

Evaluation of the Type and Authenticity of Information on Instagram Posts Related to Hepatitis: A Cross-sectional Study

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ABSTRACT

Introduction: Hepatitis is a major public health concern. The social media platform, allows for the unregulated dispersion of information related to many public diseases, even by unverified accounts that are easily accessible to the population. Dispersion of unverified and unregulated information about major health conditions like “Hepatitis” by Instagram, an easily-accessible and popular social media platform, can put public health at risk.

Aim: To evaluate the type and authenticity of the information available on Instagram related to the disease “Hepatitis”.

Materials and Methods: A cross-sectional observational study was conducted virtually over a period of 10 days in August 2022. Top four “Hepatitis” related hashtags on Instagram identified by the maximum number of posts- (#hepatitis, #hepatitisawareness, #hepatitistreatment, and #hepatitisa) were taken in the present study. Posts in language “English” or “Hindi” and containing information about the disease “Hepatitis” were included in the study. A questionnaire was made for assessment of these posts

based on various pre-determined categories- type of post, type of information circulated and to assess if it is “true”, “false” or “cannot be determined” using World Health Organisation (WHO) factsheet on hepatitis and Centres for Disease Control and Prevention (CDC) guidelines.

Results: Out of the top 400 posts analysed, 388 (97%) were found relevant to the study. These posts had information related to the description {274 (70.62%)}, prevalence {95 (24.48%)}, aetiology {233 (60.05%)}, prevention {172 (44.33%)}, treatment {75 (19.33%)} and mortality {72 (18.56%)} of the disease “hepatitis.” A large number of posts {314 (80.93%)}, had authentic information about the disease.

Conclusion: Although, a large number of Instagram posts related to the disease “Hepatitis” has authentic information and were posted by doctors and the health and wellness industry, these accounts could not be verified. Government and the national medical association should join hands to create a platform to deliver authentic information to the population related to “Hepatitis” and verify the already available information.

Keywords: Hepatitis awareness, National medical association, Public health, Social media

INTRODUCTION

Hepatitis is a significant public health concern- it may develop into a chronic condition that results in end-stage liver disease or Hepatocellular Carcinoma (HCC). Hepatitis B Virus (HBV) and Hepatitis C Virus (HCV) frequently result in chronic and most harmful effects of this disease, in contrast to Hepatitis A Virus (HAV) and Hepatitis E Virus (HEV), which typically appear with the self-limited course followed by complete recovery [1]. WHO estimates that 296 million people were living with chronic HBV in 2019, and nearly 1.5 million people are infected yearly. An estimated 820000 deaths have occurred, mostly from cirrhosis and HCC. WHO has established goals for eradicating HBV and HCV by 2030 due to their high prevalence [1].

Social media is a major resource for information and raises awareness about numerous health-related concerns, including HBV [2]. Social media channels are openly accessible and enable everyone, including doctors, healthcare-related agencies, news agencies, and disease survivors, to post content and engage with people who are interested to learn about any health condition [3]. Health agency-related groups have been associated with several advantages for users, including positive coping, a decrease in feelings of loneliness, an increase in the sense of belonging, affirmation of their situation, an improved sense of well-being and improved health outcomes. But since the information is unregulated, there is a high chance that false information reach the general population, thereby resulting in adverse emotional, social, and physical outcomes [2,3].

In this study, we analysed several posts on Instagram via hashtags related to the term “hepatitis.”

The study aimed to evaluate the type and authenticity of the information available on Instagram related to the disease “Hepatitis”.

The objectives of the study were:

- To evaluate the type of information circulated about the disease “Hepatitis” by categorising them into the description, epidemiology, symptoms, preventive measures, and treatment.
- To assess the authenticity of this information by verification with official resources like WHO and CDC.
- To suggest measures for improving access to authentic information on Instagram by the population.

MATERIALS AND METHODS

A cross-sectional observational study was conducted virtually over a period of 10 days in August 2022. To obtain homogenous data, a single renowned social media platform used by the young adult population “Instagram” was used to assess the information available about the disease “Hepatitis”.

Inclusion criteria: Posts in language “English” or “Hindi” and containing information about the disease “Hepatitis” were included in the study.

Exclusion criteria: Posts in languages other than “English” or “Hindi” and containing information not related to the disease “Hepatitis” were excluded from the study. Latter is a common occurrence since there is no regulation or guidelines on the use of hashtags.

Study Procedure

The #hepatitis was typed on the search bar, and the top four hashtags identified by the maximum number of posts- (#hepatitis,

#hepatitisawareness, #hepatitistreatment and #hepatitisa) were taken in the study. Each author was allotted one hashtag for further analysis.

The assessment of these posts was based on various predetermined categories:

- **About the post**- Type of post (image or video), number of likes and comments (to get information about interactions with the post), and the type of user who uploaded this post (doctor, health and wellness industry and others). For the latter part, each Instagram post was clicked to open the user account profile uploading the post and the description of the user account was used.
- **Information about the disease “Hepatitis”**- The type of information (descriptive, epidemiology, symptoms, preventive measures, treatment) and assess if this information is “true,” “false,” or “cannot be determined.”

Posts that were factually correct as determined by WHO Factsheet on Hepatitis and CDC guidelines [4,5] were deemed to be “true”, otherwise “false.”

Posts that had information which was related to the disease ‘Hepatitis,’ available on google and other unverified platforms but could not be found on WHO/CDC website, or posts related to patients sharing their experiences, etc.,: were grouped under “cannot be determined.”

Each author was allotted one hashtag, and they analysed 10 “recent” posts every day for 10 days in August 2022.

After a total of 400 posts were analysed, posts unrelated to the disease were excluded from the study. Hence, we were left with 388 posts.

STATISTICAL ANALYSIS

The data was collected in Microsoft Excel and simple calculations were performed using the “Function and Statistical analysis” command.

RESULTS

Out of the total 400 posts analysed, 388 (97%) were found relevant to the study which included 98 (25.25%) posts with #hepatitis, 97 (25%) posts with #hepatitistreatment, 100 (25.77%) posts with #hepatitisawareness, and 93 (23.96%) posts with #hepatitisa. A total of 338 (87.1%) posts were classified as picture posts, and 50 (12.89%) were classified as video posts.

Posts by different users about hepatitis are shown in [Table/Fig-1], with most posts by the health and wellness industry or website and the least by dieticians. [Table/Fig-2], shows the different types of content or information describing the disease “Hepatitis” exhibited by posts analysed in the present study. Furthermore, from the 388 posts, 314 (80.93%) contained information that was true (example being a post describing different types of Hepatitis), while the rest, 17 (4.38%), contained false information (example a post describing that eating bananas can cure Hepatitis) [Table/Fig-3]. This is just an observation made from our analysis that we did not include in the table. Its an interesting take on spreading awareness about hepatitis using memes and cartoons that are also popular among the users.

User type	n (%)
Doctor	105 (27.06%)
Health and wellness industry/website	250 (64.43%)
News Agency	26 (6.70%)
Dietician	2 (0.52%)
Survivor/person suffering from disease	5 (1.29%)
Total	388

[Table/Fig-1]: Evaluation of users that made posts about hepatitis.

Characteristics	n (%)
Description	274 (70.62%)
Prevalence	95 (24.48%)
Cause/aetiology	233 (60.05%)
Prevention	172 (44.33%)
Treatment	75 (19.33%)
Mortality	72 (18.56%)

[Table/Fig-2]: Characteristics of posts exhibiting content related to hepatitis.

True/False/cannot be determined	n (%)
True	314 (80.93%)
False	17 (4.38%)
Cannot be determined	57 (14.69%)

[Table/Fig-3]: Posts with correct/false information.

*As determined by World Health Organisation Factsheet on Hepatitis and CDC guidelines [4,5] posts that had information which was related to the disease ‘Hepatitis,’ available on google and other unverified platforms but could not be found on WHO/CDC website, or posts related to patients sharing their experiences, etc., were grouped under “cannot be determined”

DISCUSSION

On analysis of the top 100 posts under the hashtags #hepatitis, #hepatitisawareness, #hepatitistreatment, #hepatitisa; the authors found that a large number of posts were actually about the topic “hepatitis” 388 (97%), and many of them were by health and wellness industry/website 250 (64.43%) and doctors 105 (27.06%). In the present study, 27.06% of posts were by doctors, on the other hand, Bisht H et al., in their study of analysing Instagram posts for monkeypox, found 11.65% of posts by doctors [6]. During the Coronavirus-19 disease pandemic, a large number of posts on hashtags related to the disease were not about the disease, and a large number of celebrities and the general population were using the disease-related hashtags to share their symptoms and struggles and also increase the popularity of their page by gaining likes and followers.

Only 16 (4.12%) posts were in the form of memes or cartoons. According to Vraga EK and Bode L, WHO visuals have significantly decreased the likelihood of misinformation spreading [7]. In the present study, only 16 (4.12%) posts were memes or cartoons that conveyed information in a pictorial or funny form.

Many posts had limited likes and comments; less than fifty likes on 276 (69%) posts and less than fifty comments on 371 (92.75%) posts. Despite the limited popularity of the top posts related to hepatitis on Instagram, a large proportion of them had accurate information 314 (80.93%). Bisht H et al., observed that put exact number (70.68%) of the 369/522 posts analysed had accurate information [6]. Social media expansion may be a valuable platform for disseminating accurate information and halting the spread of hepatitis. Instagram can be utilised effectively to reach a broad audience for prevention if used properly [8]. Instagram followers of college students can be leveraged to reach a broader audience and have a greater influence, as indicated by Paige SR et al., [8].

The present study data showed that 17 (4.38%) posts contained misleading information, while in 57 (14.69%) posts it was not clear whether the information was accurate or fraudulent. Therefore, the information easily accessible through social media may not be immediately trustworthy. There is a possibility that inaccurate information may reach the public and distort facts.

Although many posts highlighted the aetiology of hepatitis-233 (60.05%) and preventive measures-172 (44.33%) information about treatments and mortality are lacking.

Several measures can be taken to improve this situation. Government and the national medical association should join hands to create a platform to deliver authentic information to the population related to “Hepatitis” and verify the already available information. This can be done by creating official accounts on Instagram by National

Medical Association and Government of India and appointing doctors who can verify the authenticity of information being shared. These doctors are well aware about patient concerns and queries about the disease and treatments; thus they should help create and circulate information about the same. An example being: raising awareness about using a sterile needle while getting a tattoo will reduce the risk of HBV. During COVID-19 pandemic, users reading post on Instagram with hashtag #covid were diverted to the official WHO website; so that they can access genuine and up-to-date information about the disease. Similarly, for hepatitis, users accessing posts with hashtag #hepatitis should be directed to websites like WHO or CDC guidelines for hepatitis prevention or official website of National Medical Association, that contain up-to-date, verified and genuine information.

Limitation(s)

Few limitations of the study were the potential for posts to be repeated if they include multiple hashtags. Although the sample size was very small, this was intentionally done because users often just read the top few posts that can draw their attention rather than the 10,000 posts that are present. In addition, since Instagram lacks the feature to validate credentials, the researchers could not confirm the doctor's qualifications or those of the health and wellness sector. The researchers are also aware that despite receiving lots of likes and comments, they could not estimate the actual number of users who viewed the posts. This estimate may have been much higher, but we lacked the necessary resources to determine it.

CONCLUSION(S)

Pertaining to the disease "hepatitis," the top 100 posts in top hashtags contain posts relevant to the disease and the maximum

of them conveyed accurate information- mainly related to the aetiology and prevention measures. Further regulation of these posts by qualified doctors or authorities can increase the reliability of information circulated to the general population by way of Instagram.

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