

# Development and validation of health literacy measures in the Netherlands

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# Adapt, test and validate HL measures

Newest Vital Sign (NVS)

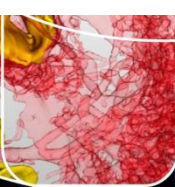
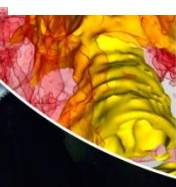
Short Rapid Estimate of Adult Literacy in Medicine (REALM)

Short Assessment of Health Literacy (SAHL)



# Adapt and test NVS

- Select two labels and adapt items
- Delphi study experts (n=27)
- Cognitive interviews patients (n=30)



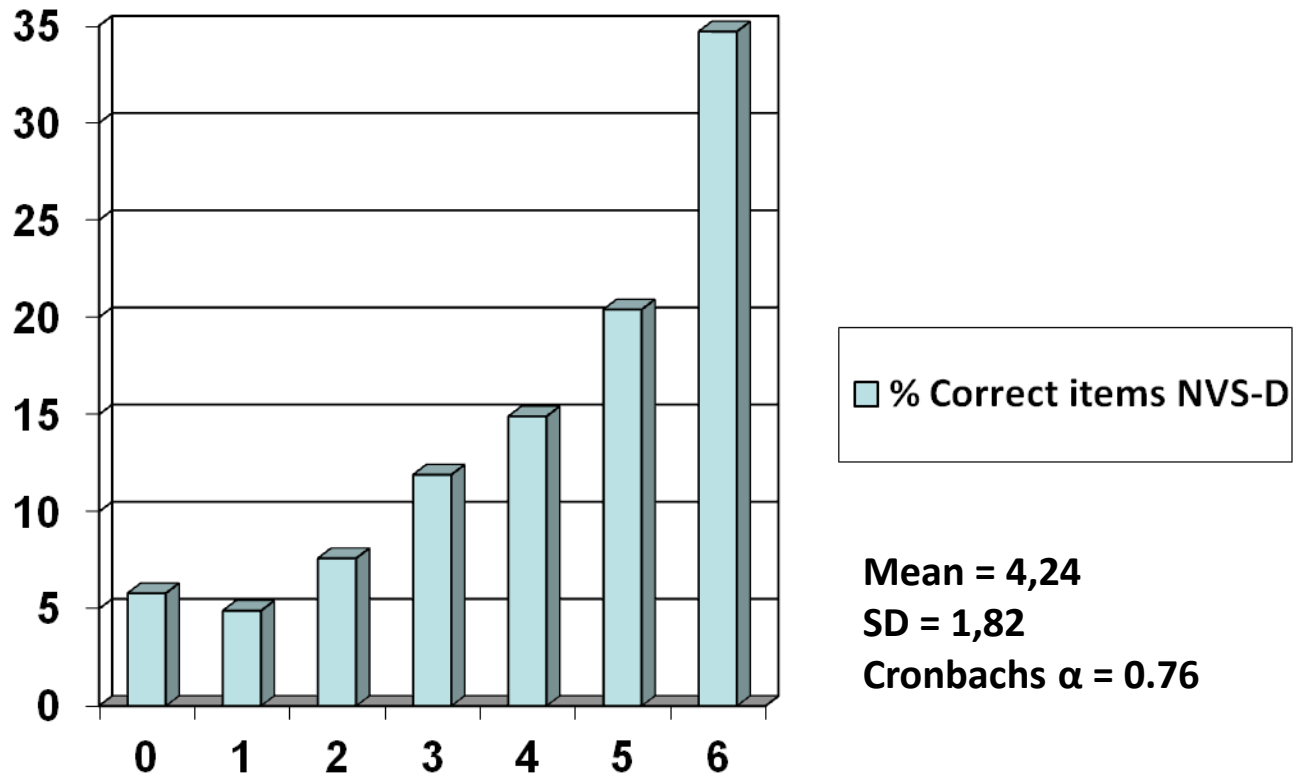
# Validation Dutch NVS (NVS-D)

- Online questionnaire and telephone interview (n=329)
- Validation against standard test for prose literacy

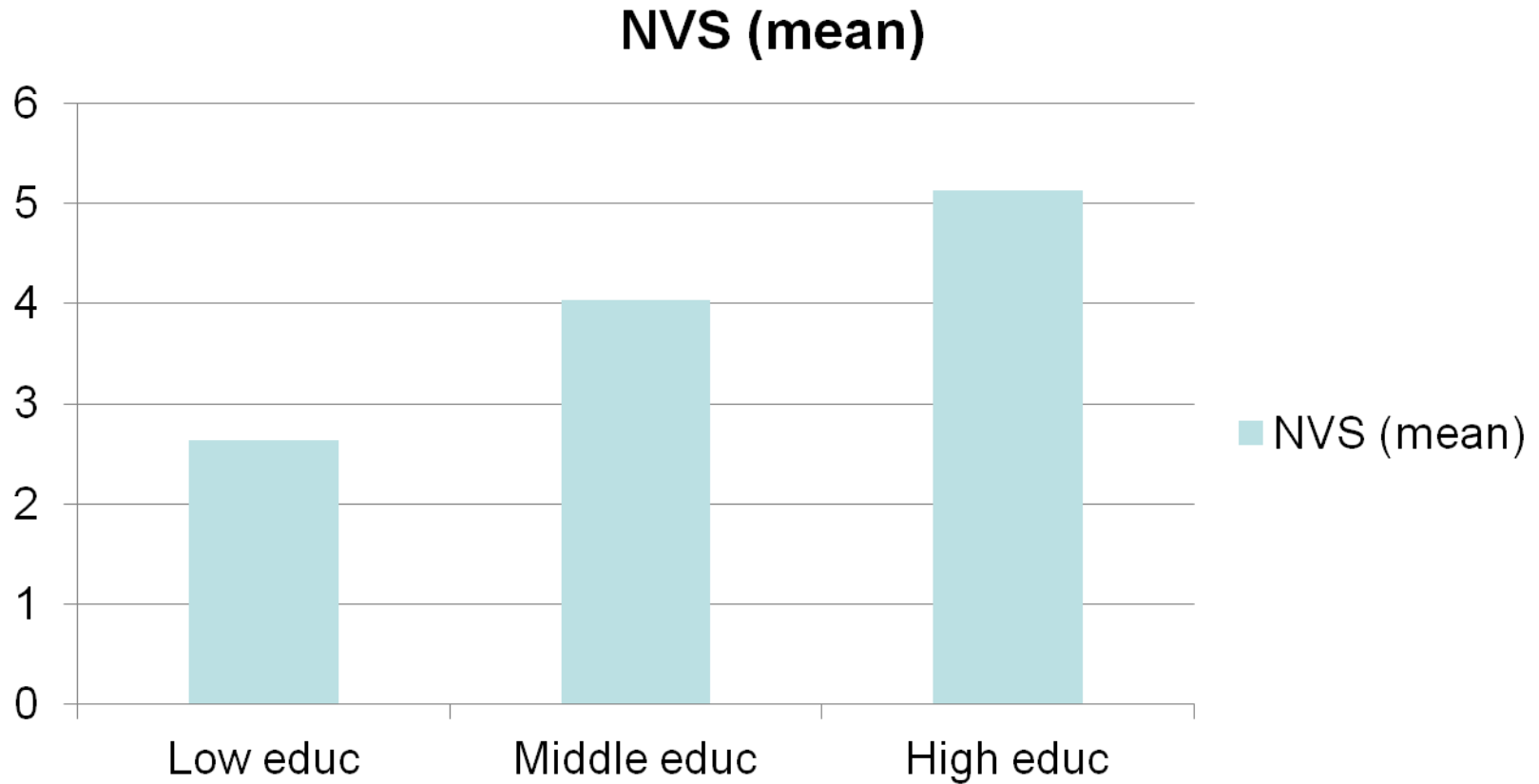




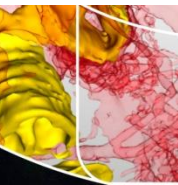
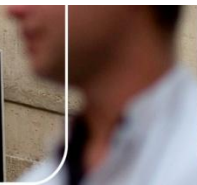
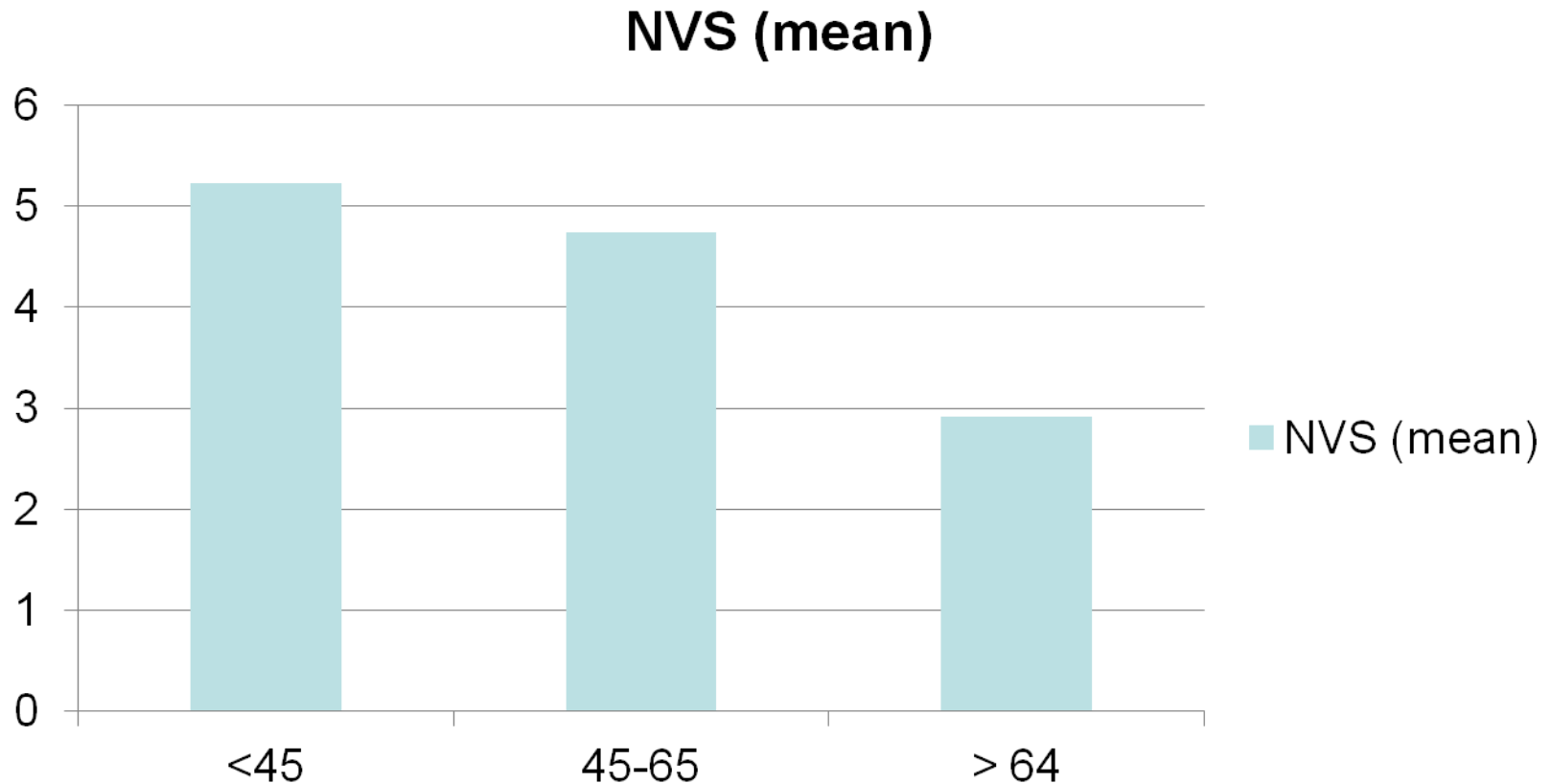
# Score distribution NVS-D



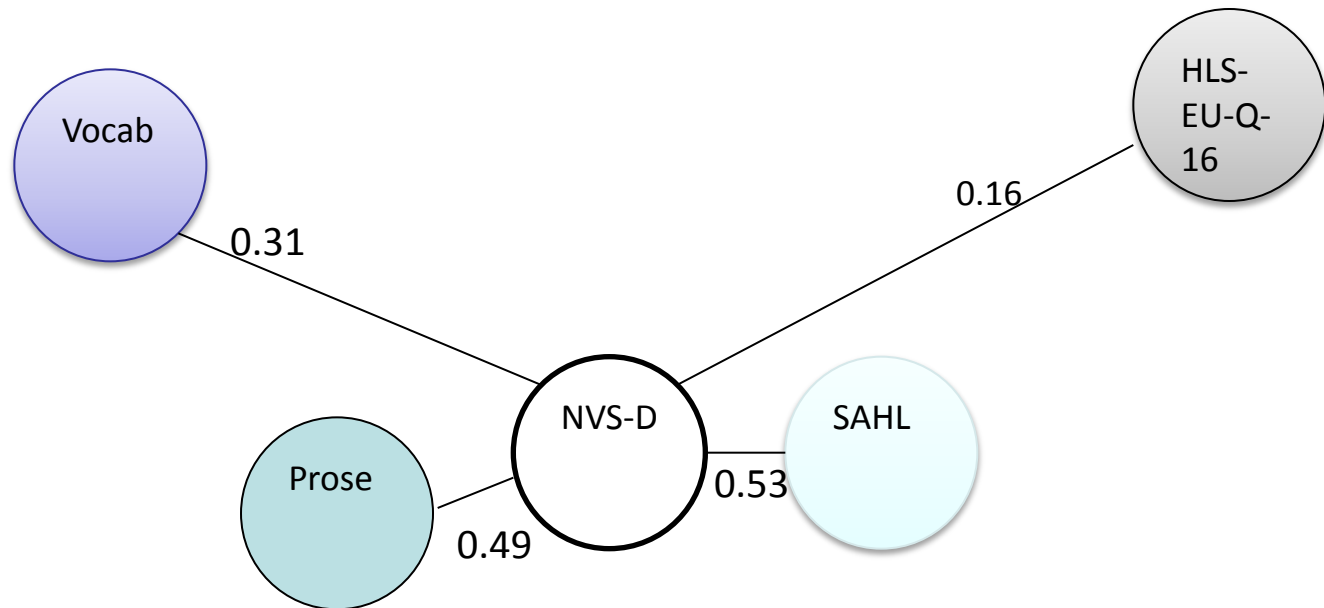
# Educational differences in NVS-D



# Age differences in NVS-D

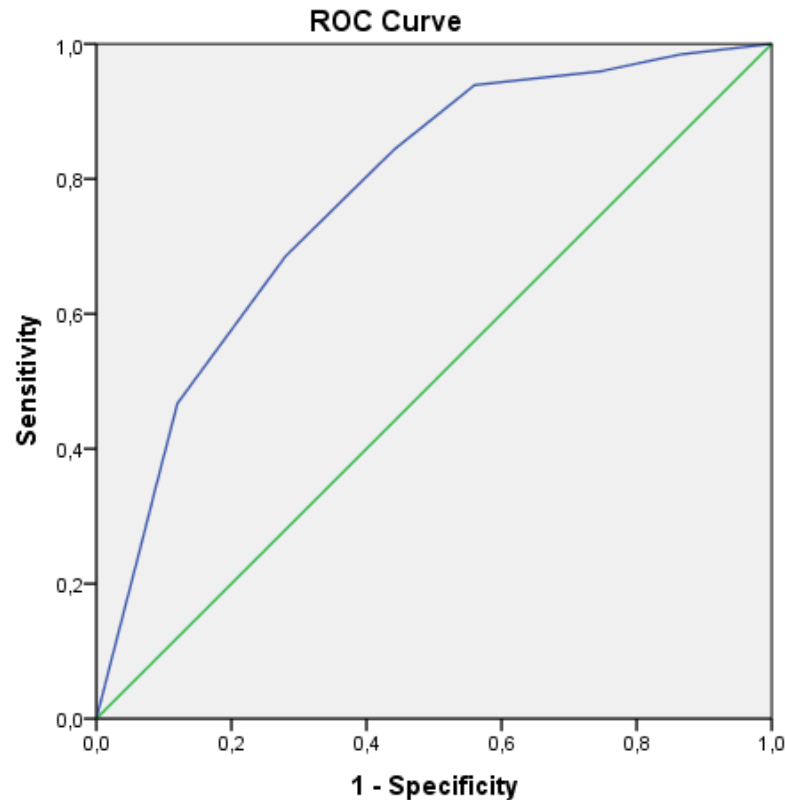


# Associations NVS-D (Pearson)





# ROC curve NVS-D



Diagonal segments are produced by ties.

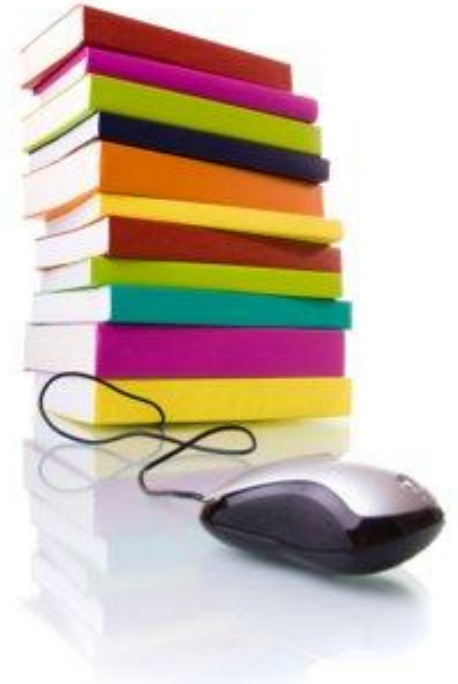
Optimal cut-off point for predicting adequate HL  $\geq 4$

Area under the ROC curve = 0.78



# Adapt and test REALM/SAHL

- Select 95 words from Dutch Thesaurus 'Health care en well-being'
- Add association test to each item
- Pretest items (n=127)
- Selection of 33 items
- Change association test in comprehension test

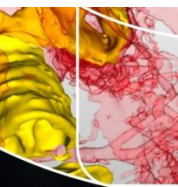
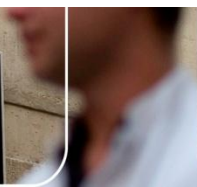
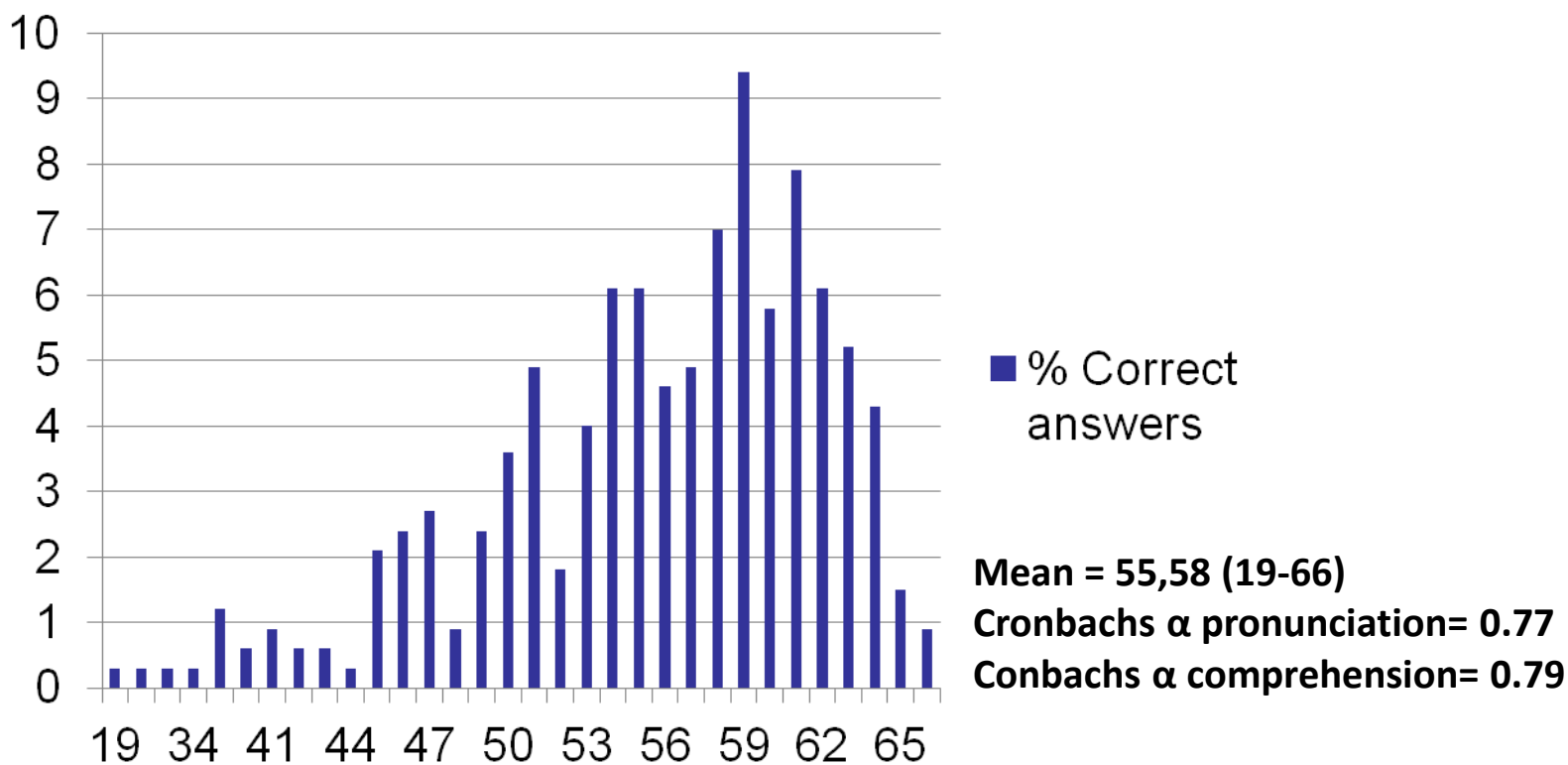


# Validation Dutch SAHL (SAHL-D)

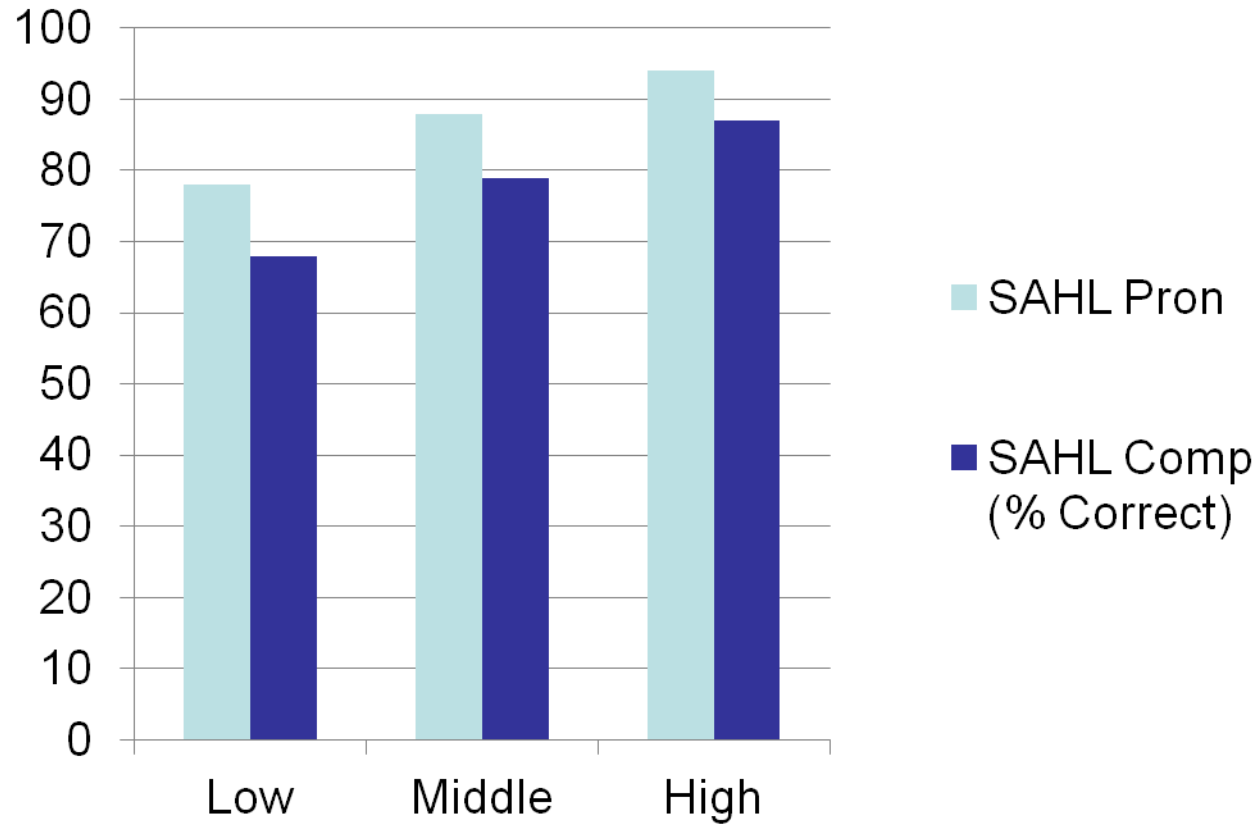
- Online questionnaire and telephone interview (n=329)
- Validation against standard test for prose literacy



# Score distribution SAHL-D

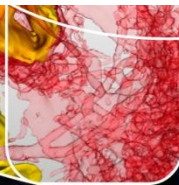
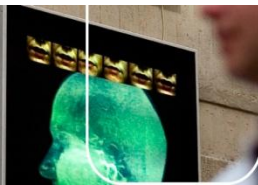
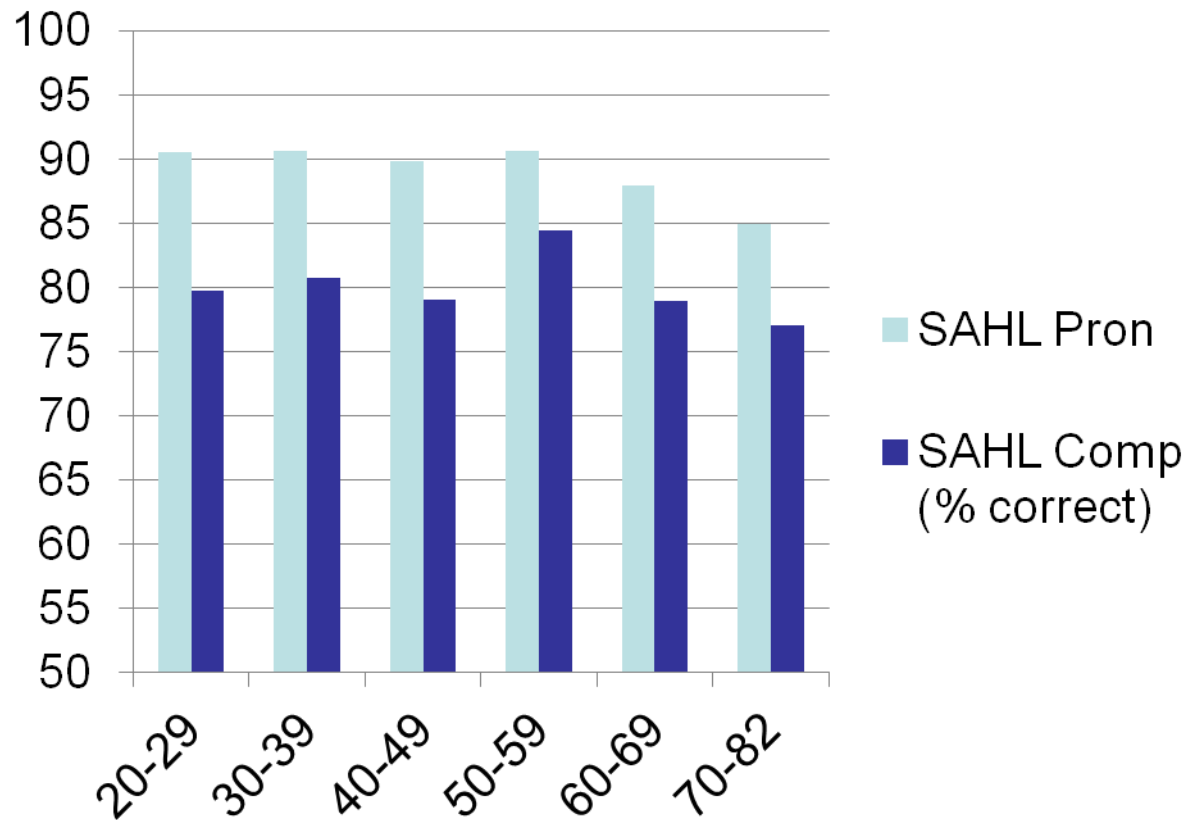


# Educational differences in SAHL-D

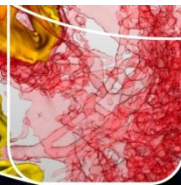
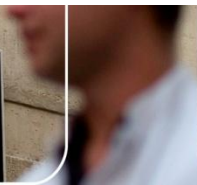
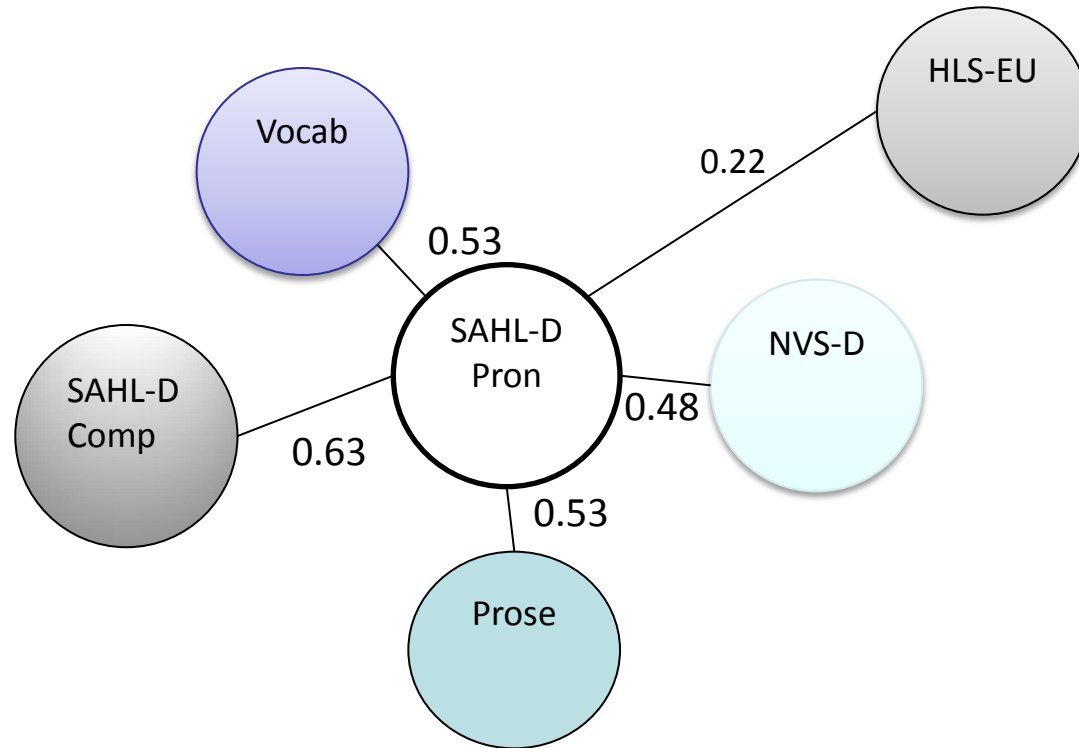




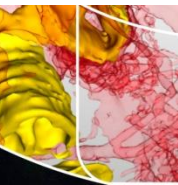
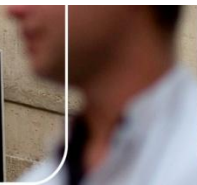
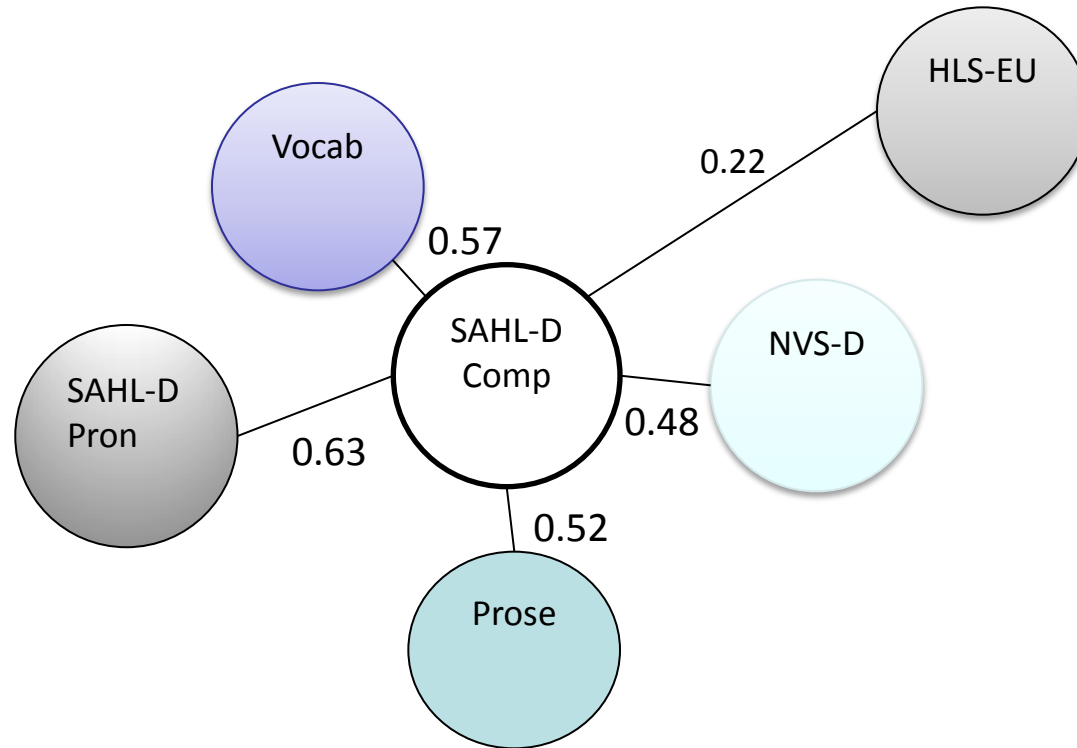
# Age differences in SAHL-D



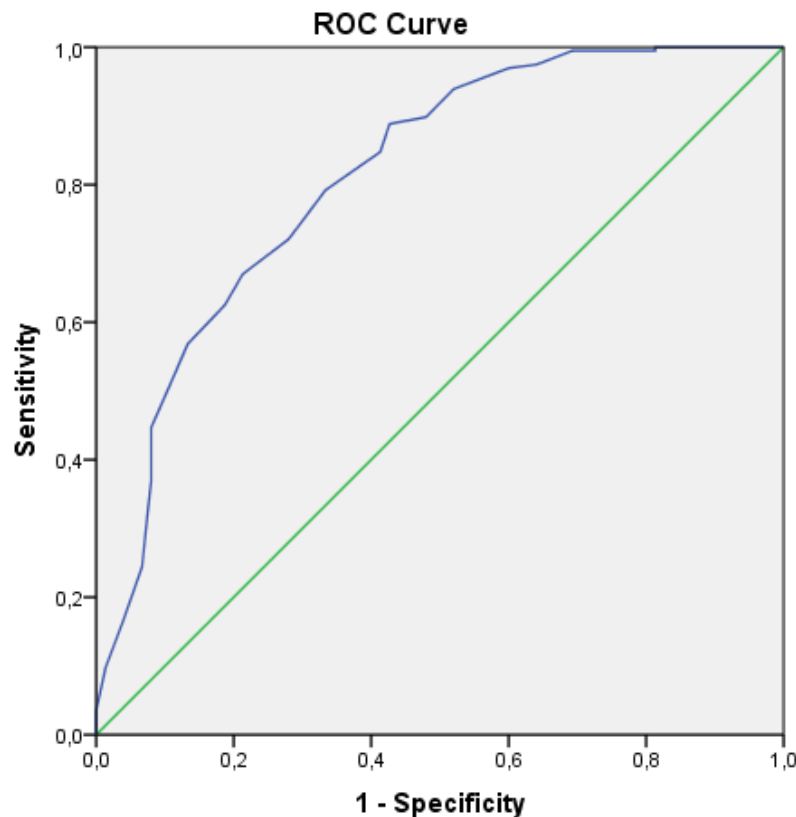
# Associations SAHL-D pronunciation (Pearson)



# Associations SAHL-D comprehension (Pearson)



# ROC curve SAHL-D



Diagonal segments are produced by ties.

Optimal cut-off point for predicting adequate HL 54.5

Area under the ROC curve= 0.81



# Conclusions

The NVS-D and SAHL-D are valid and reliable measures to objectively assess HL in health promotion and health care research in the Netherlands

The NVS-D and SAHL-D allow HL research in the Netherlands to use instruments similar to those used internationally





# Future plans

## Development health literacy measures

- Context specific
- Interactive and critical HL
- Transparant languages require more demanding tests

## Systematic intervention development for low HL populations

- Colorectal cancer screening
- Preconception care



# In collaboration with...

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