

Socioeconomic inequality in health among elderly in Japan

— a cohort study (Part 1)—

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Background&Purpose :

The issue of caring for disabled elderly is becoming one of the important social problems in Japan. Prevention of elderly functional dependency is necessary from not only biomedical and psychological aspects but also social aspects. The aim of this study is to examine the influence of socioeconomic status and other social factors on the incidence of functional dependency in Japanese population.

Methods :

2737 Japanese, aged 65 and older, who were not disabled at baseline in 2000, completed self-administered questionnaires. They were followed for 2 years. The effects of income level, productive activities, social networks and social supports on the incidence of functional dependency were estimated by the Cox proportional hazard model after adjusting for age.

Results :

Results shows significantly increased risk of becoming functionally dependent for females relates to 4 factors: ① Lower Income level (hazard rate (HR))=1.83, 95% confidence interval(CI)= 1.18-2.86), ② Low frequency of contact with relatives living apart (HR=1.75, 95% CI=1.12-2.74), ③ Low frequency of participation in social activities (HR=1.86, 95% CI=1.08-3.22) and ④ Not providing social support (HR=2.91, 95% CI=1.80-4.68). These effects were not the case for males.

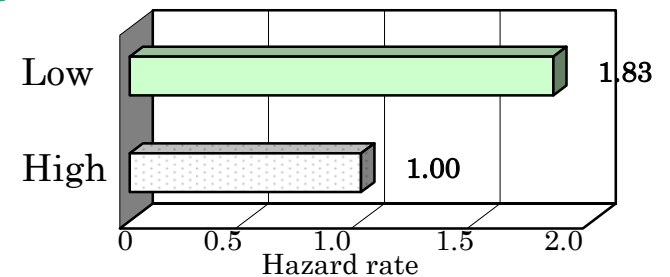
Table Hazard rate of social factors on the incidence of functional dependency in Japanese elderly

Factor/Reference		Male		Female	
		n	HR (95%C.I.)	n	HR (95%C.I.)
Socioeconomic status					
Income ^a	Low/High	209/1094	1.66 (0.83-3.31)	399/1027	1.83 (1.18-2.86)
Productive activities					
Work status	Unemployed/Employed	972/329	2.70 (0.82-8.89)	1215/195	1.08 (0.49-2.37)
Housework	Not engaged /Fully engaged	366/291	0.91 (0.42-1.99)	82/1054	1.78 (0.89-3.56)
	Partially/Fully engaged	624/291	0.53 (0.24-1.17)	222/1054	1.46 (0.84-2.54)
Role in family except housework ^b	Not engaged/Engaged	619/620	0.94 (0.49-1.80)	475/807	1.56 (0.99-2.45)
Social networks					
Frequency of contact with relatives living apart ^c	Low/High	699/609	0.54 (0.28-1.04)	673/756	1.75 (1.12-2.74)
Frequency of contact with Neighbors ^d	Low/High	665/643	0.87 (0.47-1.62)	714/715	1.37 (0.88-2.14)
Frequency of participation in social activity ^e	Low/High	808/500	1.43 (0.72-2.82)	855/574	1.86 (1.08-3.22)
Social supports					
Degree of support reception ^f	Per 1point		1.06 (0.99-1.13)		0.96 (0.91-1.01)
Support provider ^g	No/Yes	267/1024	1.48 (0.75-2.91)	285/1108	2.9 (1.80-4.68)

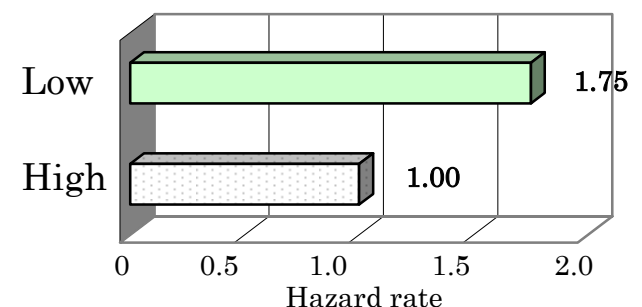
Notes: HR: Hazard Rate CI: Confidence Interval :p<.05 :p<.001
^aLow= public assistance recipients, municipal tax-exempted households and old-age-welfare-pension recipients, municipal tax-exempted households High= municipal tax-exempted persons, municipal taxpayer ^b taking charge of the house, looking after children or pets, etc. ^cLow= less than 1day/w High= not less than 1day/w ^dLow = less than several times/w High= everyday ^eLow= almost no High=more than several times /year ^f range (0-24) ^ggive advice to families or friends, etc.

Figure Significant factor

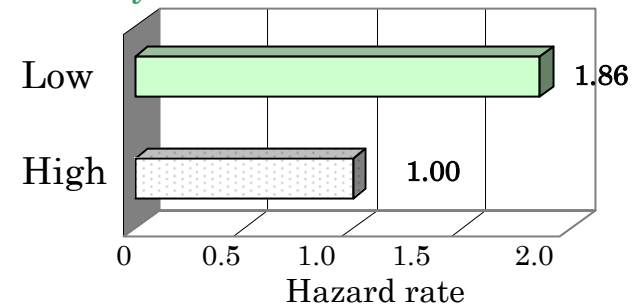
①Income (female)



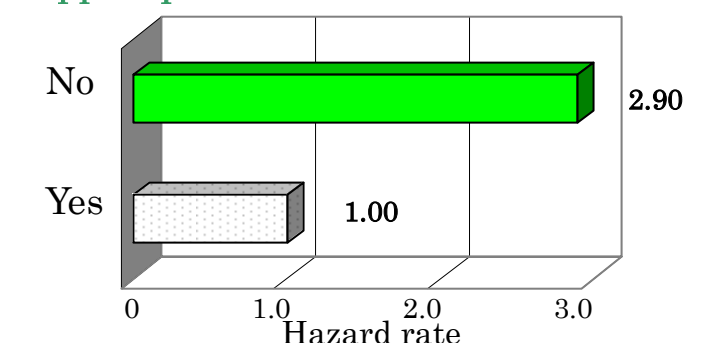
②Frequency of contact with relatives living apart (female)



③ Frequency of participation in social activity (female)



④Support provider (female)



Conclusions :

Results suggest that social risk factors of elderly functional dependency differ by sex. In females, not providing supports to families or friends was the most relevant factor to the incidence of functional dependency. Income level and social networks appeared also important for maintaining functional independency of Japanese female elderly.

Reference:

1)Stuck AE et al: Risk factors for functional status decline in community-living elderly people: a systematic literature review. Social Science & Medicine 48: 445-469. (1999)
 2)Zunzunegui MV et al: Social networks, social integration, and social engagement determine cognitive decline in a community-dwelling Spanish older adults. J Gerontology B Psychol Sci Soc Sci 58: S93-S100. (2003)

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