

The emergence of the frail older adult: mixed trends and potential explanations

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Background

The continual increase in life expectancy in developed countries has led researchers to define a fourth phase of the originally three-phase epidemiologic transition: the phase of delayed degenerative diseases (Olshansky and Ault 1986). Empirical evidence to address the question of this fourth phase is characterised by a compression or an expansion of morbidity and disability centres on the observation of trends in the prevalence of morbidity and disability. A good understanding of recent trends in morbidity and disability is paramount to forecasting and perhaps influencing future trends. However, explanations of trends so far have been based on declines in disability as have been observed to date in the United States and some other developed countries. Observations of declining trends lead to different explanations than observations of increasing trends. In this contribution, explanations for the mixed trends observed in the Netherlands are sought.

Methods

This study is based on both published literature and empirical data from a historic and a recent study in the Netherlands: the Dutch Longitudinal Study of health among the Elderly (baseline: 1955-57) and the Longitudinal Aging Study Amsterdam (baseline: 1992-93) (Deeg et al. 1994). Both studies are representative for the older population of the Netherlands and include the age group 65-84 years. Trends are examined in morbidity, mild and severe disability and self-rated health across five decades. Potential explanatory factors are derived from additional analyses.

Findings

The prevalence of chronic conditions rose since the mid-1950's. Whereas severe disability showed a decreasing trend, mild disability increased. Good self-rated health showed a decreasing trend until the 1990's, which stabilized after that (Table 1). Although explanatory factors that have been proposed for the USA and some other developed countries (rising level of education, advances in medical treatment, increased use of assistive devices, and greater increases in male than female life expectancy) have followed the same development in the Netherlands, these factors cannot serve as explanations for increasing trends. Empirical evidence supports alternative explanations: changes in the associations between diseases, mild disability, and self-rated health; changes in the functioning of the health care system, in particular shorter hospital stays; differences in trends between socio-demographic subgroups of the older population, with worse trends in the less-well-off; and recent boosts in the public image of old age.

Conclusions

The mixed trends observed in the Netherlands correspond to the Dynamic Equilibrium scenario proposed by Manton (1982): an increase in morbidity accompanied by a decrease in severe disability. The explanations provided for these mixed trends may prove useful for anticipating on future trends in other countries, the decline in which has been suggested to have stopped (Fuller-Thomson et al. 2009). If the underlying evidence is replicated in research elsewhere, this will allow better planning of health care capacities.

References

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Table 1. Prevalence of mild disability (difficulty in stair climbing) and less than good self-rated health by age and sex, 1955-57 (DLSE), 1992-93 and 2005-06 (LASA)

	Age				
	65-69	70-74	75-79	80-84	total ¹
Mild disability, men					
1955-57	9.8	9.8	14.2	24.2	12.4
1992-93	12.7	19.6	26.8	40.4	20.8
2005-06	16.2	25.2	36.7	54.4	26.7
Self-rated health, men					
1955-57	16.2	13.7	21.4	25.7	17.6
1992-93	27.2	35.2	38.8	33.3	32.7
2005-06	28.5	27.3	41.3	54.4	33.2
Mild disability, women					
1955-57	15.1	30.1	38.2	45.7	29.7
1992-93	27.4	28.3	46.9	60.7	37.6
2005-06	35.1	45.9	57.2	76.3	49.3
Self-rated health, women					
1955-57	30.7	33.7	43.0	34.6	34.9
1992-93	41.4	39.6	50.8	45.6	43.6
2005-06	37.5	37.4	54.1	50.8	43.1

DLSE: Dutch Longitudinal Study of Health among the Elderly

LASA: Longitudinal Aging Study Amsterdam

¹ Totals weighted by age and sex of the population of the Netherlands as of 1-1-1993