Trending Facts or Misinformation: A Study Determining Accuracy Of Instagram Posts In The Context Of Stroke Prevention And Management

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Abstract

Background:
There has been a rise in the number of unreliable influencers and employees who post a lot of uncontrolled information on social media. This can range from precisely describing diseases to using irrelevant hashtags underneath their posts. As a result, determining the reliability of the information still remains a crucial issue that requires attention.

Objectives:
A study to analyze whether the information available on Instagram regarding stroke and its other aspects is accurate.

Methods:
A cross sectional study was conducted under which several hashtags related to stroke on Instagram were investigated.

Results:
The study's main focus falls on the participation of various sections of the public which mainly included doctors 31 (11.52%), health and fitness agencies 56 (20.82%) and survivors 126 (46.84%). The study also brings into account the fact that out of 269 posts, 154 (57.24%) posts had general description of stroke, 59 (21.93%) posts had information on prevention, 29 (10.78%) posts had information on prevalence, and only 19 (7.06%) posts had information on the mortality caused by stroke.

Conclusion:
The study has revealed certified drawback that the information contribution from other sources apart from doctors or a certified health organization is minimal when compared to the contribution by the survivors of stroke. It would be momentous to watch the government officials, doctors and if possible, stroke survivors come together to join hands and form a proper stage for knowledge dispersal.

Keywords: Stroke, Social Media, Awareness

Introduction

Stroke has been defined by the WHO as "rapidly developing clinical signs of focal (or global)

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disturbance of cerebral function, with symptoms lasting 24 hours or longer, or leading to death, with no apparent cause other than of vascular origin".[1] Broadly, strokes can be classified into two major categories: ischemic and hemorrhagic.

Being the second most common cause of death worldwide with an annual mortality rate of about 5.5 million[1], stroke also prevails as a leading cause of mortality and disability in India, largely due to the increasing prevalence of the key modifiable risk factors such as a sedentary lifestyle, non-communicable diseases like hypertension, diabetes mellitus, dyslipidemia, and other factors such as smoking and alcohol consumption.[2]

The internet has emerged as a quick and accessible source of information for a variety of health-related topics. There has also been a proliferation of unverified influencers and personnel posting a large amount of unregulated information on social media.[3] This can range from inaccurate descriptions of diseases to the sole use of unrelated hashtags beneath their posts.[4]

With the increasing prominence of the Internet, unreliable information about diseases might transform into a health hazard for unsuspecting individuals. Early diagnosis and management play a crucial role in carrying out life-saving treatment and maximal restoration of quality of life.[5,6] Studies have shown that there has been a rise in the use of social media by caregivers of individuals affected by stroke.[7] Hence, assessing the reliability of information available remains a crucial aspect that needs to be given attention.[8]

Therefore, we carried out a web-based survey to assess the relevance of information available on social media.

Aim:

To verify the accuracy and relevance of information available related to stroke on Instagram.

Methodology:

A cross-sectional type of observational study was conducted wherein the Instagram posts and videos related to the subject of "stroke" were analyzed. Relevant hashtags to the topic - #stroke, #strokeawareness, #strokesurvivor, #strokeprevention and #strokerecovery – were selected and a total of 500 posts; (i.e.) 100 from each hashtag were scrutinized based on the popularity of the post and type of information it contained. The information in the posts was verified with reference to the CDC/WHO.

All the Instagram posts under the above-mentioned hashtags, in languages English and Hindi were included in the study. The posts in languages other than English and Hindi and those that were irrelevant (had no information related to the disease "stroke") were excluded from the study.

Results:

After applying the inclusion and exclusion criteria on the 500 posts analyzed, our study revealed that only 269 (53.58%) were relevant to the topic "stroke" and were included in the further analysis. Table 1 shows the number of posts under each hashtag that were included in this study. We found that a large number of posts under #strokeprevention were relevant to the disease "stroke", while in contrast only a small number of posts under #stroke and #strokesurvivor were relevant.

Table 2 shows the baseline characteristics of the posts included in our study – type of post, duration since posted, posted by and popularity of the posts. However maximum; 126 (46.84%) posts were posted by stroke survivors.

Table 3 shows the nature of information about the disease "stroke" contained in these posts.

The accuracy of information in the posts was verified with the Centre for Disease Control Factsheet on Stroke and UpToDate. A large number of posts had information that was correct, 237 (88.10%), where only 6 (2.23%) posts had incorrect information and in 26 (9.67%) posts – the accuracy of the information could not be verified.

Table 1: Table 1 shows the number of posts under each hashtag that was included in the study, after applying the inclusion and exclusion criteria.

Hashtag	Number	Percentage

#stroke	37	13.75
#strokerecovery	62	23.05
#strokesurvivor	35	13.01
#strokeawareness	42	15.61
#strokeprevention	93	34.57
	269	100.00

Table 2: Table 2 shows the baseline characteristics (type of post, duration since posted, posted by and popularity) of the posts included in our study

	n	%
Type of posts		
Post	173	64.31
Video	96	35.69
Duration since posted		
< 1 month	103	38.29
1-6 months	149	55.39
> 6 months old	17	6.32
No. of likes		
< 50	83	30.86
50-100	23	8.55
100-500	47	17.47

>500	116	43.12
No. of comments		
< 50	184	68.40
50-100	30	11.15
100-500	46	17.10
>500	9	3.35
Posted by		
Doctor	31	11.52
Survivor	126	46.84
Health & wellness industry/ website	56	20.82
News agency	6	2.23
Dietician	16	5.95
Others	34	12.64

Table 3: Table 3 shows the nature of information about the disease "stroke" in the posts analyzed by our study

	n	%
Description about stroke	115	42.75
Prevalence of stroke	29	10.78
Etiology of stroke	64	23.79
Prevention of stroke	59	21.93

Treatment of stroke	118	43.87
Mortality of stroke	19	7.06

Is the information true or false?		
	Number	Percentage
Yes	237	88.10
No	6	2.23
Cannot be determined	26	9.67
	269	100.00

Is it a meme / cartoon / funny information?		
	Number	Percentage
Yes	2	0.74
No	267	99.26
	269	100.00

Discussion:

Studies have shown by analyzing several social media platforms that there has been a substantial increase in the usage of social media by those who care for stroke victims.[7]

The relevance of social media for patients and healthcare professionals alike is discussed by Jose Maria Caberera-Maqueda, who found that it had a favorable effect on the outcomes of stroke patients.[9] Another research about stroke survivors pointed out that 40.8% (118/289) of the study participants utilized social media daily and 79.1% (280/354) of the study participants used the internet on a daily basis. This further substantiates our study's prospect in determining the validity of the information being posted on social media, and in our case, Instagram.[10]

According to a paper from China, local health initiatives and events like World Stroke Day have an impact on the social media searches that people perform. In order to combat disinformation, it is crucial to make sure that accurate information is being disseminated on widely used platforms.[11]

Only 269 (53.58%) of the cases in our study were pertinent to the illness "stroke," which is one of the study's key findings. There might be a number of causes for this, including the fact that many Indians might not be familiar with the term "stroke" and instead use the term "paralysis." Additionally, just 37 (13.75%) of the posts under the #stroke were on the illness "stroke," with the majority being about artists and automobiles. Given that the word "stroke" is fairly vague and non-specific and may also refer to the stroke of a paintbrush by an artist or the stroke of

a motorbike, we can infer that the hashtag "stroke" is not a useful source to learn about the condition. The other hashtags with suffixes that give more description about the disease can be a better way to gain information about the disease "stroke".

A large number of posts—237 (88.1%) conveyed accurate information, and 116 (43.1%) received more than 500 likes. However, out of all the posts, only 31 (11.52%) were made by doctors, and 56 (20.82%) were made by businesses related to health and wellness. In contrast, 126 (48.84%) of the posts were made by people who had survived a stroke.

Teenagers are among the social media user groups with the greatest usage rates in the twenty-first century because they seek to be engaged.[12,13] Although the statistical data does not appear to be reliable, as (267/269) 99.26% of the information wasn't entertaining. If the content had been delivered in a humorous way, it would have caught their attention.

Limitations :

This study is limited by the languages chosen for the hashtag analysis, which were English and Hindi, whereas healthcare associated information may be present in other languages as well. Since the word "stroke" has multiple synonyms in the English language, we may have confusion when it comes to usage of hashtags. The age group most afflicted with stroke and its associated symptoms tend to be of older age than the demographic which is most active on social media, especially Instagram.

Conclusion:

Social media can affect regular people in both beneficial and harmful ways.[14] Online help, which can facilitate accessibility, was mentioned in a few of the posts from rehabilitation facilities.[15] As far as the dependability of the content is improved, doctors might advise patients to exercise caution when utilizing the relevant hashtags to find support groups and more information on social media platforms.[16,17] Further, using these posts as a means to disseminate information about identification of symptoms can help raise awareness and thereby early identification of the signs of this disease and seeking hospital care early. We must embrace the spread of accurate information by National and International forums to create awareness about this emergency situation so first responders can save lives.

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