What Clinical Severity Assessments May Miss: The Importance of Self-Perceived Severity in Uncovering Burden of Illness among Patients with Psoriasis

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Background

- Psoriasis is a chronic, immune-mediated inflammatory condition. It is characterized by erythematous plaques covered with silvery scales that can manifest on any area of the skin, from minor localized patches to high body coverage.[1]
- Body Surface Area (BSA) is a measure of how much skin is impacted by psoriasis and has been traditionally used to classify disease severity and track psoriasis over time. One handprint is equal to approximately 1 percent BSA. Involvement of <3% BSA is considered mild, 3%-10% BSA is considered moderate and >10% of BSA is considered severe psoriasis.[2]
- However, in recent guidance issued by the International Psoriasis Council (IPC) disease severity described based on the BSA-only has been challenged. In this guidance systemic eligibility due to severity of disease has been expanded to patients with BSA<10% that have either failed on topicals or with a high impact areas of involvement such as scalp, nail, face or palms and soles.[3]
- We hypothesize that patient-perceived psoriasis severity (Self-Reported Disease Severity) may not correlate with the clinical severity classification based on BSA-alone and that this group of patients are potentially impacted by a higher disease burden.

Objective

This analysis examined the humanistic and economic burden of patients with psoriasis severity classified as mild (<3%) according to body surface area (BSA).

Among those with mild BSA, those who self-reported their severity as moderate-to-severe (SR-ModSev) were compared with those who self-reported their severity as mild (SR-Mild).

Methods

Design

We conducted a retrospective analysis using data from the 2020 National Health and Wellness Survey (NHWS).

Data Source

The EU (France, Germany, Spain, Italy, UK) NHWS is an annual, self-administered, internet-based cross-sectional survey. Participants are adults (at least 18 years old), recruited using general population panels and a quota sampling technique attaining large respondent sample sizes that provide representative data for each country.

Study Population and Data Variables

- Study population
  - Resident of the EU (France, Germany, Spain, Italy, UK)
  - Aged ≥18 years
  - Self-reported and physician-diagnosed psoriasis
- Severity groups
  - SR-ModSev: classified as mild based on the BSA but self-reported moderate to severe
  - SR-Mild: classified as mild based on the BSA and self-reported mild severity
- Socio-demographic data
  - Age, gender
  - Employment status, education
- Clinical characteristics
  - Psoriasis characteristics including location on body
  - Whether diagnosed by a physician
  - Whether on treatment (prescription, over the counter [OTC])
  - Charlson Comorbidity Index (CCI)
- Patient-reported outcome measures
  - Healthcare resource use in past 6 months (HCRU)
  - EQ5D-5L[4]
  - Work Productivity and Activity Impairment Questionnaire (WPAI)[5]
  - Patient Health Questionnaire (PHQ-9) Scale[6]

Statistical Analyses

Unweighted comparisons of socio-demographic, clinical and patient reported outcomes (PRO) variables between severity groups (SR-ModSev vs. SR-Mild) were conducted using chi-square tests and ANOVA tests for categorical and continuous variables, respectively.

Results

- In the mild BSA cohort, 21.5% were identified as SR-ModSev (n=618) and 78.5% as SR-Mild (n=2,251).
- SR-ModSev vs. SR-Mild were younger (47 vs. 49 years, *p*= 0.01) and a higher proportion were female (60% vs. 54.3%, *p*= 0.01).
- Employment status was similar across both severity groups.

Table 1 : Sample Characteristics

	Self-Report Moderate-Severe, but Mild Based on BSA (n=618)	Self-report Mild and Mild Based on BSA (n=2,251)	*p* value
Male	40.0%	45.7%	0.011
Female	60.0%	54.3%	
Age 18-34	28.3%	22.3%	0.010
Age 35-44	18.3%	18.2%	
Age 45-54	18.1%	18.1%	
Age 55-64	16.2%	17.1%	
Age 65+	19.1%	24.3%	
Mean age	46.81	49.36	
Employed (full-time, part-time, self-employed)	59.6%	55.3%	0.060

Figure 1. Part(s) of Body Affected by Psoriasis

- Figure 1 shows reported areas of body affected by psoriasis.
- Comparing the SR-Mild with the SR-ModSev, a higher proportion of SR-ModSev reported having psoriasis in highly visible body areas including the face/neck and scalp/head (both *p*s< 0.05).

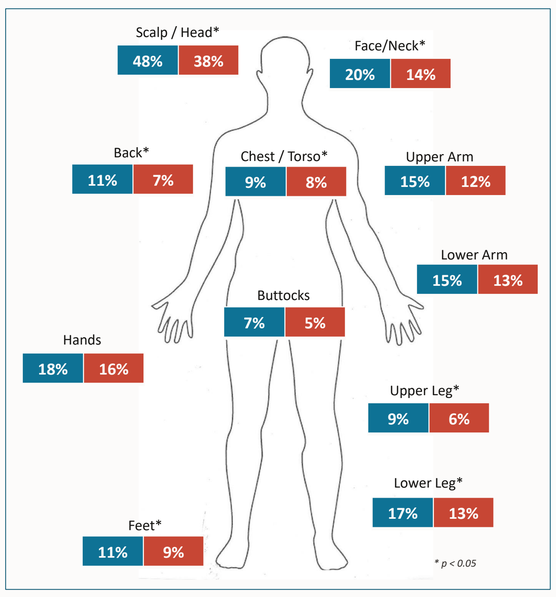


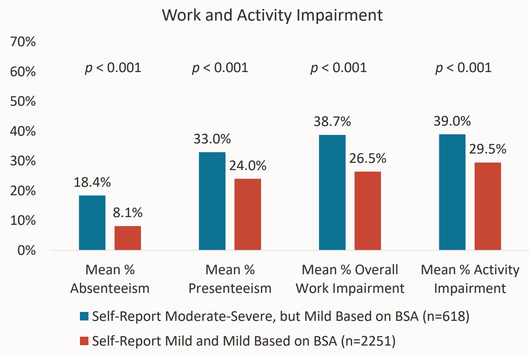
Table 2: Comorbidities and Psoriasis Treatment

	Self-Report Moderate-Severe, but Mild Based on BSA (n=618)	Self-Report Mild and Mild Based on BSA (n=2,251)	*p* value
Self-reported comorbidities:			
Atopic dermatitis / Eczema	30.3%	19.9%	<0.001
Acne	14.7%	10.6%	0.004
Vitiligo	4.1%	2.4%	0.022
Rosacea	8.9%	5.2%	0.001
Charlson Comorbidity Index (mean)	0.87	0.52	<0.001
Psoriasis diagnosed by a physician	74.0%	58.8%	<0.001
If diagnosed: Currently use a prescription medication to treat psoriasis	56.5%	14.6%	<0.001
Use non-prescription medications (e.g., over-the-counter medication) or herbal products for psoriasis)	34.6%	24.8%	<0.001

- SR-ModSev group had greater comorbidity burden than the SR-Mild group with both higher Charlson Comorbidity Index and higher self-reported atopic dermatitis/eczema, acne, vitiligo, and rosacea, all *p*s <0.05.
- A greater proportion of SR-ModSev patients were diagnosed with psoriasis by a physician (SR-ModSev 74% compared to SR-Mild 58.8% (*p*< 0.001) and 56.5% of the SR-ModSev group currently use a prescription medication to treat their psoriasis compared to 14.6% of the Mild group (*p*< 0.001).

Figure 2. Quality of Life Scores, Work and Activity Impairment Scores

- SR-ModSev group showed greater work absenteeism (18.4% vs 8.1%, *p*< 0.001), presenteeism (33% vs. 24%, *p*< 0.001), overall work productivity loss (38.7% vs 26.5%, *p*< 0.001), and activity impairment (39% vs 29.5%, *p*< 0.001) compared with the SR-Mild group.
- SR-ModSev group had worse EQ-5D-5L health utility scores (0.706 vs. 0.785 *p*< 0.001); differences exceeded minimally important difference for these measures.



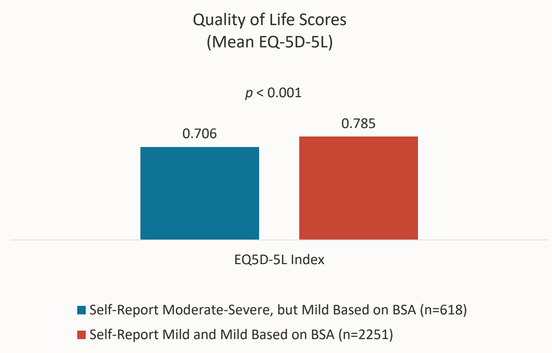


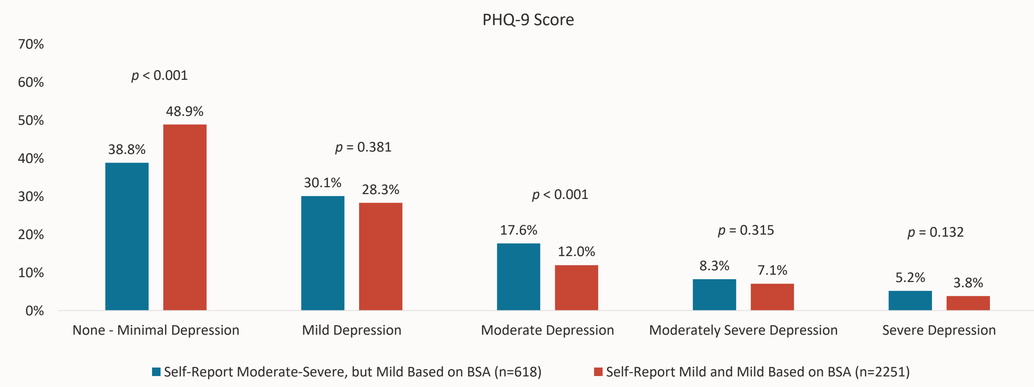
Table 3. Healthcare Resource Utilization

- The SR-ModSev group relative to the SR-mild group, reported greater numbers of traditional HCP visits (6.86 vs 5.38, *p*< 0.001), dermatologist visits (0.39 vs. 0.19, *p*< 0.001), emergency room visits (0.65 vs. 0.31, *p*< 0.001) and hospitalizations (0.56 vs. 0.16, *p*< 0.001) in the past six months.

	Self-Report Moderate-Severe, but Mild Based on BSA (n=618)	Self-Report Mild and Mild Based on BSA (n=2,251)	*p* value
Healthcare resource utilization (past 6 months):			
Mean number of visits to any traditional HCP (past six months)	6.86	5.38	<0.001
Mean number of visits to any Dermatologist (past six months	0.39	0.19	<0.001
ER visits in the past six months (mean)	0.65	0.31	<0.001
Hospitalized in the past six months (mean)	0.56	0.16	<0.001

Figure 3. PHQ-9

- A lower proportion of the SR-ModSev group compared with SR-Mild group had with none – minimal depression (38.8% vs 48.9%, p< 0.001).
- Additionally, a higher proportion of the SR-ModSev group had moderate depression compared with the SR-Mild group (17.6% vs. 12.0%, p< 0.001).



Conclusion

Despite both groups' psoriasis severity being clinically classified as mild using BSA, the SR-ModSev group (21.5%) had higher disease burden: worse quality of life, greater work productivity and activity impairment, higher presence of depression, and incurred higher HCRU compared with SR-Mild. These findings highlight the importance of the patients' perspective and limitations of the traditional classification of the severity of psoriasis based on the categories of "mild, moderate and severe" from the BSA alone.

References

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