IOSR Journal of Nursing and Health Science (IOSR-JNHS)
e-ISSN: 2320–1959.p- ISSN: 2320–1940 Volume 14, Issue 5 Ser. 4 (Sept. – Oct. 2025), PP 28-31
www.iosrjournals.org

"Misinformation In The Digital Age: Examining Health-Related Myths On Social Media"

Dr. Prerna Nautiyal, Dr. Sweta Singh
Post-Graduate Student, Department Of Public Health Dentistry, K. M. Shah Dental College & Hospital, Sumandeep Vidyapeeth (Deemed To Be University), Vadodara, Gujarat, India)
Professor And Head, Department Of Public Health Dentistry, K. M. Shah Dental College & Hospital, Sumandeep Vidyapeeth (Deemed To Be University), Vadodara, Gujarat, India)

Abstract:
The advent of social media has revolutionized the way individuals communicate and access information, offering unprecedented opportunities for real-time information exchange. However, this digital transformation has also facilitated the widespread dissemination of misinformation and disinformation, particularly in the health domain. Health-related misinformation poses significant threats to individual well-being, public health systems, and economic stability. This review explores the most common health-related misinformation shared on social media platforms. A comprehensive bibliographic search was conducted in PubMed, Medline, EMBASE, Scopus, and Web of Science databases for English-language articles published in the last five years.

Key Words: *Health Misinformation, Health Dissemination, Health Disinformation, Health-myths, Social media platforms*

Date of Submission: 13-10-2025 Date of Acceptance: 23-10-2025

I. Introduction

The prevalence of health misinformation on social media platforms is alarmingly high, with a multitude of false or misleading claims circulating widely. This prevalence is fueled by the rapid dissemination of information in digital spaces, where misinformation can quickly reach large audiences before accurate information can counteract it.

The World Health Organization acknowledges that health misinformation online can spread further, faster, and sometimes deeper than accurate information. On certain social media platforms, prevalence of misinformation is 70% and more likely to be shared than correct information.[1] Among all social media platforms, Twitter is the most common source of health misinformation, followed by YouTube and Facebook.[2] Health misinformation is less commonly found on platforms like Instagram, MySpace, Pinterest, Tumblr, and WhatsApp. Microblogging platforms such as Twitter tend to focus more on topics like vaccines, drugs, smoking products, pandemics, and eating disorders and Media sharing platforms like YouTube, Instagram, and Pinterest, as well as social network platforms such as Facebook and WhatsApp, are more likely to feature health misinformation related to non-communicable diseases and treatments.[2]

II. Material And Methods

A structured approach was followed for identifying and selecting relevant studies. A comprehensive literature search was conducted to gather articles that addressed the most common health-related misinformation shared on social media platforms. The selection process was guided by well-defined inclusion and exclusion criteria to ensure that only relevant, recent, and high-quality studies were considered for review. The detailed criteria and search strategy are presented below.

Inclusion Criteria

The following criteria were applied for the inclusion of studies in this review:

1. Articles published in peer-reviewed journals within the last five years.
2. Studies written in the English language.
3. Original research articles addressing health misinformation on social media platforms.
4. Studies investigating the spread, detection, or public health impact of health misinformation.
5. Studies focusing on health-related topic disseminated via social media.

Exclusion Criteria

The following articles were excluded from the review:

1. Duplicate publications.
2. Technical reports, case reports, and conference abstracts.
3. Studies not specifically addressing health misinformation or unrelated to social media platforms.

Search Strategy

A systematic electronic search was conducted using five major databases: PubMed, Medline, EMBASE, Scopus, and Web of Science. The search was limited to articles published in English over the past five years. The search strategy included the following keywords: "Misinformation," "Health Misinformation," "Health Disinformation," "Social Media Platforms," and "Approaches." Boolean operators (AND, OR, NOT) were applied to refine and filter the search results for relevance. The initial search retrieved a total of 30 articles. After the removal of duplicates, 25 unique articles remained. These were screened based on titles and abstracts, resulting in 10 articles that met the eligibility criteria and were included for full-text review and analysis.

III. Common Prevalent Sources Of Health Misinformation On Social Media Platforms:

1. **Misinformation on Vaccines-** Twitter has emerged as a prominent platform for the dissemination of misinformation regarding vaccines, with notable implications for vaccine hesitancy.[2] Prevalence of vaccine's misinformation in Social media platform is 37%.[2] Misinformation on social media platforms exists regarding the vaccines for COVID-19, human papillomavirus (HPV), polio, and influenza, rubella, measles, mumps.[2]

a) **Covid-19 vaccines-** The global endeavor to develop COVID-19 vaccines has been unparalleled in scale and scope. Misinformation regarding COVID-19 vaccines has been pervasive, encompassing various false claims, including assertions that vaccines contain body of aborted children, aim to implant microchips in people for control purposes, or alter human DNA (Deoxyribonucleic Acid) via messenger RNA (Ribonucleic Acid) vaccines.[3-4]

b) **Polio vaccines:** Polio remains endemic in Pakistan and Afghanistan presenting ongoing public health challenges.[5] For instance, unsubstantiated claims attributing with rumors regarding vaccine side effects, death after the polio vaccine have proliferated, along disseminated across platforms such as Facebook, Twitter, and YouTube.[6]

c) **Human Papillomavirus (HPV) vaccines-** The proliferation of misinformation exacerbates parental vaccine hesitancy, resulting in reduced HPV vaccination rates among children. Instances of misinformation pertaining to HPV vaccines include claims suggesting that the vaccine has caused adverse health outcomes, such as destroyed lives or fatalities, and falsely asserting a rise in cervical cancer rates among vaccinated age groups.[7] Notably, adverse health-related misinformation predominates, constituting approximately 60% of misinformation posts concerning HPV vaccines.[7]

2. **Misinformation on Non-communicable Diseases**: Approximately 19% of misinformation found on social media pertains to non-communicable diseases (NCDs) like cancer, diabetes, epilepsy, hypertension and Coronary Heart Disease.

a) **Diabetes-** Misleading videos regarding diabetes are prevalent and often promote unscientific cures or treatments. These videos tend to garner more popularity than those containing evidence-based health information, thereby increasing the likelihood of individuals consuming low-quality health content.[8] Examples of misinformation in such videos include claims that diabetes is solely caused by excessive consumption of mangoes and bananas that it cannot develop without a family history, or that testing for diabetes can induce the condition.[9]

b) **Cancer-** False, exaggerated, or misleading assertions regarding cancer treatments and cures are widespread across various social media platforms. Prevalence of misinformation related to treatment of Cancer are 39.8% in Facebook, 27% YouTube, 22.1% in Instagram and 14.1 % in TikTok.[10] Examples of such misinformation include claims suggesting that vegetables can cure cancer, turmeric possesses therapeutic properties for cancer treatment, and apple seeds have the ability to eradicate cancer cells.[10]

c) **Epilepsy:** Misinformation pertaining to epilepsy is prevalent on social media platforms, particularly on TikTok, where mischaracterizations of nonepileptic events as epileptic seizures are common.[11] Additionally, a significant portion of misinformation on TikTok includes the dissemination of jokes and stereotypes related to seizures, such as equating seizures with dancing or suggesting that individuals hold their tongues during seizures to prevent swallowing them.

3. **Misinformation on Diet/Eating Disorders:** Prevalence of 9% of misinformation regarding diet and eating disorders content found on social media platforms.[2] This misinformation often revolves around food fads, fad diets that prioritize short-term weight loss over long-term health, health fraud involving products or diets

lacking scientific support, and misdirected health claims that mislead consumers regarding the healthiness of certain foods.[9-10]

4. **Misinformation on Pandemics and Communicable Diseases:** Prevalence of misinformation is 19% related to pandemics and communicable diseases such as H1N1 virus, Zika virus and Ebola virus.[2]

a) **H1N1 Virus**- Misinformation regarding the H1N1 virus on social media manifests in diverse forms, encompassing false assertions about transmission methods (example- waterborne transmission or via insect bites/vectors), conspiracy theories (such as claims that swine flu is a pharmaceutical scheme for profit), promotion of unverified cures or prevention methods (like suggesting no need for medical consultation due to the absence of treatment for H1N1 or equating immunity from seasonal flu to protection from H1N1), and the spread of unfounded fears regarding the safety of the swine flu vaccine (e.g., misinformation suggesting it will cause harm or death).[12]

b) **Ebola Virus**- The Ebola virus has sparked various discussions and misinformation on social media platforms, particularly during outbreaks, leading to widespread confusion and fear. Misinformation on social media platforms on regarding preventive methods includes suggestions like daily hot water baths with salt, consuming bitter cola or miracle cola, avoiding mosquito bites, rubbing the body with Aloe Vera products, drinking plenty of condensed milk, and refraining from shaking hands.[13]

5. **Misinformation on Drugs and Smoking-** Prevalence of misinformation is 22% misinformation about e-cigarettes, marijuana, which includes inaccurate information about addiction and dependency, myths about the effectiveness of certain treatments or interventions.[2]

a) **Misinformation on Provaping**- Misinformation on social media platforms regarding pro-vaping includes assertions minimizing health risks associated with using Electronic Nicotine Delivery Systems (ENDS), such as vaping being portrayed as largely harmless or non-addictive.[14] Other misleading claims on social media suggest that e-cigarettes are highly effective for smoking cessation, bringing economic and environmental advantages.

b) **Misinformation on Cannabis-** Use of cannabis as a cancer cure represented the largest category (23.5%) of social media content on alternative cancer treatments.[15] Other misinformation in Social media platforms are: Cannabis can be used to help women during pregnancy and in active labor, it is a treatment for autism, tweet promoting cannabis build-up immune to help guard against the coronavirus. [16]

6. **Misinformation on Complementary and alternative medicine (CAM)-** Social media has become a platform where misinformation regarding Complementary and alternative medicine proliferates. This includes various forms of manual therapies such as chiropractic and osteopathy, as well as natural products such as herbal medicines and dietary supplement.[17] For example- Surge of misinformation on Twitter linking spinal manipulation therapy (SMT) with immunity particularly during the COVID pandemic's onset.[18] SMT, is a form of manual therapy commonly practiced by chiropractors, osteopaths, and physical therapists to treat musculoskeletal conditions, especially those affecting the spine. Social media misinformation claims that chiropractic care enhances immunity, mobility, strength.

a) **Misinformation on Homeopathy-** Facebook and Whatsapp posts have been studied which found that dissemination of misinformation surrounding homeopathy, leads to health risks. For example- misinformation involves claims suggesting that a short homeopathic course or specific medicines can provide protection against covid-19. For instance, a misinformation post circulating on these platforms promotes a 6-day homeopathic course. The regimen involves the administration of two homeopathic medicines: Influenzinum 200 (4 pills at bedtime) and Arsenicum Album 200 (4 pills at bedtime) for the first three days. The post further suggests that this course can be repeated after 45 days if the epidemic or virus threat persists.[19-20]

b) **Ayurvedic, Natural and Herbal Misinformation**- In the landscape of Ayurvedic, natural, and herbal remedies, misinformation proliferates across social media platforms. False claims assert that cow's urine can act as a preventive measure against COVID-19, while others purport that saltwater gargles possess the ability to eliminate the virus.[21-22]

IV. Conclusion

Health misinformation on social media affects people's beliefs, decisions, and health behaviors. It is especially harmful in areas like vaccines, non-communicable diseases, pandemics, and alternative treatments. This growing problem highlights the need for better digital literacy and responsible content sharing. Health professionals and platforms must work together to stop the spread of false health information and promote accurate, evidence-based content to protect public health.

References

[1]. Vosoughi S, Roy D, Aral S, The Spread Of True And False News Online. Science. 2018;359:1146–1151.
[2]. Suarez LV, Alvarez GV, Prevalence Of Health Misinformation On Social Media: Systematic Review. J Med Internet Res., 2021 Jan 20;23(1):E17187. Doi: 10.2196/17187. PMID: 33470931; PMCID: PMC7857950.
[3]. Hughes B Et Al., Development Of A Codebook Of Online Anti-Vaccination Rhetoric To Manage COVID-19 Vaccine Misinformation. Int J Environ Res Public Health. 2021 Jul 15;18(14):7556. Doi: 10.3390/Ijerph18147556
[4]. Skafle I, Nordahl HA, Quintana DS, Wynn R, Gabarron E. Misinformation About COVID-19 Vaccines On Social Media: Rapid Review. J Med Internet Res. 2022 Aug 4;24(8):E37367. Doi: 10.2196/37367.
[5]. Polio Eradication, UNICEF, Available At: [Https://Www.Unicef.Org/Afghanistan/Polio-Eradication], Last Accessed Date: 10/5/2024
[6]. Ittefaq M, Kamboh SAM, Zelaya C, Arif R, Polio Vaccine Misinformation On Social Media: Challenges, Efforts, And Recommendations JCOM, 2024, 23(01), Y01. Available At: [Https://Doi.Org/10.22323/2.23010401], Last Accessed Date : 10/5/2024.
[7]. Kornides ML, Badlis S, Head KJ, Putt M, Cappella J, Gonzalez HG, Exploring Content Of Misinformation About HPV Vaccine On Twitter. J Behav Med. 2023 Apr;46(1-2):239-252. Doi: 10.1007/S10865-022-00342-1. Epub 2022 Jul 27. PMID: 35896853; PMCID: PMC9328646.
[8]. Leong AY, Sanghera R, Jhajj J, Desai N, Jammu BS, Makowsky MJ. Is Youtube Useful As A Source Of Health Information For Adults With Type 2 Diabetes? A South Asian Perspective. Can J Diabetes. 2018 Aug;42(4):395–403.E4. Doi: 10.1016/J.Jcjd.2017.10.056.
[9]. Dutta D Et Al., Quinary Prevention In Diabetes Care: Need For Multidisciplinary Approach, Clinical Epidemiology And Global Health 11,2021, DOI:10.1016/J.Cegh.2021.100757.
[10]. Lazard AJ Et Al., Exposure And Reactions To Cancer Treatment Misinformation And Advice: Survey Study. JMIR Cancer. 2023 Jul 28;9:E43749. Doi: 10.2196/43749. PMID: 37505790; PMCID: PMC10422174.
[11]. Jiang K, Nordli DR 3rd, Galan F. The Devil Is In The Details: Understanding How Misinformation Regarding Epilepsy Manifests In Tiktok Videos. Epileptic Disord. 2023 Feb;25(1):28-32. Doi: 10.1002/Epd2.20036. Epub 2023 Apr 17. PMID: 37002554.
[12]. Ng QX, Ng CX, Ong C, Lee DYX, Liew TM. Examining Public Messaging On Influenza Vaccine Over Social Media: Unsupervised Deep Learning Of 235,261 Twitter Posts From 2017 To 2023. Vaccines (Basel). 2023 Sep 24;11(10):1518. Doi: 10.3390/Vaccines11101518. PMID: 37896922; PMCID: PMC10610639.
[13]. Sell TK, Hosangadi D, Trotochaud M. Misinformation And The US Ebola Communication Crisis: Analyzing The Veracity And Content Of Social Media Messages Related To A Fear-Inducing Infectious Disease Outbreak. BMC Public Health 20, 550 (2020).
[14]. Sidani JE Et Al., E-Cigarette-Related Nicotine Misinformation On Social Media. Subst Use Misuse. 2022;57(4):588-594. Doi: 10.1080/10826084.2022.2026963. Epub 2022 Jan 22. PMID: 35068338; PMCID: PMC9257904.
[15]. Shi S, Brant AR, Sabolch A, Pollom E. False News Of A Cannabis Cancer Cure. Cureus. 2019 Jan 19;11(1):E3918. Doi: 10.7759/Cureus.3918. PMID: 30931189; PMCID: PMC6426557.
[16]. Turner J, Kantardzic M, Vickers SR, Brown AG. Detecting Tweets Containing Cannabidiol-Related COVID-19 Misinformation Using Transformer Language Models And Warning Letters From Food And Drug Administration: Content Analysis And Identification. JMIR Infodemiology. 2023 Jan 23;3:E38390. Doi: 10.2196/38390. PMID: 36844029; PMCID: PMC9941900.
[17]. Sanadhya S, Aapaliya P, Jain S, Choudhary G. Complementary And Alternative Medicine: A Buzz For Medical And Health Care Systems. J Res Pharm Pract. 2015 Jan-Mar;4(1):42-3. Doi: 10.4103/2279-042X.150059. PMID: 25710050; PMCID: PMC4326972.
[18]. Kawchuk G, Hartvigsen J, Harsted S, Nim CG, Nyirö L. Misinformation About Spinal Manipulation And Boosting Immunity: An Analysis Of Twitter Activity During The COVID-19 Crisis. Chiropr Man Therap. 2020 Jun 9;28(1):34. Doi: 10.1186/S12998-020-00319-4. PMID: 32517803; PMCID: PMC7281697.
[19]. Bopaiah J, Garimella K, Kavuluru R. Opinions On Homeopathy For COVID-19 On Twitter. Proc ACM Web Sci Conf. 2022 Jun;2022:359-363. Doi: 10.1145/3501247.3531575. Epub 2022 Jun 26. PMID: 36112977; PMCID: PMC9472594.
[20]. Sharma AE, Khosla K, Potharaju K, Mukherjea A, Sarkar U. COVID-19-Associated Misinformation Across The South Asian Diaspora: Qualitative Study Of Whatsapp Messages. JMIR Infodemiology. 2023 Jan 5;3:E38607. Doi: 10.2196/38607. PMID: 37113380; PMCID: PMC10013129.
[21]. Jackson J, Rahul M, Haque S, So Much Hot Air: Twitter And Facebook Let Quack Covid Cures Spread Unchecked In India, The Bureau Of Investigative Journalism, 2021.
[22]. Afolabi SA, Folorunso SO, Bunyula Z, Banjo O, Social Listening: A Thematic Analysis Of COVID-19 Discussion On Social Media, 2020, DOI:10.1101/2020.07.25.20162040.