

Project Title

Frailty in an Elderly Primary Care Population with Multimorbidity

Project Lead and Members

Project lead: Xin Rong Ng

Project members: Sai Zhen Sim, Jeremy Lew, Poay Sian Sabrina Lee, Eng Sing Lee

Organisation(s) Involved

National Healthcare Group Polyclinics, Nanyang Technological University

Healthcare Family Group(s) Involved in this Project

Medical

Applicable Specialty or Discipline: Family medicine

Family Medicine

Project Period

Start date: January 2022

Completed date: Ongoing

Aims

This study aimed to describe the prevalence and components of frailty and the association of HRQoL with frailty among older adults with multimorbidity in primary care.

Background

See poster appended/ below

Methods

See poster appended/ below

Results

See poster appended/ below

Lessons Learnt

Need for frailty screening programme in primary care

Conclusion

See poster appended/ below

Additional Information

Singapore Health & Biomedical Congress (SHBC) 2022: Singapore Primary Care Award
(Poster category) – (Gold Award)

Project Category

Applied/ Translational Research

Quantitative Research

Keywords

Frailty, Elderly, Primary Care

Name and Email of Project Contact Person(s)

Name: Sim Sai Zhen

Email: sai_zhen_SIM@nhgp.com.sg



National Healthcare Group
POLYCLINICS

Frailty in an elderly primary care population with multimorbidity

Sai Zhen Sim¹, Xin Rong Ng¹, Kai Wei Jeremy Lew¹, Poay Sian Sabrina Lee¹, Eng Sing Lee^{1,2}

1- National Healthcare Group Polyclinics

2- Nanyang Technological University-Lee Kong Chian School of Medicine

INTRODUCTION

Frailty and multimorbidity are related and yet distinct syndromes associated with ageing. Each is associated with increased mortality, hospitalization, disability, and increased healthcare utilization.¹⁻³ Those who have both multimorbidity and frailty concurrently have increased clinical complexity, care burden and care fragmentation⁴ and the NHS Multimorbidity guideline recommended identifying frailty in patients with multimorbidity as these patients may benefit from tailored care approaches to improve outcomes⁵. However not much known is about older adults with both frailty and multimorbidity in the polyclinic setting.

OBJECTIVE

This study aims describe and understand frailty in a group of elderly primary care patients with both frailty and multimorbidity

METHODOLOGY

This study employs a post-hoc analysis using data from an original study that measured patient-reported outcome preferences in 180 elderly polyclinic teamlet patients aged 65 years and older with multimorbidity. Multimorbidity was defined as having at least 3 or more chronic conditions from a list of 22 self-reported chronic conditions – hypertension, hyperlipidaemia, diabetes mellitus including pre-diabetes, arthritis and/or rheumatoid arthritis, obesity, cardiovascular disease, asthma or chronic bronchitis, chronic hepatitis, thyroid disorder, stroke and transient ischemic attack, heart failure and valve problems, kidney disease or failure, depression or anxiety, chronic urinary problem, physical disability, cognitive limitation, any cancer in the last 5 years, osteoporosis, dementia or Alzheimer's disease, chronic pain, gout, other mental health conditions, and neurological disorders.

Other data collected included frailty (FRAIL scale), depressive symptoms (Patient Health Questionnaire-9), social support (Duke Social Support Score), health-related quality of life (EuroQuol 5 Dimensions-5 level Utilities Index and Visual Analogue Scale), self-reported recent hospitalization in the last 12 months, and sociodemographic characteristics (age, sex, ethnicity, education level, dwelling, marital status).

RESULTS

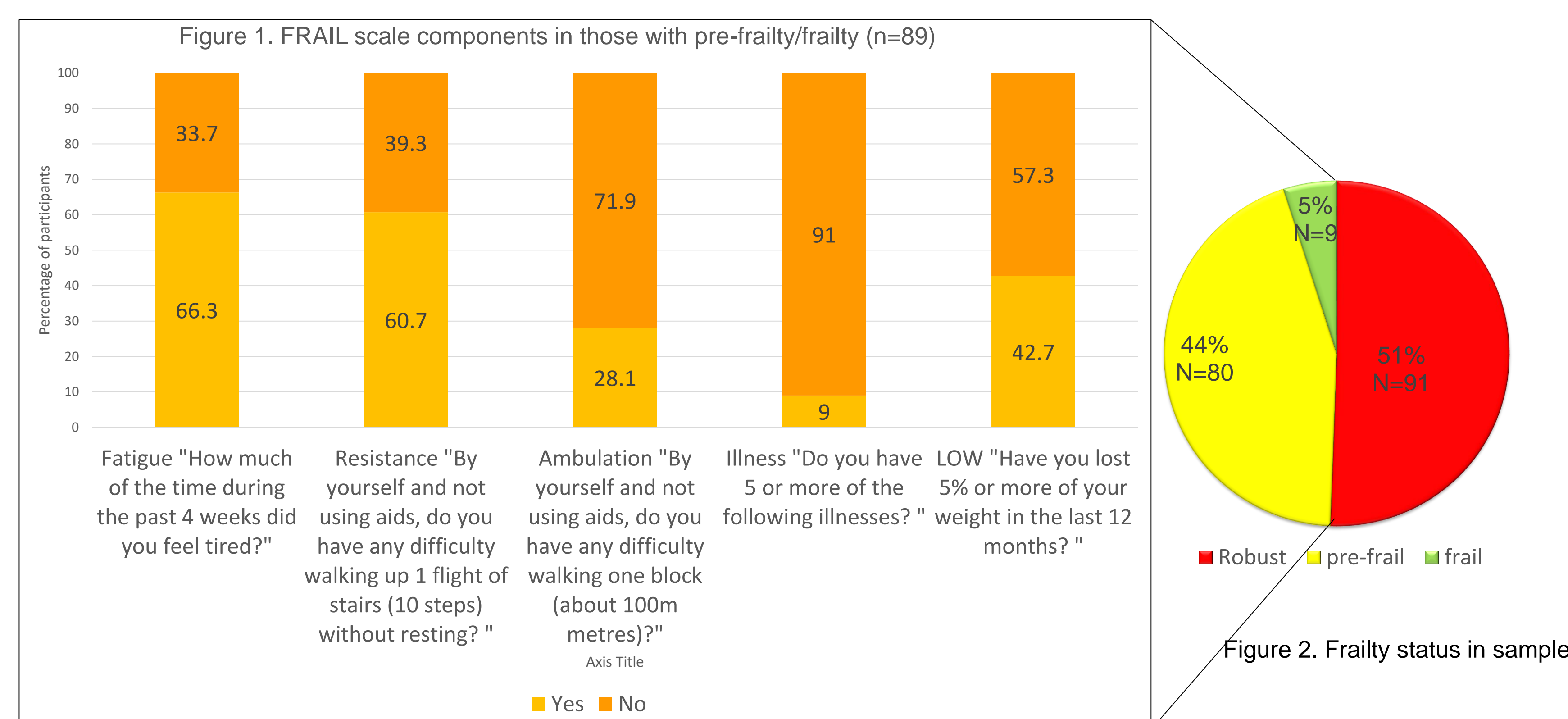


Table 1. Frailty statuses and sociodemographic variables

	Robust (%)		Pre-frail / frail (%)		p-value*
	Old	Oldest-old	Old	Oldest-old	
Age	52.4	42.4	47.6	57.6	0.301
Sex	M	F	M	F	0.181
	54.9	45.1	44.9	55.1	
Ethnicity	Chinese	Others	Chinese	Others	0.517
	83.5	16.5	79.8	20.2	
Marital Status	Married	Others	Married	Others	0.371
	69.2	30.8	62.9	37.1	
Education	PSLE & below	Secondary	PSLE & below	Secondary	0.071
	47.3	52.7	60.7	39.3	
Dwelling	1/2/3 room	4 room &	1/2/3 room	4 room &	0.378
	38.5	61.5	44.9	55.1	

*Pearson Chi-square

Table 2. Frailty statuses and other variables

	Robust		Pre-frail / frail		p-value
	Mean	(SD)	Mean	(SD)	
Chronic conditions	4.2	1.3	4.9	1.4	<0.01*
Duke Social Support	38.6	16.5	35.5	16.2	0.221*
General Health State [‡]	78.5	14.7	75	17.4	0.178*
Utilities Index [#]	UI <1 (%)	UI =1 (%)	UI <1 (%)	UI =1 (%)	<0.001**
	46.2	53.8	70.8	29.2	
PHQ-9	Mean	(SD)	Mean	(SD)	<0.001*
	1.6	2.1	3.5	4.2	
	Not depressed (%)	Depressed (%)	Not depressed (%)	Depressed (%)	0.002**
	90.1	9.9	71.9	28.1	
Hospitalization	N (%)	Y (%)	N (%)	Y (%)	0.266**
	78	22	70.8	29.2	

*Mann-Whitney U test, **Pearson chi-square test, ‡ Health-related quality of life – EuroQuol 5-Dimensions-5 Levels Visual Analogue Scale, # Health-related quality of life- EuroQuol 5-Dimensions Utility Index, ∞ No depression is PHQ-9 < 5, Depression is PHQ-9 ≥ 5.

CONCLUSION

Although this was a post-hoc study and there were a few interesting findings. Our study highlighted the lack of association of age and gender with frailty in the older adult primary care population with multimorbidity, while confirming that most had problems with the FRAIL domains of resistance, ambulation and weight loss. This may indicate a need for better frailty screening and multimodal interventions focusing on resistance exercises and nutrition. However, larger, prospective studies are required to confirm our findings in this population and help implement interventions.

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