

Health-Related Videos Published by Filipino Content Creators on TikTok: A Thematic Analysis

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Background: TikTok is gaining popularity among Filipinos as a source of health-related information. However, there is a concern on the information being disseminated through the platform because misinformation can negatively impact viewers. Hence, the importance of studying health-related videos which can potentially influence belief, behavior, and public health.

Objective: This study aimed to describe common themes of health-related videos in TikTok published by Filipino content creators.

Methods: A cross-sectional design using qualitative analysis was utilized. One hundred of the most popular videos under #HealthTokPh were collected. Interesting segments were identified and coded. Codes were analyzed through qualitative thematic analysis to create the initial set of themes. Themes were reviewed and refined until the final set of themes was determined. Final themes were analyzed to create a coherent narrative.

Results: There were three main themes among TikTok videos: reproductive and sexual health, infectious diseases, and dermatology. Misinformation was encountered in twelve videos; nine featured healthcare professionals addressing it while three were created by laypeople and had misleading content. Themes were discussed by healthcare professionals to answer questions from TikTok users. Videos showed content creators speaking throughout the video with visual aids such as on-screen texts, diagrams, and product samples. Use of humor and trending background music were more frequent among videos on reproductive and sexual health. Videos on COVID-19 had the most cited information source namely the Center for Disease Control and Prevention (CDC), World Health Organization (WHO), and published journals.

Conclusion: Health-related TikTok videos uploaded by Filipino content creators were on reproductive health, sex education, OTC medications, COVID-19, and acne. Common themes were discussed in a simplified but factual manner and misinformation was addressed by citing credible sources. Humor, trending music, and visual aids contributed to popularity.

Key words: health videos, social media, thematic analysis

INTRODUCTION

Social media was developed as a communication tool to facilitate online interactions.¹ Its use has expanded to entertainment, education and included the scientific community to promote and disseminate health information to influence patient decisions and behavior.²⁻⁵ TikTok, a Chinese-founded company in 2016, is one among the social media platforms of interest.⁶ The platform was created to engage users for short lip sync-videos but has progressed to short clips of health-relevant information.

Misinformation was also observed to be prevalent on social media at 87%.^{7,8,9} It can be a source of concern as it can negatively impacts behaviors through disengagement from health-seeking information, avoidance of healthcare, or affect decision making on health.^{10,11} Other implications include decreased public trust, misallocation of resources, decreased access to health care, delayed health service delivery, increased stress of medical providers, vaccine hesitancy, conspiracy beliefs, and illegal promotion of controlled substances.^{12,13}

The hashtag #HealthTokPH was launched by TikTok in February 2021 and has gained 9.1 billion views.^{14,15} However, there were no studies on these videos despite the growing concern on misinformation in social media and its impact on health. Awareness to both users and creators can be raised through analyzing themes of health-related videos in the platform. The results can be used to improve social media utilization as

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a tool for health promotion and suggest regulative measures to counter misinformation. Hence, this study described the themes of health-related content on TikTok published by Filipino content creators.

This study aimed to describe themes of health-related videos in TikTok published by Filipino content creators.

METHODS

This study utilized a cross-sectional study design using qualitative data and thematic analysis. Videos were collected through queried search on TikTok using #HealthTokPh. An incognito browser and a newly created account were used in the data search. Browser history, cookies, and cache were deleted prior to searching

Data Collection

Data were collected by the primary investigator using queried search on TikTok. Only publicly uploaded videos from February 2021 to December 2023 were included. Content creators were either an individual or an organization based in the Philippines. Language was either in Filipino or English. Video search was conducted in a single day in January 2024. Fifty-five videos that were duplicates, part of a series, depiction of medical journey, and dental health were excluded.

Data Analysis

One hundred videos were analyzed by three investigators using MAXQDA Analytics Pro Software. Videos were transcribed and imported in the software. Interesting segments of the videos and transcripts were marked and coded as points of interest. Codes were organized and aggregated into similar groups to identify themes and subthemes. Themes and subthemes were reviewed and reread repeatedly until refined. A narrative was written from the final set of themes, creating a coherent discussion.

This study was approved by the University of the Philippines Manila Research Ethics Board (UPMREB). Data collection and handling were done in accordance with the Data Privacy Act of 2012. Names and identities of content creators and TikTok accounts were censored and unidentifiable.

RESULTS

One hundred health-related TikTok videos posted from February 2021 to December 2023 were analyzed. The overall mean engagements were 134,948 reactions, 2744 comments, 2,178,710 views, and 6,420 shares. Languages were in Tagalog (n=85) and in English (n=15). Ninety-one videos were created by healthcare professionals such as physicians, nurses, pharmacists, and a physiotherapist. The other videos were uploaded by non-profit organizations (n=6) and general users or non-healthcare individuals (n=3).

The general categories of themes were reproductive and sexual health (n=47), infectious diseases (n=18), dermatology (n=8), nutrition (n=5), substance use (n=5), gastrointestinal health (n=3), oral health (n=3), anxiety (n=2), gout (n=2), sleep (n=2), weight

management (n=2), benign paroxysmal positional vertigo (n=1), eye health (n=1), and seizure (n=1).

Misinformation was encountered in twelve videos, three records had misleading content such as discouraging viewers to take medicines, applying anti-fungal shampoo on the face, and taking herbal supplements for gastrointestinal problems. All 12 videos were uploaded by non-healthcare professionals. On the other hand, nine videos showed healthcare professionals addressing misinformation on a variety of topics: COVID-19 (n=4), therapeutics (n=2), disease causation (n=2), and vaping (n=1).

Popular TikTok videos showed health professionals responding to frequently asked questions from TikTok users (n=42), explaining health information using pathophysiology, pharmacology, or anatomy (n=34), and sharing health tips (n=24). The general subthemes included therapeutics (n=27), prevention (n=22), harm (n=16), signs and symptoms (n=16), risk factors (n=11), prognosis (n=5), and diagnostics (n=3). There were ninety-three videos that did not show references while seven videos cited the Center for Disease Control and Prevention (CDC), Monthly Index of Medical Specialties (MIMS), the World Health Organization (WHO), Philippine Cancer Society (PCS), and published journals. The top visual aids used were on-screen texts (n=74), diagrams (n=30), and product samples (n=21). Trending songs were occasionally heard (n=36) while most videos featured content creators speaking without background music (n=64).

Reproductive and sexual health were discussed in forty-seven videos with subthemes on contraceptive methods, pregnancy, and sex education. Themes were explained with spoken audio and on-screen texts in Tagalog (n=38) and in English (n=9). Oral contraceptive pills (OCPs) were frequently discussed amid all contraceptive methods available. Its proper use, indication, and initiation were explained in layman's terms as shown by pharmacists who simplified the mechanism of action to make it understandable to the viewers: progestin pills act to thicken cervical lining while oral contraceptive pills prevent ovulation. There was one video which promoted a specific brand of OCP. Other contraceptive methods discussed were condom and birth control patch.

Subthemes on pregnancy included signs and symptoms, appropriate timing of ultrasound in confirming viability and identifying the sex of the fetus. Other subthemes were infertility, supplementation, coital safety, coital position during pregnancy, and suitable timing of coitus post-partum. These subthemes were discussed by obstetricians and gynecologists while citing their background knowledge and clinical practice.

Sex education was the third common subtheme on reproductive and sexual health. Videos showed information on seminal fluid, lubrication, positioning, female anatomy, orgasm, and after-sex glow with obstetricians/gynecologists using anatomical models and diagrams to explain these topics. One video contained a physiotherapist suggesting appropriate coital positions among people intolerant to hip flexion or extension.

Avoidance of risky sexual behaviors emerged as a secondary theme when explaining themes on reproductive and sexual health. Videos emphasized preventable outcomes such as unwanted pregnancies and sexually transmitted infections. Consensual intimacy was also discussed in one video.

Forty-two videos on reproductive and sexual health had no cited articles, journals, or references. Themes were discussed by healthcare professionals based on their background knowledge and experience. Obstetricians shared clinical practice on maternal health, pharmacists simplified the pharmacology of oral contraceptive pills, and nurses shared various topics from birth control to sex education. Only five videos cited references which were WHO and CDC for sexually transmitted infection, PCS for the prevalence of endometrial cancer, and recent literature on supplementation, fertility, and benefits of coitus.

Nine videos simplified medical jargon in terms or phrases understandable to viewers. For example, sex releases *"endorphins"* or *"happy hormones"*; *"uterine involution"* as *"pagbalik sa normal size at position"*; *"pelvic organ prolapse"* as *"buwa"*, and *"ovulation"* as *"pagbuo at pag-release ng obaryo ng itlog"*.

Humorous lines were heard on four reproductive and sexual health videos. Notable phrases were *"iwasan makipagsex kung walang label"*, *"nag pregnancy test ka na ba? Alam na ba ng jowa mo?"*, *"Nakalunok ng semen? Hala mabubuntis ka, joke lang po"*, and *"Kaya mga sir wag puro kayo lang ha, kailangan din sila"* while pertaining to female orgasm. Twenty-eight videos on reproductive and sexual health used trending songs as background music and twelve out of the twenty-eight showed content creators dancing to the music. Trending songs included *"Touch my Body"* by Mariah Carey, *"Breathe"* by Mackenzie Ziegler, and *"Locked Away"* by R. City. The remaining sixteen videos had electronic instrumental music as background tunes.

Eighteen videos discussed various infectious diseases in Tagalog (n=15) and English (n=3). Over the counter (OTC) medications and COVID-19 emerged as common subthemes. Questions on OTC medications for fever, cough and colds were discussed by pharmacists and general physicians. Mechanism of action, indication, frequency of use, proper dosing, and other pharmacological concepts were simplified and explained through analogy. Video creators had explained antitussives as *"nakakatulong sa pag iwas ng labis na pag ubo"*, mucolytics as *"pampalambot ng plema"*, and expectorants as *"pampalabas ng plema"*. The indications for treatment were also discussed: antitussives for dry cough, mucolytic or expectorant for productive cough, paracetamol for fever and pain, and non-steroidal antiinflammatory drugs (NSAIDs) for pain and inflammation. Additional on-screen texts and images were used to aid the explanation. Generic names of drugs were highlighted but one video was sponsored and promoted a drug from a pharmaceutical company. There was one video promoting fermented garlic as treatment for cough and colds but discouraged viewers to take conventional medications for cough and colds.

Three videos have subthemes on harm: medication misuse, drug-to-drug interactions, and overdosing. It was emphasized that common brand names may contain similar components thus, risk of adverse reactions increases when these drugs are taken together. One video explained that cross-reactivity between NSAIDs happens hence, allergies can occur within the drug class.

There were three main themes on COVID-19 in seven videos: signs, symptoms, and vaccination. The similarities in clinical presentation with the common flu were explained by general physicians. One video addressed a question on why COVID-19 can present with loose watery stools. The explanation on its pathophysiology was simplified as *"lock*

at susi" for receptors and enzymes. There were also questions, health beliefs, and misinformation on COVID-19: TikTok users believe that all people presenting with cough and colds have the disease, vaccination provides absolute protection from infection, and boosters are unnecessary. These queries were adequately addressed by physicians and pharmacists by citing information from WHO, CDC, and published journals: COVID-19 has non-specific symptoms, vaccination lowers severity of infection; and boosters increase immunity after the primary series.

Themes on infectious diseases also had overlapping subthemes with reproductive health (n=6) and dermatology (n=4). These include prevention, risk factors, signs, and symptoms of sexually transmitted infections. On the other hand, dermatology related contents were about fungal infections, fungal acne, and dandruff.

Eight videos on dermatology were discussed in Tagalog (n=6) and in English (n=2). The most common subtheme was acne (n=6), and its prevention was discussed by a dermatologist and a nurse by avoiding manipulation, lessening sun exposure, using azelaic acid, and practicing good hygiene. One video cited a case report explaining slugging or application of petrolatum in the face and how it benefits healing of dry skin but aggravates acne in oily skin. On-screen texts were used as information prompts while health professionals were speaking (n=4) or dancing to music (n=2). Antifungal shampoos were mentioned in two videos. The first was uploaded by a medical organization, recommending antifungal shampoo for flaky dandruff. The second video however had misleading content. It showed a layperson encouraging viewers to apply antifungal shampoo on the face to treat acne. There was no cited information source to support the video creator's claim.

Misinformation was also encountered in less popular themes. A video had refuted safety claims of smoking electronic cigarettes by explaining toxic substances contained in vapes. Another video showed a pharmacist disproving the popular trend of combining paracetamol and coke to treat anxiety; paracetamol is an analgesic while coke contains caffeine, an anxiogenic which can aggravate anxiety. There was also an attempt to correct misperception on hypertension treatment such as drinking pineapple juice for control, but this video did not provide any explanation and had a condescending tone. Other misperceptions addressed were disease causation such as spicy food to hemorrhoids and electric fans to pleural effusion. Videos likewise clarified that association and causation were different concepts. Spicy food can irritate the gastrointestinal tract but will not directly cause hemorrhoids while pleural effusion has many etiologies and electric fan exposure is not one of them.

DISCUSSION

Reproductive and sexual health, infectious diseases, and dermatology were common themes among health-related videos published by Filipino content creators on TikTok. Other identified themes were substance use, nutrition, oral health, gastrointestinal health, weight management, sleep, anxiety, gout, benign paroxysmal positional vertigo, and eye health. Misinformation was considered in 12% of all videos analyzed, three had misleading content and were created by non-healthcare professionals, while the remaining nine

featured healthcare professionals addressing it. Themes were discussed by healthcare professionals such as physicians, pharmacists, and nurses. Humor, diagrams, pictures, product samples, and trending music were utilized to relay information.

Videos containing themes on reproductive and sexual health such as OCPs, pregnancy, and sex education were the most popular. The use of OCPs is leading birth control method discussed in social media.¹⁵ Social media videos may represent OCPs negatively, especially when created by non-health professionals.¹⁷ In contrast, some studies showed that videos created by healthcare professionals were highly educational.^{16,17} In this study, videos on OCPs were described positively by obstetricians, gynecologists, and pharmacists. Another subtheme on reproductive health is pregnancy. Videos showed healthcare professionals responding to pregnancy-related questions from TikTok users. Social media has been an avenue for pregnancy-related information among women, proving to be an additional source of learning and support aside from traditional media.^{18,19} However, pregnant women perceived social media to be less reliable than health professionals.²⁰ Mistrust was rooted in misinformation, incomprehensible content, and the user's inability to appraise information.²¹ In this study, videos showed obstetricians and gynecologists addressing questions through their clinical experience and practice. Videos explained information in a conversant manner, using layman's terms and diagrams so that viewers may better understand them. Hence, pregnancy-related videos analyzed in this study may be more reliable. Female anatomy and sexual pleasure are popular subthemes on sex education. The popularity of these subthemes is congruent with literature. Popularity, especially among adolescents, may be due to the informational needs not being satisfied by traditional sex education while social media allows easy access of these content.^{22,23} Inappropriate and fictitious videos can increase risky sexual behaviors of viewers, but healthcare professionals can influence risk-reduction by augmenting accurate information on social media.²²⁻²⁴ In this study, videos on sex education were discussed by healthcare professionals in an educational manner while also emphasizing outcomes of risky behaviors such as sexually transmitted infections and unwanted pregnancies.

Subthemes on infectious diseases were OTC medications and COVID-19. Videos showed healthcare professionals addressing questions on OTC medications through pharmacology, product samples, and some with product promotion. Literature has shown that TikTok is one of many platforms that address concerns and needs of users regarding medical treatment.^{24,25} However, misinformation is always a concern.²⁶ Videos created by non-physicians were often unreliable sources that can lead to serious consequences.²⁷ A recent case report described the death of a 14-year-old female due to diphenhydramine toxicity after joining a popular TikTok challenge.²⁸ Moreover, social media has become a suitable marketing channel for over-the-counter medications.²⁶ The Japanese market has shown that drug sales of over-the-counter drugs for allergic rhinitis increased after social media promotion.²⁷ Advertising over-the-counter drugs might also negatively influence behavior such as doctor appointment cancellations.²⁸ In this study, videos showed pharmacists and general physicians responding to queries on OTC medications, viewers were encouraged to seek professional consultation, and relevant drug information were

appropriately discussed. These may support the reliability of videos uploaded by Filipino content creators. Another identified subtheme in this study were health beliefs in COVID-19 booster vaccination and its clinical presentation. Misinformation on COVID-19 related videos is prevalent on social media, including TikTok.²⁹ This contributes to vaccine hesitancy among Filipinos along with fear, mistrust, and adamant attitude.³⁰ Healthcare professionals were encouraged to address incorrect claims to mitigate potential negative implications on public health.^{10,31} In this study, videos showed healthcare professionals addressing health-beliefs of TikTok users and information was explained through pathophysiological and pharmacological concepts. Videos showed content creators using layman's terms in the discussion while citing credible sources to further support their claims. Hence, COVID-19 related videos uploaded by Filipino content creators are most likely to be trustworthy sources of information.

Acne subtheme on dermatology was the most common topic among health-related videos uploaded by Filipino content creators. Acne-related videos on TikTok have shown to have poor information quality.³² Videos uploaded by non-physicians have poorer quality as compared to physicians. Patients tend to avoid dermatological procedures due to misinformation.³³ In this study, content was discussed by dermatologists but had no cited sources. Only one video cited a published journal and there was also one video created by a non-healthcare individual with misleading information.

On-screen texts, diagrams, and images were common across videos. Visual aids hold attention, increase engagement, boost popularity of videos among viewers.³⁴ It facilitates learning by providing additional information to the content.³⁵ Other contributors to popularity are viewers' interest, use of humor, and addition of trending music.^{35,36} In this study, videos utilized visual aids as information prompts across categories while the use of humor and trending music were frequently heard on videos with the predominant theme - reproductive and sexual health. The popularity of TikTok videos makes it an accessible source of health information but literature has showed contrasting evidence regarding information quality.³⁷⁻³⁹ Earlier studies described that misinformation on acne, COVID-19 vaccines, and attention-deficit/hyperactivity disorder (ADHD) were seen on TikTok.^{39,40} These videos contained misleading content and were mostly created by non-healthcare professionals.³⁸⁻⁴⁰ On the other hand, healthcare professionals uploaded videos on chronic obstructive pulmonary disease (COPD) and diabetes mellitus with better quality.^{41,42} Misinformation is a concern since it affects patient decision.⁴³ In this study, three videos created by non-healthcare professionals had misleading content, encouraging participants to engage in erroneous behavior. On the other hand, twelve videos were created by healthcare professionals to address common health beliefs, especially on COVID-19 vaccines. Other themes on reproductive health, sex education, OTC medications, COVID-19, and acne were also discussed through facts, theoretical concepts, clinical practice, and experience. Videos were explained in simplified terms with the aid of diagrams and images.

This study has shown that common themes of health-related videos published by Filipino content creators were reproductive health, sex education, OTC medications, COVID-19, and acne. Majority of the videos were created by healthcare professionals, factually discussing

common themes and addressing misinformation. However, only videos under hashtag #HealthTokPH were collected and might have missed health-related videos without this hashtag. Credentials of content creators and cited sources were not verified unless the information is publicly available such as being explicitly stated in the account or video. The study also focused on describing themes but did not include the impact of health-related videos to viewer's behavior. Nevertheless, this study supports literature's claim on the potential of social media as a source of health information.^{21,38} Healthcare professionals have a role in creating evidence-based videos to disseminate facts and mitigate the spread of misleading content.³⁵ Further studies are recommended to focus on content analysis, user's engagement, and impact to viewers of the identified themes. These will further support the potential of health-related TikTok videos in influencing patient beliefs and behavior. TikTok videos are accessible sources of health information and should be maximized by creating evidence-based content. Altogether, health-related TikTok videos can be reliable sources of information that address queries and beliefs of its audience.

CONCLUSION

Health-related TikTok videos uploaded by Filipino content creators were on reproductive health, sex education, OTC medications, COVID-19, and acne. Common themes were discussed in a simplified but factual manner and misinformation was addressed by citing credible sources. Humor, trending music, and visual aids contributed to popularity.

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