

Skin Disease's Effect on Quality of Life

Subjects: Dermatology

Contributor: Katherine Kelly

Acne, atopic dermatitis (AD), and psoriasis are all chronic dermatologic conditions that greatly impact the lives of pediatric patients and their caregivers. The visible nature of these diseases negatively affects the self-image of children early in life as well as their relationships with their families and peers. Physicians recognize the importance of addressing both the physical and mental symptoms of their patients but are currently not equipped with clear guidelines to manage long-term psychosocial comorbidities in pediatric dermatologic patients. A PubMed and Google Scholar search of key words was conducted to explore self-image in pediatric patients with acne, AD, and psoriasis. Chronic skin diseases put pediatric patients at risk for strained family relationships, poor self-image, psychiatric comorbidities, stigmatization, and eventual suicidal behavior. A limitation of this study is a lack of a validated measure of quality of life in the pediatric population that fulfills enough criteria to evaluate long term quality of life in children and adults. Possible management options, including connecting patients with the same diagnosis and allocating resources to parents and teachers to better understand these chronic skin conditions, may provide pediatric patients with the support they need to develop resilience in the face of these challenges.

Keywords: quality of life ; Skin Disease

1. Acne

Pediatric patients with chronic dermatologic conditions involving visible lesions face challenges to their self-image as well as to the way others perceive them, which may negatively affect their daily life. Those with acquired skin conditions, such as AV, feel a more potent impact on self-esteem than those with congenital skin conditions ^[1]. In a study including adolescents aged 11 to 18 years, those with acquired dermatologic diseases affecting the face expressed a worse self-image than those with congenital facial diseases ^[2].

This negative self-perception among adolescents is not necessarily correlated with disease severity. Review studies on the psychosocial impact of AV acknowledge the discrepancy between the patient's assessment of their acne severity and that performed by a medical professional ^[3]. The patient's self-assessment was far more influenced by factors including anxiety, depression, and low self-esteem. Patients with the worst scores on self-esteem scales were those who believed they have more severe AV, despite incongruent medical evaluations ^[3].

However, other studies suggest a relationship between disease severity and quality of life. In a cross-sectional study of 23 high schools in Athens, Greece, the impact of acne on quality of life measured by the child daily life quality index (CDLQI) was proportional to acne severity ($p < 0.0001$) ^[4]. Differences in the CDLQI score were influenced by feelings of low self-esteem, disturbance from symptoms of acne, feelings of unworthiness in their relationships, and unpleasant treatment ^[4].

Poor self-esteem and feelings of unworthiness in childhood may put pediatric patients at greater risk of psychosocial comorbidities. In a study of 72 patients with mild-to-moderate acne on their face, the mean score for the Carroll Rating Scale for Depression (CRSD) was within the range of clinical depression ^[5]. Positive changes in self-perception may be achieved with successful medical intervention ^[6]. Fifty percent of acne patients who were treated with standard topical and systemic agents for three months reported fewer feelings of embarrassment, and 58% of these patients reported less social inhibition following treatment ^[6].

2. Atopic Dermatitis

AD can affect children at much younger ages than acne can. Managing this chronic dermatologic condition puts notable strain on the caregivers of pediatric patients with AD, which often negatively impacts their relationship with their child ^[7]. Compared to controls, mothers of infants with AD more frequently characterized themselves as more depressed and anxious and described their infant more negatively than positively ^[8]. In a study evaluating family quality of life, most caretakers of pediatric patients with AD cited problems with exhaustion, frustration, guilt, helplessness, and resentment ^[9].

The depression and anxiety of the caretakers of pediatric patients with AD may cause these children to develop negative perceptions of themselves, which may impact their future quality of life [7]. Compared to peers without AD, preschool patients with AD have a greater incidence of behavioral issues, disrupted family dynamics, and anxious parenting [10]. Pediatric patients with AD exhibited similar behavioral problems to children with other severe chronic diseases such as renal failure, including increased dependency, fearfulness, and nighttime sleep disturbance, usually stemming from their chronic discomfort [10]. In a qualitative study of 55 pediatric patients with AD living in Hong Kong, most of the children listed their primary physical challenge as intense pruritus, which interfered with their sleep, diet, play, and sports. Frustrations with family members often revolved around parents telling the participants to stop scratching [11]. When the children heard these demands from their parents, they felt misunderstood and criticized as five of the participants reported being scolded and beaten for scratching [11]. This cycle of desperation and helplessness continued as the children resisted their parents' demands to take their medications [11]. The children in this study understood the benefits of applying the ointments and taking the oral medications for their AD, but some of the treatments they were prescribed were uncomfortable for them to use [11].

The frequent disputes with their caretakers caused some children to put more pressure on themselves to perform better academically to meet parental expectations [11]. Other children internalized negative perceptions of their body over time, viewing themselves as "dirty" and "disgusting," expressing hatred of their skin, or feeling the need to cover their skin to prevent others from seeing it [11]. In a cross-sectional study of 51 pediatric patients with AD and their guardians, the relationship between the severity of the child's AD and the quality of life of the child and that of the caregivers was evaluated [12]. Greater severity of AD, measured by the Severity Scoring of Atopic Dermatitis (SCORAD) index, was associated with worse quality of life of the children and their caregivers, measured by the CDLQI and the Dermatitis Family Impact (DFI) scores ($p < 0.001$) [12]. Most of the children's AD had a weak effect on the CDLQI scale, compared to their guardians, who fit into the moderate to very high effect on the DFI scale, which suggests a great level of compromise and strain among family members of pediatric patients with AD [12].

3. Psoriasis

Among children aged 5–16, psoriasis decreased health-related quality of life (HRQL) by 30.5% ($p < 0.001$) [13]. Psoriasis affected HRQL more than epilepsy, enuresis, and diabetes. In a similar study of 118 children aged 5–16 years surveyed with the CDLQI, psoriasis and atopic dermatitis had a greater impact on HRQL compared to other chronic dermatologic conditions, such as vitiligo [13]. In a qualitative study of 32 adolescent dermatology patients ages 12–19 years, those with psoriasis were affected by the greatest range of different HRQL domains, including psychological, social, and physical [14]. The psychological domain specifically focused on emotional aspects, bullying, self-esteem, and judgement from others [14]. Children with psoriasis reported the greatest impairment of quality of life based on scoring from the CDLQI, followed by those with atopic dermatitis [15]. The CDLQI scores for pediatric psoriasis patients ranked higher than those for alopecia, localized eczema, acne, and urticaria patients [15].

Psoriasis may impact the lives of both the patients and their caregivers. In a multicenter study of 129 pediatric patients with psoriasis and their caregivers, the CDLQI and DFI were used to evaluate the effect of psoriasis on the quality of life of the children and their family members [16]. The average CDLQI score was 7.6, suggesting a moderate effect on the quality of life of the patients, with personal feelings being the most severely impacted domain [16]. Emotions were the most severely impaired domain for caregivers based on the DFI. The DFI score was positively correlated with the CDLQI score ($r = 0.554$, $p < 0.001$) and the PASI ($r = 0.350$, $p < 0.001$) [16]. Among patients with more rigorous treatment regimens, including systemic agents and phototherapy, there was impairment in multiple domains for the quality of life of their caregivers compared to those receiving first-line therapies [16]. Caretakers of pediatric patients with psoriasis experience psychological strain due to the unpredictable pattern of their child's disease, leading to feelings of helplessness [17]. They often report frustration over dealing with their child's low mood and dissatisfaction over medical care [17]. Some caregivers felt overwhelmed by the responsibility of caring for their child's condition and described compromising their own personal health for the sake of their family [17].

Adolescent patients with psoriasis frequently face challenges regarding poor self-esteem, difficulties with sexual intimacy, stigmatization, and strained family and social relationships [13]. Psoriasis especially impacts the types of physical activities adolescents engage in, particularly extracurricular sports, which may negatively contribute to other comorbidities associated with psoriasis, including diabetes, obesity, hypertension, and psychiatric disorders [13]. The visible nature of this skin condition and its associated discomfort both contribute to the avoidance of physical activity in this age group [13]. In an online focus group, 48% of adolescent participants cited the visibility as the "worst" aspect of psoriasis as well as the loss of control since psoriatic lesions are often recurrent and unpredictable [13]. These negative thoughts about their bodies may affect the self-esteem of adolescents over time and put them at a higher risk of psychiatric conditions such as

depression and anxiety. Compared to healthy controls, self-esteem (SE) ($p < 0.001$) and body image (BI) ($p = 0.021$) were lower in patients with psoriasis [18]. Psoriasis Area and Severity Index (PASI) was negatively correlated with BI ($r = -0.423$) but positively correlated with the quality of life ($r = 0.703$) and SE ($r = 0.448$). Another study demonstrated that poor SE in patients with psoriasis was highly associated with comorbid psychopathologies, such as sexual dysfunction disorders, anxiety, depression, and suicidality. Educational status did not affect DLQI scores in psoriasis patients; however, SE improved with higher education levels ($p < 0.05$) [18].

Psoriasis especially affects appearance, confidence, and lifestyle in adolescent patients. Adolescent patients report feelings of loss of control because of the unpredictable course their disease, which impedes their ability to cope [15]. They agree that self-esteem issues stemming from psoriasis stay with them in the long term, sometimes after complete clearance [15]. Some of the most common coping mechanisms are avoidance behaviors or concealing strategies, which may affect their daily activities or intimacy with sexual partners. Talking with peers helps some adolescents with their confidence, feelings of loneliness, and their knowledge of other coping mechanisms [15]. The main contributors to depression among patients with psoriasis were female gender, poor perception of their appearance, poor self-worth, increased psychological distress, and reduced emotional social support [19]. Therefore, achieving better/complete clearance through proper treatment may positively affect their body image and may prevent the development of other psychiatric conditions such as depression [19].

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