

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

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

Item	Mokken analysis			Partial credit IRT analysis			
	H _i (a)	Crit-value (b)	Point biserial (c)	Location (d)	SE (e)	Fit residual	x ² 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	0.58	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, $\rho = 0.86$, Cronbach $\alpha = 0.86$

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	PSI	SAPS
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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