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# **Choice and effectiveness of home care for the elderly**

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# Acknowledgements

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# Background

Previous studies and policy trend

- More choice and control, inclusion
- more effectiveness of social care
- prevents more intensive services

Public sector has been blamed for not giving choices

Instruments to give more choice and flexibility have been developed e.g. voucher, individual budget

In Finland: 'New Elderly Care Act' (980/2012)

- improve the opportunity to involve the elderly in decision-making and improve possibility to choose services

# Objectives

To know more about ...

How do the recipients of public home care feel about their possibility to choose services?

Is the free choice associated with a higher effectiveness of home care?

# Study

- Public home care receivers in three areas in Finland: Pieksämäki, Hämeenlinna, the Savonlinna district
- Collaboration with public home care providers
- Winter 2013-2014

## Hypothesis

- Free choice is associated with a better effectiveness of home care

# Home care in Finland

## **Social care**

### Home service

- Personal care with some assistance with household and food and drink

### Support services

- meals on wheels, errand services (e.g. shopping), bathing and sauna, alarm services and day care

## **Health care**

### Home Health Care

The person may use one or more of the services

# Data

- Structured survey
- 2,096 regular home care recipients
- 65 years old and older
- MMSE > 18 (Mini-Mental State Examination)
- Data on service use was collected from providers' customer information systems
  - what services
  - how long the person has used the service



# Respondents

- The response rate 50.3%, n=1054
- The average age 85 years, the oldest 105 years
- 69% women
- 73 % live alone
- 80 % have children
- 64% get enough information about home care services
- 58% cope with help they get from home care
- 56% help from relatives or friends affect significantly on coping at home

# Dependent variable: Effectiveness of home care services

- Social Care Related Quality of Life gain (SCRQoLgain)
- ASCOT instrument INT4 modified to self-completion questionnaire
  - After discussion with the ASCOT team
  - English preference weights

# SCRQoLgain

	N	Mean	Median	Std. Error of Mean
Hämeenlinna	216	0.15	0.10	0.013
Pieksämäki	112	0.18	0.14	0.018
Savonlinna district	189	0.20	0.16	0.015
Total	517	0.17	0.12	0.009

# Explanatory variables for social care related quality of life gain from previous studies

**Impairment:** health, mental health, daily functional capacity related problems, dependence on the help of others

→ EQ-5D (mobility, self-care, usual activities, pain/discomfort, anxiety/depression)

## **Other personal abilities and resources**

→ whether enough money

→ education, children, living alone, getting help from relatives or friends

**Adaption:** whilst ability to function gets worse, people adapt and get more from the poorer set of functionings

→ time from starting the service use

## **And background questions**

Explanatory variable		All (n= 1054) %	Pieksä- mäki (n=233) %	Hämeen- linna (n=486) %	Savon- linna (n=335) %
Can you choose	your care worker?	14	19	13	11
	time when the care worker visits you?	34	33	33	41
	day when cleaned?	31	40	30	30
	meals?	20	17	22	20
	at least one of above	63	64	61	67
Would like to influence the services they received?	yes	62	57	64	65
	no	24	30	21	24
	NA	14	13	15	11

# Method: Multivariable regression

Two stages

1) 'Basic model' without variables describing the possibility to choose

→ Which of the explanatory variables are associated with SCRQoLgain?

→ What is the Coefficient of Determination (Adjusted R-squared)?

2) Adding the variables describing the possibility to choose to the model

→ Is the possibility to choose associated with SCRQoLgain?

→ What happens to the Coefficient of Determination?

Adjusting the models:

- Variables were dropped out so that the model gives the best possible Coefficient of Determination (Adjusted R-squared)
- Robust standard errors (developed by White)
- VIF tested

# The basic model

	Estimate	Std. Error	t value	Pr(> t )	
	(Intercept)	-0.14782086	0.08720425	-1.6951	0.0904023 .
Age	0.00236417	0.00096095	2.4602	0.0140727 *	
Education college degree or higher	-0.02668906	0.01704136	-1.5661	0.1176707	
Elderly rental housing	0.02639271	0.02161313	1.2211	0.2223537	
Have children	-0.03853285	0.01889631	-2.0392	0.0417261 *	
Living with someone	-0.01876768	0.01588164	-1.1817	0.2376300	
Receiving enough information about the home care services	0.01572169	0.01563962	1.0052	0.3150495	
Help from relatives or friends affect coping at home, little or not at all	0.02728557	0.01387311	1.9668	0.0495154 *	
Coping with help that have got from home care	0.05740320	0.01737157	3.3044	0.0009895 ***	
Mobility, unable	-0.02584094	0.02043119	-1.2648	0.2062798	
Self-care, somewhat decreased	0.05574139	0.01610921	3.4602	0.0005652 ***	
Self-care, unable to take care	0.12822436	0.02844159	4.5083	7.401e-06 ***	
Usual activities, somewhat decreased or unable	0.03237171	0.01679381	1.9276	0.0542213 .	
Home service, less than 12 months	0.04115122	0.01991479	2.0664	0.0390813 *	
Home service more than 12 months	0.07943770	0.01640018	4.8437	1.501e-06 ***	
Meals on wheels, 4 months or longer	0.05253122	0.01451043	3.6202	0.0003109 ***	
	Signif. codes: 0 '***' 0.001 '**' 0.01 '*' 0.05 '.' 0.1 ' ' 1				
Multiple R-squared: 0.1682, Adjusted R-squared: 0.1543					

# The basic model

Estimate Std. Error t value Pr(>|t|)  
 (Intercept) -0.14782086 0.08720425 -1.6951  
 0.0904023 .

Age	0.002	0.001	2.5	0.014 *
Have children	-0.039	0.019	-2.0	0.042 *
Help from relatives or friends affect coping at home, little or not at all	0.027	0.014	2.0	0.049 *
<b>Coping with help from home care</b>	<b>0.057</b>	<b>0.017</b>	<b>3.3</b>	<b>0.000 ***</b>
<b>Self-care, somewhat decreased</b>	<b>0.056</b>	<b>0.016</b>	<b>3.5</b>	<b>0.000 ***</b>
<b>Self-care, unable to take care</b>	<b>0.128</b>	<b>0.028</b>	<b>4.5</b>	<b>0.000 ***</b>
Usual activities, somewhat decreased or unable	0.032	0.017	1.9	0.054 .
Home service, less than 12 months	0.041	0.020	2.1	0.039 *
<b>Home service more than 12 months</b>	<b>0.079</b>	<b>0.016</b>	<b>4.8</b>	<b>0.000 ***</b>
<b>Meals on wheels four months or longer</b>	<b>0.053</b>	<b>0.015</b>	<b>3.6</b>	<b>0.000 ***</b>

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Multiple R-squared: 0.1682  
 Adjusted R-squared: **0.1543**



	Estimate	Std. Error	t value	Pr(> t )
<b>Basic model + Freedom of choice</b>				
(Intercept)	-0.1052851	0.0852977	-1.2343	0.2174074
Would you like to influence the services you received	-0.0172907	0.0147480	-1.1724	0.2413461
Can you choose your care worker	0.0170246	0.0188905	0.9012	0.3677123
Can you choose time when the care worker visits you	0.0291045	0.0145721	1.9973	0.0461002 *
Can you choose day when cleaned	0.0332045	0.0136798	2.4273	0.0154106 *
Can you choose what food you want to eat	0.0447049	0.0161938	2.7606	0.0058880 **
Age	0.0019076	0.0009489	2.0104	0.0446934 *
Education college degree or higher	-0.0374509	0.0174064	-2.1516	0.0317005 *
Elderly rental housing	0.0310895	0.0212384	1.4638	0.1435917
Have children	-0.0388836	0.0186690	-2.0828	0.0375548 *
Living with someone	-0.0195069	0.0157073	-1.2419	0.2146000
Receiving enough information about the home care services	0.0042320	0.0158077	0.2677	0.7889786
Help from relatives or friends affect coping at home, little or not at all	0.0230374	0.0136623	1.6862	0.0921066 .
Coping with help that have got from home care	0.0482209	0.0173003	2.7873	0.0054284 **
Mobility, unable	-0.0233299	0.0201891	-1.1556	0.2481677
Self-care, somewhat decreased	0.0511793	0.0158165	3.2358	0.0012577 **
Self-care unable to take care	0.1199929	0.0287648	4.1715	3.322e-05 ***
Usual activities, somewhat decreased or unable	0.0261078	0.0166406	1.5689	0.1170215
Home service, less than 12 months	0.0402208	0.0199825	2.0128	0.0444366 *
Home service more than 12 months	0.0747179	0.0165361	4.5185	7.069e-06 ***
Meals on wheels 4 months or longer	0.0523514	0.0143697	3.6432	0.0002849 ***
Multiple R-squared: 0.1916, Adjusted R-squared: 0.1735				

**Basic model + choice**

Estimate Std. Error t value Pr(&gt;|t|)

(Intercept) -0.1052851 0.0852977 -1.2343 0.2174074

*Can choose time when the care worker visits you*

0.029 0.015 2.0 0.046 \*

*Can choose day when cleaned*

0.033 0.014 2.4 0.015 \*

*Can choose meals*

0.045 0.016 2.8 0.006 \*\*

Age

0.002 0.001 2.0 0.045\*

Education college degree or higher

-0.037 0.017 -2.2 0.032 \*

Have children

-0.039 0.019 -2.1 0.038 \*

Help from relatives or friends affect coping at home, little or not at all

0.023 0.014 1.7 0.092 .

Coping with help from home care

0.048 0.017 2.8 0.005 \*\*

Self-care, somewhat decreased

0.051 0.016 3.2 0.001 \*\*

**Self-care, unable to take care****0.120 0.029 4.2 0.000 \*\*\***

Home service, less than 12 months

0.040 0.020 2.0 0.044\*

**Home service more than 12 months****0.075 0.017 4.5 0.000\*\*\*****Meals on wheels 4 months or longer****0.052 0.014 3.6 0.000\*\*\***

Signif. codes: 0 '\*\*\*' 0.001 '\*\*' 0.01 '\*' 0.05 '.' 0.1 ' ' 1

Multiple R-squared: 0.1916,  
Adjusted R-squared: **0.1735**

# Conclusion

- About 60% of the public home care receivers told that they can choose something related to services
- Most of them told being able to choose the time of the care worker's visit
- But - about 1/4 said they are not so interested to influence the services they receive
- Differences between cities

*... we don't have comparison of private home care ...*

Free choice is (slightly) associated with a better effectiveness of home care, significant association with

- choosing meals
  - only 1/5 told they can choose the meals
- choosing the time when the care worker visits
  - home care users have already more choice on that

*... cannot say about causality; cross-sectional study ...*



**Thank you!**  
**Kiitos!**

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