

Proceeding Paper

Impact of Atopic Dermatitis on the Mental Health of Adolescents—Literature Review †

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Abstract: Atopic dermatitis is an inflammatory, chronic and relapsing skin disease with repercussions for quality of life. This study aims to identify the consequences of atopic dermatitis on the mental health of adolescents, through a narrative review of the literature by research in the EBSCO, Scielo, BVS and Pubmed databases. Studies suggest that adolescents with acute atopic dermatitis may be affected by depression, attention deficit hyperactivity disorder, anxiety, conduct disorder, autism, sleep and thinking problems, psychosomatic symptoms and suicidal thoughts. Atopic dermatitis has a negative impact on adolescent mental health.

Keywords: adolescents; atopic dermatitis; mental health; nursing; dermatology

1. Introduction

Atopic dermatitis (AD) is an inflammatory, chronic and relapsing skin disease, characterized by the existence of eczematous lesions and itching with repercussions for quality of life. AD is associated with comorbidities such as asthma, allergy, allergic rhinitis, mental disorders and skin infections [1,2]. There is a greater risk of developing mental disorders such as anxiety and depression in the presence of chronic pathologies [3] such as AD. Generally, dermatological pathologies, mostly chronic, affect physical, psychological, social and emotional health, well-being and interpersonal relationships, leading to high levels of psychological stress [4]. AD, thus, has an impact on the physical, social, school, mental and family aspects of adolescents' lives [5] and is associated with several psychiatric disorders [6,7].

Nurses working in dermatology recognize the importance of mental health with the same value as physical health [8] in their patients. Faced with this problem, the team carried out this study, the main goal of which was to identify, in empirical studies, the consequences of atopic dermatitis for the mental health of adolescents.

2. Materials and Methods

The narrative review of the literature was developed through research in databases, using search engines: EBSCO (CINAHL, Medline, Nursing, MedicLatina), Scielo, BVS and Pubmed; using the descriptors MeSH: “mental health”, “adolescent” and “atopic dermatitis” and the Boolean terms “AND”, “OR” and “NOT”. Inclusion criteria: text in Portuguese and English, publication between 2017 and 2022, and full text. The research took place between the 18th and 21st of March 2022. The article selection was carried out by reading the summary of forty-eight papers in the first phase. The full reading was carried out whenever in doubt to avoid the exclusion of articles relevant to the review. Forty-three articles were excluded for not answering the research question. In the second phase, the



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five selected studies were analysed, regarding the type of study, objective, sample, variables and results obtained (Table 1).

Table 1. Publications relevant to the narrative review.

Authors (Year)	Objectives	Study	Sample
Keller et al. (2021) [9]	Assess associations between atopic diseases and behavioural difficulties	Cross-sectional study	937 adolescents
Kim and Seo (2022) [10]	Identify the relationships between allergic diseases and suicidal ideation and plans	Cross-sectional study	164,725 adolescents (12–18 years)
Kyung et al. (2020) [11]	Identify the influencing factors for mental health in adolescents with AD.	Cross-sectional study	62,276 adolescents
Lee and Shin (2017) [12]	Evaluate the association of atopic dermatitis with depressive symptoms and suicidal behaviour	Analytical descriptive	72,435 adolescents (12–17 years)
Muzzolon et al. (2021) [13]	Determine the frequency of risk for mental disorders in adolescents with AD according to the severity of the disease.	Cross-sectional study	100 adolescents

3. Results

The results obtained after analysing the five articles suggest that atopic dermatitis affects the mental health of adolescents, with an impact on their psychological well-being. Adolescents with AD may have symptoms of depression and high levels of anxiety, low self-esteem, mood swings and behavioural patterns. Atopic dermatitis was strongly associated with greater difficulties, more emotional and conduct problems, and more symptoms of hyperactivity/inattention; the adolescents themselves reported more peer relationship problems [9]. AD in adolescents was associated with a higher prevalence of stress, depressive symptoms, suicidal ideation [11,12] and suicidal behaviours [12]. The risk for mental disorders was higher in children with moderate/severe atopic dermatitis compared to those with mild disease, especially for sleep problems and emotional reactivity [13].

4. Discussion

The aim of this study was to identify the consequences of AD on the mental health of adolescents. The studies found suggest the mental health of adolescents with AD may be affected by psychiatric pathologies such as depression, attention deficit hyperactivity disorder (ADHD), anxiety and conduct disorder as well as having psychosomatic symptoms and sleep and thinking problems, including suicidal thoughts.

Keller et al. [9], through a cross-sectional study, evaluated the behavioural difficulties in a sample of 915 adolescents with atopic diseases (mean age of 13.3 years) by self and parent reports using the Strengths and Difficulties Questionnaire (SDQ). Emotional problems, relationships with colleagues, hyperactivity/attention deficit and behavioural problems were evaluated in this questionnaire. An association was established between atopic disease and relational problems of adolescents with their peers. In the same study, AD was associated with a higher level of emotional issues, behaviour problems and hyperactivity/inattention deficit in younger children. This fact may be justified by the symptoms associated with the pathology, such as pruritus, which may be the cause of agitation, and result in more maladjusted behaviours. On the other hand, symptoms of AD tend to improve during adolescence, which could explain the data obtained by the authors. The results of this study demonstrate the need to implement intervention programmes from a very early age, with mental health assessment and professional follow-up after diagnosis. The Yaghmaie et al. study in 2013 [2] concluded that the severity of eczema was significantly associated with ADHD, depression, anxiety, behavioural changes and autism. Horev et al. [14] also found an association between AD and attention deficit hyperactivity disorder in children.

Kim and Seo [10] concluded that atopic pathology was a statistically significant risk factor for suicidal thoughts and plans, with sleep deprivation playing a mediating role. Adolescents with atopic disease are at greater risk of sleep disorders, such as sleeping fewer hours compared to adolescents without the pathology. Previous studies have demonstrated the relationship between sleep disorders and suicide in adolescents [15–17]. Sleep pattern disorders negatively interfere with adolescents' neurocognitive functions and emotional health, increasing the risk of mental illness. Sleep disturbance is one of the most common symptoms of AD and is associated with depression, anxiety, fatigue, lack of attention and impulsivity [18]. It seems that sleep deprivation in children with AD may be one of the main triggers, especially for attention deficit hyperactivity disorder [19]. Therefore, promoting sleep in adolescents with AD should be one of the priorities for preventing the risk of suicide attempts.

In the cross-sectional study conducted by Kyung et al. [11], through stratified sampling representative of Korean adolescents aged between 12 and 18 years, adolescents with AD perceived themselves as unhappy, stressed, depressed and dissatisfied with their sleep compared to adolescents without this pathology. The prevalences of stress, depression and suicidal thoughts among adolescents with AD were 59.1%, 27.8% and 13.9%, respectively. Male gender, subjective unhappiness and dissatisfaction, such as with sleep, were identified as enhancing factors. Subjective unhappiness was more strongly associated with stress in individuals with AD, and depression was the second risk factor. For depression, suicidal thoughts were the factors most strongly associated, followed by the perception of stress. The suicidal idea was the factor most strongly associated with depression followed by the perception of stress.

Adolescents with AD have a higher prevalence of depressive symptoms, and a greater tendency to feelings of sadness and hopelessness, suicidal thoughts and suicide attempts according to the data obtained by Lee and Shin [12]. These data are in line with the systematic literature review and meta-analysis conducted by Sandhu et al. [7], who found a significantly increased risk of suicidal thoughts and suicide attempts in patients with AD.

According to the study by Muzzolon et al. [13], the risk of mental disorders was higher in children with moderate/severe atopic dermatitis compared to those with mild disease, mainly for sleep problems and emotional reactivity. Sleep problems, emotional reactivity (mood/feeling changes, panic, worry, emotional vulnerability), thinking problems (worry, rigidity, obsession) and anti-social behaviour (such as bullying, social exclusion, social isolation, discrimination and stigmatization), and the risk of anxiety and depression were reported.

Considering the results obtained in the analysed studies, AD seems to profoundly affect the mental health of adolescents, impacting their psychological well-being. Multi-disciplinary teams should accompany these adolescents in specialized consultations in order to identify possible mental health changes as well as to assess dermatitis symptoms and therapeutic management. Nurses will have a fundamental role in this whole process, including in dermatology clinics, through specialized nursing consultations, highlighting, among various topics, the prevention and promotion of mental health, the identification of signs and symptoms of mental disorders, self-help strategies and the promotion of healthy lifestyles, such as sleep and physical activity. Programmes such as Positive Mental Health can make a difference in adolescents with AD and should be implemented from a very early age in order to promote a state of well-being in which adolescents can develop their skills, and deal with the disease and with daily sources of stress, studying successfully, having satisfaction and feeling part of the community [20].

5. Conclusions

Atopic dermatitis has a negative impact on the mental health of adolescents as shown by the results obtained. Promoting mental health in adolescents with AD should be a priority for nursing teams, including dermatological ones, and may be the first line of aid in mental health. Nurses should implement projects and interventions in order to promote

positive mental health in adolescents with AD and minimize the negative impact on their mental health.

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