



Health literacy, diabetes knowledge and self-management

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Background

Self-management is an important element of diabetes care, in the course of which patients fulfill a significant role in the care for their disease.





Background

- Health literacy a possible barrier for self-management.
- Studies show ambiguous results: some studies indicate no association between health literacy and self-management and others do.
- Research from European countries is underrepresented.



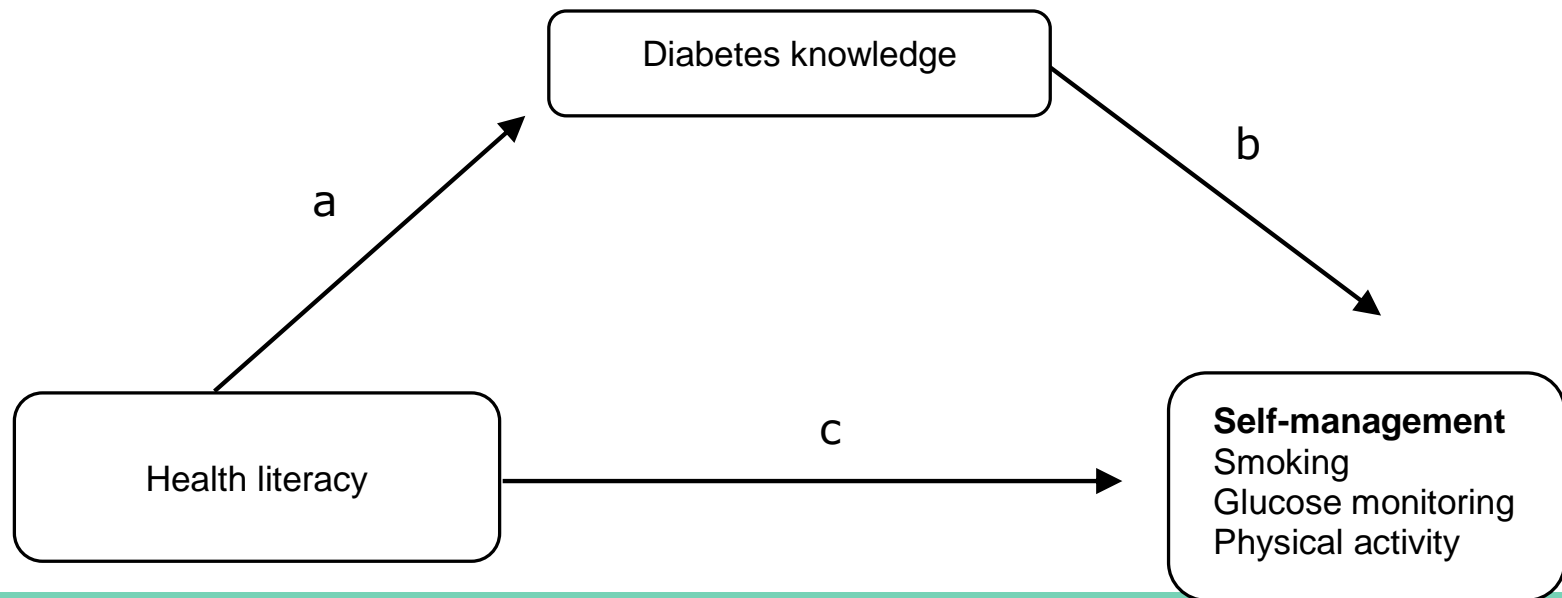
Background

- Diabetes knowledge is considered a possible mechanism linking health literacy to self-management (Von Wagner et al., 2009).
- Little is known on diabetes knowledge as pathways.



Aim

Gain insight into the associations between patients' health literacy skills, their self-management behavior and to investigate the contribution of diabetes knowledge.





Methods

Study design and data collection

- Data from an observational study between June 2009 to June 2010.
- Data from patient registrations linked to questionnaires.
- Response rate 46% (N=1941).
- For present study respondents with type 2 diabetes and over the age of 24 (N=1675).



Methods

Main variables

- Health literacy (Chew's Set of Brief Screening Questions).
- Diabetes knowledge (Diabetes Knowledge Test).
- Self-management indicated by smoking behavior, glucose monitoring (control and registration) and physical activity (sports and other than sports).



Methods

Statistical analysis

- Analyses performed with multiple imputed datasets (n=20).
- Multi-level analyses taking GP practice level into account (diabetes duration, age, education and sex as confounders).
- Steps taken in the analyses:
 1. Estimate the association between HL and self-management
 2. Estimate the association between DK and self-management
 3. Estimate the association between HL and DK



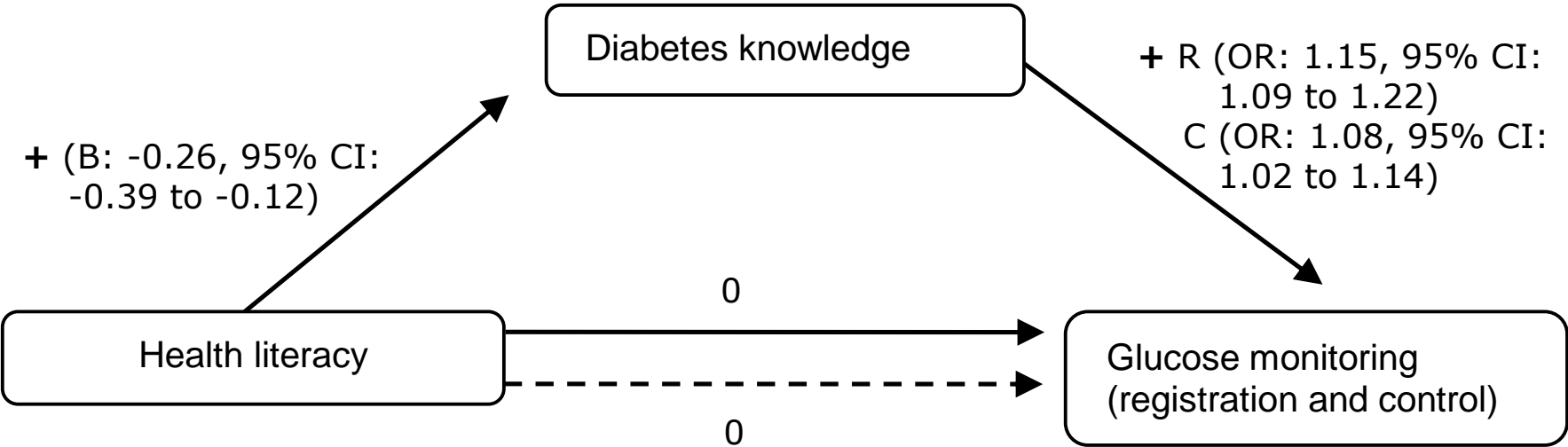
Preliminary results

Characteristics	Percentage	Mean (SD)
Male	50.4%	
55 years or older	86.5%	
Low level of education	45.5%	
Diabetes 4 to 10 year	46.2%	
Smoking	14.0%	
Glucose control	40.6%	
Glucose registration	48.5%	
Health Literacy		1.8 (0.8)
Diabetes Knowledge		9.1 (2.2)
Physical activity		3.0 (1.8)



Preliminary results

Health literacy, diabetes knowledge and glucose monitoring

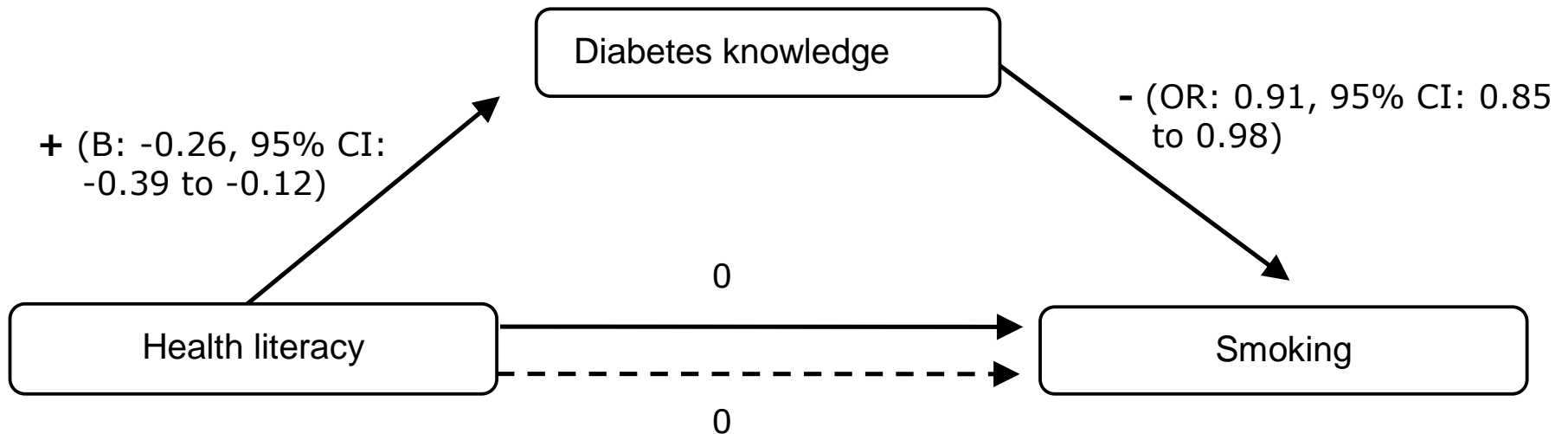


Sobel test: association between health literacy and glucose registration ($p < 0.05$) and control ($p < 0.01$) via diabetes knowledge



Preliminary results

Health literacy, diabetes knowledge and smoking

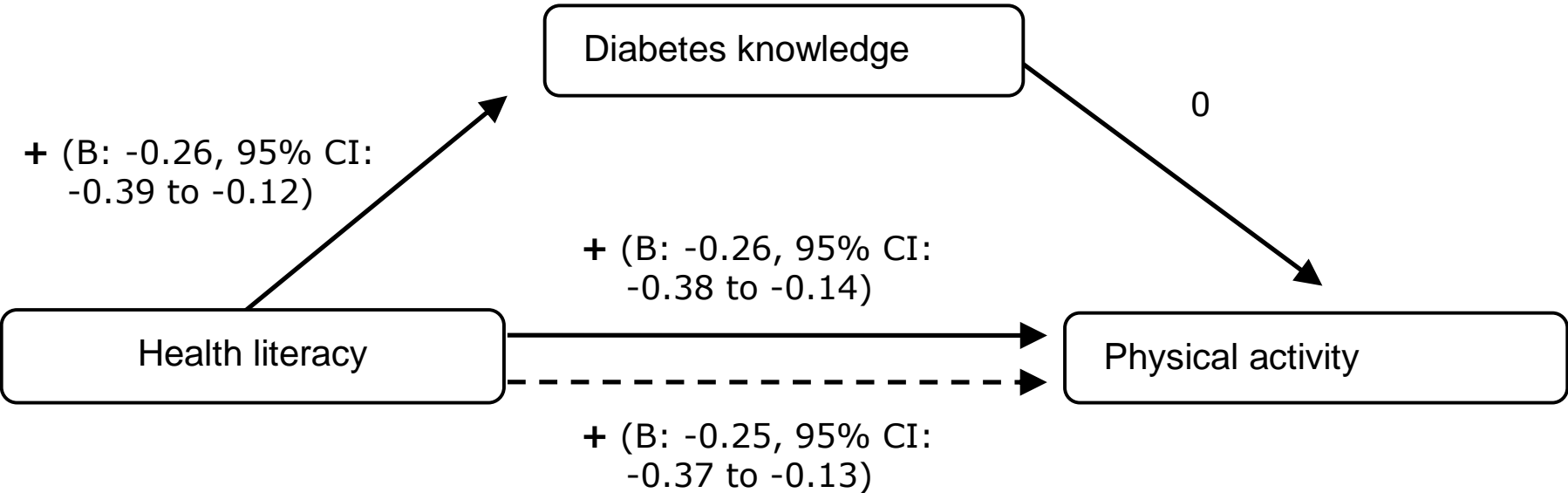


Sobel test: association between health literacy and smoking via diabetes knowledge ($p < 0.05$)



Preliminary results

Health literacy, diabetes knowledge and physical activity



Sobel test: no association between health literacy and physical activity via diabetes knowledge



Discussion

- The relationship between health literacy and diabetes self-management is not straightforward as it differs between type of self-management activity.
- Those who have little diabetes knowledge are less likely to be involved in self-management.



Discussion

Implications

- How do factors such as self-efficacy, beliefs and attitudes exactly relate to health literacy and to self-management?

Limitations

- Limited measure of health literacy.
- Low Internal consistency of the DKT ($\alpha = 0.512$).



Thank you for your attention

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