



# Can we measure the social and emotional well-being of adults with hearing loss?

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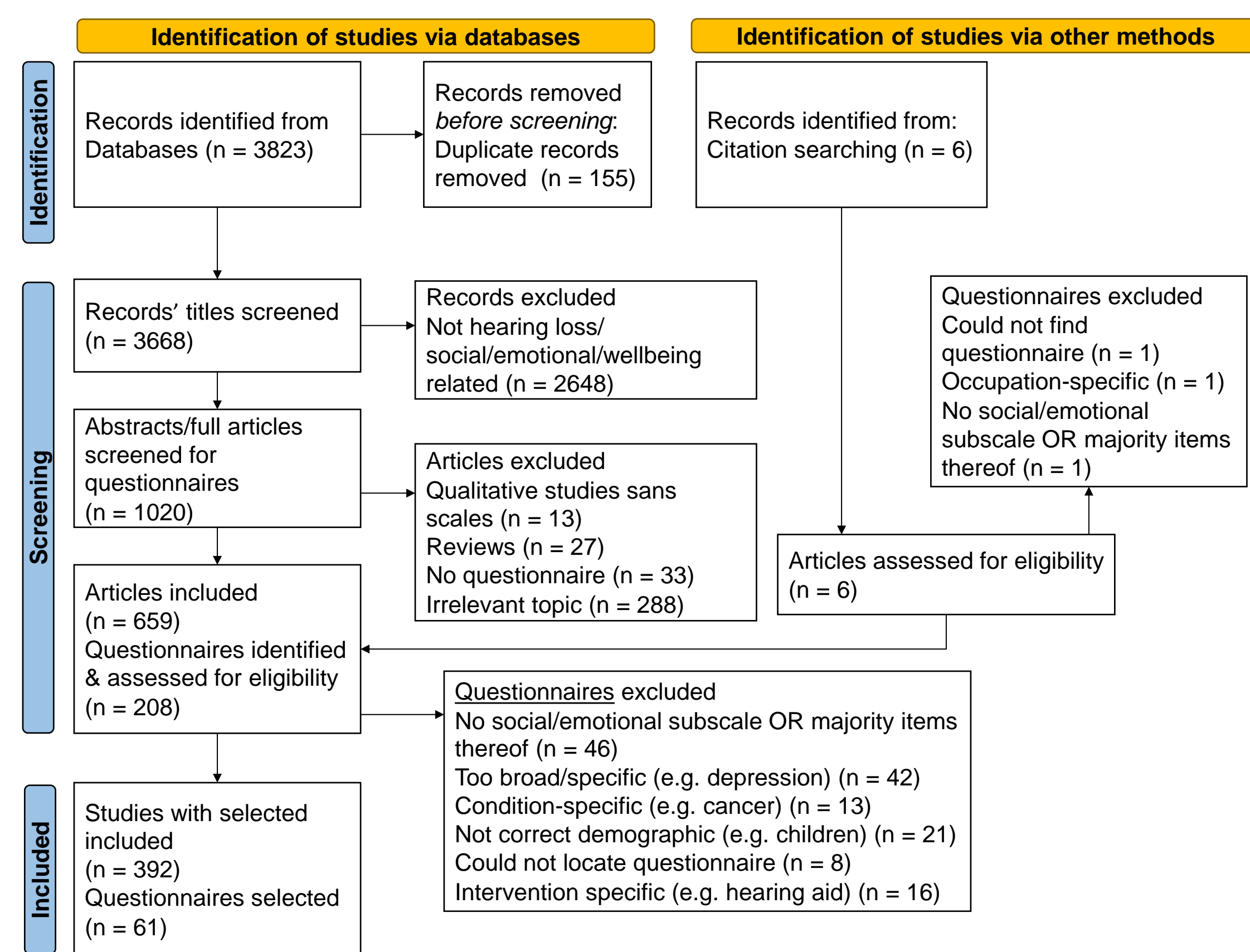
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## 1. What existing self-report questionnaires have been used to measure the social and/or emotional well-being of adults with hearing loss?

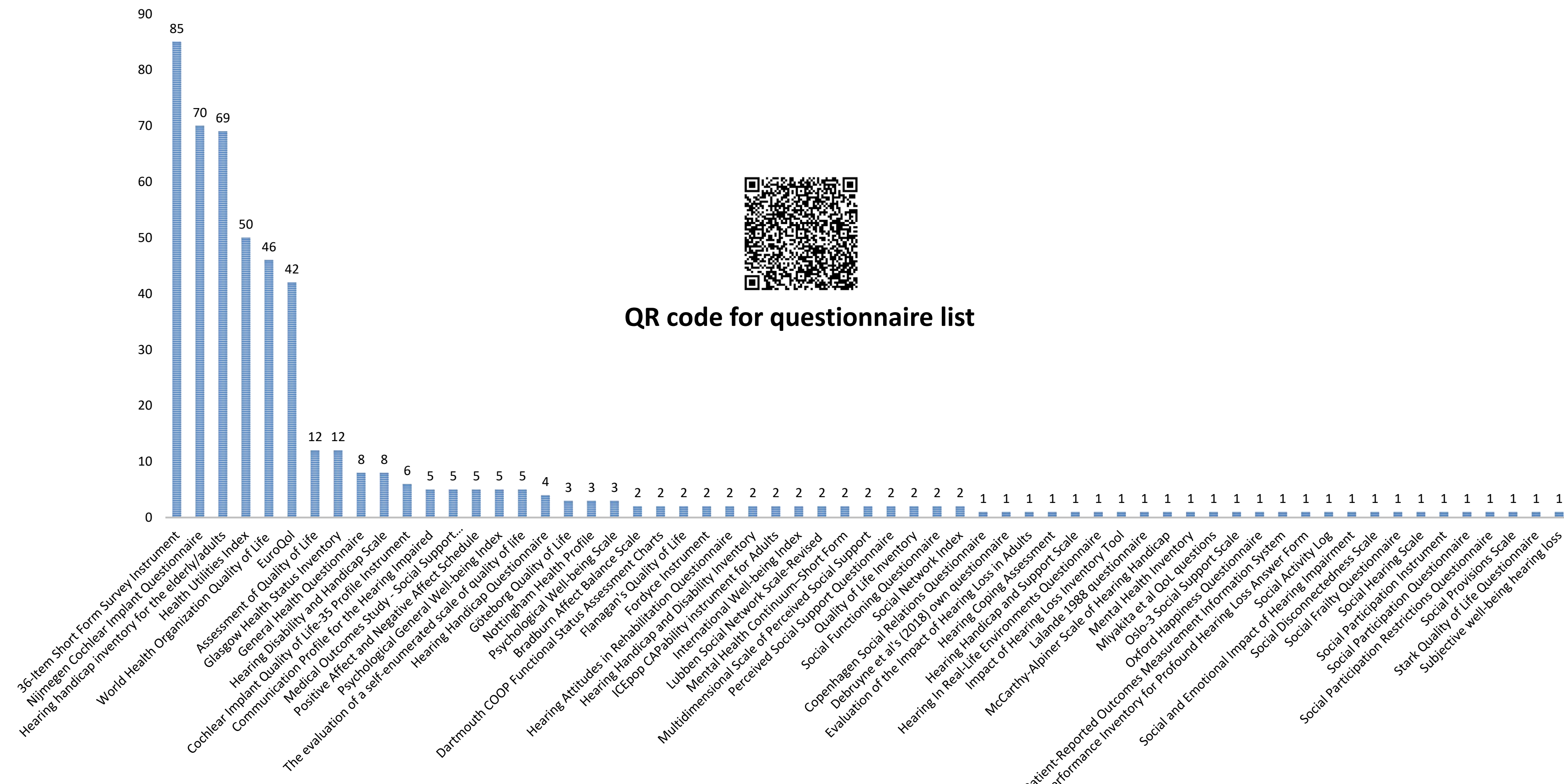
To identify the well-being questionnaires previously used for adults with hearing loss (AHL), we conducted a systematic search of EMBASE, MEDLINE & Web of Science.

- "Hearing loss" OR "hearing impair\*" OR "hard of hearing" OR "deaf\*" OR "hearing disorder"
- "Well-being" OR "wellbeing" OR "well being" OR "life satisfaction" OR "social health" OR "emotional health" OR "quality of life"

Followed by the examination and listing of scales measuring social and/or emotional well-being.



### FREQUENCY OF RELEVANT QUESTIONNAIRES IN IDENTIFIED STUDIES



QR code for questionnaire list

## 2. Is social and emotional well-being of adults with hearing loss multidimensional? And if so, what factors do social and emotional well-being variables map onto?

We measured important aspects of social and emotional well-being for AHL. This was followed by exploratory factor analysis (oblique rotation).

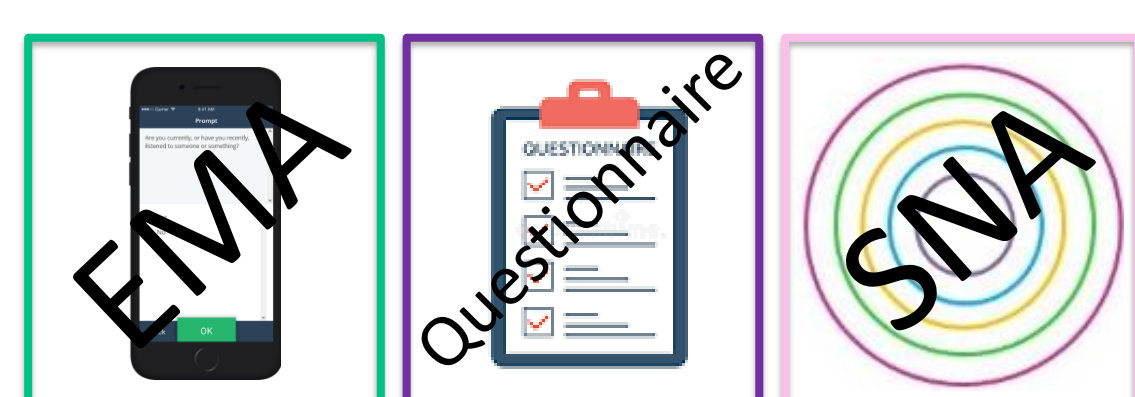
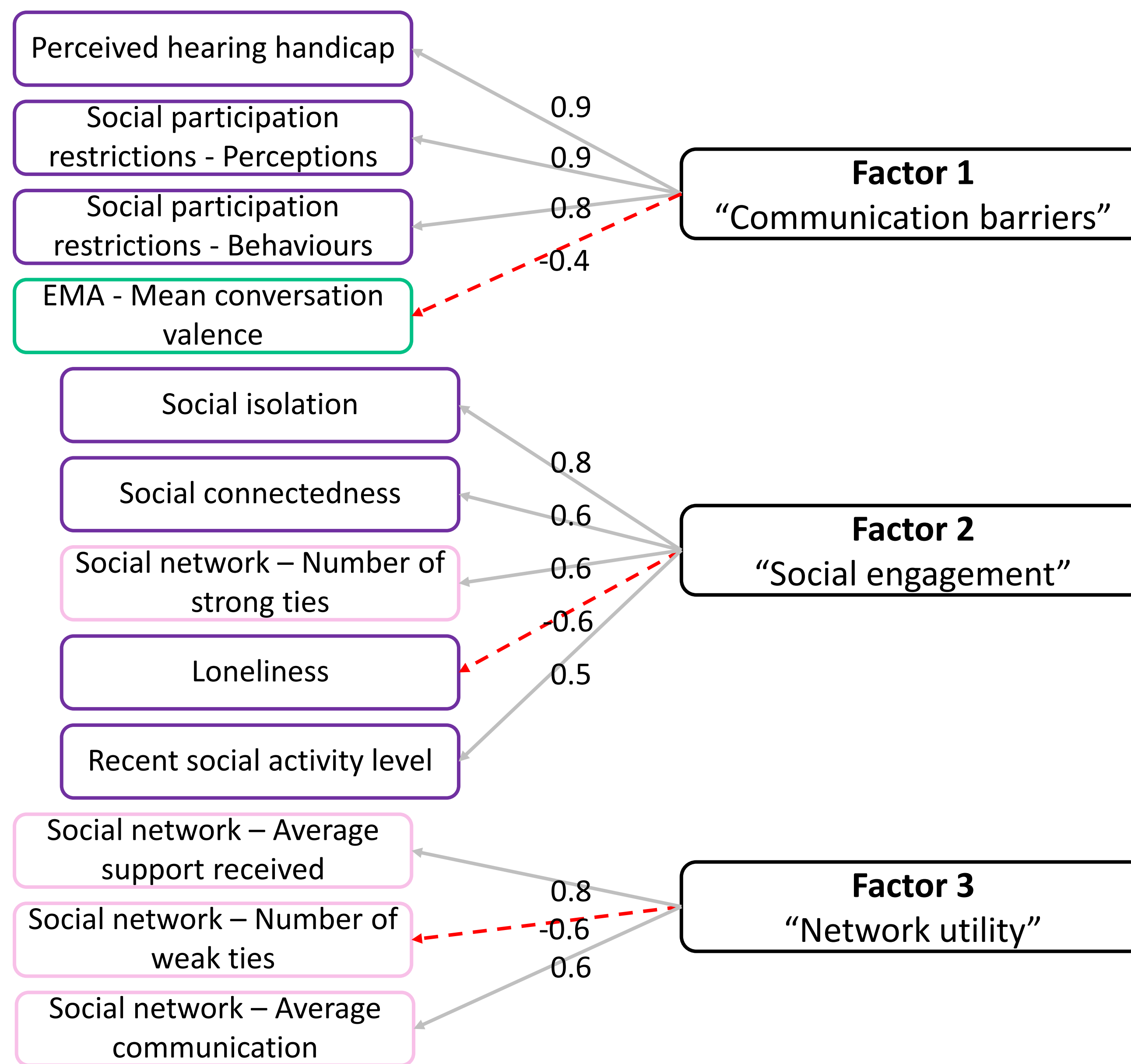
135 AHL completed:

- 7-days of ecological momentary assessment to measure emotions in listening situations.
- A social network interview to measure social contacts, support and communication (SNA).
- A battery of questionnaires.

This provided 12 key variables for the exploratory factor analysis

Participant characteristics	Sample (n = 135)	Older Adults (>65yo) (n = 85)	Younger Adults (<65yo) (n = 50)
Mean age (years)	65.6	72.65	53.62
Female	74	47	27
Male	61	38	23
BE4FA (dB HL)	44.49	48.35	37.93
Aided	112	72	40
Unaided	23	13	10
Surveys completed	84.95%	85.97%	83.22%

Variable factor loadings	Factor 1	Factor 2	Factor 3
EMA Mean conversation valence	-0.370		-0.132
Social activity log		0.543	0.107
Hearing handicap inventory adult	0.886		
SPaRQ- behaviours	0.813		
SPaRQ- perceptions	0.870		
De Jong Gierveld loneliness scale	0.293	-0.572	
Lubben social network scale		0.791	
Social connectedness scale	-0.223	0.647	-0.154
Number of weak ties		0.345	0.600
Number of strong ties	0.199	0.631	
Average support received		0.123	-0.786
Average communication			-0.594



Factor loading in positive direction  
Factor loading in negative direction

## 3. Are existing well-being measures adequate for measuring the social/emotional well-being factors?

We used spearman rank correlations to investigate convergent and discriminant validity, whether the relevant subscales of two of the most popular existing social and emotional well-being scales map onto our factors: Short Form Survey Instrument (SF-36) and World Health Organisation Quality of Life (WHOQOL).

Correlation coefficients of subscales and factors	Factor 1	Factor 2	Factor 3
SF-36	-0.15561	0.096596	-0.16594
Emotional W-B	-0.44768	0.433301	-0.1709
SF-36 Social Functioning	-0.40118	0.428189	-0.14
WHO Overall Quality of Life	-0.46832	0.51336	-0.06642
WHO Psychological Relationships	-0.30894	0.501347	0.110495

Factor three is not adequately measured by any of the five subscales. Network information may be an important missing aspect of these scales. Factor three is also measured only by SNA, so we need to ensure the rigour of factor three.

### Conclusions

- 61 questionnaires pertaining to social and/or emotional well-being were previously used for AHL. Six were used frequently, with a majority used only once or twice.
- The social and emotional well-being of AHL is multidimensional. And not just 1 = social 2 = emotional.
- Of the three factors we found, only factor three "Network Utility" does not correlate with the subscales of two of the most popular existing measures.
- Further work now will investigate if this is truly an important missing aspect of existing scales, or if the measurement type (SNA) plays a role.