CONTRIBUTION OF SOCIODEMOGRAPHIC AND PSYCHOLOGICAL FACTORS TO SURVIVAL IN VERY OLD PERSONS

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Introduction

Population ageing challenge:

- 80+ years old – the fastest growing population age group.
- EU= 6% ; CRO = 5,5% of total population (Eurostat, 2022)

Longevity research:

- Very old persons - an important source of information on:
  - individuals' heterogeneity,
  - adaptive capacity in ageing
  - and its determinants.

(Poon et al., 1992; Smith & Ryan, 2016)

AIM

- To explore the contribution of sociodemographic factors and psychological factors to the very-old persons' survival in ten-years follow-up period.

Hypotheses:

➢ Positive associations expected between:

- ✓ **sociodemografic characteristics** (gender, education, no. of children),
- ✓ **psychological factors** (family relationship, quality of life, subjective functioning)
- ✓ and the participants' **survival**.

Method: Participants

Part of the HECUBA project sample (*N*=345) (HRZZ IP-01-2018-2497)

- Residents (*N* = 191) of 13 retirement homes in Zagreb, Croatia – who had children
- <u>Baseline measurement in 2008:</u>
  - Average age **88 (80 to 97)** years
  - 140 (73%) women & 51 (27%) men
  - 83% widowed
  - 51% elementary education
- <u>Follow-up in 2018:</u>
  - Deceased participants in 10-years-period
  - Average survival **92 (84-103)** years

Method: Instruments and Procedures

1. **In 2008: Questionnaire for the Oldest-Old** (constructed for the HECUBA project):

   - **Sociodemografic data:**

     Age, Gender, Education (years of school), No. of Children

   - **Psychological scales:**

     Family Relationship (3 items, range 1-3)

     Quality of Life (4 items, range 4-12)

     Subjective Health(2 items, range 2-6)

     Subjective Independence (2 items, range 2-6)

- Administered individually, as a structured interview, in retirement homes.

2. **In 2018**: Participants' **survival (age of death)** was checked (Croatian Registry of Deaths)

Results: *Table 1. Descriptive Statistics (N = 191)*

Variables	***M***	***SD***	***min***	***max***
Age at Interview	88.0	3.4	80	99.6
Age at Death	92.0	3.8	84.8	102.6
Years of Schooling	10.4**	3.2	4	17
Number of Children	1.9	1.0	1	6
Family Relationship	2.9	0.4	1	3
Quality of Life	4.6	1.1	2	6
Subjective Health	4.7	0.9	2	6
Subjective Independence	4.3	1.2	2	6

- On average, satisfactory baseline subjective functioning – indicates participants' **adaptive capacity**.
- ** Difference in education ($t = 4.02$; $p < 0.001$): Men = 11 yrs ($SD = 2.0$); Women = 9.8 yrs ($SD = 3.1$).

Results: Significant correlations (*Pearson's r*) between variables (*N* = 191)

With **Survival** - Indicate social/emotional support, care:

- No. of Children (*r*= 0.20**)
- Quality of Life (*r* = 0.14*)

Other correlations - Indicate adaptation:

- Subjective Health & Independence (*r* = 0.44**)
- Quality of Life:
  - & Subjective Independence (*r* = 0.19*)
  - & Family Relationship (*r* = 0.29**)

* $p < 0.05$; ** $p < 0.01$

Table 2. RA results: Prediction of survival in total sample (N = 191) and in women subsample (N=140)

Predictor variables	β_{ALL}	β_{WOMEN}
Education	0.12	0.19*
Number of Children	0.26**	0.26**
Family Relationship	0.14	0.20*
Quality of Life	0.05	0.12
Subjective Health	-0.06	-0.07
Subjective Independence	-0.02	-0.03
RA Coefficients	R = 0.32; $\mathbf{R^2 = 0.10^*}$ F = 2.47*	R = 0.40; $\mathbf{R^2 = 0.16^*}$ F= 3.22*

Note:
* $p < 0.05$
** $p < 0.01$

Prediction of survival in very old age

- RA models significantly predicted:
  - **10%** of the all participants' survival variance;
    - ✓ **greater number of children** was a single significant predictor of longer survival.
  - **16.4%** of the female participants' variance;
    - ✓ **longer education** and **greater number of children** and better family relationship *(borderline)* significantly contributed to their longer survival.
- Psychosocial factors' modest but significant contribution to survival in very old persons! Other factors?

Discussion

- Very old persons' **adaptive capacity** (Baltes, 1997; Poon et al., 1992): ***Confirmed!***
- Participants' **living environment**: provided care, stimulating activities, social support and participation etc.
- All in favour of longer life and **longevity** (Hsu. 2007; Engelhardt at al., 2010; Seeman et al., 2011).

Discussion…

- Other contributing factors?
  - ***Biological*** (chronic illnesses, genetic factors … - *HECUBA!*).
  - ***Social*** (social support, socio-economic status …).
  - ***Psychological*** (personality, affect …).

Study limitations and reccommendations

Methodological limitations:

- Sample of participants
- Variables' choice
- Self-report measures
- Design: Single measurement + life status

Reccommendations:

- Larger, representative sample
- Add selected variables
- Mixed/Qualitative methods
- Longitudinal study design

Conclusion

- Growing 80+ population - **key goal:** recognise unique risk/protective factors for their functioning!
- Provide/develop interventions for mantaining individuals' functioning, social relations & health - **quality of life**.
- Adjust **social & health policies** to enable quality of life in very old age – at home & institutions.
- Applicable also to **poorly functioning** older persons!

THANK YOU!