Vol 61(3) 323-26 ,**2011**.
17. Ageing and Social Support: A study on Low-income Urban Elderly in Pune. *Indian Anthropologist* vol. 37 (2) 45-52, **2007**.
18. Living Conditions of Elderly in India, *Indian Journal of Gerontology* Vol. 20, No.3, **2006**, 250-263.