Family Impact of Moderate-to-Severe Atopic Dermatitis in Children Aged < 12 years: Results From 732 Patients in the PEDIatric STudy in Atopic Dermatitis (PEDISTAD) Observational Study

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BACKGROUND

- Primary caregivers of children with moderate-to-severe AD experience a significant burden on normal family life[1–3]

OBJECTIVE

- **To describe real-world impact of AD on family in children aged < 12 years with moderate-to-severe AD enrolled in PEDISTAD**

METHODS

- PEDISTAD (NCT03687359)[4] is an ongoing, global, 5-year, observational registry describing the disease characteristics, atopic comorbidities, and treatment patterns in pediatric patients (aged < 12 years) with moderate-to-severe AD
- Study population: children aged < 12 years at baseline, with investigator-assessed moderate-to-severe AD
  - Currently receiving systemic treatment (including phototherapy) or
  - Currently on topical treatment, but otherwise candidates for systemic treatment
- All summaries presented are from patients enrolled between September 2018 and July 2020 (N = 732)
- Family burden/caregiver assessment of symptom severity was measured using the DFI and the CGAD questionnaires
  - DFI questionnaire evaluates the impact of AD on QoL of the caregiver(s)/family; it consists of 10 questions (each scored 0 [not at all] to 3 [very much]; range: 0–30); examines domains of family life that may be impacted by AD
  - CGAD questionnaire reports the caregiver's assessment of their child's AD symptoms (no symptoms, mild, moderate, severe, or very severe)

RESULTS

Table. Baseline demographics and assessment of patient burden.

	0 to < 2 years (n = 77)	2 to < 6 years (n = 224)	6 to < 12 years (n = 431)	All (N = 732)
Age, mean (SD), years	1.1 (0.5)	3.6 (1.1)	8.5 (1.7)	6.2 (3.2)
Male, n (%)	49 (63.6)	125 (55.8)	208 (48.3)	382 (52.2)
Race,[a] n (%)				
White	56 (72.7)	139 (65.0)	264 (63.9)	459 (65.2)
Asian	6 (7.8)	27 (12.6)	59 (14.3)	92 (13.1)
Black or African American	8 (10.4)	24 (11.2)	58 (14.0)	90 (12.8)
Other/multiple	7 (9.1)	24 (11.2)	32 (7.7)	63 (8.9)
Age at AD onset,[b] median (IQR), years	0.3 (0.2–0.5)	0.5 (0.3–1.0)	1.0 (0.3–4.0)	0.7 (0.3–2.0)
Any concomitant AD comorbidity, n (%)	24 (31.2)	131 (58.5)	293 (68.0)	448 (61.2)
Type 2 inflammatory comorbidity[c]	24 (31.2)	130 (58.0)	278 (64.5)	432 (59.0)
Anxiety	0	5 (2.2)	32 (7.4)	37 (5.1)
ADD/ADHD	0	1 (0.4)	30 (7.0)	31 (4.2)
Clinical and patient/caregiver assessments, mean (SD)				
EASI[d,e] (range: 0–72)	15.1 (10.3)	13.2 (9.3)	15.0 (11.3)	14.4 (10.7)
% BSA affected by AD[f]	36.4 (20.6)	31.7 (20.8)	33.6 (21.1)	33.3 (21.0)
POEM score[g,h] (range: 0–28)	15.7 (6.6)	16.1 (7.5)	15.3 (7.2)	15.6 (7.2)
Worst scratching during the previous 24 hours[i,j] (range: 0–10)	6.0 (2.6)	5.9 (2.8)	–	–
Worst itching during the previous night[i,k] (range: 0–10)	–	–	4.9 (2.9)	–
Worst itching during the current day[j,k] (range: 0–10)	–	–	3.8 (2.7)	–
DFI (range 0–30)	11.1	12.0	10.3	10.9

[a]N1 = 77, 214, 413, and 704. [b]N1 = 77, 222, 427, and 726. [c]Includes: asthma, allergic conjunctivitis, allergic rhinitis, eosinophilic esophagitis, food allergy, and nasal polyposis. [d]N1 = 75, 220, 422, and 717. [e]EASI: 0 to ≤ 1 = clear/almost clear; > 1 to ≤ 7 = mild; > 7 to ≤ 21 = moderate; > 21 to ≤ 50 = severe; > 50 to 72 = very severe. [f]N1 = 72, 214, 410, and 696. [g]N1 = 72, 209, 417, and 698. [h]POEM score: 0–2 = clear/almost clear; 3–7 = mild; 8–16 = moderate; 17–24 = severe; 25–28 = very severe. [i]N1 = 63 and 185. [j]Scored from 0 "no itch" to 10 "worst imaginable itch". [k]N1 = 399.

ADD, attention-deficit disorder; ADHD, attention-deficit hyperactivity disorder; BSA, body surface area; EASI, Eczema Area and Severity Index; IQR, interquartile range; N1, number of patients with reported data; POEM, Patient-Oriented Eczema Measure; SD, standard deviation.

Figure 1. Proportion (%) of parents/caregivers responding with "quite a lot" or "very much" to each DFI item.
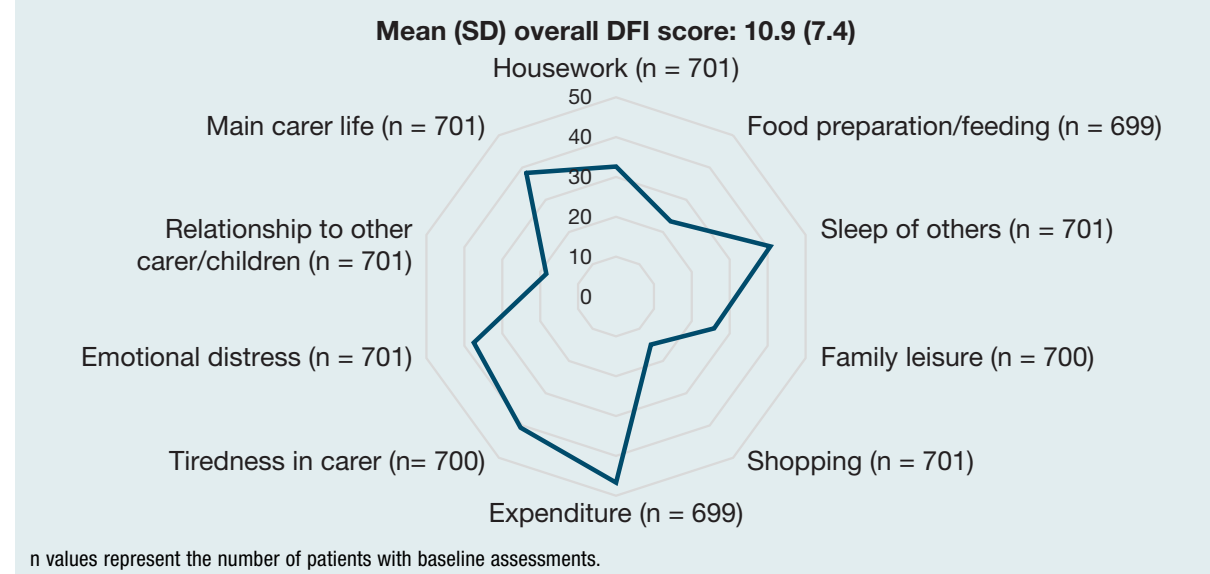

Mean (SD) overall DFI score: 10.9 (7.4)

n values represent the number of patients with baseline assessments.
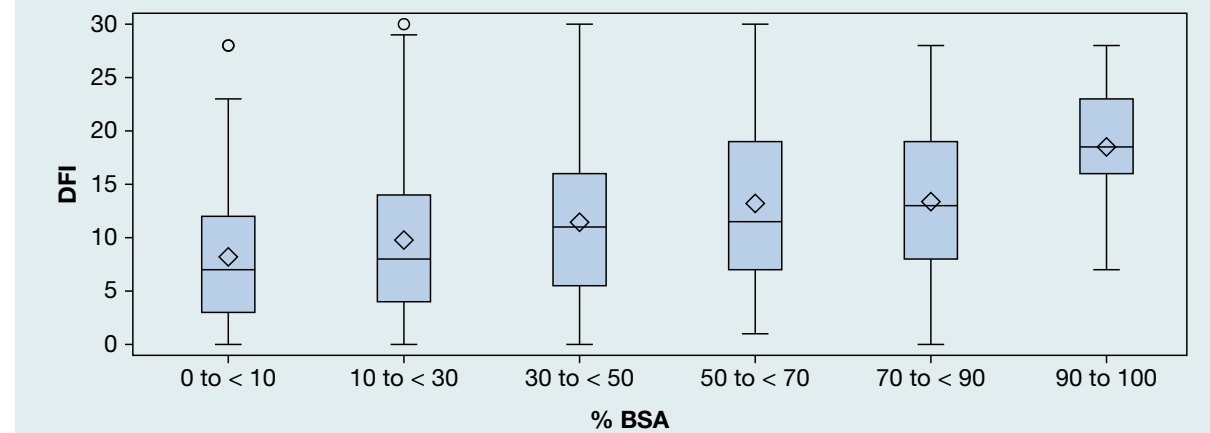
Figure 2. Baseline % BSA vs baseline DFI score.

Figure 3. Baseline EASI vs baseline DFI score.
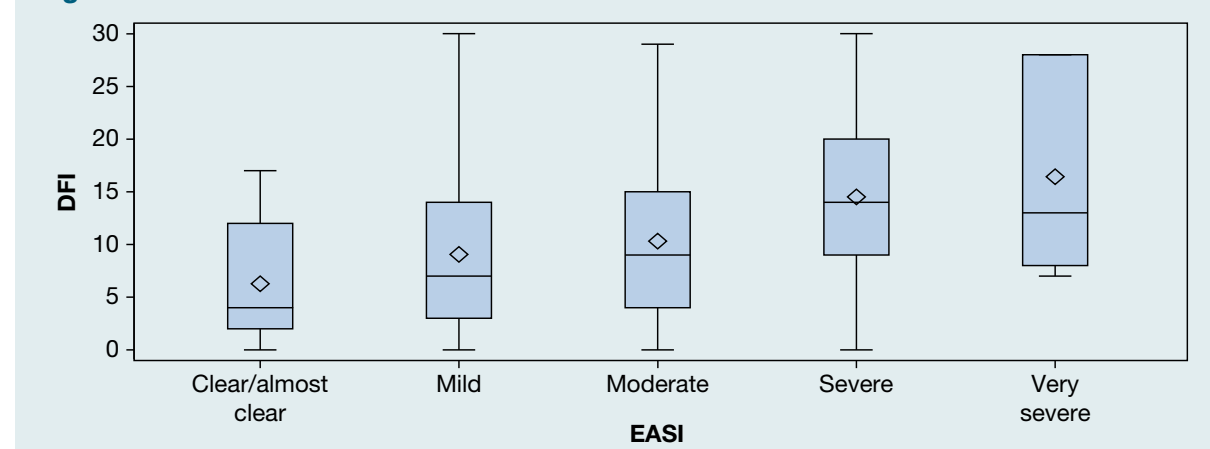
Figure 4. Proportion of responses to CGAD questionnaire by age group.

n values represent the number of patients with baseline assessments; y, years.
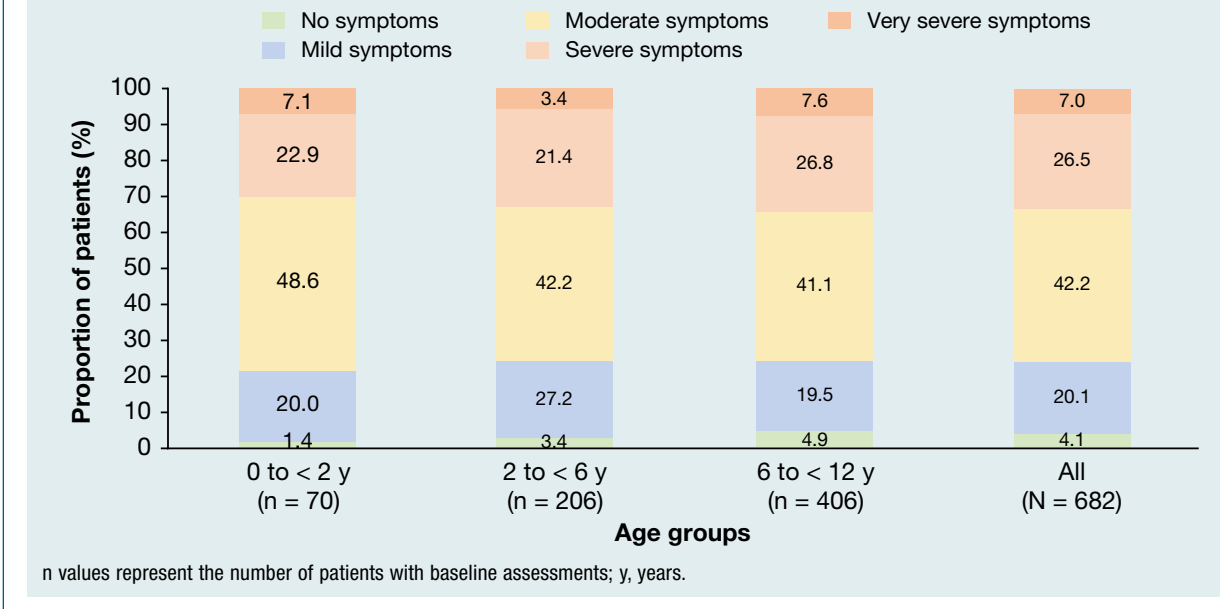
CONCLUSIONS

- **Caregivers of children aged < 12 years with moderate-to-severe AD in PEDISTAD reported a multidimensional impact on caregiver/family life**
- **Across age groups, the majority of caregivers reported moderate-to-severe symptoms of AD (CGAD)**
- **According to the DFI questionnaire, areas of family life most impacted by AD include expenditure, tiredness, family sleep and caregiver QoL due to AD treatment.**
- **When comparing DFI with disease severity measures (EASI, BSA), a trend toward increased DFI was observed with increases in disease severity**
- **AD burden in children aged < 12 years with moderate-to-severe AD extends to their family/caregivers, demonstrating an additional impact of inadequate disease control**
- **The adverse effects on QoL in families of children aged < 12 years with moderate-to-severe AD reflect an unmet need for effective and safe therapies**

References: 1. Al Shobaili HA. Pediatr Dermatol. 2010;27:618-23. 2. Al Robaee AA, Shahzad M. Acta Dermatovenerol Croat. 2010;18:243-7. 3. Lawson V, et al. Br J Dermatol. 1998;138:107-13. 4. Paller AS, et al. BMJ Open 2020;10:e033507.