

Sex-stratified validation of the Lifestyle for BRAin Health (LIBRA) score for dementia prediction: the AGES-Reykjavik Study

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Objective

To externally validate the LIBRA score in men and women separately and assess potential differences in score performance

Methods

Study population:

- AGES-Reykjavik Study cohort, excluding individuals with dementia at baseline

LIBRA2 score:

- LIBRA2 = coronary heart disease, diabetes, hypercholesterolemia, hypertension, depression, obesity, smoking, physical activity, renal disease, alcohol consumption, cognitive activity, diet, hearing impairment, social contact, sleep disturbances

Statistical analyses:

- Sex-stratified Cox proportional hazards regression to estimate association between LIBRA score and dementia
- Performance for 5- and 10-year dementia risk measured using AUCs and calibration plots

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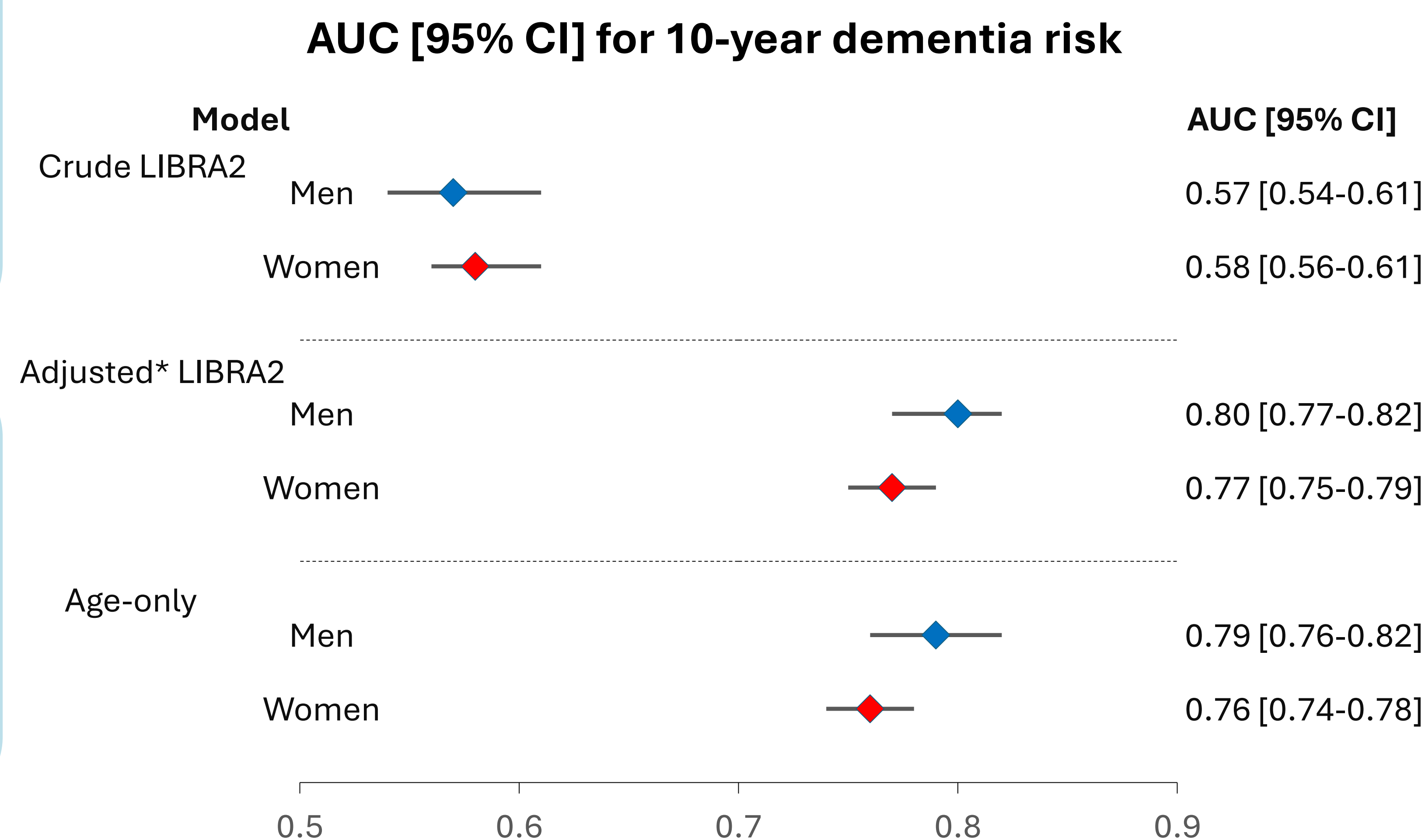
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Results - Study population

Study characteristics (n = 5,343)	Women (n = 3,097)	Men (n = 2,246)
Age (mean, SD) <i>in years</i>	76.6 (5.8)	76.7 (5.6)
Follow-up (mean, SD) <i>in years</i>	8.6 (3.3)	8.1 (3.5)
Dementia (n, %)	681 (22.0%)	418 (18.6%)

Results - Discrimination

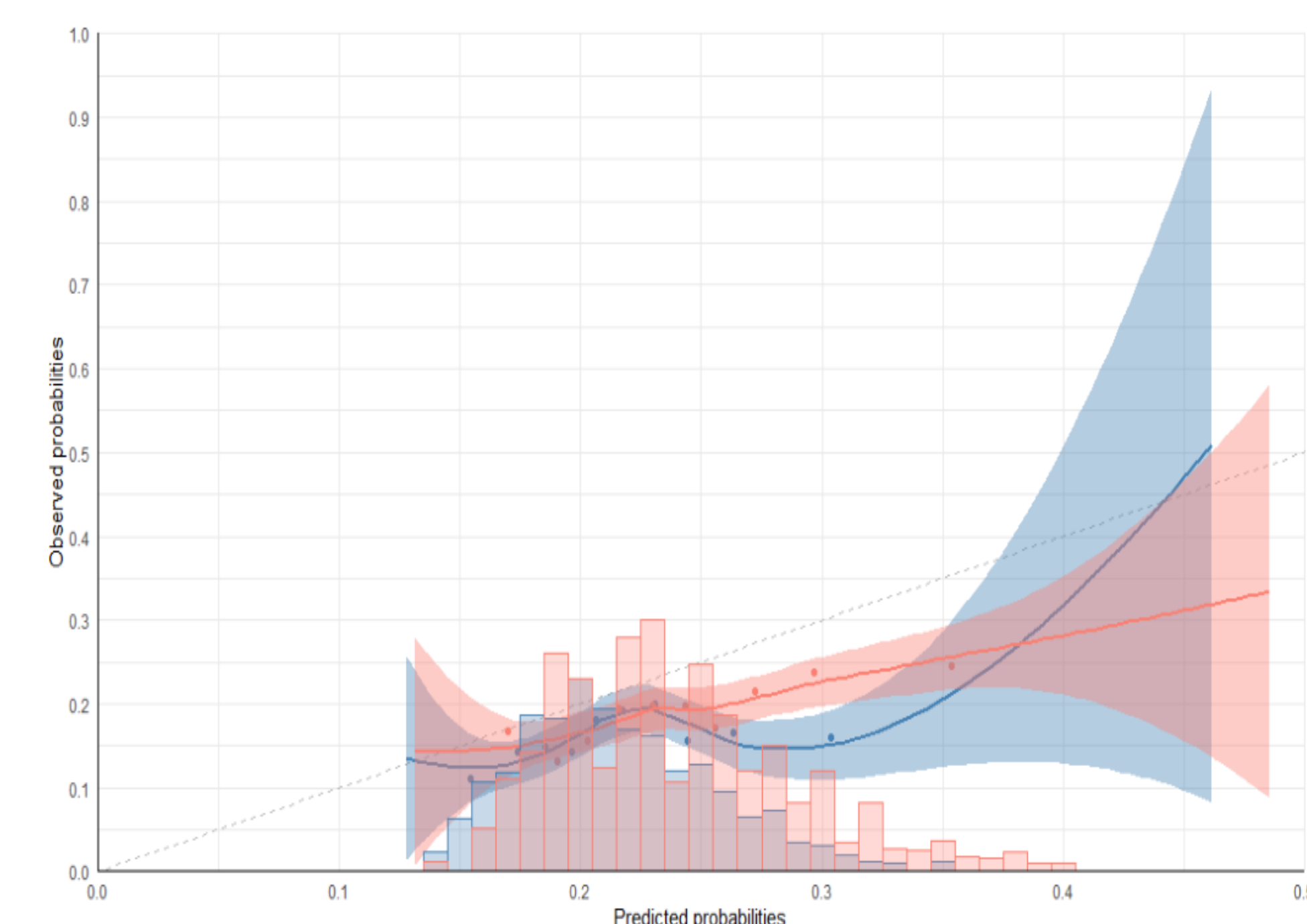


Interaction between sex and LIBRA2:
• P-value 0.51

Results - Calibration

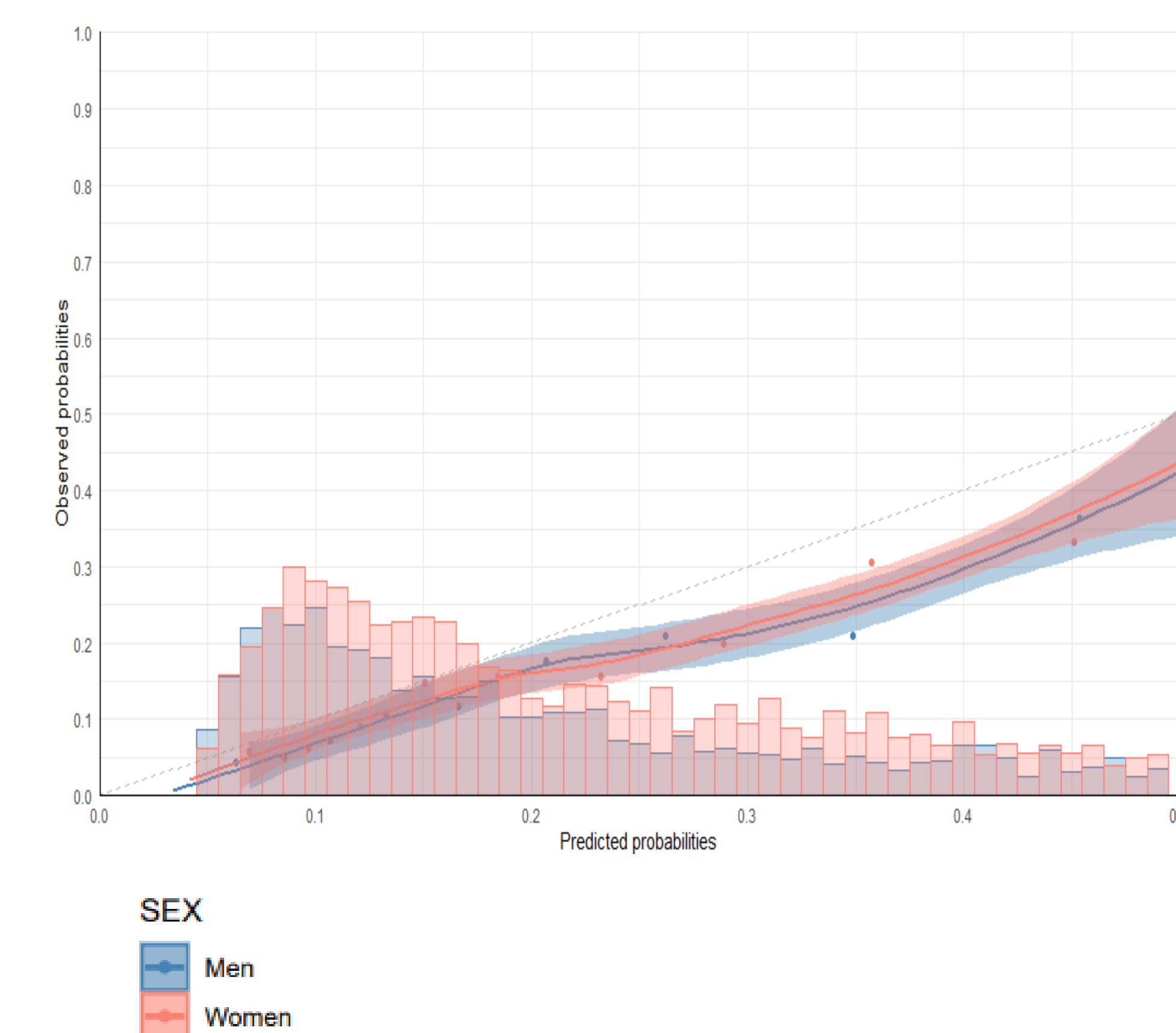
Calibration for crude 10-year dementia risk:

- Men: $y = -1.07 + 0.45x$
- Women: $y = -0.63 + 0.71x$



Calibration for adjusted 10-year dementia risk:

- Men: $y = -1.12 + 0.48x$
- Women: $y = -0.80 + 0.63x$



Conclusion

- Performance of LIBRA similar in men and women, with no significant sex difference
- General performance of LIBRA is poor, age alone resulted in better performance