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Original Article

A Comparative Analysis of English and Turkish Hashtags on Allergic Rhinitis

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ABSTRACT

Background: In an era where social media serves as a powerful medium for information dissemination and interaction, this study focuses on examining and comparing social media hashtags in the English and Turkish languages related to allergic rhinitis on Instagram.

Method: The investigation includes an analysis of the number of followers associated with these hashtags and the extent of their alignment with allergic conditions and the property of the information about allergy according to the Global Initiative for Asthma (GINA) 2023. The study period ranged from January 11, 2022, to April 15, 2023, during which posts tagged with #Allergicrhinitis (English) and #Allerjikrinit (Turkish) on Instagram were meticulously investigated.

Results: The study reveals that the median follower count for #Allerjikrinit and #Allergicrhinitis hashtags were 4971 (200-231,000) and 469 (130-2321), respectively, with a significant portion of posts (35.2% to 47.8%) being unrelated to allergic rhinitis. The prevalence of advertisements was notably high, with 90% of #Allerjikrinit profiles and 55.7% of their posts containing promotional content. Remarkably, a considerable percentage (75%) of allergy-related information shared in posts contradicted the Global Initiative for Asthma (GINA) 2023 guidelines. Interestingly, 15% of those sharing content were medical professionals, demonstrating the potential influence of healthcare experts on social media platforms.

Conclusion: This study underscores the need for accurate medical information on social media, particularly with the active participation of medical specialists and regulatory institutes given allergic rhinitis since the majority of videos are unrelated to the topic.

Keywords: Social media, allergic rhinitis, instagram, health information, medical professionals

INTRODUCTION

In the current digital age, the integration of social media into daily life has revolutionized the way people access, share, and interact with information (1). Social media platforms have become powerful channels for disseminating a wide range of content, including health-related information with ethics concerns (2).

Allergic rhinitis, characterized by symptoms such as sneezing, nasal congestion, and itching, affects a substantial portion of the global population (3). With the surge in internet penetration and the prevalence of social

media use, individuals are increasingly turning to online platforms for health-related queries and discussions (4). This paradigm shift presents both opportunities and challenges, as the democratization of information empowers users to access a wealth of medical content, but also exposes them to potential misinformation and unverified claims.

Instagram, a leading visual-centric social media platform, has emerged as a notable player in this ecosystem, facilitating interactions through images, videos, and hashtags (5). By enabling users to share

personal experiences, insights, and recommendations, Instagram has cultivated a vibrant healthcare-related discourse (6,7). As such, it serves as an ideal platform for examining the prevalence, accuracy, and impact of health-related content, such as allergic rhinitis discussions.

This study undertakes a comprehensive investigation into this phenomenon, with the primary objective of shedding light on the intricate dimensions of allergic rhinitis discourse within the Instagram community. The examination meticulously analyzes the utilization of two distinct hashtags: the English hashtag #Allergicrhinitis and its Turkish equivalent, #Allerjikrinit. This two-fold language approach not only facilitates a cross-cultural comparative analysis but also deepens our insights into the intricate dynamics of information dissemination and consumption across diverse linguistic contexts.

METHODS

Data Collection: The most popular social media applications in our country are youtube, instagram, facebook, twitter and tiktok. Health providers use youtube for verbal information, and instagram accounts for text and visuals. we have done our work on those who use the instagram account that shares the most text and visual content. The study was conducted from January 11, 2022, to April 15, 2023. During this period, Instagram posts tagged with the hashtags #Allergicrhinitis in English and #Allerjikrinit in Turkish were systematically collected for analysis. The selection of hashtags allowed for the inclusion of posts related to allergic rhinitis across two distinct linguistic domains.

Data Analysis: The analysis encompassed two key dimensions: the follower count associated with each hashtag and the alignment of posts with the theme of allergic rhinitis.

Content Classification: Posts were categorized as relevant if they contained content directly related to allergic rhinitis symptoms, treatments, experiences, or awareness. Posts that did not pertain to allergic rhinitis or were unrelated were categorized as non-relevant. 25 unreal Instagram accounts and 30 Instagram accounts that have not shared anything for the last 1 year were not included in the study. Real account holders who regularly post about allergic rhinitis were included in the study.

Accuracy Assessment: In order to assess the accuracy of information shared within relevant posts, each piece of content was cross-referenced with the Global Initiative for Asthma (GINA) 2023 guidelines (8).

Profiling and Commercial Presence: Profiles sharing posts under the hashtags were scrutinized to identify any commercial presence, including advertisements or affiliations with medical entities, pharmaceutical

companies, or healthcare-related organizations. Additionally, the involvement of healthcare professionals in sharing content as identified.

All participants completed an informed consent form, the study was carried out in accordance with the Declaration of Helsinki, and it was authorized by the institutional local ethics committee.

RESULTS

The analysis of hashtag follower counts revealed distinct patterns between the English and Turkish hashtags. The median follower count for #Allerjikrinit was 4971 (range: 200-231,000), whereas #Allergicrhinitis garnered a median follower count of 469 (range: 130-2321). In terms of post relevance, a notable proportion of posts were found to be unrelated to allergic rhinitis. Specifically, for #Allerjikrinit, posts ranging from 35.2% to 47.8% were not related to the theme ($p = .071$), mirroring a similar trend for #Allergicrhinitis. Among profiles sharing under the #Allerjikrinit hashtag, a significant 90% included advertisements in their profiles, and 55.7% of their posts contained promotional content. A diverse array of advertisements emerged, including non-pharmacological treatments (33%), household products (10%), medical devices (3%), and medical services (2%) (Table 1).

Table 1. Distribution of posts according to various parameters

	#Allerjikrinit	#Allergicrhinitis	P value
Followers, n	4971 (200-231.000)	469 (130-2321)	<0.001
Nonrelavent to Allergic Rhinitis	35.2%	47.8%	0.071
Advertisement on Profile	90%	40%	<0.001
Advertisement on posts	55.7%	24.4%	<0.001
Medical information, informative posts-to-noninformative posts, ratio	33.6%	20%	0.049
The accuracy of informative posts	15.4%	45.7%	0.020

Strikingly, around 40% of posts contained allergy-related information. However, an alarming 75% of this information contradicted the Global Initiative for Asthma (GINA) 2023 guidelines, reflecting a substantial discrepancy between shared content and established medical guidelines. Approximately 15% of content contributors were identified as medical professionals.

DISCUSSION

This study demonstrates most of the content on Instagram is not accurate considering allergic rhinitis and should be carefully evaluated by followers. The variability of

the content may be different according to the hashtag's language. The local authorities including relevant professionals on the topic, should take responsibility for controlling and preventing the dissemination of disinformation in this regard.

The high prevalence of non-allergic rhinitis-related posts under both hashtags raises questions about the focus and accuracy of the content shared on Instagram (9). The substantial presence of advertisements, with a variety of non-pharmacological treatments, household products, and medical services, underscores the commercial nature of a significant portion of posts. This commercial influence necessitates cautious evaluation, as misleading or potentially harmful information can inadvertently gain prominence in the guise of expert advice (9,10).

One of the most concerning findings is the substantial mismatch between shared content and established medical guidelines. The presence of misleading or inaccurate information within a majority of posts calls for critical intervention to ensure that health-related discussions on Instagram are grounded in evidence-based practices (4). The discrepancies indicate a pressing need for both healthcare professionals and regulatory bodies to play an active role in guiding accurate health information sharing on social media platforms. With percentages of non-relevant posts ranging from 35.2% to 47.8%, the study highlights a concerning prevalence of irrelevant content within the discourse. Furthermore, the significant presence of advertisements on both profiles and posts underlines the commercial nature of a considerable portion of the content. This commercial influence poses a challenge, as it can blur the line between genuine health information and marketing messages. The data in Table 1 emphasizes the disparity in the accuracy of informative posts given GINA 2023 guidelines (8). The study reveals that only 15.4% of informative posts were accurate for #Allerjikrinit, while this percentage was significantly higher at 45.7% for #Allergicrhinitis. The discrepancy points between the hashtags in English and in Turkish also may indicate the differences in followers' sociocultural and ethnic features. The health-related content on Instagram needs improved fact-checking and source verification mechanisms on social media platforms, to ensure that accurate and reliable information reaches users. The observed inconsistency with medical guidelines signifies the challenges posed by the credibility and accuracy of the information available to users.

The participation of medical professionals in sharing content on allergic rhinitis is a notable aspect of this study. While the engagement of healthcare experts contributes to the authenticity of discussions, the study's findings also indicate a concerning prevalence of inaccuracies within the content shared by medical professionals. This

observation emphasizes the importance of continuous medical education and professional accountability, even within the context of social media interactions.

The study's insights have far-reaching implications for both the healthcare community and social media platforms. Strengthening the collaboration between healthcare professionals and regulatory bodies could yield more reliable health content on Instagram. The platform itself can also play a pivotal role in promoting accurate information through algorithmic prioritization of validated sources and fact-checking mechanisms.

Günaydın FE et al. by; In the study conducted by examining Youtube videos using the keyword "asthma", health pros' videos were of the highest quality, but considering the rates of follow-up, alternative medicine is the most videos were watched. Similar to our study, it was determined that the shares of health professionals contained more accurate information (11).

Aydin MF et al. In their youtube study on gastroesophageal reflux disease, it was determined that the posts made by experts in their field contain more accurate information than other posts, and most of the information given by people who are not experts in their field or for advertising purposes were found to be wrong. Their results were similar to our study (12).

Gonzalez-Estrada A et al. In a study conducted on the 200 most watched videos by searching YouTube using the keyword "Asthma", it was found that health care providers got the highest score in terms of quality of their videos, while other servers offered unclear treatments related to alternative medicine, which were far from scientific (13).

Limitations

Several limitations should be acknowledged. The study's focus on Instagram might not capture the entire spectrum of allergic rhinitis discussions across diverse social media platforms. Additionally, the reliance on hashtags as a representation of allergic rhinitis content might overlook posts that are not adequately tagged.

CONCLUSION

In conclusion, this study underscores the dynamic interplay between social media and healthcare, particularly within the context of allergic rhinitis. The findings emphasize the need for vigilant monitoring, accurate content dissemination, and the active engagement of medical professionals and regulatory bodies to ensure the quality and reliability of health-related discussions on platforms like Instagram. By fostering a more informed and trustworthy digital health environment, we can harness the potential of social media for the betterment of public health and medical discourse. Social media users can get the most accurate information about allergic rhinitis on

Instagram from healthcare providers who are experts in allergy. Most of the posts made by alternative medicine, pharmaceutical companies and non-experts do not provide accurate information.

DECLARATIONS

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