

Erasmus School of
Health Policy
& Management

From Conceptions to Measurement: Dutch Perspectives and the WOOP Tool

Erasmus University Rotterdam



Disclosure slide

- No (potential) conflict of interests

Erasmus

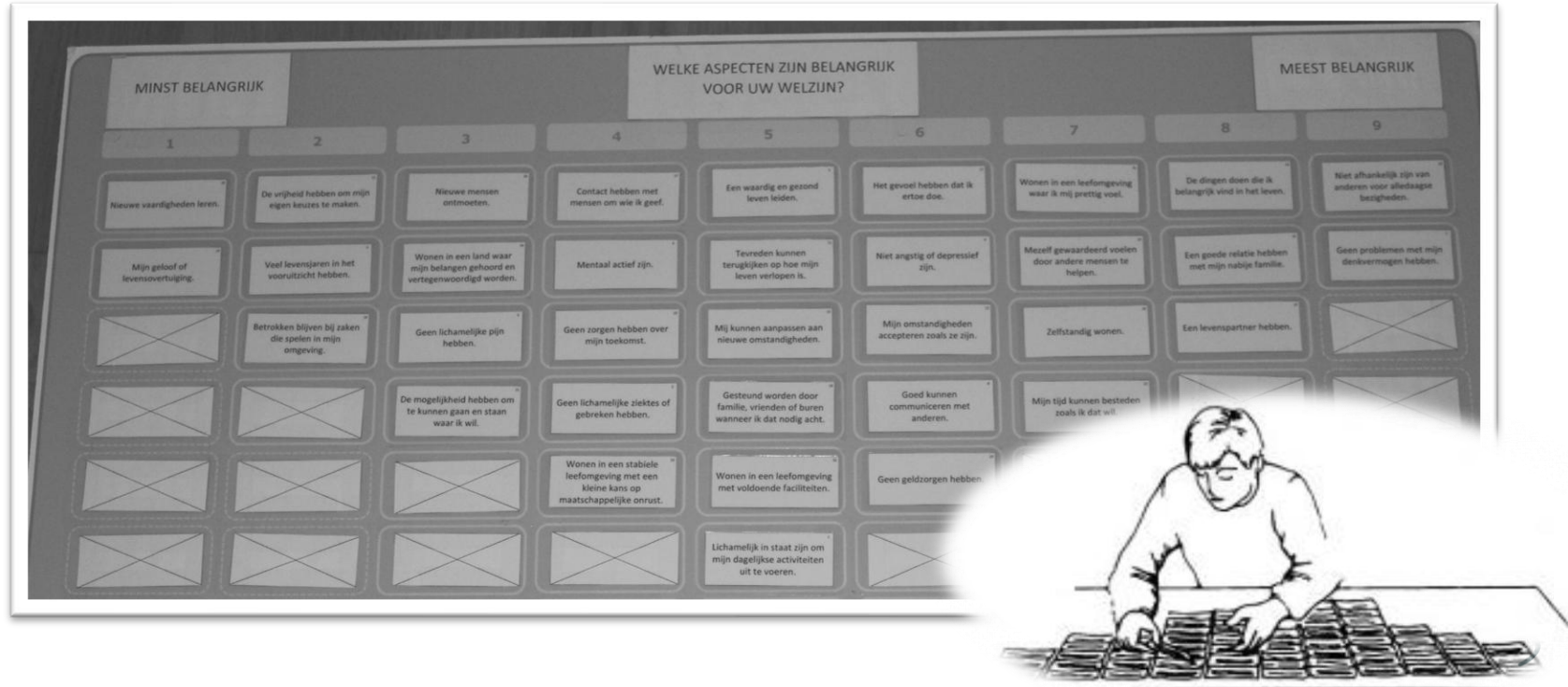
Erasmus School of
Health Policy
& Management

Development of the WOOP

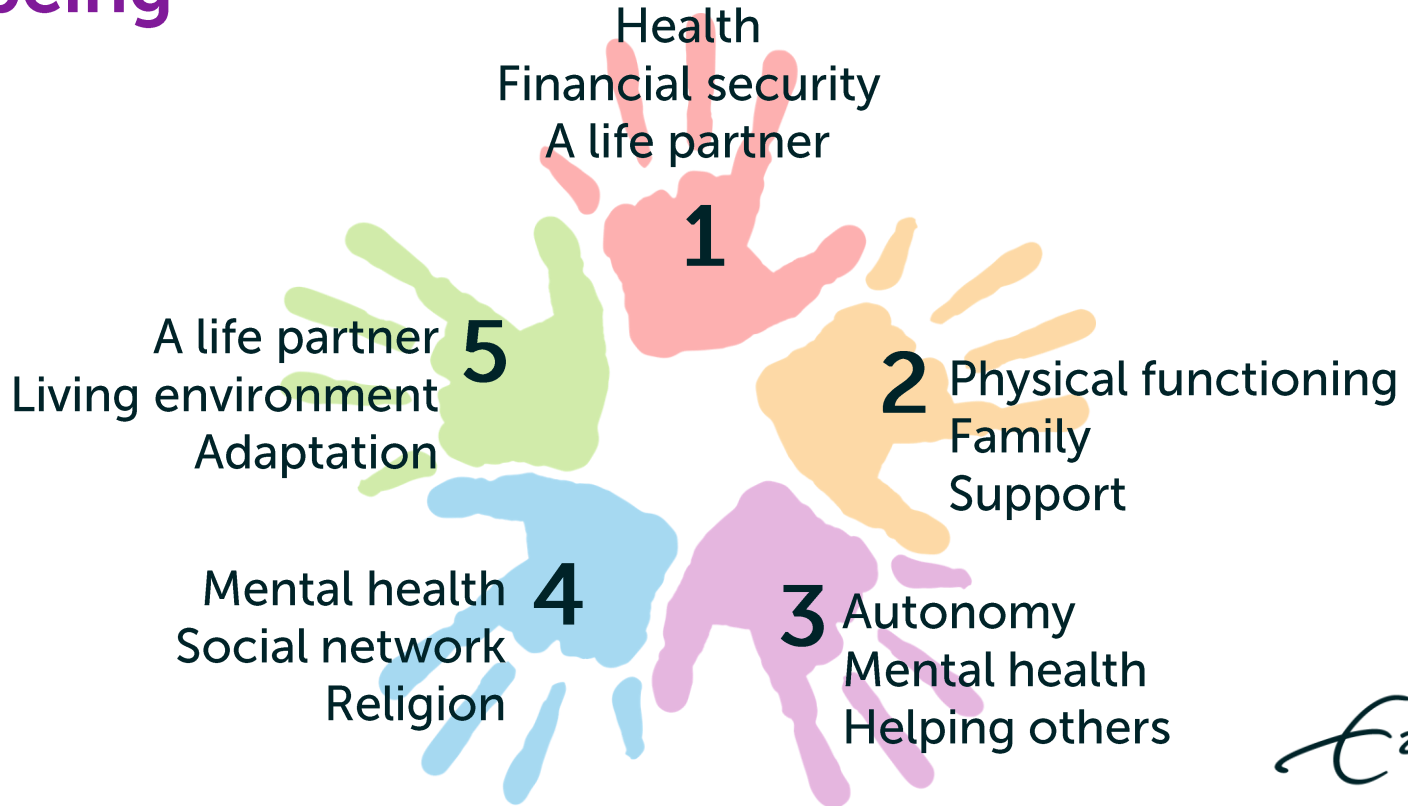
Erasmus University Rotterdam



Views of older people in the Netherlands on wellbeing



Views of older people in the Netherlands on wellbeing



Erasmus

Translating the views of older people into dimensions for a new measure of well-being



Living situation

Consider living in a house or neighbourhood you like.

- I'm very satisfied with my living arrangements
- I'm satisfied with my living arrangements
- I'm reasonably satisfied with my living arrangements
- I'm dissatisfied with my living arrangements

Feeling useful

Consider meaning something to others, your environment or a good cause.

- I feel very useful
- I feel useful
- I feel reasonably useful
- I do not feel useful
- I do not feel at all useful

Erasmus School of
Health Policy
& Management

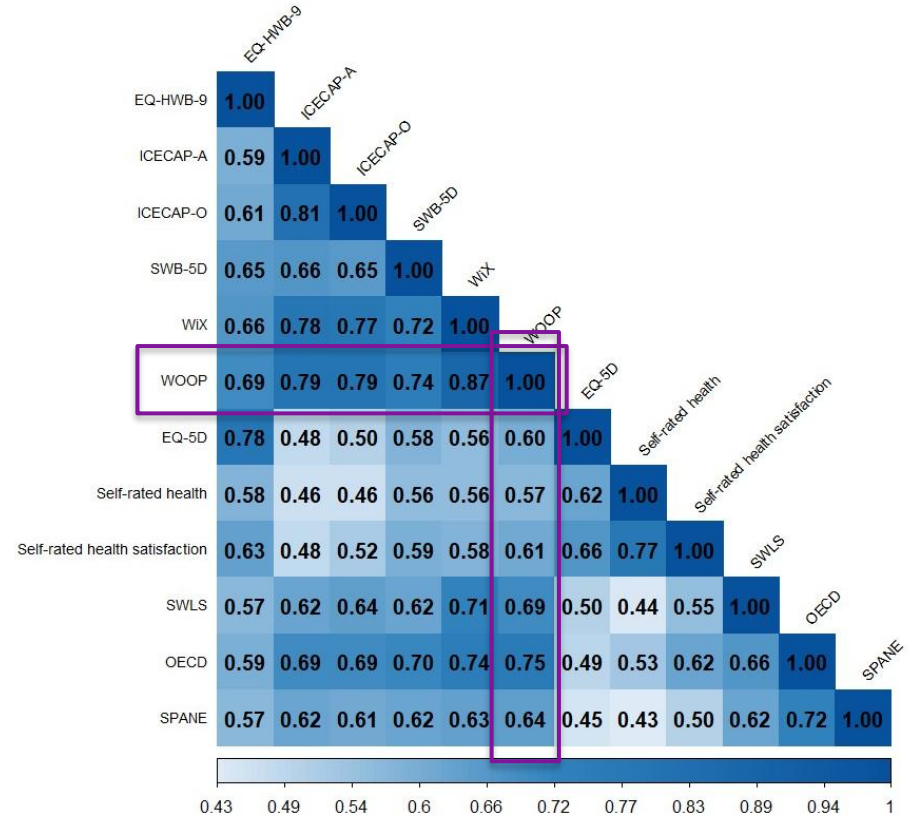
Performance of the WOOP

Erasmus University Rotterdam



Convergent validity

- All well-being instruments showed strong correlations among them
- EQ-HWB-9 was more strongly correlated with EQ-5D-5L
- WOOP presented the strongest correlations with the other wellbeing instruments and general well-being questionnaires



Known-group validity

- All well-being instruments were able to distinguish between clinical and demographic groups
- EQ-5D-5L, EQ-HWB-9 and SWB-5D showed higher detection in clinical groups
- WOOP and WiX showed better detection in demographic groups

Group	EQ-5D-5L	EQ-HWB-9	ICECAP-A	ICECAP-O	SWB-5D	WiX	WOOP
Arthritis							
<i>Clinical (n=104)</i>	66.59 (14.83)	66.59 (17.10)	60.32 (17.04)	56.79 (16.80)	58.94 (11.36)	65.67 (14.57)	64.08 (13.09)
<i>Non-clinical (n=116)</i>	87.07 (8.47)	87.00 (8.76)	78.10 (13.41)	73.51 (13.66)	73.71 (13.42)	81.53 (9.83)	80.75 (10.88)
Mann-Whitney U results – U (p) [r]	1209 (<0.001) [0.69]	1414 (<0.001) [0.66]	2463.5 (<0.001) [0.51]	2753 (<0.001) [0.47]	2344.5 (<0.001) [0.53]	2142.5 (<0.001) [0.56]	1991 (<0.001) [0.58]
Heart							
<i>Clinical (n=177)</i>	71.61 (15.48)	69.10 (16.68)	62.41 (17.90)	57.21 (17.36)	59.24 (14.36)	65.30 (14.85)	65.24 (14.87)
<i>Non-clinical (n=280)</i>	91.04 (9.05)	89.77 (9.36)	79.43 (13.49)	75.71 (14.48)	76.45 (12.49)	82.77 (10.12)	82.53 (10.87)
Mann-Whitney U results – U (p) [r]	6000 (<0.001) [0.64]	5696.5 (<0.001) [0.65]	11369.5 (<0.001) [0.46]	9972.5 (<0.001) [0.51]	8942.5 (<0.001) [0.54]	7771.5 (<0.001) [0.58]	8414 (<0.001) [0.56]
General Health							
<i>Poor health (n=1,011)</i>	77.91 (15.25)	76.35 (17.08)	66.97 (17.75)	62.39 (17.77)	64.74 (15.32)	71.18 (14.93)	70.55 (14.91)
<i>Good health (n=1,133)</i>	93.00 (7.55)	91.65 (8.64)	81.17 (13.70)	77.51 (14.27)	79.56 (12.84)	84.52 (10.14)	84.95 (10.23)
Mann-Whitney U results – U (p) [r]	952308 (<0.001) [0.58]	926789 (<0.001) [0.54]	835787 (<0.001) [0.40]	850306 (<0.001) [0.42]	884557.5 (<0.001) [0.47]	884057 (<0.001) [0.47]	902868 (<0.001) [0.50]
Income							
<i>Low (n=522)</i>	82.39 (15.77)	80.28 (17.60)	69.91 (19.52)	66.37 (19.85)	70.13 (16.47)	73.54 (16.22)	72.82 (16.19)
<i>Medium (n=774)</i>	85.87 (13.76)	84.47 (14.85)	74.50 (16.23)	70.34 (16.64)	72.25 (15.74)	78.18 (13.29)	78.33 (13.60)
<i>High (n=681)</i>	89.05 (11.65)	88.30 (12.38)	78.98 (15.62)	74.29 (16.26)	75.70 (15.16)	82.65 (12.62)	82.85 (12.75)
Kruskal-Wallis results – H (p) [η^2]	62.9 (<0.001) [0.03]	78.6 (<0.001) [0.04]	74.3 (<0.001) [0.04]	55.5 (<0.001) [0.03]	40.0 (<0.001) [0.02]	117 (<0.001) [0.06]	137 (<0.001) [0.07]
Relationship							
<i>Not in a relationship (n=703)</i>	84.10 (14.39)	81.38 (16.84)	70.67 (18.40)	66.47 (18.95)	69.63 (16.82)	74.50 (15.38)	74.08 (15.82)
<i>In a relationship (n=1,441)</i>	86.76 (13.75)	85.93 (14.32)	76.33 (16.36)	72.29 (16.74)	74.00 (15.22)	80.05 (13.34)	80.15 (13.45)
Mann-Whitney U results – U (p) [r]	445769.5 (<0.001) [0.10]	420269.5 (<0.001) [0.14]	418009 (<0.001) [0.14]	417754.5 (<0.001) [0.14]	429657 (<0.001) [0.12]	394679.5 (<0.001) [0.18]	390115.5 (<0.001) [0.19]

Effect size interpretation: small ($0.01 \leq \eta^2 < 0.06$, $0.1 \leq r < 0.24$); moderate ($0.06 \leq \eta^2 < 0.14$, $0.24 \leq r < 0.37$); strong ($\eta^2 \geq 0.14$, $r \geq 0.37$)

Test-retest reliability

- All well-being instruments showed reliable assessment over time (ICC>0.70)

Instrument	Correlations main and retest sample	Complete agreement	ICC (95% CI)
No change in health (n=392)			
<i>EQ-5D-5L</i>	0.78	37.76%	0.85 (0.82 – 0.88)
<i>EQ-HWB-9</i>	0.80	23.21%	0.79 (0.75 – 0.83)
<i>ICECAP-A</i>	0.70	26.53%	0.71 (0.66 – 0.76)
<i>ICECAP-O</i>	0.69	28.57%	0.73 (0.67 – 0.77)
<i>SWB-5D</i>	0.73	26.02%	0.76 (0.71 – 0.80)
<i>WiX</i>	0.79	16.07%	0.81 (0.78 – 0.84)
<i>WOOP</i>	0.81	18.37%	0.82 (0.78 – 0.85)
No change in well-being (n=383)			
<i>EQ-5D-5L</i>	0.79	37.86%	0.84 (0.81 – 0.87)
<i>EQ-HWB-9</i>	0.81	23.50%	0.80 (0.77 – 0.84)
<i>ICECAP-A</i>	0.69	25.33%	0.70 (0.65 – 0.75)
<i>ICECAP-O</i>	0.69	29.50%	0.72 (0.67 – 0.76)
<i>SWB-5D</i>	0.73	26.11%	0.75 (0.71 – 0.79)
<i>WiX</i>	0.78	15.41%	0.81 (0.77 – 0.84)
<i>WOOP</i>	0.81	17.75%	0.81 (0.77 – 0.84)

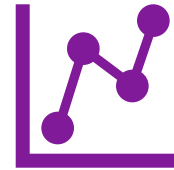
Conclusion



Developed for and with older individuals to ensure face validity



Equivalent or slightly superior psychometric performance in older populations



Future research will focus on studying implementation in evaluations

Erasmus

Erasmus School of
Health Policy
& Management

Thank you!

Erasmus University Rotterdam

The Erasmus University logo, featuring the word "Erasmus" in a white, elegant, cursive script font.

Erasmus School of
Health Policy
& Management

Appendix

Erasmus University Rotterdam



The W-MIC study



Study design

Cross-sectional survey
with follow-up
measurement



Population

7000 US and NL
participants, with quotas
for specific subgroups
(general, older, targeted
health conditions)



Measures

Demographics (Module A), Well-
being instruments (Module B),
Clinical severity (Module C),
General health (Module D),
General well-being (Module E)



Data collection

Dynata hosted and
recruited participants

Erasmus

In-survey quality checks

- Attention check questions
- Dynata's quality check, including:
 - reCAPTCHAs,
 - Geo-IP tracking,
 - Address verification,
 - Digital fingerprinting,
 - IP deduplication
- Dynata's QualityScore:
 - <20 automatically excluded
 - 21-50 manually checked by Dynata

The logo for Erasmus, featuring the word "Erasmus" in a stylized, cursive script font.

Post-hoc data quality checks

- Post-hoc data quality checks:
 - Criteria 1: Inconsistent pain reporting: EQ-HWB-9 (Q4) vs. EQ-5D-5L (Q83)
 - Criteria 2: Inconsistent daily activity reporting: EQ-HWB-9 (Q3) vs. EQ-5D-5L (Q82)
 - Criteria 3: Inconsistent financial situation: WiX (Q10) vs. ability to make ends meet (Q103)
 - Criteria 4: Child count inconsistency: More children <18 (Q99) than total children (Q98)
 - Criteria 5: Completion time <5 minutes
 - Criteria 6: Survey quality score <90
 - Criteria 7: >5 self-reported health conditions
- Participants meeting ≥ 3 criteria were removed
- Participants excluded if provided extreme inconsistencies in Criteria 1 and 2 (>2 Likert points) or in Criteria 3 (e.g., very satisfied but much difficulty)

The Erasmus logo is a stylized, handwritten-style signature of the word "Erasmus" in black ink, located in the bottom right corner of the slide.

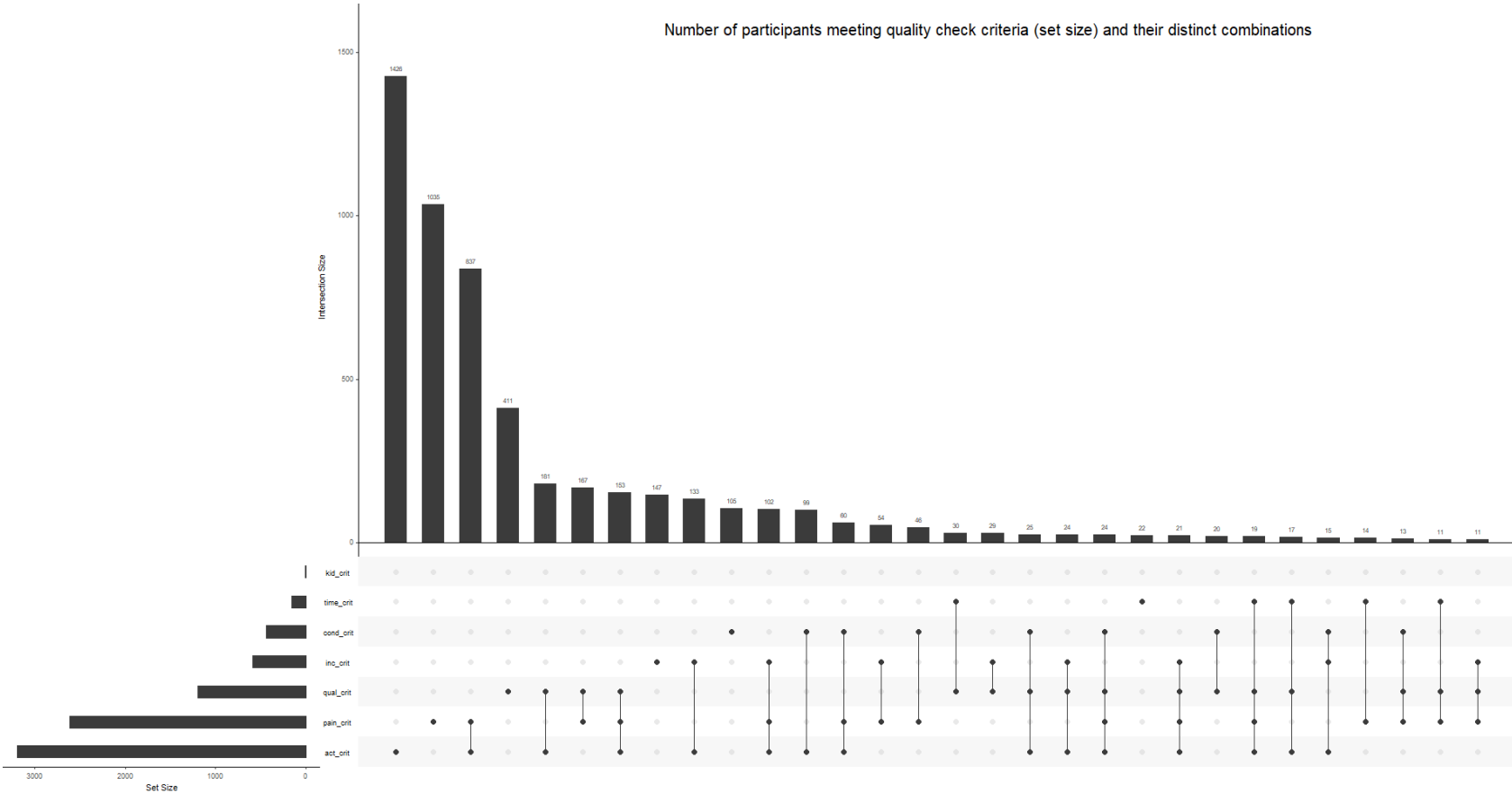
Quality checks

- 7838 participants completed the survey (US: n=4045, 52%; NL: n=3793, 48%)
- 5336 (68%) failed at least one quality check criteria (out of 7)
- 683 (9%) were excluded
 - 560 failed ≥ 3 criteria
 - 202 provided extremely different answers

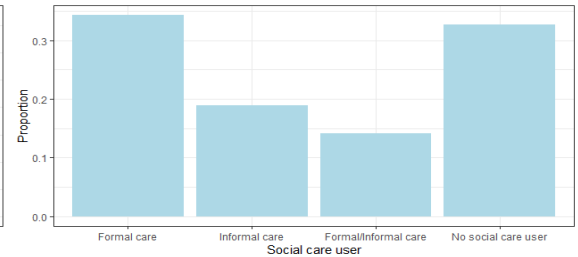
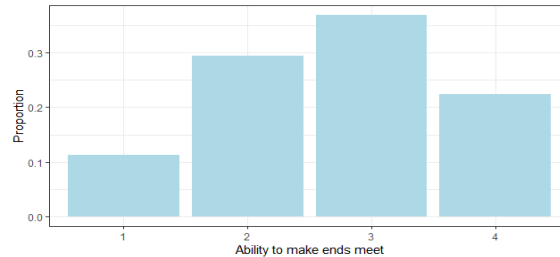
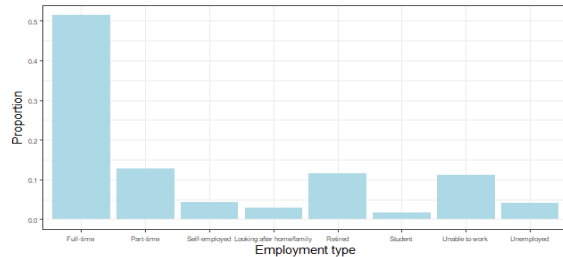
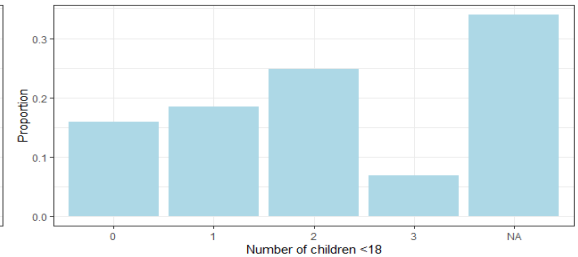
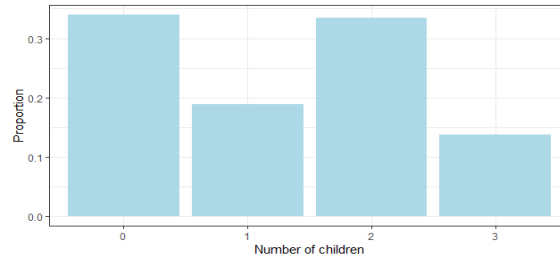
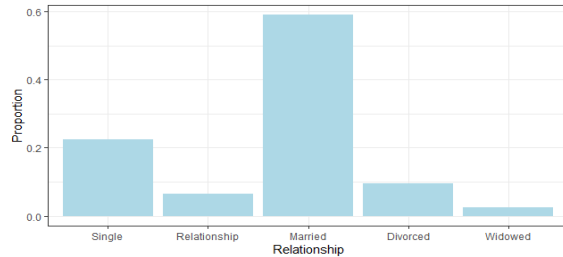
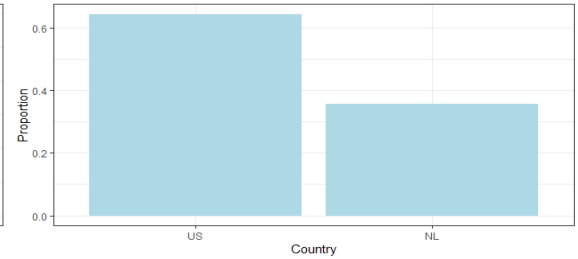
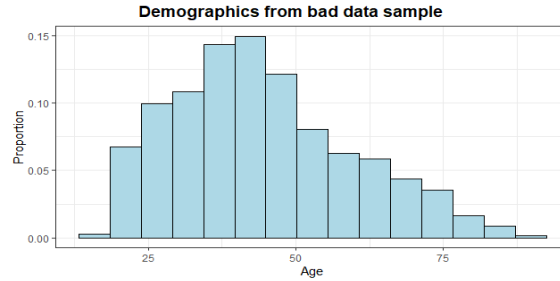
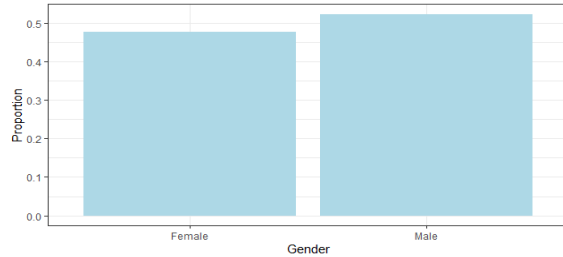
The Erasmus logo, featuring the word "Erasmus" in a stylized, cursive script.

Quality checks

Number of participants meeting quality check criteria (set size) and their distinct combinations

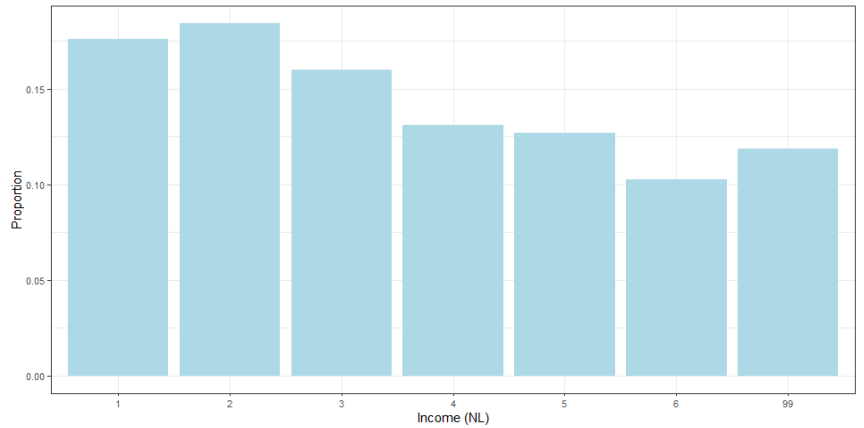
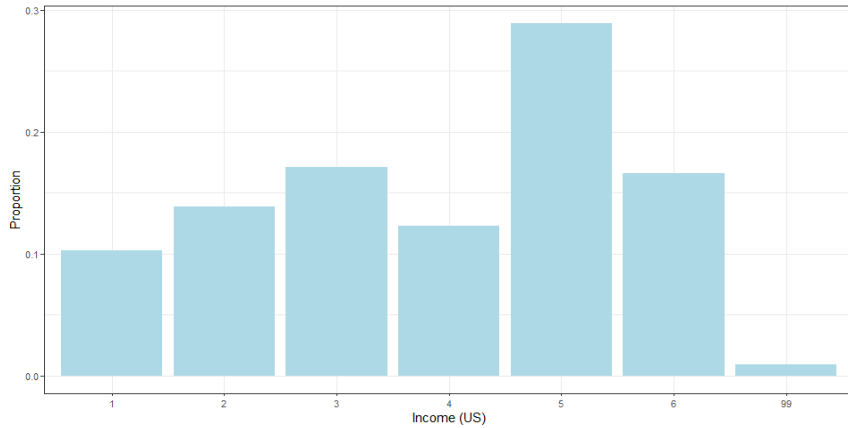
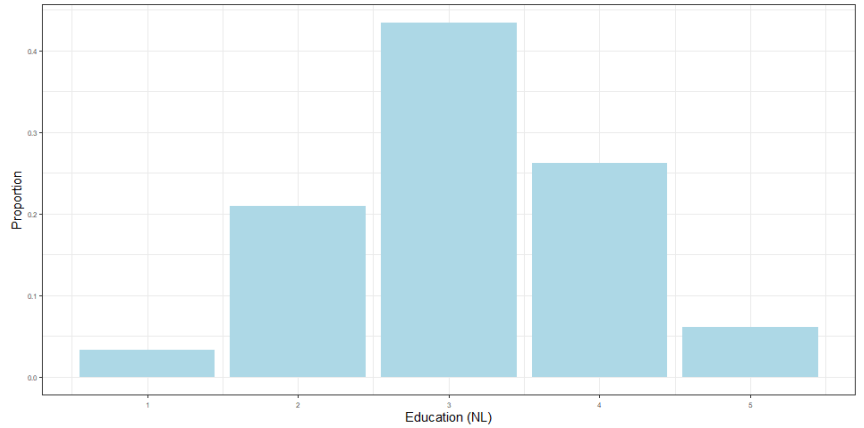
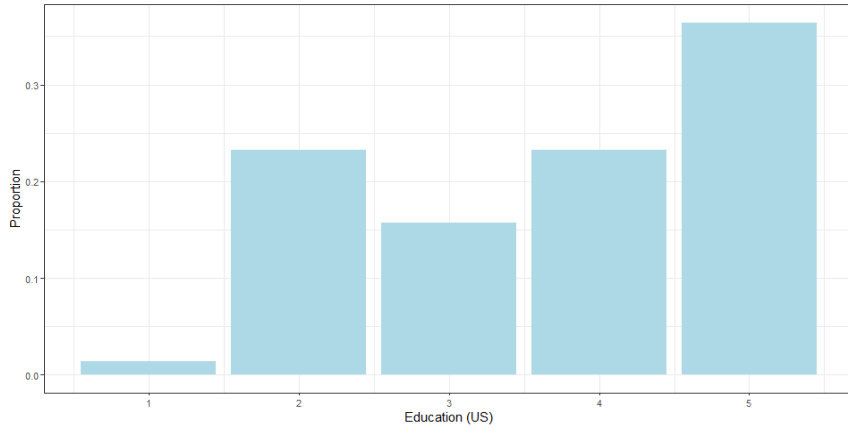


Demographics – Bad data sample



Demographics – Country-specific (bad data)

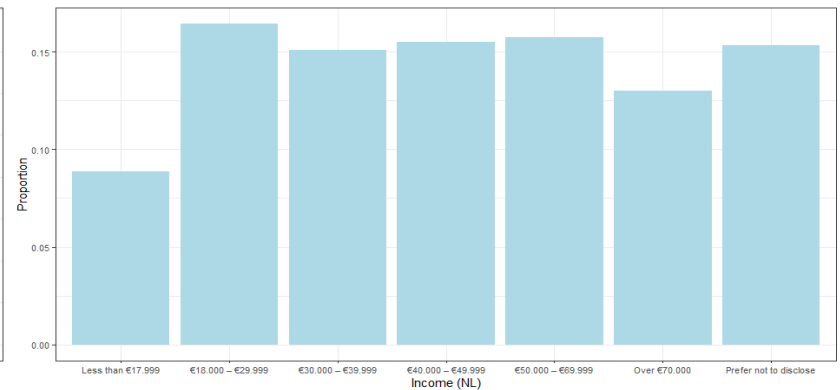
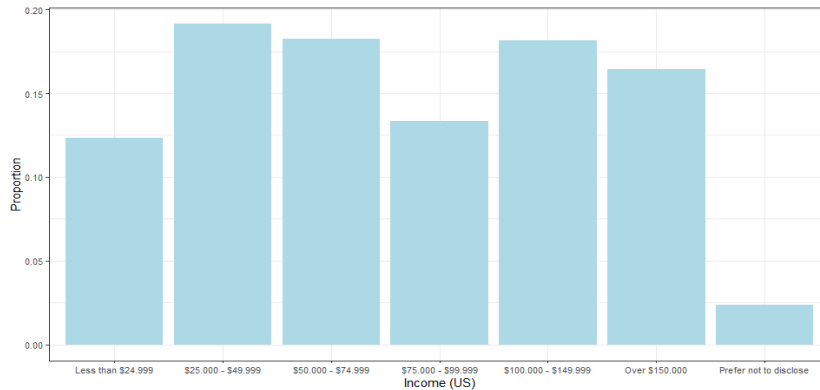
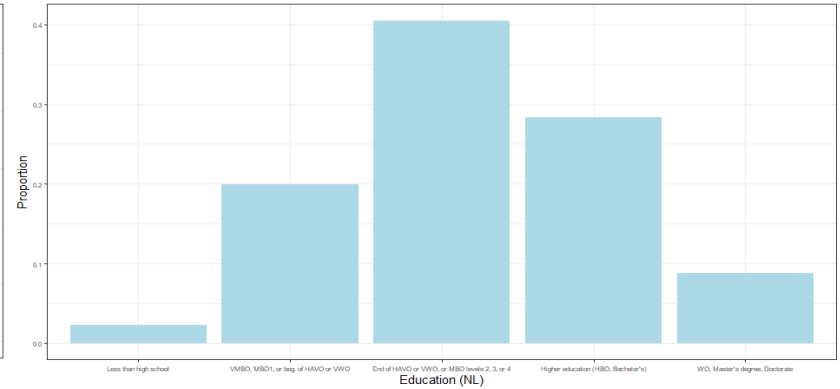
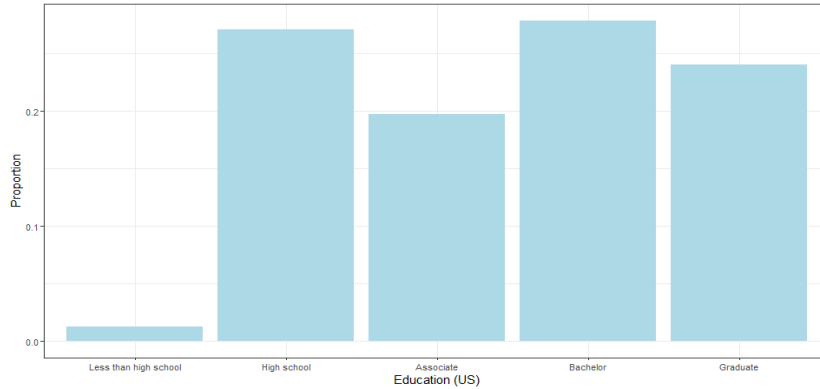
Country-specific demographics from bad data sample



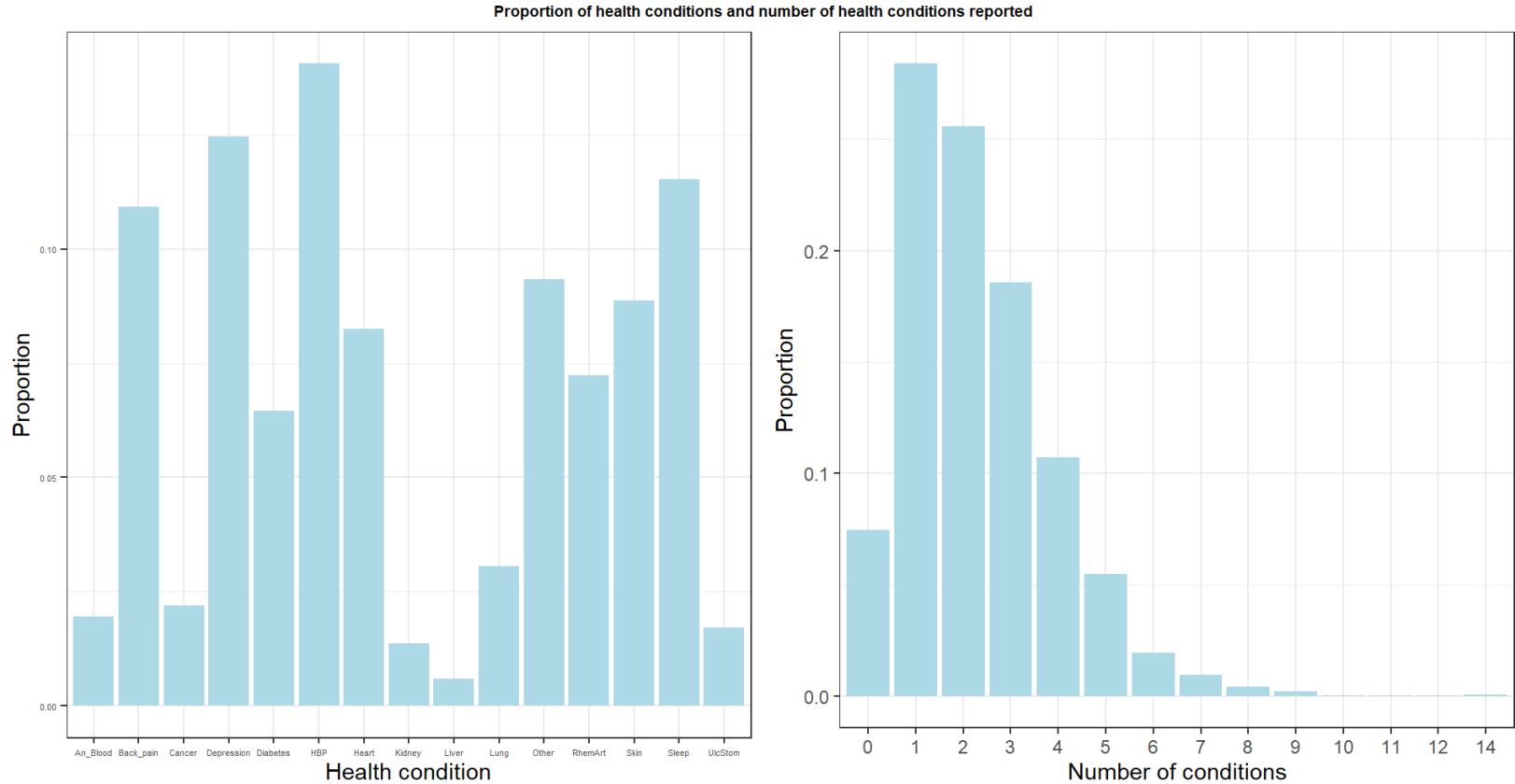
Demographics – Country-specific

- 7155 final sample (US: n= 3606, 50%; NL: n=3549, 50%)

Country-specific demographics from final sample

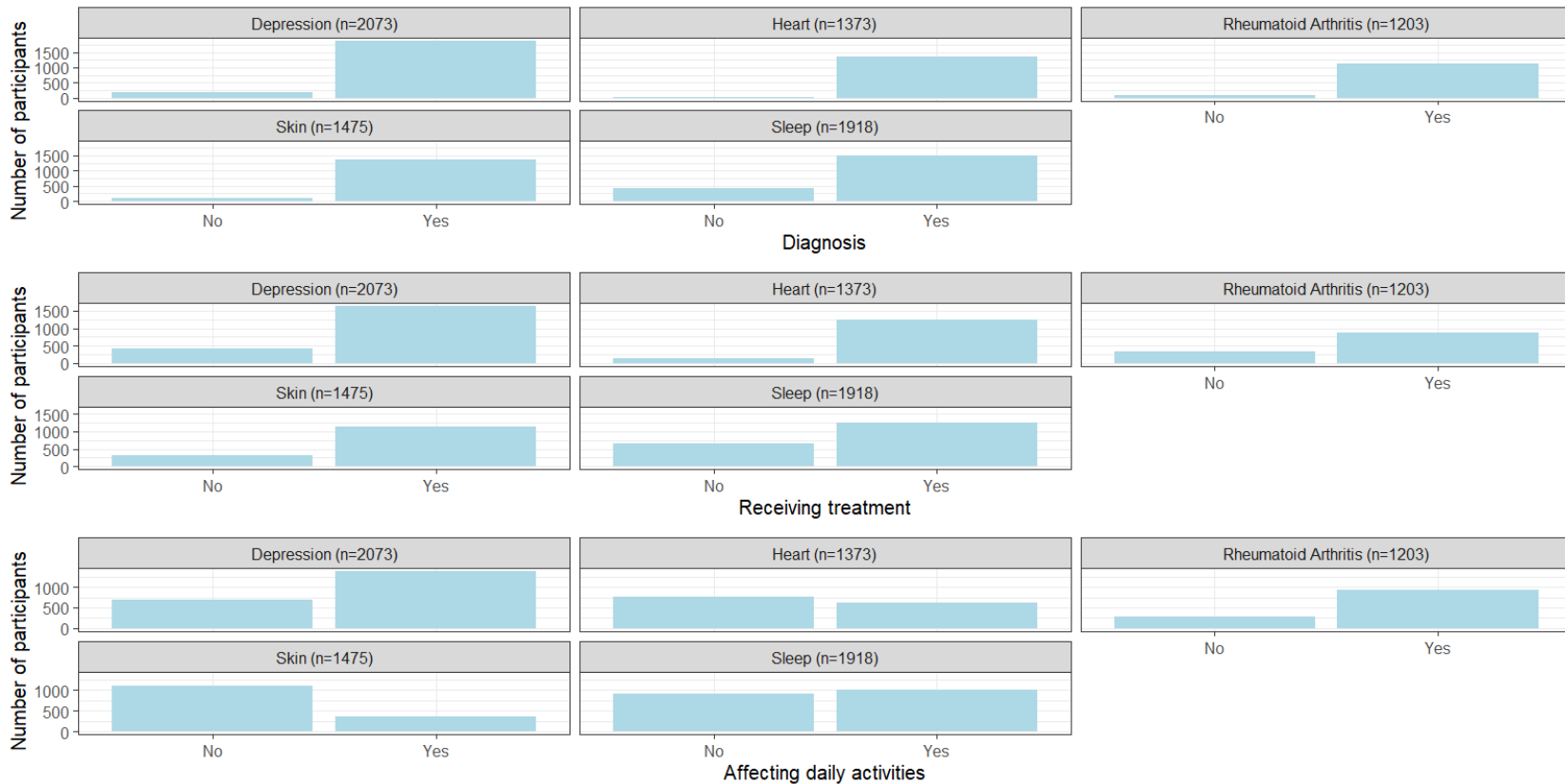


Health conditions



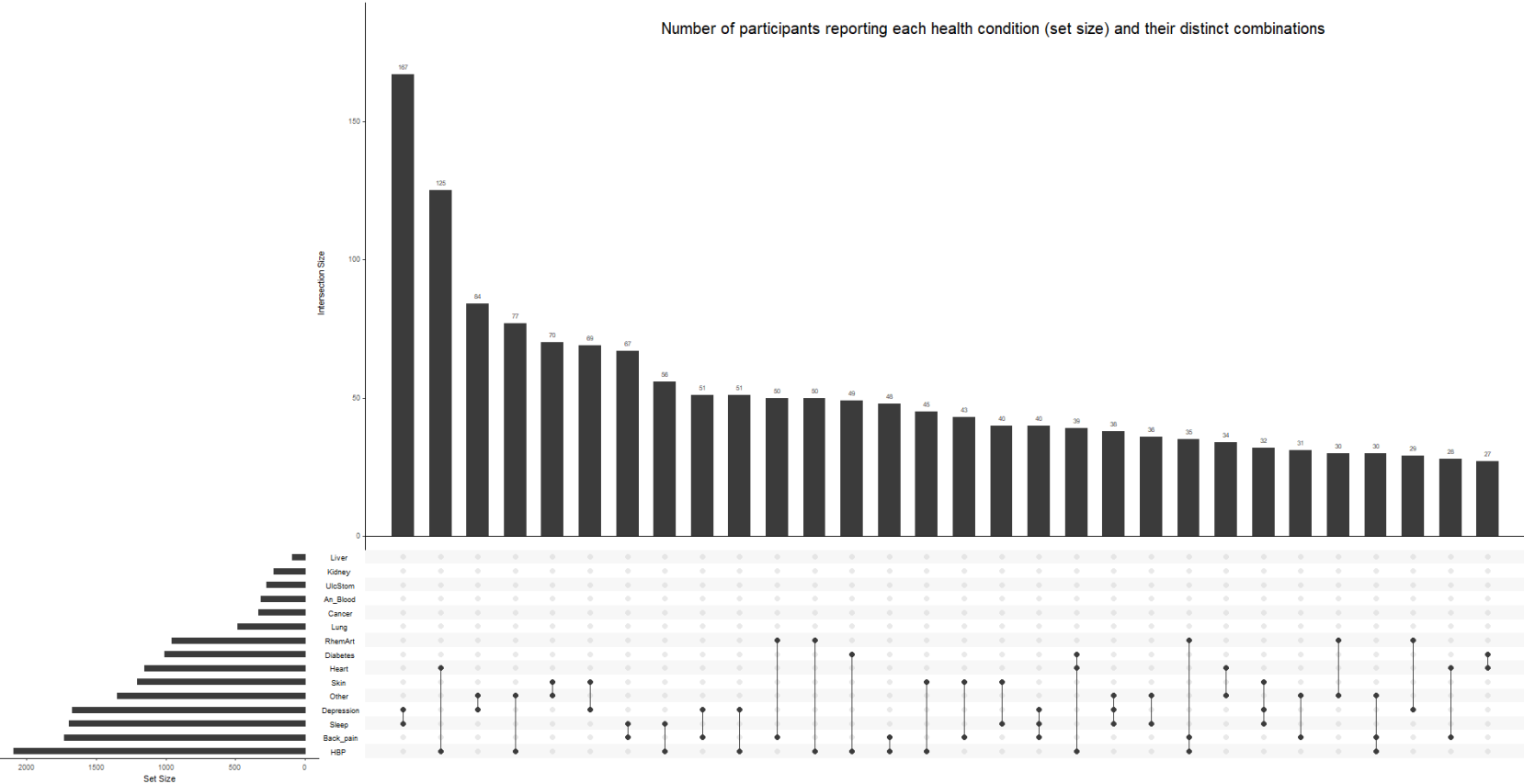
Targeted health conditions

Number of participants with self-reported diagnosis, treatment and being affected in their daily activities



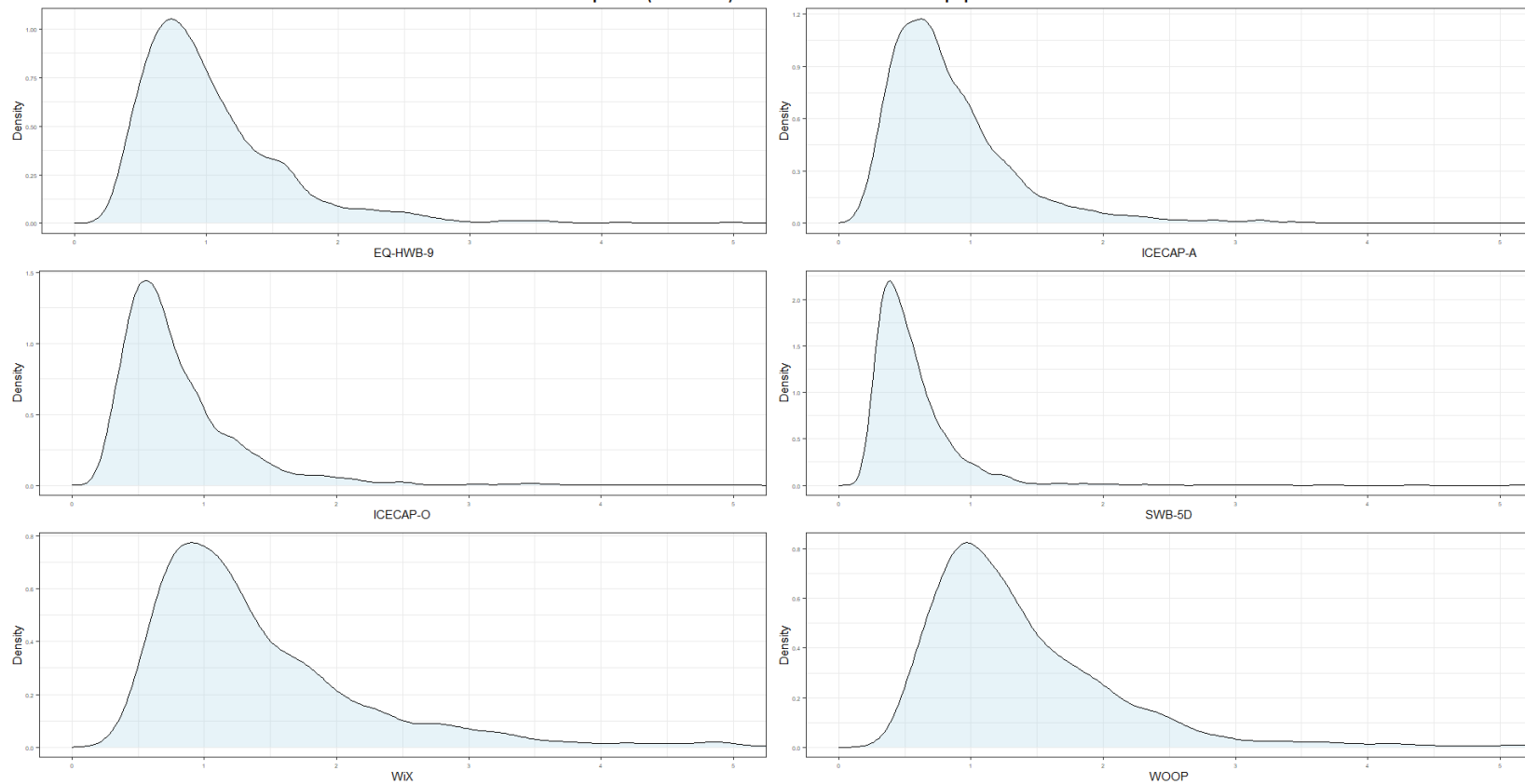
Comorbidity

Number of participants reporting each health condition (set size) and their distinct combinations



Completion time

Time completion (in minutes) across instruments in older population

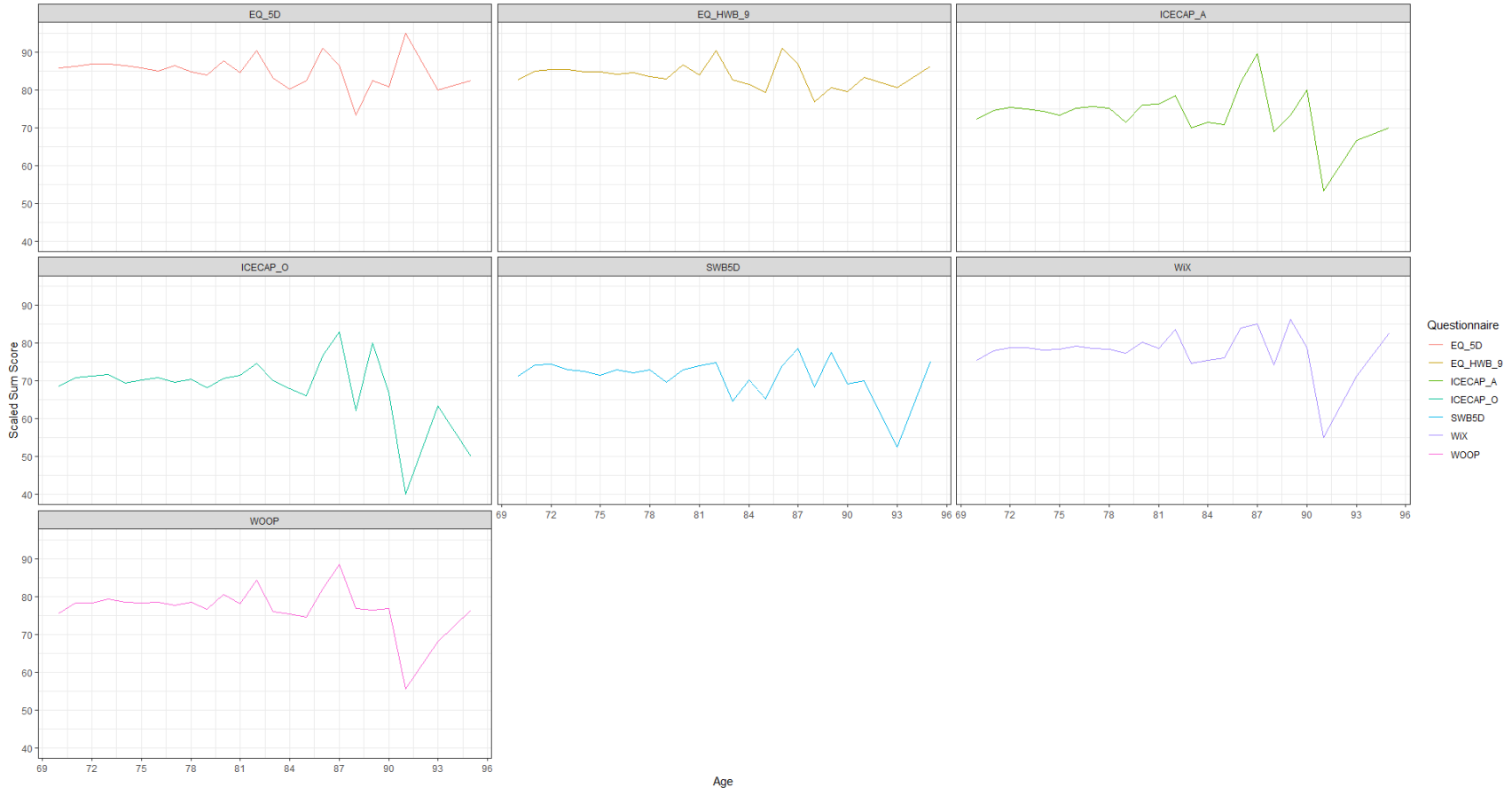


Descriptive statistics

- Older adults had moderate to high levels of well-being across instruments
- More negatively skewed in the EQ-5D-5L and EQ-HWB-9



Descriptive statistics – Scores by age



Response options frequencies

Distribution of response option frequencies across well-being instruments in older population

