

Hidradenitis Suppurativa and Food Insecurity: A Stratified Analysis

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Background. Hidradenitis suppurativa (HS) is a chronic inflammatory skin condition that affects 1-4% of the population.¹ While previous research has raised the importance of exploring social determinants of health in HS, little exploration has been done to assess which factors are important to consider.^{2,3} Prior research has shown an association between obesity and HS, and emerging studies highlight an association between food insecurity and obesity.^{2,4} As such, this study aimed to investigate the association between HS and food insecurity, while adjusting for the potential confounders of age, sex, and race.

Sample. Individuals ≥18 years old with self-reported diagnosis of HS as well as those without HS were identified through the All of Us database. The final sample included 127 individuals with HS for whom demographic information was available on age, sex, and race and who completed the Children's HealthWatch Hunger Vital Sign screening survey (validated for use among adults in 2017), as well as 381 random non-HS controls for whom the same metrics were available. After stratifying data by food security status, univariate and multivariate logistic regression models were run to analyze the effects of age, sex, and race between those with and without HS. Additionally, separate models were run to account for effect modification by age, sex, and race on food security status in just those individuals with HS.

Methods. Demographic analysis showed that among those with HS the mean age was 51.9 years, and 84% were female, 66% were Caucasian, and 17% were African-American. Logistic regression analyses showed that food insecurity was significantly associated with HS (OR_{unadjusted} = 3.47 [2.08, 5.78]; OR_{adjusted} 2.55 [1.46, 4.45]), even after adjusting for confounders of age, sex, and race. Among those with HS, sex (OR: 0.53 [0.20, 1.48]) was not found to have a significant association with food security status. However, for those with HS who racially identified neither as white nor as black, there was a significantly increased association with also being food insecure (OR: 3.04 [1.02, 9.06]).

Conclusion. This study supports an association between HS and food insecurity. There are several limitations to this study, including the use of a self-selected population that may not be fully representative of the larger HS population and may limit the generalizability of findings. Recent literature suggests that HS goes underdiagnosed and understudied among African-Americans.^{3,5} Although the All of Us database seeks to increase sampling population diversity, its current sample may also be affected by this bias. Further research is needed to elucidate the relationship between HS and food insecurity and how factors such as race may modify it. This can help inform potential interventions to decrease food insecurity among those with HS.