



Reliability of a specific Health Related Quality of Life (HRQoL) questionnaire for home enteral nutrition (HEN) (NutriQoL[®] questionnaire)



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Rationale and objective

Generic instruments measuring Health Related Quality of Life (HRQoL) are not enough concrete in order to explore the influence of specific aspects of home enteral nutrition (HEN) in patients receiving this therapy^{1,2}. For this reason, NutriQoL[®], a specific questionnaire, was developed for measuring HRQoL in patients receiving HEN.

The aim was to **analyze the reliability of NutriQoL[®]** as a psychometric property.

Tables and Figures (I)

Figure 1. Distribution of patients according to the main diagnosis leading to HEN

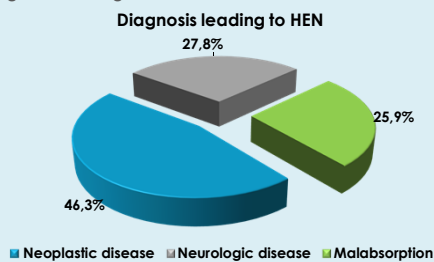


Figure 2. VAS scores obtained in each visit (mean and 95% CI)

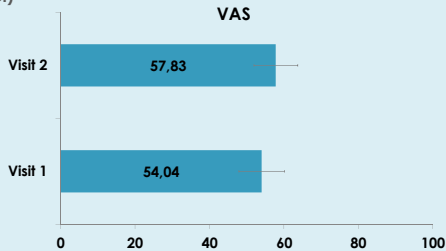
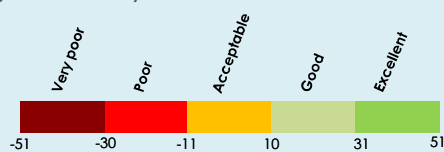


Figure 3. Preliminary distribution of total NutriQoL[®] scores



Results

- ▶ NutriQoL[®] was administered to 54 clinically stable subjects: 38 patients and 16 caregivers on behalf of patients.
- ▶ 59.3% were men, mean age of 65 (SD: 18) years.
- ▶ 48.2% used HEN as the only nourishment.
- ▶ The main diagnosis for which HEN was prescribed was neoplastic disease (46.3%) (Figure 1).
- ▶ The majority of patients only used the oral administration route (44.5%).
- ▶ Test-retest reliability and internal consistency results are presented in table 1 and 2.
- ▶ Mean (SD) NutriQoL[®] and VAS scores are presented in table 3 and figure 2, respectively.

Methods

A prospective cohort of patients receiving HEN, diagnosed by their treating physician as clinical stable (a stable health state, with constant Karnofsky index, and without expected changes during the month following the inclusion), was recruited from 5 Spanish public hospitals. It included 17 pairs of items of HEN-related HRQoL grouped in two domains:

- 1) physical functioning and activities of daily living
- 2) social life aspects.

Additionally, a visual analogue scale (VAS) and 1 item of overall HRQoL were presented. NutriQoL[®] was completed twice within a 3-week interval. Total NutriQoL[®] score ranges between -51 and 51 points (Figure 3).

Reliability was assessed by **test-retest reliability**, using intra-class correlation coefficients (ICC) and their 95% confidence interval (CI), and **internal consistency** evaluated by Cronbach's alpha (α)^{3,4}. Both coefficients were calculated for the total and each NutriQoL[®] domain scores between visits 1 and 2.

References

1. Eur. J. Gastroenterol. Hepatol. 2000; 12:1101-09
2. J. Adv. Nurs. 2006; 56:270-81
3. Med Clin (Barc). 1998;110:142-145
4. BMJ. 1997; 314:572

Conclusions

NutriQoL[®] had a **good reproducibility level** and presents a **good internal consistency**. Mean (SD) NutriQoL[®] scores indicated that patients had a **fairly good HRQoL**. NutriQoL[®] VAS score showed similar results in both visits.

NutriQoL[®] proved to be a reliable tool for measuring HRQoL in patients receiving HEN. This study raises issues relevant to the practical use of specific HRQoL scales in patients with HEN.

Tables and Figures (II)

Table 1. Intra-class correlation coefficients and CI 95% from test-retest

Test-retest reliability	ICC	95% CI
Domain 1	0.83	0.72-0.90
Domain 2	0.84	0.74-0.90
NutriQoL [®] score	0.88	0.80-0.93

Table 2. Cronbach's alpha in each visit

Internal consistency	α -visit 1	α -visit 2
Domain 1	0.68	0.76
Domain 2	0.62	0.70
NutriQoL [®] score	0.77	0.83

Table 3. Descriptive statistics of NutriQoL scores (domains and total score)

	Visit 1 (n=54)		Visit 2 (n=54)	
	Mean(SD)	Range	Mean(SD)	Range
Domain 1	11.07(11.48)	-1 to 35	11.57(12.76)	-18 to 41
Domain 2	0.72(4.55)	-9 to 9	1.37(4.53)	-9 to 9
NutriQoL[®] score	11.80(14.88)	-21 to 41	12.94(16.42)	-21 to 48