

MODULE 1-P2: Fall risk assessment among community-dwelling older adults in Singapore

Vanessa Koh^{1,2}, Abhijit Visaria², Tan Kok Yang², Rahul Malhotra^{1,2}, Angelique Chan^{1,2}

¹Programme in Health Services and Systems Research, Duke-NUS Medical School, Singapore

²Centre for Ageing Research and Education, Duke-NUS Medical School, Singapore

1 Falls in Singapore

More than a third of older adults above the age of 65 fall at least once a year, and this figure increases to half for those above 80 years old (1). Falls among older adults are the second most common cause of unintentional injurious deaths globally (2). In recent years, healthcare organizations in Singapore are making a concerted effort to shift care into primary care, with an increased focus on prevention (3). This is a timely move as it calls for greater attention toward preventive strategies for falls, which include early identification of specific fall risk factors and promoting individualised interventions to address falls.

2 TARGET

- The Targeted Assessment and Recruitment of Geriatrics for Effective fall prevention Treatments (TARGET) is conducted to understand and estimate the fall risk
- Will include novel technologies (ZurichMove, SPACE) for the holistic identification of fall risk (i.e. fall risk screening with gait signatures)
- Data gathered will help inform the design of individualised fall intervention programmes downstream

3 Methodology

- Prospective cohort study
- Aims to recruit 3000 community-dwelling older Singaporeans across two years
- Participants will be followed up quarterly by phone to understand their cognition status and fall-related outcomes

Data collected included:

- Socio-demographic variables
- Physical health status
- Cognition status
- Life Space & Home Safety
- Social network
- Resilience and Depression
- Fall status and fear of falling

References:

1. Al-Aama, T., Falls in the elderly: spectrum and prevention. *Can Fam Physician*, 2011. 57(7): p. 771-6.
2. James, S.L., L.R. Lucchesi, C. Bisignano, et al., The global burden of falls: global, regional and national estimates of morbidity and mortality from the Global Burden of Disease Study 2017. *Injury Prevention*, 2020. 26(Suppl 2): p. i3-i11.
3. Nurjono, M., J. Yoong, P. Yap, et al., Implementation of Integrated Care in Singapore: A Complex Adaptive System Perspective. *Int J Integr Care*, 2018. 18(4): p. 4.

4 Preparation for Pilot

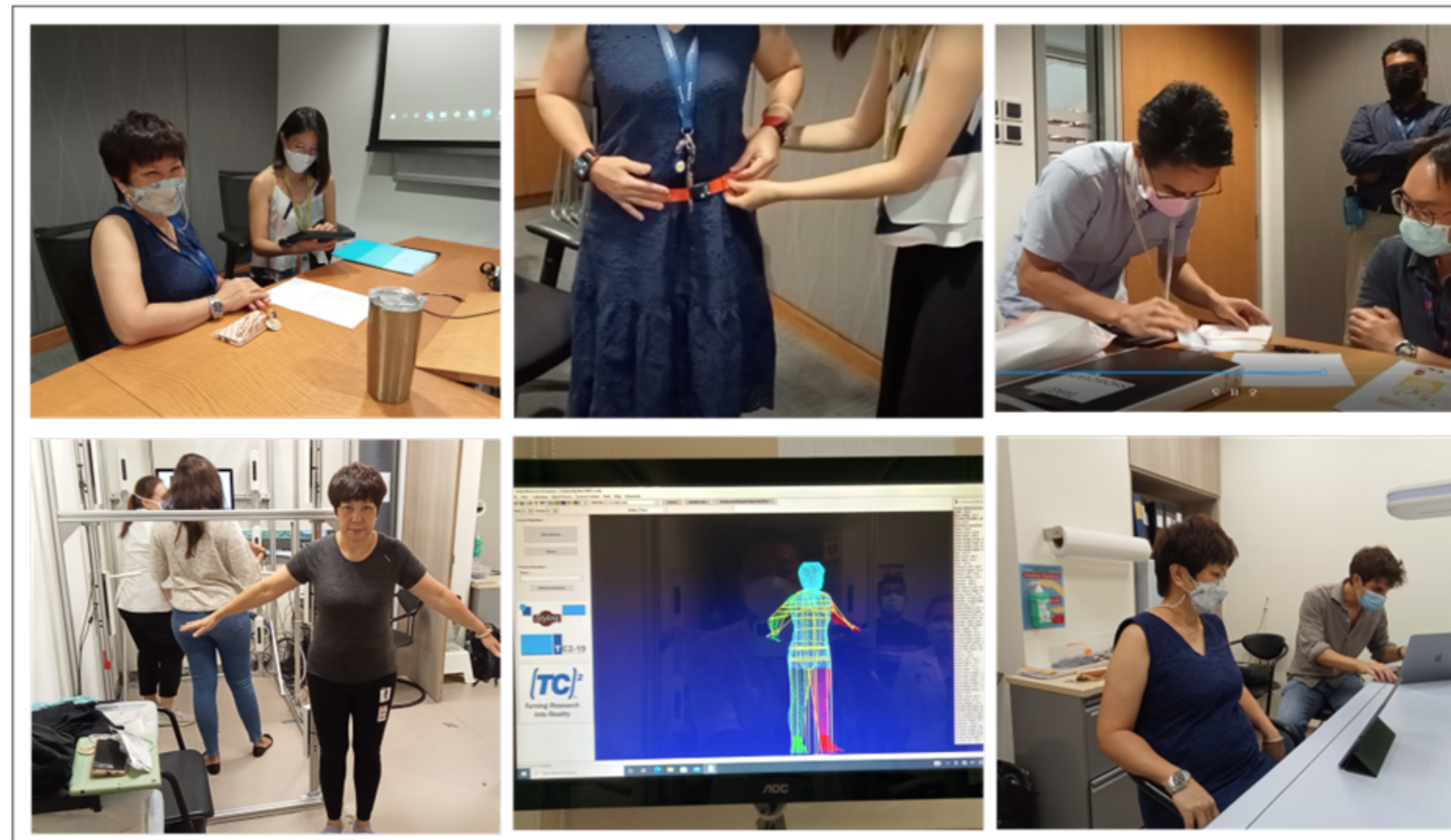


Figure 1: Summary of images obtained during pre-pilot internal training with two volunteers (Duke-NUS staff).

Pre-pilot training conducted emphasised:

- Data collection process
- Familiarity with administering questionnaires and technologies in different languages
- Consistency among different interviewers

5 Pilot Study

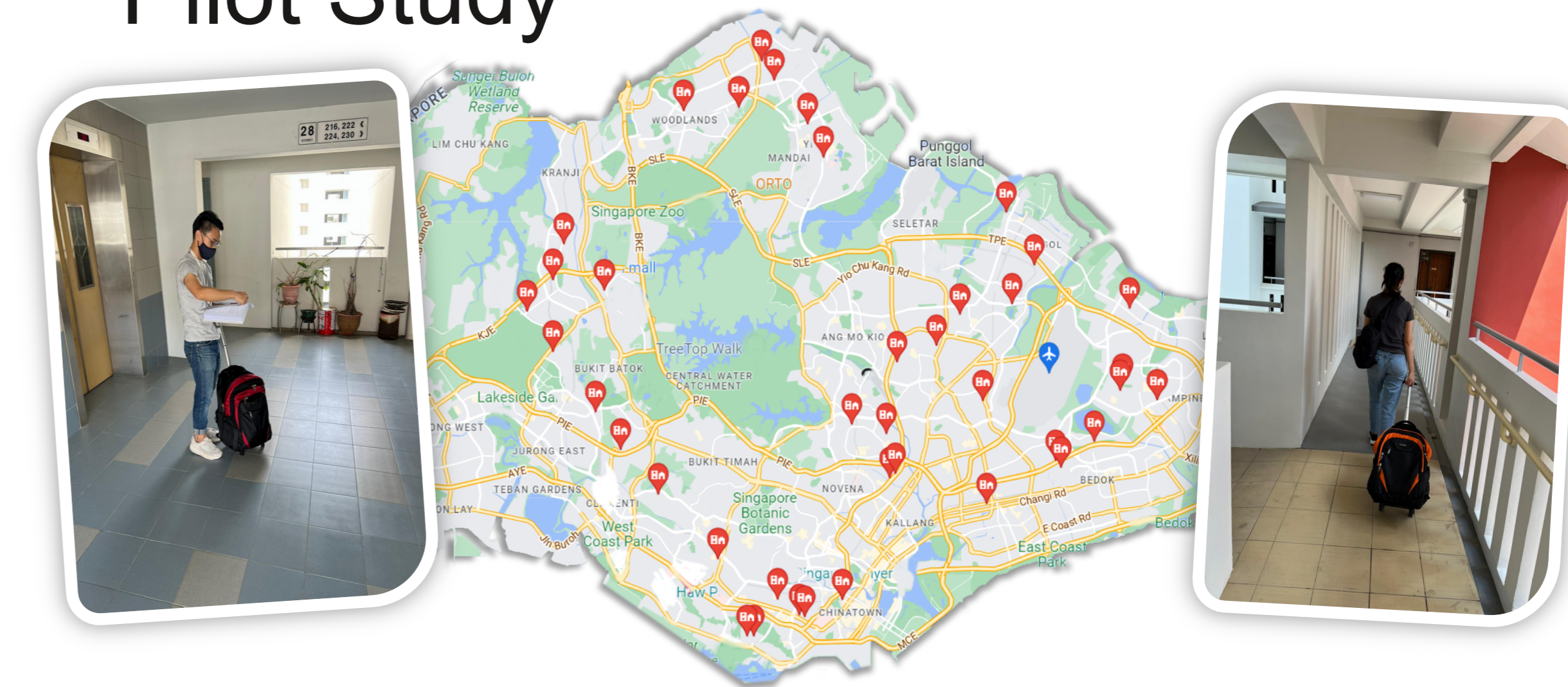


Figure 2: Interviewers out on fieldwork for TARGET Pilot data collection.

- ❖ Random selection of 55 household addresses
- ❖ Each interview took an average of 1 hour, 57 minutes (No SPACE), and 3 hours, 6 minutes (with SPACE)
- ❖ Successfully recruited 18 participants from 13 households
- ❖ Obtained from the Department of Statistics Singapore

TARGET questionnaires were modified to streamline the process and reduce participant fatigue

- Removed scales i.e., Lifetime Physical Activity Scale, General Self-efficacy scale
- Combined repeated questions i.e., Feeling tired after taking medication
- Streamlined ZurichMove and SPACE administration protocol

6 Work in Progress

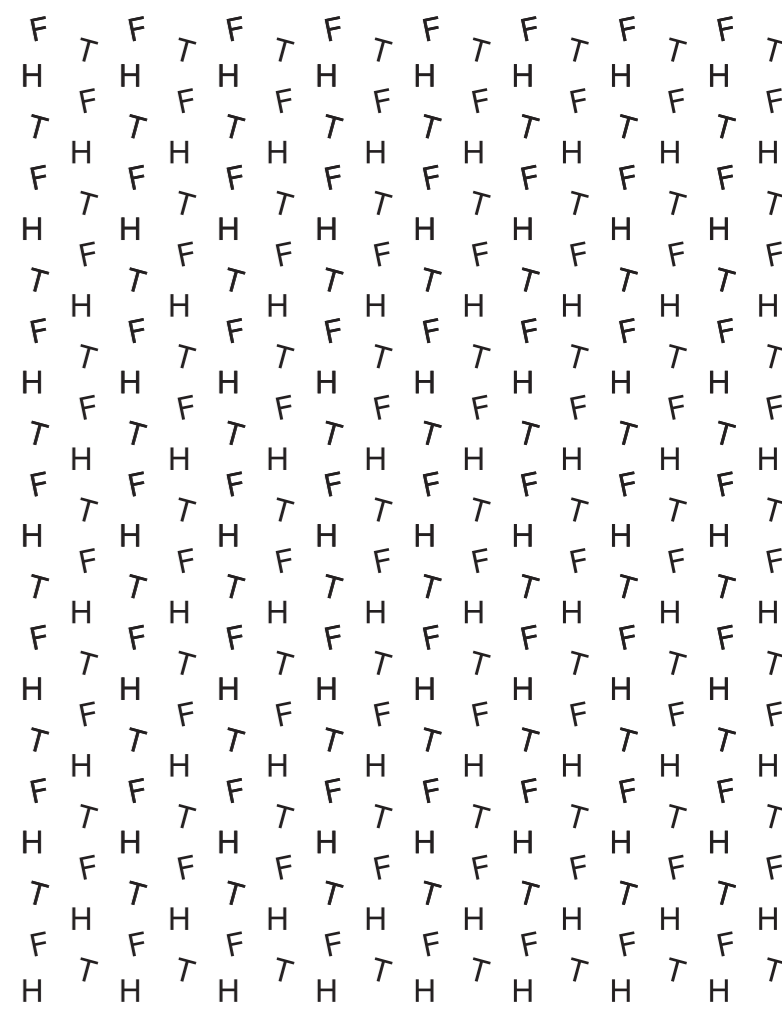
□ Commencement of Main Study

□ Stakeholder Engagement with Clinicians

- Roundtable with fall prevention experts
- To conceptualise the current gaps in fall prevention programmes among older adults in the community

□ Stakeholder Engagement with Older Adults

- Qualitative study focusing on older adults' perspectives of falls and fall intervention programmes will be conducted
- Will inform the design and implementation of user-centred fall prevention strategies



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