Differential burden in psoriasis considering patient-reported severity: Results from the National Health and Wellness Survey

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Objectives

To determine whether in psoriasis patients with mild DLQI scores, self-reported severity is reflected in healthcare resource utilization (HRU) and other patient reported outcomes (PROs) in the US and Europe (France, Germany, Italy, Spain, and the UK).

Background

Psoriasis is a chronic skin disease characterized by itchy, red, scaly plaques which can impact the quality of life of patients by increasing psychological, social, and healthcare burdens[1].

The Dermatology Quality of Life Index (DLQI) is a validated measure of health-related quality of life (HRQoL) but may not capture the entire picture of patient QoL in psoriasis because it does not cover all aspects of the disease which may impact psoriasis patients[2].

Methods

Study Design

Data from the 2019 US and 2020 EU National Health and Wellness Survey (NHWS), a nationally-representative, cross-sectional online survey, was analyzed. Patients were asked about their disease history, perceived disease severity, healthcare resource utilization (HRU), and completed validated scales including the DLQI, PHQ-9, GAD-7, WPAI, SF-36 (US) or SF-12v2 (EU), and EQ-5D-5L.

Patients

Patients who self-reported physician-diagnosed psoriasis and had a DLQI score ≤5 (mild) were stratified on their self-reported disease severity (mild vs moderate/severe) when untreated.

Study Assessment and Statistical Analyses

Descriptive and bivariate analyses were conducted to compare those who reported a psoriasis severity of mild versus those who reported moderate/severe severity using t-tests and Chi-squared tests. Generalized linear models (US) and generalized linear mixed models (EU) were used to examine the relationship between DLQI scores and outcomes when correcting for age and education (US) and age, education, and income (EU). Results were reported as marginal means.

Results

Among psoriasis patients with DLQI ≤5 in the US (n=1401, mild=837, moderate/severe=564) (Table 1) , patients with moderate/severe disease had more visits to healthcare providers (HCP) in the past 6 months (5.90 vs 4.88, p<0.01) (Figure 1) and lower EQ-5D Index scores (0.78 vs 0.80, p=0.03) (Figure 2) compared to self-reported mild when controlling for age and education.

Among EU patients (n=1910, mild=1225, moderate/severe=685) (Table 2) , models (controlling for age, education, and income) showed patients with moderate/severe disease had lower SF-12vs PCS (47.90 vs 49.98, p=0.01), SF-6D Index (0.68 vs 0.70, p=0.01), and EQ-5D Index scores (0.78 vs0.80), p=0.02) (Figure 2) .

Patients with moderate/severe disease in the EU had higher HRU, including number of HCP visits (7.01 vs 5.88, p<0.01), ED visits (0.33 vs 0.22, p=0.01), and hospitalizations (0.14 vs 0.08, p<0.01) in the past 6 months (Figure 1) .

Mental health measures including depression (PHQ-9) and anxiety (GAD-7) (Figure 3) and work productivity (WPAI) outcomes were not significant in the multivariable models in either the US or EU.

No correction was made for multiplicity.

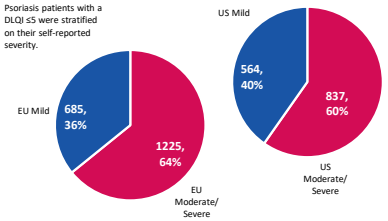
Summary

Objective

Is patient perception of severity associated with HRU and QoL, even among those with low severity scores on the DLQI?

Methods

Psoriasis patients with a DLQI ≤5 were stratified on their self-reported severity.



Results

Patients who reported having moderate or severe disease had higher resource utilization than patients who reported having mild disease

+19% Patients with Moderate/Severe disease in the EU had 19% more HCP visits than patients with mild disease

+21% Patients with Moderate/Severe disease in the US had 21% more HCP visits than patients with mild disease

Conclusion

Among psoriasis patients who classify as mild based on a DLQI score ≤5, patient self-reports of higher severity are associated with higher HRU and lower overall QoL in the US and EU, compared to patients who reported having mild disease.

Table 1 Patient demographics (US)

Mean ± SD unless %	Total (n=1401)	Mild (n=837)	Moderate/severe (n=564)
Age	52.41 ± 16.26	53.54 ± 16.40	50.72 ± 15.92
% Female	60.5%	60.8%	59.9%
% Married/Living with Partner	59.7%	59.9%	59.4%
% With university degree	51.0%	53.5%	47.3%
% Employed	53.9%	52.3%	56.2%
Annual Household Income			
<$25K/£20K/€20K (%)	13.6%	13.5%	13.8%
$25K/£20K/€20K to <$50K/£40K/€40K (%)	24.3%	24.1%	24.5%
$50K/£40K/€40K to <$75K/£75K/€75K (%)	19.8%	20.1%	19.5%
$75K/£75K/€75K or more (%)	39.0%	38.7%	39.4%
Decline to Answer	3.3%	3.6%	2.8%
Charlson Comorbidity Index (CCI)	0.69 ± 1.21	0.73 ± 1.28	0.63 ± 1.08

Sample is stratified on patient-reported severity

Table 2 Patient demographics (EU)

Mean ± SD or %	Total (n=1910)	Mild (n=1225)	Moderate/severe (n=685)
Age	51.1±15.4	51.6±15.4	50.1 ± 15.4
% Female	55.9%	56.9%	54.0%
% Married/Living with Partner	66.0%	65.4%	67.2%
% With university degree	45.4%	47.4%	41.8%
% Employed	52.5%	51.3%	54.6%
Annual Household Income			
<$25K/£20K/€20K (%)	25.2%	23.3%	28.6%
$25K/£20K/€20K to <$50K/£40K/€40K (%)	37.9%	37.6%	38.2%
$50K/£40K/€40K to <$75K/£75K/€75K (%)	24.9%	26.6%	21.9%
$75K/£75K/€75K or more (%)	5.5%	5.5%	5.7%
Decline to Answer	6.5%	7.0%	5.5%
Charlson Comorbidity Index (CCI)	0.47±0.89	0.45 ± 0.86	0.50 ± 0.93

Figure 1 Adjusted Health Resource Utilization Means

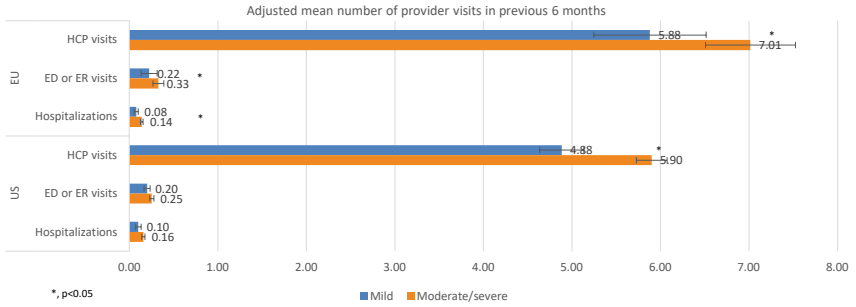


Figure 2 Adjusted Marginal Mean SF-6D Index and EQ-5D Index Scores

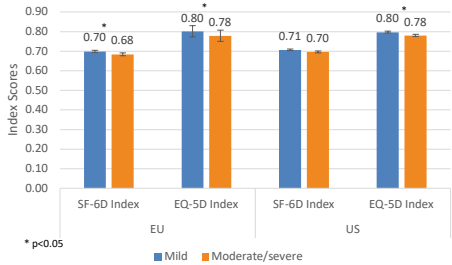
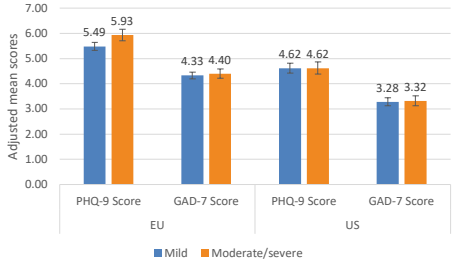


Figure 3 Adjusted Marginal Mean PHQ-9 and GAD-7 and Scores



Note: EU PHQ-9 scores were statistically different in the unadjusted results but not after multivariable modeling

Conclusions

Among psoriasis patients with DLQI ≤5, over 50% of patients described their disease severity as moderate or severe. Patient perception of higher disease severity is associated with higher HRU and lower overall QoL in the US and EU

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References: 1. Parisi R, Iskandar IYK, Kontopantelis E, Augustin M, Griffiths CEM, Ashcroft DM; Global Psoriasis Atlas. National, regional, and worldwide epidemiology of psoriasis: systematic analysis and modelling study. BMJ. 2020 May 28;369:m1590. doi: 10.1136/bmj.m1590. PMID: 32467098; PMCID: PMC7254147. Langenbruch, A., Radtke, M., Gutknecht, M. and Augustin, M. (2019), Does the Dermatology Life Quality Index (DLQI) underestimate the disease-specific burden of psoriasis patients?. J Eur Acad Dermatol Venereol, 33: 123-127. https://doi.org/10.1111/jdv.15226. Author Contributions: Substantial contributions to study conception/design, or acquisition/analysis/interpretation of data: dSM, BLB, APS, KU, LC, AMLB, FF; Drafting of the publication, or revising it critically for important intellectual content: dSM, BLB, APS, KU, LC, AMLB, FF; Final approval of the publication: dSM, BLB, APS, KU, LC, AMLB, FF. Author Disclosure: dSM, BLB, and APS are employed by Kantar Health. KU, LC, AMLB, and FF are employed by UCB. Acknowledgements: All costs associated with development of this poster were funded by Kantar Health..

DLQI: Dermatology Life Quality Index; ED/ER: Emergency Department/Emergency Room; EU: European Union; GAD-7 : Generalized Anxiety Disorder-7; HCP: Healthcare Provider; HRU: Healthcare Resource Utilization; NHWS: National Health and Wellness Survey; PHQ-9: Patient Health Questionnaire-9; US: United States;