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Review

Trends in the Prevalence of Atopic Eczema Among Children and Adolescents in Greece Since 1990: Data from a Systematic Review

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Abstract

Atopic eczema is the most prevalent chronic dermatitis in childhood, characterised by relapsing pruritic lesions and significant heterogeneity in clinical expression and immunological profile. The disease impacts quality of life and healthcare systems, especially when persistent into adulthood. Epidemiological data from the International Study of Asthma and Allergies in Childhood (ISAAC) demonstrate significant geographic and temporal variability in the prevalence of atopic eczema, with an overall upward trend observed in paediatric populations across most regions. A systematic literature search was conducted in PubMed, ScienceDirect, and the Cochrane Library to identify relevant studies published between 1990 and 2025. Seven studies met the inclusion criteria—six cross-sectional and one prospective—conducted in the urban centres of Athens, Thessaloniki, and Patras. Sample sizes ranged from 517 to 3076 participants, encompassing children and adolescents aged 6 to 17. Prevalence rates ranged from 4.5% to 16.1% in children and 8.9% in adolescents, with notable geographic and temporal variability. Male sex, younger age, environmental exposures, and a family history of atopic diseases were identified as key risk factors. Comparative data from European studies reflect similar trends, with increasing atopic eczema prevalence and plateauing asthma rates suggesting distinct etiological pathways. The psychosocial and economic burden of atopic eczema remains substantial, highlighting the need for early recognition and effective management. Despite methodological variability and limitations in study design, findings indicate an underestimation of atopic eczema prevalence in Greece and underscore the importance of standardised epidemiologic surveillance.

Keywords: child; adolescent; atopic eczema; atopic dermatitis; prevalence; Greece; Greek

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1. Introduction

Atopic eczema represents the most prevalent form of chronic dermatitis in childhood, as demonstrated in recent epidemiological data [1]. Clinically, it presents as a persistent, relapsing pruritic rash that typically manifests early in life, with a tendency to diminish in severity in many individuals as they progress through childhood [2,3]. Importantly, not all patients clinically diagnosed with atopic eczema exhibit true atopy, defined by the presence of allergen-specific immunoglobulin E (IgE); this distinction is particularly notable in developing regions where parasitic infections, such as helminth infestations, are prevalent [4]. The burden of severe atopic eczema persisting into adulthood is considerable in terms of direct healthcare costs and its profound impact on patient quality of life [5]. Chronic

pruritus often results in significant sleep disturbances, and the visible manifestations of atopic eczema contribute to psychosocial stress and stigmatisation [6].

Atopic eczema is an inflammatory skin disorder arising from genetic predisposition, barrier dysfunction, and immune dysregulation [7]. In addition to immune-mediated inflammation, recent evidence highlights roles for altered lipid metabolism, neuroimmune signalling, and microbial imbalance in disease development [8]. These findings support a multifactorial pathogenesis and offer opportunities for targeted therapeutic approaches.

The assessment of atopic eczema prevalence is vital for understanding disease burden, tracking epidemiologic trends, and generating hypotheses regarding etiologic factors through inter-country comparisons. The International Study of Asthma and Allergies in Childhood (ISAAC), initiated in 1995, utilised standardised questionnaires to compare asthma, rhinitis, and atopic eczema prevalence across diverse geographic regions [9]. Data from subsequent ISAAC phases revealed that, for children aged 6–7 years, the global prevalence of atopic eczema symptoms increased from 6.1% in Phase One to 7.9% in Phase Three, with most regions exhibiting this upward trend [10,11]. In contrast, among adolescents, the global prevalence decreased from 8.8% in Phase One to 7.3% in Phase Three, with regional variations indicating higher prevalence rates in the Asia-Pacific, Indian Subcontinent, and Latin America regions. Interestingly, a divergence in prevalence trends between asthma and atopic eczema was observed in Aberdeen between 2004 and 2009 posing the possibility of distinct aetiological pathways underlying the two conditions [12].

Over the past three decades, multiple studies have investigated the epidemiology of atopic diseases in Greece, producing noteworthy findings. However, no comprehensive review has been conducted to date. The objective of this work was to systematically evaluate trends in the prevalence of atopic eczema and identify associated risk factors among Greek children and adolescents from 1990 to 2025. To the best of our knowledge, this is the first systematic review to assess the burden and determinants of atopic eczema across Greece over the past 35 years.

2. Materials and Methods

2.1. Search Process

A systematic literature search was performed across three electronic databases—MEDLINE, ScienceDirect, and the Cochrane Library—covering the period from January 1990 to April 2025. The search strategy employed Medical Subject Headings (MeSH) terms including “child”, “adolescent”, “atopic eczema”, “atopic dermatitis”, “prevalence”, “Greece”, and “Greek”, which were applied to the titles, abstracts, and key-words of the articles. A total of 45 publications, all in the English language, were initially identified: 27 articles from PubMed, 18 from ScienceDirect, and none from the Cochrane Library. Following the removal of 27 duplicate records, 18 unique studies remained. Of these, 12 articles were excluded based on predetermined eligibility criteria. Ultimately, six studies met the inclusion criteria and were incorporated into the final review (Figure 1). The methodology of this systematic review adhered to the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines [13]. Furthermore, the review protocol was registered in the International Prospective Register of Systematic Reviews (PROSPERO) under the ID number 1042111.

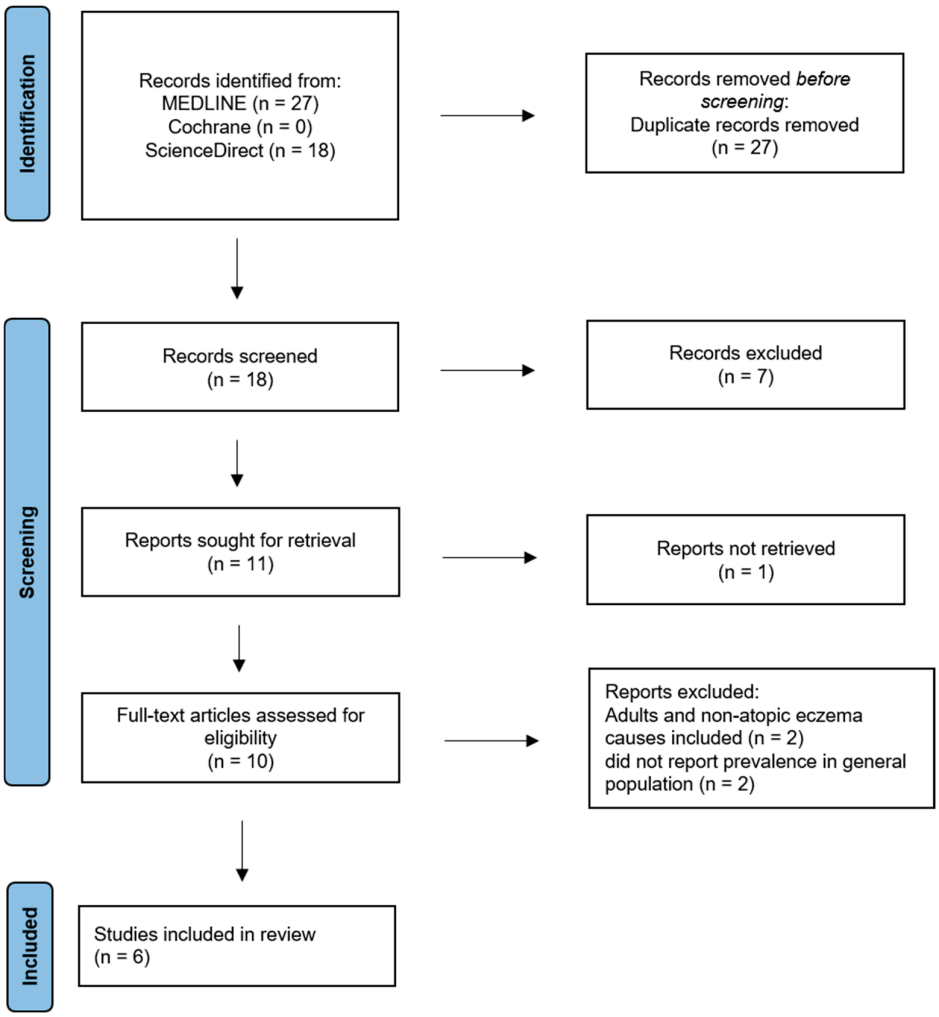

Figure 1. Preferred Reporting Items for Systematic Reviews flow diagram of selection process.

2.2. Eligibility

Epidemiological and observational studies published in English or Greek, focusing on the Greek paediatric and adolescent population with atopic eczema, were included in this review. The studies were classified by design into cross-sectional and prospective cohort studies. Atopic eczema diagnosis was established based on various data sources: (1) self-reported questionnaires completed by adolescents or the parents of younger children regarding symptoms of atopic diseases such as eczema, allergic rhinitis, and asthma; (2) clinical examination for characteristic signs of atopic dermatitis, especially in body folds; and (3) allergological evaluation through Skin Prick Tests (SPT) for sensitization to a panel of common airborne allergens, including grass, tree, and olive pollens, as well as common indoor allergens such as Dermatophagoides farinae and pteronyssinus, Alternaria tenuis, and animal dander.

2.3. Selection Process

All potentially relevant full-text articles identified from the three electronic databases were independently screened by two authors (CK, EH), who verified the data obtained. Any discrepancies between the reviewers were resolved through discussion. No attempts were made to contact the original study authors to clarify missing or ambiguous data. All studies included in this systematic review had obtained independent ethics approval from their respective institutional review boards or ethics committees. As this work is

a systematic review of published data, no separate ethics approval was required for the current study.

2.4. Data Items

The findings of the included studies were extracted as prevalence rates (i.e., frequencies), with stratification by age group and gender when available. Specific characteristics of the children and adolescents were documented as reported by the studies. These characteristics included the year of the study, sample size, geographic region, as well as demographic data (gender, age in years), environmental exposures (i.e., moisture, mites, fungi), and personal and family histories of atopic conditions (i.e., asthma, allergic rhinitis, atopic eczema). Given the substantial heterogeneity observed in preliminary quantitative assessments (I^2 consistently >65%), a meta-analysis was deemed inappropriate. Instead, a qualitative synthesis was conducted, as it was better suited to capturing the complexity of the available evidence. Subgroup analyses were not pursued, as each time period included only two studies, limiting the interpretability and robustness of such comparisons. Definitions of "current" and "lifetime" atopic eczema varied, with reference periods ranging from 12 months (i.e., ISAAC-based studies) to two years. Additionally, ascertainment methods differed, with some studies relying on parent-reported symptoms and others on parent-reported physician diagnoses. Lifetime prevalence values were preferred to enhance comparability and to align with prior studies on asthma, which commonly report lifetime asthma and lifetime allergic rhinitis as the main outcome. Variability in questionnaire design and the predominance of cross-sectional study designs further limited comparability and precluded causal inference. The data supporting the findings of this study are available within the article. Additional data can be provided upon reasonable request to the corresponding author.

2.5. Quality Assessment and Risk of Bias

The quality of the studies was independently assessed by two authors (CK, EH) using the evidence levels defined by the Centre for Evidence-Based Medicine (Oxford, UK). Specifically, Level I included well-conducted cohort studies with valid reference tests that were applied blindly or objectively to all participants. Level II comprised exploratory cohort studies with valid reference tests. Level III included studies involving non-consecutive patients or those where the reference test was not applied to all participants. Level IV encompassed Case–Control studies, or studies using poor or non-independent reference tests that were not applied to all patients but were interpreted independently of the index test. Level V consisted of expert opinion, without explicit critical appraisal, or evidence derived from physiology, bench research, or theoretical principles.

3. Results

Eleven surveys retrieved from seven different studies were included in this systematic review [14–20] (Table 1). Sample sizes of the retrieved epidemiological studies ranged from 517 subjects aged 6–17 [19] to 3076 subjects aged 8–9 years old [14]. Participants lived in the city of Patras [14,15,18] as well as the capital cities of Thessaloniki and Athens [16,17,19,20]. Six epidemiological studies were cross-sectional [14–18,20] and one was prospective [19]. All studies were conducted between 1 January 1990 and 28 April 2025.

Between 1991 and 2018, six cross-sectional surveys were conducted during the winter months of January and February in the city of Patras. The study population comprised children enrolled in 44 public primary schools. These surveys aimed to assess the prevalence and temporal trends of allergic rhinitis, allergic conjunctivitis, atopic eczema, and asthma during winter. The findings were published in three different publications [14,15,18].

The collected data included self-report questionnaires answered by the patients' parents [14,15] and patients' respiratory test results, i.e., spirometry, exhaled nitric oxide [18]. A standardised questionnaire, calibrated for the Greek population, was utilised across all surveys. This instrument differed from the ISAAC questionnaire [9], as the initial survey on allergic rhinitis was conducted in 1991, prior to the development and implementation of the ISAAC protocol.

Table 1. Characteristics of surveys reported.

Reference	Study Design	Year	Sample	Age (yrs)	Region	Atopic Eczema Prevalence	Level of Evidence
Anthracopoulos et al. [14]	Cross-sectional	1991	2417	8–10	Patra, S	4.5% [a]	III
Anthracopoulos et al. [14]	Cross-sectional	1998	3076	8–10	Patra, S	6.3% [a]	III
Papadopoulou et al. [16,17]	Cross-sectional	2000	1000	9–10	Athens, C	14.4% [a]	III
Papadopoulou et al. [16,17]	Cross-sectional	2000	1023	9–10	Thessaloniki, N	11.7% [a]	III
Anthracopoulos et al. [14]	Cross-sectional	2003	2725	8–10	Patra, S	9.5% [a]	III
Anthracopoulos et al. [15] *	Cross-sectional	2008	2688	8–10	Patra, S	10.8% [a]	III
Malliori et al. [18] *	Cross-sectional	2008	2688	8–10	Patra, S	10.8% [a]	III
Malliori et al. [18]	Cross-sectional	2013	2554	8–10	Patra, S	13.6% [a]	III
Siguardardottir et al. [19]	Cohort	2017	517	6–10	Athens, C	6.2% [c]	II
Malliori et al. [18]	Cross-sectional	2018	2648	8–10	Patra, S	16.1% [a]	III
Antonogeorgos et al. [20]	Cross-sectional	2020	1934	12–14	Athens, C	8.9% [b]	III

Abbreviations: S, South; C, Central; N, North; *, same sample; [a], ISAAC questionnaire; [b], GAN questionnaire; [c], iFAAM questionnaire.

Atopic eczema prevalence was found to have an increasing trend between 1991 and 2003 in the three consecutive surveys conducted by Anthracopoulos et al. [14]. Interestingly, the prevalence doubled its value in a decade, from 4.5% in 1991 to 9.5% in 2003 ($p < 0.001$). In detail, prevalence increased 1.4 times between 1991 and 1998 and 1.5 times between 1998 and 2003. Male to female risk ratio (RR) in all three surveys was 1.23 (95% CI: 1.05–1.45), indicating that males were 23% more likely to have atopic eczema than females in the general paediatric population in Greece. The same team of Greek researchers published another study a few years later, determining the atopic eczema prevalence in the same population in 2008 [15]. Atopic eczema prevalence demonstrated a further increase to 10.8% ($p < 0.05$) with male to female RR unchanged at 1.24 (95% CI: 1.08–1.43). Furthermore, the two consecutive studies [14,15] included four consecutive surveys that examined the prevalence of atopic eczema among asthmatic children with new onset, current and persistent wheeze. Atopic eczema prevalence followed an increasing trend in all asthmatic groups, having the most significant increase in the group of persistent asthma; from 6.6% in 1991 to 39.7% in 2008, showing a 6-fold increase ($p < 0.001$). In the current wheeze group of children, eczema prevalence also recorded a 3-fold growth pattern from 13.4% in 1991 to 38.4% in 2008 ($p < 0.001$). In the new-onset wheeze group, eczema increased from 21.6% to 41.7% from 1991 to 2003, though a decrease afterwards to 34.1% in 2008; overall eczema prevalence increased by 1.6 times ($p < 0.05$). In the following years, another team of researchers conducted two additional surveys that were published in their study concerning the prevalence of atopic manifestations in the Greek paediatric population [18]. They compared the new prevalence values with the previous surveys and documented an escalation in atopic eczema prevalence from 10.8% in 2008 to 13.6% in 2013 and 16.1% in 2018. Since the first survey conducted in 1991, prevalence demonstrated a 3.5-fold upward trend; 4.5% in 1991 to 16.1% in 2018. The association between eczema and wheeze/asthma

in children rose from RR of 3.27 (95% CI: 1.97–5.45) in 1991 to a peak of 5.25 (95% CI: 4.01–6.87) in 2003, followed by a steady decline to 2.22 (95% CI: 1.50–3.27) in 2018.

During the period 2000–2001, a cross-sectional study was conducted in Thessaloniki to assess the prevalence of atopic eczema among children, as part of the ISAAC Phase II multicentre initiative [16]. The study, carried out between October 2000 and December 2001, involved children from 31 primary schools. Data collection included parental responses to the ISAAC questionnaire concerning symptoms of asthma, allergic rhinitis, and atopic eczema, as well as results from SPT to seven common aeroallergens: grass, tree, olive pollens, Dermatophagoides farina, Dermatophagoides pteronyssinus, Alternaria tenuis and cat epithelium. The study reported an atopic eczema prevalence of 11.7% in the paediatric population of Thessaloniki ($p < 0.001$). Comparable data were also obtained from children and adolescents in Athens, enabling a direct comparison between the two urban centres. The prevalence of atopic eczema in the Athens survey was higher, reaching 14.4%; however, the pattern of aeroallergen sensitization exhibited an inverse trend, with a lower prevalence in Athens compared to Thessaloniki surveys (16.0% vs. 25.2%, respectively; $p < 0.001$).

In the Integrated Approaches to Food Allergen and Allergy Management (iFAAM) study [19], conducted between 2014 and 2017, 15.3% of participants had a documented history of atopy before the age of two years, while 6.2% exhibited symptoms of atopic eczema during that period. This investigation constituted the final follow-up phase of the EuroPrevall prospective study, which initially enrolled 12,049 newborns from nine European cities between 2005 and 2010. Subsequently, as part of the multicentre Global Asthma Network (GAN) Phase I study [21], a cross-sectional survey was conducted by Antonogeorgos et al. [20] between February and March 2020, involving 921 male and 1013 female adolescents attending secondary schools. Data were derived from GAN questionnaires completed by adolescents and their parents, capturing information on atopic symptoms and associated behavioural factors within the preceding 12 months. The prevalence of atopic eczema among Greek adolescents in Athens was found to be 8.9%. Notably, more than six out of ten affected reported a positive family history of atopy ($p = 0.038$).

4. Discussion

This systematic review aimed to investigate the epidemiological profile of atopic eczema as a manifestation of atopy among children and adolescents in Greece. The findings demonstrated that prevalence rates varied from 4.5% in 1991 to 16.1% in 2018 among children, and reached 8.9% in adolescents in 2020, reflecting considerable geographical and temporal heterogeneity. Although an overall increasing trend in prevalence was observed, these findings should be interpreted cautiously due to potential information bias at specific time points and methodological differences across studies. Factors associated with the onset of atopic eczema included male sex, age between 8 and 10 years, exposure to specific environmental allergens (i.e., moisture, mites, fungi), and a personal or family history of asthma or allergic rhinitis. The scarcity of comprehensive data highlights the likelihood that atopic eczema prevalence has been historically underestimated in many regions, including Greece. This underestimation contributes to disease progression and diminished quality of life. It also impedes early identification and effective management.

A cross-sectional study conducted in Aberdeen, Scotland [22] analysed 3935 parent-completed questionnaires concerning children aged 1 to 7 years residing in North-East Scotland. The prevalence of atopic eczema showed a marked increase over the study period, rising from 3.2% in 1964 to 17.8% in 1994, peaking at 32.7% in 2004, and slightly declining to 28.8% in 2014. In contrast, while the prevalence of asthma has declined since the 1999 and 2004 surveys, it remained approximately double the rate reported

in 1989. The divergent trends observed between asthma and eczema may be explained by recent evidence emphasising the pivotal role of the airway epithelial barrier, rather than solely the humoral immune response, in asthma pathogenesis [23]. Furthermore, public health interventions, including reduced exposure to second-hand smoke, have been documented to influence asthma risk more strongly. Notably, data from the Aberdeen study demonstrated a greater association of second-hand smoke exposure with asthma compared to eczema. Aberdeen study outcomes were consistent with those of three Greek studies conducted in Patras, which encompassed six consecutive surveys demonstrating the increasing trend in the prevalence of atopic eczema in the paediatric population [14,15,18]. Concerning the asthma prevalence plateau in the first decade of the second millennium, the three Greek studies agree with an Aberdeen study that included 3935 children and the Maryland study [24], which included 152,387 children. Therefore, the observed increase in eczema prevalence alongside a plateau in asthma prevalence among paediatric populations appears to represent a global epidemiological pattern. A recent systematic review indicates an increasing trend in the prevalence of allergic rhinitis in Greece [25], which is also reflected globally according to current epidemiological data [26,27].

Furthermore, a large cross-sectional survey conducted in Italy, comprising 11,287 children and 10,267 adolescents, demonstrated an increasing trend in atopic eczema prevalence across both the 6–7 and 13–14-year age groups [28]. Specifically, prevalence among school-aged children rose from 14.3% to 17.0% and increased from 11.0% to 12.8% among adolescents. The study also assessed regional differences and reported no significant variation in atopic eczema prevalence between metropolitan and non-metropolitan areas; 10.5% versus 12.7% in children and 11.4% versus 12.8% in adolescents, respectively. These findings challenged the hygiene hypothesis, which posited that limited early-life exposure to microbes increases the risk of allergic diseases [29]. Consequently, they called into question the previously assumed role of urbanisation in driving the rising burden of atopic eczema in rural areas, as indicated by earlier studies [12,26]. They also confirm comparable prevalence rates of atopic eczema in the two largest cities in Greece [16,17].

Two extensive European cohort studies reported atopic eczema prevalence rates comparable to those observed in the Greek population in all cross-sectional studies. A cohort study from Norway [30], which included 373,954 children under the age of six, identified a prevalence of 17%. Similarly, a United Kingdom primary care-based study encompassing 8,604,333 children and adolescents aged 0–17 years reported an overall atopic eczema prevalence of 12.3% [31]. Nevertheless, the cohort study in the EuroPrevall-iFAAM birth cohort [19] reported a lower prevalence of 6.2% in Greece, the lowest rate among the countries participating in that study. Accordingly, in the same study, asthma and food allergy prevalence in Greece were the lowest among the included countries.

In the GAN Phase I study, published in 2022 [32], researchers assessed the prevalence, severity, and lifetime occurrence of atopic eczema across global centres participating in GAN Phase I (2015–2020) and one or both phases of the ISAAC study (Phase I: 1993–1995; Phase III: 2001–2003). Linear mixed models were employed to estimate 10-year trends in atopic eczema prevalence, stratified by age group, region, and income level. After adjusting for world region and income group, the regression model estimated a global increase in the prevalence of current eczema symptoms of 0.98% per decade (95% CI: 0.04–1.92) in adolescents and 1.21% per decade (95% CI: 0.18–2.24) in children. The study found that the global rise in current and severe eczema symptoms in these age groups was primarily driven by increases in the African and Eastern Mediterranean regions. However, the observed increase in lifetime atopic eczema prevalence was mainly driven by trends in Europe and among children in the USA.

In three population-based surveys conducted in Greece, the male-to-female RR for atopic eczema was consistently 1.23 (95% CI: 1.05–1.45), indicating that males were 23% more likely than females to have atopic eczema [14]. A subsequent study by the same research group in 2008 confirmed a rising prevalence of atopic eczema to 10.8% ($p < 0.05$), with the sex-based risk ratio remaining stable at 1.24 (95% CI: 1.08–1.43) [15]. However, contrasting findings emerged from the ISAAC Phase 3 study [10], which analysed data from multiple international centres. In this larger cohort, the prevalence of current eczema symptoms was slightly higher in girls (8.2%) than in boys (7.7%), yielding an odds' ratio of 0.94 (95% CI: 0.92–0.97), implying no consistent global pattern of sex-based differences in eczema prevalence. Numerous studies have demonstrated a higher prevalence of atopic eczema in males during infancy, with a subsequent shift toward female predominance during adolescence [30,31]. An Italian study [33] showed an equal sex ratio for atopic eczema, consistent with earlier reports [34] but differing from studies indicating a female predominance. The consistent age-dependent trend, corroborated by the ISAAC Phase 3 findings [10], provided a plausible explanation for the observed male predominance in the Greek surveys of school-aged children.

Two studies concerning atopic eczema prevalence in the Greek population were conducted, including children and adolescents who were examined and diagnosed in a tertiary hospital due to skin symptomatology. One study took place in Athens, analysing retrospectively data from patients who attended the tertiary hospital for a skin disease [35]. They compared the data previously drawn from a Greek cohort study examining the prevalence of skin diseases in the Greek population over the last 30 years. Atopic eczema was observed in 20.7% of all children, making it the most prevalent condition. Notably, the risk of atopic eczema was significantly higher in Greek children compared to children of immigrant backgrounds. In developed countries, atopic eczema represents the most common diagnosis among children, reflecting the increasing prevalence of eczema in the general population and the influence of a progressively Western-like lifestyle [36]. Similarly, data from Greece indicated that atopic eczema is the most frequently reported disease category in children, with prevalence decreasing with age. The second study from Thessaloniki included 940 patients and found that atopic eczema was the most frequent paediatric dermatosis in all age groups [37]. The prevalence was 20.9% among children and adolescents aged 0–18 years examined at the paediatric dermatology clinic. It was found to be more frequent among toddlers and preschoolers, decreasing gradually with increasing age.

In recent years, increasing attention has been directed towards the substantial impact of atopic eczema on both individual and societal levels. Pruritus contributes to impaired sleep and mood disturbances, and affected individuals often experience limitations in their daily activities due to ongoing treatment requirements and necessary lifestyle adjustments [6]. Moreover, families of children with atopic eczema frequently report lower family quality of life compared to families of healthy children. Individuals affected by atopic eczema consistently report lower health-related quality of life and heightened psychological distress when compared to the general population and individuals with other medical conditions. Notably, adolescents with atopic eczema have demonstrated significantly lower scores in the vitality, social functioning, and mental health domains of standardised quality-of-life assessments [38]. Both adults and children with atopic eczema are at increased risk for psychosocial difficulties. In a study by Anderson et al. [39] involving 559 adults with self-reported eczema, 47% frequently felt frustrated with their condition. Additionally, 39% reported frequent embarrassment about their appearance, and 35% often experienced anger related to their appearance.

Sleep disruption is another common and burdensome consequence, primarily driven by nocturnal pruritus, and may negatively affect not only patients but also their families, including siblings [40]. A recent review on the burden of atopic eczema in adolescents and adults highlighted psychological distress as the most frequently reported consequence affecting quality of life, followed by sleep disturbances [41]. Eczema frequently coexists with other atopic disorders, such as asthma, allergic rhinitis, and allergic conjunctivitis, often within the same individual. These patients typically require twice the number of medical consultations and incur approximately double the pharmaceutical costs compared to individuals without allergic conditions.

The economic burden of atopic eczema is considerable, comprising both direct and indirect costs [5]. Direct costs generally include expenditures related to healthcare services, which patients, insurers, or public health systems may bear. Indirect costs encompass broader economic impacts, such as loss of productivity and affected quality of life. Although quantifying these costs remains complex, it is critical for informing cost-effectiveness analyses of therapeutic strategies. Therefore, early recognition and appropriate management of eczema are essential to mitigate the psychological burden on patients and the associated healthcare expenditures [3].

Limitations of the Study

This study has several limitations. First, the definition and diagnostic criteria for atopic eczema varied across the included surveys, with some relying on a combination of subjective reports and objective clinical assessments. This heterogeneity may partly explain the variability in reported prevalence rates. Additionally, the self-reported questionnaires differed in design and content, limiting direct comparability between studies. Furthermore, except for one cohort study, all included studies were cross-sectional, precluding any causality inference.

Moreover, the included studies generally exhibited a moderate risk of bias, particularly concerning selection and recall bias. In contrast, the single cohort study demonstrated a lower risk of bias, especially in participant selection. Notably, the study populations were predominantly drawn from urban areas, and data collection was primarily conducted during the autumn and winter months. Consequently, the reported prevalence estimates may be subject to over- or underestimation when compared to rural populations or studies conducted in other seasons, such as spring and summer.

5. Conclusions

Atopic eczema is a common chronic condition with significant personal and social consequences, and a well-documented impact on quality of life. There is a critical need for well-designed epidemiological studies focusing on children and adolescents to more accurately estimate prevalence and investigate factors influencing disease onset and progression, including protective and aggravating determinants. Such insights are essential to deepen understanding of disease pathogenesis, guide targeted prevention strategies, and optimise clinical management, ultimately contributing to improved quality of life for affected individuals.

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