

IMPACT OF ATROPHIC ACNE SCARS ON QUALITY OF LIFE IN ADULTS

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INTRODUCTION

Acne affects more than 80% of adolescents and young adults¹².

Acne scars develop in the majority of acne sufferers (approx. 95%³).

Few studies have attempted to assess the impact of acne scars on Quality of Life (QoL), and most used tools that lack sensitivity and specificity to acne scarring.

OBJECTIVES

To determine the impact of facial acne scars on QoL and effects on self-esteem, mood, and psychosocial stress using recently developed patient's self-completion instruments that specifically address acne scarring evaluation.

MATERIALS AND METHODS

Subjects were recruited through general population panels in France, Germany, the UK, USA, Canada and Brazil and completed an online questionnaire between Nov 2019 and Jan 2020. All participants had atrophic facial acne scars according to the Self-assessment of Clinical Acne-Related Scars (SCARS) questionnaire. Signs of facial acne were clear/almost clear to isolate the impact of scars according to the Patient Global Assessment (PGA). Photoscales were used to help self-assessments.

QoL was assessed with the Dermatology Life Quality Index (DLQITM) and the facial acne scar quality of life (FASQoLTM). DLQI overall response scores range 0-30, with higher scores indicating greater impairment in QoL. The FASQoL overall score ranged 0-40, with higher scores reflective of greater QoL impairment. The sample structure was designed to include a representative sample of the population affected by facial acne scars.

RESULTS

Characteristics of subjects analyzed

In total, 723 subjects with post-acne scars were included in the survey. The average (SD) age was 35 years old (9,3) and 52% of subjects were females; 79% of subjects had a family history of acne scars.

56% reported their worst state of acne as mild (according to PGA) and scars first appeared on average (SD) at 19 (5) years old. At the time of questionnaire completion, all subjects had clear (16%) or almost clear (84%) acne. The average duration (SEM) of facial acne is 10 years (0.32) and 71.3% of the subjects have had treatment for their acne. Subjects respectively represent for Fitzpatrick I, II, III, IV, V, VI-4.4%, 14%, 27.4%, 25.8%, 23.5% and 4.9% of the sample.

All subjects had atrophic scars on their faces, 31.6%, 49.6%, and 18.8% had mild, moderate, and severe/very severe acne scars respectively (mean severity score of 8.1 [SEM 0.09] on a scale of 0 to 20, 20 being the most severe) according to SCARS scale.

The most commonly self-reported type of atrophic acne scars was 'ice pick' scars (82.8%), followed by 'boxcar' scars (22.4%) and 'rolling' scars (7.4%). Atrophic scars were reported either in isolation (60%) or in combination with hypertrophic scars (37.6%) and keloidal scars (2.1%).

Burden of subjects analyzed

DLQI results

In total, 545 subjects with acne scars (>75%) indicated scars as a concern; the mean DLQI for facial acne scars was 6.26 (0.22).

The impact of scars on QoL was scored as 'very large' or 'extremely large' (ie DLQI>10) by 19.3% of the subjects with mild acne scars versus 20.1% and 34.0% of those with moderate and severe/very severe scars, respectively (P<0,05) (Table 1).

Most subjects were self-conscious about their scars (76%, n=549), and almost half of them reported scarring to impose a negative impact on their social and leisure activities (48.1%) and/or work performance (41.7%).

P<0,05	TOTAL (N=723)	Mild scars (n=208)	Moderate scars (n=384)	Severe/very severe scars (n=131)
0-1= no effect on subjects life	24.6%	32.7%	21.8%	18.5%
2-5= small effect	35%	35.7%	37%	28.5%
6-10= moderate effect	17.9%	12.2%	21.1%	19%
11-20= very large effect	19.3%	18.7%	16.6%	27.6%
21-30= extremely large effect	3.1%	0.6%	3.5%	6.4%

Table 1: DLQI according to severity

DLQI scores increased with an increase in scarring severity (Figure 1). This association remained after adjusting for covariables in multivariate analysis (ie age, sex, employment status, education, country of residence, Fitzpatrick scale) (p=0.0001 for the risk of DLQI>10 among mild vs severe/very sever scarring).

FASQoL results

The mean FASQoL score for facial acne scars was 11.54 (SEM 0.55) on a 1 to 40 scale where 40 reflected the highest QoL impairment. DLQI and FASQoL scores were significantly correlated (Pearson's r = 0.683; P<0.001)

The most frequently reported emotional distress signs were feeling less attractive (77.4%), self-conscious (68.0%), annoyed (74.5%), and worried about scars not going away (74.8%) as well as being sad because of acne scars (68.4%). Being bothered about having to hide scars also scored high on the FASQoL.

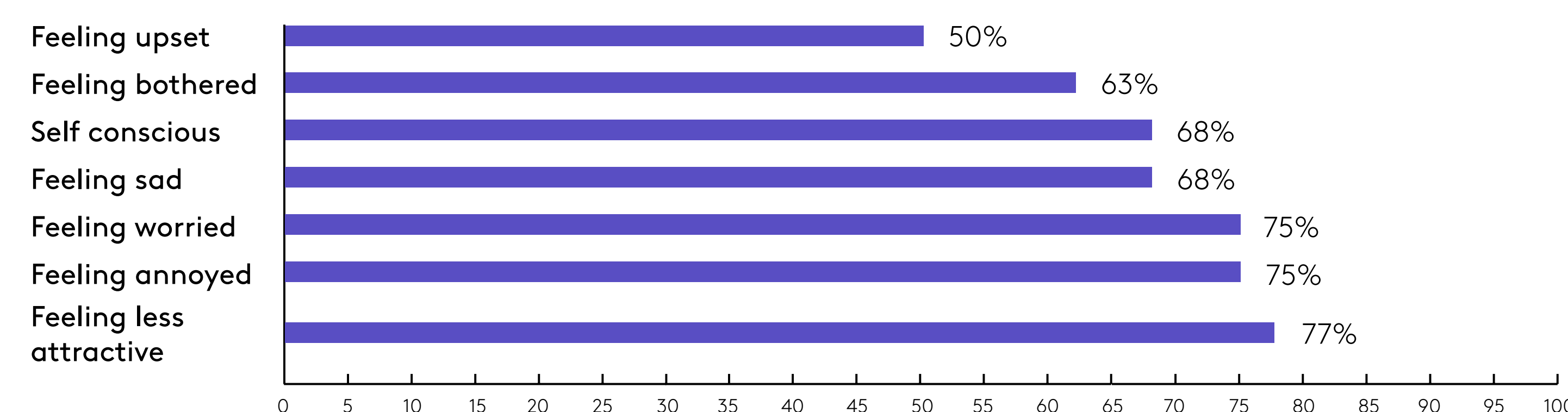


Figure 1 Emotional distress as per the FASQoL

In multivariate analysis, higher FASQoL scores were associated with increased severity of scarring (mean [SEM] FASQoL of 9.14 [0.54], 11.48 [0.53], and 15.73 [1.00] in subjects with mild, moderate, and severe/very severe acne scars, respectively; P<0.001).

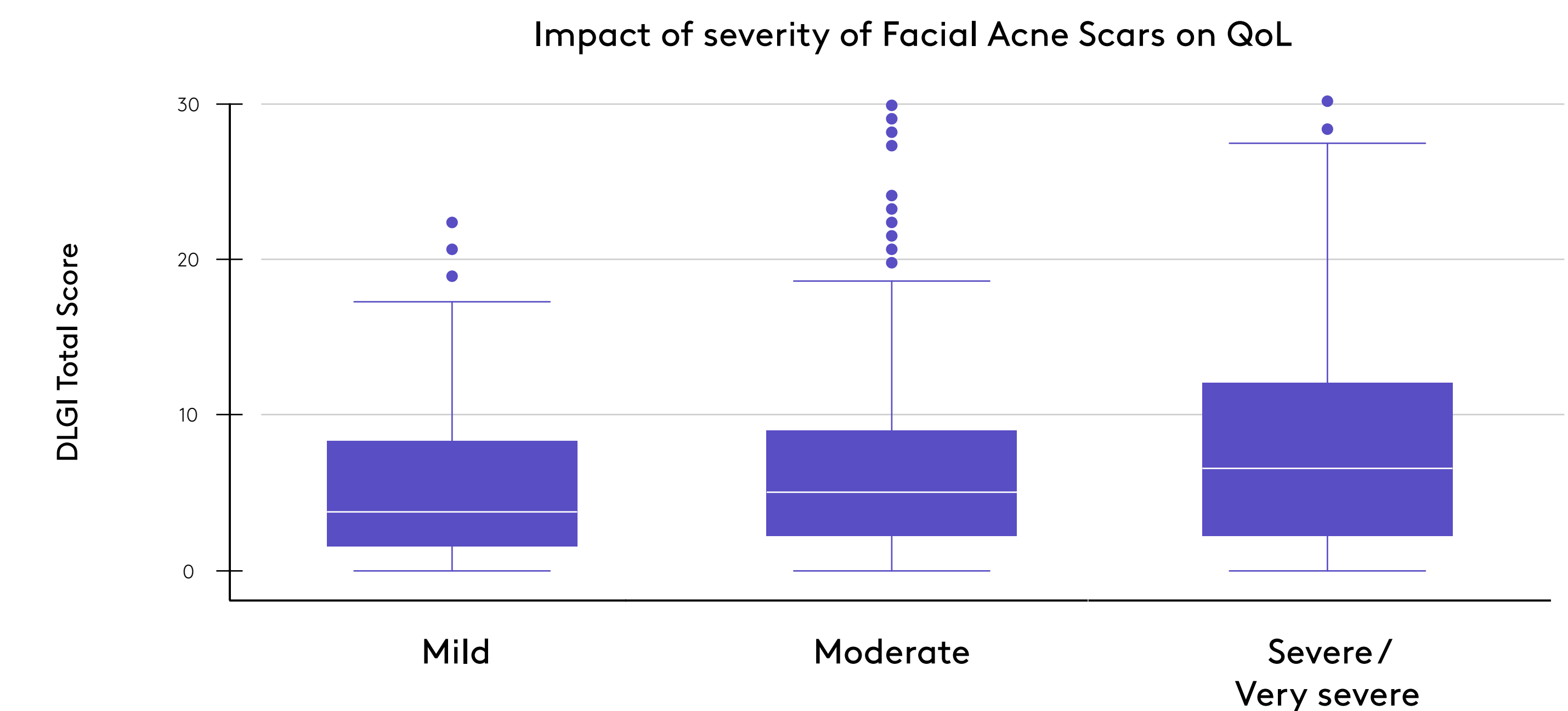


Figure 2: Distribution of DLQI score based on self-rated severity of facial acne scars

CONCLUSION

Quality of Life impairment with facial acne scars is comparable to other inflammatory dermatological conditions of the face including psoriasis or rosacea. The perceived severity of facial acne scarring is associated with a greater impact on the subjects' QoL, with highest implications for self-esteem. However, even subjects with mild acne scars may be adversely impacted: 19.3% subjects with mild acne scars had a very large impairment of QoL (i.e. DLQI score >10).

Timely and effective treatment of acne would reduce scarring and mitigate the impact that scars have on patients' QoL.

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