

Unravelling Falls: A Comprehensive Analysis of Injury Patterns and Outcomes in Southern Malaysia

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Introduction

The comprehensive exploration of injuries resulting from falls and their associated outcomes remains underexplored in Malaysia. This study aims to bridge this knowledge gap by investigating the interplay between the sociodemographic status of fall patients and their trauma characteristics.

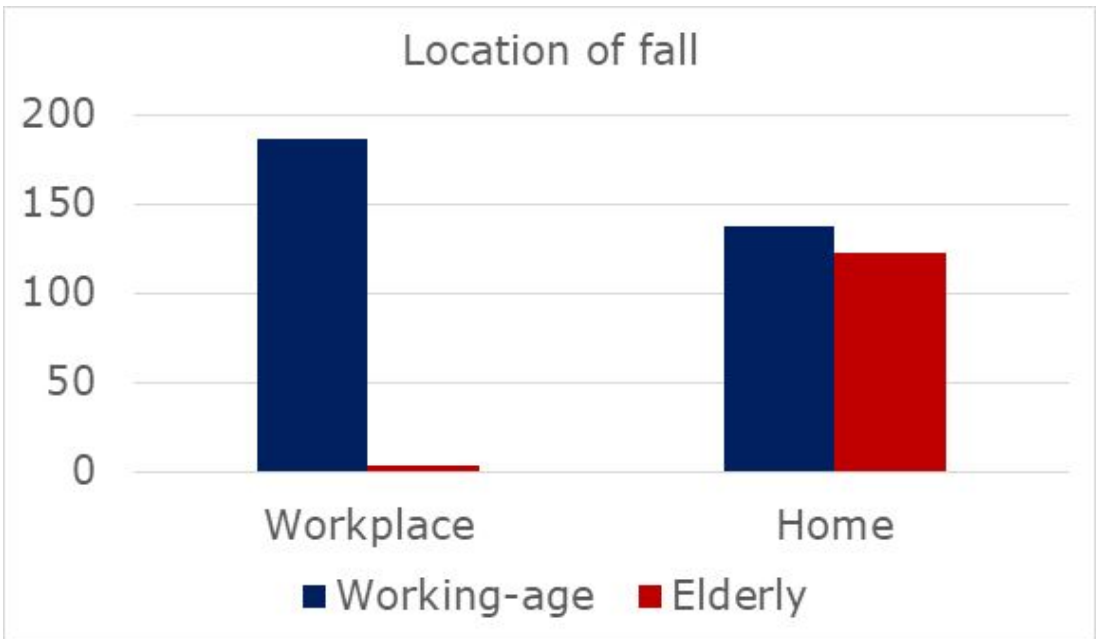
Materials and methods

This retrospective study examines 525 patients from January 2018 to December 2022 who presented to our unit following a fall.

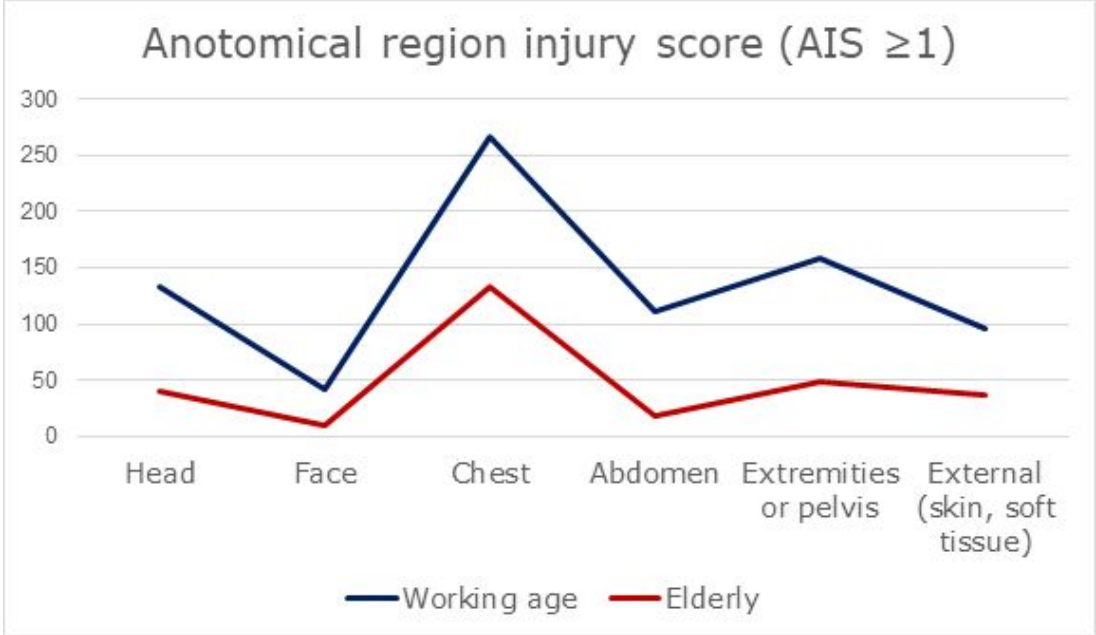
These patients were stratified into two age groups, namely 15-64 years (Working-age) and ≥ 65 years (Elderly). Chi-square and t-test analyses were employed to discern injury patterns and outcomes.

Results

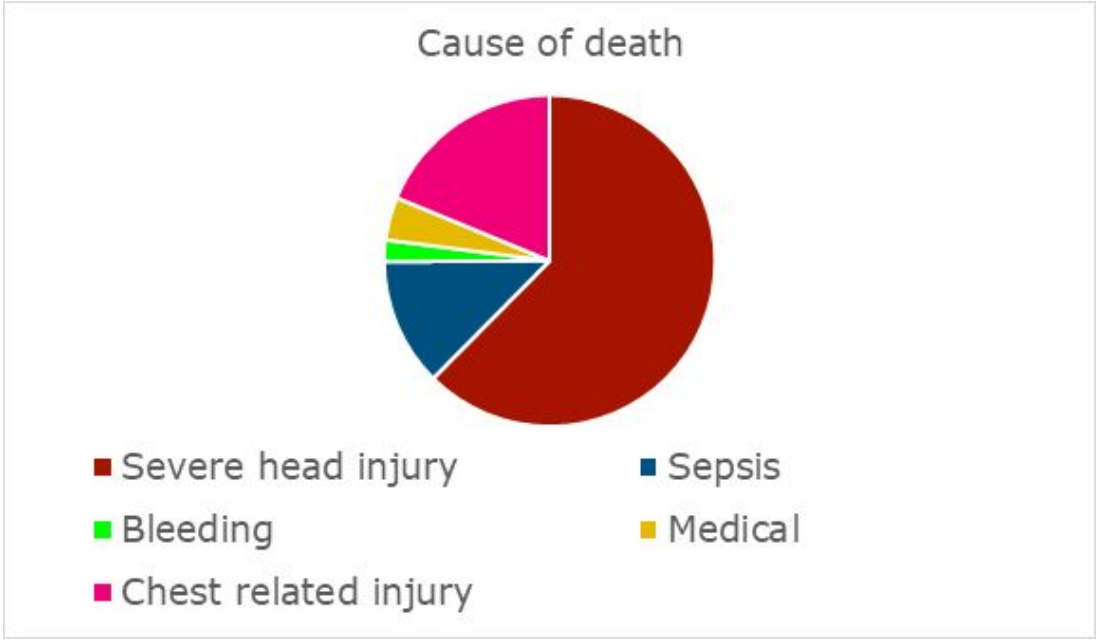
Among the 525 patients, 50.7% within the working age group exhibited a higher propensity for falls in the workplace, while 79.9% of the elderly predominantly experienced falls at home ($p<0.001$).



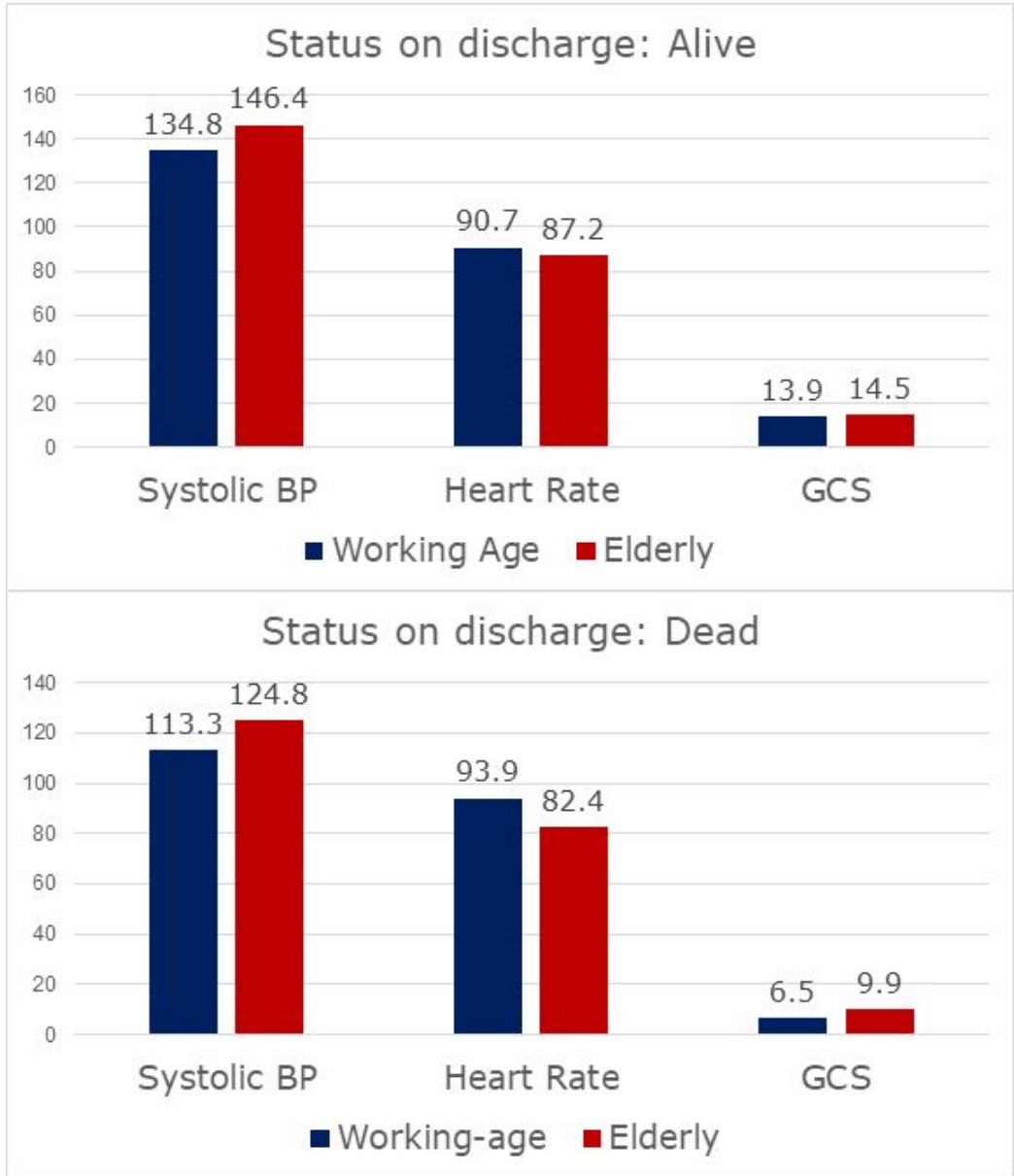
An analysis of injury patterns based on anatomical regions among our subjects revealed that when compared between the working-age group and elderlies, both age category experienced the highest number of injuries in the chest region (76.2%, $p>0.073$), followed by the extremities (39.6%, $p>0.928$) and head (33%, $p>0.816$).



51 (9.7%) patients succumbed to death, with severe head injury being the leading cause (62.5%), followed by chest-related injuries (18.8%) in both the working-age and elderly groups ($p>0.849$).

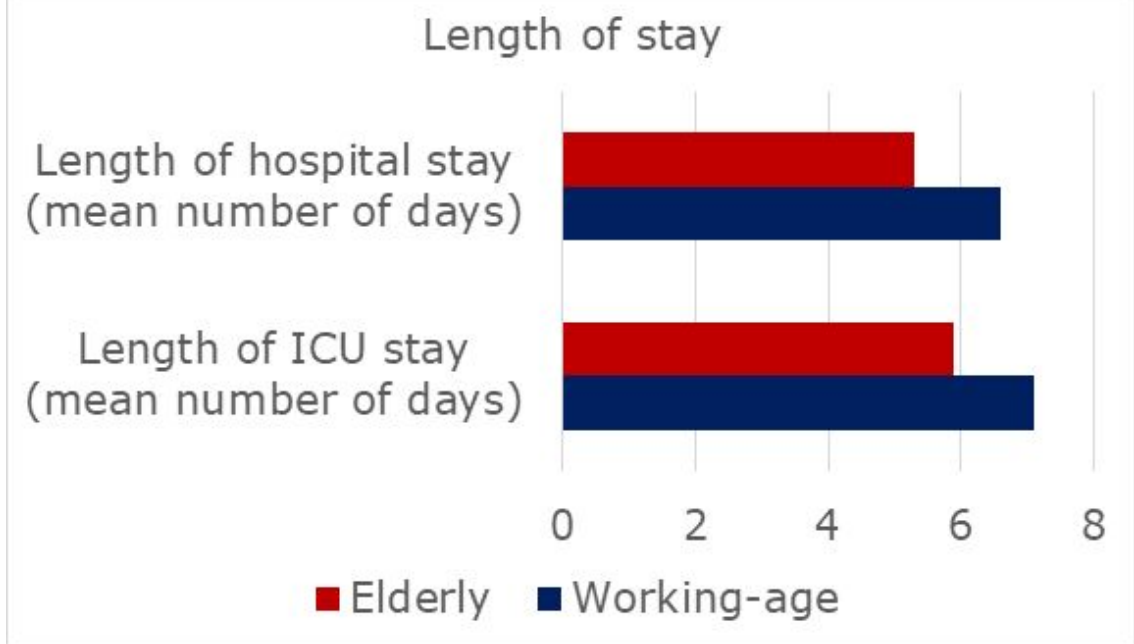


Despite this, most patients had stable hemodynamics upon arrival to the emergency department: systolic BP 136.1 ± 30.8 ($p<0.001$), heart rate 91.0 ± 22.3 ($p<0.038$), and GCS 13.5 ± 3.6 ($p<0.015$). We then analyzed hemodynamics in working-age versus elderly patients and their discharge outcomes (survival).



Most importantly, significantly lesser elderlies developed complications when compared with working-age group ($p<0.029$). The mean hospital stay duration was less than a week (6.2 ± 6.4 , $p<0.034$).

Complications (%)			
	Working-age	Elderly	p-value
Cardiac arrest	1 (0.3)	0	0.029
ARDS	0	2 (1.3)	
Sepsis	3 (0.8)	1 (0.7)	
Covid19	2 (0.5)	2 (1.3)	
Any complication	1 (0.3)	4 (2.6)	



Conclusion

The results highlight that fall patients in southern Malaysia typically maintain stable hemodynamics and complications after a fall among the elderlies are not as common. This study provides crucial insights into fall-related incidents, underscoring the importance of targeted interventions to reduce fall risks and optimize healthcare resource allocation.