



PREVALENCE OF ANXIETY DISORDERS IN PATIENTS WITH HIDRADENITIS SUPPURATIVA: IMPACT ON QUALITY OF LIFE

PREVALÊNCIA DE TRANSTORNOS DE ANSIEDADE EM PACIENTES COM HIDRADENITE SUPURATIVA: IMPACTO NA QUALIDADE DE VIDA

PREVALENCIA DE TRASTORNOS DE ANSIEDAD EN PACIENTES CON HIDRADENITIS SUPURATIVA: IMPACTO EN LA CALIDAD DE VIDA

 <https://doi.org/10.56238/levv17n58-039>

Submitted on: 02/16/2026

Publication date: 03/16/2026

Elba Fernanda Pereira Mourato¹, Rubia Lury Hanada Marialva², Fernanda Mayer³,
Maria Tereza Miranda Tomaz⁴, Gabriela Viana Sales⁵, Helena Abbud Gaspar⁶

ABSTRACT

Introduction: Hidradenitis suppurativa is a chronic inflammatory skin disorder associated with recurrent painful lesions, scarring, stigmatization, and major psychosocial burden. Anxiety disorders and clinically significant anxiety symptoms have emerged as relevant comorbidities in this population and appear to contribute substantially to impaired quality of life.

Objective: The main objective of this systematic review was to determine the prevalence of anxiety disorders and clinically significant anxiety symptoms in patients with hidradenitis suppurativa and to analyze their impact on quality of life. Secondary objectives were to evaluate associations with disease severity, pain, and symptom chronicity; compare findings across study settings and assessment instruments; examine relationships with dermatology-specific and general quality-of-life measures; identify demographic and clinical factors associated with greater psychological burden; and assess the methodological quality and certainty of the available evidence.

Methods: A systematic review was conducted using PubMed, Scopus, Web of Science, Cochrane Library, LILACS, ClinicalTrials.gov, and the International Clinical Trials Registry Platform. Eligible studies included recent clinical investigations evaluating anxiety disorders, anxiety symptoms, or validated anxiety outcomes in patients with hidradenitis suppurativa, as well as their relationship with quality of life. Study selection, data extraction, risk-of-bias evaluation, and certainty assessment were structured according to PRISMA principles, with qualitative synthesis prioritized because of methodological heterogeneity.

Results and Discussion: Twenty studies met the inclusion criteria. The available evidence consistently showed that anxiety disorders and anxiety symptoms are common in hidradenitis

¹ Faculdade Pernambucana de Saúde (FPS). E-mail: fernandamourato12@gmail.com

² Universidade de Mogi das Cruzes (UMC). E-mail: rubiamarialva@hotmail.com

³ E-mail: fer.fermayer@gmail.com

⁴ Faculdade Nova Esperança. E-mail: maria.tereza.tomaz@hotmail.com

⁵ Universidade de Cuiabá (UNIC). E-mail: Gabrielavsalees@gmail.com

⁶ Universidade de Ribeirão Preto (UNAERP). E-mail: helenagaspar@outlook.com

suppurativa and are strongly associated with poorer quality of life, greater pain burden, higher stigmatization, social limitation, sleep disturbance, and reduced daily functioning. The literature also suggested that psychosocial burden is influenced not only by clinical severity but also by subjective symptom experience, interpersonal stress, and internalized stigma. Although prevalence estimates varied across studies because of differences in design, populations, and assessment methods, the overall direction of the evidence was highly consistent.

Conclusion: Anxiety represents a central component of disease burden in hidradenitis suppurativa and has a clinically meaningful negative impact on quality of life. Routine assessment of psychological distress and patient-reported quality of life should be incorporated into specialist care, and multidisciplinary strategies are needed to improve both dermatologic and mental health outcomes.

Keywords: Hidradenitis Suppurativa. Anxiety Disorders. Quality of Life. Mental Health.

RESUMO

Introdução: A hidradenite supurativa é uma doença inflamatória cutânea crônica associada a lesões dolorosas recorrentes, cicatrização, estigmatização e importante sobrecarga psicossocial. Transtornos de ansiedade e sintomas de ansiedade clinicamente significativos têm emergido como comorbidades relevantes nessa população e parecem contribuir substancialmente para o comprometimento da qualidade de vida.

Objetivo: O objetivo principal desta revisão sistemática foi determinar a prevalência de transtornos de ansiedade e de sintomas de ansiedade clinicamente significativos em pacientes com hidradenite supurativa e analisar seu impacto na qualidade de vida. Os objetivos secundários foram avaliar associações com a gravidade da doença, dor e cronicidade dos sintomas; comparar os achados entre diferentes contextos de estudo e instrumentos de avaliação; examinar relações com medidas de qualidade de vida específicas da dermatologia e gerais; identificar fatores demográficos e clínicos associados a maior sobrecarga psicológica; e avaliar a qualidade metodológica e o nível de evidência disponíveis.

Métodos: Foi realizada uma revisão sistemática utilizando as bases de dados PubMed, Scopus, Web of Science, Cochrane Library, LILACS, ClinicalTrials.gov e International Clinical Trials Registry Platform. Foram incluídos estudos clínicos recentes que avaliaram transtornos de ansiedade, sintomas de ansiedade ou desfechos de ansiedade validados em pacientes com hidradenite supurativa, bem como sua relação com a qualidade de vida. A seleção dos estudos, extração de dados, avaliação do risco de viés e análise da certeza das evidências foram estruturadas de acordo com os princípios PRISMA, com priorização de síntese qualitativa devido à heterogeneidade metodológica.

Resultados e Discussão: Vinte estudos atenderam aos critérios de inclusão. As evidências disponíveis demonstraram consistentemente que transtornos de ansiedade e sintomas de ansiedade são comuns na hidradenite supurativa e estão fortemente associados a pior qualidade de vida, maior carga de dor, maior estigmatização, limitação social, distúrbios do sono e redução da funcionalidade diária. A literatura também sugeriu que a sobrecarga psicossocial é influenciada não apenas pela gravidade clínica, mas também pela experiência subjetiva dos sintomas, estresse interpessoal e estigma internalizado. Embora as estimativas de prevalência tenham variado entre os estudos devido a diferenças de desenho, populações e métodos de avaliação, a direção geral das evidências foi altamente consistente.

Conclusão: A ansiedade representa um componente central da carga da doença na hidradenite supurativa e tem impacto negativo clinicamente relevante na qualidade de vida. A avaliação rotineira do sofrimento psicológico e da qualidade de vida relatada pelo paciente deve ser incorporada ao cuidado especializado, e estratégias multidisciplinares são necessárias para melhorar os desfechos dermatológicos e de saúde mental.

Palavras-chave: Hidradenite Supurativa. Transtornos de Ansiedade. Qualidade de Vida. Saúde Mental.

RESUMEN

Introducción: La hidradenitis supurativa es un trastorno inflamatorio crónico de la piel asociado con lesiones dolorosas recurrentes, cicatrización, estigmatización y una importante carga psicosocial. Los trastornos de ansiedad y los síntomas de ansiedad clínicamente significativos han emergido como comorbilidades relevantes en esta población y parecen contribuir de manera sustancial al deterioro de la calidad de vida.

Objetivo: El objetivo principal de esta revisión sistemática fue determinar la prevalencia de los trastornos de ansiedad y de los síntomas de ansiedad clínicamente significativos en pacientes con hidradenitis supurativa y analizar su impacto en la calidad de vida. Los objetivos secundarios fueron evaluar asociaciones con la gravedad de la enfermedad, el dolor y la cronicidad de los síntomas; comparar los hallazgos entre diferentes contextos de estudio e instrumentos de evaluación; examinar relaciones con medidas de calidad de vida específicas de dermatología y generales; identificar factores demográficos y clínicos asociados con mayor carga psicológica; y evaluar la calidad metodológica y el nivel de evidencia disponible.

Métodos: Se realizó una revisión sistemática utilizando las bases de datos PubMed, Scopus, Web of Science, Cochrane Library, LILACS, ClinicalTrials.gov y la International Clinical Trials Registry Platform. Se incluyeron estudios clínicos recientes que evaluaron trastornos de ansiedad, síntomas de ansiedad o resultados validados de ansiedad en pacientes con hidradenitis supurativa, así como su relación con la calidad de vida. La selección de estudios, extracción de datos, evaluación del riesgo de sesgo y análisis de la certeza de la evidencia se estructuraron de acuerdo con los principios PRISMA, priorizando la síntesis cualitativa debido a la heterogeneidad metodológica.

Resultados y Discusión: Veinte estudios cumplieron con los criterios de inclusión. La evidencia disponible mostró de forma consistente que los trastornos de ansiedad y los síntomas de ansiedad son comunes en la hidradenitis supurativa y están fuertemente asociados con peor calidad de vida, mayor carga de dolor, mayor estigmatización, limitación social, alteraciones del sueño y reducción del funcionamiento diario. La literatura también sugiere que la carga psicosocial está influenciada no solo por la gravedad clínica, sino también por la experiencia subjetiva de los síntomas, el estrés interpersonal y el estigma internalizado. Aunque las estimaciones de prevalencia variaron entre los estudios debido a diferencias en el diseño, las poblaciones y los métodos de evaluación, la dirección general de la evidencia fue altamente consistente.

Conclusión: La ansiedad representa un componente central de la carga de la enfermedad en la hidradenitis supurativa y tiene un impacto negativo clinicamente relevante en la calidad de vida. La evaluación rutinaria del malestar psicológico y de la calidad de vida reportada por el paciente debe incorporarse en la atención especializada, y se requieren estrategias multidisciplinares para mejorar tanto los resultados dermatológicos como los de salud mental.



Palabras clave: Hidradenitis Supurativa. Trastornos de Ansiedad. Calidad de Vida. Salud Mental.



1 INTRODUCTION

Hidradenitis suppurativa is a chronic, recurrent, inflammatory disorder of the follicular unit that primarily affects intertriginous skin and is characterized by painful nodules, abscesses, draining tunnels, and irreversible scarring.¹ The disease commonly begins during early adulthood, frequently follows a prolonged course marked by flares and remissions, and imposes a substantial physical and psychosocial burden on affected individuals.¹ Beyond cutaneous inflammation, hidradenitis suppurativa is increasingly recognized as a systemic condition associated with multiple comorbidities that contribute to long-term disability and impaired daily functioning.¹ Contemporary clinical guidance therefore emphasizes not only lesion control and prevention of structural damage, but also the assessment of symptom burden, quality of life, and extracutaneous consequences of disease.² This broader approach reflects the growing understanding that the consequences of hidradenitis suppurativa extend far beyond the visible skin lesions and influence education, work participation, intimate relationships, and social functioning.² In many patients, the chronicity of pain, drainage, odor, and scarring creates a uniquely distressing disease experience that may predispose to persistent psychological morbidity.²

Among the psychiatric dimensions associated with hidradenitis suppurativa, anxiety has emerged as a particularly relevant yet still incompletely characterized outcome.³ Anxiety in this population may arise from several converging mechanisms, including chronic pain, unpredictability of flares, fear of odor or visible drainage, body-image disruption, and repeated experiences of stigmatization within both social and healthcare environments.³ The cumulative effect of these stressors can generate hypervigilance, anticipatory distress, social avoidance, and diminished self-confidence, especially in patients with longstanding or anatomically extensive disease.³ Recent cohort data further suggest that adults with hidradenitis suppurativa have an increased risk of incident anxiety disorders compared with matched controls, reinforcing the clinical importance of this association.⁴ At the same time, cross-sectional studies indicate that anxiety symptoms are not merely incidental comorbid findings, but are closely linked to subjective disease burden, pain intensity, itch, and patient-reported quality-of-life impairment.⁴ These observations support the view that anxiety should be considered a core dimension of disease impact rather than a peripheral psychological complication.⁴

Quality of life is profoundly compromised in hidradenitis suppurativa and represents one of the most consistent findings across observational studies and evidence syntheses.⁵ Disease-related quality-of-life impairment extends across physical discomfort, sleep quality, mobility, sexual well-being, work productivity, social participation, and emotional health, often

reaching levels categorized as very large or extremely large in dermatology-specific instruments.⁵ Importantly, this burden is not explained solely by objective inflammatory severity, because patients with apparently limited anatomical involvement may still report marked suffering related to pain, shame, unpredictability, and interpersonal consequences.⁵ The relationship between anxiety and quality of life appears to be bidirectional, with anxiety amplifying perceived disability while disease burden, in turn, perpetuates anxious symptomatology.⁶ This reciprocal interaction may help explain why some patients experience substantial functional impairment even when traditional physician-reported severity indices appear only moderate.⁶ It also underscores the need for a patient-centered framework that integrates psychological outcomes into both research design and routine clinical evaluation.⁶

The path from hidradenitis suppurativa to anxiety is likely multifactorial and biologically as well as psychosocially mediated.⁷ Persistent inflammation, repeated tissue injury, sleep disturbance, and chronic nociceptive input may interact with social isolation, internalized stigma, and reduced perceived control over the disease course to intensify psychiatric vulnerability.⁷ Studies examining stigmatization and internalized skin bias have shown that these constructs are closely associated with adverse psychopathology and poorer health-related quality of life in patients with hidradenitis suppurativa.⁷ In practical terms, patients may avoid exercise, intimacy, employment opportunities, and healthcare encounters because of embarrassment, fear of judgment, or previous negative experiences related to their condition.⁸ Such behavioral adaptations can progressively narrow social roles and reinforce anxious cognitions, particularly in individuals with disease affecting the axillary, inguinal, genital, or inframammary regions.⁸ The resulting psychosocial spiral may continue even when inflammatory activity partially improves, indicating that the mental health impact of hidradenitis suppurativa may persist beyond acute cutaneous exacerbations.⁸

Another important consideration is that anxiety in hidradenitis suppurativa does not occur in isolation from other determinants of patient well-being.⁹ Pain has been identified as a major contributor to reduced quality of life, and its chronic or recurrent nature may directly intensify emotional distress and avoidance behavior.⁹ Similarly, itch, malodor, drainage, restricted clothing choice, and concern about lesion visibility can each exert a cumulative effect on psychological functioning that is not fully captured by conventional severity staging.⁹ Emerging evidence also suggests that the burden of psychiatric comorbidity may extend to pediatric and adolescent populations, highlighting that mental health consequences may begin early in the disease course.¹⁰ Because hidradenitis suppurativa often affects patients during formative years for identity, sexuality, education, and employment, the disorder may produce cumulative life-course impairment with repercussions that persist for decades.¹⁰ This

reinforces the need to interpret anxiety prevalence not as an isolated statistic, but as one element of a broader pattern of psychosocial and functional disruption.¹⁰

From a methodological standpoint, the literature on anxiety in hidradenitis suppurativa is heterogeneous and difficult to synthesize without a structured review.¹¹ Studies differ in design, recruitment setting, diagnostic criteria, comparator groups, severity metrics, and the instruments used to assess anxiety, depression, and health-related quality of life.¹¹ Some reports rely on validated anxiety scales such as the Generalized Anxiety Disorder 7-item scale or the Hospital Anxiety and Depression Scale, whereas others infer psychiatric burden from diagnostic coding, self-report, or broader psychosocial constructs.¹¹ These differences complicate the interpretation of prevalence estimates and may contribute to apparent inconsistencies across studies.¹² In addition, the relationship between anxiety and quality of life may be modified by confounders such as sex, age, obesity, pain burden, access to specialist care, treatment status, and previous surgical intervention.¹² A systematic review is therefore necessary to organize the available evidence, identify recurring patterns, and critically appraise the certainty of current conclusions.¹²

The present topic is also clinically relevant because current hidradenitis suppurativa management increasingly endorses multidisciplinary care and early recognition of comorbidities.¹³ Recent guidelines and expert consensus documents emphasize that treatment goals should not be restricted to lesion counts alone, but should include symptom relief, reduction in disease activity, improvement in quality of life, and recognition of associated psychological burden.¹³ Within this context, anxiety deserves particular attention because it may influence healthcare-seeking behavior, adherence to therapy, patient satisfaction, and the perceived effectiveness of both medical and surgical interventions.¹³ Failure to identify anxiety may contribute to fragmented care, underestimation of suffering, and missed opportunities for psychiatric or psychological support.¹⁴ Conversely, systematic recognition of anxiety-related burden may improve shared decision-making, facilitate timely referral, and promote more realistic, individualized therapeutic planning.¹⁴ Clarifying the prevalence of anxiety disorders and their relationship with quality of life is therefore essential for dermatologists, surgeons, psychiatrists, primary care physicians, and other clinicians involved in the management of hidradenitis suppurativa.¹⁴

2 OBJECTIVES

The main objective of this systematic review is to determine the prevalence of anxiety disorders and clinically significant anxiety symptoms in patients with hidradenitis suppurativa and to analyze their impact on quality of life. The secondary objectives are to evaluate the

association between anxiety burden and hidradenitis suppurativa severity, pain, and symptom chronicity; to compare the prevalence of anxiety across different study settings, patient populations, and assessment instruments; to examine the relationship between anxiety and dermatology-specific as well as general health-related quality-of-life measures; to identify demographic and clinical factors associated with greater psychological burden, including sex, age, anatomical involvement, and comorbidities; and to assess the methodological quality, risk of bias, and certainty of the available evidence in order to define current knowledge gaps and priorities for future research.

3 METHODOLOGY

This systematic review was designed in accordance with Preferred Reporting Items for Systematic Reviews and Meta-Analyses principles and was structured to synthesize the recent literature on anxiety disorders in hidradenitis suppurativa and their impact on quality of life. A comprehensive search strategy was planned using controlled vocabulary and free-text terms related to hidradenitis suppurativa, anxiety disorders, anxiety symptoms, psychiatric comorbidity, and quality of life. The following databases and trial registries were searched: PubMed, Scopus, Web of Science, Cochrane Library, LILACS, ClinicalTrials.gov, and the International Clinical Trials Registry Platform. Search strings were adapted to the syntax of each source, and the reference lists of eligible studies and relevant reviews were manually screened to identify additional records.

Eligible studies included observational studies, cohort studies, case-control studies, cross-sectional analyses, and interventional studies reporting data on anxiety disorders, anxiety symptoms, or validated anxiety outcomes in patients with hidradenitis suppurativa. The initial time window was defined as the last five years to prioritize the most contemporary evidence; however, the protocol allowed expansion to ten years if fewer than ten eligible studies were identified after full-text assessment. No language restrictions were applied. Human studies were prioritized for the main synthesis, while animal or in vitro studies, if encountered and considered relevant to mechanistic interpretation, would be presented separately and would not be pooled with the clinical evidence. Small sample studies were accepted when methodologically eligible, but sample-size limitations were explicitly considered during critical appraisal.

Study selection was performed independently by two reviewers in sequential phases involving title and abstract screening, full-text eligibility assessment, and final inclusion. Disagreements were resolved by discussion and, when necessary, by consultation with a third reviewer. The study selection process was planned to be documented in a PRISMA flow

diagram showing the number of records identified, duplicates removed, records screened, full-text reports assessed, exclusions with reasons, and studies included in the final review.

4 RESULTS

The structured search across PubMed, Scopus, Web of Science, Cochrane Library, LILACS, ClinicalTrials.gov, and ICTRP identified 1,124 records. After removal of 286 duplicates, 838 records underwent title and abstract screening. Of these, 96 reports were selected for full-text assessment, 76 were excluded for predefined reasons, and 20 studies met the inclusion criteria for the final qualitative synthesis. Owing to substantial heterogeneity in study design, anxiety assessment methods, comparator strategies, and quality-of-life instruments, a quantitative meta-analysis was not performed.

Table 1

Reference	Population / Intervention / Comparison	Outcomes	Main conclusions
Bató et al., 2021	This psychometric validation study included adults with hidradenitis suppurativa and compared the EQ-5D-5L with the EQ-5D-3L for health-status assessment rather than comparing different treatments.	The study assessed feasibility, effects, validity, discrimination across quality-of-life domains, including anxiety and depression.	The EQ-5D-5L performed better than the EQ-5D-3L for capturing health-related quality of life in hidradenitis suppurativa, supporting more sensitive evaluation of psychosocial burden.
Akoglu et al., 2021	This cross-sectional study evaluated patients with hidradenitis suppurativa and examined how disease severity and self-reported mental health burden related to stigmatization, without a separate external control group.	The main outcomes were stigmatization scores and their associations with disease severity and poor mental health.	Greater clinical severity and worse psychological burden were the strongest predictors of stigmatization, reinforcing the link between mental distress and diminished psychosocial well-being.
Ooi et al., 2022	This single-center cross-sectional study assessed patients with hidradenitis suppurativa in Singapore without a formal comparator cohort.	The study evaluated psychosocial well-being, emotional burden, and quality-of-life impairment associated with hidradenitis suppurativa.	Hidradenitis suppurativa imposed a marked psychosocial burden and supported the need for holistic, multidisciplinary care beyond cutaneous disease control alone.
Butt et al., 2022	This cross-sectional analysis included patients with hidradenitis suppurativa and evaluated internalized skin bias rather than testing a therapeutic intervention.	The study measured internalized skin bias, adverse psychopathology, anxiety and depression correlations, and health-related quality of life.	Internalized skin bias was associated with adverse psychopathology and impaired quality of life and appeared to mediate the relationship between anxiety or depression and health-related quality of life.
Ingraham et al., 2022	This community-based cross-sectional survey included individuals with hidradenitis	The outcomes included negative emotions, anxiety,	More negative interactions with providers and romantic partners were associated with

Reference	Population / Intervention / Comparison	Outcomes	Main conclusions
	suppurativa and explored the effect of negative interactions with healthcare providers and romantic partners, without a disease control group.	embarrassment, depressed mood, and quality-of-life impairment during interpersonal interactions.	worse quality of life, showing that interpersonal stress meaningfully contributes to psychosocial burden.
Perche et al., 2022	This observational study recruited patients with hidradenitis suppurativa and examined interference with social activities across disease burden levels rather than across treatment arms.	The study assessed participation in social activities, fear of negative evaluation, social anxiety, painful nodules, and body-region involvement.	Social participation was frequently impaired, and higher social-anxiety scores were consistently associated with greater interference in everyday activities.
Rymaszewska et al., 2022	This cross-sectional study enrolled Polish patients with hidradenitis suppurativa and did not include a non-HS comparator group.	The main outcomes were the incidence and severity of depressive and anxiety symptoms measured with standardized psychometric instruments.	Anxiety and depressive symptoms were common in hidradenitis suppurativa, supporting routine psychiatric screening in affected patients.
Singh et al., 2023	This observational cohort study included patients with hidradenitis suppurativa and evaluated the relationship between stigmatization and psychosocial outcomes without a separate healthy control group.	The outcomes were quality of life, depression, and social anxiety in relation to perceived stigmatization.	Stigmatization was closely related to reduced quality of life and worse psychosocial outcomes, including higher social anxiety.
Alya et al., 2023	This cross-sectional case-control study compared patients with hidradenitis suppurativa with patients who had psoriasis or atopic dermatitis.	The study assessed psychosocial impact, quality of life, and work-related consequences across inflammatory skin disorders.	Hidradenitis suppurativa had a greater psychosocial impact on quality of life than psoriasis or atopic dermatitis and was associated with lower employment rates.
Rymaszewska et al., 2023	This cross-sectional study evaluated patients with hidradenitis suppurativa and examined coping strategies and satisfaction with life without an external comparator group.	The outcomes included satisfaction with life, psychosocial burden, and the influence of anxiety-depression comorbidity on coping.	Patients with hidradenitis suppurativa had low satisfaction with life, and reducing anxiety-depression comorbidity appeared important for comprehensive care.
Cohn et al., 2024	This retrospective cohort study compared adults with hidradenitis suppurativa in the United States with matched individuals without hidradenitis suppurativa.	The study evaluated incident anxiety disorder diagnoses and identified risk factors for new-onset anxiety among patients with hidradenitis suppurativa.	Adults with hidradenitis suppurativa had a higher likelihood of developing anxiety disorders than controls, and risk was influenced by demographic and clinical factors.
Mart et al., 2024	This cross-sectional study included patients with hidradenitis suppurativa and examined demographic and clinical factors affecting quality of life, without a separate non-HS comparator.	The outcomes focused on quality-of-life impairment and its relationship with clinical and demographic variables.	Quality of life was substantially impaired in hidradenitis suppurativa, and patient burden was influenced by both disease-related and personal factors.
Wu et al., 2024	This validation study in Australia included patients with	The study assessed	The HiSQOL captured substantial quality-of-life

Reference	Population / Intervention / Comparison	Outcomes	Main conclusions
	hidradenitis suppurativa and evaluated the questionnaire rather than comparing treatments.	suppurativa-specific quality-of-life and the performance of HiSQOL in routine assessment.	impairment in hidradenitis suppurativa and supported disease-specific assessment of psychosocial burden.
Dattolo et al., 2024	This observational study compared pediatric and adult patients with hidradenitis suppurativa within the same clinical framework rather than using healthy controls.	health-related quality of life, patient-reported outcome measures, and the psychosocial burden associated with hidradenitis suppurativa.	Hidradenitis suppurativa significantly impaired quality of life across age groups, while also highlighting the relative scarcity of pediatric psychosocial data.
Garg et al., 2025	This real-world validation study included adults with hidradenitis suppurativa and compared the HiSQOL with the Dermatology Life Quality Index.	correlations between the two instruments and identification of the quality-of-life items most strongly affecting patients, including anxiety-related items.	The HiSQOL strongly correlated with the Dermatology Life Quality Index but better captured domains such as embarrassment, depression, and anxiety that strongly affect quality of life.
Michelucci et al., 2025	This prospective single-center study assessed patients with moderate-to-severe hidradenitis suppurativa undergoing wide local excision with secondary intention healing.	The study measured changes in quality of life and mental health, including anxiety and depression subscales, before and after surgery.	Surgical management was associated with improvement in both quality of life and mental health, suggesting that effective disease control can lessen psychosocial burden.
Altunay et al., 2025	This prospective single-center study enrolled patients with hidradenitis suppurativa and did not include a healthy control group.	The study assessed depression, anxiety, stress, and quality-of-life impairment using standardized scales and examined associated clinical variables.	Severe psychological burden and marked quality-of-life impairment were common, with anxiety affecting a large proportion of patients.
Marron et al., 2025	This multicenter European observational study included patients with hidradenitis suppurativa and examined the role of stigmatization in psychosocial outcomes.	The outcomes included stigmatization, anxiety, depression, and quality-of-life impairment in relation to health- and disease-related variables.	Stigmatization was strongly associated with psychological distress and reduced quality of life, supporting the clinical relevance of social and self-perception factors.
Sanlı et al., 2025	This case-control study compared patients with hidradenitis suppurativa with healthy controls.	The study evaluated sleep quality, pain, and Quality Index scores and analyzed their correlations with disease severity.	Patients with hidradenitis suppurativa had significantly higher anxiety, depression, sleep disturbance, and quality-of-life impairment than controls, and pain correlated with worse psychosocial outcomes.
Rotsiamis et al., 2025	This observational study included patients with hidradenitis suppurativa and explored associations between inflammatory biomarkers and psychological burden without a non-HS comparator group.	The study assessed systemic inflammation, psychological burden, and symptom measures, and quality-of-life outcomes.	Systemic inflammation was linked to greater psychological burden and worse quality of life, suggesting that biological and psychosocial dimensions of disease are closely intertwined.

5 RESULTS AND DISCUSSION

Recent evidence indicates that anxiety is not a marginal accompaniment of hidradenitis suppurativa, but a recurrent and clinically meaningful component of overall disease burden.¹⁷ The earliest included study, by Bató et al., showed that generic health-status instruments with improved sensitivity were better able to capture anxiety and depression dimensions in hidradenitis suppurativa, which is relevant because underdetection of psychosocial morbidity may distort prevalence estimates.¹⁷ Akoglu et al. then demonstrated that stigmatization rose in parallel with clinical severity and worse mental health, reinforcing the concept that psychiatric suffering is closely intertwined with the lived severity of the disease rather than being an incidental background feature.¹⁷

Ooi et al. extended this perspective by documenting substantial psychosocial burden in an Asian clinical population, suggesting that anxiety-related impairment is not restricted to Western cohorts or to a single healthcare context.¹⁸ Butt et al. further showed that internalized skin bias was associated with adverse psychopathology and poorer health-related quality of life, supporting the idea that self-perception and shame may mediate the pathway between disease manifestations and anxious distress.¹⁸ Ingraham et al. added an interpersonal dimension by reporting that negative experiences with healthcare professionals and romantic partners were associated with worse emotional outcomes, indicating that anxiety in hidradenitis suppurativa is amplified by social interactions as well as by symptoms themselves.¹⁸

Perche et al. contributed important data on social functioning by showing that impairment in everyday social activities was strongly associated with social-anxiety measures, especially when painful lesions and body-region involvement limited confidence and public participation.¹⁹ Rymaszewska et al., in their 2022 study, documented that anxiety and depressive symptoms were highly prevalent among Polish patients with hidradenitis suppurativa, lending direct support to routine screening strategies in clinical practice.¹⁹ Singh et al. subsequently confirmed that stigmatization was closely linked to reduced quality of life and higher social anxiety, consolidating stigma as a central explanatory factor across multiple observational datasets.¹⁹

Alya et al. provided an informative comparative framework by showing that hidradenitis suppurativa exerted greater psychosocial impact on quality of life than psoriasis or atopic dermatitis, suggesting that the psychiatric burden of hidradenitis suppurativa may be disproportionately high even among chronic inflammatory dermatoses.²⁰ The later study by Rymaszewska et al. also indicated that low satisfaction with life was strongly influenced by anxiety-depression comorbidity, emphasizing that mental health burden in hidradenitis

suppurativa extends beyond transient symptom distress and affects broader life appraisal.²⁰ Together, these studies suggest that prevalence estimates of anxiety should be interpreted alongside constructs such as stigma, coping, and life satisfaction because these domains appear to cluster and reinforce one another.²⁰

The strongest longitudinal evidence among the included studies came from Cohn et al., who found that adults with hidradenitis suppurativa had a higher risk of incident anxiety disorders than matched controls, supporting a temporal association rather than a purely cross-sectional coexistence.²¹ Mart et al. then showed that quality-of-life impairment remained substantial across demographic and clinical strata, indicating that anxiety-related burden is likely modified by, but not fully reducible to, conventional disease descriptors.²¹ Wu et al. strengthened outcome assessment by validating the HiSQOL as a disease-specific instrument capable of capturing hidradenitis suppurativa-related quality-of-life impairment with greater clinical relevance than broader tools alone.²¹

Dattolo et al. broadened the age spectrum by showing that psychosocial burden was also important in pediatric patients, although adults tended to have worse health-related quality of life and higher psychological impact overall.²² Garg et al. further supported the value of disease-specific measurement by demonstrating that the HiSQOL correlated strongly with the Dermatology Life Quality Index while more effectively capturing embarrassment, depression, and anxiety-related domains.²² Michelucci et al. offered a therapeutic perspective by showing that wide local excision with secondary intention healing was associated with improvement in both mental health and quality of life, implying that successful control of chronic inflammatory activity may alleviate anxiety burden even when the intervention is surgical rather than psychiatric.²²

Altunay et al. reported one of the clearest recent signals of psychiatric burden, with anxiety affecting a large proportion of patients and coexisting with severe quality-of-life impairment in a prospective clinical cohort.²³ Marron et al. reinforced the role of stigmatization by demonstrating strong associations between stigma, anxiety, depression, and reduced quality of life in a multicenter European population.²³ Sanlı et al. added a controlled comparison by showing that patients with hidradenitis suppurativa had significantly higher anxiety, depression, sleep disturbance, and quality-of-life impairment than healthy controls, with pain closely related to worse psychosocial outcomes.²³

Rotsiamis et al. finally linked systemic inflammation to psychological burden and poorer quality of life, suggesting that anxiety in hidradenitis suppurativa may reflect not only social and behavioral mechanisms but also disease-related biological activity.²⁴ When these 20 studies are considered together, the literature consistently indicates that anxiety

prevalence is clinically relevant regardless of whether it is measured as a formal diagnosis, symptom scale elevation, or broader emotional distress domain.²⁴ However, the absolute prevalence reported across studies remains heterogeneous because the reviewed literature used different instruments, thresholds, populations, and recruitment settings, which limits direct numerical comparability.²⁴

A central synthesis finding is that anxiety appears to be most strongly connected to patient-reported burden rather than to a single objective marker of cutaneous severity.²⁵ Pain, drainage, malodor, intimate-area involvement, social withdrawal, and stigmatization recur more consistently than physician-rated staging as correlates of anxiety-related impairment, which may explain why some patients with apparently moderate disease still report very poor quality of life.²⁵ This pattern is clinically important because it suggests that screening limited to lesion counts or anatomical extent may miss substantial psychiatric morbidity in patients whose daily functioning is nonetheless severely affected.²⁵

These findings are broadly aligned with current hidradenitis suppurativa literature and guideline-oriented reviews that frame the disease as a multidimensional disorder requiring attention to pain, psychosocial morbidity, and health-related quality of life in addition to inflammatory control.²⁶ The present synthesis also agrees with recent larger reviews showing that anxiety, depression, sexual dysfunction, sleep impairment, and work-related limitations are recurrent features of the hidradenitis suppurativa experience.²⁶ In this context, the observed prevalence of anxiety disorders or anxiety symptoms should not be interpreted narrowly as psychiatric comorbidity alone, but as part of a wider network of disease impact that influences treatment response, adherence, healthcare engagement, and patient-centered outcomes.²⁶

The main sources of heterogeneity in this review were methodological and likely lowered certainty of evidence for any pooled prevalence estimate.²⁷ Most included studies were cross-sectional, several used convenience samples from specialist clinics, and anxiety was variably measured through diagnostic coding, psychometric screening tools, or broader mental health constructs, all of which increase inconsistency and risk of indirectness.²⁷ For this reason, the overall GRADE certainty for the prevalence question is best interpreted as low to moderate, with greater confidence in the qualitative conclusion that anxiety burden is frequent and clinically relevant than in any single numerical prevalence figure.²⁷

Risk-of-bias considerations also deserve emphasis, because residual confounding was common and many studies did not fully adjust for obesity, smoking, pain severity, treatment exposure, socioeconomic status, or previous psychiatric history.²⁸ Reverse causality is another concern in cross-sectional analyses, since poorer quality of life may both

result from and intensify anxiety symptoms.²⁸ Nevertheless, the consistency of associations across studies from different countries, age groups, and methodological approaches strengthens the clinical plausibility of a true and meaningful link between hidradenitis suppurativa, anxiety burden, and diminished quality of life.²⁸

From a practical standpoint, the evidence supports routine assessment of anxiety symptoms and quality of life during hidradenitis suppurativa care, particularly in patients with pain, stigmatization, social avoidance, sleep disturbance, or major functional impairment.²⁹ Brief validated screening instruments may be useful in dermatology and surgical settings, but they should complement rather than replace direct clinical inquiry about fear, embarrassment, intimacy, work limitations, and avoidance behavior.²⁹ Future research should prioritize prospective multicenter cohorts with standardized anxiety definitions, disease-specific quality-of-life measures, and longitudinal evaluation before and after effective medical or surgical treatment so that both prevalence and modifiable predictors can be more precisely defined.²⁹

6 CONCLUSION

The available recent literature indicates that anxiety disorders and clinically significant anxiety symptoms are common among patients with hidradenitis suppurativa and are consistently associated with marked impairment in quality of life. Across the included studies, the psychological burden of the disease was closely linked to pain, stigmatization, social limitation, sleep disturbance, and dissatisfaction with daily functioning. Although numerical prevalence estimates varied across studies, the overall direction of the evidence was highly consistent in showing that anxiety represents a central component of disease burden in hidradenitis suppurativa.

These findings are clinically relevant because they support a broader model of hidradenitis suppurativa care that extends beyond inflammatory lesion control alone. In routine practice, patients with recurrent pain, embarrassment, impaired intimacy, occupational difficulty, or avoidance of social interactions should be considered at increased risk of significant anxiety-related morbidity. Integrating mental health screening and quality-of-life assessment into dermatologic care may improve recognition of hidden suffering and facilitate more comprehensive treatment planning.

The main limitations of the current literature are the predominance of cross-sectional designs, variation in anxiety assessment methods, and inconsistency in the adjustment for confounding variables. Many studies were conducted in specialist settings and may therefore overrepresent individuals with more severe or treatment-refractory disease. In addition, the



distinction between formally diagnosed anxiety disorders and elevated anxiety symptom scores was not uniform, which reduces precision when attempting to compare prevalence across studies.

Future research should prioritize multicenter prospective studies with standardized definitions of anxiety outcomes and consistent use of disease-specific and generic quality-of-life instruments. Longitudinal designs are especially needed to clarify temporal relationships between disease activity, stigmatization, treatment response, and changes in anxiety burden over time. Interventional research should also determine whether effective medical, surgical, and multidisciplinary care can produce sustained improvement not only in skin disease but also in psychiatric outcomes and functional well-being.

Overall, the evidence supports the view that hidradenitis suppurativa must be managed as a chronic inflammatory disorder with major psychological and social consequences. Evidence-based care should therefore be multidisciplinary, patient-centered, and individualized, with attention to symptom control, psychosocial distress, and real-world functional limitations. Recognizing anxiety as a clinically meaningful dimension of hidradenitis suppurativa may help improve quality of life, strengthen therapeutic relationships, and promote more humane and effective long-term care.

REFERENCES

- 1 Sabat, R., Alavi, A., Wolk, K., Wortsman, X., McGrath, B., Garg, A., et al. (2025). Hidradenitis suppurativa. *Lancet*, 405(10476), 420–438.
- 2 Frew, J., et al. (2025). Australasian hidradenitis suppurativa management guidelines. *Australasian Journal of Dermatology*, 66(2), 75–89.
- 3 Kimball, A. B., Kirby, J., Ingram, J. R., Tran, T., Pansar, I., Ciaravino, V., et al. (2024). Burden of hidradenitis suppurativa: A systematic literature review of patient reported outcomes. *Dermatology and Therapy*, 14(1), 83–98.
- 4 Chernyshov, P. V., Finlay, A. Y., Tomas-Aragones, L., Poot, F., Sampogna, F., Marron, S. E., et al. (2021). Quality of life in hidradenitis suppurativa: An update. *International Journal of Environmental Research and Public Health*, 18(11), 6131.
- 5 Caccavale, S., et al. (2023). Hidradenitis suppurativa burdens on mental health: A literature review of associated psychiatric disorders and their pathogenesis. *Life*, 13(1), 189.
- 6 Bató, A., Brodszky, V., Gergely, L. H., Gáspár, K., Wikonkál, N., Kinyó, Á., et al. (2021). The measurement performance of the EQ-5D-5L versus EQ-5D-3L in patients with hidradenitis suppurativa. *Quality of Life Research*, 30(5), 1477–1490.

- 7 Akoglu, G., Yildiz, I., Karaismailoğlu, E., & Esme, P. (2021). Disease severity and poor mental health are the main predictors of stigmatization in patients with hidradenitis suppurativa. *Dermatologic Therapy*, 34(3), e14910.
- 8 Ooi, X. T., et al. (2022). The psychosocial burden of hidradenitis suppurativa in Singapore. *JAAD International*, 7, 89–94.
- 9 Butt, M., et al. (2022). Associations of internalized skin bias with age, adverse psychopathology, and health-related quality of life among patients with hidradenitis suppurativa: A cross-sectional analysis. *JAMA Dermatology*, 158(4), 432–438.
- 10 Ingraham, N., Hann, L. R., Williamson, J. A., & Drew, C. (2022). Communicating with health providers and romantic partners: The impact of negative emotions on quality of life for individuals with hidradenitis suppurativa. *International Journal of Women's Dermatology*, 8(3), e049.
- 11 Perche, P. O., et al. (2022). Hidradenitis suppurativa's impact on social activities: An observational study. *Cureus*, 14(5), e25292.
- 12 Rymaszewska, J. E., Krajewski, P. K., Matusiak, Ł., Maj, J., & Szepietowski, J. C. (2023). Depression and anxiety in hidradenitis suppurativa patients: A cross-sectional study among Polish patients. *Postępy Dermatologii i Alergologii*, 40(1), 35–39.
- 13 Singh, R., et al. (2023). Stigmatization, a social perception which may have a debilitating impact on hidradenitis suppurativa patients: An observational study. *Archives of Dermatological Research*, 315(4), 1049–1052.
- 14 AlSiyoufi, A., et al. (2023). Psychosocial implications and quality of life in patients with hidradenitis suppurativa compared to those with atopic dermatitis and psoriasis: A cross-sectional case-control study. *Dermatology Practical & Conceptual*, 13(2), e2023076.
- 15 Rymaszewska, J. E., Krajewski, P. K., Matusiak, Ł., Maj, J., & Szepietowski, J. C. (2023). Satisfaction with life and coping strategies among patients with hidradenitis suppurativa: A cross-sectional study. *Journal of Clinical Medicine*, 12(8), 2755.
- 16 Cohn, E., Palma, G., Mastacouris, N., Strunk, A., & Garg, A. (2024). Incidence of anxiety disorder in adults with hidradenitis suppurativa. *British Journal of Dermatology*, 191(3), 351–356.
- 17 Mart, H. M. E., et al. (2024). Demographic and clinical features and factors affecting the quality of life of patients with hidradenitis suppurativa: A cross-sectional study. *Dermatologic Surgery*, 50(7), 630–635.
- 18 Wu, K., et al. (2024). Quality-of-life evaluation in hidradenitis suppurativa in Australia: Validation and outcomes of the HiSQOL questionnaire. *Australasian Journal of Dermatology*, 65(8), 630–635.
- 19 Dattolo, A., et al. (2025). Health-related quality of life and clinical characteristics of hidradenitis suppurativa in a pediatric population. *Dermatology Reports*, 17(2), 10086.
- 20 Garg, A., et al. (2025). Validation of the real-world application of the hidradenitis suppurativa quality of life (HiSQOL) score to adults with hidradenitis suppurativa. *British Journal of Dermatology*, 192(2), 261–268.



- 21 Michelucci, A., Manzo Margiotta, F., Salvia, G., Vietina, A., Janowska, A., Morganti, R., et al. (2025). Effectiveness of wide local excision and secondary intention healing in hidradenitis suppurativa: A single-centre study on quality of life and mental health outcomes. *Clinical and Experimental Dermatology*, 50(4), 836–840.
- 22 Altunay, I. K., Akpulat Tekin, C., Inal Aptoula, S., Aksu, A., & Ozkesici Kurt, B. (2025). Evaluation of the psychosocial burden of hidradenitis suppurativa and relevant factors: A prospective single-center study. *Sisli Etfal Hospital Medical Bulletin*, 59(1), 28–34.
- 23 Marron, S. E., et al. (2025). Stigmatization and perceived health status in patients with hidradenitis suppurativa: An observational multicenter study in Europe. *International Journal of Dermatology*, 64(5), 861–869.
- 24 Sanlı, E., et al. (2025). Beyond skin deep: The unseen burden of hidradenitis suppurativa on sleep and quality of life. *Cutaneous and Ocular Toxicology*, 44(3), 342–350.
- 25 Rotsiamis, N., et al. (2025). Systemic inflammation correlates with depression and lower quality of life in patients with hidradenitis suppurativa independent of disease severity. *Archives of Dermatological Research*, 317(1), 649.
- 26 Holgersen, N., Rosenø, N. A. L., Nielsen, V. W., Hjorthøj, C., Nordentoft, M., Garg, A., et al. (2025). Risk of new-onset and recurrent depression and anxiety among patients with hidradenitis suppurativa. *JAMA Dermatology*, 161(10), 1014–1021.
- 27 Liakou, A. I., et al. (2024). Association between inflammatory markers and psychometric scores in patients with hidradenitis suppurativa. *Journal of Clinical Medicine*, 13(19), 5795.
- 28 McAndrew, R., Lopes, F. C. P. S., Sebastian, K., & Diaz, L. Z. (2021). Quality of life in hidradenitis suppurativa: A cross-sectional study of a pediatric population. *Journal of the American Academy of Dermatology*, 84(3), 829–830.
- 29 Nguyen, T. V., Damiani, G., Orenstein, L. A. V., Hamzavi, I., & Jemec, G. B. E. (2021). Hidradenitis suppurativa: An update on epidemiology, phenotypes, diagnosis, pathogenesis, comorbidities and quality of life. *Journal of the European Academy of Dermatology and Venereology*, 35, 50–61.