Title: Investigating the Association Between Skin Disorders and Eating Disorders: A Systematic Review and Meta-Analysis

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Abstract:

Background: Eating disorders, including anorexia nervosa, bulimia nervosa, and binge eating disorder, are severe psychiatric conditions characterized by persistent disturbances in eating behavior. Prior research has primarily focused on weight and shape-related risk factors and dermatologic manifestations that occur as consequences of eating disorders. Less attention has been given to whether appearance-related factors independent of weight, such as skin disorders, may increase the risk of developing eating disorders.

Objectives: This meta-analysis aims to examine the association between skin disorders and the risk of developing eating disorders, particularly in the context of negative self-perception.

Methods: This systematic review and meta-analysis is conducted in accordance with PRISMA guidelines. A comprehensive literature search was performed in PubMed, Scopus, and Embase. Eligible observational studies meeting predefined inclusion criteria were included. Data extraction was conducted independently by two reviewers. Pooled odds ratios were calculated using a random-effects model, and heterogeneity was assessed using the I^2 statistic.

Results: Out of 1557 identified studies, 664 were duplicates, and 874 were found to have inaccurate design, population, or outcomes in the first screening. Subsequently, 23 more studies were excluded in eligibility screening. Finally, a total of 16 studies comprising 71,757,662 participants

were included. Pooled analyses demonstrated a significant association between dermatologic disorders and eating disorders. Skin disorders were associated with increased odds of Anorexia nervosa was associated with an odds ratio (OR) of 2.47 (I^2 = 97%, p = 0.004, I^2 = 97%), bulimia nervosa with an OR of 1.86 (I^2 = 0%, p < 0.001, I^2 = 0%,), binge eating disorder with an OR of 2.82 (I^2 = 78%, p = 0.001, I^2 = 78%), and unspecified eating disorders with an OR of 1.98 (I^2 = 98%, p = 0.02, I^2 = 98%).

Conclusion

Individuals with pre-existing skin disorders have an increased likelihood of developing eating disorders. These findings underscore the importance of integrated dermatologic and mental health care and call for further investigation into appearance-related self-perception.