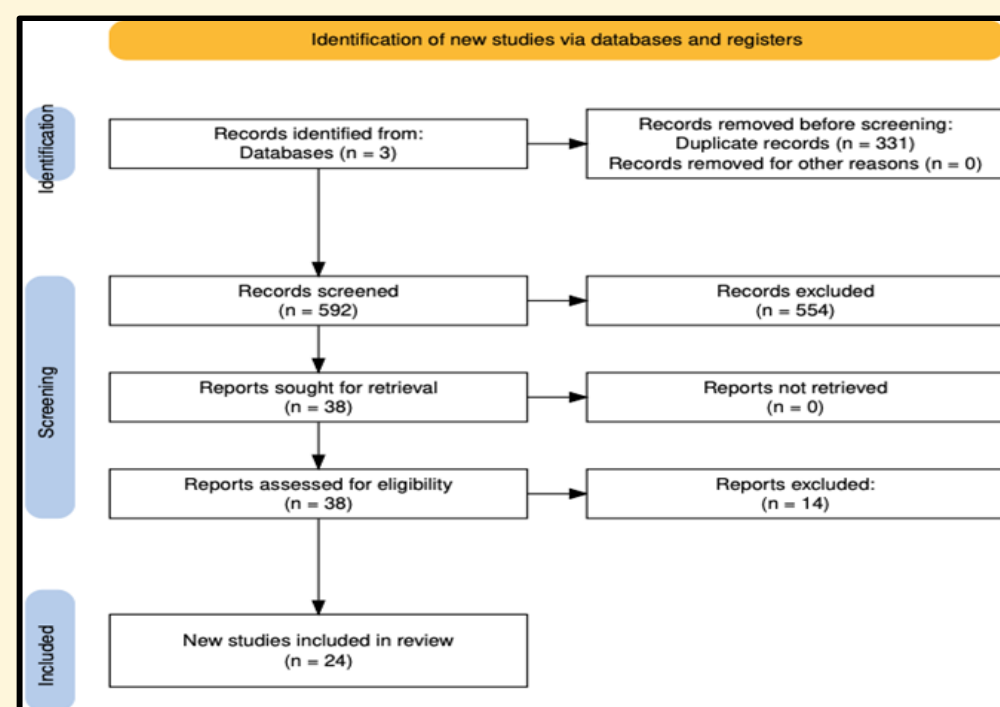


Introduction

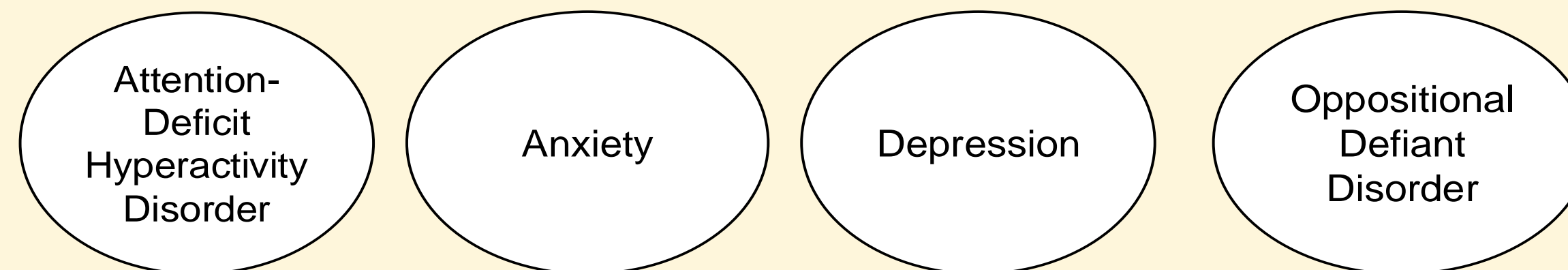
- Recent literature has increasingly elucidated the bidirectional relationship between atopic dermatitis (AD) and sleep disturbance (SD).¹
- Exacerbation of pruritus and discomfort during nocturnal hours can lead to significant disruptions in sleep architecture and quality.^{1,2}
- This review aims to synthesize and critically evaluate recent findings on SDs and associated psychiatric ailments in AD, emphasizing their implications for health outcomes and quality of life.

Methods

- A comprehensive search was conducted of the PubMed, PsycINFO, and Web of Science databases using the keywords "Atopic Dermatitis" or "Eczema" and "Insomnia or "Sleep Disturbance" or "Sleep Disorder" or "Sleep Deprivation."
- Studies were included if they discussed sleep disturbances in AD and their effects on health and quality of life, were of the appropriate study type, and were published in peer-reviewed journals in English between 2019 and 2024.



Psychiatric Conditions Associated with Sleep Disturbance in AD



- SD was associated with increased psychological comorbidities:
 - Attention-Deficit Hyperactivity Disorder (OR 2.1, 95% CI: 1.0–4.0)^{3,4}
 - Anxiety (OR 2.3, 95% CI: 1.8–2.9)^{5,6}
 - Depression (OR 2.6, 95% CI: 2.0–3.3)^{5,6}
- Oppositional and defiant behaviors were weakly, yet positively associated with SD (r=.22, p=.04).⁴
- SD was associated with increased risks of self-harm (OR 11.6, 95% CI: 5.7–23.5) and suicidal ideation, with sleep dissatisfaction (OR 1.2, 95% CI: 1.1–1.2) and shortened sleep (OR 1.3, 95% CI: 1.3–1.4) as contributing factors.^{7,8}

Impacts on Quality of Life and General Health

- These cumulative effects resulted in reduced overall quality of life in AD patients, with frequency and severity of SD modulating impact.⁶
- Specifically, SD is significantly associated with general health impairments including fatigue, increased sick days, higher risk of headaches, and worse cognitive functioning over time.^{5,9-12}
- Caregivers also experienced reduced sleep quality (mean difference -6.2, p<.01), with reports of significantly longer sleep latency, or the length of transition time into sleep.^{13,14}

Conclusion

- Findings suggest a potential bidirectional relationship between SD and AD severity.
- SD may be an effect modifier in the relationship between AD and psychiatric comorbidities, potentially secondary to mood changes and viscous stress cycles.⁴
- Whether SD and psychiatric illnesses share the same underlying mechanisms or if psychological symptoms develop secondary to SD in AD remains unclear.
- Nonetheless, improving sleep may help alleviate both the physical and psychological burden of AD.
- Future research should focus on targeted interventions addressing SD in AD management, including novel treatment options and behavioral health therapies.
- Our investigation is subject to several limitations including variations in study methodologies, such as tools to measure SD, and sample sizes.

