

# Testing the frequency scale for the content validity of the modified EQ-HWB-S in a sample of patients, informal caregivers and members of the general public in Argentina.

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## OBJECTIVE

The EQ-HWB is a generic instrument designed to measure health and wellbeing in diverse populations. We are conducting a content validity assessment of the Argentine Spanish version of the EQ-HWB-S in a sample of patients, social care users, and informal carers. This poster presents findings of an exploratory study about participants understanding of the modified frequency scale options, and equivalence and wording preferences between modified and experimental versions.

## METHODS

Qualitative study employing cognitive interviews with 20 participants recruited through purposive sampling strategy.

### Table 1: Participant characteristics

<b>Gender:</b>		<b>Age:</b>	
F	12 (60%)	18 – 34	5 (25%)
M	8 (40%)	35 – 64	5 (25%)
<b>Health condition:</b>		+ 65	10 (50%)
Yes	13 (65%)	<b>Education:</b>	3 (15%)
No	7 (35%)		
<b>Users of social care services:</b>		High school	7 (35%)
Yes	9 (45%)	Tertiary	4 (20%)
No	11 (55%)	University	6 (30%)
<b>Carer:</b>			
Yes	4 (20%)		
No	16 (80%)		

- Most interviews were conducted face-to-face.
- Trained qualitative researchers used semi-structured interviews combining a think-aloud approach and targeted probes.
- Content analysis was performed using a framework adapted for content validation studies, supported by data extraction matrices.
- The study protocol was approved by a local IRB in Buenos Aires, Argentina.

- Ranking the Frequency Scale response options** Participants were given five randomly ordered cards with the frequency options of the EQ-HWB S modified version and were asked to arrange them from most frequent to least frequent. None of the responses were used as pre-existing anchors.

- Comparison with the Experimental Version** (In the modified version, the option "Only occasionally" was changed to "A little bit of time."). Participants were then asked to place a sixth card ("*Only occasionally*") on the scale.
- A sensitivity analysis was conducted, removing participants who did not correctly place the cards at the extremes.

Table 2. Participant Rankings with Expected Order  
(Modified version intended order)

subj ect	Correlati on	Never	A little of the time	Sometimes	Often	Most or all of the time
1	0,4	Sometimes	Never	A Little of the time	Most or all of the time	Often
2	1	Never	A little of the time	Sometimes	Often	Most or all of the time
3	1	Never	A little of the time	Sometimes	Often	Most or all of the time
4	1	Never	A little of the time	Sometimes	Often	Most or all of the time
5	0,8	Never	A little of the time	Often	Sometimes	Most or all of the time
6	0	Never	Often	Most or all of the time	Sometimes	A little of the time
7	0,4	Never	Often	Sometimes	A little of the time	Most or all of the time
8	1	Never	A little of the time	Sometimes	Often	Most or all of the time
9	1	Never	A little of the time	Sometimes	Often	Most or all of the time
10	1	Never	A little of the time	Sometimes	Often	Most or all of the time
11	0,8	A little of the time	Never	Sometimes	Often	Most or all of the time
12	1	Never	A little of the time	Sometimes	Often	Most or all of the time
13	1	Never	A little of the time	Sometimes	Often	Most or all of the time
14	1	Never	A little of the time	Sometimes	Often	Most or all of the time
15	1	Never	A little of the time	Sometimes	Often	Most or all of the time
16	1	Never	A little of the time	Sometimes	Often	Most or all of the time
17	1	Never	A little of the time	Sometimes	Often	Most or all of the time
18	1	Never	A little of the time	Sometimes	Often	Most or all of the time
19	1	Never	A little of the time	Sometimes	Often	Most or all of the time
20	0,4	Never	Most or all of the time	A little of the time	Sometimes	Often

## RESULTS

### Explore the Frequency Scale

The frequency of responses in each position was evaluated based on the positions previously proposed by the researchers. In most cases, there was a strong agreement between the expected and chosen positions (75% to 90%), with positions 2 and 4 showing the lowest concordance (75% in both cases). Table 2 shows that the large majority of respondents ordered responses exactly as intended, three participants (1, 6, 20) placed the response options in an almost completely random order.

### Characteristics of participants who misordered

- Woman (60) university studies, breast cancers
- Men (34) university studies, diabetes
- Woman (88) tertiary studies, hypertension

These 3 participants had no difficulty with the EQ-HWB-S, only in positioning themselves in “the last 7 days”. Two of them were the first interviews we carried out the exercise for the first time and they did not understand the task. Then we decided to change the instruction. In addition, two participants mis-ordered two adjacent responses, we interpret as poor understand of the wording.

While the majority of participants placed the cards in the expected positions, 19 cards were placed in different locations, with deviations of up to three positions from the expected placement. However, cognitive debriefing using EQ-HWB-S questions confirmed that the scale was sufficient and coherent. Most participants found it appropriate and reported no difficulty selecting a response.

Agreement, measured by the kappa index between expected and observed positions was higher, with values of 0.76 (95% CI: 0.67 - 0.86) and 0.88 (95% CI: 0.80 - 0.95) for unweighted and weighted kappa, respectively. In the sensitivity analysis, the agreement between expected and observed positions was higher, with values of 0.94 (95% CI: 0.88 - 1) and 0.97 (95% CI: 0.93 - 1) for unweighted and weighted kappa, respectively. An the only 4 cards were placed in unexpected locations (Table 3).

### Comparison with the Experimental Version

- When comparing to the experimental version, "only occasionally" was expected to align with "a little of the time," but only 5 participants matched it as anticipated, while 8 paired it with "sometimes".
- Three participants noted that “Only occasionally” (In Spanish Solo de vez en cuando) did not sound natural.
- Five participants chose the modified version
- Nine participants had no preference between the two frequency scales versions

## CONCLUSION

In the majority of participants the modified frequency scale exercise did not reveal major wording or comprehension issues. No clear preference emerged between the experimental and modified versions. Initially, the card-sorting exercise was conducted without reference to a specific situation, which made it challenging for participants. Introducing an example—such as considering how many times they had felt cold in the past seven days—proved helpful. However, at least two participants struggled with the exercise, leading to responses that differed from the intended meaning.

Table 3. Sensitivity analysis contingency table

	Never	A little of the time	Sometimes	Often	Most or all of the time
1	16	0	0	0	0
2	0	15	0	1	0
3	0	0	15	1	0
4	0	1	1	14	0
5	0	0	0	0	16