

Scar Treatment Characteristics and Consumer Preferences Among Amazon Products Between 2022 and 2024

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Introduction

Scars from trauma, burns, acne, and surgery are common, affecting an estimated 100 million individuals annually and often leading to long-term psychosocial distress and reduced quality of life. As concerns about skin health and cosmetic appearance rise, the global scar treatment market has grown substantially, reaching \$20.6 billion in 2020. Many individuals seek non-invasive, over-the-counter (OTC) scar treatments, contributing to the popularity of topical products sold online. The American Academy of Dermatology (AAD) currently recommends silicone-based treatments for scars, citing mechanisms such as hydration of the stratum corneum, inhibition of fibroblast proliferation and collagen overproduction, and promotion of angiogenesis. Other active ingredients, like onion extract, vitamin E, and allantoin, are also marketed for their anti-inflammatory and antimicrobial properties, though their efficacy remains less supported by research. To better understand consumer behavior and guide both patients and clinicians, this study uses [Amazon.com](https://www.amazon.com) one of the world's largest online marketplaces to analyze OTC scar treatments and consumer preferences from 2022 to 2024. We compare popular active ingredients, customer ratings, perceived effectiveness, affordability, product forms, and adverse reactions to identify the most highly rated and desirable features of scar removal products based on real-world consumer feedback.

Methods

Searched [Amazon.com](https://www.amazon.com) using keywords: "scar removal" and "scar treatment"

Conducted in incognito mode and logged out to eliminate personalized search bias

Evaluated 100 products with more than 50 ratings in:
 • December 2022
 • September - December 2024

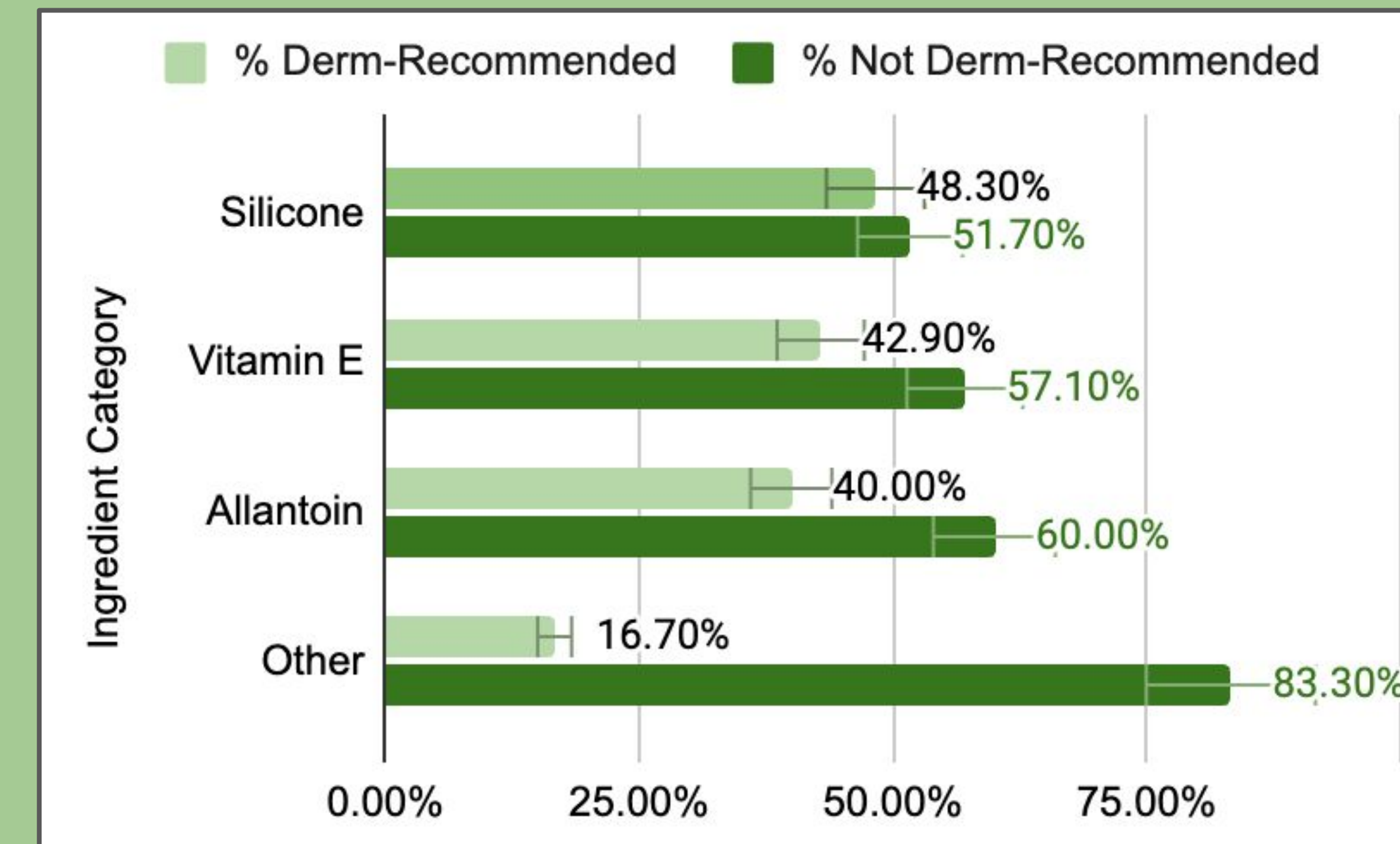
From product page and consumer reviews data was collected on:
 Product name, # of ratings and rating distribution, Average rating (out of 5), Price, price per ounce (liquids), Type/form (gel, cream, adhesive, other), Application instructions, Claimed time to results, Clinician recommendation (yes/no), Primary active ingredients

Grouped by active ingredient (Silicone, Vitamin E, Allantoin, Other), Application methods (Cream, Adhesive, etc), Physician recommendation

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Dermatologist recommendation varied significantly by active ingredient category

($\chi^2(3) = 9.81, p = 0.020$). Products in the "other" ingredient category were the least likely to be recommended, while Silicone had near-equal representation of dermatologist versus non dermatologist recommended.



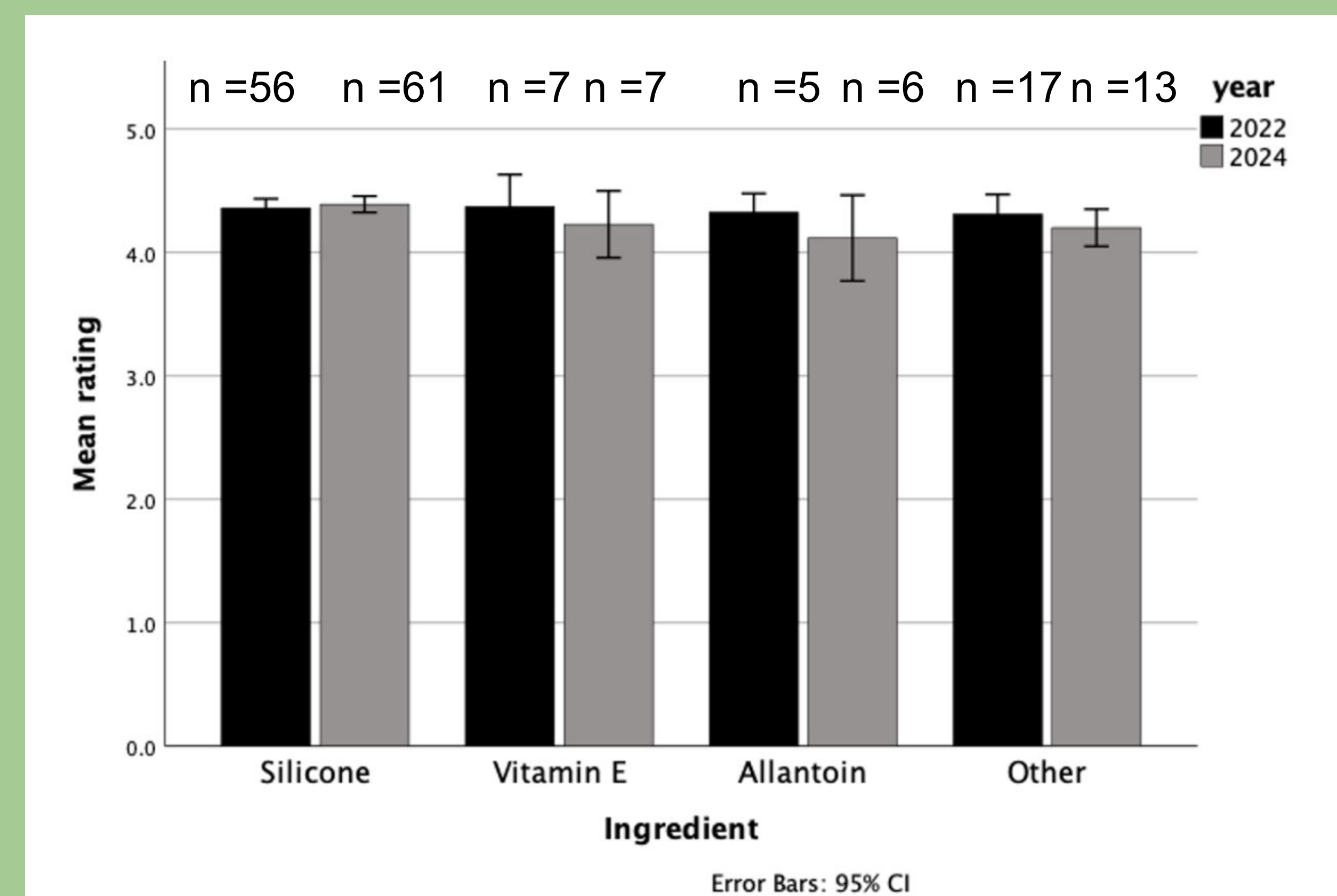
Dermatologist recommended products are rated slightly higher than non-dermatologist recommended products

Dermatologist Recommendation advertised on product	Median Rating	Mean Rating	n (Number of Products)
Yes	4.3	4.36	73
No	4.3	4.31	101

Comparison of Consumer Ratings by Product Formulation Type

Formulation Type	Mean Rating	Median Rating	n (Number of Products)
Gel / Cream	4.34	4.3	92
Tape / Adhesive	4.36	4.3	54
Oil	4.37	4.6	9
Balm	4.25	4.25	4
Other	4.29	4.3	13

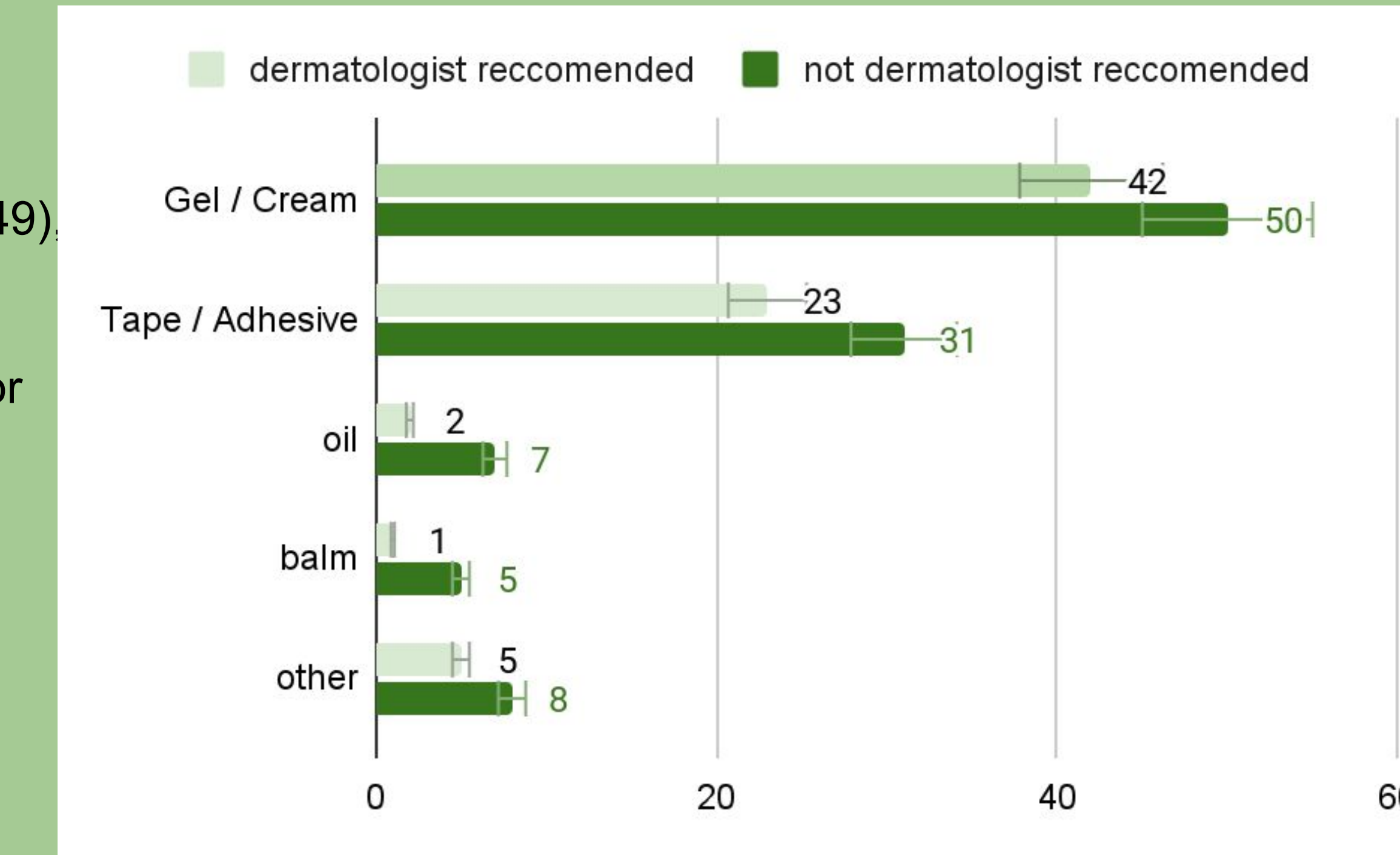
Consumer ratings for Vitamin E, Allantoin, and other ingredients and stayed the same for Silicone products from 2022 to 2024



Ingredient	Mean rating in 2022	Mean rating in 2024
Silicone	4.36	4.39
Vitamin E	4.37	4.23
Allantoin	4.33	4.12
Other	4.31	4.20

No significant association was found between formulation type and dermatologist recommendation

($\chi^2(4) = 2.48, p = 0.649$), suggesting that endorsement may be based on ingredient or branding rather than form.



Clinical Implications

- **Gels and creams** were preferred over tapes and balms, especially when containing **Silicone** or **Vitamin E**.
- **Dermatologist-recommended** products had slightly higher ratings.
- **Vitamin E and Allantoin ratings declined** from 2022 to 2024, despite its popularity.
- **Silicone remained consistently high**, supporting its evidence-based use.
- **Oils had the highest median rating**, but were less common.

Results

- **Product Trends (2022 vs. 2024):** In 2022, adhesives were the most common form (40%), while by 2024, gels and creams dominated (66.7%). Median product price decreased from \$19.99 to \$17.59. Fewer products were labeled "dermatologist recommended" in 2024 (24%) compared to 2022 (50%). Dermatologist recommendation was significantly associated with ingredient category ($\chi^2(3) = 9.81, p = 0.020$), with "other" ingredients the least likely to be recommended. No significant association was found between formulation type and dermatologist recommendation ($p = 0.649$).
- **Across all types, ratings were relatively similar (mean 4.25–4.37).** Oil-based products had the highest **median** rating (4.6), though gels/creams were most represented ($n = 92$). Dermatologist-recommended products had a slightly higher mean rating (4.36) compared to non-recommended (4.31).

Strengths / Limitations

- **Study Strengths & Limitations:** Strengths include dual time point analysis (2022 & 2024), and detailed product categorization.
- Limitations include reliance on Amazon-only data, subjective and unverified reviews, lack of objective scar outcome measures, and uncontrolled scar variability.

Citations

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