



Taiwan Chinese Version of the Self-Regulation Questionnaire for Gynecologic Cancer Survivors in Taiwan: A Psychometric Study

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Introduction

To improve quality of life (QOL), these survivors must deal with treatment-related side effects through self-regulation (SR). This study evaluated the psychometric properties of a culturally adapted Taiwan Chinese version of the self-regulation questionnaire (TC-SRQ) for gynecologic cancer survivors.

Keywords: Self-Regulation, Gynecologic Cancer Survivors, Psychometric Study, Quality of Life

Methods

A cross-sectional study. The TC-SRQ was adapted from a German version through translation and back translation. Pilot (N=37) and formal tests (N=287) of TC-SRQ with a sample of these survivors were conducted. Construct validity was evaluated by confirmatory factor analysis; convergent validity tested by using EORTC QLQ-C30 while discriminant validity using age, family support, health status, and sleep quality. Reliability was evaluated by internal consistency and test-retest reliability.

Results

Analyzing data fit for TC-SRQ measurement model found significant difference ($\chi^2=311.23$, $p=0.0$) failed to reject the null hypothesis but satisfied by popular fit indices (RMSEA=0.088; NFI=0.97, CFI=0.98, NNFI=0.97). SR correlated positively with QOL in overall and in partial of functional domains and negatively with fatigue and pain. SR also distinguished by age, family support, health status, and sleep quality. Thus, TC-SRQ demonstrated good convergent and discriminant validities. A Cronbach's α of .91 indicated good internal consistency; the test-retest reliability coefficient was .82.

Conclusions

TC-SRQ is valid and reliable for assessing self-regulation in gynecologic cancer survivors. With TC-SRQ, self-regulation of gynecologic cancer survivors can be measured clinically and regularly.

Table 1 Demographic and medical characteristics and TC-SRQ total for the study participants (N = 28)

Variable	n	%	M	SD
Education				
Junior high school or below	116	40.8	70.71	14.55
High/vocational school	87	30.3	70.78	13.07
College or above	82	28.9	68.62	11.33
Marital Status				
Not married	96	34.1	68.49	13.48
Married	189	65.9	70.96	13.06
Religiosity				
Not religious	64	22.6	67.63	13.59
Religious	221	77.4	70.86	13.06
Site				
Uterine cervix	121	42.9	71.26	14.71
Uterine corpus	83	28.9	69.77	12.38
Ovary	81	28.2	68.81	11.64
Stage				
I	182	63.8	71.10	13.43
II	52	18.5	69.00	13.58
III	39	13.6	68.82	10.49
Survival Time				
< 2 years	72	25.4	69.90	13.36
2-5 years	79	27.5	70.10	12.74
≥ 5 years	132	46.3	70.66	12.99
Treatment				
Surgery only	122	42.9	70.37	15.13
Surgery + radiation therapy (including radiation therapy only)	42	14.6	71.98	10.39
Surgery + chemotherapy (including chemotherapy only)	83	28.9	70.46	11.08
Surgery + radiation + chemotherapy (including radiation + chemotherapy only)	38	13.6	66.61	13.64
Severity				
High	84	29.6	69.74	12.14
Average	125	43.9	67.38	12.28
Mild	74	25.8	74.43	13.26

^aTC-SRQ data missing for two participants

Table 2 Model fit indices for the original model and modified model of TC-SRQ scale

Fit index	Original model	Modified model
Likelihood-ratio Chi-square (χ^2)	664.64	308.76
Goodness-of-fit Index (GFI)	0.77	0.88
Root mean square error of approximation (RMSEA)	0.14	0.088
Adjusted goodness-of-fit index (AGFI)	0.70	0.83
Non-normed fit index (NNFI)	0.95	0.98
Normed fit index (NFI)	0.95	0.97
Comparative fit index (CFI)	0.96	0.98
Incremental fit index (IFI)	0.96	0.98
Parsimony normed fit index (PNFI)	0.81	0.79
Relative fit index (RFI)	0.94	0.97
Critical N (CN)	71.80	125.95