# Scoping Review: Social Media Health Opinion Leaders as Actors in Public Health Promotion

Souad El Mghari, Miroslava Tokovska, Ragnhild Eg, Merete Kolberg Tennfjord

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## *Abstract*

**Background:** The shift toward digital adoption in public health communication has drastically changed how health information is disseminated to populations. Social Media Health Opinion Leaders (SMHOLs) have emerged as key players in this transformation, leveraging their social influence to shape public health behaviours. These individuals serve as interpreters of health information, aligning with social marketing principles to promote healthy lifestyles. Despite their growing presence, the literature on SMHOLs is under-explored, with inconsistent definitions and limited examination of their health promotion strategies.

**Objective:** This scoping review aims to synthesise the existing literature that details the role of SMHOLs as influential actors in public health promotion. It examines the strategies and methods employed by these individuals to disseminate health messages, encourage healthy behaviours, and ultimately influence public health outcomes.

**Methods:** Using the PRISMA-ScR approach, an exhaustive search across five databases and grey literature identified 18 relevant studies published between 2014 to 2024. Studies were selected based on their focus on opinion leaders, social media and health promotion, with key search terms and selection criteria developed iteratively to capture the broad and evolving definitions of SMHOLs.

**Results:** SMHOLs, classified as either credentialled 'health opinion leaders' and 'health influencers' or non-credentialled 'influencers', have a unique role in leveraging social marketing principles to promote health. Theories such as dialogic communication and transportation theory reveal SMHOLs' ability to engage audiences through storytelling, perceived authenticity, and personal credibility. Key strategies include tailoring content to platform-specific features, building trust through parasocial relationships, evoking emotional responses paired with efficacy information, and employing self-presentation tactics.

**Conclusions:** The study recommends clearer terminology to identify SMHOLs, structured health promotion strategies, and guidelines to align the appropriate SMHOLs with targeted health campaigns. These steps will enable public health practitioners to harness the unique influence of SMHOLs in a manner that strengthens accurate health communication and optimises the impact on audience behaviours and health literacy.

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# Original Manuscript

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**Keywords:** health opinion leaders, health promotion, social media influencers, health communication, health influencers.

## Introduction

Digital adoption in public health communication has fundamentally altered how health information reaches populations. Opinion leaders on social media are transforming how health messages reach and resonate with diverse communities. Their unique position at the

intersection of health communication and social influence enables them to shape public health attitudes and behaviours at an unprecedented scale. The concept of opinion leaders is not recent; the term, a concept dating back to the mid-20th century, describes individuals who influence the opinions of others, their behaviours, and their thoughts.[1-2] However, as per Burke-Garcia [3], the advent of the internet has given birth to new channels of communication and influence resulting in online opinion leaders. While already present and established in numerous fields  such as politics, opinion leaders with a health focus have been flooding social media platforms in the last decade. For the purpose of this study, they are referred to as Social Media Health Opinion Leaders (SMHOLs). These individuals fulfil the roles of mediators, intermediaries, middle people, and translators in a communication process where they should provide and explain the available evidence.[4] In the context of health, they actively deliver health messages and influence audiences on social media.[5] Burke-Garcia [3] refers to these online opinion leaders as 'online influencers'. SMHOLs promote health behaviours by serving as 'social proof' in encouraging audiences to model their healthy habits[6], aligning their function with social marketing principles. Social marketing is defined as the use of marketing techniques to influence behaviours that benefit individuals and communities for the greater social good, rather than for just commercial profit.[7]

The importance of health promotion has been on the rise due to the evolution of modern health care.[8] It is known as the process of enabling people to increase control over, and improve, their health in an attempt to reach a state of physical, mental, and social well-being.[9] Health promotion is thus centred on strategies and communication actions that are designed to improve public health by encouraging beneficial behaviours, preventing diseases, and enhancing overall well-being. It is critical in ensuring that accurate, timely, and impactful health messages reach large and diverse populations. Traditionally, this information was relayed directly to patients through mass media, community outreach and healthcare providers . Nevertheless, in recent years health promotion professionals have recognised the potential of social media for reaching even broader audiences.[10] Social marketing and health promotion on social media are closely linked; when they are applied together on social networking sites, the platform's capabilities to target specific health behaviours and engage audiences effectively is enhanced. Furthermore, many social marketing and health promotion campaigns use influential individuals for different public health issues.[11] These influential individuals include what this paper is referring to as Social Media Health Opinion Leaders.

Despite previous research demonstrating the increasing use of SMHOLs in health promotion, to our knowledge no comprehensive review papers have synthesised the available scholarships on this topic. While social networking sites are widely advocated as channels for health promotion, recent studies indicate a significant underrepresentation of SMHOLs as research subjects.[12] Despite robust evidence establishing correlations between SMHOLs and their audiences' health outcomes,[13] the mechanisms through which these leaders contribute to health promotion remain inadequately explored in the existing review literature. This knowledge gap is particularly evident in understanding the communication strategies of SMHOLs and their methods of health information dissemination on social media platforms.[5] The absence of comprehensive analysis in this domain presents a critical barrier to leveraging SMHOLs in public health initiatives, necessitating a systematic examination of their role in health promotion discourse.

A significant challenge in this domain lies in the inconsistent conceptualisation of SMHOLs across social media platforms. Available literature reveals considerable heterogeneity in their

definitions and classifications, with some studies unable to establish clear categorisation parameters. This taxonomic ambiguity is further complicated by the diverse backgrounds of SMHOLs, ranging from credentialled health professionals to self-proclaimed experts. The coexistence of both qualified and non-qualified individuals disseminating health information raises concerns about message accuracy and public comprehension, as non-medical SMHOLs may contribute to health information misunderstanding.[5-14] In view of this, developing a standardised classification framework for SMHOLs through this scoping review emerges as a crucial research priority in order to enhance the effectiveness and reliability of social media-based health communication.

Research surrounding digital adoption in health promotion should look in more depth into strategies and communication techniques used by SMHOLs; thus, this scoping review aims to synthesise the existing literature on the role of SMHOLs as key actors in public health promotion. It seeks to explore the strategies and techniques that these individuals use to disseminate health messages while promoting healthy behaviours, and further to use the findings to help in shaping public health outcomes. The following questions guided this research:

1. How are Social Media Health Opinion Leaders classified and defined across various studies?
2. How do Social Media Health Opinion Leaders contribute to public health promotion?
3. What techniques and strategies do Social Media Health Opinion Leaders employ for public health promotion?

## Methods

## Research design

A scoping review is considered an effective method for rapidly providing pertinent and actionable evidence. It is often used to clarify definitions and explore the conceptual scope of a research area.[15] This type of review is known to include various forms of literature, such as systematic reviews, and meta-analyses.[16]

## Searching for relevant studies

From March 2024 to July 2024, an exhaustive search was carried out following a three-step search strategy. Firstly, a systematic search process was conducted; relevant databases for this interdisciplinary work were used to ensure the most up-to-date knowledge and to reflect the progressive development of SMHOLs for health promotion. Because of the relative novelty of the field, the researchers limited their studies to those published between 2014 and 2024. The key search terms were developed through an iterative process as the reviewers became more familiar with the evidence base. Subject terms used in this search included combinations of the population (opinion leaders), the phenomenon of interest (health promotion), and context (social media), as summarised in Table 1. This initial search was followed by an analysis of the title, abstract and index terms of the retrieved papers. Secondly, an additional search using the finalised search terms was performed across all databases. Thirdly, hand-searching was conducted to identify studies that may not have been located in the main searches. This involved reviewing the reference lists from the screened studies, in addition to the grey literature.

The review was conducted following the PRISMA protocol, which establishes minimum

standards for systematic reviews in high-quality scientific publications and enhances the transparency of the research process.[17] The search strategy was based on the PICo method for mapping existing literature and synthesising knowledge: P – Population, I – Interest of Phenomena, and Co – Context[18] (see Table 1).

Table 1. PICo method - Framework Guideline for Literature Searches and Evidence-Based Research.
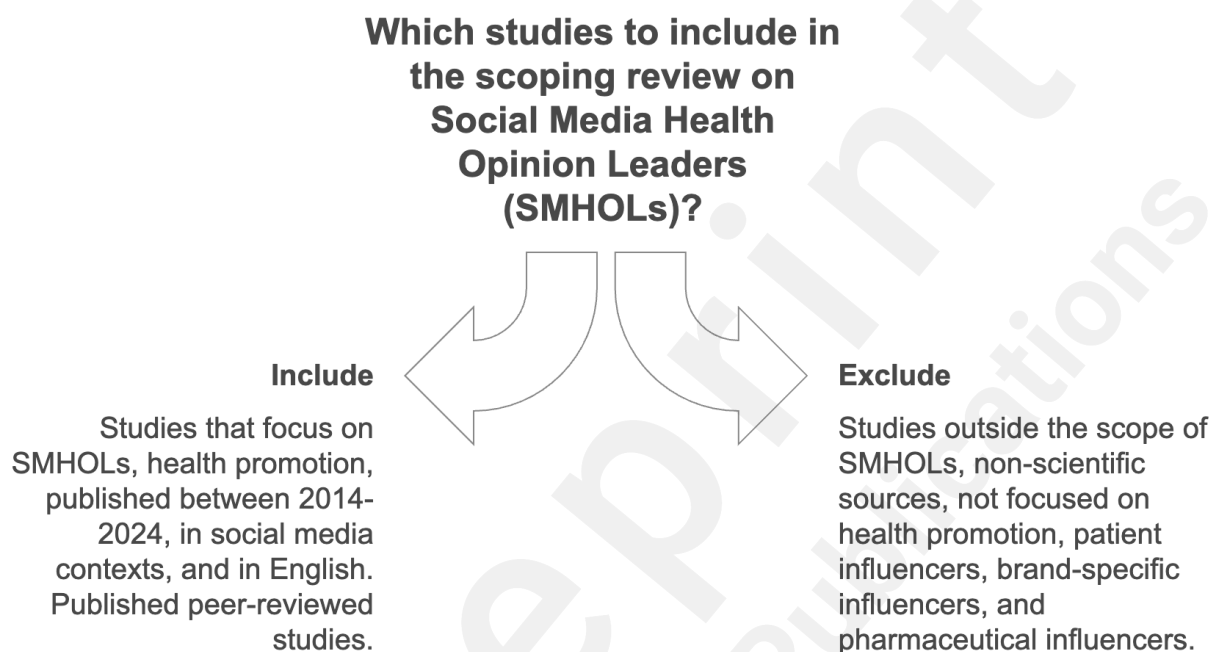
|  | Main concept | Alternate keywords |
|---|---|---|
| **(P) - Population** | Opinion leaders | Health opinion leaders. Health influencers. Health advocates. Health experts. Opinion leaders. Influencers. Internet celebrities. Social media influencer (SMI). Social media opinion leader. Health professional influencers. Social influencers. Digital influencers. Internet influencers. Fitness influencers. Health content creators. Content creators. Healthcare influencers. Microcelebrities. |
| **(I) - Interest of Phenomenon** | Health promotion | Health promotion. Public health communication. Health communication. Promotion of health. Health social marketing. Health marketing. Health advertising. Health messages. Health information. Health content. Health information dissemination. Health campaigns. |
| **(Co) - Context** | Social media | Social media. Social networking sites. Social media website. Facebook. Instagram. Twitter (X). TikTok. Pinterest. YouTube. WhatsApp. Snapchat. Social networks. Social platform. Social media platforms. Internet community. |

Using the PRISMA-ScR approach as described by Moher et al.[17], and due to the multidisciplinarity of the subject matter, the research team conducted a comprehensive search of five databases (Medline, PsycINFO, Communication and Mass Media Complete, Business Source Complete, Web of Science) and grey literature, namely Google Scholar. Researchers constructed the search string by focusing on three key elements: opinion leaders, health promotion, and social media. The search string was applied to each database, with minor changes required for the specific use of each database. The resulting articles were then screened against predetermined eligibility criteria.

The screened articles were based on predefined criteria (Figure 1). The inclusion criteria for this scoping review encompassed several key aspects. First, eligible studies had to examine Social Media Health Opinion Leaders (SMHOLs) and focus on individuals who play a pivotal role in health promotion through their use of social media. Furthermore, the studies had to be situated within the context of social media, such as Facebook, Instagram, Twitter (X), TikTok, YouTube, and similar platforms where health promotion activities are conducted. Only studies published in English were considered. Additionally, the review only included studies that investigate various types of opinion leaders, such as those involved in general health (e.g., medical influencers, doctor influencers), preventive health (e.g., wellness, fitness, and nutrition influencers), and mental health opinion leaders. The exclusion criteria for this review are

equally specific. Non-scientific sources, including news articles, expert briefs and reports, as well as non-peer-reviewed materials, would not be considered. The review also excluded studies focusing on patient influencers, who primarily share content based on personal health experiences, as these individuals do not align with the criteria for professional or expert-driven health promotion. Additionally, studies that focus solely on brand-specific influencers who are engaged in marketing activities, particularly those promoting products through influencer marketing strategies, would not be included. Similarly, studies examining pharmaceutical influencers who primarily promote pharmaceutical products rather than broader health messages are also excluded from this review.

Figure 1: Inclusion and Exclusion Criteria.

**Which studies to include in the scoping review on Social Media Health Opinion Leaders (SMHOLs)?**

**Include**

Studies that focus on SMHOLs, health promotion, published between 2014-2024, in social media contexts, and in English. Published peer-reviewed studies.

**Exclude**

Studies outside the scope of SMHOLs, non-scientific sources, not focused on health promotion, patient influencers, brand-specific influencers, and pharmaceutical influencers.

## Data extraction and synthesis

The research team for this review consisted of four members; all contributed to and signed this work. The participating researchers bring diverse backgrounds to this study, thus contributing to the multidisciplinary nature of the subject matter. Through meetings, conducted both live and online, the team defined the broad research questions to be addressed. Two of the researchers defined the steps for the study protocol, including identifying the search terms, the databases to be searched, and the inclusion and exclusion criteria.

After conducting a screening of titles, abstracts, full texts, and additional references, a total of 18 articles published between 2014 and 2024 were deemed eligible for inclusion in the scoping review.

Figure 2: Flow Chart of Search Process Based on PRISMA Approach.
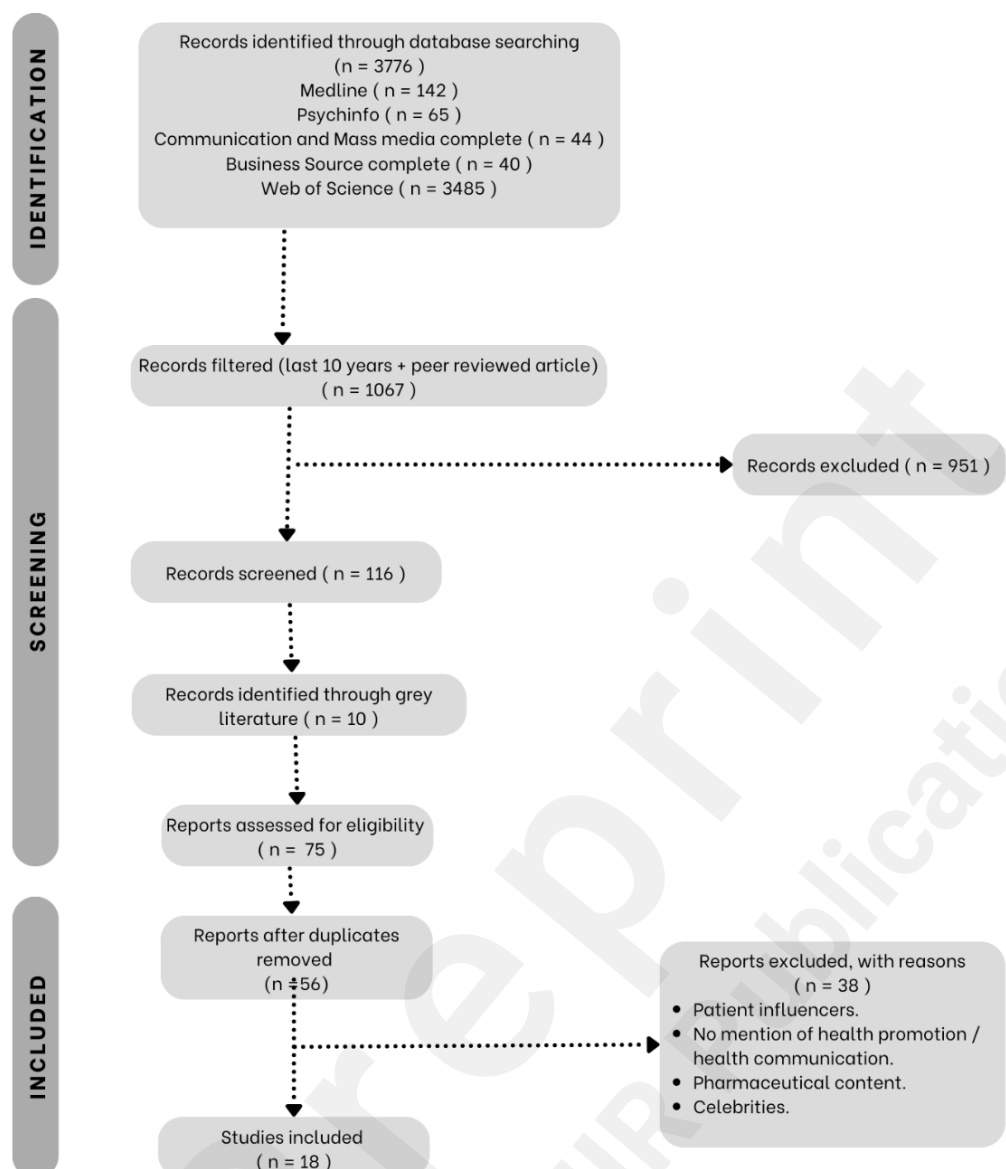
The 18 selected articles were compiled in a summary table (see Table 2), which includes the title of the paper, authors, year of publication, journal, study design, and main ideas.

A data extraction form was created in Microsoft Word, and the authors independently summarised the data. Discrepancies were resolved through an exchange of views; the core themes of the study were synthesised and are presented in the Discussion section of this paper, which is divided into three categories aligned with the aims of the study:

● Social Media Health Opinion Leaders' identification categorised into three levels, and further divided into credentialled and non-credentialled SMHOLs.

● The role of SMHOLs in public health promotion.

● Health promotion strategies by Social Media Health Opinion Leaders, including communication techniques and the traits and characteristics of SMHOLs.

Finally, the researchers address the recommendations for practice and future research.

## Ethics approval

Ethical approval was not required for this study, as it is a scoping review based on previously published reports with anonymous original data.

Table 2: Summary Table of Included Papers in the Scoping Review.

| Title/Author/Year | Study Design and Methods | Journal | Main Ideas |
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| Social Media Influencers and Adolescents' Health: A Scoping Review of the Research Field.[12]<br><br>Elena Engela, Sascha Gell, Raffael Heiss, Kathrin Karsay<br><br>2024 | Scoping review: PRISMA-ScR approach. Search conducted across eight databases, resulting in the inclusion of 51 articles published between 2012 and 2022. | Social Science & Medicine | • Variability in how social media influencers (SMIs) are defined.<br><br>• SMIs can both positively and negatively affect adolescent health.<br><br>• Social cognitive theory suggests that humans learn by observing the behaviour of social role models and evaluating the resulting consequences. |
| The Quality of Health Parasocial Opinion Leaders on Social Media. A Literature Review.[19]<br><br>Saw Teck Chew, Emma Mohamad & Sabariah Mohamed Salleh<br><br>2019 | Systematic literature review method.<br><br>Reviewed 10 out of 545 articles related to health opinion leaders on social media. | Journal of Social Sciences and Humanities | • Opinion leaders develop strong parasocial relationships with followers through regular and personal content, influencing their audience's health-related attitudes and behaviours.<br><br>• While influential, some health opinion leaders lack medical training, posing risks of spreading misinformation.<br><br>• Two-step flow of communication: health opinion leaders act as intermediaries between mass media and the public, distilling complex information into relatable content for their followers. |
| Communication of Nutrition Information by Influencers on Social Media: A Scoping Review.[20] | Scoping review methodology with a systematic search across nine databases (2016-2021). 11 studies | Health Promotion Journal of Australia | • SMIs often support specific diets without mentioning nutritional risks.<br><br>• They establish trustworthiness by listing credentials and using scientific language.<br><br>• The ability to change attitudes and even beliefs is achieved through the trust and |

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| Alice Rogers, Shelley Wilkinson, Olivia Downie, Helen Truby<br><br>2022 | (nine academic, two from business/marketing literature). | | credibility of the communicator. |
| The Emerging Landscape of Social Media Influencers in Public Health Collaborations: A Scoping Review.[21]<br><br>Alexandra E. Michel, Emily S. Miller, Prachi Singh, Gretchen Schulz, Rupali J. Limaye, PhD,<br><br>2024 | Scoping review: Out of 658 articles, the 15 included studies meet the article's objective to assess the effectiveness of using SMIs in digital health promotion activities. | Health Promotion Practice | • There is a noted lack of standardised practices for evaluating SMI effectiveness in health promotion campaigns.<br><br>• Lack of basic information on influencer definitions and social media platforms used.<br><br>• Content development strategies varied, with many studies favouring native content approaches. |
| Tailoring in the Digital Era: Stimulating Dialogues on Health Topics in Collaboration with Social Media Influencers.[22]<br><br>Roel O. Lutkenhaus, Jeroen Jansz, Martine P.A. Bouman<br><br>2019 | Digital methods : network analysis. | Digital Health | • Combining influencer marketing with tailored health communication can effectively reach niche audiences.<br><br>• The role of social influencers in online communities resembles that of opinion leaders in the classic two-step flow model of Katz and Lazarsfeld.<br><br>• In targeting and tailoring health interventions, two kinds of influencers would make suitable collaboration partners: social influencers who are influential in one specific community (opinion leaders) and social influencers who are influential among more than one community and who act as bridge builders. |

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| What Do Social Media Influencers Say about Health? A Theory-Driven Content Analysis of Top Ten Health Influencers' Posts on Sina Weibo.[23]<br><br>Wenxue Zou, Wanjiang Jacob Zhang, and Lu Tang<br><br>2021 | Content analysis: theory-driven. | Journal of Health Communication | • Social media health influencers play a significant role in disseminating health-related information to the public.<br><br>• The article distinguishes between influencers without professional credentials who build intimate relationships with followers and those who are experts sharing their knowledge.<br><br>• There are differences in communication strategies for various diseases. |
| Acceptance of Health Messages Conveyed by Parasocial Opinion Leaders on Twitter among Followers[5].<br><br>Chew, S. T., Mohamad, E., & Salleh, S. M.<br><br>2021 | Qualitative in-depth interviews, and qualitative analysis. | Malaysian Journal of Communication | • The study identifies several characteristics that make opinion leaders effective: expertise, activeness, popularity, confidence, and extensive knowledge.<br><br>• Four types of message receptions are identified: information and complexity reduction, health orientation, stimulation of interest, and strengthening of the image and ethics of professionalism. |
| "A friend who knows what they're talking about": Extending Source Credibility Theory to Analyze the Wellness Influencer Industry on Instagram.[24]<br><br>Wellman, M. L.<br><br>2023 | Qualitative, in-depth semi-structured interviews | New Media & Society | • Wellness influencers on Instagram build and maintain credibility through source credibility theory (SCT): expertise, trustworthiness, and attractiveness.<br><br>• The study includes a fourth construct: positionality.<br><br>• The article suggests that traditional credibility constructs need to evolve to better understand the dynamics of influencer culture, particularly in the unregulated wellness sector. |

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| Selling Health and Happiness – How Influencers Communicate on Instagram about Dieting and Exercise: Mixed Methods Research.[25]<br><br>Pilgrim, K., & Bohnet-Joschko<br><br>2019 | Mixed-methods design with quantitative and qualitative content analysis of Instagram posts. | BMC Public Health | • Influencers in the domain of exercise and nutrition seek to heighten their appeal through targeted communication techniques and visual content, which is over-represented by idealised bodies.<br><br>• Influencers create a sense of intimacy and friendship with their followers, leading to a dependency on their advice for happiness and well-being. |
| Strategies of Parasocial Opinion Leaders in Using Twitter to Convey Health Messages to Followers.[26]<br><br>Chew, S. T., Mohamad, E., & Salleh, S. M.<br><br>2022 | Qualitative in-depth interviews and qualitative analysis. | Malaysian Journal of Communication | • Health opinion leaders use various communication strategies adapted to the topic conveyed and its intended purpose.<br><br>• Health influencers' expertise and charisma can enhance the effectiveness of health campaigns.<br><br>• Their ability to establish friendly relationships with followers can lead to better engagement and message retention. |
| Strategies to Improve Health Communication: Can Health Professionals Be Heroes?[27]<br><br>Jenkins, E. L., Ilicic, J., Molenaar, A., Chin, S., & McCarey, T. A.<br><br>2020 | Cross-sectional questionnaire study. | Nutrients | • Nutrition professionals (NPs) were perceived as more authentic and trustworthy than social media influencers among young adults.<br><br>• The study highlighted that positive emotional appeals, particularly those associated with heroism, can enhance engagement and the effectiveness of health communication by NPs.<br><br>• NPs can balance professionalism with vulnerability in their posts, which may help create a more relatable and authentic image. |

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| Exploring Drivers for Public Engagement in Social Media Communication with Medical Social Influencers in China.[28]<br><br>Ngai, C. S. B., Singh, R. G., & Lu, W.<br><br>2020 | Quantitative content analysis. | PLoS ONE | • The study highlights that the public engages with medical social influencers (MSIs) primarily to seek health information that addresses their well-being concerns.<br><br>• Effective dialogic communication is crucial for MSIs to foster engagement. It involves creating a sense of empathy and connection with the audience.<br><br>• Emotional expressions generate both likes and comments. |
| Disseminators, Not Influencers: Communication of Dietitians on Social Networks.[29]<br><br>Marauri-Castillo, Rodríguez-González, Marín-Murillo<br><br>2023 | Qualitative research methodology: in-depth interviews through semi-structured questionnaire. | Vivat Academia | • Nutritionists stress the importance of adapting the message to the characteristics of each social media network.<br><br>• Many users trust influencers over qualified dietitians, leading to the spread of unverified information.<br><br>• Nutrition professionals should adopt narrative techniques to communicate scientific information effectively. |
| Mental Health Professionals as Influencers on TikTok and Instagram: What Role Do They Play in Mental Health Literacy and Help-Seeking?[30]<br><br>Pretorius, McCashin, Coyle<br><br>2022 | Qualitative and cross-sectional study. | Internet Interventions | • Mental health professionals, as influencers, can significantly enhance mental health literacy among young people on platforms like TikTok and Instagram.<br><br>• Many mental health influencers lack verified status on social media. |

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| Online Opinion Leaders in the Health Promotion Digital Era.[31]<br><br>Lynn-Sze, Kamaruddin<br><br>2021 | Qualitative method: content analysis and semi-structured interviews. | Malaysian Journal of Communication | • Health opinion leaders utilise social media to promote health issues and influence public decision-making.<br><br>• They engage in meaningful conversations with their audience, which is crucial during public health threats such as pandemics.<br><br>• The characteristics of opinion leaders affect how followers make health-related decisions.<br><br>• Health influencers employ strategies like social connectivity, social support, and social consultation. |
| An Exploratory Content Analysis of the Use of Health Communication Strategies and Presence of Objectification in Fitness Influencer Social Media Posts.[32]<br><br>Willoughby, Couto, Kang, Randall, Kirkpatrick, Ka Lai Lee, Su, M. Booth & Domgaard<br><br>2024 | Qualitative method: content analysis. | Health Communication | • Fitness influencers can significantly shape health messaging and behaviours among their followers.<br><br>• While social media posts can promote positive health behaviours, many include objectifying content, which can negatively affect body image.<br><br>• The study suggests that health communication professionals should work with fitness influencers to create content that encourages positive health behaviours while reducing objectifying content. |
| Social Media Use to Improve Communication on Children and Adolescent's Health: the Role of the Italian Paediatric Society Influencers.[33] | Mixed-method approach: combining quantitative social media data analysis with qualitative feedback from the influencers. | Italian Journal of Paediatrics | • Engaging paediatric influencers can effectively combat misinformation and promote accurate health messages.<br><br>• Training medical influencers in communication strategies can enhance their effectiveness.<br><br>• The article highlights the importance of the scientific community's active participation in social media to improve public health |

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| Bozzola, Staiano, Spina, Zamperini, Marino, Roversi, Corsello and The Italian Paediatric Society Executive Board  2021 | | | communication. |
| The Importance of Engagement in the Dissemination of Audio-Visual Content by Spanish Health Influencers on Instagram.[34]<br><br>Almela-Baeza, Guercetti and Febrero 2023 | Qualitative content analysis. | Social Sciences | • The study highlights that a higher number of followers does not necessarily equate to higher engagement.<br><br>• Influencers often share content related to nutrition and health products.<br><br>• There should be collaboration between health influencers and accredited health professionals to ensure the reliability of the information disseminated. |

## Results

The scoping review identified eighteen articles that addressed the role of Social Media Health Opinion Leaders in public health promotion. Although our search covered the past 10 years, all of the selected articles were published within the last five years, with the earliest dating back to 2019.  The selected articles revealed three key themes aligning with the aims of the scoping review:

1. The various identifications and definitions used for SMHOLs, and their classification into credentialled vs non-credentialled SMHOLs.

2. The contribution of SMHOLs in public health promotion.

3. The strategies used by SMHOLs for health promotion.

The first theme addresses the classification and definition of SMHOLs, which vary across studies. Through examination of the selected articles, a discernible pattern of characterising SMHOLs emerged, ranging from the broad term 'opinion leader', the social media specific term 'influencer', through to the more niche expertise specific term, such as 'wellness influencer'. According to Chew, Mohamad and Salleh [19], the historically rooted term 'opinion leader' extends beyond social media, making it the broadest descriptor for SMHOLs. In contrast, other

studies prefer more contemporary terminology, such as 'influencer' and its variations like 'social media influencer' and 'content creator'. Despite the variations in wording, however, definitions generally align around three characteristics: maintaining an active social media presence,[12] amassing a large following,[24] and influencing their audience through the content they create and share.[25]-[20] Some studies further distinguish these terms by combining broader labels like 'opinion leader' or 'influencer' with content-specific focuses, leading to terms such as 'healthcare opinion leaders[19]', 'social media health influencers[23]', 'medical social influencers[28]', 'wellness influencers[24]', 'mental health influencers[30]', 'public health opinion leaders[31]', and 'fitness influencers[32]'. An additional distinction was identified between credentialled SMHOLs and non-credentialled ones,[19] where the latter disseminate health information but lack official qualifications or professional roles within the health sector.[23]

The second theme reveals how SMHOLs contribute to public health promotion through their online activities and engagement. Studies demonstrate that they have a significant impact on health behaviour change among their followers through their consistent health message delivery and community building.[5] Their ability to reach diverse audiences, particularly younger demographics,[12] makes them valuable partners in public health campaigns. Research indicates that SMHOLs are particularly effective in translating complex health information into accessible content, though their influence varies based on their credibility and expertise level. While their contributions show promise, challenges exist regarding the accuracy of shared information and the need for better collaboration with healthcare institutions.

The third theme focuses on health promotion techniques and strategies employed by SMHOLs. The primary techniques applied on social media include personal narratives,[20] visual content,[31] and emotional appeals.[23] Relatedly, the effectiveness of these strategies seems to rely on the perceived authenticity of the SMHOL and trust built through interactions with audiences and collaborations with health professionals.[27]-[33] However, the use of these techniques varied across studies, pointing to the practice of SMHOLs individually adopting and adapting social media strategies. Furthermore, these multiple strategies indicate a lack of a single, uniform approach to health promotion by and via SMHOLs.

# Discussion

## Social Media Health Opinion Leaders' identification

Due to the multiplicity of the terms used for SMHOLs found in the selected studies, we have structured them into a three-level schema to reflect the aforementioned progression from general to more niche classifications (see Figure 3).

### *The First Level of Social Media Health Opinion Leaders: The Opinion Leaders*

Opinion leaders have traditionally been defined as individuals who indirectly shape the opinions, behaviours and thoughts of others.[1]-[2,19] In the context of mass media, Lutkenhaus, Jansz and Bouman [22] explain that opinion leaders traditionally relied on interpersonal communication techniques to share their views, such as the trust that they built in their community, or personalising their messaging. In the digital era this interpersonal communication, now mediated by technology, guides audiences' attention through the vast amount of available content. However, they are also seen as experts in their fields,[35]-[31] such as health.

Beyond their communication role, opinion leaders are trusted and active members of their communities. Hefler, Kerrigan, Henryks, Freeman and Thomas [36] argue that opinion leaders play a vital role in society, particularly as health promotion efforts become more community-based. These individuals have a responsibility for the success of community health initiatives.[36]-[31] In a more recent approach, Lynn-Sze and Kamaruddin [31] have named and defined these modern opinion leaders as individuals who serve as information bridges and active community participants. Lutkenhaus, Jansz and Bouman [22] stated that the role of opinion leaders is mirrored by that of influencers on social media.

The term 'opinion leader' is widely applicable, encompassing individuals across diverse fields, including those active on digital platforms and in traditional mass media. Our analysis suggests that 'opinion leader' could serve as an umbrella term for SMHOLs, regardless of their specific area of expertise or platform. However, this designation lacks precision as it does not specify the scope of influence or field, which may introduce ambiguity. While this broad applicability is useful, the designation 'opinion leader' may be insufficiently precise for describing SMHOLs in the context of health promotion given the specific health-oriented and social media-focused nature of our study.

## The Second Level of Social Media Health Opinion Leaders: The Influencers

The second level of SMHOLs is more specific to the social media landscape. They are often captured by the term 'influencers' and recognised as a modern equivalent of opinion leaders, sometimes referred to as 'digital opinion leaders'. Influencers are defined by Gräve [37] as opinion leaders on social networks who share information with vast audiences.[34] These digital opinion leaders can shape the attitudes, decisions and behaviours of their followers through the content they share on social media.[38]-[39]-[34] By shaping standards within their networks [25], influencers today play a similar role to opinion leaders.

Influencers are described as individuals who have built a credible reputation and following, often by sharing content within a specific domain [33] such as health. Influencers who situate themselves in a given domain are typically viewed as experts therein, demonstrating their expertise by consistently creating content on relevant topics. This role often extends into advertising and brand ambassadorship, where influencers leverage their expertise to engage in sponsored content, highlighting the commercial potential associated with their impact. Many influencers create digital content where they share personal experiences related to healthy living; they also offer health advice or promote health products, often reaching large audiences.[40]-[41]-[34] In fact, the reach and level of influence is a common approach to the classification of influencers, alongside content type.[30] Moreover, their influence extends beyond simple information sharing and includes communicating ideas, thoughts, and emotions, which particularly reach and affect younger generations.[29]

In their review article, Engel, Gell, Heiss and Karsay [12] highlighted several terms used in the literature to describe individuals with influence on social media, such as 'celebrity endorser', 'content creator', 'social influencer', and 'opinion leader'. Among these, the term 'social media influencer' (SMI), a synonym for the term 'influencer', has emerged as part of this second level in the categorisation of health opinion leaders. SMIs are often referred to as content creators, meaning individuals who produce entertaining or educational material and contribute

information to various media platforms.[20] They are popular online figures who promote products, services, beliefs, ideologies, and lifestyle habits to their large audiences.[42-43-44-45-24] SMIs hold closer relationships and relatively high engagement with their followers,[46-21] as they are frequently viewed as 'experts' within their content niches.[47-21] These influencers thus share specialised knowledge in areas such as nutrition[28]; in some cases, nutrition professionals themselves are considered SMIs.[27]

Not all influencers are qualified experts. Quite a few lack formal qualifications or credentials within the domains they promote. Many share advice without scientific backing, which can sometimes lead to misinformation;[48-29] this potential pitfall is exacerbated by the tendency to combine professional insights with personal experiences. Often acting as marketers rather than health experts, influencers promote products such as dietary supplements and sportswear, often linking them to achieving ideal physical goals and positive mental health.[25]

## *The Third Level of Social Media Health Opinion Leaders: By Field*

The third layer of SMHOLs is more niche, combining both the social media-specific and health-specific aspects of the subject. This layer encompasses both 'influencers' and 'opinion leaders', while also specifying the field of expertise – health (including public health and healthcare), wellness, fitness, nutrition, mental health, and others. Chew, Mohamad and Salleh [5] point out that 'health opinion leaders' on social media actively disseminate health messages to shape the views and behaviours of their audiences. In healthcare, the influence of these leaders is seen in two main dimensions: the exchange of information, and their impact on both medical professionals and the general public. [49-5] Their messaging on social media can reach a wide audience, including their peers. They provide advice and guidance that can shape attitudes toward health.[49-19] Some studies also refer to these figures as 'health celebrities[19]', highlighting their capacity to build parasocial relationships with their followers while delivering health information.[5-26] In their study, Lynn-Sze and Kamaruddin [31] refer to public health opinion leaders as individuals who use social media to rally support for their campaign and implement community health initiatives.
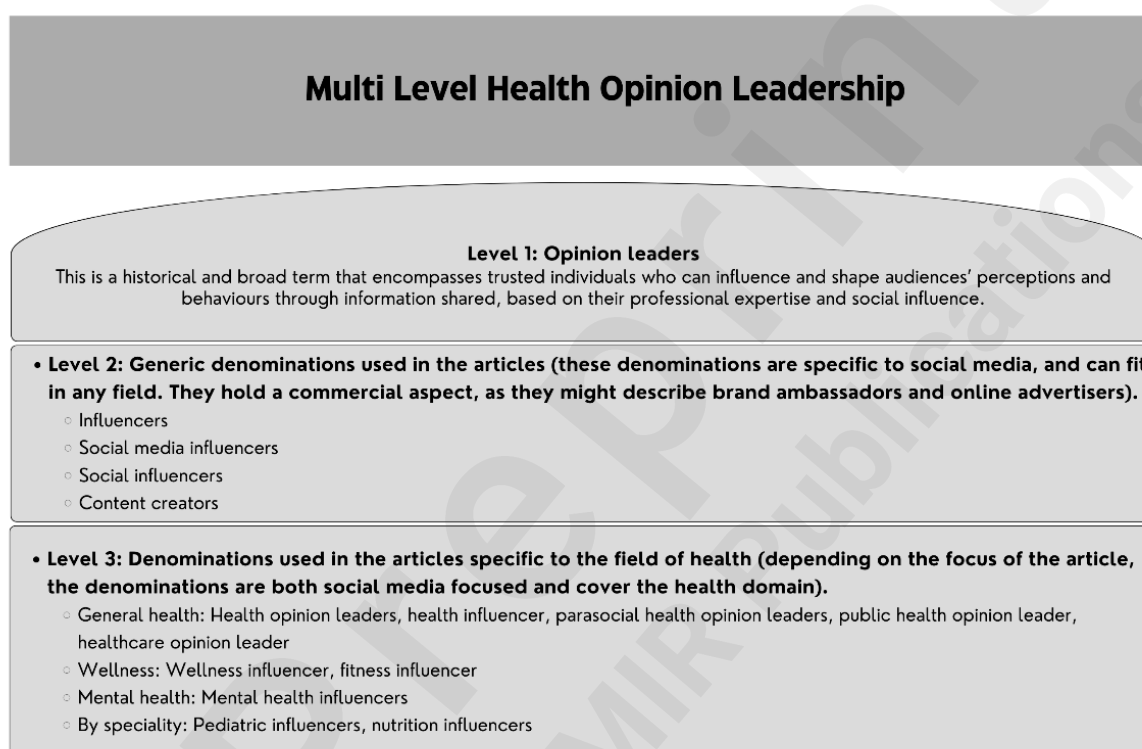
Health influencers play a key role when communicating health messages, evoking emotional connections, and promoting behaviour changes[23-11] – a role that rests on their position to foster relationships with large audiences through social interactions.[23] Engel, Gell, Heiss and Karsay [12] highlight the categorisation of health influencers based on the specific health topics they cover. Different types of health influencers emerge from eight of the studies they reviewed, among them mental health influencers, food influencers, and fitness influencers. Fitness influencers, for instance, are identified by their focus on physical activity, often being personal trainers or athletes who gained popularity by sharing fitness-related information online.[50-51-12-52-32] Similarly, wellness influencers grow their following by sharing their personal health journeys, while mental health professionals use social media to make wellbeing and self-help content more accessible to the public.[24-30]

Medical social influencers, defined as those with certified medical qualifications, are recognised as credible sources of health-related content and are viewed as key opinion leaders within social media communities.[28] Medical doctors also have the potential to become SMHOLs, as their medical expertise allows them to influence public opinion on health matters.[53-26] Bozzola, Staiano, Spina, Zamperini, Marino, Roversi, Corsello and Ferrara [33] , for example, documented the role of paediatricians skilled in communication as influencers in combating medical

misinformation.

The SMHOLs in this level may include both individuals with credentials and those without, creating a mix of expertise levels. While the specificity of this level offers a clearer understanding of the role and scope of health opinion leaders, it also uncovers a challenge. When content shared by credentialled opinion leaders appears alongside those without formal qualifications, it may threaten the integrity and perceived trustworthiness of both parties' communications. For the benefit of the audience, a distinction based on credentials may be necessary to differentiate the sources of health information.

Figure 3: Opinion Leadership Three Level Naming Structure



**Multi Level Health Opinion Leadership**

**Level 1: Opinion leaders**
This is a historical and broad term that encompasses trusted individuals who can influence and shape audiences' perceptions and behaviours through information shared, based on their professional expertise and social influence.

- **Level 2: Generic denominations used in the articles (these denominations are specific to social media, and can fit in any field. They hold a commercial aspect, as they might describe brand ambassadors and online advertisers).**
  - Influencers
  - Social media influencers
  - Social influencers
  - Content creators

- **Level 3: Denominations used in the articles specific to the field of health (depending on the focus of the article, the denominations are both social media focused and cover the health domain).**
  - General health: Health opinion leaders, health influencer, parasocial health opinion leaders, public health opinion leader, healthcare opinion leader
  - Wellness: Wellness influencer, fitness influencer
  - Mental health: Mental health influencers
  - By speciality: Pediatric influencers, nutrition influencers

## *Credentialled and Non-Credentialled SMHOLs*

In addition to the lack of agreement on the definitions and identification used to describe SMHOLs, the analysis of the articles also revealed a gap in distinguishing between credentialled and non-credentialled SMHOLs. Wellman [54]-[24] stated that some SMHOLs may hold degrees or certifications in health-related fields, blurring the line between formal expertise and perceived authority. Some health opinion leaders without any medical background can still influence large audiences, potentially leading to the spread of inaccurate health information[28]-[55]-[19]-[5]; others, such as doctors, use social media to share their expertise and solidify their status as knowledgeable SMHOLs.[23] Ngai, Singh and Lu [28] define medical social influencers as individuals who possess formal medical qualifications, and offer credible advice on health-related topics.

Certified medical doctors, due to their expertise, have the potential to become influential health opinion leaders, capable of shaping public opinion and influencing health-related decisions.[53]-[26] The importance of this distinction has been highlighted in several studies and in different health-related areas. Jenkins, Ilicic, Molenaar, Chin and McCaffrey [27] made a clear distinction

between 'nutrition professionals' and 'social media influencers', highlighting the importance of formal qualifications in building credibility in the health field. Similarly, Byrne, Kearney and MacEvilly [48] categorised influencers as individuals sharing advice on food and nutrition, though many are not qualified dietitians or nutritionists and may sometimes disseminate misinformation or unverified claims.[29]

When audiences do not have trouble identifying credentialled sources it enhances public trust, reduces the spread of misinformation, and supports informed decision-making about health behaviours and preventive measures. In addition, a clear distinction will benefit researchers by facilitating more rigorous analysis of health communication strategies and outcomes. By examining these dynamics, researchers and public health professionals can develop targeted strategies that elevate the role of qualified experts, promoting accurate health education and fostering a healthier, better-informed society.

## Perspectives of SMHOLs in Public Health Promotion

The reviewed studies have adopted different theoretical frameworks to explain how SMHOLs best succeed in promoting public health messages, either through deliberate strategies or based on individual characteristics.

The perspective of Ngai, Singh and Lu [28] belongs to the deliberate category. They consider health communication as dialogic and interpersonal strategies to foster public engagement with influencers' health messaging, identifying five key dimensions: information usefulness, interactive dialogic loops, affectivity, connectivity, and collectivity. This strategy promotes public health messages by making them feel personal and relevant. Along the same line, the transportation theory [56] has been applied in an examination of SMHOLs' use of engaging stories, with results suggesting that stories can deeply immerse audiences, making them more receptive to health messages.[23] However, in this study, the researchers also relied on the extended parallel process model (EPPM); this framework explains the interaction between a SMHOL's fear-inducing message content and efficacy information, which when combined are likely to result in behavioural change.

Focusing on individual characteristics, Jenkins, Ilicic, Molenaar, Chin and McCaffrey [27] applied self-determination theory (SDT), which suggests that a SMHOL's alignment of thoughts, feelings, and behaviours with true identity is a crucial factor in enhancing their credibility and making them more effective messengers. The source credibility theory (SCT) has a similar focus on the individual; with roots in celebrity endorsement literature,[57]-[24] it originally comprised expertise, trustworthiness, and attractiveness. Wellman [24] extends SCT with the concept of 'positionality', recognising that SMHOLs' sociocultural background and status add depth to their perceived authenticity, reflecting the complex cultural context in which they operate. SCT further underscores the role of social role models, suggesting that individuals adopt behaviours by observing opinion leaders and their outcomes, similar to learning from personal experiences.[58]-[59]

The parasocial relationship theory bridges strategy and individual qualities, highlighting how followers develop an intimate yet one-sided bond with influencers. Adopted by Chew, Mohamad and Salleh [5], it studies the phenomenon in which followers develop a one-sided intimacy with influencers. This type of relationship could be built from a SMHOL's deliberate tactics, but it could also be the outcome of the traits they showcase. Regardless of the means,

the personal content shared by SMHOLs contribute to their followers' perceptions of them as authentic and relatable, building a trusting and loyal connection that enhances their impact on public health promotion. Together, these frameworks reveal how SMHOLs leverage both strategic communication and personal authenticity, making them powerful agents in modern health communication.

## Health Promotion Techniques and Strategies by Social Media Health Opinion Leaders

The studies included in the review have revealed several health promotion techniques adopted by SMHOLs. These techniques have been analysed and then grouped into key strategies (see Figure 4).

### *Communication techniques*

Building on the analyses and the previously outlined perspectives, we have identified four categories of health promotion strategies.

- o **Adapting information**

Many communication techniques are highly dependent on the affordances offered by the social media platform, although they still rely on the deliberations of the content creator. Visual and interactive content, such as videos, photos, and infographics, are vital in making complex health information digestible and appealing to the public.[34]-[33] The proper use of platform-specific tools, like reels and hashtags, also enhances engagement and facilitates the spread of health messages.[29]-[20] Tailoring messages to specific audiences is another effective strategy; this includes modifying communication to suit the beliefs and perceptions of their followers, thus enhancing engagement.[22] SMHOLs often connect with their audiences by using personalised, relatable content, which fosters a sense of community.[20] Creating this connection is essential for building trust, and is often based on the use of informal and friendly language to make health advice more accessible.[19]-[28] Engaging followers through comment sections or community hashtags further strengthens these relationships.[20]

SMHOLs with an expertise in nutrition should use evidence-based content and interact with their audience to correct misinformation.[29] The content used in mental health promotion is often tailored to specific populations, for instance by simplifying psychological theories or incorporating interactive elements. This type of tailoring has shown to be effective in improving mental health literacy,[30] particularly when combined with the construction of parasocial relationships that set the stage for deeper engagement with health messages.[30]

- o **Building relationships**

SMHOLs often develop parasocial relationships with their followers, strengthening their influence. These relationships, based on the opinion leader's lived experiences and personal narratives, help create a sense of intimacy and relatability.[60]-[61] Combined with scientifically grounded content, the personal stories and experiences contribute to a sense of authenticity. Public health organisations have capitalised on the relations and authenticity built by SMHOLs by providing them with accurate, verified information, which the SMHOLs in turn adapt to resonate with their audience.[21] The integration of persuasive language techniques, along with a

culturally appropriate tone, further enhances the impact of health communication on social media.[20]-[27] However, sponsored content can sometimes undermine authenticity, as followers may perceive paid posts as less genuine.[29]

o **Evoking emotional responses**

Several studies stress the importance of using theory-driven strategies in message development. One of the highlighted theories is the aforementioned extended parallel process model, which posits that the likelihood of someone acting on a message depends both on the perceived threat and on the individual's perceived efficacy. In fact, key concepts such as self-efficacy and response efficacy play a role in encouraging behavioural change by helping audiences believe in their ability to take action.[58]-[32] For instance, fear-inducing messages, when paired with efficacy information, are more likely to result in action by the recipient.[23]

o **Engaging through stories**

Stories capture audiences by engulfing them in an alternative narrative, according to the transportation theory. Narrative evidence, through personal stories and testimonials, elicits emotional responses, while statistical data engages cognitive reactions.[23]-[62] Effective dissemination of health information depends on dialogic communication, interpersonal influence, and the identification of appropriate channels for sharing content.[28]-[25]

## Health Opinion Leaders' traits and characteristics

SMHOLs employ various health promotion techniques, leveraging their personal attributes to build trust and influence. Multiple studies highlight the role of SMHOLs as trusted messengers due to their perceived authenticity, personality, and expertise.[21] Followers often view these opinion leaders as educators who provide appreciated health advice, with five key attributes emerging: personality, authenticity, trust/credibility, professional knowledge, and social standing.[31] These attributes contribute to their success, as audiences perceive SMHOLs as reliable sources who communicate in simple, accessible language.[12] However, the health promotion techniques encountered in the selected studies rely mainly on authenticity and trust.

o **Characteristics of authenticity that foster trust**

Adhering to the self-determination theory, with its emphasis on authenticity reflecting identity across thoughts, feelings, and behaviours, many SMHOLs make an effort to promote trust through credibility. One way to enhance trustworthiness is by listing professional credentials and incorporating scientific references into their content.[20] Transparency and consistency are also vital for maintaining trust, particularly in the wellness sector.[24] Studies have shown that healthcare professionals who maintain professionalism online, such as nurse practitioners, are often seen as more credible, leading to improved patient health outcomes.[27] For instance, Jenkins, Ilicic, Molenaar, Chin and McCaffrey [27] found that young adults perceived nurses' posts on Instagram as more trustworthy and authentic compared to those of social media influencers, emphasising the importance of professional knowledge in fostering trust. Conversely, in the fitness domain partnerships with the more trusted health communicators are recommended to improve message credibility; fitness influencers also rely on their

personal experiences as athletes or professional trainers to share health advice.[32]

o   **Characteristics that build relationships**

Expertise and attractiveness, in addition to trustworthiness, are core attributes in the source credibility theory; moreover, recent works have added positionality to this list.[24] In other words, a credible source of information is not only a trustworthy expert, but also someone to look up to due to their perceived attractiveness and sociocultural position. Many SMHOLs demonstrate their expertise through disclaimers, sharing their qualifications and sources of information to bolster their authority.[24] The impact of expert power on influencing followers' beliefs and behaviours is well-documented, with followers valuing not only knowledge but also the ethical and professional conduct of SMHOLs.[35-26] Consequently, a SMHOL may gain a leadership role in the eyes of their followers and, according to the parasocial leadership theory, this could make the bond between communicator and follower even stronger.[63] Indeed, SMHOLs are often seen as experts due to their active participation, confidence, and ability to provide accurate information.[5]

Overall, the effectiveness of SMHOLs in health promotion relies on a combination of trust, authenticity, expertise, and their ability to form parasocial relationships with followers. These factors create a powerful connection that enhances the influencers' ability to shape health attitudes and behaviours and be successful as health promoters.

Figure 4: Health Promotion Strategies by Social Media Health Opinion Leaders
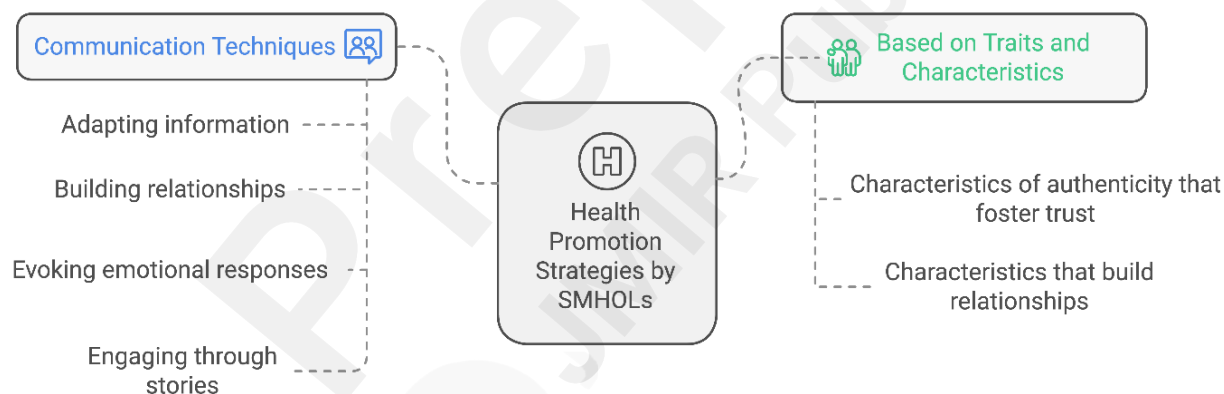


## Strengths and limitations of the study

This scoping review provides a structured analysis of SMHOLs as pivotal figures in public health promotion. A notable strength is the breadth of theoretical frameworks applied from the selected studies, which offers a comprehensive understanding of SMHOL strategies and their impact as actors in health promotion. Additionally, by categorising SMHOLs based on their credentials and field of work, this study clarifies distinctions that are essential for evaluating credibility in public health contexts. However, the scope of the study was limited by the recent publication dates of relevant articles. While articles published between 2014 and 2024 were considered, the earliest included study was published in 2019, thus narrowing the evidence base to a small pool of recent studies. This limited temporal range resulted in a smaller selection of reviewed studies than anticipated.

## Recommendations

To enhance future research and practice in the field of social media health opinion leadership, the following recommendations are proposed:

● *Establish consistent terminology*. Develop a clear naming structure for SMHOLs based on social media focus, health specialisation, and differentiation between formal (credentialled) and informal (non-credentialled) influencers, to provide clarity in both academic and public health contexts.
● *Define health promotion strategies*. Identify and standardise health promotion techniques specific to SMHOLs, enabling a more structured approach in this field and improving the evaluation of their effectiveness in diverse health campaigns. This standardisation would also benefit SMHOLs by providing them with a roadmap to effective and professional health promotion.
● *Develop guidelines for campaigns*. Draw up and implement guidelines that match specific SMHOLs to appropriate health campaigns, considering both their area of expertise and engagement style. By aligning the right influencers with the right campaigns, public health initiatives may achieve higher levels of audience engagement and impact.

These recommendations aim to foster a more rigorous and impactful integration of SMHOLs in public health communication.

## Conclusion

Establishing precise terminology and definitions for SMHOLs is crucial to understanding their distinct roles in public health promotion. This review categorises SMHOLs into three main types based on their credentials and professional involvement (see Figure 5). 'Health opinion leaders' are credentialled health professionals who influence public perceptions and behaviours without engaging in commercial endorsements or branded content. 'Health influencers' are also credentialled but incorporate commercial elements, such as sponsored posts and brand partnerships, into their health communication. Finally, 'influencers' lack formal health credentials and primarily function as content creators, often monetising their platforms through brand deals and advertisements. This framework enables a clearer distinction among SMHOLs, which is essential for assessing their credibility and impact in the context of public health.

Figure 5: Suggested Terminology for Social Media Health Opinion Leaders
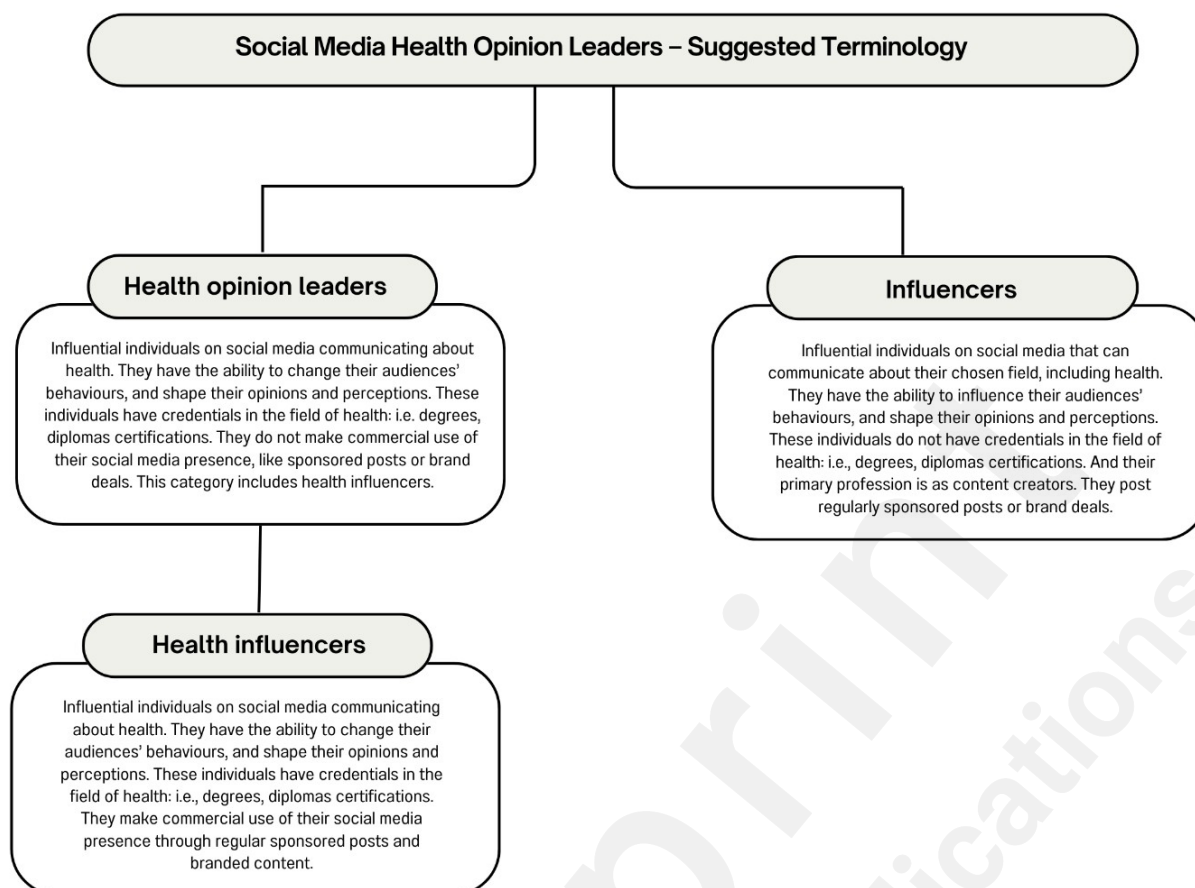
The effectiveness of SMHOLs in promoting health messages arises from their ability to blend strategic communication with personal authenticity. Theoretical frameworks presented in this review suggest that SMHOLs not only create engaging health content, but also build a relatable and credible persona that resonates with audiences.

Based on this review, several health promotion strategies used by SMHOLs emerge as influential in modern public health communication. Key strategies include:

● Adapting health information to the unique affordances of each social media platform and its target audience.
● Building relationships with followers through engaging, interactive communication.
● Evoking emotional responses, coupled with efficacy information, to enhance message impact.
● Sharing narratives and stories, supported by narrative evidence, to foster engagement and perceived connection.
● Demonstrating authenticity, which yields trust and enhances credibility.
● Showcasing expertise through both personal and professional content, strengthening perceived authority.

These strategies underscore the power of SMHOLs as critical actors in shaping health-related behaviours in the digital era, as they skilfully combine professional insight with personal engagement based on self-presentation and identity expression (authenticity, trustworthiness, physical appearance, sharing personal experiences).

## Author Contributions

All the authors conceptualised the study. The first and second authors led the literature review, with contributions from the third and fourth. The first author had the main responsibility for the investigation, formal analysis and data curation. The second author led the methodology, and the first author led the data analysis with contributions from the other three authors. All authors contributed to the development of the analysis plan, collection and analysis of primary data, and data interpretation. The first author wrote the initial draft, including visualisations; the third and fourth reviewed and edited the initial draft; all the authors critically reviewed the revised draft of the manuscript. Supervision and project administration were performed by the third and fourth authors. All the authors have read and approved the final draft.

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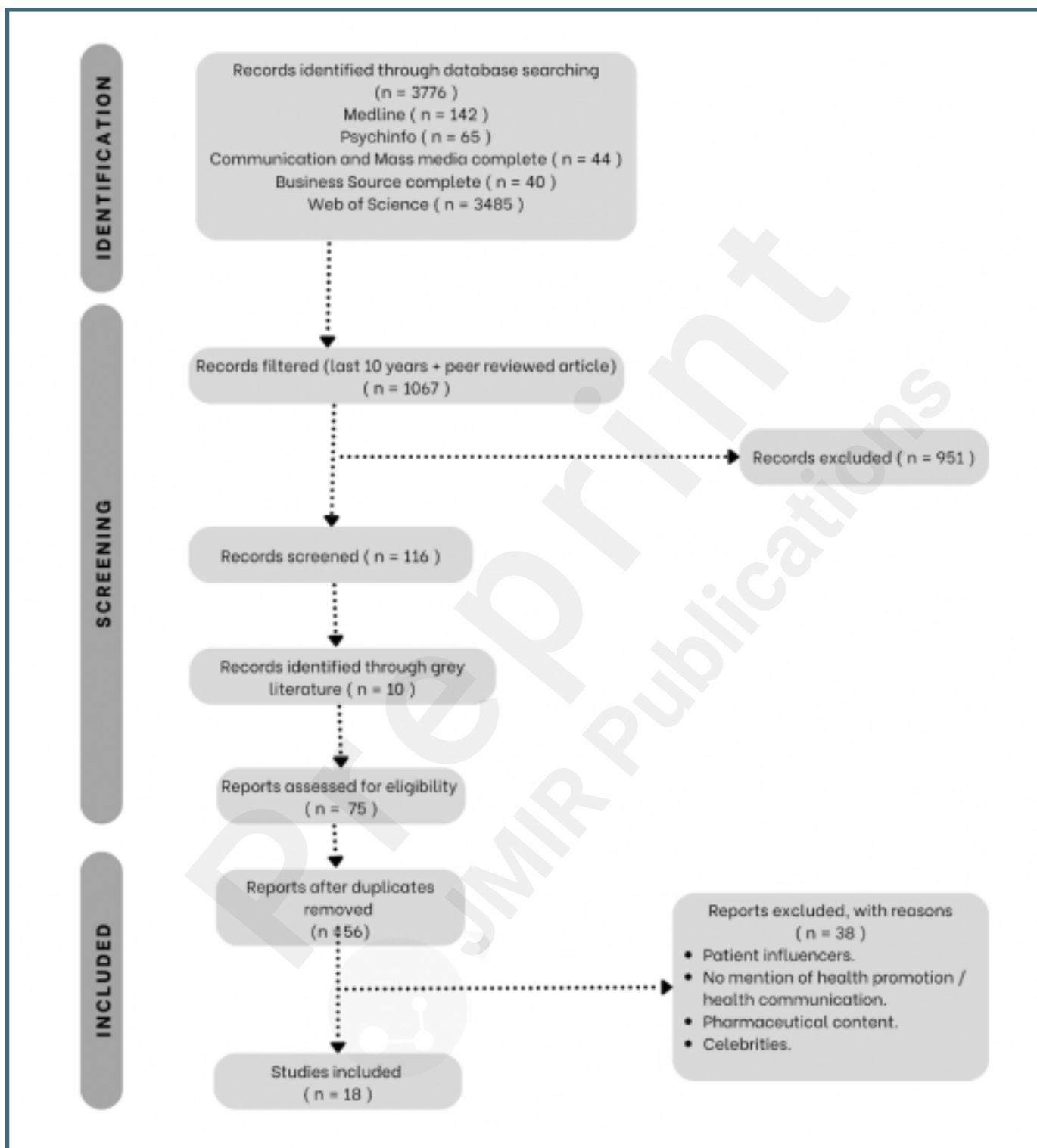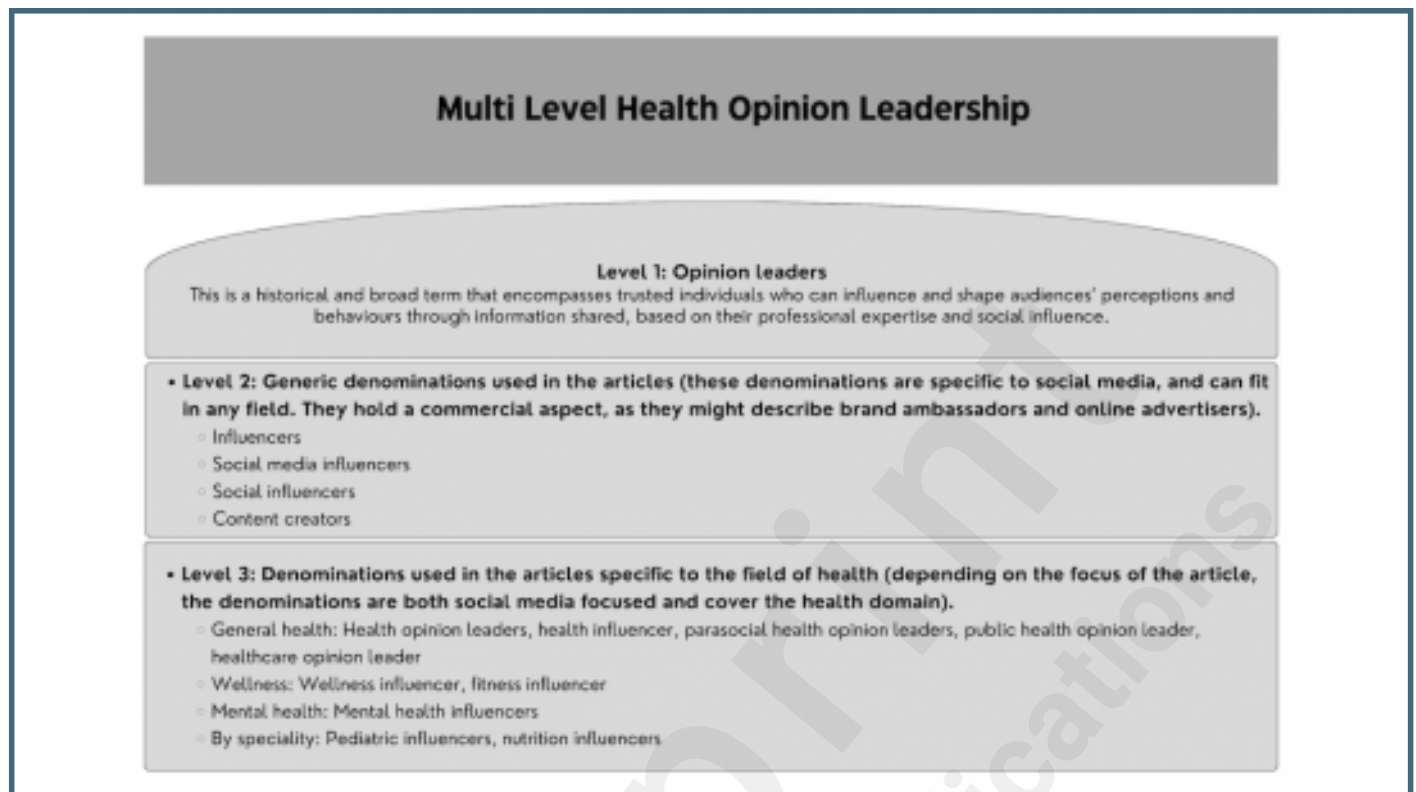
# Supplementary Files

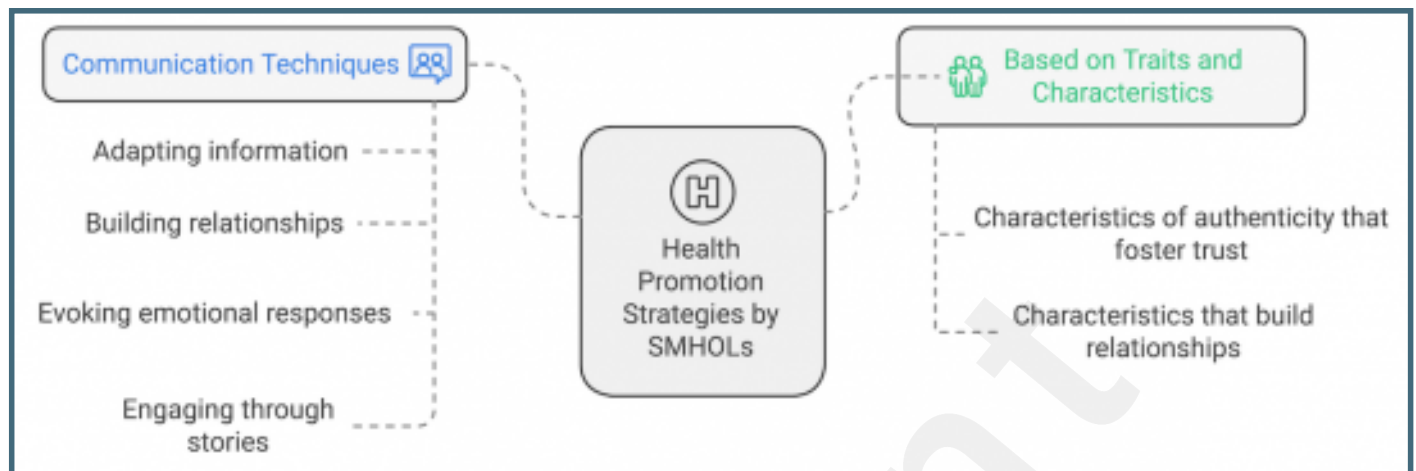# Figures

Inclusion and Exclusion Criteria.
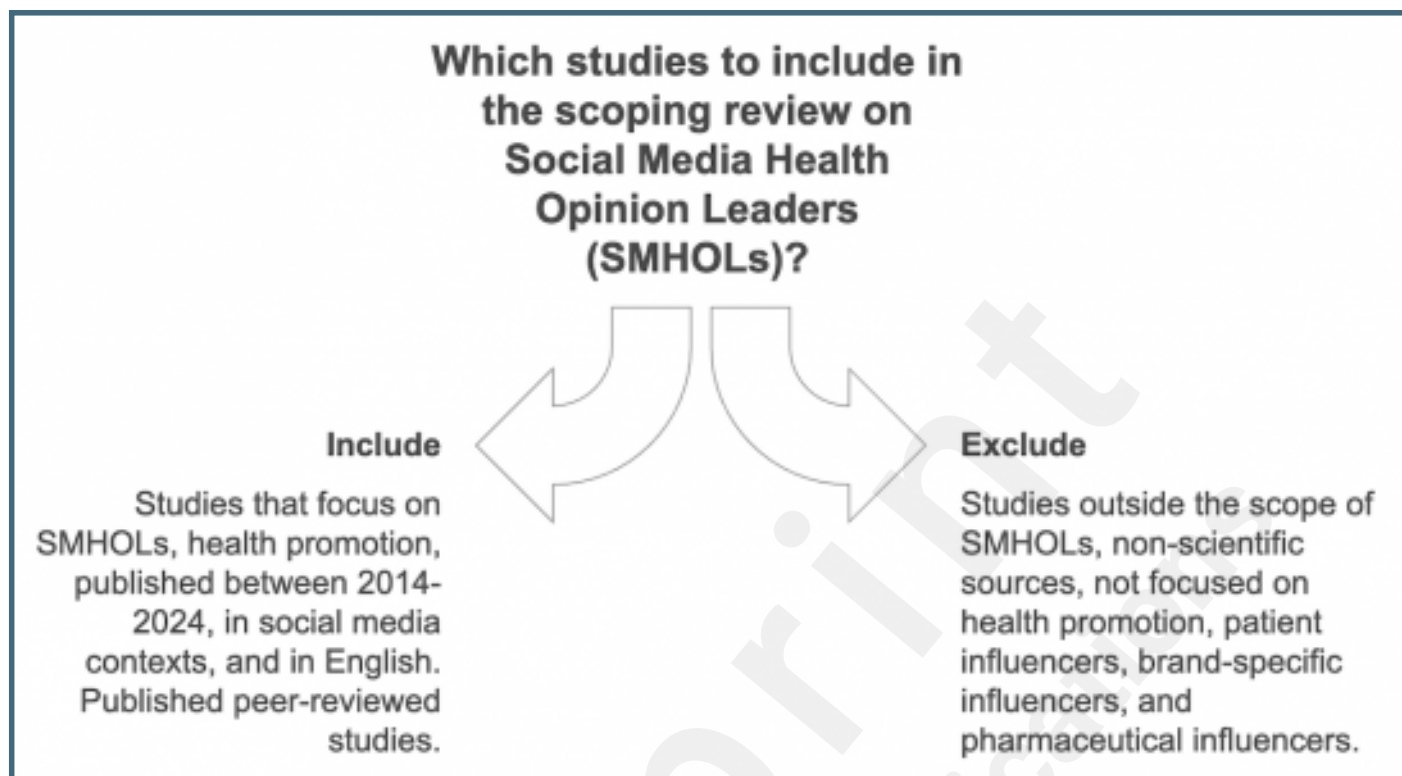
Flow Chart of Search Process Based on PRISMA Approach.

Opinion Leadership Three Level Naming Structure.



**Multi Level Health Opinion Leadership**

**Level 1: Opinion leaders**
This is a historical and broad term that encompasses trusted individuals who can influence and shape audiences' perceptions and behaviours through information shared, based on their professional expertise and social influence.

- **Level 2: Generic denominations used in the articles (these denominations are specific to social media, and can fit in any field. They hold a commercial aspect, as they might describe brand ambassadors and online advertisers).**
  - Influencers
  - Social media influencers
  - Social influencers
  - Content creators

- **Level 3: Denominations used in the articles specific to the field of health (depending on the focus of the article, the denominations are both social media focused and cover the health domain).**
  - General health: Health opinion leaders, health influencer, parasocial health opinion leaders, public health opinion leader, healthcare opinion leader
  - Wellness: Wellness influencer, fitness influencer
  - Mental health: Mental health influencers
  - By speciality: Pediatric influencers, nutrition influencers

Health Promotion Strategies by Social Media Health Opinion Leaders.

Suggested Terminology for Social Media Health Opinion Leaders.