IMPACT ON VITILIGO PATIENTS' QUALITY OF LIFE, ACCESS TO HEALTHCARE, AND USE OF HEALTHCARE.

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Abstract:
The autoimmune skin depigmenting condition vitiligo can have a detrimental effect on one's quality of life. There is great potential for a new FDA-approved treatment for vitiligo, and strategies for its implementation should take into account the disease burden, healthcare access, and healthcare utilization of those who have vitiligo in order to optimize benefits. We examined these outcomes in participants with and without vitiligo using the extensive data set from the All of Us Research Program, which included survey responses. As dichotomized proxies for disease burden, healthcare access, and healthcare utilization, we employed quality of life, postponed care because of a barrier, and visiting a doctor within the previous 12 months. According to the findings, individuals with vitiligo are more likely than those without the condition to report a lower quality of life, but they also appear to have greater access to and use of healthcare services. When demographics, socioeconomic traits, and vitiligo comorbidities are taken into account, these associations become insignificant. According to earlier studies, non-Caucasian people have worse overall health outcomes and a lower quality of life among those who have vitiligo. In addition to finding that non-Caucasian people with vitiligo had less access to healthcare and used it less frequently than Caucasian people, our data showed consistent findings. To increase health equity, underprivileged people should be given priority when new vitiligo treatments are implemented.
Keywords: Vitiligo, Healthcare, patients, Qualityof Healthcare, quality of life.

Introduction

Melanocyte loss is the cause of vitiligo, an autoimmune skin condition that manifests as white spots on the skin. It affects 0.5% to 2% of people and is the most prevalent depigmenting skin condition. Although the condition can occur at any age, people between the ages of 10 and 30 are most likely to present with it. All ethnic groups and skin types are affected by the disorder, although those with darker skin may experience a more severe impact on their quality of life. The only FDA-approved treatment for vitiligo repigmentation is rufolitinib cream (Ahmed , 2023).

Vitiligo patients are more likely to suffer from anxiety, depression, and a lower quality of life, among other detrimental psychosocial effects. Negative effects "are evidenced in measurements of self-esteem, body image, stigma, and anxiety," according to a literature review on the health-related quality of life impacts of vitiligo. Additionally, the study discovered that health outcomes varied by race and ethnicity, with traits like having highly contrasting dark skin being linked to a lower health-related quality of life. According to a more recent survey, patients with skin conditions affecting their hands and face in general are more likely to feel stigmatized and to suffer from other detrimental social effects (Bergqvist , 2020; Picardo, 2022; Rosmarin, 2023).
Access to medical care may also be restricted for those who suffer from vitiligo. About half of vitiligo patients did not receive any treatment

within the first year after diagnosis, according to a recent real-world study by Rosmarin et al. Some respondents to a 2016 survey of 87 people with vitiligo mentioned obstacles to getting healthcare, such as the expense of treatment and making appointments. Interestingly, the tendency for non-Caucasian people over 65 to be diagnosed with vitiligo, as reported for participants in a large dataset, and the well- established barriers to health care access and poorer health outcomes that are common among non-Caucasian people in the US may be reflected in this putative finding of limited healthcare access (Bhandarkar , 2012; Mastacouris , 2023).
In order to better investigate the disease burden imposed by vitiligo as well as healthcare access and utilization among those who have it, this study makes use of a sizable dataset of participants who are diverse in terms of demographics, geography, and medical background.

Materials and Methods:

Data Source :

Survey data from the National Institutes of Health's "All of Us" research program, which offers a sizable, longitudinal dataset on participants in the United States, was used in our analysis.Because the All of Us dataset targets populations that have historically been underrepresented in biomedical research and gathers a wide range of sociodemographic, clinical, and healthcare utilization data, it is a good fit for this study.

Sample Features:

Data on participant demographics and socioeconomic characteristics, such as race-ethnicity, gender, age, education level, household income, health insurance status, and the number of challenges in daily activities, were obtained from the All of Us survey.

Definition of Vitiligo and effect on the patient:

The loss of melanocytes, which produce the pigments that protect the skin from UV rays, is a hallmark of vitiligo, an autoimmune skin disorder. A combination of factors, such as autoreactive T-cells, altered innate and adaptive immunity, genetic predisposition, environmental influences, and melanocyte stress, contribute to the pathogenesis of vitiligo (Chen T, 2016; Lee JH, 2023).
Cytotoxic T-cells, which usually recognize and destroy damaged or infected cells, are essential to the most implicated autoimmune- mediated processes. In order to prevent self-tissue damage, these T- cells undergo a selection process in the thymus during maturation, which removes autoreactive variants. Autoreactive cytotoxic T-cells, on the other hand, are thought to develop target melanocytes in vitiligo and release cytokines like interferon-γ (IFN-γ) to draw more cytotoxic T-cells to the skin (Ezzedine, 2021; Finneran, 2023).

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Results:
While vitiligo was linked to quality of life, postponing care because of a barrier, and visiting a doctor within the previous 12 months in our unadjusted analysis, these associations vanished when demographics, socioeconomic factors, and vitiligo comorbidities were taken into account. These results imply that the observed disparities in health outcomes and access between the vitiligo and non-vitiligo populations are mediated and explained by other factors rather than vitiligo. Our findings imply that non-Caucasian people typically have worse health outcomes than Caucasian people in the vitiligo population. However, as our analysis and numerous other studies have demonstrated, this association is not specific to the vitiligo population.
Although this analysis did not examine the relationship, prior research has also demonstrated that Asian American patients are more likely to have been diagnosed with vitiligo. According to other studies, people who have vitiligo are more likely to suffer from anxiety, psychosocial problems, and a generally lower quality of life. Additionally, we discovered that non-Caucasian people have generally worse health outcomes, which is in line with findings from general population surveys. Our findings support previous analyses that found a correlation between vitiligo and race/ethnicity. Given the documented systemic disadvantages that non-Caucasian people experience disadvantages that may also be present in the Vitiligo community our findings imply that giving them extra consideration could increase equity (Gandhi K, 2022; Kussainova, 2020; Richard, 2023).

Recommendations:
- The fact that some recruitment takes place in settings where healthcare providers are present may encourage participation from those who have the most access to healthcare. In order to address these problems, All of Us targets groups that have historically been underrepresented in clinical research and uses targeted advertising and personal interest groups to recruit subjects. Lastly, studies indicate that up to 40% of vitiligo cases in the United States might go undiagnosed, meaning they are not included in the EHR data used to identify the All of Us cohort. We are unable to calculate the possibility of underdiagnosis because All of Us surveys inquire about skin conditions but not specifically about vitiligo. Moreover, we are unable to ascertain how vitiligo affects survey results. This gap should be filled in future data collection and research.
- When demographics, socioeconomic factors, and vitiligo comorbidities are taken into account, the negative effects of vitiligo on quality of life and the potential increased access and use of

healthcare by those who have it are not statistically significant. Nonetheless, these findings suggest that although vitiligo affects everyone, non-Caucasian people may face greater effects on their quality of life as well as difficulties accessing and using healthcare. Better quality of life outcomes could result from healthcare practices that take special considerations for these subpopulations into account.

Conclusion:
As the severity of the disease worsens, so does the disease burden on daily activities and HRQoL for vitiligo patients. Face lesions are most frequently linked to decreased HRQoL and impairment in activities and work. Compared to patients with 0–5% BSA affected, those with >5% BSA affected had higher VitiQoL scores and greater activity impairment. These findings underline the necessity of gaining access to new, developing treatments while also pointing out the possible

insensitivity of generic HRQoL measures and the need for more sensitive disease-specific measures.

References:

1. Ahmed F, Moseley I, Ragi SD, Ouellette S and Rao B (2023) Vitiligo in underrepresented communities: An All of Us database analysis. Journal of the American Academy of Dermatology 88(4):945–948.
2. Bergqvist C and Ezzedine K (2020) Vitiligo: A Review. Dermatology 236(6):571– 592.
3. Bhandarkar SS and Kundu RV (2012) Quality-of-Life Issues in Vitiligo. Dermatologic Clinics 30(2):255–268.
4. Chen T, Grau C, Suprun M, Silverberg NB (2016) Vitiligo patients experience barriers in accessing care. Cutis 98(6):385–388.
5. Ezzedine K, Eleftheriadou V, Jones H, Bibeau K, Kuo FI, Sturm D and Pandya AG (2021) Psychosocial Effects of Vitiligo: A Systematic Literature Review. Am J Clin Dermatol 22(6):757–774.
6. Gandhi K, Ezzedine K, Anastassopoulos KP, Patel R, Sikirica V, Daniel SR, Napatalung L, Yamaguchi Y, Baik R and Pandya AG (2022) Prevalence of Vitiligo Among Adults in the United States. JAMA Dermatology 158(1):43–50.
7. Kussainova A, Kassym L, Akhmetova A, Glushkova N, Sabirov U, Adilgozhina S, Tuleutayeva R and Semenova Y (2020) Vitiligo and anxiety: A systematic review and meta-analysis. PLoS One 15(11):e0241445.
8. Lee JH, Ju HJ, Seo JM, Almurayshid A, Kim GM, Ezzedine K and Bae JM (2023) Comorbidities in Patients with Vitiligo: A Systematic Review and Meta-Analysis. J Invest Dermatol 143(5):777–789.
9. Mastacouris N, Strunk A, Garg A. Incidence and Prevalence of Diagnosed Vitiligo According to Race and Ethinicity, Age, and Sex in the US. JAMA Dermatol. 2023;159(9):986–990.
10. Picardo M, Huggins RH, Jones H, Marino R, Ogunsola M and Seneschal J (2022) The humanistic burden of vitiligo: a systematic literature review of quality- of-life outcomes. J Eur Acad Dermatol Venereol 36(9):1507–1523.
11. Rosmarin D, Soliman AM and Li C (2023) Real-World Treatment Patterns in Patients with Vitiligo in the United States. Dermatol Ther (Heidelb) 13(9):2079– 2091.