

# Relationship between literacy skills and self-reported health in the Nordic countries

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# Definitons of Health Literacy

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- **Functional health literacy:**

The ability to read and understand basic health-related information ( Kickbush et al. 2013)

- **«All inclusive» definition:**

HL is linked to literacy and entails people's knowledge, motivation and competences to access, understand, appraise and apply health information in order to make judgements and take decisions in everyday life concerning healthcare, disease prevention and health promotion to maintain or improve quality of life during the life course (Sørensen et al. 2012)

# Possible consequences of poor functional health literacy skills

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- poorer use of health-care services
- a poorer ability to take medications correctly
- a poorer ability to interpret labels and health messages
- among the elderly, poor health literacy was associated with poorer overall health and higher mortality

# This study

- Data from PIAAC in four Nordic countries
- Age-group: 16 - 65

## Variables:

- **Measure of literacy** (scoring range 0 - 500)
  - Below level 1 + Level 1 - Level 2 - Level 3 - Level 4/5
- **Answer to question about own health (Self-reported health - SRH)**
  - Two categories:
    - Optimal SRH: **Excellent - Very good - Good**
    - Sub-optimal SRH: **Fair - Poor**

## Variables....

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- **Gender**
- **Age-groups**
  - 16 - 24
  - 25 - 34
  - 35 - 44
  - 45 - 54
  - 55 - 65
- **Educational level**
  - **Low**                      ISCED 1,2 and 3C short
  - **Medium**                    ISCED 3C long, 3A -B and 4
  - **High**                        ISCED 5 and 6



# Results

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## Respondents reporting sub-optimal SRH (%) in different socio-demographic groups and across literacy levels (1)

Variable	Category	Denmark	Finland	Norway	Sweden
Gender	<b>Male</b>	16	20	16	14
	<b>Female</b>	18	16	18	19
Age group	<b>16 - 24</b>	9	8	10	11
	<b>25 - 34</b>	11	9	13	10
	<b>35 - 44</b>	16	11	12	14
	<b>45 - 54</b>	21	20	20	18
	<b>55 - 65</b>	26	36	30	25

## Respondents reporting sub-optimal SRH (%) in different socio-demographic groups and across literacy levels (2)

Variable	Category	Denmark	Finland	Norway	Sweden
Educational level	Low	26	26	25	26
	Medium	17	20	17	14
	High	10	11	10	10
Literacy skills	Below & at Level 1	34	37	28	32
	Level 2	20	25	22	20
	Level 3	11	14	13	12
	Level 4/5	8	8	9	7



Logistic regression of the association between skills and suboptimal SRH in the Nordic countries **before controlling** for sex, age and educational level. Odds - ratio (95 % c. i.)

Literacy	Level	Denmark	Finland	Norway	Sweden
	Below 1 + 1	6.28*	6.48*	3.84*	6.66*
	2	2.94*	3.87*	2.73*	3.50*
	3	1.48	1.86*	1.49*	1.92*
	4/5 (reference)	1	1	1	1

Logistic regression of the association between skills and suboptimal SRH in the Nordic countries **after controlling** for sex, age and educational level      Odds ratio (95 % c. i.)

Variable	Category	Denmark	Finland	Norway	Sweden
Educational level	<b>Low</b>	2.90*	2.57*	2.64*	2.75*
	<b>Medium</b>	1.66*	2.18*	1.70*	1.67*
	<b>High (reference)</b>	1	1	1	1
Literacy skills	<b>Below &amp; at level 1</b>	2.90*	2.07*	1.99*	3.24*
	<b>Level 2</b>	1.70*	1.52*	1.53*	1.90*
	<b>Level 3</b>	1.11	1.18	1.15	1.39
	<b>Level 4/5 (reference)</b>	1	1	1	1

## Some challenges

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- Importance of functional literacy skills from early school years
- Adequate education for adults with low literacy skills
- Vulnerable groups: Expanding number of migrants and refugees

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- Written health information should be easy to understand (simple language without acronyms and technical terms)
  - Important health information should be given orally as well as in writing
  - Consequences for costs and demands on the health care system

# Strength and limitations of the study

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## ■ **Strength**

- Direct measure of literacy skills
- Respondents had access to the texts - minimal pressure on working memory capacity
- SRH is a well validated measure

## ■ **Limitations**

- Age group 65+ not included
- Study is based on cross-sectional data and thus cannot properly be used as a basis for making causal inferences
- Do not provide information on to what extent the respondents apply health information



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***Thank you***

