





Are all people with high social isolation at high risk of physical frailty? : relationship with subjective wellbeing

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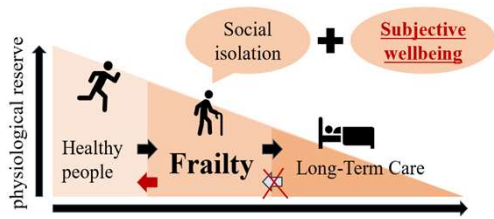
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Executive summary

- ①  **with higher social isolation** →  Risk of physical frailty ↑
- ②  with high social isolation + **High levels of subjective wellbeing** →  Risk of physical frailty ↓

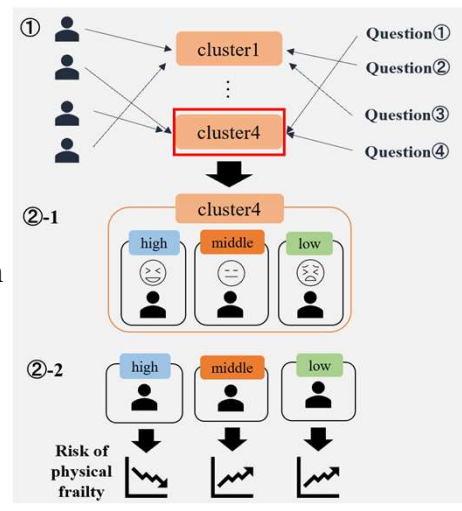
Backgrounds

The relationship between social isolation and subjective wellbeing, and physical frailty has attracted. We examine the impact of both social isolation and subjective wellbeing on the risk of physical frailty.[1][2]



Methods

- ① Clustering on social isolation by probabilistic latent semantic analysis and characterization by Bayesian network.
- ②-1 **Focusing on clusters with high social isolation** and grouping them by subjective wellbeing.
- ②-2 Comparing the risk of physical frailty by subjective wellbeing group in survival time analysis.



Results

Results ①

Comparing the physical frailty rates by social isolation cluster

- Analyzed: 1,953 cases
Male: 51.0%, Average age: 69.8
- We adopted 4 classes
- We used a modified version of the Fried frailty criteria [3]

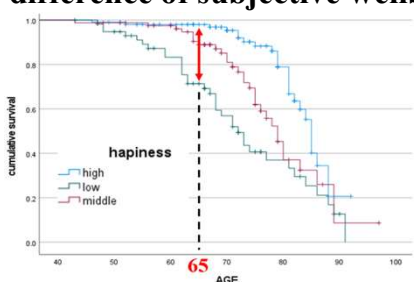
cluster1	cluster2	cluster3	cluster4
<ul style="list-style-type: none"> • High community contribution • Participation in social activities 	<ul style="list-style-type: none"> • Having a spouse • Having a job • High frequency of conversation by phone and SNS 	<ul style="list-style-type: none"> • Having a spouse • Not having a job • Non-participation in social activities 	<ul style="list-style-type: none"> • Low frequency of conversation by phone and SNS • Low community contribution
Physical frailty rates			
11.0%	13.7%	20.9%	30.7%

➤ **People with high social isolation are at higher risk of physical frailty than those with low social isolation**
 ※ This is the same result as shown in Davies et al. (2021) [1]

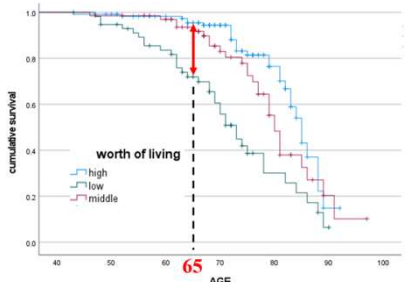
Results ②

Among people with high social isolation, comparing the risk of physical frailty by the difference of subjective wellbeing

- People with high happiness have a **27.6%** lower risk of physical frailty than those with low happiness.



- People with high worth of living have a **23.5%** lower risk of physical frailty than those with low worth of living.



➤ **Even in people with high levels of social isolation, high subjective wellbeing can reduce the risk of physical frailty**
 ※ This is a new finding not revealed in Davies et al. (2021) [1]

References

[1] Davies, K. et al. (2021). The longitudinal relationship between loneliness, social isolation, and frailty in older adults in England: a prospective analysis. *The Lancet Healthy Longevity*, 2(2), 70-77.
 [2] Steptoe, A. et al. (2015). Subjective wellbeing, health, and ageing. *The Lancet*, 385(9968), 640-648.
 [3] Fried, P. L. et al. (2001). Frailty in Older Adults: Evidence for a Phenotype. *The Journals of Gerontology*, 56(3), 146-157.

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