

## Using Social Media for Breastfeeding Communication in Indonesia

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**ABSTRACT :** Breastfeeding is known to positively affect maternal and child health. Despite the many benefits of breastfeeding, Indonesia's breastfeeding rate is still below target. Social media can be a useful communication for development tool to promote breastfeeding in Indonesia. Understanding how social media is used in communicating and promoting breastfeeding can help in tailoring programs to increase the breastfeeding rate. This paper aims to analyze the potential and challenges of social media in breastfeeding communication by examining the functions of social media in breastfeeding communication. The results are social media in breastfeeding communication can be classified into two major functions, namely for informational and social purposes. Informational refers to resource and curation functions, whereas social refers to community, social support and social activism. The social function, especially social support seemed to be the most widely reported function of social media, due to the networked nature of social media. Although challenged with the issue of digital divide and other external factors that affect breastfeeding, social media may be an effective tool in breastfeeding promotion and communication.

**KEYWORDS:** *breastfeeding, development, health communication, social media*

### I. INTRODUCTION

Breastfeeding is seen as a viable strategy in improving maternal and child health and consequently improve the health, social and economic development. Numerous studies have shown that breastfeeding offers many benefits both for the child and the mother. Breastfed children have lower morbidity and mortality due to both communicable and noncommunicable diseases with evidence suggesting that breastfed children have higher intelligence and emotional quotients than non-breastfed children [1]. For the nursing mother, breastfeeding can prevent cancer, diabetes, cardiovascular disease, hypertension, postnatal depression and can improve birth spacing [1]–[3]. Victora et al [2] further asserts increasing breastfeeding worldwide can reduce 823,000 child deaths and 20,000 breast cancer deaths each year.

Breastfeeding not only offers health benefits but may also have positive impact on the economy. Optimal breastfeeding practice in Indonesia can save the country 5,377 children's lives every year, conserve families up to 13.7% of monthly earnings that was to be spent on buying formula and save further to treat diarrhea and pneumonia, and in numbers it could save 256,420,000 USD annually in health system expenditures and prevent 1,343,700,000 USD in annual wage losses by improving children's cognitive abilities [4]. In the long run, investing in breastfeeding will result in healthier, stronger and more productive adults for generations to come [4]. Hence, the benefits of breastfeeding extend beyond better health to make it a matter of human capital that may directly contribute to the economic development of an emerging nation.

Breastfeeding has been practiced since the dawn of mankind as a natural phenomenon to ensure the survival of their generation. For thousands of years, breastmilk is a human baby's main food that is obtained directly from the mother's breast [5]. Breastfeeding is not a lifestyle choice but a normal part of human life [6]. Breastfeeding is so important that in Islam—the major religion practiced by Indonesians—it is regarded as an obligation for mothers to breastfeed for two years and for fathers to ensure the child receives their right to breastfeed (Qur'an 2: 233). Modern research has led the World Health Organization to recommend giving only breastmilk to an infant in the first six months of life or defined as exclusive breastfeeding as one of the gold standard of infant and young child feeding, amongst early initiation of breastfeeding, adequate complementary

feeding after six months and continuing breastfeeding for two years [7]. In Indonesia, the government has made exclusive breastfeeding compulsory unless there are medical reasons not to do so; those who intentionally hinder breastfeeding may be detained for up to 1 year and fined to a maximum of USD 10,000 according to the Republic of Indonesia Health Bill [8]. The government also issued Government Decree on Exclusive Breastfeeding with several ministerial decrees to ensure the community supports exclusive breastfeeding by providing facilities at workplaces, health centers or any public setting.

Despite the reported benefits, religious obligation and supportive government policy, the fact is the breastfeeding rate in Indonesia stands at 37.3% as reported in the 2018 Basic Health Survey conducted by the Ministry of Health [9]. The number is still below the global target which is 50% exclusive breastfeeding [10]. Complex interaction between demographic, biophysical, social, and psychological factors contribute to the inadequate rate of breastfeeding [11]. While demographic and biophysical problems are difficult to overcome, psychosocial factors of breastfeeding can be modified through health communication.

## II. SOCIAL MEDIA IN HEALTH COMMUNICATION

Health communication, defined as the study of communication principles, processes and messages to provide health solutions at different levels, focuses specifically on how communication impacts health care delivery and health promotion [12], [13]. When used effectively, health communication can influence attitudes, perception, knowledge, and social norms which act as precursors in behavior change [14]. Communication then becomes a key component in behavior change as communication involves creating, collecting and sharing health information. This communication process also allows persuasive messages to be devised and then disseminated through major channels to provide the target audience the relevant health information that can positively influence their health knowledge, attitude and behavior [15]. Therefore, studying communication behavior is a crucial part in a health behavior change intervention.

In the past, health communication was accomplished mainly through interpersonal exchanges between patients and health workers, or through traditional mass media such as news or advertisements in print or broadcast media or printed materials such as brochures and posters. In recent years, health communication has evolved as the digital revolution took place and completely changing the nature of both interpersonal and mass communication. With new media, communication evolved from mass-centric to be network-centric, consequently, society evolved from being a mass society to becoming a network society [16]. The evolution of new media that is more integrated and interactive further strengthens this network society theory. This new form of media, known as Web 2.0, social media, social networks and other names has changed the landscape of communication. Communication has then undergone a transformation, from centered around top-down mass communication, to the form of *mass self-communication* or *self-directed mass communication* that stresses on horizontal communication [17], [18]. Castells' concept of mass self-communication is the result of communication convergence where we can say it is mass communication since reaches potential audience globally through peer-to-peer networks and Internet connection, but it is also self-communication because it is "self-generated in content, self-directed in emission, and self-selected in reception by many that communicate with many" [18, p. 248]. This concept fits when explaining social media.

As a media that is decentralized, interactive and transboundary, social media is eminent as a tool for development. Social media is defined as a group of Internet-based applications that create highly interactive platforms where individuals and communities co-create and exchange user-generated content [19], [20]. The power of social media lies in its ability to connect people, mediate and mobilize networks. It is also more inclusive and able to penetrate across population and different demographics [21]. Social media reflects the participatory principles in development communication since they share the same characteristics: participation, openness, community, conversation and connectedness [22]. Hence, in communicating development, social media may be a powerful tool.

Social media is starting to be utilized in the field of health communication. The use of social media positively influences health behavior change, although with varied empirical results [23]. Social media is effective as a medium for diffusion of health information transcending geographic and administrative areas [24]. In health communication, it is mostly used in the field of sexual and reproductive health (including HIV/AIDS), general healthy lifestyle (i.e. physical activity and smoking cessation promotion), noncommunicable diseases (i.e. cardiovascular diseases, cancer, obesity), infectious diseases (i.e. influenza), and mental health [25]–[29]. Since young people are the most frequent users of social media in the population, sexual and reproductive health targeting them become the most reported use of social media for health communication [26]. Another reason is that the anonymity of the Internet and social media makes it possible to discuss on taboo topics such as sexual problems and reproduction as well as mental health. Social media can be used in promotion of behavior change interventions as well as for communicating public health emergencies [25]. As social media provide rich information known as big data, it has been reported to be useful in surveillance, tracking and monitoring of disease outbreak thus providing real-time communication and needed data at relatively low cost [30].

### III. FUNCTIONS OF SOCIAL MEDIA IN BREASTFEEDING COMMUNICATION

The functions of social media in breastfeeding communication is similar to that of health communication as discussed above, although it is identified that there are more functions specific to breastfeeding in particular. The functions of social media in breastfeeding communication can be classified into two categories. The first one relates to informational function and the second category is for social functions, which involves social media being a platform for community, social activism and social support.

#### 3.1. Informational

Informational function of social media relates to how social media is used in the dissemination and exchange of information as well as to curate information. In this regard, social media is seen as a resource to gain and exchange information and to store that information for future reference.

##### 3.1.1. Resource

As with other more traditional mass media in health communication, social media serves as a resource of information to be used in disseminating information regarding health. The difference is social media allows not just a one-way information dissemination but a two-way exchange of information. Although Stockdale *et al* [31] argues the credibility of information on breastfeeding available online, there is empirical evidence that interventions based on new media can positively affect breastfeeding duration [32], [33]. In low and middle income countries, interventions based on new media that integrate multiple media were reported to be most effective [34]. This is highlighted in Al Ghazal's [35] findings that a breastfeeding promotion campaign which integrate Facebook with other promotion strategies is effective in increasing the breastfeeding rate. Twitter was reported to positively increase knowledge and awareness on breastfeeding and breastfeeding behavior change [36]. A positive correlation was found between the role of Facebook as a communication media and the correct perception of breastfeeding mothers in exclusive breastfeeding [37]. Facebook, Twitter and other social media serve not only as provider of primary information (for example, a Facebook user who is a health professional or educator posting information on breastfeeding), but has the ability to link to outside sources (such as links to websites providing breastfeeding information) or even offline information (by posting information on offline events or places to get information on breastfeeding).

A limitation of social media as a resource of information is that the information present in social media may not be reliable or credible due to its user-generated content nature. Even then, it is the personal information such as others' breastfeeding stories or testimonials that was found to be the most appealing format to get information and support [38]. This calls for the importance of health professionals such as doctors, midwives and lactation counselors to be present in social media and the virtual communities where breastfeeding mothers participate to ensure the credibility and reliability of breastfeeding information. Social media accounts that are more popular positively affect pro-breastfeeding attitudes and online social support intention [39]. Message style, message valence and online page popularity become vital components to address when designing messages and information on breastfeeding in social media.

##### 3.1.2. Curation

Curation is broadly defined as the activity of collecting and storing information from the Internet or personal documentation on health. Social media can be used to gather and store information obtained through the Internet about breastfeeding. Mothers not only rely on search engines to view information from the web browser, but often valuable information can be obtained from social media sites [40]. The "Share" button on Facebook, for example, is often used for the purpose of saving it in the user's personal profile page where they can reference to it at a later time. Curated information may be in multimedia forms such as images, and lately information on specific topics can be put into pictures through the use of information graphics or "infographics". Governments, non-profit organizations and companies now use "infographics"—that is complex data presented through visualizations—to get their message across their audience [41]. A social media site, Pinterest was created mainly for the purpose of curating these images, which can be used to promote recommended infant feeding practices [40].

Other than to collect and organize information, social media can also be used for documentation on breastfeeding such as to record personal breastfeeding behavior [42]. For example, mothers can use it to track their frequency and duration of breastfeeding directly or expressed [43]. This can be done either from a specific website, mobile application or through blogs, microblogs and social networking sites [44]. Curating this information is mainly for practical health purposes to ease the mother in daily breastfeeding practice and to have a record handy in case they encounter breastfeeding problems and need to go to a health professional.

#### 3.2. Social

A defining characteristic of social media that distinctly differs it from other forms of media or even new media is its social function. Unlike traditional mass media that is unidirectional and anonymous where the audience don't necessarily interact with one another, in social media interaction is fundamental. So the concepts of community and social support were present in this analysis of the social functions of social media. Another

function, social activism, relates to the use of social media in mobilizing these virtual communities and social support networks for a social cause.

### 3.2.1. Community

Social media facilitates the creation of communities vital to support breastfeeding mothers. Being a member of a social media-based community allows users to develop relationships with those with similar interests, while accepting and incorporating social networking into their daily lives [45]. Nowadays, women's communities have moved to the virtual space thus exchange of support and the need to connect are now facilitated by technology such as social media. Community health communication are increasingly mediated by technology, replacing geographically-bound traditional tight-knit communities that seemed to fade due to higher mobility of women who are working and engaging more activity outside the home [46]. These virtual communities have positive impact on both bonding and bridging social capital of these mothers [47].

Social media which functions as community is usually present in Facebook as it provides the Groups feature to connect individuals with the same interest in one place, although it may be present in other social media forms. On these social media sites, communities on breastfeeding consists not only of mothers supporting breastfeeding but specific communities such as for sick or premature babies [48], breastmilk sharing [49], [50], and fathers supporting breastfeeding [51], [52]. Other than that, virtual communities on breastfeeding has been reported to focus on specialized issues such as breastfeeding with a history of breast surgery, mothers with physical problems that hinder them from optimal breastfeeding, mothers who are exclusively pumping, mothers who have experienced the loss of an infant, breastfeeding highly allergic infants, and breastfeeding sick babies in hospital [53]. These communities on social media provides women with a "tribe" of breastfeeding peer supporters [54]. Social media is especially useful because it is readily available at any time, allowing mothers to access it at their convenience to gain support, connections, advice and social interaction with other adults at their time of isolation due to child-rearing [46], [55].

Although what people disclose in social media may not be an accurate representation of themselves in real life, in regards to online breastfeeding communities in social media, mothers who participate in them generally feel that they were part of a trusted community offering an authentic presence of support created by a global community of breastfeeding women [54], [56]. This is vital since breastfeeding is sometimes a deeply personal experience, especially in Indonesia where exposing the breast or talking about "breasts" in public may not be culturally appropriate, having mothers graphically describe their breastfeeding experience requires them to fully trust the community where they are sharing their feelings to. Feelings of trust and authenticity on social media breastfeeding communities indicate that they may very well positively impacts breastfeeding behavior of the mothers who are members of those communities.

### 3.2.2. Social support

Numerous studies have shown that social media is largely used to exchange social support. Social support has positive influence on health [57]–[59]. Traditional social support is an instrumental determinant in various health aspects such as food, housing, income, security and access to the welfare system [60]. In the advent of the digital revolution, social support has extended into cyberspace, where they are mediated by these new forms of media such as social media.

In health communication, social media is used to exchange social support from peers [61]. This applies especially in the case of breastfeeding communication, where support is the overarching theme that emerges in the empirical literature of breastfeeding communication [54], [56], [62]. Social media can be a vehicle for support exchange in that it serves as an online support group due to its ability to create user generated content, provide information about one's profile, making a list of friends and communicate with one another using both synchronous and asynchronous messaging tools [54].

Social support is vital in determining breastfeeding success. When traditional or offline social support is not adequate or does not fully satisfy mothers, they seek social support online. Other than that, women who engaged in online social support for breastfeeding had antecedents of a breastfeeding goal, breastfeeding query or an interest in discussion/debate, and willingness to seek and offer support online [56]. Women have been using the Internet for social support purposes since mid-1990s through listserv and email [63]. Mothers are more active on Facebook for the purpose of exchanging support on social media [64]. The social support obtained from the Internet and social media can be an alternative to increase breastfeeding self-efficacy – a psychosocial factor vital in breastfeeding [65]. Social support becomes a vital function of social media for breastfeeding communication due to the characteristic of women's communication that is supportive in nature. Women adopt a 'feminine' interaction involving support, which is reflected in women's online behavior that is more emotionally-oriented than men's [66].

It is expected, then, that research on online breastfeeding communities yield results relating to emotional support being the major type exchanged. In social support literature, having a health issue – breastfeeding in this case—requires emotional support [59]. Research focusing on an online breastfeeding

community by the community resulted in the function of that community as for social support, specifically emotional support [62]. These mothers are more prone to providing intangible support such as emotional and esteem support on social media [64]. However, it is worth to note that breastfeeding is not merely an emotive activity, successful breastfeeding is also attributed by practical information [54], [67]. Providing online emotional support sometimes may not be sufficient to address a mother's problem regarding breastfeeding, tangible support that translates into offline support is often needed. In this case, social media serves not to replace traditional support offline but to complement them instead.

### 3.3. Social Activism

Social media in breastfeeding communication has shown to be used as a platform for social activism. As noted by Castells, an apparent characteristic of the network society is the flourishing of online social movements [68]. These social movements are distinct in that they voice for causes such as social identities including women's issues [18]. The breastfeeding movement is one of these examples.

In Indonesia, the social movement on breastfeeding is largely powered by the Indonesian Association of Breastfeeding Mothers (*Asosiasi Ibu Menyusui Indonesia*, AIMI), and in line with Castells' theory, it was initiated and developed online [69]. AIMI still uses various forms of social media in their operations [70]. Through the use of social media, AIMI has reached out not only to mothers but to network with fellow civil society organizations and more importantly governmental departments, United Nations bodies and international NGOs [71]. From this, they were successful in their campaign in pushing the Ministry of Health to reinforce policies on the ban of formula milk advertisement. Bridges [54] studied the Australian counterpart organization and found that the use of Facebook for breastfeeding was largely for support.

Social media communities on breastfeeding are not limited to mothers but their main supporter—that is, their spouse or the baby's father—are also present online [72]. In Indonesia, an example is the @ID\_AyahASI movement for fathers supporting breastfeeding that started as a Twitter account with many followers which manifested to offline activities supporting breastfeeding such as seminars, fundraisings, community gatherings and other social programs [51]. Since there is numerous empirical evidence that support from significant other positively influence the breastfeeding rate, it is important to acknowledge the fact that fathers who support breastfeeding have taken the movement—or even initiated it in the first place—online through social media.

Social activism on breastfeeding by AIMI, @ID\_AyahASI or other organizations, movements and communities to promote breastfeeding also focus on social media to counter formula companies who are also adept at social media. These formula companies, with big budgets for advertisements, use social media with savvy and appealing messages—from Twitter to YouTube and Facebook Fanpages—to reach and engage with new mothers or mothers with babies and provide breastfeeding advice while also bombarding those mothers with information on formula milk [63]. At the same time, the formula companies still invest big budgets for advertising in mainstream media and cooperate with health professionals such as midwives and hospitals by having their sales representatives visiting them directly and offering them gifts in exchange for the health workers recommending their products or giving free samples to mothers who visit their health facilities [73]. Although this is against the Health Bill and punishable by law in Indonesia, in reality the law is hardly ever enforced so the practice continues [74]. It is only logical then that these social movements counter those big corporations through social media to educate and empower mothers and their families on the right information on breastfeeding.

## IV. POTENTIAL AND CHALLENGES OF SOCIAL MEDIA FOR BREASTFEEDING COMMUNICATION

Social media can be a potential vehicle for health communication since social media use in Indonesia is quite high. According to Indonesian Association of Internet Service Providers, Internet penetration in Indonesia is 51.8% in 2016, in number that translates to 132.7 million Indonesians who are online [75]. Out of that number, 87.4% own and use social media. Internet users in Indonesia are mainly in the reproductive age group, this implies that they may also be new parents with infants in need of breastfeeding information and support that they can get online.

We have defined before that the first function of social media in breastfeeding communication is information. In fact, Indonesian Internet users go online mainly to access information [75]. This is acknowledged by government or nongovernmental organizations and individual health professionals with social media presence to convey breastfeeding information on social media, not only AIMI and @ID\_AyahASI but also other communities such as *Sharing Asi-Mpasi* on Facebook and individuals such as pro-breastfeeding doctors with professional lactation training WiyarniPambudi (@drOei) and IGN Pratiwi @drtiwi on Twitter and Instagram—all of them with high number of followers from tens to hundreds of thousands. Ministry of Health Republic of Indonesia is also active on social media integrated with their official website, managed by their Public Communication Center. The information provided by these social media accounts are deemed credible

since they are either the government or dedicated health professionals and peer counselors.

Social media is also potential to be used in breastfeeding communication in Indonesia as a platform for social support exchange. Indonesia is regarded as a collectivistic culture which values the community rather than the individual, meaning Indonesians often put the interests of their communities first before their individual interests [76]. Taking this into account, we can say that social support is abundantly exchanged in instances where Indonesians gather or become part of a community, whether offline or online. Specifically, Indonesian women were more likely to provide social support to strangers compared to women from a Western country [77]. Indonesian mothers who participate in community activities were reported to have children with better health than mothers who were less active in communities [78]. As digital native mothers, they now turn to social media to be active in communities.

The challenges of implementing a social media strategy in breastfeeding communication intervention to increase breastfeeding rate in Indonesia involve the issue of digital divide and other external factors of breastfeeding behavior. Although Internet penetration increases every year, the majority of Indonesian Internet users (65%) reside in Java Island which is the most urban and populous islands of the archipelago [75]. Information and communication infrastructure in other islands or remote places in the country is still limited. Hence, a social media intervention might be effective when focused in an urban setting targeting mothers in cities rather than in rural and remote areas. This may be effective in increasing breastfeeding rate as in urban areas we find women who enter the workforce with higher economic status, two things that has been reported by Titaley et al [73] as factors associated with non-exclusive breastfeeding in Indonesia. Even then, rural mothers should still be a priority, since maternal mortalities mainly in rural than urban setting due to insufficient access of information, support, and health infrastructure such as lack of health workers and facilities [79].

Despite behavior change communication intervention may affect a mother's decision to breastfeed by increasing their breastfeeding knowledge and self-efficacy, some mothers may find it hard to practice breastfeeding due to other external factors such as biophysical and demographic factors. For example, a mother experiencing obstetric complication or delivered via Caesarian section may find it harder to breastfeed exclusively when compared to mothers who delivered vaginally without any complications [73]. This is where their support system plays a key role. To increase breastfeeding rate utilizing social media should not focus only on mothers but their support system, namely family and health professionals. They are important in determining a mother's breastfeeding behavior [80], [81]. Family not only refers to the baby's father but often the mother's parents play a bigger role in determining a mother's breastfeeding success [82]. Health workers were reported not to support breastfeeding as they were not professionally and academically educated to do so [83]. That and the practice of formula companies to approach them to promote their products for a price have negatively affected the breastfeeding rate. A social media approach to make family and health professionals become aware and more supportive of breastfeeding will consequently support the mother in achieving successful breastfeeding goals.

## V. CONCLUSION

Social media as a health communication tool has an impact in breastfeeding behavior and consequently may affect the increase of breastfeeding rate. Through an analysis of the functions of social media, we can conclude that information and social were key themes to consider in breastfeeding promotion and communication interventions focusing on social media. However, the current evidence suggests that more empirical data is needed to find out how effective these social media functions in breastfeeding communication with the goal of increasing breastfeeding rate in Indonesia. This calls for further study which employs not only descriptive, qualitative methods but also large-scale quantitative or experimental methods to support these findings. Through more empirical studies, we can further harness the potential of social media and overcome the challenges of using social media with the goal of increasing breastfeeding rate to improve maternal and child health and consequently support both national and global development.

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