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The consequences of becoming frail on the elderly's daily life

- Results from Swilsoo -

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Objective

- To achieve **a more global understanding** of what is frailty and what are its consequences,
- by an empirical analysis of the extent to which and how **frailty makes a difference** in various dimensions of the **daily life**
- using data from the **Swilsoo** study (Swiss Longitudinal Study on the Oldest-Old).

Main arguments

- Frailty is highly consequential for the daily life of the elderly
- It circumscribes a specific stage of the individual life course
- Frailty and its consequences are dynamic phenomena, implying threshold effects

The daily life

“Daily life” encompasses the total sphere of an individual’s experiences circumscribed by the objects, persons and events he/she encountered in the pursuit of his/her life.

Is an “objective” and subjective reality.

(Schutz, 1970; Berger & Luckmann, 1984 [1966]).

The daily life (2)



Our concern: a **partial aspect** of the daily life.

1) Two components:

(a) **Direct relationships** with those living outside the household, considering

- two personal networks: **family** and **friends**;
- two dimensions: **integration** and **instrumental support**

(b) **Leisure activities**

2) An objective, quantitative approach is favored.

The Swilsoo study

(Swiss Interdisciplinary Longitudinal Study on the Oldest-Old)

- 1994: 340 individuals between 80 and 84 years old (born between 1910 and 1914)
- 1999: 376 individuals between 80 and 84 years old (born between 1915 and 1919)
- Residing at home at study inception
- Sample stratified by sex (~50% F) and region (~50% urban and ~50% semi-rural)
- Information gathered by means of face-to-face interviews (total N=1225).
- If the elderly was not able to be directly interviewed, a proxy was interviewed, a smaller version of the questionnaire being used.

Longitudinal follow-up

Number of respondents



340	267	237	209	172
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1994

1995

1996

1997

1999

W1

W2

W3

W4

W5

80-84
years old

85-89
years old

Measures

1) Direct relationships (personal networks)

1.1 Integration

Reported frequency of:

- Visiting family
- Being visited by family
- Visiting friends
- Being visited by friends

With a scale ranging from 1 (=never) to 5 (daily or almost daily)

Measures (2)

1.2 Instrumental support

Four composite indicators:

- **Support given to family members**
(mean of 8 categories, each coded from 1=never to 4=often)
- **Support received from family members**
(mean of 7 categories; same scale)
- **Support given to friends**
(at least one among 7 categories)
- **Support received from friends**
(at least one among 6 categories)

Measures (3)

2. Leisure activities

- Media-reading (watching television; listening to the radio; reading newspapers; reading books or magazines)
- **Recreative** (playing solitary; playing with others)
- **Productive** (gardening; manual work)
- **Outdoor-physical** (walking; exercising-sport)
- **Outdoor-social** (going to the bar or restaurant; cultural activities; going on holiday, on a trip; taking part to a local event or feast)
- **Religion** (praying; office attendance).

Measures (4)

Frailty is measured by **health status**, an indicator with three categories

- **Independent (I)**
- **Frail (F)**
- **Dependent (D).**

(Guilley, Armi, Ghisletta & Lalive d'Epina, this symposium)

In the multivariate analysis, **other covariates** are introduced for control: age; gender; region of residence; socioeconomic status; household composition; composition of personal networks.

Procedure

- 1) A **multivariate analysis** of the daily life as depending on the health status,
using a **multilevel model** (Bryk & Raudenbush, 1992; Snijders & Bosker, 1999),
with age / gender / region / socioeconomic position / household composition/ personal networks compositions as control variables

Procedure (2)

2) **A comparison** (using the Wilcoxon signed-rank test) of the daily life in **two successive waves**, **according to various health trajectories** within the same period of time

Procedure (3)

Two types of health trajectories:

(a) **Stable**

- independence to independence (I-I; n=221, 25%)
- dependence to dependence (D-D; n=104, 12%)

(b) **Declining**

- independence to frailty (I-F; n=108, 12%)
- frailty to frailty (F-F; n=259, 30%) *
- frailty to dependence (F-D; n=68, 8%)

* If the trajectory F-F implies a continuity in the same health status, it is characterized by an accumulation of deficiencies (Armi & Guilley, 2004).

The daily life according
to the health status:
results of the
multivariate analyses

Integration

	Independent vs. Frail	Dependent vs. Frail	In sum
<i>Family</i>			
Visiting	0.239 **	-0.441 **	I > F > D
Being visited	-0.066	0.133	I = F = D
<i>Friends</i>			
Visiting	0.142	-0.554 ***	I = F > D
Being visited	-0.199	0.191	I = F = D

Controlled for age, gender, region, socioeconomic status, household and network composition

*p.<.05 ; **p.<.01 ; ***p.<.001

Instrumental support

	Independent vs. Frail	Dependent vs. Frail	In sum
<i>Family</i>			
Support given	0.045	-0.088 **	I = F > D
Support received	-0.100 *	0.162 *	I < F < D
<i>Friends</i>			
Support given	0.048 **	-1.482 **	I > F > D
Support received	-0.338 *	0.602 *	I < F < D

Controlled for age, gender, region, socioeconomic status, household and network composition

*p.<.05 ; **p.<.01 ; ***p.<.001

Leisure activities

	Independent vs. Frail	Dependent vs. Frail	In sum
Media-reading	0.034	-0.155 *	I = F > D
Recreative	0.166 **	-0.106	I > F = D
Productive	0.102 *	-0.396 ***	I > F > D
Outdoor-physical	0.200 ***	-0.370 ***	I > F > D
Outdoor-social	0.135 ***	-0.230 ***	I > F > D
Religion	-0.020	0.013	I = F = D

Controlled for age, gender, region, socioeconomic status, household and network composition

*p.<.05 ; **p.<.01 ; ***p.<.001

A comparison of the daily life in two successive waves, according to various health trajectories

Integration

	Stable		Declining		
	I-I	D-D	I-F	F-F	F-D
<i>Family</i>					
Visiting	→	→	↘	→	↘
Being visited	→	→	↗	→	→
<i>Friends</i>					
Visiting	→	→	→	↘	→
Being visited	→	→	→	→	→

The arrows indicate either a continuity "→", or a decrease "↘", respectively an increase "↗", at the .05 level (Wilcoxon signed-rank test)

Instrumental support

	Stable		Declining		
	I-I	D-D	I-F	F-F	F-D
<i>Family</i>					
Support given	↘	→	↘	↘	→
Support received	→	→	→	→	→
<i>Friends</i>					
Support given	↘	→	→	↘	→
Support received	→	→	→	→	→

The arrows indicate either a continuity "→", or a decrease "↘", respectively an increase "↗", at the .05 level (Wilcoxon signed-rank test)

Leisure activities

	Stable		Declining		
	I-I	D-D	I-F	F-F	F-D
Media-reading	→	→	→	↘	↘
Recreative	→	→	→	→	→
Productive	→	→	↘	↘	↘
Outdoor-physical	→	→	→	→	↘
Outdoor-social	→	→	→	↘	↘
Religion	→	→	→	→	→

The arrows indicate either a continuity "→", or a decrease "↘", respectively an increase "↗", at the .05 level (Wilcoxon signed-rank test)

Conclusion

1) Frailty makes a difference

- In the structure and nature of the relationships
- In the level of engagement in leisure activities and the nature of those activities



A specific stage of the individual life course

Conclusion (2)

2) Frailty and its consequences as dynamic phenomena

- A transition from one health status to another and an accumulation of deficiencies within frailty are associated with several changes in the daily life.



At a certain level of accumulation of deficiencies, the capacity of resilience and to maintain his/her lifestyle is exhausted, implying the need of a more or less deep adaptation.

(P.B. Baltes 1997; Lang, Rieckmann & M.M. Baltes, 2002).

- Continuous process and threshold effects

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