

Validation and responsiveness of EHP-30 traditional Chinese version in endometriosis and adenomyosis

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Objective

The EHP 30 Endometriosis Health Profile Questionnaire is useful to evaluate the health status of women suffering from endometriosis. Our study studied the Chinese version of the EHP-30 to assess the validity of the questionnaire for patients with endometriosis and adenomyosis, and assessed the responsiveness of this questionnaire after medical and surgical therapy in this patient group.

Design Prospective Cohort Study

Methods

Chinese EHP-30 was prepared by standard forward and backward translation. Women suffering from endometriosis with/without adenomyosis were invited and filled in the self-administered EHP-30. Disease characteristics for endometriosis included intensity of painful symptoms by visual analog scale (VAS). Disease characteristics for adenomyosis included VAS scores on painful symptoms and menstrual blood loss by pictorial blood loss assessment chart (PBAC). Construct validity was evaluated through correlation with Short-form Health Survey (SF-36) by Spearman correlation tests. For construct validity, at least 50 patients were required. The number of patients needed for factor analysis varies from 4 to 10 per variable to ensure stability of the variance-covariance matrix. With 53 items in EHP-30, allowing 5% of incomplete questionnaires, a total of 222 patients were recruited. 109 women repeated the questionnaire in 2 weeks to assess the test-retest reliability. Test-retest reliability was assessed by intra-class correlation coefficient (ICC). The internal consistency was checked. 3-12 months after medical treatment or surgery, the same set of EHP-30 and SF-36 were given at the usual gynaecology follow up. The responsiveness of the EHP-30 was evaluated by effect sizes (ES), standardized response mean (SRM), and paired samples t test or the Wilcoxon Signed Rank Test where appropriate.

Results

222 women, mean age 39 +/-7.29 (SD) years, completed the study. Cronbach’s alpha for the core questionnaire as a whole was 0.98 and indicates good internal reliability. All item-total correlations exceeded 0.4 for the core questionnaire (range 0.65-0.92), which demonstrates good internal consistency for items. Test-retest reliability indicated substantial to perfect agreement (ICC between 0.87-0.94 for all subscales). All predefined correlations between EHP-30 and SF-36 were significant (p<0.001). The responsiveness after medical and surgical treatment was well demonstrated with EHP-30 and subscales on their quality of life were reflected with EHP-30.

Conclusions

Chinese version of Endometriosis Health Profile-30 is a validated tool to evaluate symptomatology, quality of life of patients with endometriosis and adenomyosis. It is a reflective tool sensitive to change of health status. In clinical practice this questionnaire can be used to evaluate the treatment response.

Disclosure None

Table 1. Internal reliability for the five main subscales of the Endometriosis Health Profile 30

Scales	All women (n=222)	Endometriosis only (n=175)	Adenomyosis (n=47)
Pain	0.974	0.969	0.978
Powerlessness	0.932	0.922	0.931
Emotions	0.940	0.937	0.941
Social support	0.928	0.922	0.926
Self-image	0.860	0.867	0.818

Table 2. The test-retest reliability of the five main subscales of the Endometriosis Health Profile 30

Scales	Recruitment*	Retest†	ICC
Pain	37.82 ± 26.41	37.50 ± 27.60	0.941
Powerlessness	40.17 ± 25.74	38.08 ± 26.08	0.942
Emotions	28.25 ± 22.17	29.92 ± 24.00	0.937
Support	25.75 ± 23.98	31.13 ± 24.95	0.911
Image	19.50 ± 19.68	25.50 ± 22.36	0.841

Table 3. Convergent validity of the scales of Endometriosis Health Profile-30 and Short Form 36-item health survey

Endometriosis Health Profile-30	Short Form 36	Spearman’s rho*	Endometriosis Health Profile-30
Pain	Bodily pain	-0.785	Pain
Pain	Role of physical limitation	-0.709	Pain
Control and powerlessness	Social function	-0.675	Control and powerlessness
Emotions	Mental health	-0.586	Emotions
Emotions	Role of emotional health	-0.645	Emotions