Patient and Physician Response Scale Preferences for Clinical Outcome Assessments in Sjögren's: A Qualitative Comparison of Visual Analogue Scale, Numerical Rating Scale, and Likert Scale Response Options

POSB371

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Introduction

- Sjögren's is a chronic autoimmune disease of exocrine glands, characterized by symptoms of dryness, fatigue, and joint/muscle pain[1]
- The 0-100mm Visual Analogue Scale (VAS), 0-10 Numerical Rating Scale (NRS), and 4-point Likert Scale (LS) have been used in clinical outcome assessments (COAs) to assess Sjögren's symptom severity and disease activity
- Given the range of response scales used in Sjögren's COA instruments, understanding their comparability and preference from the patient and physician perspectives may be of interest to the wider scientific community

Objectives

- To explore patient and physician preference for a 0-100mm VAS, 0-10 NRS, and 4-point LS when used to assess Sjögren's symptom severity and disease activity
- To explore comparability of patient and physician responses across these scales in Sjögren's

Methods

- Qualitative, semi-structured, cognitive, interviews were conducted via telephone with adult Sjögren's patients (N=12) from the US and expert Sjögren's physicians (N=10) from the US, UK, and Germany (**Figure 1** and **Table 1**)
- As part of a larger study, participants were asked to rank the 0-100mm VAS, 0-10 NRS, and 4-point Likert scale in order of their preference
- Patients with Sjögren's were asked where they would rate each category on the Likert scale (None/Mild/Moderate/Severe), on the 0-10 NRS and VAS (anchors: 'no symptoms' to 'severe symptoms')
- Physicians also marked the equivalent of each LS response (Inactive disease/low/moderate/high disease activity) on the corresponding NRS and VAS (anchors 'no disease activity' to 'maximal disease activity'), to explore between-scale comparability of responses

Results

Response scale preferences

- The 0-10 NRS was the preferred response scale by most patients (n=6/12) and physicians (n=6/10) (**Figure 2** and **Figure 3**)
- Familiarity with the 0-10 NRS, ease of use and less subjectivity were the most frequent reasons for this preference

Figure 1. Overview of study design

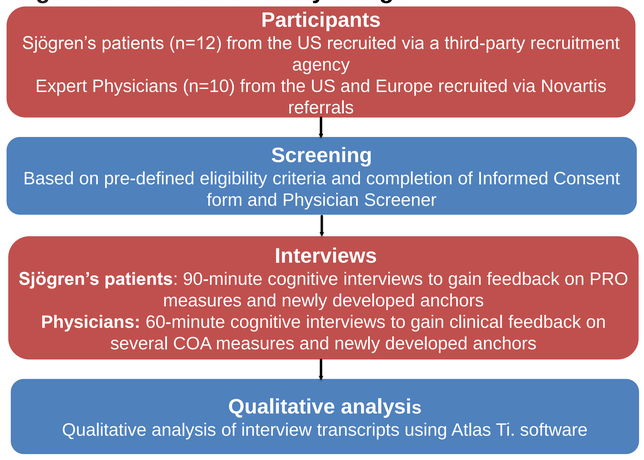


Figure 2. Patient order of preference of response scales

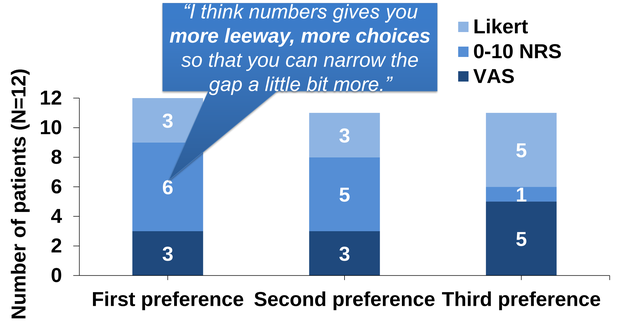


Figure 3. Physician order of preference of response scales

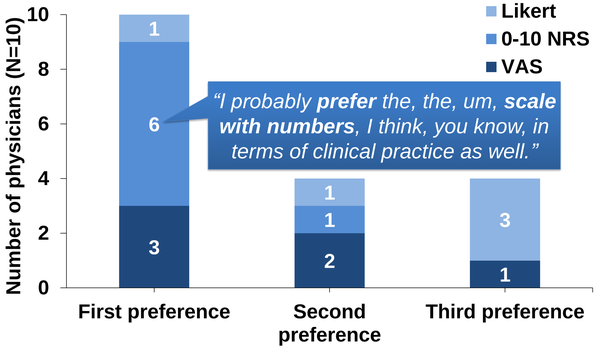
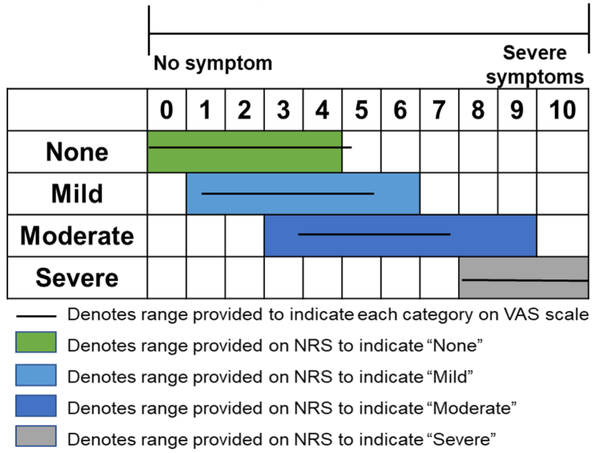


Table 1. Patient and Physician demographics

Patients (N=12)	
Age (years; average (min-max))	56.1 (20-80)
Ethnicity, n (%)	
Non-Hispanic, Non-Latino, or Non-Spanish origin	9 (75)
Hispanic, Latino or Spanish origin (of any race)	3 (25)
Overall disease activity (based on PhGA score), n (%)	
Moderate disease activity	5 (42)
High disease activity	4 (33)
Low disease activity	3 (25)
Education level, n (%)	
Completed high school or below only	2 (17)
Completed college/degree or above	10 (83)
Time since diagnosis, n (%)	
2-5 years	6 (50)
6-10 years	4 (33)
10+ years	2 (17)
Physicians (N=10)	
Country of practice, n (%)	
United States	8 (80)
Germany	1 (10)
UK	1 (10)
Current role, n (%)	
Rheumatologist	10 (100)
Number of years managing/treating Sjögren's, n (%)	
20-30	4 (40)
10-20	3 (30
5-10	2 (20)
30+	1 (10)
Number of Sjögren's patients treated per month (average), n (%)	
20-30	5 (50)
30+	5 (50)

PhGA: Physician global assessment of disease

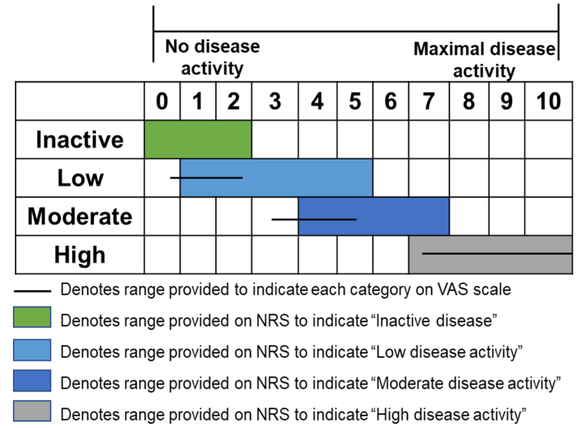
Figure 4. Comparison of VAS and NRS ranges for each Likert scale category (patient response)



Comparability of responses across scales

- Sjögren's patients rated 'Severe' on the Likert scale as ranging between 8-10 on the NRS and 80mm-100mm on the VAS. 'Moderate' ranged between 3-9 NRS and 37mm-77mm VAS. 'Mild' ranged between 1-6 on the NRS and 11mm-53mm 80mm-100mm on the VAS. 'None' ranged between 0-4 on the NRS and 0mm-52mm on the VAS (**Figure 4**)
- Physicians rated 'High disease activity' on the LS as ranging between 7-10 on the NRS and 72mm-100mm on the VAS. 'Moderate disease activity' ranged between 4-7 on the NRS and 35mm-55mm on the VAS. 'Low disease activity' ranged between 1-5 on the NRS and 5mm-28mm on the VAS. 'Inactive' was consistently selected as 0-2 on the NRS and 0mm on the VAS (**Figure 5**)

Figure 5. Comparison of VAS and NRS ranges for each Likert scale category (physician response)



Conclusions

- The 0-10 NRS was selected most frequently as the preferred response scale by both patients and physicians.
- Participants' responses were largely concordant across the VAS, NRS, and LS, with physicians categorizing scales more distinctly and consistently than patients
- Future quantitative research is required to confirm the comparability of responses across scales.

References

1.MARIETTE, X. & CRISWELL, L. A. 2018. Primary Sjögren's syndrome. New England Journal of Medicine, 378, 931-939..