

Informed Decision Making in Colorectal Cancer Screening

A computer-based decision aid for individuals with varying health literacy levels

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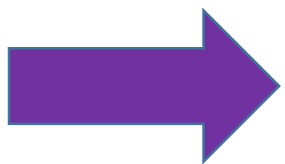


Dutch CRC screening programme

Ages 55-75

Invitation sent to invitees' homes every two years

Fecal Immunochemical Test (FIT) → Colonoscopy



Informed decision making: Knowledge, Values & Behaviour

Challenging for individuals with low health literacy



Health Literacy

The ability to **access, understand, and use** health information to make appropriate health decisions





Aim research project

To develop and pilot-test a **computer-based decision aid** to support informed decision making in CRC screening **that is usable, acceptable and comprehensible** for individuals with **low and adequate health literacy**

Methods

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Development prototype



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graph TD; A[Development prototype] --> B[Alpha-testing]; B --> C[Beta-testing]; D[To assess the usability, acceptability & comprehensibility] --> E[To assess changes in outcome variables after use of the decision aid];
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Alpha-testing

To assess the usability,
acceptability &
comprehensibility

Beta-testing

To assess changes in
outcome variables after
use of the decision aid



Decision aid prototype

Simple webpage

External internet agency

Built on information from the **National Institute Public Health and the Environment**

Based on International Patient Decision Aids Standards (IPDAS) checklist

- CRC
- Decision options
- Risk information
- Benefits and Harms
- Values Clarification





Decision aid prototype

Decision options

Emphasis on:

- It's a personal choice
- Decision to participate or not participate

Beslischulp
Bevolkingsonderzoek darmkanker

Beslischulp voor het
bevolkingsonderzoek
darmkanker

[Start >](#)

Lees voor 

Deze website helpt u om een beslissing te nemen over **wel of niet meedoen** aan het bevolkingsonderzoek darmkanker.

Veel mensen denken dat meedoen aan het bevolkingsonderzoek darmkanker altijd het beste is. Maar dat kan per persoon verschillen. Het bevolkingsonderzoek heeft namelijk mogelijke **voordelen**, maar ook mogelijke **nadelen**.

Meedoen is vrijwillig. U beslist zelf of u wel of niet meedoet.





Alpha-testing

Interviews with individuals with low health literacy (n=15) & adequate health literacy (n=10)

Think aloud method

Thematic analysis



Beta-testing

Before/after study design

Population: Individuals eligible for CRC screening (n = 81)

Health literacy (Newest Vital Sign and or SAHL-D)

- Low (n = 35)
- Adequate (n = 46)

Outcomes	Pre	Post
Knowledge	✓	✓
Attitude	✓	✓
Intention	✓	✓
Decisional Conflict	✓	✓
Deliberation	✓	✓
Risk perception	✓	✓
Anxiety	✓	✓
Decision making preparation		✓
Satisfaction		✓
Usability		✓

Results

+



Alpha-testing

Low health literate participants:

- Purpose of decision aid not always clear
- Decision to not participate not always recognized
- Difficult medical words
- Risk information difficult
- Preference for spoken text and videos
- Values Clarification Exercise difficult

What does DA mean exactly?

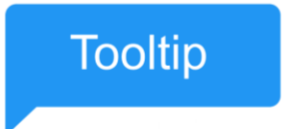
Some cons are not cons [for me]

So I am misled [by the information]?

The last bit [VCE] is really difficult. I would really quit, yes



Adaptations




Beslishulp
Bevolkingsonderzoek darmkanker

Wat houdt het bevolkingsonderzoek darmkanker in?

- ✓ Wat houdt het bevolkingsonderzoek darmkanker in?
- ✓ Wat is darmkanker?
- Test uw kennis
- ✓ Hoe voert u de ontlastingstest uit?
- ✓ Wat betekent de testuitslag?
- ✓ Wat houdt het vervolgonderzoek in?
- Test uw kennis

Wat houdt het bevolkingsonderzoek darmkanker in?

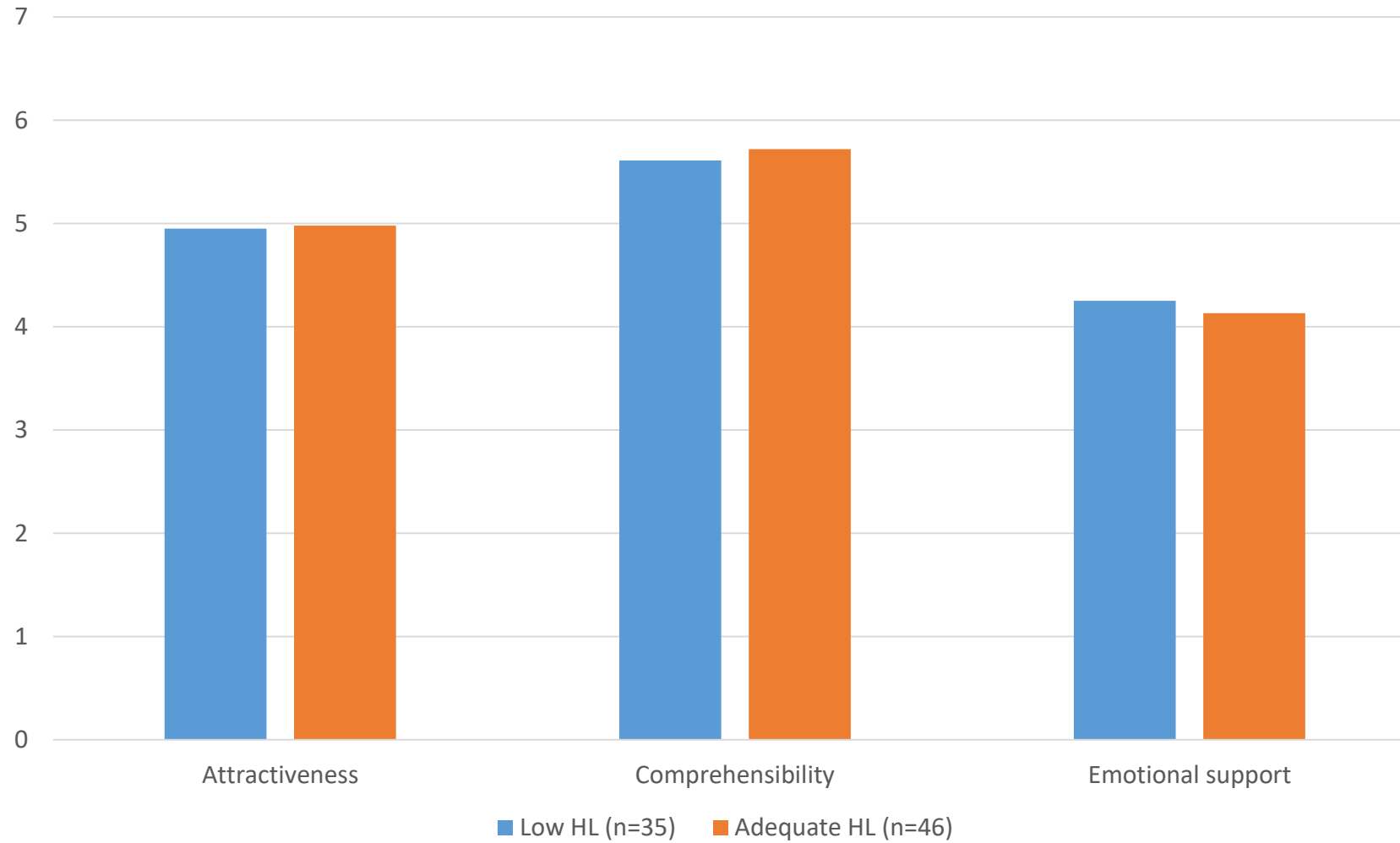


- Met het bevolkingsonderzoek kan darmkanker worden voorkomen of **vroeg** worden ontdekt.
- Bij het bevolkingsonderzoek wordt gekeken of er bloed in de ontlasting (poep) zit.

Meer lezen over het bevolkingsonderzoek? Klik **hier**.

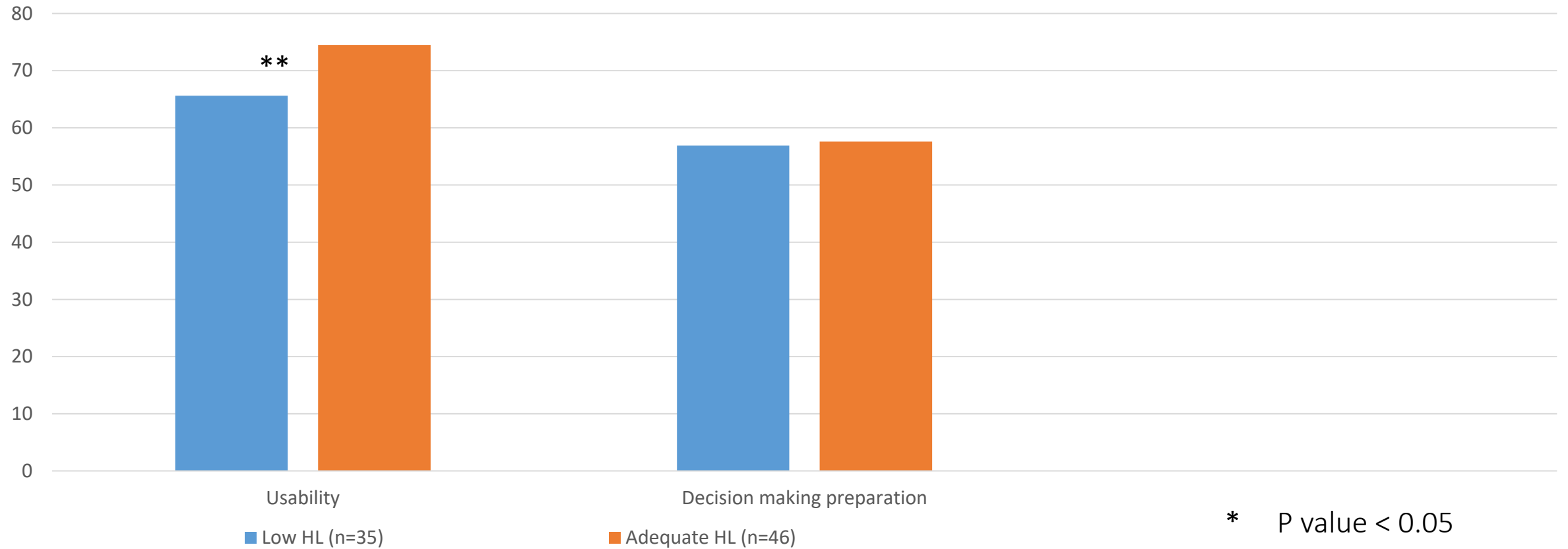


Satisfaction with the decision aid



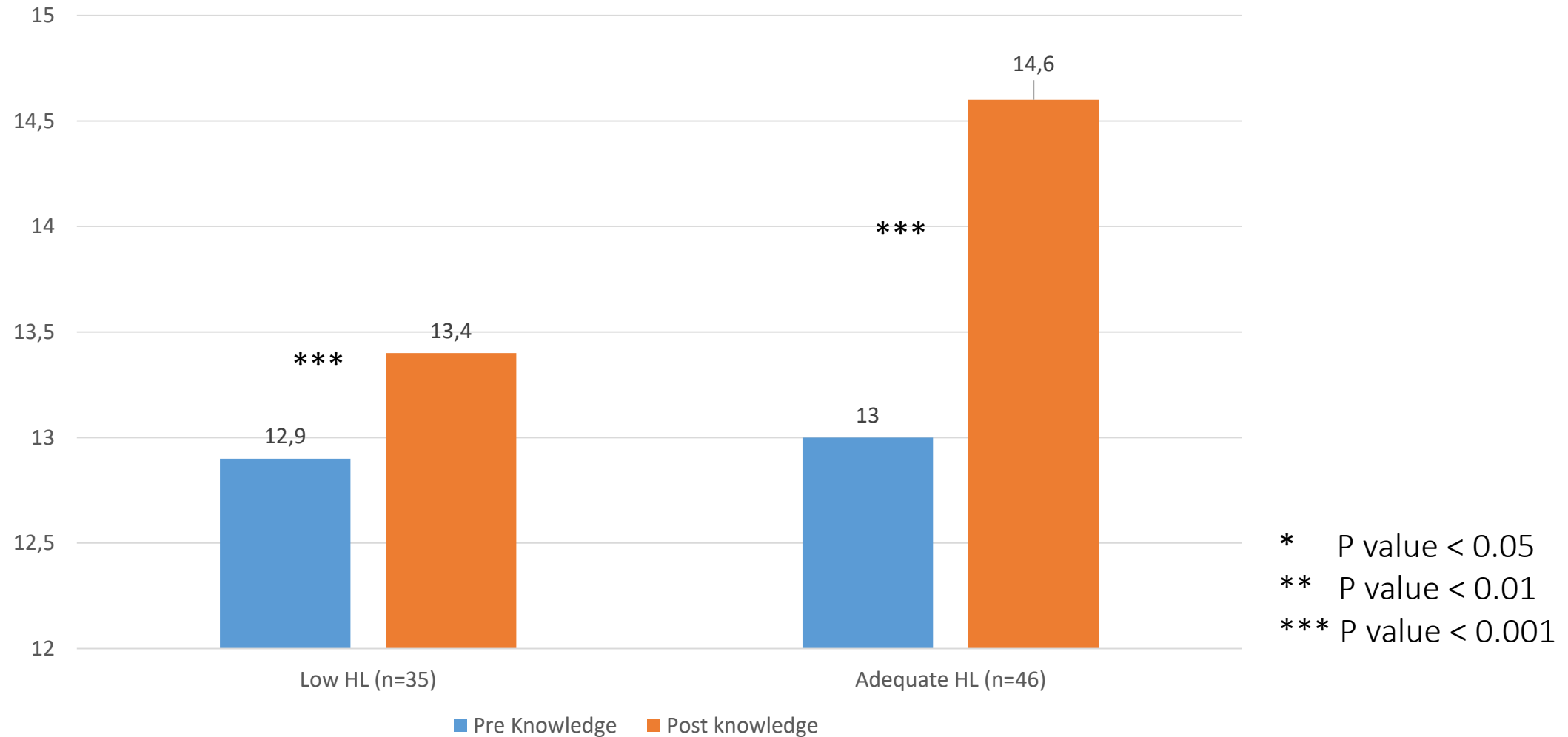


Usability and Decision making preparation



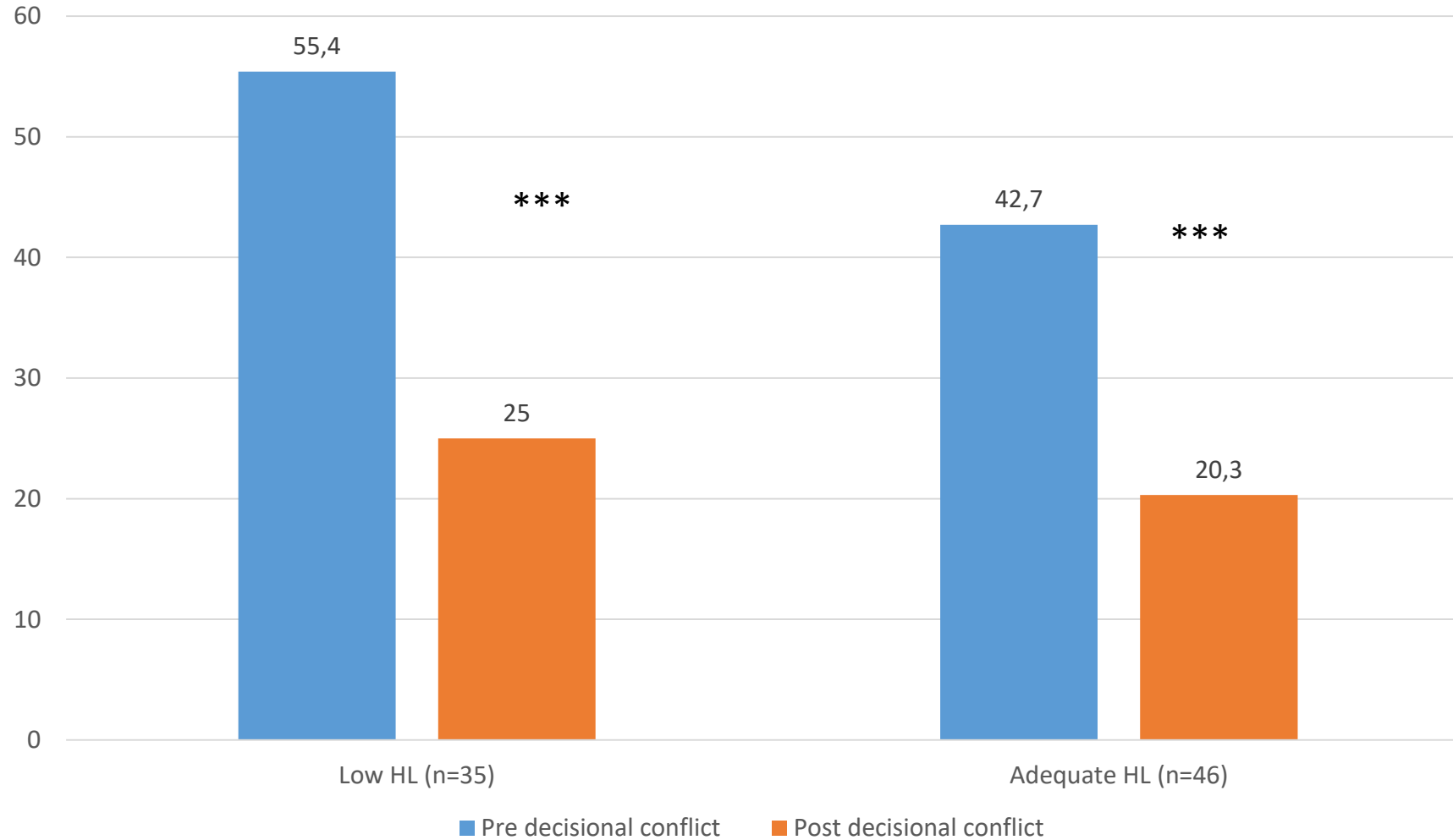


Mean knowledge score before and after the DA





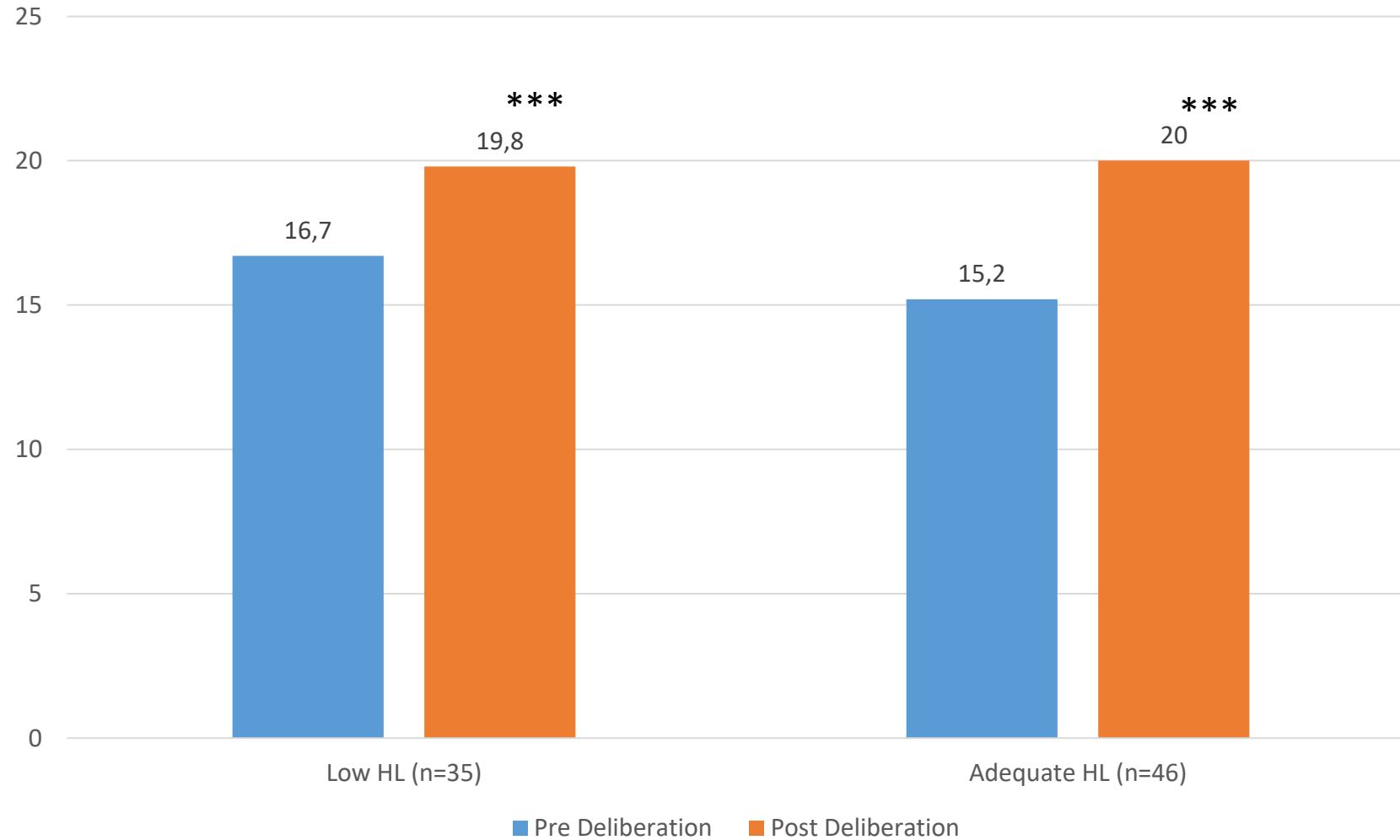
Mean decisional conflict score before and after the DA



* P value < 0.05
** P value < 0.01
*** P value < 0.001



Mean deliberation score before and after the DA



* P value < 0.05
** P value < 0.01
*** P value < 0.001



No significant pretest posttest differences were observed for:

- Attitude towards screening participation
- Intention to participate in screening
- CRC risk perception
- Anxiety

Conclusion and implications

- Acceptable, comprehensible and usable among individuals with varying health literacy and educational levels
- Significant changes in Knowledge, Decisional conflict and Deliberation
- No significant changes in Attitude, Intention, Risk perception and Anxiety
- Important first step in the development of decision support tools for individuals with lower health literacy
- Further research: Test effects on decision making in Randomized Controlled Trial

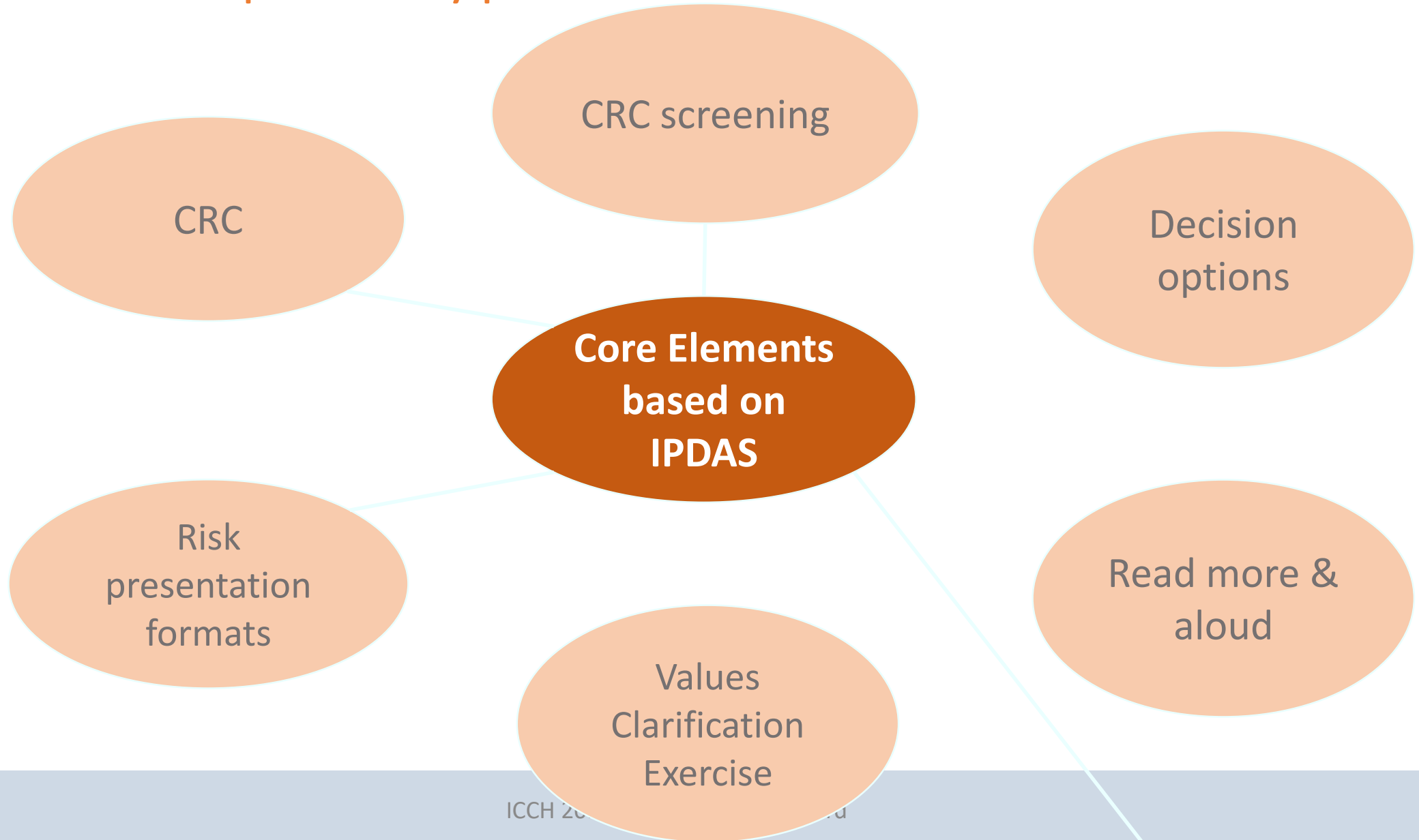


Thank you

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Stage 1: DA prototype





Welke uitslagen zijn mogelijk?

