

Reddit Discourse on Eczema: Quantitative Analysis of Misinformation, Engagement, and Alignment With 2025 American Academy of Dermatology Guidelines

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INTRODUCTION

Atopic dermatitis (AD) is a chronic inflammatory disease with significant psychosocial burden.¹ Patients increasingly seek dermatological information and guidance on Reddit, a platform with over 70 million daily active users, which hosts disease-specific communities such as r/eczema.^{2,3} These forums provide validation and peer support but may amplify misinformation.⁴ The 2025 American Academy of Dermatology (AAD) atopic dermatitis guidelines offer a timely, evidence-based benchmark against which to evaluate this discourse.

MATERIALS AND METHODS

The authors conducted a cross-sectional analysis of the top posts from the r/eczema subreddit between May 25, 2024, and May 25, 2025. Of 210 posts screened, 123 met the inclusion criteria (English language, relevant to AD diagnosis; excluding off-topic and spam posts). Posts were thematically coded and scored using two frameworks: (1) a Guideline Alignment and Bias Scoring (GABS; a score from 0–5, a higher score indicated greater misinformation/bias. Criteria assessed included; testability, credibility, AAD contradiction, pseudoscientific claim, and basis of claim), and (2) AAD alignment (A score from 1–5, a higher score representing stronger guideline concordance).⁵ Two independent raters scored posts; inter-rater reliability was high ($\kappa = 0.81$). Readability was assessed with the Flesch–Kincaid index. Pearson correlations evaluated associations among GABS, AAD alignment, engagement, and readability.

RESULTS

The most frequent themes were treatment success ($n = 29$), flare triggers ($n = 25$), and alternative remedies ($n = 16$). Alternative remedies (mean AAD = 2.69; mean GABS = 1.94) and misinformation/doubt (mean AAD = 2.20; mean GABS = 3.20) were the least AAD guideline-concordant. Empowerment and peer education (mean AAD = 4.70; mean GABS = 0.60) and flare triggers (mean AAD = 4.60; mean GABS = 0.80) demonstrated

the highest concordance (Table 1). Overall, a higher GABS score strongly correlated with lower AAD alignment ($r = -0.77$, $P < 0.001$), a pattern more pronounced at the theme-specific level ($r = -0.92$, $P < 0.001$). Engagement metrics further reinforced this pattern: upvote percentage correlated positively with AAD alignment ($r = 0.34$, $P < 0.001$) and negatively with GABS ($r = -0.37$, $P < 0.001$), while comment count correlated with Reddit score ($r = 0.50$, $P < 0.001$) (Figure 1). Readability was not significantly associated with information quality within both GABS and AAD alignment.

DISCUSSION

These results demonstrate that while Reddit discourse contains substantial misinformation, community engagement tends to favor posts aligned with dermatology guidelines. Dermatologists should be aware of these online dynamics, as they reveal barriers and narratives not easily captured in clinic settings. Proactive engagement through patient education, counseling that acknowledges alternative treatment narratives, and partnerships with digital health communities may help mitigate misinformation and support adherence to evidence-based management.

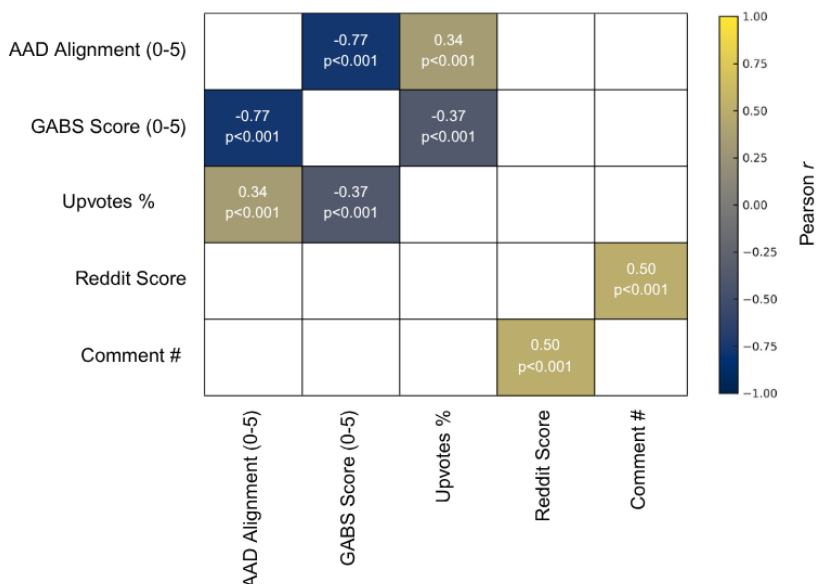
Study limitations include restriction to a single subreddit, lack of demographic information, and a cross-sectional design. Nevertheless, these findings demonstrate that social media captures patient perspectives not easily measured in clinic-based studies. Platforms may offer dermatologists valuable insights into barriers to care, adherence challenges, and lived experiences of disease.

Reddit discourse exhibits a complex interplay with medical guidelines. Higher GABS scores strongly correlated with lower AAD alignment, particularly in themes such as alternative remedies and misinformation. One post described frustration with the medical system, accusing dermatologists of profiting from the disease rather than seeking a cure. This sentiment

TABLE 1.

Theme-Specific Mean American Academy of Dermatology (AAD) Alignment and Global Acne Burden Score (GABS) Scores, With Correlation Summary				
Section	Category	Total Posts	Mean AAD Alignment	Mean GABS Score
Theme-specific analysis	Access/Insurance Issues	1	5.0	1.0
Theme-specific analysis	Alternative Remedies	16	2.69	1.94
Theme-specific analysis	Childhood/Parenting	4	4.0	1.0
Theme-specific analysis	Crowdsourced Knowledge & Resource Sharing	1	5.0	0.0
Theme-specific analysis	Emotional Support and Affirmations	3	5.0	0.67
Theme-specific analysis	Empowerment & Comprehensive Peer Education	10	4.7	0.6
Theme-specific analysis	Flare Triggers	25	4.6	0.8
Theme-specific analysis	Lifestyle Impact	6	3.67	1.5
Theme-specific analysis	Mental Health Impact	8	3.88	1.38
Theme-specific analysis	Misinformation/Doubt	10	2.2	3.2
Theme-specific analysis	Seeking Advice	6	4.33	1.17
Theme-specific analysis	Treatment Failure	4	3.75	1.5
Theme-specific analysis	Treatment Success	29	4.55	0.66
Section	Variables	Pearson Coefficient	P-Value	
Correlation summary	GABS vs AAD alignment	-0.77	$P<0.001$	
Correlation summary	Theme mean GABS vs mean AAD	-0.92	$P<0.001$	
Correlation summary	Upvote % vs AAD alignment	0.34	$P<0.001$	
Correlation summary	Upvote % vs GABS	-0.37	$P<0.001$	
Correlation summary	Comments vs Reddit score	0.5	$P<0.001$	
Correlation summary	Readability vs AAD	0.05	$P=0.600$	
Correlation summary	Readability vs GABS	0.08	$P=0.420$	

FIGURE 1. Heatmap illustrating the strength and direction of Pearson correlations among AAD alignment, GABS score, and engagement variables (upvotes, comments, and Reddit score).



typifies the “Misinformation and Doubt” theme. While users tended to favor higher-quality information, guideline-discordant posts remained prominent. This duality suggests both risks and opportunities: patients experiencing the greatest burden may be most vulnerable to adopting non-guideline strategies. These findings, along with the discovery that readability is not a significant predictor of post quality, underscore the critical need for targeted interventions and evidence-based education in active online patient communities.

DISCLOSURES

The authors have no conflict of interest to declare.

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