

The Impact of Atopic Dermatitis on Employment and Productivity: A French Study

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Dear Editor;

Atopic dermatitis (AD) is a chronic inflammatory skin condition that mainly affects children, but it can persist or even appear in adulthood. In the French population aged > 15 years, its prevalence has been estimated as 4.6% (1). In adults with AD, health-related quality of life (HRQoL) can be markedly impaired (2), mainly due to symptoms such as itch, sore, painful and stinging skin, and feelings such as embarrassment and self-consciousness. The social life of patients with AD may be disrupted, and an association with sleep disturbance and psychological problems is frequently observed (3). Work is an important aspect of life and an integral component of HRQoL. A systematic review (4) documented a noteworthy impact of AD on work life, in particular with regard to sick leave.

In the present study, we aimed to investigate work impairment in patients with AD. Adults (≥ 18 years) reporting a diagnosis of AD were selected from a representative sample of the French general population recruited by a polling institute (HC Conseil Paris, France) using stratified, proportional sampling with a replacement design (5). Work impairment was evaluated by 3 questions: Q1. Were you absent from work due to your AD? Q2. Did you need to stop working due to your AD? Q3. Were you required to decrease your workload because of your AD? For each question, respondents were asked to state the number of days per year.

From a total of 2,530 patients with AD identified in the sample, 1,905 (75.3%) were active, i.e., currently engaged in employment or seeking employment, according to the definition of the International Labour Organization (ILO). Among these individuals, 1,654 were employed, 70 on sick leave, and 181 were seeking employment. There were 749 men (39.3%). Clinical severity was moderate/severe (Patient-Oriented Eczema Measure [POEM] score ≥ 8) in 53.9% of patients. The percentage of individuals who had to be absent from work (Q1) was 25.9%, with a mean of 20.6 days per year (**Table I**). The frequency, as well as the number of days, was higher in patients with clinically moderate/severe AD compared with mild severity. Men reported absence at work more significantly frequently than women in

the group with moderate/severe condition, but not for mild AD. As to question Q2, 18.6% reported they had to interrupt their work due to AD, and more men did so (24.3%) than women (15.0%). The mean number of days of interruption was 26.3. The frequency was significantly higher when the disease was moderate/severe compared with mild. As for Q1, the difference between men and women was significant only for moderate/severe AD. Reduction of workload (Q3) was reported by 16.1% of individuals, with a mean of 5.9 days per year. Similar to the other questions, the frequency was higher in men than in women, and the difference between men and women was significant only for moderate/severe AD. A correlation between clinical severity and HRQoL impairment has been generally observed (2), and in particular with the work/school domain of the Dermatology Life Quality Index (DLQI) (6). Andersen et al. (7) observed that work productivity decreased with increasing clinical severity. In respondents with mild AD, an average of 0.1 days of work per week were missed due to AD, while in patients with moderate AD the average was 0.2, and with severe AD it was 0.8. Different factors may contribute to the higher impact observed in men than in women. For example, social expectations may make it more difficult for men to discuss their situation and seek support at work, leading to increased stress and difficulties in managing symptoms at work. Different aspects of work life have been evaluated in previous studies, and significant work impairment was consistently reported in patients with AD (4). Absence from work has an impact on work productivity with consequent economic impact on the society. An analysis of the effect of AD on adult patient performance at work and occupational absence (8) estimated the social cost of lost productivity across the European Union at €2 billion per year.

A limitation of the present study is that we used single questions to assess work impairment and not a validated instrument. In conclusion, adults with AD are noticeably affected and limited in their work life. Our hypothesis is that the impact of AD on work life may be due to several factors: symptoms causing discomfort that makes it difficult to focus on work tasks; appearance concerns, which

[AQ4]Table I. Frequency of work impairment according to sex and clinical severity in 1,905 patients with atopic dermatitis

Question	n (%)	Men n (%)	Women n (%)	p-value [§]
Q1. Absence from work	Total (n = 1,905)			
Number of days	494 (25.9%)	234/749 (31.2%)	260/1,156 (22.5%)	< 0.001*
	20.6 (18.0–23.1)	21.8 (18.2–25.5)	19.5 (15.9–23.3)	0.228**
	Mild (n = 878)			
Absence from work	114 (13.0%)	48/334 (14.4%)	66/544 (12.1%)	0.393*
Number of days	15.0 (11.0–19.0)	13.5 (8.5–18.5)	16.0 (10.0–22.1)	0.394**
	Moderate/severe (n = 1,027)			
Absence from work	380 (37.0%)	186/415 (44.8%)	194/612 (31.7%)	< 0.001*
Number of days	22.2 (19.2–25.3)	23.9 (19.6–28.2)	20.6 (16.3–24.9)	0.157**
	Total (n = 1,905)			
Q2. Work interruption	355 (18.6%)	182/749 (24.3%)	173/1156 (15.0)	< 0.001*
Number of days	26.3 (13.7–18.9)	15.4 (12.0–18.8)	17.3 (13.3–21.2)	0.345**
	Mild (n = 878)			
Work interruption	72 (8.2%)	32/314 (9.6%)	40/544 (7.4%)	0.298*
Number of days	12.9 (8.3–17.6)	10.3 (5.8–14.8)	15.0 (7.2–22.8)	0.158**
	Moderate/severe (n = 1,027)			
Work interruption	283 (27.6%)	150/415 (36.1%)	133/612 (21.7%)	< 0.001*
Number of days	17.2 (14.2–20.2)	16.5 (12.5–20.4)	17.9 (13.3–22.6)	0.528**
	Total (n = 1,905)			
Q3. Reduction of work	307/1,095 (16.1%)	150/749 (20.0%)	157/1,156 (13.6%)	< 0.001*
Number of days	5.9 (5.5–6.4)	6.2 (5.5–6.8)	5.8 (5.0–6.4)	0.254**
	Mild (n = 878)			
Reduction of work	68/878 (7.7%)	30/334 (9.0%)	38/544 (7.0%)	0.344*
Number of days	5.1 (4.0–6.2)	5.0 (3.2–6.8)	5.2 (3.7–6.7)	0.783**
	Moderate/severe (n = 1,027)			
Reduction of work	239/1,027 (23.3%)	120/415 (28.9%)	119/612 (19.4%)	< 0.001*
Number of days	6.2 (5.7–6.7)	6.4 (5.7–7.2)	5.9 (5.2–6.6)	0.170**

[§]for the comparison between men and women. *Chi-square test; **independent sample t-test.

may affect interactions with others; sleep disturbances that may lead to fatigue and decreased work productivity; frequent medical consultations that may disrupt work schedules; and the psychological impact, which may affect overall well-being.

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Ethics committee: The study was approved by a local ethics committee at CHU de Grenoble, France (reference number 20.04.18.61210) and was conducted according to the principles of the Declaration of Helsinki.

The authors have no conflicts of interest to declare.

REFERENCES

1. Richard M-A, Corgibet F, Beylot-Barry M, Barbaud A, Bodemer C, Chaussade V, et al. Sex- and age-adjusted prevalence estimates of five chronic inflammatory skin diseases in France: results of the "OBJECTIFS PEAU" study. *J Eur Acad Dermatol Venereol* 2018; 32: 1967–1971. <https://doi.org/10.1111/jdv.14959>
2. Birdi G, Cooke R, Knibb RC. Impact of atopic dermatitis on quality of life in adults: a systematic review and meta-analysis. *Int J Dermatol* 2020; 59: e75–e 91. <https://doi.org/10.1111/ijd.14763>
3. Gilhooley E, O'Grady C, Roche D, Mac Mahon J, Hambly R, Kelly A, et al. High levels of psychological distress, sleep disturbance, and alcohol use disorder in adults with atopic dermatitis. *Dermatitis* 2021; 32: S33–S38. <https://doi.org/10.1097/DER.0000000000000687>
4. Nørreslet LB, Ebbelhøj NE, Ellekilde Bonde JP, Thomsen SF, Agner T. The impact of atopic dermatitis on work life: a systematic review. *J Eur Acad Dermatol Venereol* 2018; 32: 23–38. <https://doi.org/10.1111/jdv.14523>
5. Misery L, Seneschal J, Corgibet F, Halioua B, Marquié A, Merhand S, et al. Impact of atopic dermatitis on patients and their partners. *Acta Derm Venereol* 2023; 103: 5285. <https://doi.org/10.2340/actadv.v103.5285>
6. Maksimović N, Janković S, Marinković J, Halioua B, Marquié A, Merhand S. Health-related quality of life in patients with atopic dermatitis. *J Dermatol* 2012; 39: 42–47. <https://doi.org/10.1111/j.1346-8138.2011.01295.x>
7. Andersen L, Nyeland ME, Nyberg F. Increasing severity of atopic dermatitis is associated with a negative impact on work productivity among adults with atopic dermatitis in France, Germany, the U.K. and the U.S.A. *Br J Dermatol* 2020; 182: 1007–1016. <https://doi.org/10.1111/bjd.18296>
8. Zuberbier T, Orlov SJ, Paller AS, Taïeb A, Allen R, Hernanz-Hermosa JM, et al. Patient perspectives on the management of atopic dermatitis. *J Allergy Clin Immunol* 2006; 118: 226–232. <https://doi.org/10.1016/j.jaci.2006.02.031>