

Extremely high rate of physical and mobility problems for people who are homeless

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A Trinity College study published in the journal *Scientific Reports* demonstrates an extremely high burden of physical and mobility problems experienced by people who are homeless and were admitted for inpatient care to an acute hospital in Dublin. The study found that only one third of participants could climb a hospital stairs and there was a very common presentation of geriatric conditions such as frailty, falls and needing a mobility aid on a long term basis, despite a low median participant age of 45 years.

Overall, the study provided visible evidence of accelerated physical aging among this cohort relative to the general population with participants, (all homeless and mostly using hostel accommodation or rough sleeping) in their 20s, 30s and 40s experiencing poor physical status and geriatric syndromes comparable to housed individuals in their 70s or 80s years.

It is commonly accepted that adults who are homeless experience [poor health](#) and frequently require hospital in-patient care. The objective of this study however was to evaluate a wide range of physical functioning variables to enable better

future planning of targeted health and accommodation services for this group.

Uniquely this study collectively evaluated this group using a broad range of robust physical functioning measures, including lower extremity physical function, falls risk, functional capacity, stair climbing ability, frailty, fitness and grip strength. Notably, many participants were unable to even complete the simple physical tests due to pain or not feeling well enough.

The study of 65 people, (32.3% female, 66.7% male) was carried out in St James's Hospital and initiated by the Physiotherapy Department, Trinity College and Inclusion Health Team at St James's Hospital. It was conducted by Sinead Kiernan, Physiotherapy Researcher, Department of Physiotherapy St. James's Hospital and first author and supervised by Dr. Julie Broderick, Department of Physiotherapy, Trinity College and Dr. Cliona Ní Cheallaigh, Lead Inclusion Health Service, St. James's Hospital and School of Medicine, Trinity College.

Most participants (64.0%) utilized hostel accommodation or were rough sleepers (17%). It was previously noted that people who are homeless tend to present more often for unscheduled care—such as presenting to the emergency department much more commonly than those who are stably housed. Some will need to be admitted to hospital for further care—and this cohort can constitute a substantial proportion of inpatients in many acute hospitals at any one time. Some of these patients were referred to [physiotherapy](#) and appeared to have very low levels of mobility but the physical characteristics of this vulnerable group were not well known.

Key findings

- The majority (83%) of participants had [mobility problems](#).

- Over half (54%) of this cohort experienced at least one fall in the previous six months.
- Only 31% could attempt to climb one flight of stairs.
- Only 38% could walk for six minutes.
- The majority of participants (70.5%) were frail or pre-frail.
- One quarter (25%) displayed extremely poor balance.

housing policy should respond to the physical health needs of people who are homeless along with housing and accommodation services that are designed with accessibility in mind.

More information: S. Kiernan et al. Markedly poor physical functioning status of people experiencing homelessness admitted to an acute hospital setting, *Scientific Reports* (2021). DOI: [10.1038/s41598-021-88590-0](https://doi.org/10.1038/s41598-021-88590-0)

Dr. Julie Broderick, Principal Investigator and Assistant Professor, Discipline of Physiotherapy, Trinity College said: "This study conducted by Physiotherapy researcher Sinead Kiernan found that general physical and mobility levels of participants who were homeless in their 20s, 30s and 40s were comparable to levels we would expect to see among stably housed people in their 70s or 80s, this is visible evidence of accelerated physical aging among this cohort. The huge physical burden experienced by this group who mostly utilized hostels or were rough sleepers is concerning. As well as other complex needs, mobility levels, strength and fitness need to be targeted in this group to prevent further deterioration. Falls prevention strategies are also necessary. Accommodation services for people who are homeless need to be suitable and accessible for people with low mobility levels."

Provided by Trinity College Dublin

Recommendations

It is established that many people who are homeless experience problems associated with addiction and mental health complexities, but physical and mobility limitations also deserve greater consideration. The Trinity research team propose that medical and rehabilitation services are needed to target these limitations as some may be reversible with appropriate physiotherapy provision. Physiotherapy and other physical rehabilitation services are a priority for this group.

Appropriate community and outreach services are also necessary as it is likely that ongoing support will be needed after discharge from [hospital](#). Specific community-based onward referral services are also required.

And finally, the research team recommends that

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