3ʳᵈ International Conference on Evidence-based Policy in Long-term Care

Is a caregiver's value dependent on caring skills?

Do needs for support services influence economic value of informal care?

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Session Informal carers, 11:45 – 1:15 September 2 2014

EHESP

Outlines

I. Background of the study

- Informal caregivers' cornerstone of AD care
  - Ageing population in EU countries, with home care preferences for individuals, families and states
  - Predominant share of hours of care and assistance

- "Burden of caring" or spillover effects (Bobinac et al 2010)
  - Deteriorated health
  - Opportunity costs

- For care policies to be effective in the LT
  - A greater recognition of caregivers' needs for support
  - They influence both the caregiver well being & the resources used for AD

I. Background (ctd)

- A large spectrum of needs for support (Rosa et al 2010)
    - From medical & psychological care to social supports, including education related needs

- In EU 2 main types of policies to support carers
    - Financial support/cash for care (e.g. France)
    - In kind services
        - Non specific & indirect : e.g home based professional services
        - Non specific and direct : e.g. **respite care**
        - In-kind specific support : e.g. counselling, **training**, information, **support group**

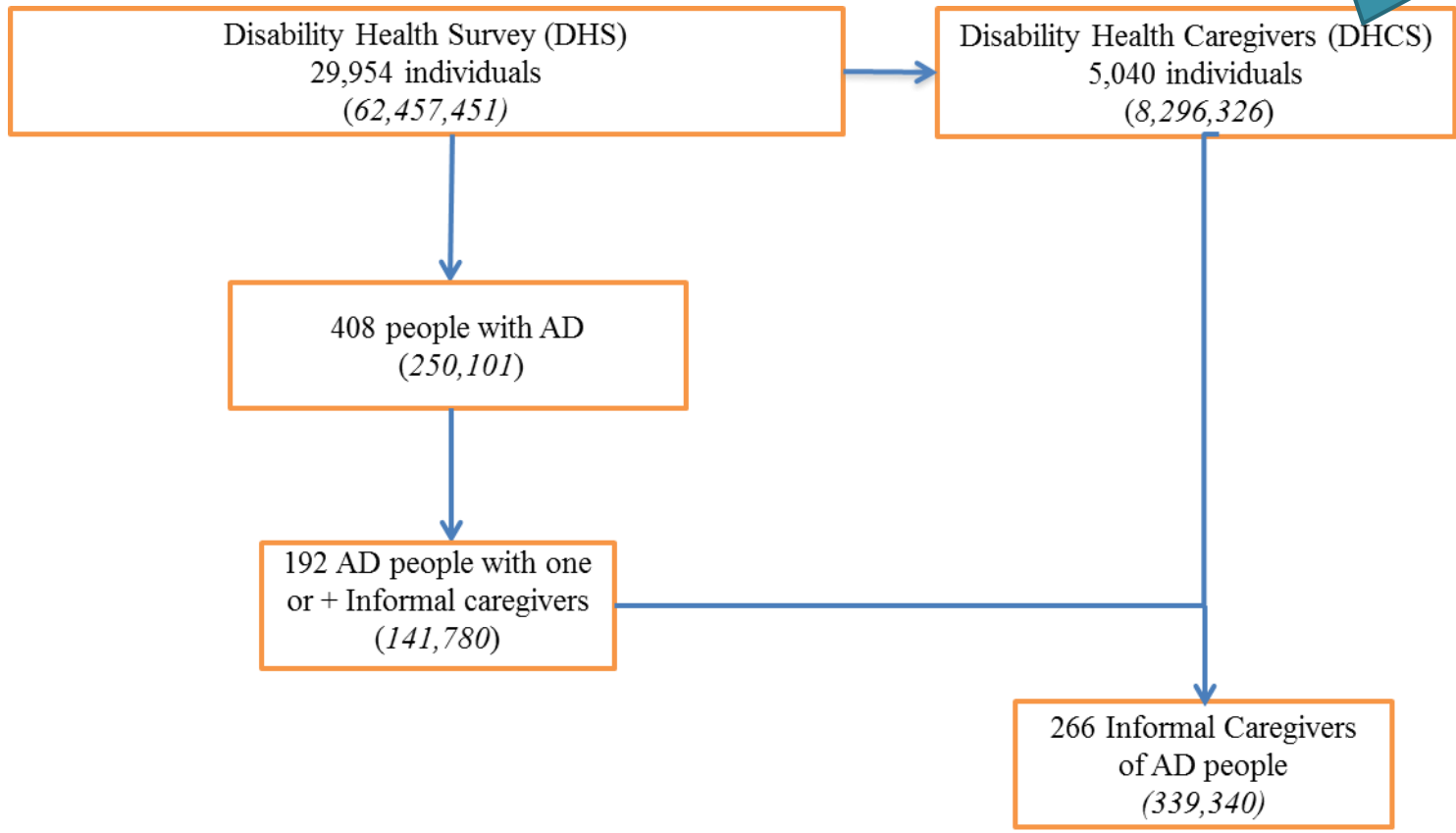- Few studies in France so far

II. Research question

To what extent is a caregiver's willingness to pay (WTP) influenced by his or her need for support services ?

III. Materials and methods

1. Study sample
2. Methods

3.1. Study sample

1st data set of this type in France. Information on caregiving situations including support services

Disability Health Survey (DHS)
29,954 individuals
(62,457,451)

Disability Health Caregivers (DHCS)
5,040 individuals
(8,296,326)

408 people with AD
(250,101)

192 AD people with one
or + Informal caregivers
(141,780)

266 Informal Caregivers
of AD people
(339,340)

3.2. Data (ctd)

- From contingent valuation method (i.e. stated preferences)
- WTP open ended question
  - *"Imagine that you could be replaced for one hour for the care you provide to [name of the care recipient].*
  - *What is the maximum amount that you would be willing to pay for this hour of care?*
    - *Before answering, note that this amount would entail a decrease in your budget*
  - *No answer/ protest (false zero) and true zero to be disentangled (see following slide)*

2. Methods: Heckman two stage model

- Selection equation : $PEWTP^* = \alpha z + \mu$ (1) (probit estimation) with $PEWTP^*$ the latent unobserved variable

$$PEWTP = \begin{cases} 1 \; if \; PEWTP^* \geq 0 \\ 0 \; if \; PEWTP^* < 0 \end{cases}$$

- Outcome equation $\quad LWTP = \begin{cases} \beta x + e \; if \; PEWTP = 1 \\ unobserved \; if \; PEWTP = 0 \end{cases}$ (2)

  - With z & x are caregivers & recipients chartacteristics

- Independence of the error terms: $H_o: \rho = corr[\mu, e] = 0$; $H1: \rho \neq 0$
- If H_o rejected
  - Two-stage procedure is justified
  - WTP value has to be estimated conditionnally to the probability of having given a value (not having protested)
  - Inverse of Mill's Ratio (IMR) gives the impact of omission of (1) when estimating (2) (Davin et Paraponaris, 2012)

IV. Results (1)

Table 1 Main characteristics of the sample studied (N=266)

Caregivers 'characteristics	%
Gender (female)	61.7
Professional status (retired)	61.4
Household monthly Income (less than €2,000)	50
Caregivers' need for support	%
Need for respite	26
Need for care training	18
Need for support group	20
Care recipients characteristics	
Age (mean)	80
Gender (female %)	63.2
Mean value of WTP to reduce 1 hour of care	
Mean caregiver's WTP (SD)	12.1 (8)
Mean caregiver WTP w income ≤ €2,000	11.8 (8.6)
Mean caregiver WTP w income >€2,000	12.4 (7.9)

IV. Results (2)

Table 2. Logistic regression: the impacts of different health state on the caregiver's need for support services

Needs for support	Care training			Support group			Respite care	
	OR	Std. Err.		OR	Std. Err.		OR	Std. Err.
General Health state	.6815036	.1516011		.8752207	.1805213		1.746654**	.3205654
Depression	1.960725	.8309943		2.447885*	.9759382		1.3517	.5113765
Sleep problems	2.221488*	.8640824		1.974466	.7308089		1.276275	.4396642
Anxiety	1.445121	.5960318		1.512487	.5994314		1.528682	.536545

General health state: variable with 5 categories (the highest value represents the poorest health state)
Providing care implies depression: (yes vs no)
Providing care implies sleeping disorders: (yes vs no)
Providing care implies anxiety: (yes vs no)
*p<0.05; **p<0.01

IV. Results (3)

Need for care training increases the monetary value of informal care

Associations between variables and caregivers probability to estimate WTP (PEWTP) and caregivers' Log (WTP+1) (LWTP) – results of Heckman model with two-step procedure

Independent variables	Outcome equation - dependent variable: LWTP		Selection equation - dependent variable: PEWTP	
	Coef.	Std. Err.	Coef.	Std. Err.
Need for respite care (yes vs no)	-.3078191	.241379	-.4346946	.2650968
Need for care training (yes vs no)	.5794092*	.2401086	.1123579	.3072039
Need for support group (yes vs no)	.249197	.2798483	.6392571*	.2831547
Inverse Mill's Ratios	.9117173*	.4282136		

V. Discussion

- Care training
  - A more effective alternative to sustain informal care?
  - Influences informal care monetary value (utility)
  - Improves care quality
  - Caregivers' empowerment : a way to improve social welfare?

- Perspective for further cost-benefit analyses, since very few studies found

V. Discussion

- Some limitations :
  - Use of dichotomous variables representing needs for support (Koopmanschap) , thus no information on levels of needs
  - CVM: based on individual preferences, some questions remain when considering societal perspectives
  - Effectiveness of care training
    - but for whom and when to start were not elucidated
  - Study only focused on French system