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Examining the Impact of a Mindfulness Program on Anxiety in Pediatric Alopecia Areata

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Introduction & Objectives:

Anxiety is a common comorbidity in Alopecia Areata (AA), especially in children and adolescents. Mindfulness apps have become increasingly popular and have been demonstrated to be successful in reducing anxiety levels in adolescent trials [3]. However, there is no data on the benefit of these apps in pediatric patients with AA.

Therefore, this study aims to evaluate the effect of a meditation app on anxiety scores in pediatric patients with AA.

Materials & Methods:

This was a single center prospective study conducted in an outpatient pediatric dermatology clinic. Patients 12-17 years of age diagnosed with AA affecting at least 30% of the scalp as measured by the Severity of Alopecia Tool (SALT) score were with anxiety as measured by the Beck Anxiety Inventory (BAI) were included in the study. The Insomnia Severity Index (ISI) and Child and Adolescent Bullying Scale-22 (CABS-22) were used to assess for concomitant insomnia and bullying. Patients were instructed to download the Breathr mindfulness app and to complete at least 1 exercise each day for 3 months. The BAI, ISI, and CABS-22 scores were assessed again at 1 month and 3 months. At the end of the follow-up period, semi-structured interviews were conducted to gather feedback about the meditation app, as well as the patients' experiences living with AA.

Results: Eighteen patients were enrolled in this study between October 2023 and May 2025. Fifty percent (n = 9) were female and 50% (n = 9) were male. The mean age of patients was 14.2 (SD = 1.9) years. Mean SALT score was 76.2 (SD = 29.0) percent and was not significantly different after 1 month (p = 0.107). Mean BAI, ISI, and CABS-22 scores were 12.7 (SD = 9.7), 6.9 (SD = 4.6), and 41.1 (SD = 18.2) respectively, reflecting mild anxiety, mild sleep disturbances, and the presence of bullying. These scores were not significantly different after 1 month (BAI: p = 0.0630, ISI: p = 0.296, CABS-22: p = 0.0792). SALT score was not significantly correlated with BAI (coefficient: 0.335, p = 0.174), ISI (coefficient: 0.0966, p = 0.703), or CABS-22 (coefficient: 0.240, p = 0.337) scores. The majority of patients interviewed described positive short-term effects from using the app, with "feeling more calm" reported most commonly. Barriers to use included feeling that it was a chore, and forgetting to use it.

Conclusion: Pediatric patients with AA experience anxiety, sleep disturbances, and bullying but the severity of these were not correlated with extent of scalp involvement in our sample. Mindfulness programs may provide limited benefits for pediatric patients with AA and further studies could help clarify who may benefit the most as well as the ideal timing and frequency of use for these interventions.