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Measuring patient satisfaction with urinary incontinence treatment

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Measuring patient satisfaction with urinary incontinence treatment

Abstract

Background: A number of patient satisfaction measures were trialed in a cross-sectional survey of women who had treatment for urinary incontinence (N=187). The psychometric properties of these measures were examined and a short measure for patient satisfaction was developed.

Methods: Participants completed a questionnaire comprising items covering incontinence status, treatment type and three generic patient satisfaction questionnaires: the Client Satisfaction Questionnaire (CSQ-18), the Consultation Satisfaction Questionnaire (Consult SQ), and the Patient Satisfaction Index (PSI).

Donabedian's model postulates that satisfaction is the patient's judgment on the quality of care. The seven dimensions in this model provide the conceptual framework against which the measures were reviewed.

Results: The instruments were examined by their descriptive systems, internal structures and responsiveness. The items from the instruments were examined through iterative Mokken and partial credit IRT analyses against Donabedian's model. Seven items were selected which formed a Short Assessment of Patient Satisfaction (SAPS) scale. Its internal psychometric properties were excellent (α = 0.86) and it provided a patient satisfaction perspective that was most consistent with Donabedian's model.

In summary, the internal structures of the instruments suggested that all SAPS items were responsive, but some items on the other measures were insensitive. Also, all measures were shown to be unidimensional. Tests of response bias suggested that this was present in the CSQ-18 and the PSI. Redundancy was observed in the Consult SQ, CSQ-18 and PSI.

Conclusions: This study has provided evidence that patient satisfaction can be assessed validly, reliably and sensitively using the much shorter SAPS instrument. This new short measure of patient satisfaction with treatment will be a useful tool for clinicians and evaluators as the population ages.

Keywords

treatment, patient, incontinence, measuring, poster, urinary, satisfaction

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Measuring Patient Satisfaction with Urinary Incontinence Treatment

Study aims

Comparison of four patient satisfaction instruments:

- CSQ-18 (Client Satisfaction Questionnaire; 18 items)
- Consult SQ (Consultation Satisfaction Questionnaire; 18 items)
- Genito-Urinary Treatment Satisfaction Scale (GUTSS; 10 items)
- PSI (Patient Satisfaction Inventory; 23 items)

Introduction

1. Incontinence affects ~38% of females and ~10% of males
2. Treatment outcomes are symptom relief, improved quality of life
3. Another outcome is satisfaction with health care:
   - Expectation that clinicians will 'cure' or alleviate symptoms
   - Patients' rights sees patients as 'consumers' who need to be informed, consulted and involved in medical decision-making
   - Patient views help monitor health care quality

Review of the patient satisfaction literature

1. Most studies used a single-item
2. Only 1 incontinence-specific measure
   - The Genito-Urinary Treatment Satisfaction Scale (GUTSS)
3. Over 60% of papers fail to report any psychometric properties
4. ~ 80% of respondents report being 'satisfied'; how to interpret this?

Theory of patient satisfaction

Theories of patient satisfaction suggest it covers 7 areas:

- Access to health services, the treatment environment
- Provision of health information
- The relationship with health care providers
- Participation in making health care choices
- The technical quality of care
- Treatment effectiveness (helping the daily life of the patient)
- General satisfaction

Dissatisfaction occurs where there are multiple transgressions or where there is a catastrophic failure in one area

Methods

Random sample of physiotherapy and surgery patients:

- Females; Rx in previous 12-months
- Patients sampled from St George Hospital (Sydney) & Royal Women's Hospital (Melbourne)

Questionnaire:

- Incontinence Severity Index & Urogenital Distress Inventory-6 post treatment (now) and retrospective to before treatment (then); then-test = difference between (now) and (then)
- Patient satisfaction (CSQ18, Consult SQ, GUTSS, PSI)

Participants

- Participation rate = 44% (N =184)
- Treatment: Physiotherapy (27%), Surgery (40%), Both (33%)
- Then-test: Improved (82%), No change (12%), Worse (6%)

Results 1: Comparison of instruments

		Consult SQ	CSQ-18	GUTSS	PSI
Coverage of theory					
Access & facilities		***	***		
Information		**		**	***
Relationship		****	**	**	******
Participation		*	**		*********
Technical skill		*****	**	*	***
Effectiveness			*	***	
Satisfaction general		***	*****		
Other			***		**
Correlations between scales	***CSQ-18***	0.67			
(Spearman, all p < 0.01)	***GUTSS***	0.48	0.70		
	PSI	0.64	0.74	0.64	
Psychometric properties					
Average inter item correlations		0.45	0.41	0.55	0.59
Reliability (Cronbach α)		0.93	0.90	0.90	0.97
Scale analysis (Loevinger H)		0.51	0.42	0.58	0.63
Response bias (<20% of cases)		NO	YES	NO	YES
Responsiveness					
Treatment type (F-value, transformed)		0.35	2.57	4.90##	1.44
Treatment outcome (then-test)		0.10	4.47#	12.40##	2.42

(Significance: # ≤ 0.05, ## ≤ 0.01)

Interpretation:

- Poor coverage of patient satisfaction theory (best is CSQ-18; worst is PSI and GUTSS)
- High reliability - a function of redundant items (all 4 instruments)
- Evidence of response bias (CSQ-18 & PSI)
- Poor responsiveness (best is GUTSS)

Based on pooled items, can a comprehensive model be constructed?

Procedure

1. Preparing the data
   - Collapse sparse data & inconsistent response categories
   - Delete non-responsive & poorly worded items
   - Pool remaining items for analysis (N=49)
2. Data analysis
   - Partial credit item response theory analysis for item examination
   - Mokken analysis for item fit and scale analysis
3. Procedure
   - Iterative analyses until best fitting model achieved, consistent with the 7 theoretical areas of patient satisfaction

Results 2: Construction of the SAPS

Final model of a unidimensional Short Assessment of Patient Satisfaction scale (SAPS)

Dimension	*N*	*Item stem (abbreviated)*	*Item source*
Effectiveness	1	Happy with the effect of your treatment	GUTSS
Information	2	Satisfaction with explanations of treatment results	GUTSS
Technical skill	3	The clinician was careful to check everything	Consult SQ
Participation	4	Satisfaction with health care choices	PSI
Relationship	5	How much were you respected	PSI
Access & facilities	6	The time with the clinician was not long enough	Consult SQ
Satisfaction general	7	Happy with the care received	GUTSS

Results 3: Psychometric properties of SAPS

Psychometric properties of SAPS items and the SAPS scale

	Mokken analysis		*Partial credit IRT analysis*					
Item	*H_i (a)*	*Crit-value (b)*	*Point biserial (c)*	*Location (d)*	*SE (e)*	*Fit residual*	*x2*	*p-value*
1	0.52	0	0.74	0.25	0.11	1.19	0.74	0.69
2	0.55	0	0.75	-0.36	0.13	-0.34	3.82	0.15
3	0.56	0	0.74	-0.69	0.14	-0.80	4.14	0.13
4	0.55	1	0.78	-0.05	0.11	-0.20	0.83	0.66
5	0.58	0	0.81	-0.49	0.11	-0.76	1.16	0.56
6	0.51	3	0.61	2.02	0.15	0.96	0.25	0.88
7	0.56	0	0.74	-0.68	0.14	-0.81	1.16	0.56

Notes:

Scale statistics: Loevinger H: 0.55, ρ = 0.86, Cronbach α = 0.86

a = Item coefficient of scalability; b = Crit-value under P-matrix analysis;
c = point biserial correlation, d = logits; e = standard error

Interpretation:

- Excellent coverage of patient satisfaction theory areas
- No substantial violations of Guttman monotonicity
- Loevinger H exceeds value for strong unidimensional scale
- Consistent relationships between items

Results 4: Responsiveness of SAPS

	Consult SQ	*CSQ-18*	*GUTSS*	*PS I*	*SAP S*
Responsiveness to treatment and outcomes					
Treatment type (F-value, transformed)	0.35	2.57	4.90**	1.44	3.12*
Treatment outcome (then-test)	0.10	4.47*	12.40**	2.42	7.20**
Responsiveness to pooled Patient Satisfaction quartiles (a)					
Relative efficiency	1.00	1.68	1.61	1.15	2.18

Significance: * ≤ 0.05, ** ≤ 0.01

a = All 4 instrument scores converted to T-scores, then pooled (averaged) and then quartiled

Interpretation:

- SAPS more sensitive than Consult SQ, CSQ-18 or PSI to treatment type and treatment outcomes
  - Less sensitive than GUTSS
- SAPS more sensitive than any instrument to pooled patient satisfaction estimate

Conclusions

1. All 4 patient satisfaction instruments shown to have some measurement problems
2. Pooling of items led to the construction of the SAPS
3. SAPS (7-items) shortest instrument and has excellent internal psychometric properties
4. SAPS more sensitive than any instrument to pooled patient satisfaction estimate
5. SAPS needs to be tested in other samples and populations
6. A single item measure has also been derived from the study

A copy of the report and the SAPS can be obtained from A/Prof Graeme Hawthorne. Email: graemeeh@unimelb.edu.au

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