

THE QUALITY OF HEALTH PARASOCIAL OPINION LEADERS ON SOCIAL MEDIA. A LITERATURE REVIEW

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ABSTRACT

The growing popularity of social media usage has led to growing social media revolution capable of replacing traditional communication media. This landscape change not only helps individuals in communicating, searching for health information and thus sharing information on social media, but also promoting changes in the types and functions of health opinion leaders. Social media opinion leaders have more autonomy in determining content agenda and direction that they intend to convey to and share with their followers. Individuals now make decisions on health issues without relying entirely on the advice of doctors or professional bodies as they are also persuaded and influenced by the parties they deem trustworthy, including opinion leaders. Therefore, it is important for us to understand the process that these opinion leaders go through in creating health messages on social media and the quality of relationship they have with their followers. This paper will discuss past literature and research on the model of parasocial opinion leadership between health opinion leaders and their followers who use social media to communicate and consult on health issues and messages in the relationship process as well as to examine the issues and circumstances of health opinion leaders that exist on social media from the health perspective. 10 out of 545 articles have been identified for analytical purposes in tandem with the observed theme. The analyses of the studies illustrate a situation in which the characteristics of opinion leaders may influence the attitude and behaviour of the audience in health context. However, studies on the functions of health opinion leaders in social media are still lacking.

Keywords: Opinion Leadership, Parasocial Relationship, Parasocial Opinion Leadership, Health communication, Social Media, Two Step Flow Communication

INTRODUCTION

Opinion leaders have been around in politics as early as the 1940s and have been studied by Lazarsfeld et al. in the United States' presidential election (Lazarsfeld et al. 1944). Opinion leaders are individuals who indirectly influence one's opinion, behaviour, and thought in certain ways (Katz & Lazarsfeld 1955; Rogers & Shoemaker 1971). Lazarsfeld et al. (1944) stated that the mass media does not affect individuals directly, but rather try to access opinion leaders and then deliver information and interpretation to the opinion leaders for further dissemination (Katz 1957). Opinion leaders can play the roles of mediators, intermediaries, middlemen, and translators in the process of communicating information by explaining the available evidence, adjusting the guidelines to take into account the local views and situations, and generate consensus (Locock et al. 2001). Opinion leaders are part of a wider process. Therefore, the important point of opinion

leadership is the relationship and dynamics between two or more individuals (Locock et al. 2001). The term opinion leader also exists in many areas including health (Weimann 1994).

However, changes in media technology and landscape have promoted drastic changes in the types and functions of opinion leaders from traditional media to new media and opinion leadership has also evolved in a changing media environment (Schafer & Taddicken 2015; Rachele 2018). Social media existence does not only result in evolution amongst opinion leaders (Emma, & Wan 2017), but also provides the opportunity for health opinion leaders to disseminate opinions and ideas to their followers easily (Inceoğlu, Özçetin, Gökmen Tol, & Alkurt 2014). Apart from that, opinion leaders influence practical policies on how to promote the dissemination of new technologies in healthcare organisations (Hao, Padman, & Telang 2011). Emma and Wan (2017) also mentioned that individuals now not only make health decisions without relying entirely on the advice of doctors or professional bodies anymore, but they are also persuaded and influenced by those they deem trustworthy including opinion leaders. Besides, opinion leaders relate to new ideas and they have adequate interpersonal skills to influence people on decision-making (Carpenter & Sherbino 2010). Opinion leaders also exist in the contexts that contain uncertainty (Anderson & Titler 2014).

However, opinion leaders on social media who do not have relevant medical backgrounds may be able to influence and attract their followers' attention, resulting in inaccurate health information being received by the followers (Emma, & Wan 2017; Inceoğlu et al. 2014). Not all individuals can distinguish and evaluate between beneficial or harmful health information (Carrotte, Vella, & Lim 2015), especially with the presence of health opinion leaders who have no medical backgrounds that may cause huge problems to the people in understanding health messages. For example, there are large Malaysian anti-immunisation and gentle birthing communities on Facebook whom neither belong to nor are they supported by medical experts and the Ministry of Health. The Facebook anti-immunisation and gentle birthing movements are a problem and constraint faced by the Malaysian Ministry of Health for the past few years. Therefore, issues regarding consciousness and ethics of health opinion leaders have an utmost importance that require due attention. The need to understand the process that opinion leaders go through in creating health messages on social media is also important to comprehend, apart from the relationship quality of health opinion leaders with their followers.

According to the Eleventh Malaysia Plan (11MP), the demand for quality healthcare had been increasing, but there were constraints on ensuring the treatment methods provided were in line with technological advances. The report also mentioned there were gaps in terms of healthcare facilities and service delivery quality which were still insufficient, the burden of diseases, the stress on the delivery, and the lack of involvement of healthcare stakeholders (Economic Planning Unit, Prime Minister's Department 2015). Systematic literature review carried out by Flodgren et al. (2010) found that opinion leaders alone or those who have intervention strategies are able to give high impact and influence on health promotion strategies. These healthcare opinion leaders can provide advice based on evidence and their experience. Nevertheless, Flodgrean et al. (2010) stated that past studies gave little emphasis and in fact ignored the focus on the opinion leaders' role in promoting health. Hence, the means of communication between opinion leaders and their followers in promoting health issues need to be explored in future research in order to understand their role and effectiveness. Among the studies that can be undertaken are exploring and identifying the way healthcare opinion leaders use social media to communicate health issues in

addition to the way the social media users negotiate issues. In this article, the authors will review the literature that discuss healthcare opinion leaders on social media from various angles as well as make summary and conclusion for the direction of the study on this topic.

HEALTH COMMUNICATION AND THE SEARCH FOR HEALTH INFORMATION ON SOCIAL MEDIA

Social media refers to a Web 2.0 platform that allow individuals to create content for online sharing purposes. Social media is capable of providing space for its users to create and generate information in the forms of writing, pictures and videos, and sharing them with others (Kaplan & Haenlein 2010). It is an electronic form of communication for individuals or users in the online community for sharing of information, ideas, personal messages, and other contents (Cann, Dimitriou, & Hooley 2011; White 2012) in detail (Osatuyi 2012). The impact of social media such as Facebook and Twitter is increasing and it is increasingly dominated by some online strangers (Smith 2009). Social media has a great potential as an information sharing platform (Osatuyi 2013) and it has replaced traditional media (Li, Wang, Lin, & Hajli 2015). However, information sharing on social media is influenced by the existing characteristics of network and its environment (Shang, Wu, & Li 2016).

Many studies have also investigated the effectiveness of social media tools for the purpose of health delivery in the social media era (Brusilovskiy et al., 2016; Fergie, Hunt, & Hilton, 2016; Galiatsatos et al., 2016; Hollinderbäumer, Hartz, & Uckert, 2013; Lipp et al., 2014; Pander et al., 2014; Whyte & Hennessy, 2017). With social media facilitation, most people prefer to use it to find health information, but its usage depends on the needs of each group. The youth are more likely to refer to social networking sites to search for health information (Thackeray, Crookston, & West 2013). This was also evidenced by the study by Wu and Raghupathi (2012), which showed that access to information and communication technology has a strong relationship with the delivery of effective public health. In addition, social media users are also individually active in generating health content (Fergie, Hunt, & Hilton 2016). Individuals search for health information to increase their knowledge of treatment and diagnosis process, which help them to practise healthy lifestyle (DeChoudhury, Morris, & White 2014).

However, there exists challenges with regard to the reliability of health information, which can be a barrier in the quest for information (Payton, Kvasny, & Kiwanuka-Tondo 2014) and health information search through the Internet remains a complex and complicated activity. The vast amount of information is not necessarily easily accessible online by general users (Zhang et al. 2012), especially for individuals who need a language that is easy to understand rather than a scientific one (Payton et al. 2014). In this regard, health scientific languages found on the websites become a constraint that contribute to individual's tendency to return to obtaining information from traditional sources (Saad et al. 2013).

SOCIAL MEDIA AND OPINION LEADERS IN HEALTH COMMUNICATION

Opinion leaders have existed since the 1970s in various fields, namely marketing, fashion, politics, family planning, science, agriculture as well as healthcare (Weimann 1994). According to Weimann, in healthcare, opinion leaders' personal advice and guidance played an important role

in two dimensions of healthcare, which are the exchange of information and influence among medical experts and non-professional public. Both dimensions indicate the important role of personal influence of medical experts and staff towards patients as documented in the study. Healthcare professionals and patients have certain relationships in the concept of healthcare opinion leadership. Healthcare opinion leaders are able to provide guidance, advice, and information to influence decisions and attitudes of an individual (Weimann 1994).

The concept of opinion leadership in the healthcare domain for information dissemination and acknowledgement of healthcare practices has been proven, especially in terms of awareness, knowledge, technology, or new practices (Weimann 1994). According to Weimann, studies involving the activation of opinion leaders among the professional communities had previously revealed the practical values of medical opinion leaders that can act as the positive driving force of innovation, practices, and knowledge for individuals. In addition, Carpenter and Sherbino (2010) mentioned in their study that professional healthcare experts may use opinion leaders to influence someone positively.

Previous studies have identified the way the opinion leaders have been trained to emphasise the health aspects. Opinion leaders can act as a medium by intervening to help change social norms and speed up changes in one's behaviour (Valente & Pumpuang 2006). Their studies also proved that health celebrities are opinion leaders who are able to play an important role in promoting health aspects and influencing the target in the community. These health celebrities use their status and influence to promote changes in the behaviour of their target audience. The view that celebrities are opinion leaders is also supported by Chia and Poo (2015) and also Foong and Yazdanifard (2014). Chia and Poo (2015) noted that celebrities play a role as leaders in influencing followers to make decisions and change their attitudes. The existence of opinion leaders in healthcare as a point of reference and guidance has been proven by Disch et al.'s (2016) study.

However, changes in the media landscape motivates the style of opinion leadership to change from old to new media (Schafer & Taddicken 2015), this also support by Rachele (2018). According to Schafer and Taddicken, opinion leadership can be found in a changing media environment and opinion leaders who exist in social media are different compared to other opinion leaders as these opinion leaders use various media resources to obtain information and interact with others. Opinion leaders are important in the social network stream of information, especially Facebook, which has been an important platform (Karlsen 2015). Social media existence also helps opinion leaders to communicate health messages and issues with followers easily, quickly, and openly (Emma & Wan 2017). They also stated that social media has provided the users a platform to hold various discussions and share information on health issues with each other. Besides, health opinion leaders have different statuses in social media as they appeal to their followers in information dissemination and opinion interaction (İnceoğlu et al. 2014).

In Malaysia, the study by Emma and Wan (2017) showed that opinion leaders play an important role in reducing health problems and they are able to influence one's health attitudes and behaviours. The study also found that not only individuals today make decisions related to health issues without relying entirely on doctor's advice, but also rely on those who they deem trustworthy. These people do not normally need to have medical expertise to be seen as trustworthy in giving medical advice. However, the authority boundary of health opinion leaders on social media is still ambiguous (İnceoğlu et al. 2014). İnceoğlu et al. pointed out that health opinion leaders who exist

on social media need to have extensive expertise and authority boundary for them to spread the relevant information through social media.

The existence of opinion leaders in social media is likely to be due to the interests of their followers, with both sides taking part in creating important issues and disseminating information. The existence of new media contributes towards the increase in opinion leaders' efficiency in changing their followers' attitude from passive to active (Hwang 2015). San, Hasan and Shamshudeen (2014) mentioned that an in-depth study needed to be conducted on information searching behaviour and conversation through interpersonal communication that will affect one's health behaviour decisions. San et al. also stated that the behaviour in searching for health information plays an important role in reducing uncertainty, anxiety, and stress as well as improving personal care.

THE CONCEPT OF OPINION LEADERS IN TWO-STEP FLOW COMMUNICATION

The concept of opinion leaders was founded by Lazarsfeld in the two-step flow of communication in 1940. Lazarsfeld studied and collected a research on the 1940 election to identify voting patterns and the relationship between media and political forces. Lazarsfeld found that the majority of the public were still worried about the propaganda during the election campaign. In contrast, interpersonal relationships with others proved to be more influential than that of the media. Not all campaigns had an impact on the target audience, in fact individuals could choose on their own the messages that really affected them (Katz 1957, 2015; Katz & Lazarsfeld 1955). This was due to only a small percentage of voters changed their mind on the previously made stand. This situation showed that mass media had no significant influence on the voters' stand. Voters are more influenced by information than interpersonal communication in their area (Mohd Yusof 2015). This model is important in the aspect of opinion leaders as individuals in the community who receive information from the media and disseminate it to others.

Opinion leaders are deemed important in interpersonal communication studies because they influence the views and behaviours of others through interpersonal discussions. Opinion leaders not only have a great influence on individuals' actions and behaviours through the media, in fact they are also seen as trustworthy and their own audiences do not feel that they are being deceived. Therefore, opinion leaders have an important role in determining one's opinions or actions (Katz 1957).

However, there is a shortcoming in the two-step flow communication because in reality, information on important events through mass media totally reach the audience directly and not through opinion leaders. Audience interact on important topics they receive through the media. Opinion leaders only have further information that can correct, validate, and so forth. This situation emphasises the importance of using the two-step communication flow hypothesis carefully with limitation in explaining the early information process of mass communication (Deutschmann & Danielson 1960). Opinion leaders exist in new media environment (Schafer & Taddicken 2015a, 2015b) and they leverage on various media and communication channels to convey messages to their followers (Schafer & Taddicken 2015b). The contemporary social media environment has renewed interest in the concept of two-step flow generally, and opinion leadership specifically (Rachele 2018). While many research on opinion leaders have been conducted, past studies do not

provide a model that explains the means and reasons the mass media personalities can function as opinion leaders (Stehr et al. 2015).

According to Stehr et al. (2015), theories and models need to be based on the relationship explanation between media users and opinion leaders. Media personalities also use their influence in parasocial relationships. Stehr et al. mentioned that parasocial relationship exists among opinion leaders. They incorporated parasocial relationship with opinion leaders as a new model in their research and stated that parasocial opinion leaders' influence is based upon personal relationship in communication between two individuals. One's parasocial relationship in the media can influence the process of generating opinions. Media users also develop a relationship scheme with media personalities to maintain parasocial relationship.

This approach can be used for further research on the opinion leaderships as it can measure the real impact of their influence. In the future, it will provide an environment to observe how the media environment changes, especially with the emergence and prevalence of social media (Stehr et al. 2015). Kim et al. (2015) showed that a new media especially social networking sites promotes parasocial relationship which alongside celebrity reputation, persuades the users to make decisions. This study showed that new media stimulates audience's desire and the environment of the new social media networking sites gives celebrities more power to influence their followers' decisions. They found that audiences are more inclined to form parasocial relationship with celebrities. Audience see celebrities as trustworthy and non-risky individuals. A study by Chun, Kim, and Kim (2016) showed that parasocial relationship has a positive impact on media users and celebrities, influences attitudes, and gives impact on media users or their followers.

THE APPROACH OF PARASOCIAL OPINION LEADERS

Parasocial opinion leadership which was developed by Stehr et al. (2015) refers to a relationship formed between opinion leaders and their followers through the media. This parasocial relationship is a media continuum between media users and media personalities or celebrities (Rubin & Step 2000). This relationship allows media users to feel that they are in an interpersonal relationship with their favourite media personalities and see them as their best friends (Huang, Chan, & Tse 2011). Parasocial relationship is based on a clear communication process between celebrities and their supporters or followers. It is an important factor in understanding the relationship between media personalities and media users. Strong parasocial experience results in a greater commitment towards social norms and greater enjoyment as a result of such exposure (Hartmann & Goldhoorn 2011). Therefore, followers are more inclined to form parasocial relationship with opinion leaders and view them as trustworthy and non-risky individuals (Kim et al. 2015).

This parasocial relationship has the potential to generally contribute to two functions of media impact. First, parasocial relationship can serve as a motivational and guiding factor in media exposure. Second, parasocial relationship can be the intermediary variable that influences the effects of media exposure (Tukachinsky 2014). Apart from that, parasocial relationship is prone to discussions that have accepting or rejecting elements between the audience and the media characters (Horton & Wohl 1956). Horton and Wohl stated that an individual who uses direct communication style through the media can reinforce intimacy with the audience. This relationship exists when the audience think the media character seems to be among their circle of friends. This relationship is a more important factor in developing parasocial relationship as opposed to physical

attraction. Audience who see media characters repeatedly will feel as though they are as close as friends, as if they know each other and are closely bonded with them emotionally (Gregg & Schiappa, 2017; Marmor-Lavie, 2017; Rubin & McHugh, 1987). Some of them may even try to reach these media personalities through social media and play certain roles in the relationship such as interpersonal relationship. In these circumstances, they will have the opportunity to learn and see things from different perspectives or experience things they have never experienced before (Gregg & Schiappa 2017).

Media personalities have an influence on a topic of discussion due to their extensive information and great influence on opinion formation (Stehr et al. 2015). However, Stehr et al. noted that the function of opinion leader concept in explaining the impact of information and persuasion in the media is still unclear. Stehr et al. also assumed that interpersonal communication with opinion leaders becomes an alternative channel that influences interaction in the mass media.

Social media existence strengthens the relationship between opinion leaders and their followers in the digital environment. Social media such as Twitter and Facebook allow fans to be closer to their opinion leaders' life (Click, Lee, & Holladay 2013). Troidahl and Van Dam (1965) showed that opinion leaders and their followers have a specific role in the social system, with both parties sharing information in a situation. However, Stehr et al. (2015) mentioned that there is a limited understanding of the process because of the different approaches used and the ever-changing importance of research. Stehr et al. (2015) in developing the parasocial opinion leadership also stated that there are two important functions of interpersonal opinion leaders, which are the transfer and evaluation of information disseminated by the mass media. In this regard, opinion leaders obtain information from the media and disseminate it to the less active and less interested individuals through interpersonal communication.

Parasocial opinion leadership may influence followers' attitudes in terms of opinions, emotions, and actions. However, parasocial relationship between opinion leaders and their followers is not limited to influence in terms of opinions, emotions, and actions only, but also includes the attitudes of both parties (Stehr et al. 2015). According to Stehr et al., parasocial opinion leaders are capable of generating their own media information, but interpersonal opinion leaders only obtain information from the media, then combine that information with their own ideas, and then convey back the information. In addition, an individual who uses media more often is more likely to develop parasocial relationship with opinion leaders and the interaction between the perceived media content incorporating the characteristics of opinion leaders will also contribute to the relationship formation (Schiappa, Allen, & Gregg 2007). This relationship allows media users to feel that they are enjoying an interpersonal relationship with their favourite media personalities whom they deem as best friends (Huang et al. 2011).

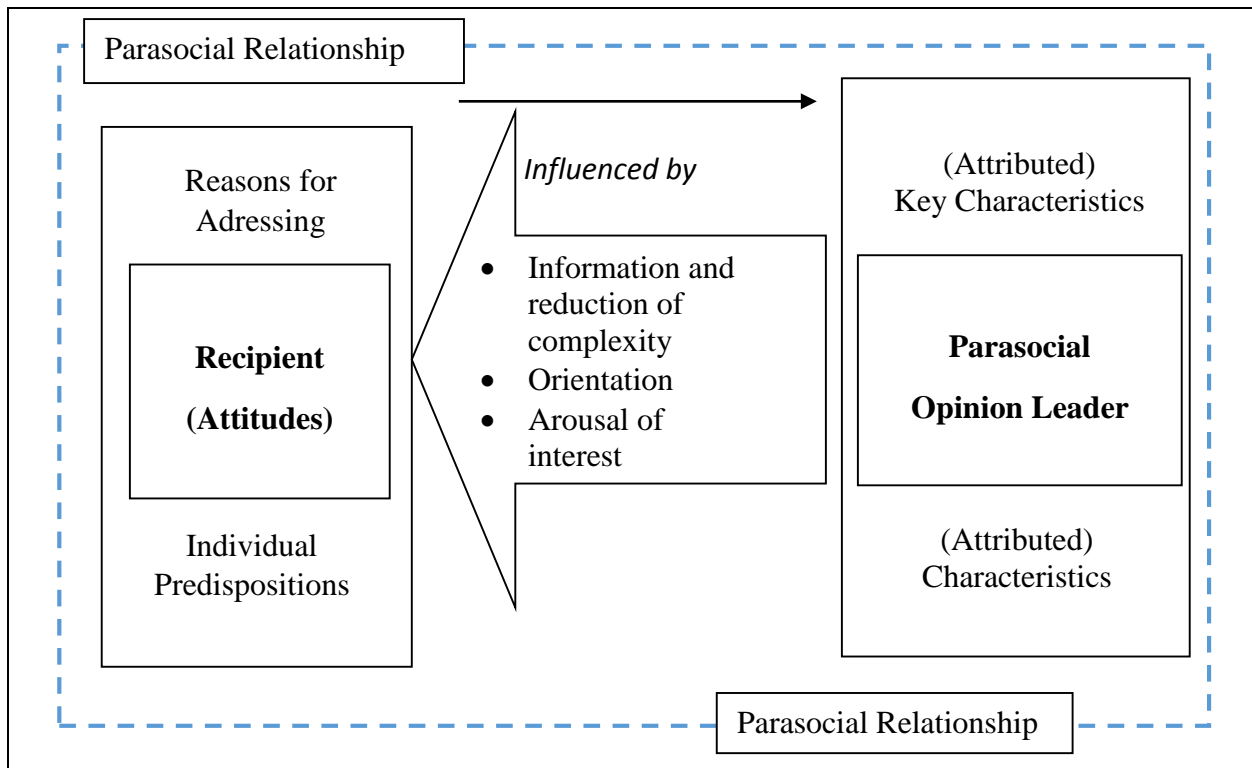
PROCESS MODEL OF PARASOCIAL OPINION LEADERSHIP

The model of parasocial opinion leadership (Figure 1) shows the process of parasocial relationship between opinion leaders and their followers. This model contains three prerequisites. The first prerequisite is the characteristics of opinion leaders, the second prerequisite is the functions that exist in the processing (information and complexity reduction, orientation, and arousal of interest), and the third prerequisite is the attitude of the recipient in the process of parasocial opinion

leadership (Stehr et al. 2015). In forming the model, at least one function will exist in the second prerequisite during the processing of opinion leaders' parasocial relationship.

Stehr et al. (2015) mentioned that parasocial opinion leadership plays an important role in influencing their followers to adapt to change. They also stated that the influence of the first prerequisite, namely key characteristics such as ability, power, and credibility that exist in parasocial relationship makes the opinion leaders a source of reference to their followers. The influence in the second prerequisite includes the main characteristics that allow the media character to take over certain functions for the particular purpose of dealing with media users. The three functions of the second prerequisite are information and reduction of complexity, orientation, and arousal of interest.

Figure 1: Process model of parasocial opinion leadership.



Source: Stehr et al. (2015)

Information and reduction of complexity

Information and reduction of complexity refers to efforts made by opinion leaders to simplify complex topics that are difficult for their followers to understand (Stehr et al. 2015) such as explaining a health issue in a simple way or using a language that is easy to understand. Opinion leaders act as spokespersons for complicated media messages and advocates for issues raised (Katz 1957, 2015; Katz & Lazarsfeld 1955). In using the media, opinion leaders are focused on exchanging and delivering information (Schafer & Taddicken 2015), the ability to reduce the

followers' feelings of uncertainty and isolation, and the frustration with existing experience (Gheorghe & Liao 2012) to help their decision-making in various situations (Chaudhry & Irshad 2013).

Orientation

Orientation refers to opinion leaders' effort in giving ideas and suggesting actions, providing detailed information, facts and news about a situation, and demonstrating to their followers the skills needed to deal with a situation (Gheorghe & Liao 2012) such as giving advice or guidance to their followers. Schafer and Taddicken (2015b) mentioned that with the changing media environment, more advice and orientation are needed to deal with large volume of information. Opinion leaders who are more knowledgeable in leadership (Raghupathi et al. 2004) provide guidance and orientation in decision-making and innovation to their followers (Grewal, Mehta, & Kardes 2000). Therefore, opinion leaders play an important role in influencing their followers' decision-making process and studies have proven that a large number of individuals still rely on the orientation by opinion leaders (Kwon & Hae 2015).

Arousal of interest

Arousal of interest refers to the ability of opinion leaders in filtering, gatekeeping, evaluating, and arousing the followers' interest (Katz 2015). For example, opinion leaders use their own ways to attract followers' attention to health issues. Opinion leaders' parasocial relationship is also able to increase followers' understanding, broaden their views, and engage them more in new or unknown topics (Stehr et al. 2015). Followers who are interested and actively participate in a particular topic will in turn give advice to others (Katz & Lazarsfeld 1955). The influence of the third prerequisite refers to the functions of the parasocial opinion leadership that may affect the recipients in terms of opinions, emotions, actions, and attitudes (Stehr et al. 2015).

Recipients establish parasocial relationship with the media by transferring information into their relationship as they characterise a particular personality for a media character. Personalities in media characters create parasocial opinion leaders (Stehr et al. 2015). Stehr et al. also developed a staggered influence model to highlight this relationship and suggested six possible levels of influence, namely (a) attention, (b) understanding, (c) trust, (d) agreement, (e) integration, and (f) action. The first influence is the recipients' attention that will guide them towards the media personality. The recipients try to understand the fact and will try to believe the statement of the personality. At the next level, the recipients agree with the messages conveyed by the parasocial opinion leaders. If the parasocial opinion leaders maintain solidarity in their relationship with the recipients, the messages by the parasocial opinion leaders may influence the recipients' actions. This model provides an opportunity to observe changes in the media environment, especially with the emergence and prevalence of social media (Stehr et al. 2015).

METHODOLOGY

Systematic review is a comprehensive method and it synthesises either towards research topics or research studies. The importance of conducting systematic review is explained by its ability to further clarify research questions as opposed to traditional review (Khan et al. 2003). According to Khan et al., systematic review can produce quality analysis based on clear questions, identify relevant studies, evaluate their quality, and summarise evidences using explicit methods. The results of past research can be synthesised based on the needs of the researchers. In this regard, a synthesis method is required to ensure researchers produce accurate and quality data. By intensifying the focus on issuing the guidelines and recommendations for practices through systematic review, healthcare professionals need to understand the principles in preparing such review and the five methods used for the review are described in Figure 2 (Khan et al. 2003). The five methods proposed by Khan et al. are widely reviewed in health context. Therefore, the systematic review used in this study is intended to look at the issues and circumstances of health opinion leaders that exist on social media. The relevant articles were identified by keyword searches on online journals, namely PubMed, Sciences Direct, SAGE Journals, Emerald, Scopus, Scholar Portal Journals, EBSCOhost, and EDP Sciences.

Figure 2: The Five Steps of Systematic Review Approach.

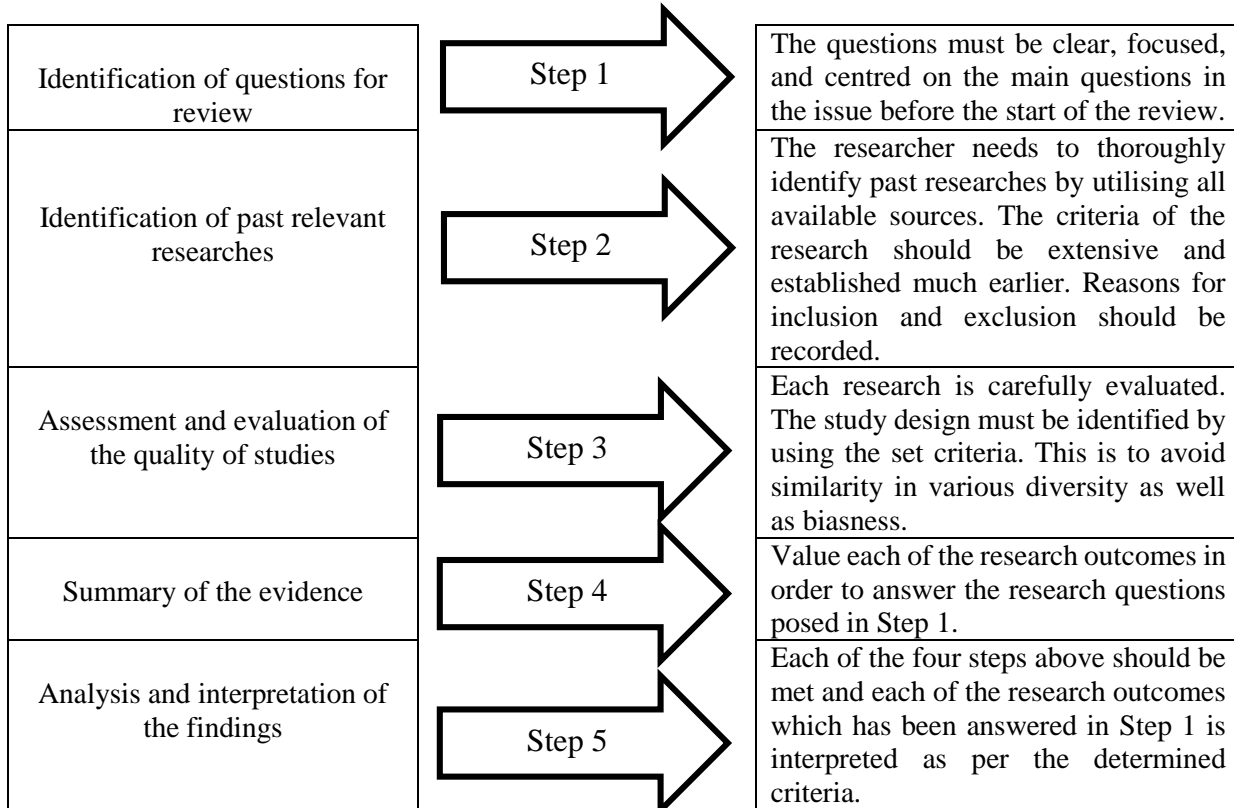
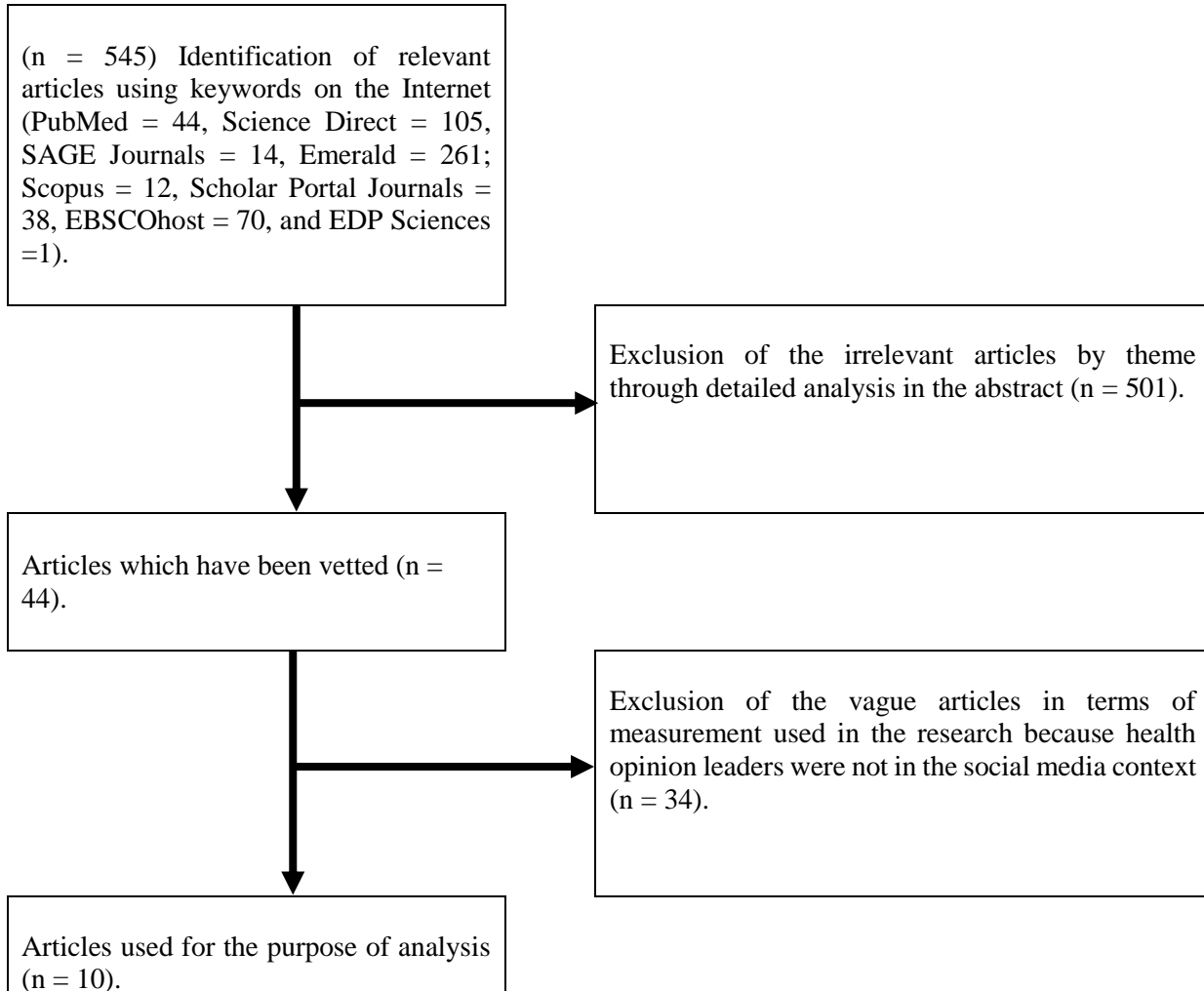


Figure 3: Selection Process for Studies Included in the Analysis.



For this research, the systematic review approached was primarily based upon the online articles published on the Internet. The researchers had determined the attributes of the research as a guide to obtain the online articles. The keywords used to search for the related articles were opinion leaders, health, and social media. The process flow employed in this research is as follows.

The systematic review approach in this research is further validated using the following criteria:

1. Issue: Health opinion leaders on social media
2. Type of research: No limit
3. Research design: No limit
4. Group of respondents: Any diseases and health & healthy lifestyle
5. Language: English
6. Article: Full text only

FINDINGS

A total of 545 articles were successfully obtained using the keyword search on the Internet. However, upon vetting through the abstract of the said research articles, only 44 research articles were qualified as they focused on health opinion leaders. From the 44 research articles, 10 research articles (refer Table 1) had conducted research on health opinion leaders on social media platform and the rest (34 research research articles) were out of the theme.

Table 1: Studies Related to Health Opinion Leaders on Social Media

Authors	Research Design	Respondents	Findings
Chu et al. (2019)	Survey	347 opinion leaders, 567 followers, and 519 general users.	<ol style="list-style-type: none"> 1. Opinion leaders were more likely than their followers to report past month's use of tobacco products. 2. Followers were more likely to report past month's use of these products than general Twitter users. 3. Followers appeared to be an especially vulnerable group. 4. Followers tended to be younger and have lower education compared to the opinion leaders and general users.
Wright et al. (2019)	Quasi-experimental design	75 mommy bloggers	Most women ranked Facebook as their first choice for receiving breast cancer risk information.
Shi & Salmon (2018)	Content analysis	A retweet network with 505,047 nodes and 545,312 edges of the popular messages (n = 206) was constructed and analysed on Weibo.	<ol style="list-style-type: none"> 1. The personal attributes, professional knowledge, and social positions predicted individual's local opinion leadership in the retweet network of popular organ donation messages. 2. Personal attributes and social positions, but not professional knowledge, were significantly associated with global opinion leadership.
Burke-Garcia et al. (2018)	Survey	298 mommy bloggers	<ol style="list-style-type: none"> 1. The majority of the respondents (87.2%, 260/298) reported that they have written about health issues in the past and in the future.

			<ol style="list-style-type: none"> 2. Readers like to read about health issues on blogs. 3. Terms of content priorities for this sample of bloggers, Nutrition and Physical Activity dominate the current conversation and similarly, Physical Activity and Nutrition remain top content priorities for these bloggers for the future. 4. Having a personal connection with a health issue was found to be positively associated with likeliness to write about health issues on blog.
Saboia et al. (2018)	Netnography observation method	Visualising and analysing all the suggestions provided by 24 previous Instagram profiles (80 suggestions per profile) and visualised 3840 Instagram profiles.	<ol style="list-style-type: none"> 1. Some groups and their characteristics and practices were identified. 2. Different opinion leaders acting as partners, but with different characteristics and practices.
Emma et al. (2017)	Investigation	5 Malaysian Instagram accounts considered as opinion leaders in health	<ol style="list-style-type: none"> 1. Social media platform provides opportunity for health practitioners and health promoters to tap into via opinion leaders and social media celebrities. 2. Characteristics of new media opinion leaders in persuading health actions by followers. Opinion leaders on social media are able to influence attitudes and health behaviour.
Wang & Liu (2016)	Content analysis	Original posts generated by mainstream media and public opinion leaders as well as the response posts from their followers in Sina Weibo.	<ol style="list-style-type: none"> 1. Stereotypical presentations of people with depression by influential sources often promoted stigmatisation of or reduced support for depressed individuals among their followers. 2. Environmental and genetic attributions for the disease in the original posts reduced stigmatisation in the response posts. 3. A crime context to discuss depression in the original posts often promoted stigmatisation.

Wang & Liu (2015)	Content analysis	The top 10 mass media organisations and the top 10 public opinion leaders based on Sina Weibo's rankings of the number of followers.	<ol style="list-style-type: none"> 1. The public opinion leaders were more likely than the mass media to express support for people with depression. 2. An association between stereotypes and stigmatisation within the posts generated by the influential users. 3. Influential users who made such claims were less likely to create stigmatising posts. 4. The impact that influential users' opinions have on the opinions of their followers about this issue.
İnceoğlu et al. (2014)	Discourse analysis	Journal analysis	<ol style="list-style-type: none"> 1. Social media provides health opinion leaders with opportunities to continuous and easy opinion/idea dissemination. 2. Easy for mutual interaction with followers. 3. The pervasiveness of the health concerns of the professionals and breadth of the limits of their professional authority. 4. The health discourse of opinion leaders mostly hold individuals responsible for protecting their health and correcting their lifestyles.
Ko et al. (2013)	Quasi-experimental study	1069 opinion leaders on Facebook	<ol style="list-style-type: none"> 1. The feasibility and effectiveness of the opinion leader's intervention as an online HIV prevention programme. 2. These findings underscore the importance of disseminating HIV information online as well as the challenges inherent in the efforts of opinion leaders to reduce HIV-related risky behaviors among Internet-using men who have sex with men.

DISCUSSION

Studies on health opinion leaders on social media are still lacking and small in number. From the perspective of empirical analysis, it shows that there is not much research on opinion leaders in various issues that arise in health context on social media. Some researchers have indicated that while there is no significant difference in health opinion leaders on social media, they should note that there are different issues in the health context. However, analyses from studies show that opinion leaders influence their audiences or followers on social media in various health issues. Most of the studies are able to prove the situation in which the characteristics of opinion leaders influence the attitude and behaviour of the audience and their followers on health issues. The characteristics that exist in health opinion leaders on social media are identified and it shows that different opinion leaders act as friends but with different characteristics and practices to give impact. In terms of the types of respondents of the studies, many of them are health opinion leaders and followers who are active on social media. However, their selection actually depends on the research problems and objectives.

Generally, most of the research methods used by researchers are more inclined towards content analysis, surveys, and quasi-experimental studies, while others used discourse analysis, netnography observation, and investigation to collect data from respondents. This shows that qualitative methods such as interviews and focus groups are still scarcely used in data collection to understand health opinion leaders on social media. The study by Farley, Hanbury, and Thompson (2014) stated that researchers should identify and evaluate opinion leaders in health communication rather than using quantitative methods such as survey questionnaires. Apart from that, Tong et al. (2011) in the study of health communication issues also reported that qualitative approaches such as interviews and focus groups are suitable to study the breadth of opinions and views. They believed that the data collected have a high degree of credibility as efforts are made to create a safe environment to encourage honest expression of opinions and views from participants.

In short, most of the research mainly focused on the effectiveness of health opinion leaders influencing their audience or followers through social media. Past studies have also identified the characteristics of opinion leaders who may have an impact on various fields including health communication, but studies on the functions of leaders and parasocial opinion leaders in the health context on social media are still lacking. The study by Tong et al. (2011) also supported the view that only qualitative approaches in the forms of interviews and focus groups can test the breadth of opinions and views on opinion leaders issues. The interview and focus group approaches will be based on the research questions that have been developed with the support of research findings and highlights of the past studies. The approach will therefore be able to review and identify ways, functions, and effectiveness of opinion leaders communicating on health issues with their followers on social media.

CONCLUSION

From the perspective of empirical analysis and the literature review, it is clear that the changes in the media technology and media landscape have not only changed communication pattern but also

changed the function of opinion leaders. Many studies have emphasised the advantages of social media use by opinion leaders to deliver messages more easily and quickly, which encourage people to communicate more openly. The existence of social media enables opinion leaders to play an important role in influencing perception and decision-making process on health-related matters (Emma & Wan 2017), which also enables people to make health decisions depending on the parties they trust (Emma et al. 2017). Today, social media has become a new platform for various discussions and information sharing, besides encouraging people in finding health information through social networking sites in order to increase their knowledge and achieve a healthy lifestyle (DeChoudhury et al. 2014; Thackeray et al. 2013).

Besides that, social media can strengthen the relationship between opinion leaders and the followers in the digital environment and foster a closer relationship (Click et al. 2013). Gregg and Schiappa (2017) also stated that individuals will follow and connect to the persona of an opinion leader via social media to foster parasocial relationship. According to Stehr et al. (2015), the model of parasocial opinion leadership between opinion leaders and their followers not only serves as a channel for disseminating and sharing of information, but also involves transfer of information. This model is suitable for observing the changing state of the media environment with the emergence of social media. While the parasocial opinion leadership process may exist in social media, studies need to be conducted to confirm this (Stehr et al. 2015). The model of opinion leaders' parasocial relationship can be applied to future studies to study parasocial relationship between opinion leaders and their followers through opinions, emotions, attitudes, and actions of both parties (Stehr et al. 2015). Therefore, future researchers may investigate the quality of opinion leaders' parasocial relationship between health opinion leaders and their followers who use social media to communicate and consult on health issues and messages in the relationship process. It is also suggested that researchers focus on the strategies and means of communication adopted by health opinion leaders as well as identifying their impact on social media followers through the use of opinion leaders' parasocial relationship model developed by Stehr et al. Apart from that, future researchers may examine the role and effectiveness of health opinion leaders' influence on the audience on health issues and health communication that exist on social media. Future researchers may also study the consultation process between social media users and opinion leaders in making health decisions based on the messages delivered by the opinion leaders.

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