

Validation of an instrument to assess the meaning in suffering: a methodological study

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Background

Suffering is a complex, multidimensional and individual experience extensively described in literature concerning different life and health conditions, but often reduced to a physical perspective as a symptom.

The relationship between suffering and meaning in life led to the development of measurement tools such as it is the case of the Meaning in Suffering Test (MIST). Additionally, recent studies have awakened the interest in the spiritual dimension and meaning in life lived by people with a reproductive health-condition, such as infertility. Only one Portuguese study validated such tool in a sample of Portuguese patients with chronic rheumatic pain.

Aim

To study the psychometric properties of the Portuguese version of **The Meaning in Suffering Test** in the Portuguese patients under fertility treatment.

Methods

Descriptive cross-sectional study (September 2019 - June 2020)

Approval by The Ethics Committee of The Institute of Health Sciences of
Universidade Católica Portuguesa

- **104** participants in the process of engaging or at any stage of a fertility treatment.
- Health-related online forums and social (in)fertility-related websites (Associação Portuguesa de Fertilidade).
- Online questionnaire.
- **MIST**: 20 items and 3 subscales (“Subjective characteristics of suffering”; “Personal responses to suffering”; and “Sense of suffering”); 7-point Likert scale ranging from 1 to 7; Total score range from 20 to 140. Higher scores indicate higher levels of meaning towards the experience of unavoidable suffering. (Starck, 1985).
- Statistical analysis: SPSS, version 26.0 (IBM, 2018).
- The Spiritual Wellbeing Questionnaire (SWBQp) was used because of its hypothesized relationship with Meaning in Life (Fisher, 2011).

Confirmatory Factor Analysis

Bad fit statistics

Exploratory Factor Analysis

**16-item version
validated**

Cronbach's alpha (0.92)
Good reliability for all
subscales (0.72 - 0.90)

Correlation between
MIST-P and SWBQp was
statically significant
($r = 0.51$; $p = 0.00$)

Results

Mean of items for overall scale = 3.63

Total score = 378.0

Cronbach's alpha = 0.90

Table 1 - CFA Goodness-of-fit indices for the MIST-P models ($n=104$)

CFA Goodness-of-fit indices for the MIST-P models								
Models	χ^2	df	χ^2/df	p -value	RMSEA (90% CI)	CFI	TLI	NFI
Model 1	553	167	3.31	0.00	0.15 (0.13-0.16)	0.64	0.59	0.49
Model 2	146	53	2.76	0.00	0.13 (0.10-0.15)	0.84	0.80	0.62
Model 3	536	170	3.31	0.00	0.15 (0.13-0.16)	0.63	0.59	0.55
Model 4	223	101	2.21	0.00	0.10 (0.08-0.12)	0.86	0.83	0.77

CFI = Comparative Fit Index; CI = Confidence Interval; df = degrees of freedom; NFI = Normed Fit Index; RMSEA = Root-Mean-Square Error of Approximation; TLI = Tucker-Lewis Index; χ^2 = Chi-square statistic; χ^2/df = ratio of the differences in chi-square to the differences in degrees of freedom

Table 2 – Descriptive statistics, Cronbach's alpha coefficient of MIST-P models and EFA assessment of normality of factors.

Structure	Factor	Mean	SD	Skewness	SE	Kurtosis	SE	Cronbach's Alpha
20-item		3.63	1.07	-0.10	0.23	-0.29	0.46	0.90
	Factor 1	4.26	1.34	-0.17	0.23	-0.39	0.46	0.90
	Factor 2	3.01	1.42	0.63	0.23	-0.31	0.46	0.82
	Factor 3	2.70	1.28	0.83	0.23	0.55	0.46	0.72
	Factor 4	4.18	1.70	-0.11	0.23	-0.98	0.46	0.71
20-item		3.63	1.07	-0.10	0.23	-0.29	0.46	0.90
	Factor 1	3.19	1.11	0.54	0.23	0.47	0.46	0.67
	Factor 2	3.94	1.23	-0.02	0.23	-0.14	0.46	0.83
	Factor 3	3.66	1.20	-0.07	0.23	-0.53	0.46	0.73
	Factor 4	3.67	1.26	0.12	0.23	-0.48	0.46	0.89
12-item		3.67	1.26	0.12	0.23	-0.48	0.46	0.89
	Factor 1	3.88	1.35	1.84	0.01	0.23	-0.51	0.89
	Factor 2	3.25	1.36	0.42	0.23	-0.61	-0.46	0.63
	Factor 3	3.83	1.23	0.03	0.23	-0.34	0.46	0.92
	Factor 4	4.27	1.36	-0.15	0.23	-0.44	0.46	0.90
16-item		3.83	1.23	0.03	0.23	-0.34	0.46	0.92
	Factor 1	4.27	1.36	-0.15	0.23	-0.44	0.46	0.90
	Factor 2	2.35	1.15	0.71	0.23	-0.24	0.46	0.79
	Factor 3	3.71	1.50	0.03	0.23	-0.72	0.46	0.72
	Factor 4	3.71	1.50	0.03	0.23	-0.72	0.46	0.72

SD = Standard Deviation; SE = Standard Error

Conclusion

Further research is necessary to better understand fluctuations in individuals undergoing long-term treatments and test the 16-item and three-factor version as a suitable, valid, and reliable structure for measuring meaning in suffering by nurses providing care to patients with different health conditions.

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