

A systematic literature review of alopecia areata in children and adolescents: psychosocial impact



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OBJECTIVE

Systematic Literature Review overall objective

- A systematic literature review was conducted to assess the efficacy, effectiveness, and safety of treatments/interventions for AA in children and adolescents <18 years of age.

Psychosocial descriptive analysis objective

- Here, we present the psychosocial impact of AA in children and adolescents, based on findings from the observational studies identified in this review that specifically address this outcome.

CONCLUSION

- This literature review highlights the significant and complex psychosocial impact of AA in children and adolescents.
- The negative impact of AA in children and adolescents impacts multiple facets of life such as self-esteem, relationships, and academic performance.
- Parents and caregivers of children with AA experienced psychosocial impacts as a result of their child's condition.
- The psychosocial burden of AA in children and adolescent patients may be reduced by addressing both psychological and dermatological aspects:
 - Early psychosocial screening.
 - Referral to appropriate psychotherapy services.
 - Utilization of emerging therapies.
- Comparative studies between pediatric and adult patients with AA are needed to elucidate characteristics that are more prominent in children and adolescents.

SYNOPSIS

- AA is a chronic autoimmune condition characterized by a T-cell-mediated attack on hair follicles that causes hair loss.¹
 - AA has a greater prevalence in the pediatric population.²
- Although some JAKis are approved for the treatment of severe AA in adults, and one is approved in adolescents,³ therapies for pediatric use are generally limited.
- Given the unique developmental challenges in affected children and adolescents, understanding the psychosocial impact of AA is essential.²

METHODS

Systematic literature review design

- A comprehensive systematic literature review was conducted following PRISMA and Cochrane Collaboration guidelines.
- Relevant studies were identified via MEDLINE, EMBASE, and EBM Reviews databases using the Ovid® platform (from database inception to April 15, 2025) and via conference proceedings, clinical trial registries, and HTA websites (2023–2025).
- Documents were screened using AI-assisted and human review processes.
- Eligibility criteria were pre-specified according to the population, intervention, comparators, outcomes, and study design (PICOS) criteria.
- Methodological quality and bias of non-RCTs and observational studies were assessed using the CRD's* Quality Assessment checklist (2009).

Inclusion criteria and psychosocial impact analysis

- Randomized controlled trials, prospective trials, and observational studies on children and adolescents with AA reporting pre-specified interventions and outcomes were included.
 - AA included alopecia universalis, alopecia totalis, alopecia sisoapho, and alopecia ophiasis.
- Data on the psychosocial effects of AA were extracted for this analysis from observational studies. The source studies used PRO tools, surveys, or questionnaires.
- Studies that reported psychosocial impact of AA analysed:
 - Emotional and mood disturbances.
 - Behavioural and cognitive challenges.
 - Social and relationship difficulties.
- Some of these studies also reported the impact of AA in parents and caregivers.

* Centre for Reviews and Dissemination (CRD) Guidance for Undertaking Reviews in Health Care (2009).

RESULTS

Psychosocial impact of AA in children and adolescents—overview

- 24 observational studies reported the psychosocial impact of AA on children and adolescents (n = 1576 participants in these studies).^{4–27}
- The publication dates of these studies ranged from 1979–2024.^{4–27}
- Many studies highlighted a higher impact of AA on quality of life and increased psychosocial impact in this population compared with controls.
- Fewer children with AA had positive life events the year before AA onset than controls during a similar period.

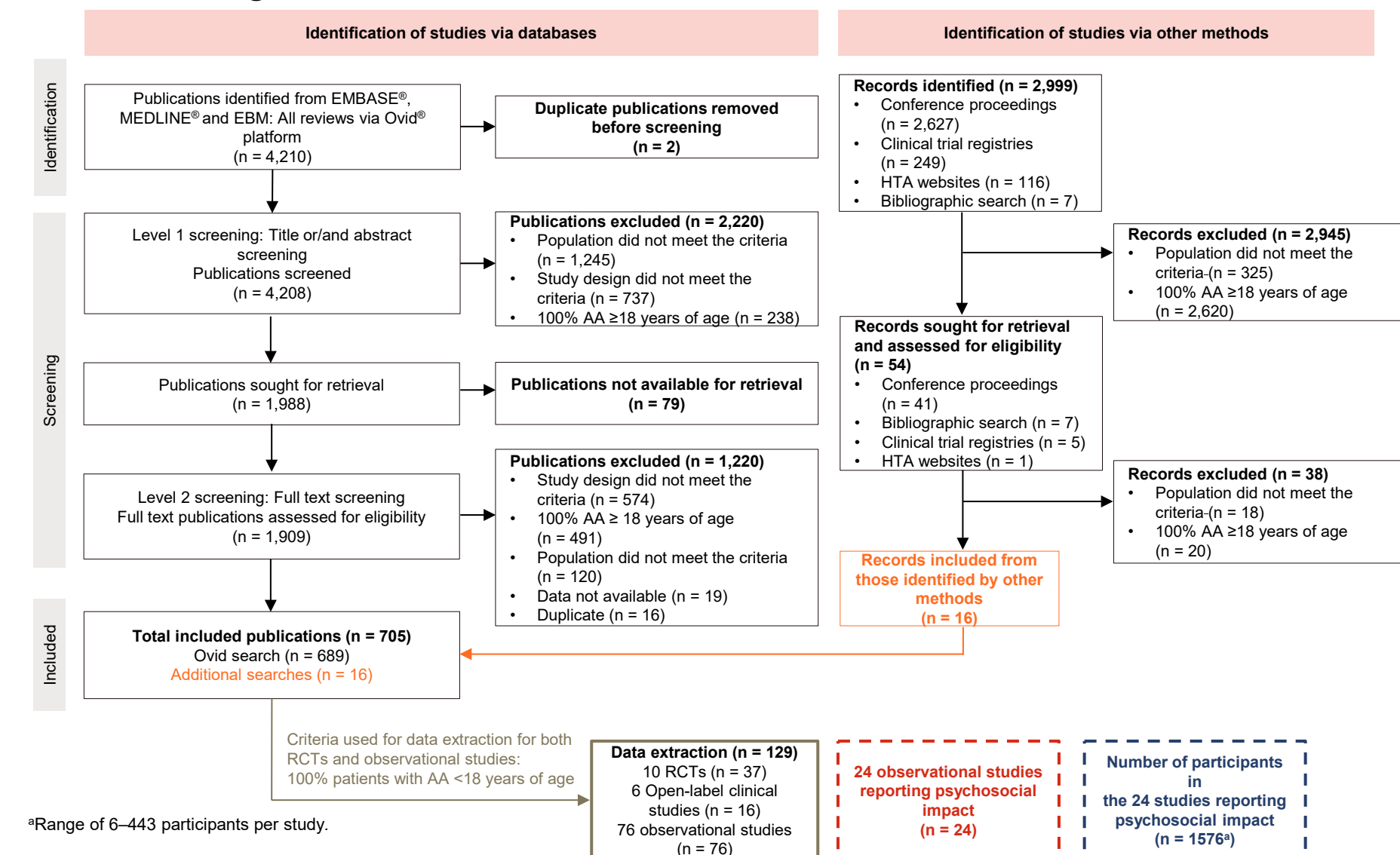
Psychosocial impact^a

- **Emotional and mood disturbances**
 - Anxiety
 - Depression
 - Embarrassment
 - Helplessness
 - Insecurity
 - Low self-consciousness
 - Low self-esteem
 - Psychological distress
 - Suicidal tendencies
 - Worry and oversensitivity
- **Behavioural and cognitive challenges**
 - Aggression
 - Difficulties dealing with conflict
 - Difficulties with concentration
 - Impacted daily activities
- **Social and relationship difficulties**
 - Avoiding swimming or sports
 - Bullying
 - Difficulties in reaching expected performance (real or imaginary expectations)
 - Impacted family relationships
 - Independence
 - Separation anxiety
 - Social impact^b
 - Stressful event history

Note that impacts are arranged alphabetically, not by prevalence. ^aSome, but not all studies included comparison with healthy controls; ^bSocial aspects included social avoidance, social competence, social judgement, social impeccability, social phobia, social problems, social relations, social withdrawal and limited social activities.

Methods

Prisma flow diagram



PRO tools used in the 24 studies

BAI BDI CBCL CDI CDLQI Child Psychiatric Interview Children's Depression Rating Scale–Revised Children's Depression Scale CMAS	Coddington's Life Events Scale CSI-24 DeFIS ERC FES LECL LES-C Paykel's Scale of Stressful Events PedsQL	Piers–Harris Children's Self-Concept Scale PSS RCADS RCMAS RSES SCARED SCL-90-R STAI-C
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Other non-formal PRO assessments included a 47-question online survey created by the research team using the REDCap platform and a structured interview relating to the patient's anamnesis.

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Results

Psychosocial impact (continued)

- Increased prevalence of depression and anxiety among children with AA, compared with healthy controls.^{4,9,10,17,19,20,22,23}
- 75% of patients with >50% scalp involvement and 63% of patients with <50% scalp involvement had anxiety or depressive diagnosis as per DICA-R.²⁰
- One study reported that 8 out of 14 patients (57%) undergoing treatment for AA required psychiatric consultations due to significant depression.¹⁰
- Significant impairment in HRQoL among patients with AA was indicated by CDLQI scores across several studies.^{25–27}
- Self-esteem, as measured by RSES, was significantly worse in patients than controls (p = 0.008), and the proportion of patients with low/moderate self-esteem was significantly higher in patients with AA compared with controls.⁶
- In another study 5 out of 6 patients who had undergone treatment for AA were reported to be depressed and had previously attempted suicide.¹³

Psychosocial impact of AA in parents and caregivers

- **Impact in parents and caregivers**
 - A higher prevalence of panic disorder, depression, and total anxiety scores were reported among the parents of children with AA, compared with controls.^{22,23}
 - Parents of children with AA also reported fatigue and substantial emotional, financial, and caregiving burden.²⁶
 - There was also a strong correlation between poor FDLQI scores and higher depression scores among parents of children with AA.²⁷

Limitations

- Limitations of this analysis include:
 - Small sample size within the identified studies.
 - Use of PRO tools that were unvalidated or not adolescent- or disease-specific in some studies.
 - Limited scope of the source databases.
 - Heterogeneity of the source studies limiting comparability.

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Abbreviations

AA=alopecia areata; AI=Artificial Intelligence; BAI=Beck Anxiety Inventory; BDI=Beck Depression Inventory; CBCL=Child Behavior Checklist; CDI=Child Depression Inventory; CDLQI=Children's Dermatology Life Quality Index; CMAS=Children's Manifest Anxiety Scale; CRD=Centre for Reviews and Dissemination; CSI-24=Children's Somatization Inventory-24; DICA-R=Diagnostic Interview for Children and Adolescents-Revised; DeFIS=Dermatology Family Impact Scale; ERC=Emotion Regulation Checklist; ERC-ER=Emotion Regulation Checklist – Emotional Regulation; FDLQI=Family Dermatology Life Quality Index; FES=Family Environment Scale; HTA=Health Technology Assessment; HrQoL=health-related quality of life; JAKi=Janus kinase inhibitor; LECL=Life Events Checklist; LES=C=Life Events Scale for Children; MEDLINE=Medical Literature Analysis and Retrieval System Online; PICOS=Population, Intervention, Comparison, Outcomes and Study; PRISMA=Preferred Reporting Items for Systematic Reviews and Meta-Analyses; PRO=patient-reported outcome; PSS=Parental Stress Scale; PedsQL=Paediatric Quality of Life Inventory; RCADS=Revised Children's Anxiety and Depression Scale; RCMAS=Revised Children's Manifest Anxiety Scale; RCT=randomized controlled trial; RSES=Rosenberg Self-Esteem Scale; SCARED=Screen for Child Anxiety Related Emotional Disorders; SCL-90-R=Symptom Checklist-90-Revised; SLR=systematic literature review; STAI-C=State-Trait Anxiety Inventory for Children.