Photo by *Nathan Dumlao,* Unsplash

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Physical frailty in People Experiencing Homelessness

Supervisors:
Prof Andrew Hayward, Prof Kate Walters, Dr Manolis Bagkeris and Dr Alex Burton

NIHR | School for Public Health Research

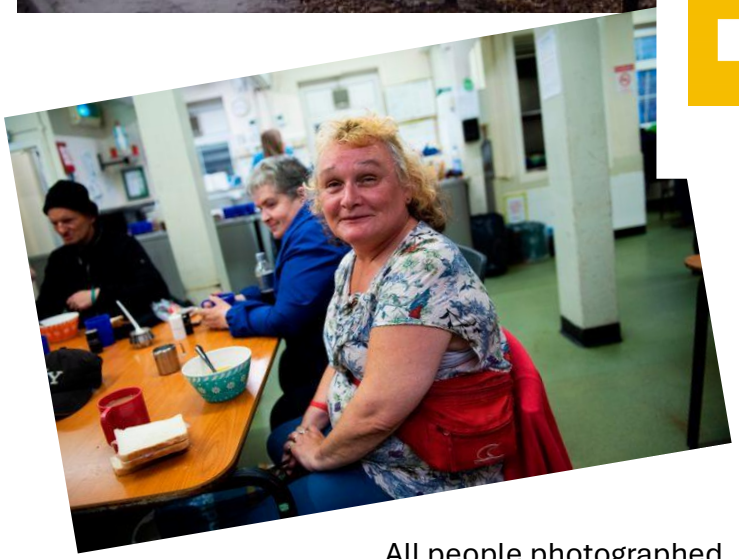
Collaborative Centre for Inclusion Health

Clinical practice to research...

NIHR | School for Public Health Research

UCL

Collaborative Centre for Inclusion Health



All people photographed provided consent for their image to be captured and shared

Defining homelessness

ROOFLESS

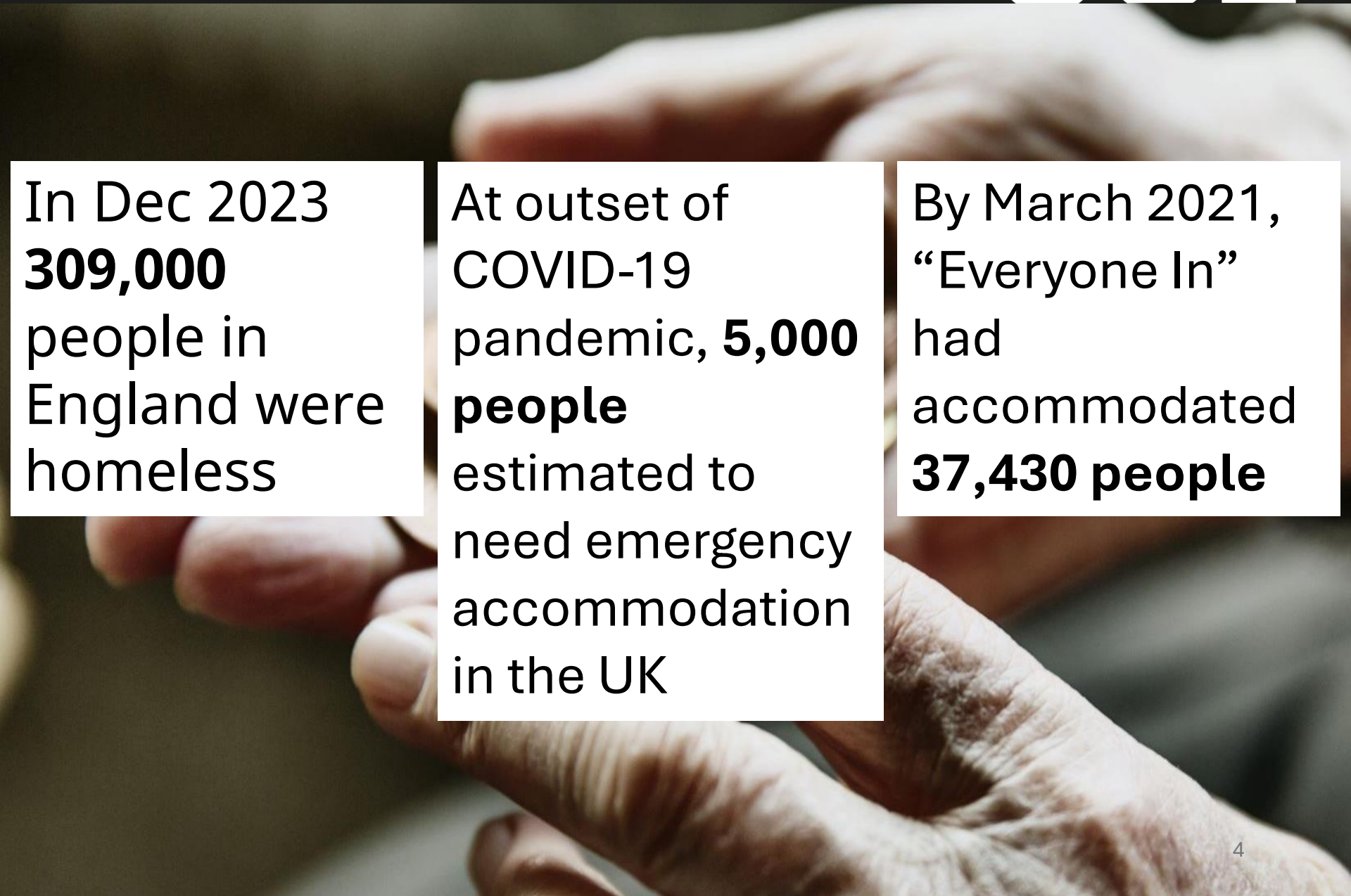
HOUSELESS

INSECURE HOUSING

INADEQUATE HOUSING

Photo by *Quaz Amir*, Canva

Homelessness in numbers



In Dec 2023 **309,000** people in England were homeless

At outset of COVID-19 pandemic, **5,000 people** estimated to need emergency accommodation in the UK

By March 2021, "Everyone In" had accommodated **37,430 people**

Defining frailty

Photo by *cocoparisienne*, Canv

"Frailty is a health state related to aging where multiple body systems gradually lose their reserves and resilience"
(British Geriatric Society, 2014)

Phenotypic model
(Fried et al, 2001)

Model of cumulative deficit
(Rockwood et al, 2007)

Homelessness and health

Photo by *Kirsten Scheuerl*, with permission

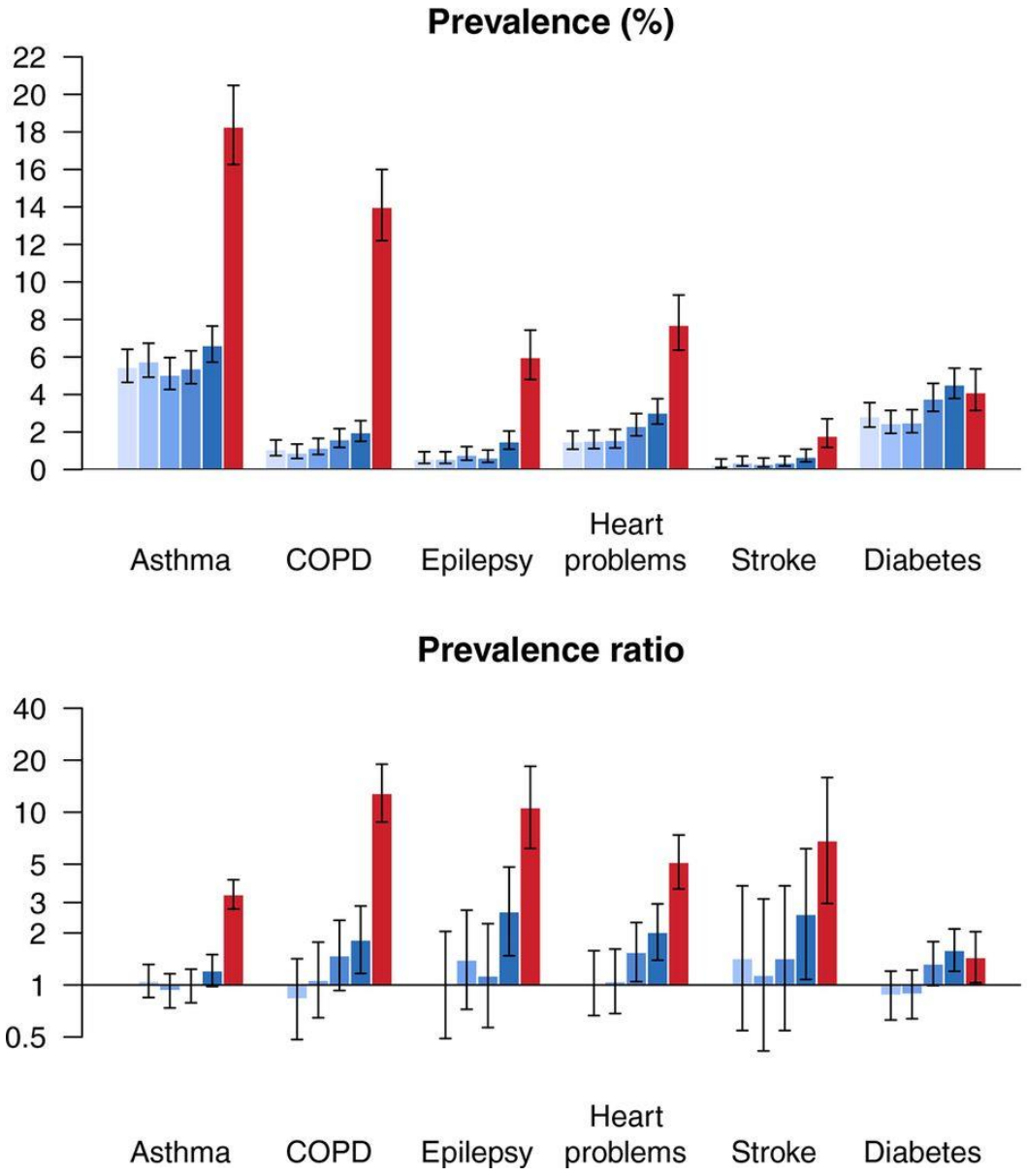
Premature mortality

High levels of…

- **Long-term physical conditions**
- **Mental health problems**
- **Drug and alcohol use**

Challenges accessing healthcare

Prevalence of common long-term conditions in people experiencing homelessness



From: Lewer D, Aldridge RW, Menezes D*, et al*. Health-related quality of life and prevalence of six chronic diseases in homeless and housed people: a cross-sectional study in London and Birmingham, England,
BMJOpen 2019;**9:**e025192. doi: 10.1136/bmjopen-2018-025192

Frailty in people experiencing homelessness

UCL

Premature frailty, geriatric conditions and multimorbidity among people experiencing homelessness: a cross-sectional observational study in a London hostel

Raphael Rogans-Watson, Caroline Shulman, Dan Lewer, Megan Armstrong and Briony Hudson

Health Care for Women Intern

Accelerated aging in people experiencing homelessness: A rapid review of frailty prevalence and determinants

Rhys Mantell[1*], Ye In Jane Hwang[1,2], Kylie Radford[2,3,4], Silvija Perkovic[1], Patricia Cullen[1,5,6] and Adrienne Withall[1,2]

OXFORD

Research Artic

Geriatric Conditions in a Population-Based Sample of Older Homeless Adults

Rebecca T. Brown, MD, MPH,[1,2] Kaveh Hemati, BA,[3] Elise D. Riley, PhD,[4] Christopher T. Lee, MD, MPH, MSc,[5] Claudia Ponath, MA,[5] Lina Tieu, MPH,[5] David Guzman, MSPH,[5] and Margot B. Kushel, MD[5]

Check for updates

OPEN **Markedly poor physical functioning status of people experiencing homelessness admitted to an acute hospital setting**

S. Kiernan[1,2], C. Ní Cheallaigh[3,4], N. Murphy[2], J. Dowds[2] & J. Broderick[1]

Photo by *Jon Tyson*, Unsplash

Research Question and aims

Research questions

- What is the prevalence of frailty in PEH?
- What are factors are associated with frailty in this population?
- What could prevent and treat frailty in this population?

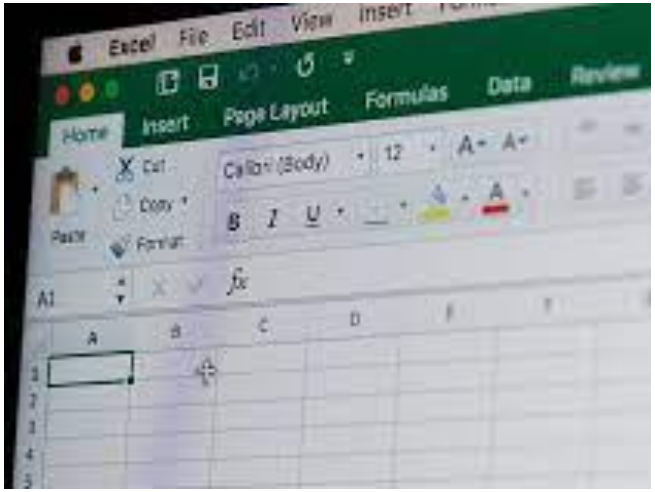
Aim

To use mixed methods research to inform the development of interventions to prevent and treat frailty in people experiencing homelessness

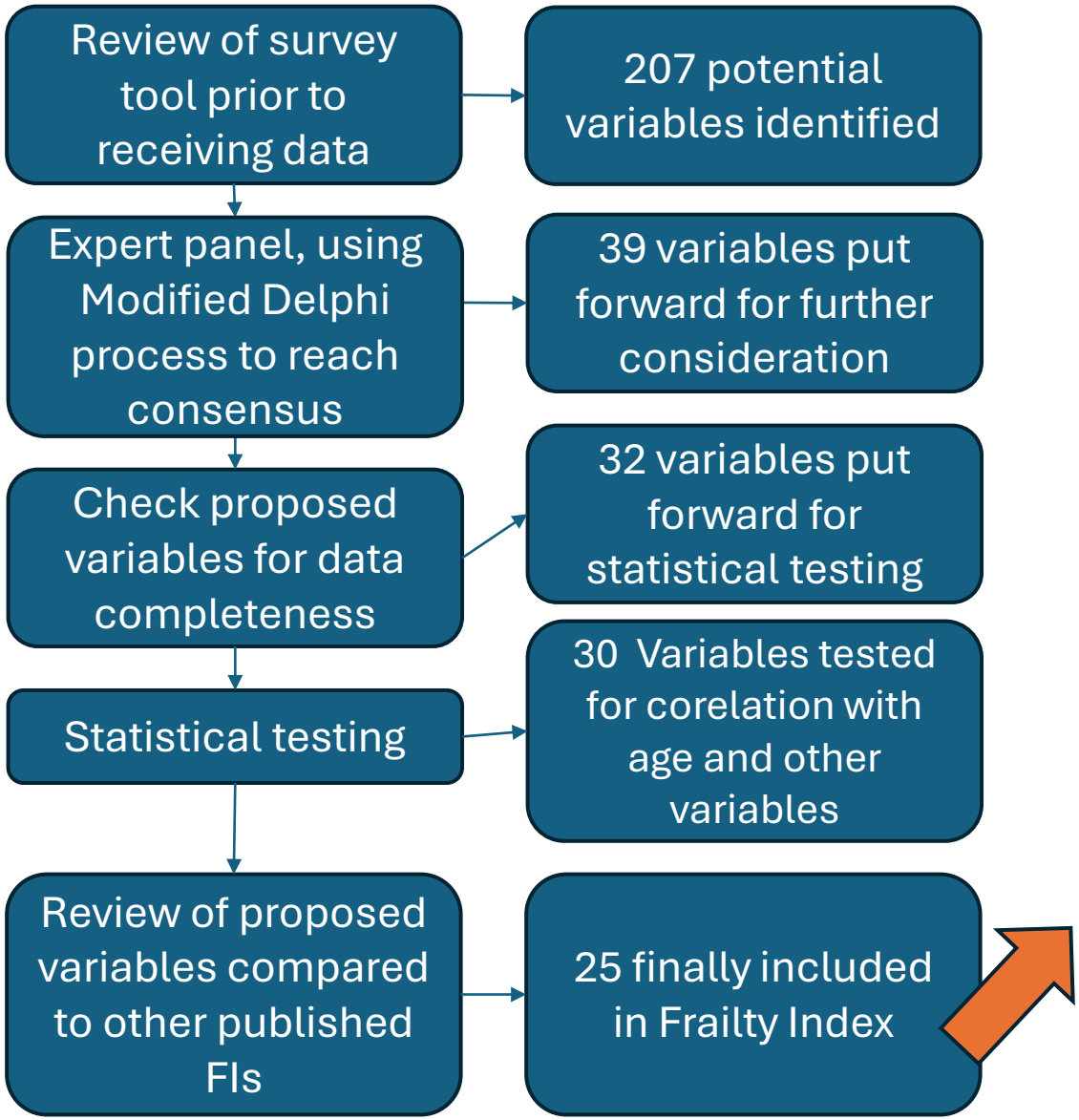
The Homeless Link dataset

Homeless Link "Homeless Health Needs Audit" (HHNA) dataset

- Health survey data collected between 2015 and 2022
- All data collected from people experiencing homelessness at time of survey



Creation of the Frailty Index (FI)



Final included variables
Long term disability/infirmity
Heart problems
Cancer
High blood pressure
Difficulty seeing
Skin problems
Problems with feet
Fainting/blackouts
Urinary problems
Schizophrenia/bipolar disorder
Musculoskeletal problems
Diabetes
Self-reported health score
Problems with circulation/blood clots
Liver problems
Stomach problems, including ulcers
Dental/problems with teeth
Dual-diagnosis of mental health/substance use
Blood borne viruses, including HIV and Hep C
Breathing problems including TB
Epilepsy
Depression
Anxiety or phobias
Eating disorder
Asthma

Application of FI…

- To calculate each participant's FI score, we will **sum the deficits** and **divide by the total number of deficits** measured:

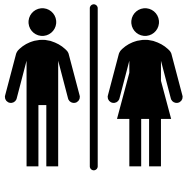
$$FI = \frac{\text{No of deficits present on the individual}}{\text{No of deficits measured for that individual}}$$

- FI scores range from 0 to a theoretical maximum of 1.
- An individual must have data on at least 20/25 deficits for their score to be calculated

FINDINGS

Describing the population

Describing the study population



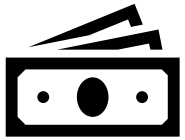
Gender
72.7% men
26.4% women

Age
97.8% participants aged 18-65 years
88.0% participants aged 18-54 years

Ethnicity
86.1% White
12.1% Non-white

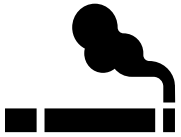
Accommodation
17.2% Roofless
64.9% Houseless
8.1% Insecure/ inadequate
9.3% Previously homeless, now housed

Immigration status
83.7% UK national
6.5% Non-UK National



Recourse to public funds
73.7% Yes
2.4% No

Health behaviour



Smoker
78.5% Yes
20.6% No

Has or is recovering from a drug problem
67.0% Yes
30.0% No

Alcohol consumption risk
30.0% Does not drink
33.8% Low risk
11.1% Increasing risk
24.9% High risk

Meals per average day
3.0% Zero
27.6% One
34.6% Two
19.7% Three or more

Self-reported health
9.1% Very bad
13.5% Bad
30.1% Fair
24.8% Good
14.8% Very good

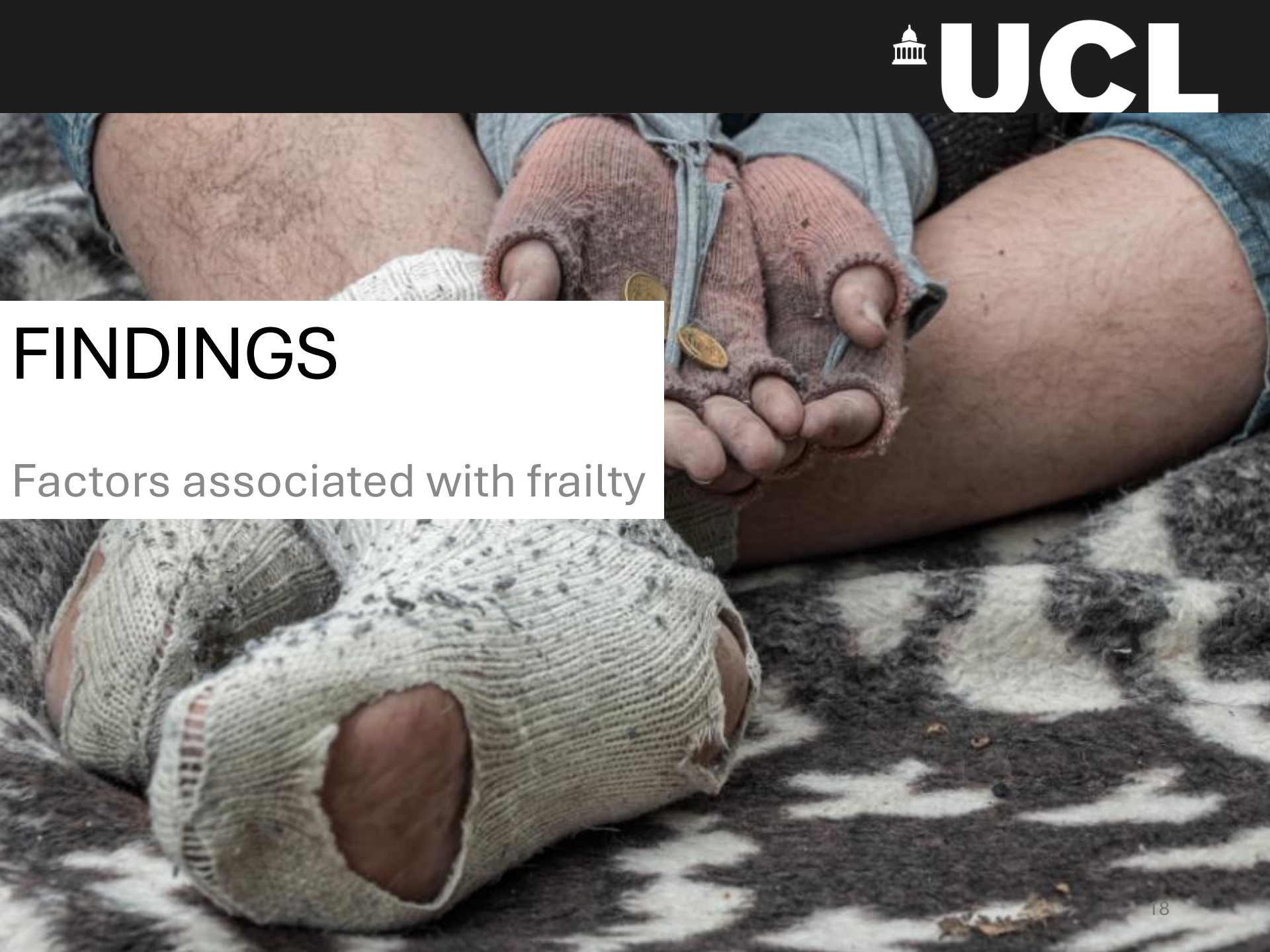
FINDINGS

Prevalence of frailty

Calculation of prevalence of frailty

	Not frail	Pre-frail	Frail	Total
People experiencing homelessness	338	1,001	949	2,288
%	14.8	43.8	41.5	100

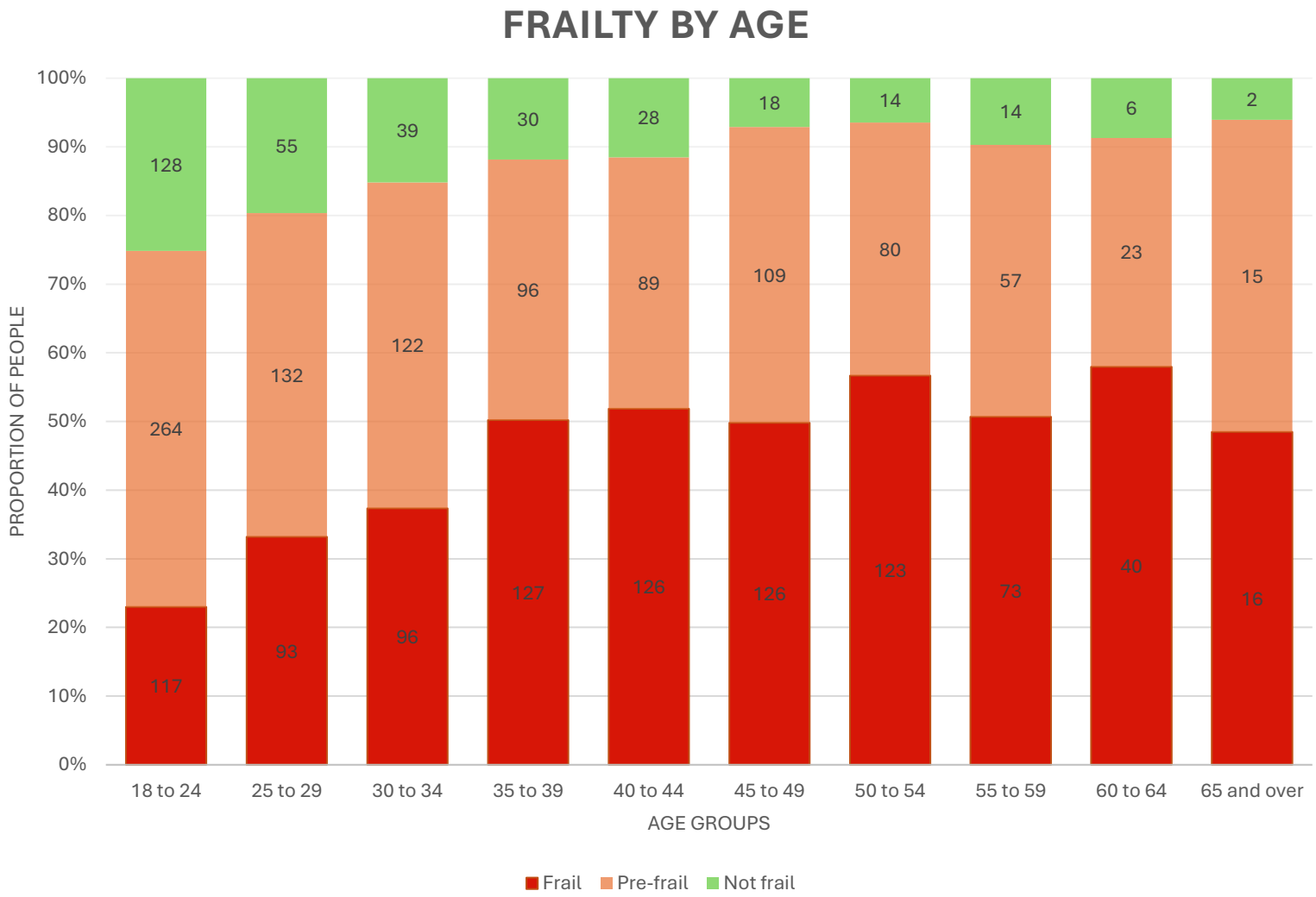
People who are **homeless** are **frail** in far **higher proportions** (41%) than the general population who are of a comparable age (8%).



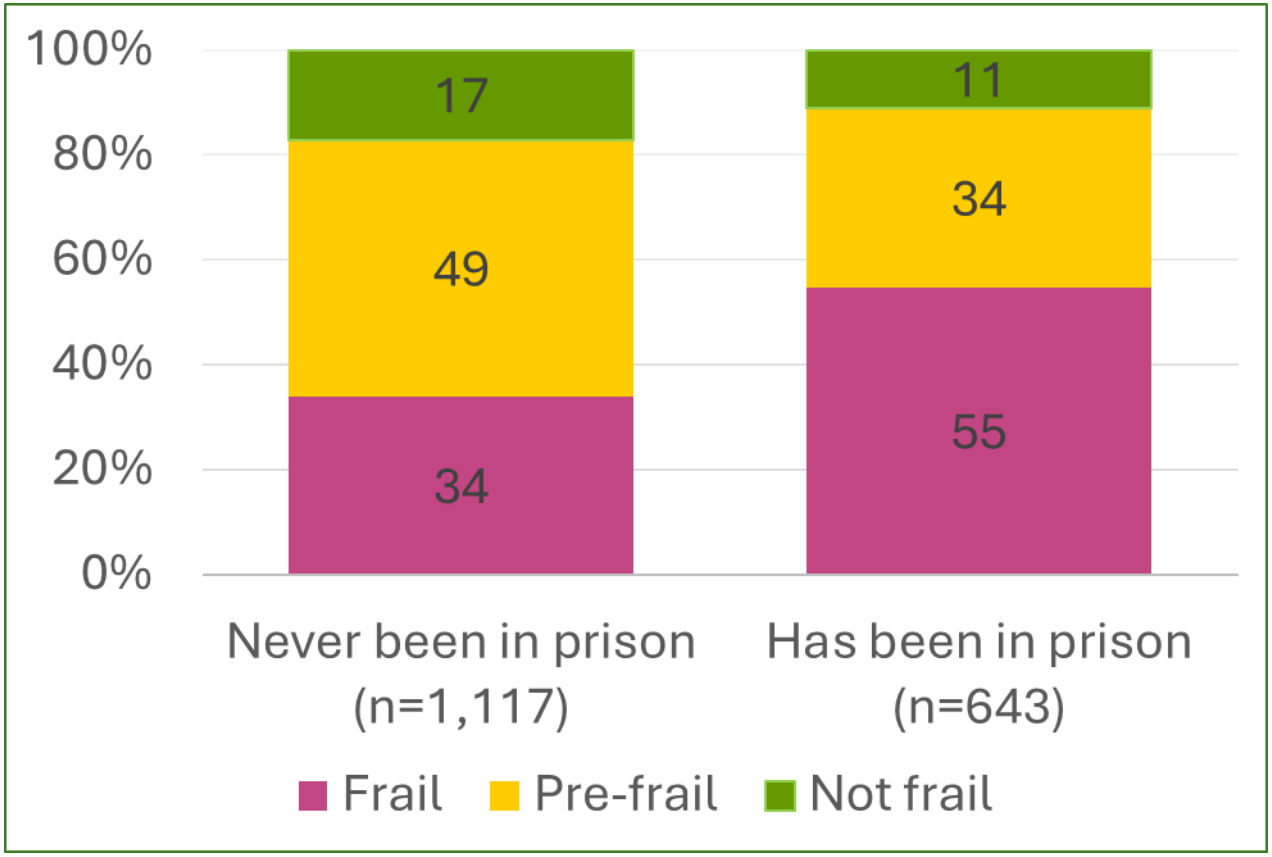
FINDINGS

Factors associated with frailty

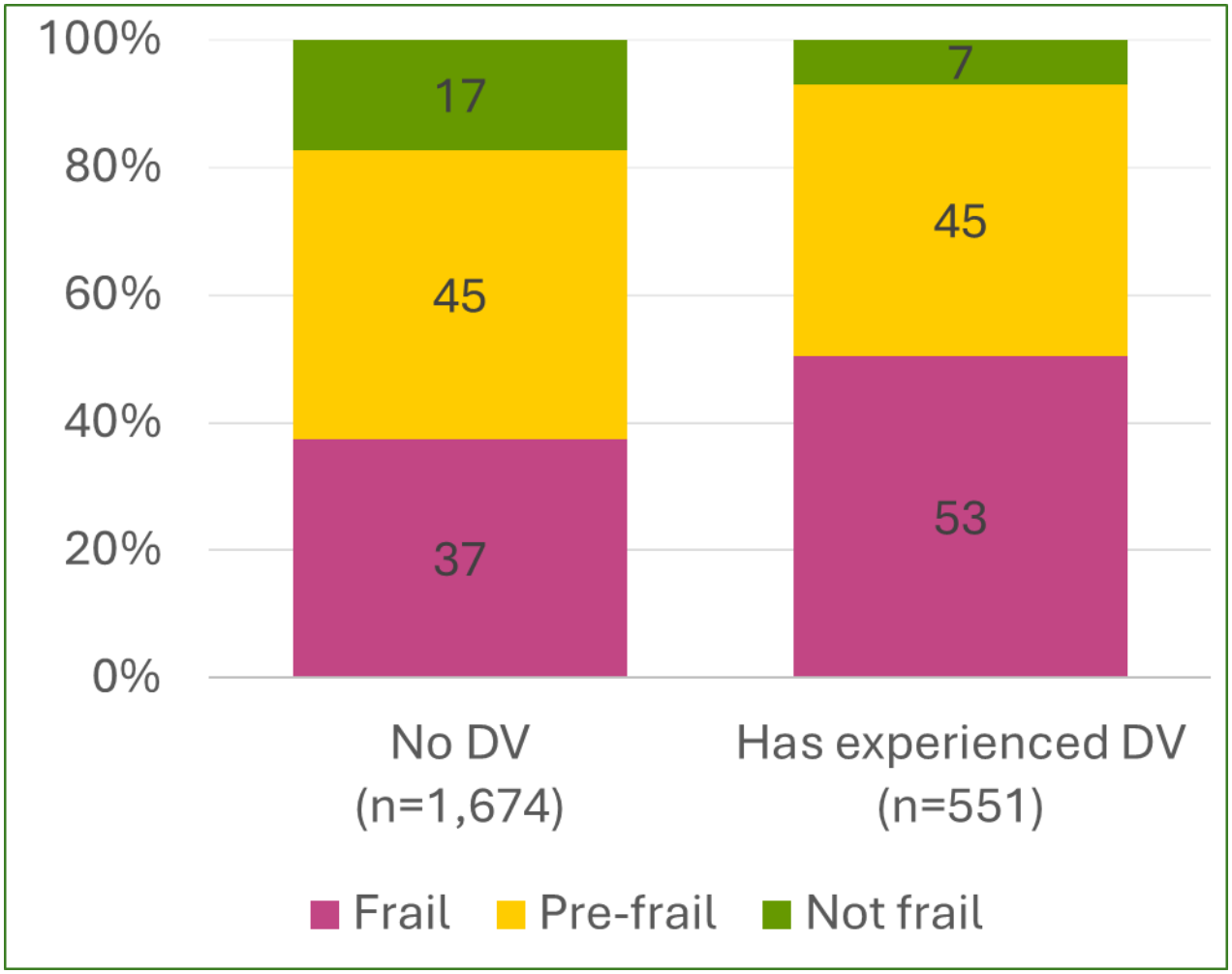
Risk factor: Frailty by age



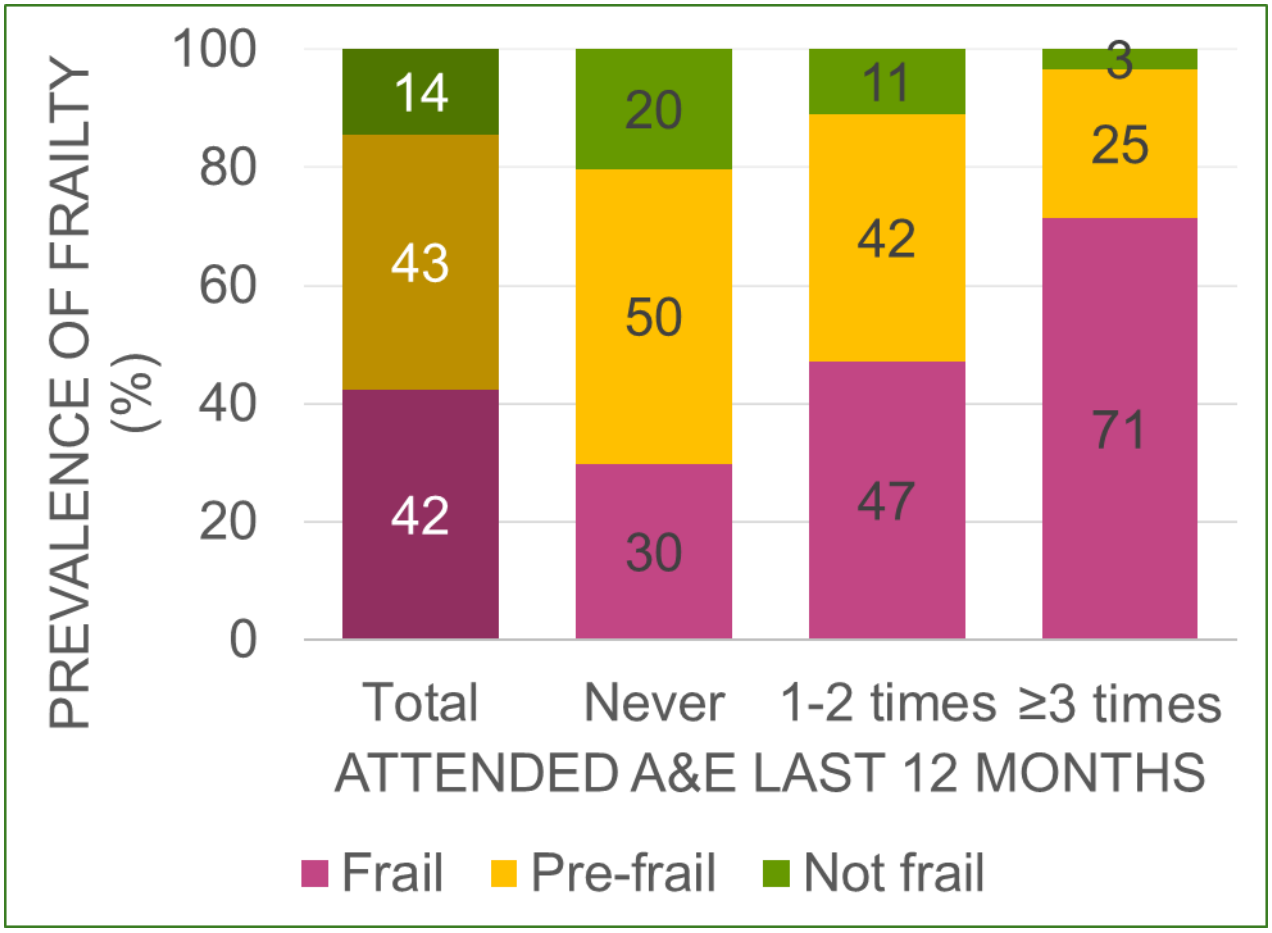
Ethnicity


100%
80%
60%
40%
20%
0%
17
49
34
11
34
55
Never been in prison (n=1,117)
Has been in prison (n=643)
Frail
Pre-frail
Not frail

Immigration status



Recourse to public funds



Strengths and limitations

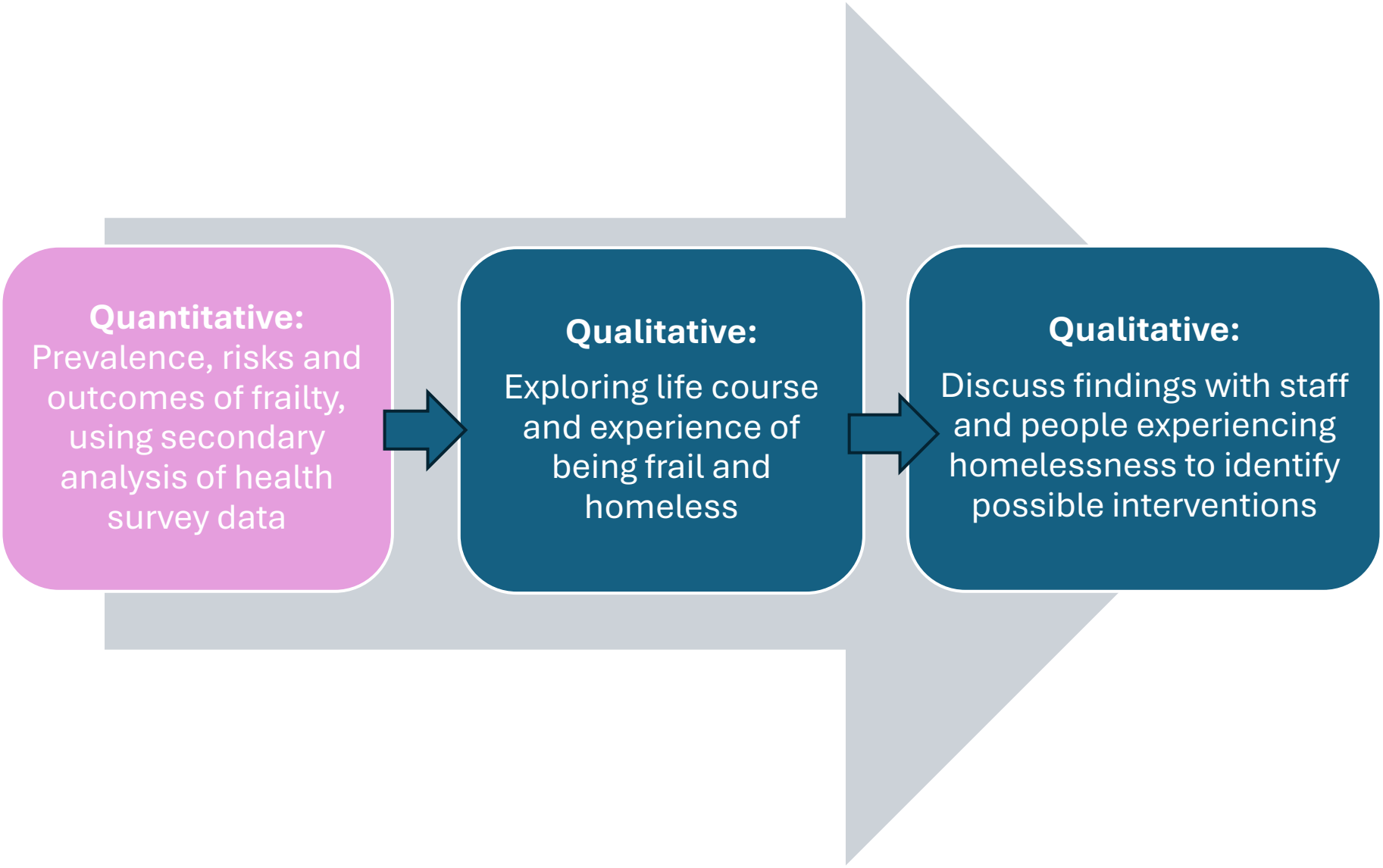
Strengths

- Sample size
- Robust approach to FI development
- Data collection methods

Limitations

- Cross-sectional nature of study
- Difficulty quantifying “hidden homeless” missed
- Survey designed without frailty in mind

Next steps…


Quantitative:
Prevalence, risks and outcomes of frailty, using secondary analysis of health survey data
Qualitative:
Exploring life course and experience of being frail and homeless
Qualitative:
Discuss findings with staff and people experiencing homelessness to identify possible interventions

Future work: addressing frailty in people experiencing homelessness

Impact: inform intervention development

Received: 21 July 2018 | Revised: 30 January 2019 | Accepted: 13 March 2019

DOI: 10.1111/hsc.12755

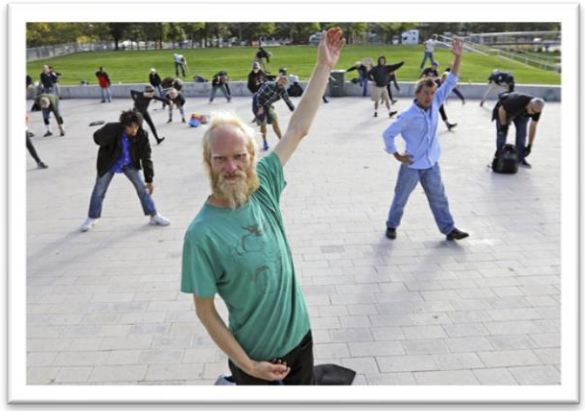
ORIGINAL ARTICLE

WILEY Health and Social Care in the community

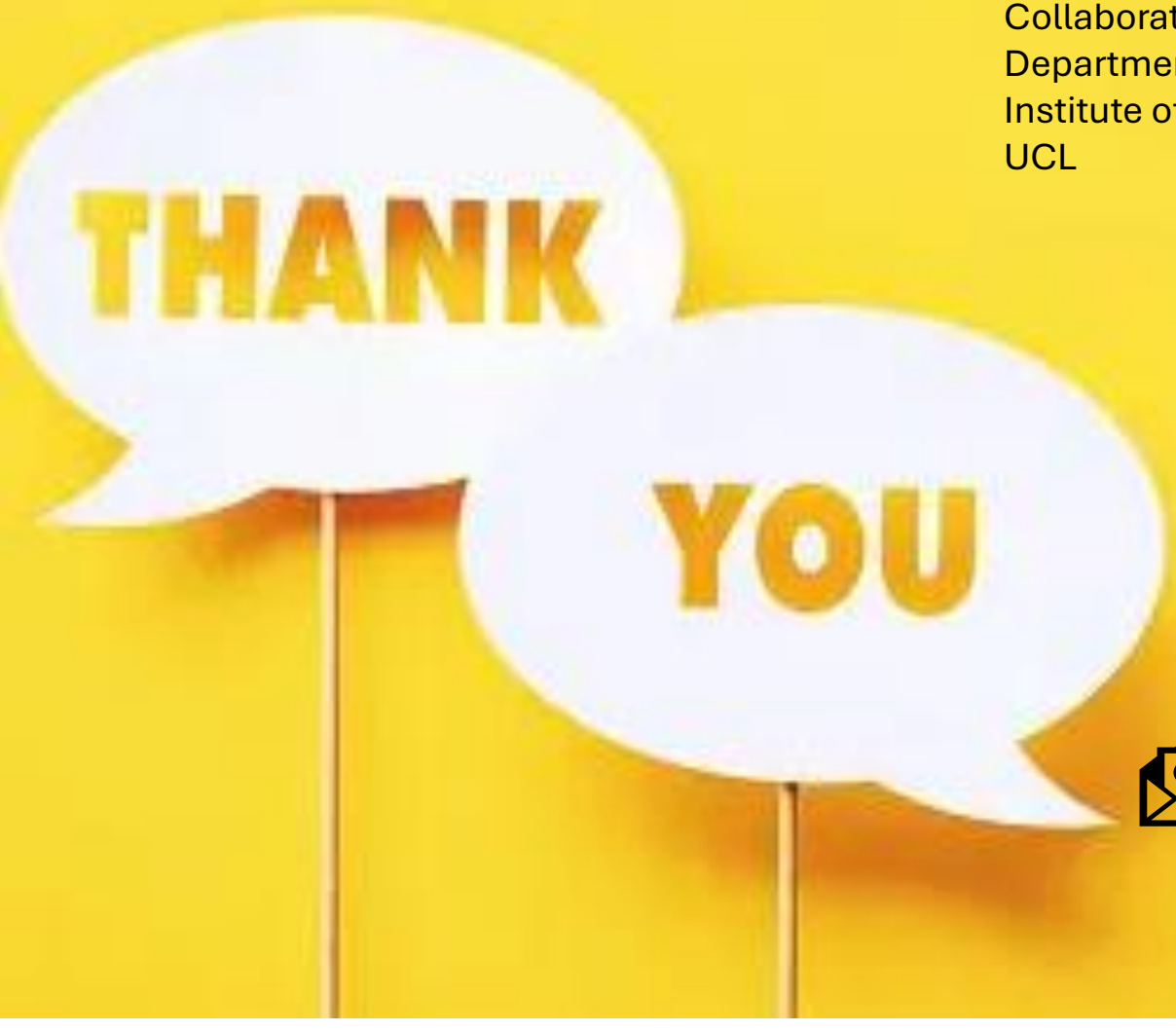
"A Mile in Her Shoes": A qualitative exploration of the perceived benefits of volunteer led running groups for homeless women

Jo Dawes MPhil, PGCE, BSc(Hons) | Charlotte Sanders MSc | Rebecca Allen Msc

Physical activity just one example…



SKID ROW RUNNING CLUB



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