The subjective shoulder value: a valid and simple measurement tool for routine measure of shoulder function

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Introduction

The Subjective Shoulder Value (SSV), is a straightforward shoulder function score (Figure 1) that is frequently used in practice and research though it did not undergo a full validation process.

Purpose

Evaluate the measurement properties of the SSV in patients conservatively treated for current shoulder conditions.

Participants

Heighty-height patients with either:
- rotator cuff condition (n=20),
- instability (n=23)
- adhesive capsulitis (n= 22)
- proximal humerus fracture (n=23)
were evaluated at their 1st medical consultation and six months later.

Methods

Difference between assessment stages (Wilcoxon signed-rank test), relationship amongst scales (Spearman correlations) and effect sizes (Cohen´s d) were calculated.

Methods

Shoulder function was evaluated usi
- Constant Score (CS)
- Relative Constant Score (CSrel)
- Simple Shoulder Test (STT),
- QuickDASH
- Western Ontario Shoulder Instability Index (WOSI)
- pain visual analog scale (pVAS)
- stiffness visual analog scale (sVAS)
- EQ-5D quality of life questionnaire.

Indicate on the scale below what percentage you would rate your affected shoulder, considering that a completely normal shoulder represents 100%. Tick only one box.

☐ ☐
0% 5 10 15 20 25 30 35 40 45 50 55 60 65 70 75 80 85 90 95 100%

Figure 1: Single shoulder value

Results

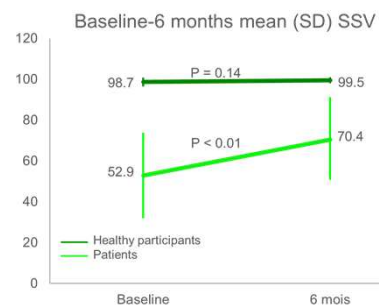

Figure 2: Baseline-6 months performance on the SSV for the patients and the control group

Results

Correlation SSV - shoulder function scores

Baseline	CSabs	CSrel	SST	QuickDASH	WOSI	EQ5D	EVA pain	EVA stiffness
SSV	0.57	0.55	0.54	-0.52	0.44	0.39	-0.36	-0.46

6 mois	CSabs	CSrel	SST	QuickDASH	WOSI	EQ5D	EVA pain	EVA stiffness
SSV	0.67	0.71	0.68	-0.70	0.68	0.54	-0.56	-0.50

Table 1: Correlations between the SSV and current shoulder function scores at baseline and 6 months

Responsiveness

	SSV	CSrel	CSabs	SST	WOSI	QuickDASH
Cohen's d	**0.86**	0.97	0.83	0.80	0.62	0.58

Table 2: Responsiveness of the SSV and current shoulder function scores for baseline-6 months difference in the control group

Implications

The SSV is a valid and responsive measurement tool.

The day to day reliability should also be investigated.

Discussion & Conclusions

The SSV discriminated between groups and measurements´ times in the patients group. It was stable over time in the control group.

It was more correlated with shoulder function scores with pain, stiffness and quality of life tools. Relationship was stronger at 6 months.

Its responsiveness compares to other approaches, except the WOSI.

Recommendations

The SSV is recommended for quick and unidimensional function evaluation in research and clinical practice