

An Empirical Investigation of Equity of Health Promotion: The Role of Message Source and Content

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ABSTRACT Good communication capability is crucial for the effectiveness of health promotion. This study aims to examine the relationship between message source (expertise and attractiveness) and content (informativeness and entertainment) on the equity of health promotion. The empirical data were collected through a survey in Tangerang, Indonesia. The number of samples were 178 respondents. Multiple regressions analysis was performed to test the conceptual model and the proposed hypotheses. The findings showed that the equity of health promotion was influenced by expertise, attractiveness, and entertainment, while informativeness did not affect the equity of health promotion significantly.

INTRODUCTION

Health is one of the main concerns of the Sustainable Development Goals (SDGs). The third aim of the SDGs was to “ensure healthy lives and promote well-being for all at all ages” (WHO 2017). At this time, the global population is also facing a new health problem, the COVID-19, which has not been fully contained in 2021 (ADRA 2021). Because of that condition, effective health promotion is extremely vital (Setti 2020). Health promotion is an effective strategy to manage many health problems in the society (Kumar and Preetha 2012). Generally, health promotion was defined as “the process of enabling people to increase control over and to improve their health” (WHO 1998).

Communication is the frontline of health promotion (Corcoran 2007). Health communication must be taken into consideration to increase the scale and improve the effectiveness of health promotion practices (Edmonds et al. 2021). Health communication could improve awareness, knowledge, and skills related to a healthy lifestyle and motivate people to follow a healthy lifestyle (De Cocker et al. 2021). However, not all health communication processes were well-accepted by the public. Therefore, communication capability is sorely needed for effective health promotion (Werder 2019).

Appropriate health communication would generate positive health outcomes and an inap-

propriate one would have a detrimental effect on health outcomes (Berry 2007). In the literature, health communication was used to manage many health problems, such as chronic diseases (Murray et al. 2005), unhealthy behavior (Paulsson-Do et al. 2017), unhealthy food consumption (Mollen et al. 2021), diet (Birau et al. 2021), physical inactivity (Marcus et al. 2000), tobacco use (Patten et al. 2018), alcohol consumption (Sawyer et al. 2021), and drug addiction (Li et al. 2013). Therefore, Berry (2007) deemed that investigating the determinant of health communication is important. The investigation can be done by studying the communication process of health behaviour. Several factors that must be considered are expertise (Chou and Wang 2017; Le et al. 2018), attractiveness (Wu and Wang 2011; Roy et al. 2013), informativeness (Haghirian et al. 2005; Hamouda 2018), and entertainment (Blanco et al. 2010; Dehghani et al. 2016).

Many studies have been conducted to investigate effectiveness of health communication. Jeong and Bae (2018) provided a systematic meta-analysis to test the effect of mass media campaign-generated conversations on health outcomes. Their study found a positive causal relationship between a campaign-generated conversation on health outcomes and this result was moderated by the health topic addressed by the campaign, the type of targeted outcome, and with whom people were conversing, along with other campaign and study-relevant vari-

ables. Shen et al. (2015) also conducted a meta-analysis on the persuasive effects of narratives in health communication. They concluded that in health communication, narrations would be better served using audio and video rather than print media and the narration is better suited for detection and prevention behaviors rather than cessation behavior. Others studied health communication relayed through Tik Tok app (Zhu et al. 2019), Youtube (Duke et al. 2019), Twitter (Park 2016), television (Dutta 2007), radio (Smith et al. 2011), Instagram (Kim and Kim 2020), Facebook (Park et al. 2011), and WhatsApp (Walwema 2020).

Even though researchers have conducted studies on health communication, there is still a lack of studies that explore the communication process in detail (Werder 2019), especially related to the equity of health promotion. Health promotion is a process of relaying or exchanging health information (Lee and Garvin 2003). According to the Equity Theory, the process would run smoothly if the relaying or exchanging process between the speaker and the receiver could create equity, a situation when both parties felt that they had received either a well-balanced benefit or a surplus compared to their input (Hess et al. 2009). Studying health promotion equity is important because this information could be used to gauge the value of health promotion from the public perspective. If the health promotion was deemed to be valuable, the public would give a positive response, which in turn would lead to more effective promotion. Thus, this study aims to test the impact of health communication on health promotion equity.

Research Objectives

This study presents a remedy for the existing research gaps by integrating message source (expertise and attractiveness) and content (informativeness and entertainment) as factors that affect health promotion equity. The general objective of this research was to examine the effect of expertise, attractiveness, informativeness, and entertainment on health promotion equity. More specifically, this research attempts to answer three questions: (1) does the expertise of the message source affect health promotion equity? (2) does the attractiveness of the message

source affect health promotion equity? (3) does the informativeness of the message content affect health promotion equity? And (4) does the entertainment of the message content affect health promotion equity?

Literature Review and Hypotheses

Message Source

The message source is vital in terms of health communication promotion (Corcoran 2007). Generally, the message source means “the party sending the message to another party” (Thomas 2005). The message source became an important aspect in communication because the willingness to accept a particular message depended on both the content of the message and the characteristics of the source (sender) (Snyder 2007).

Constructs that represent the characteristics of message source are expertise (Braunsberger and Munch 1998; Chou and Wang 2017; Le et al. 2018) and attractiveness (Wu and Wang 2011; Roy et al. 2013). According to Deshbhag and Mohan (2020), expertise was “the extent to which a communicator is perceived to be a source of valid assertions about the object”. This construct is associated with the knowledge, skill, experience, competence, authoritativeness, qualifications, or the capability of the communicator (Braunsberger and Munch 1998; Roy et al. 2013; Deshbhag and Mohan 2020). This construct is by no means an objective evaluation of the source’s expertise. It is more of a perceived expertise constructed by the audience (Deshbhag and Mohan 2020). For example, people would perceive someone with a Medical Degree (MD) to have more expertise than a high school graduate. Thus, this research defined ‘expertise’ as the audiences’ perceptions of the communicators’ knowledge, skill experience, authority, qualifications, and capability in delivering health promotion.

Attractiveness was defined as the communicators’ ability to attract the attention of the audience (Ohanian 1990; Wu and Wang 2011). This construct refers to both physical and non-physical attractiveness, such as personality, lifestyle, and power (Erdogan 1999; Deshbhag and Mohan 2020). For example, health promotion

might attract more audiences if the information was relayed by a celebrity known for his or her healthy lifestyle. Attractiveness is a construct that relies heavily on perceptions (Ohanian 1990; Roy et al. 2013). In the context of health promotion, attractiveness is defined as audiences' perceptions of the communicators' charm or allure when they are relaying health information.

Message Content

Aside from message source, another vital component in the communication process is message content (Corcoran 2007). In the literature, a message was defined as "the combination of symbols and words that the sender wishes to transmit to the receiver" (Thomas 2006). In the context of health communication, this component is associated with message content (Snyder 2007). There are two constructs that represent the characteristics of message content: informativeness and entertainment (Haghirian et al. 2005; Blanco et al. 2010; Dehghani et al. 2016; Hamouda 2018).

Informativeness refers to the message's ability to provide relevant information effectively (Oh and Xu 2003; Blanco et al. 2010). This concept is important to study because not all messages were well-accepted by the audience (Milne and Gordon 1993; Blanco et al. 2010). A message will be accepted if it has the information needed by the audience (Blanco et al. 2010). Thus, the message content must be delivered to the right audience for a communication to be successful. For example, information on diabetes would be needed by people with the disease, their immediate family, or their caregivers. Therefore, in the context of health promotion, this research defined informativeness as the level of positive valuation given by the audience based on the message's relevance and usefulness.

Entertainment is the ability of a message to provide aesthetic enjoyment for the audience (Oh and Xu 2003; Blanco et al. 2010). This part of message content aims to fulfill intrinsic motivations or internal gratifications, such as joy and pleasure (Babin et al. 1994; Parreno et al. 2013). The concept is based on the uses and gratifications theory (Katz et al. 1974). The theory stated that people tended to seek information based on their specific needs. One of their needs

was entertainment (Grellhesl and Punyanunt-Cardé 2012; Leung 2013). This is a normal tendency because people have a natural playfulness (Haghirian et al. 2005). The idea was to incorporate an entertainment aspect into health promotion to attract and retain the audience. The entertainment aspect needs to be considered, so the audiences do not analogize reading or listening health promotion with doing a chore. This research defined entertainment as the ability of the message to relay health information in a way that satisfy the audiences' emotional needs, such as fun, joy, and pleasure.

Health Promotion Equity

Communication process of health promotion is a form of information exchange. According to the equity theory, all exchange must be based on justice or fairness when all parties gain more compared to their sacrifices (Adams 1965; Hess et al. 2009). In the context of health promotion, equity would be achieved if both the communicators and the community felt that they had gained benefits from engaging in the health promotion process. Researchers agreed that equity was a crucial factor for successful exchange (Aaker 1992; Keller 1993; Sukoco 2016; Buttner and Lowe 2017). Equity was a user perspective-based concept (Aaker 1992; Keller 2013). According to Aaker (1992), the equity of health promotion was a set of values gained from the experience of procuring health information through a health promotion process. In the literature, equity was seen as a multidimensional construct (Aaker 1992; Keller 2013). Based on previous studies, health promotion equity consisted of several aspects: awareness, knowledge, perceived benefit, perceived quality, attitude, trust, commitment, and word-of-mouth (Aaker 1992, 1996; Keller 1993; Bamert and Wehrli 2005; Rios and Riquelme 2008)

Hypotheses

The conceptual model in this research was based on the existing literature related to the communication process. The research model shows that the equity of health promotion is affected by the elements of the communication process, which are message source and mes-

sage content. The elements influence the audience (Jansson-Boyd 2010; Bakr et al. 2019). Health promotion was an exchange of health information between senders and receivers and it generated equity. A good interaction would create equity, a situation when the perceived benefits were more significant than the perceived sacrifice (Adams 1965; Hess et al. 2009).

Previous studies posited that message sources significantly affected the receivers (for example, Braunsberger and Munch 1998; Lin 2011; Zanon and Teichmann 2016; Chou and Wang 2017; Deshbhag and Mohan 2020). There are two important components related to message source, expertise (Braunsberger and Munch 1998; Chou and Wang 2017; Le et al. 2018) and attractiveness (Wu and Wang 2011; Roy et al. 2013). According to Zanon and Teichman (2016), information relayed by experts could create a positive first impression for the audience. The attractiveness of the source could also affect the audience because of the existence of an identification process between the source and the audience (Roy et al. 2013). Based on that explanation, the first two hypotheses of this research are formulated as follows:

H_1 : Expertise has a positive influence on equity of health promotion

H_2 : Attractiveness has a positive influence on equity of health promotion

The success of a communication process also relies on its content (Corcoran 2007). Many researchers have investigated the positive impact received by the audience from a message (Haghirian et al. 2005; Haghirian and Madlberger 2005). Empirically, they have proven that good content would generate positive perceptions among the audience (Mahmoud 2014; Dehghani et al. 2016; Murillo 2017; Hamouda 2018). There are two factors related to message content, informativeness (Logan et al. 2012; Parreno et al. 2013; Bakr et al. 2019) and entertainment (Haghirian and Madlberger 2005; Logan et al. 2012). Ducoffe (1996) stated that when the audience received beneficial and relevant information, they would consider it as valuable information. He also added that information would be even more valuable if the audience perceived it to be entertaining. Thus, the next two hypotheses are:

H_3 : Informativeness has a positive influence on equity of health promotion

H_4 : Entertainment has a positive influence on equity of health promotion

METHODOLOGY

Data Collection

This research used a quantitative approach. The data was collected through a survey. The population of this research was a group of people who have been exposed to the promotion of health behaviour in Tangerang, Indonesia. The researchers conducted this research in Tangerang because the city was awarded as a healthy city. Since the population is very large, this research used samples. The sampling procedures were conducted randomly in four villages in Tangerang (Ketapang, Poris Plawad, Suradita, and Cisauk). All respondents have been exposed to information from health promotion and they were of 15 years of age or older.

This study used 178 respondents. The number of samples has fulfilled the requirement for statistical analysis (Hair et al. 2006). The demographic profile can be seen in Table 1. The proportion based on gender was fairly balanced. Based on age, the samples are dominated by respondents aged 21 to 50 years old. The proportions of age groups were not too different either, 27 percent was 21 to 30 years old, 23 percent was 31 to 40 years old, and 22 percent was 41 to 50 years old. Based on formal education, most

Table 1: The respondents' demographic profile

Variable	Category	n	%
Gender	Male	91	51
	Female	87	49
Age	≤20 years old	31	17
	21-30 years old	49	27
	31-40 years old	40	23
	41-50 years old	39	22
	≥51 years old	19	11
Formal Education	≥6 years	7	4
	7-9 years	14	8
	10-12 years	6	3
Income	≥13 years	151	85
	≤ Rp2.000.000	14	8
	Rp 2.000.000–Rp 3.999.999	45	25
	Rp 4.000.000–Rp 5.999.999	79	44
	≥Rp 6.000.000	40	22

Note: Total sample were 178 respondents

respondents had finished 13 years of formal schooling. This means, most have attended higher education. Based on monthly income, most received Rp 4,000,000 to Rp 5,999,999. The mean income was Rp 4,414,326.

Variables and Measures

Following the conceptual model and the hypotheses, this research has five variables: expertise, attractiveness, informativeness, entertainment, and health promotion equity. In the literature, those variables were latent variables. Thus, they must be measured using several research indicators (Diamantopoulos et al. 2012). The indicators were taken from previous studies and adjusted for the context of this research.

Expertise was measured using four indicators obtained from Le et al. (2018), while attractiveness used three indicators from Ohanian (1990) and Deshbhag and Mohan (2020). Both informativeness and entertainment were evaluated using four indicators, each taken from Blanco et al. (2010), Parreno et al. (2013), Mahmoud (2014), and Bakr (2019). The dependent variable, health promotion equity, was measured using a multidimensional approach. The indicators were adopted from several previous studies (Aaker 1996; Ajzen 2002; Verbeke 2005; Vassallo et al. 2009; Laroche et al. 2010; Al-Hawari 2011; Florek 2015). This research used indicators from previous studies to ensure its content validity (Sekaran and Bougie 2010; Buil et al. 2012).

Data Analysis

This research used three statistical analyses. First, factor analysis was conducted to test the construct validity. The variables were deemed to be valid if the (1) Kaiser Meyer Olkin value was at or above 0.5, (2) p-value of Bartlett test of sphericity was at or below 0.05; and (3) factor loading value for each indicator was at or above 0.5 (Hair et al. 2006; Malhotra 2007). Second, to test the construct reliability, this study used the Cronbach's Alpha analysis. If the Cronbach's Alpha coefficient is at or above 0.6 (Hair et al. 2006; Malhotra 2007; Sekaran and Bougie 2010), the instrument was deemed reliable. Third, this research used multiple regressions to test the hypotheses. The data analysis was done by using the statistical analysis software SPSS 25.

RESULTS AND DISCUSSION

Construct Validity and Reliability

Table 2 shows the results of construct validity and reliability tests. Based on the factor analysis, all variables have Kaiser Meyer Olkin values above 0.5 and the p-value of the Bartlett's Test of Sphericity was below 0.05. All factor loadings value were above 0.5 except for awareness. Thus, the awareness indicator was not used in the next analysis. After dropping the awareness indicators, all variables have fulfilled the construct validity criteria. The Cronbach's Alpha coefficients fell between 0.732 and 0.917, which were above 0.7. The research instrument was reliable.

Hypothesis Testing

Table 3 and Figure 1 show the results of the hypotheses testing. The F statistic value is 100.59 with a p-value below 0.05. This result indicates that the model is appropriate to represent health promotion equity. The model can explain 69.9 percent of variances (R^2).

The first finding showed that expertise positively and significantly affected health promotion equity ($\beta = 0.400$, Sig = 0.000). The first hypothesis (H_1) was accepted. It implied that a positive perception of the health communicators' expertise would positively drive health promotion equity. The second hypothesis was also accepted. The attractiveness of the message source has a positive and significant impact on health promotion equity ($\beta = 0.108$, Sig = 0.095). It indicates that the attractiveness of the communicator in relaying health information would affect health promotion equity. A higher level of attractiveness created higher health promotion equity.

The third hypothesis of this research was not supported by the data. Informativeness has no causal effect on health promotion equity ($\beta = 0.111$, Sig. = 0.155). A higher level of informativeness did not lead to higher health promotion equity. However, the other factor of message content, entertainment, was proven to have a positive and significant impact on health promotion equity ($\beta = 0.341$, Sig. = 0.000). The fourth hypothesis was accepted. The find-

Table 2: The results of construct validity and reliability testing

<i>Variables</i>	<i>Indicators</i>	<i>Factor loading</i> (≥ 0.50)	<i>KMO</i> (≥ 0.60)	<i>BTS</i> (<i>Sig.</i> < 0.05)	<i>CA</i>
Expertise	Expert	0.873	0.747	278.611 (0.000)	0.826
	Experienced	0.843			
	Knowledgeable	0.811			
	Skilled	0.713			
Attractiveness	Attractive	0.859	0.633	130.608 (0.000)	0.732
	Nice	0.86			
	Friendly	0.695			
Informativeness	Helpful	0.867	0.838	531.883 (0.000)	0.897
	Relevant	0.902			
	Clear	0.904			
	Easy to understand	0.923			
Entertainment	Fun	0.884	0.823	440.565 (0.000)	0.917
	Pleasing	0.882			
	Entertaining	0.882			
	Exciting	0.865			
Equity of Health Promotion	Awareness	0.129	0.778	707.999	0.846
	Knowledge	0.66			
	Perceived benefit	0.608			
	Perceived quality	0.844			
	Attitude	0.859			
	Trust	0.796			
	Commitment	0.792			
	Word-of-mouth	0.547			

Note: KMO = Kaiser-Meyer-Olkin; BTS = Bartlett's test of sphericity

Table 3: The results of multiple regression model

<i>Independent variables^a</i>	<i>Unstandardized coefficients</i>		<i>β standardized coefficients</i>	<i>t</i>	<i>Sig.</i>	<i>R² (%)</i>	<i>F</i> (<i>p-value</i>)
	<i>β</i>	<i>SE</i>					
(Constant)	0.000	0.042		0.000	1.000	69.9	100.588
Expertise	0.400	0.063	0.400	6.399	0.000		(0.000)
Attractiveness	0.108	0.064	0.108	1.681	0.095		
Informativeness	0.111	0.078	0.111	1.429	0.155		
Entertainment	0.341	0.074	0.341	4.626	0.000		

Note: ^aDependent variable: equity of health promotion

ing suggests that a more entertaining message would drive up health promotion equity.

This research contributed to the limited research on health promotion's communication process. It aimed to investigate the effect of message source and content on health promotion equity. More specifically, the researchers examined empirically the effect of expertise, attractiveness, informativeness, and entertainment on health promotion equity. The results showed that expertise, attractiveness, and entertainment positively and significantly affected health pro-

motion equity. This result corroborated Corcoran (2007) and Bakr et al. (2019), who stated that message source and content could create a positive impact. This finding was also in line with previous studies that discovered the positive effect of perceived expertise, attractiveness, and entertainment for the audience (Mahmoud 2014; Chou and Wang 2017; Murillo 2017; Hamouda 2018; Deshbhag and Mohan 2020).

The insignificant impact of informativeness on health promotion equity might be due to its

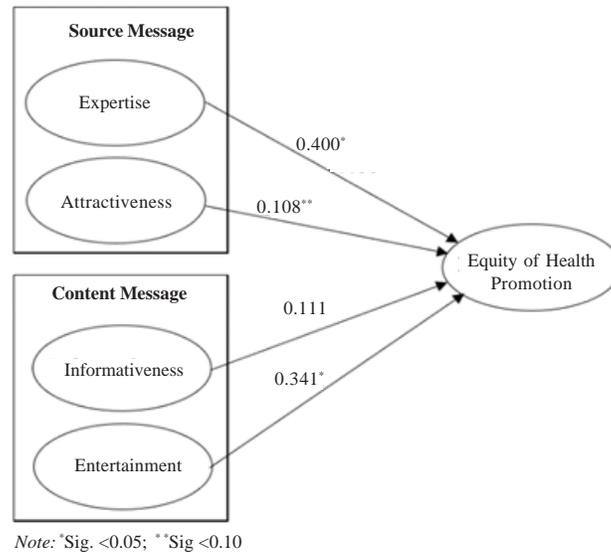


Fig. 1. The regression model

Source: Authors

character as an order qualifier, a minimum standard for information to be even considered a piece of information by its audience (Lau et al. 2018). The existence of this factor would not automatically create a significant impact on equity. However, the nonexistence of this factor would create a negative response. Using the Kano Model perspective, informativeness can be categorized as a “must-be” (Kano et al. 1984). This research also confirmed the equity theory in the context of health promotion. This research proved that communication interaction in the health promotion process could create equity.

This research showed that informativeness of message content does not guarantee to increase health promotion equity. Health promoters needs to focus on other factors. The researchers supported that health promoters should pay attention to aspects of expertise, attractiveness, and entertainment. To increase the equity of health promotion, health information must be delivered by people who are experts in the field of health. The expert is to guarantee health information. The content of the health message must be entertaining and the source of the health message must be attractive. These are to meet the emotional needs of the audience.

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Focus on these three factors of health message will increase the equity of health promotion.

CONCLUSION

Health promotion is a way to manage health problems. This research explored the determinant factors that affect health promotion equity from a communication process perspective. This paper offers a model that can be used to investigate the relationship between message source (expertise and attractiveness), message content (informativeness and entertainment), and health promotion equity. Based on the empirical analysis, this study found that health promotion equity was affected by perceived expertise, attractiveness, and entertainment. Informativeness was proven to be an insignificant factor.

RECOMMENDATIONS

Based on the findings, this research suggested two practical recommendations. First, as shown by the finding, the message source is a crucial aspect in improving health promotion equity. There are two factors behind this aspect:

expertise and attractiveness. In conducting health promotion, it is important to make sure that the information is given by health experts, such as medical doctors, nurses, dietitians, and nutritionists. It gives assurance that the information is correct and reliable. These health experts should also be attractive. The way they perform, talk, or carry themselves should be curated to create a sense of confidence and persuasion. It includes the layout and the design of the communication media used. Another aspect that needs to be carefully considered is the content, especially in the context of entertainment. Lifeless information might kill the message. In executing health promotion, the information must be presented in a way that entertains the audience. The feeling of joy would encourage the audience to take note and it might urge them to seek more related information. Health information by itself was important for the public, but they might not pay enough attention to it because it was dull. Health promotion programs must improve their entertainment-based strategies.

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