



**New York  
Institute of  
Technology**

# The Psychosocial Burden Associated with and Effective Treatment Approach for Atopic Dermatitis: A Literature Review

Hira Ghani B.A.<sup>1</sup>, Marielle Jamgochian M.B.S.<sup>2</sup>, Amy Pappert M.D.<sup>2</sup>,  
Stefanie Cubelli D.O.<sup>3</sup>, Suzanne S. Rozenberg D.O.<sup>3</sup>

1 NYIT College of Osteopathic Medicine, Old Westbury, NY

2 Department of Dermatology, Robert Wood Johnson, Somerset, NJ

3 Department of Dermatology, St. John's Episcopal Hospital, Far Rockaway, NY

## Introduction

Atopic Dermatitis (AD) is chronic relapsing inflammatory skin condition that is marked by a high degree of physical and emotional and psychosocial burden in both pediatric and adult populations.<sup>1</sup> AD is predominantly an early onset disease, with 60% of cases arising in the first year of life.<sup>2</sup> According to global burden of skin diseases research, AD is in the top 10 most prevalent skin diseases worldwide.<sup>3</sup> the prevalence of AD is 11.3 – 12.7% in the pediatric and adolescent population, and 6.9 – 7.6% in the adult population.<sup>3</sup> The incidence of AD has increased by 2-3 fold during the past decades.<sup>3</sup> AD can impact quality of life as well as the social, academic, and occupational areas of those affected.<sup>3</sup>

We reviewed most up-to-date literature to explore the extent and severity of psychosocial burden that patients with AD may experience, with focus on latest treatment options available for symptoms associated with AD.

## Discussion

AD is reported to have the greatest impact on childhood quality of life among skin conditions (QoL).<sup>4</sup>

Children with AD reported regular difficulty falling asleep, nighttime and early morning awakening, nightmares and poorer sleep quality, though sleep duration did not significantly differ.<sup>4</sup>

A recent cross-sectional study by Wan et al concluded that out of 2,000 adolescents with AD (median age of 16, 54% female), approximately 8.2% were diagnosed with a learning disability.<sup>5</sup>

Itching and soreness associated with AD can also have a psychosocial effect on children, with embarrassment leading to peer-avoidance or even depression.<sup>5</sup>

Pruritus associated with difficulty sleeping is frequently reported in adults with AD.<sup>6</sup> Poor sleep contributes to daytime sleepiness and fatigue, further reducing functional activities and adversely affecting mood.<sup>7</sup> Adults with AD report increased depression and anxiety scores compared to control groups.<sup>7</sup>

A 2019 systematic review and meta-analysis reported that adults with AD were 44% more likely to experience suicidal ideation and 36% more likely to attempt suicide compared to controls.<sup>6</sup>

Severity of AD negatively impacts sexual desire in patients and their partners.<sup>7</sup>

For mild symptoms of AD, dermatologists should recommend use of emollients and avoidance of triggers. If that fails, treatment with TCS, TCIs, phototherapy and systemic immunosuppressants is generally advised.

Dupilumab is the most effective immunomodulatory therapy available for treating moderate-to-severe symptoms associated with AD, including itching, poor sleep quality, anxiety and depression.<sup>8</sup> Topical agents and phototherapy have shown to be less efficacious with typical use and are more suited for curbing remission in mild-to-moderate disease.<sup>8</sup>

## Results

Table I: Treatment options for Atopic Dermatitis

Treatment options for mild AD	Treatment options for moderate AD	Treatment options for severe AD
Basic skin care (trigger avoidance, emollient use)	Topical Corticosteroids	Phototherapy
	Topical Calcineurin inhibitors	dupilumab†
	Topical crisaborole*	Methotrexate, cyclosporine‡
		Systemic corticosteroids §
Psychosocial evaluation to determine QoL impact of AD on patient and parents.		

\*indicated for patients >2 years of age with mild-moderate AD,

†indicated for patients >6 years of age with moderate-severe AD

‡not FDA indicated, but used off-label for patients who have not adequately responded to first-line therapies

§ not recommended for control of AD, especially in children |

#Sleep, anxiety, depression, suicidal ideation, learning difficulties, changes in interpersonal relationships, body image, and physical intimacy have all been seen in patients with Atopic dermatitis

## Conclusion

The treatment of emotional and psychosocial factors linked with moderate to severe AD remains challenging, and there is a need for well-tolerated therapeutic approaches that take the psychosocial burden of the disease into account. Patients often suffer from low self-esteem, decreased productivity, irritability, lack of physical intimacy, disturbed sleep, depression, anxiety, and in some cases, suicidal ideation. We recommend psychological evaluation in addition to dermatological consult to address the psychosocial needs of this population. We also suggest the need to implement and reinforce the use of positive coping strategies for affected patients

## References

- Weidinger S, Novak N. Atopic dermatitis. *Lancet Lond Engl*. 2016;387(10023):1109-1122. doi:10.1016/S0140-6736(15)00149-X
- Avena-Woods C. Overview of atopic dermatitis. *Am J Manag Care*. 2017;23(8 Suppl):S115-S123.
- Apfelbacher CJ, Diepgen TL, Schmitt J. Determinants of eczema: population-based cross-sectional study in Germany. *Allergy*. 2011;66(2):206-213. doi:10.1111/j.1398-9995.2010.02464.x
- Manam S, Tsakok T, Till S, Flohr C. The association between atopic dermatitis and food allergy in adults. *Curr Opin Allergy Clin Immunol*. 2014;14(5):423-429. doi:10.1097/ACI.0000000000000095
- Nutten S. Atopic dermatitis: global epidemiology and risk factors. *Ann Nutr Metab*. 2015;66 Suppl 1:8-16. doi:10.1159/000370220
- Irvine AD, McLean WHI, Leung DYM. Filaggrin mutations associated with skin and allergic diseases. *N Engl J Med*. 2011;365(14):1315-1327. doi:10.1056/NEJMra1011040
- Wan J, Mitra N, Hooper SR, Hoffstad OJ, Margolis DJ. Association of Atopic Dermatitis Severity With Learning Disability in Children. *JAMA Dermatol*. Published online April 14, 2021. doi:10.1001/jamadermatol.2021.0008
- Eckert L, Gupta S, Amand C, Gadkari A, Mahajan P, Gelfand JM. Impact of atopic dermatitis on health-related quality of life and productivity in adults in the United States: An analysis using the National Health and Wellness Survey. *J Am Acad Dermatol*. 2017;77(2):274-279.e3. doi:10.1016/j.jaad.2017.04.019

## Contact

Hira Ghani, BA  
Medical Student  
NYITCOM  
hghani01@nyit.edu

Disclosures: None