Women, elderly and less educated psoriasis patients provide more 'not relevant' responses on the DLQI - is it a problem?

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BACKGROUND & OBJECTIVE

Dermatology Life Quality Index (DLQI) is the most common health-related quality of life measure in dermatology that is widely used in treatment guidelines for psoriasis. Eight out of the 10 questions of the DLQI offer a 'not relevant' response (NRR) option that is scored as the item had no impact on patients' life at all. We aimed to explore the occurrence of NRRs on the DLQI in psoriasis patients, and to examine the effect of several socio-demographic and clinical factors on giving NRRs.

METHODS

Data were obtained from two cross-sectional surveys among psoriasis patients at two academic dermatology clinics in Hungary. Health-related quality of life was measured by employing DLQI and EQ-5D-3L, while disease severity was graded by Psoriasis Area and Severity Index (PASI). Multivariate logistic regression was applied to determine the predictors of providing NRRs.

RESULTS

Descriptive statistics: Characteristics of the 428 patients are presented in **Table 1**. Overall, 38.8% of the patients had at least one NRR: 19.6% (one), 11.5% (two), 5.1% (three) and 2.6% (more than three). Most NRRs occurred in sport, sexual difficulties and working/studying items of the DLQI (28.4%, 16.4% and 14.0%, respectively) (**Fig.1**). Overall, 28% of patients with DLQI scores of 0 or 1 had at least one NRR (**Fig.2**). Corresponding percentages for patients with DLQI total scores of 2-5, 6-10 and 11-20 were 38%, 52% and 53%, respectively.

Figure 1 Distribution of responses on the 10 items of the DLQI

Table 1 Patient characteristics

Variables	Mean (SD) or N (%)
Gender	
Female	150 (35.0%)
Male	278 (65.0%)
Age (years)	49.2 (14.3)
Disease duration (years)	19.9 (12.3)
Education	
Primary school	58 (13.6%)
Secondary school	243 (56.8%)
College/university	127 (29.7%)
Employment*	
Student	10 (2.3%)
Full-time	207 (48.4%)
Part-time	35 (8.2%)
Unemployed	19 (4.4%)
Retired	84 (19.6%)
Disability pensioner	60 (14.0%)
Other	26 (6.1%)
Treatments	
None	31 (7.2%)
Topical only	103 (24.1%)
Systemic non-biologic	107 (25.0%)
Biologic	187 (43.7%)

* Combinations may occur

Figure 2 Number of 'not relevant' responses by DLQI score bands

Determinants of 'not relevant' responses

Female gender, older age and higher PASI score were associated with providing more NRRs, whereas highly educated patients and those with a full-time job less frequently tended to tick NRRs (**Table 2**). The gender difference in providing NRRs was present in items 5, 9 and 10 (**Table 3**).

Table 2 Multivariate logistic regression on providing at least one 'not relevant' response on the DLQI (Nagelkerke R²=0.286)

	Regression coefficient (β)	SE	OR (95% CI)	p-value
Constant	-1.668	0.599	0.189	0.005
Gender (female)	0.498	0.235	1.646 (1.039-2.608)	0.034
Age	0.048	0.009	1.049 (1.031-1.068)	0.000
PASI score	0.030	0.012	1.030 (1.006-1.055)	0.014
Education				
Secondary school	-0.905	0.337	0.405 (0.209-0.784)	0.007
College/university	-1.071	0.377	0.343 (0.164-0.717)	0.004
Full-time job	-0.746	0.250	0.474 (0.290-0.774)	0.003

Table 3 Association between gender and frequencies of 'not relevant' responses per item

DLQI items	'Not relevant' responses (N, %)		p-value*
	Male (N=278)	Female (N=150)	
Item 3 (shopping/home)	6 (2.2%)	1 (0.7%)	0.244
Item 4 (clothes)	1 (0.4%)	2 (1.3%)	0.252
Item 5 (social activities)	3 (1.1%)	8 (5.3%)	0.008
Item 6 (sport)	70 (25.3%)	51 (34.0%)	0.056
Item 7 (working/studying)	35 (12.6%)	25 (16.6%)	0.258
Item 8 (interpersonal problems)	9 (3.2%)	11 (7.3%)	0.058
Item 9 (sexual difficulties)	31 (11.2%)	39 (26.0%)	<0.001
Item 10 (treatment difficulties)	3 (1.1%)	6 (4.0%)	0.044
Total	93 (33.5%)	73 (48.7%)	0.002

* Chi-square test, where p<0.05 was considered statistically significant

CONCLUSIONS

The high rate of psoriasis patients with NRRs, especially among women, less educated and elderly patients, indicates a content validity problem of the measure. A reconsideration of the use of the DLQI for medical and financial decision-making in psoriasis patients is suggested.