Jurnal Komunikasi Ikatan Sarjana Komunikasi Indonesia, Vol. 9 (2), 2024, 283-295

J U R N A L

KOMUNIKASI

IKATAN SARJANA KOMUNIKASI INDONESIA

E-ISSN: 2503-0795
P-ISSN: 2548-8740

The Relationship between Communication Channels and Health Behavior

http://dx.doi.org/10.25008/jkiski.v9i2.1046

Diah Febrina[1], Amiruddin Saleh[2], Rita Nur Suhaeti[2], Pudji Muljono[2]
[1]Faculty of Communication Science, Universitas Pancasila
Jl. Srengseng Sawah, Jagakarsa, Jakarta 12630 – Indonesia
[2]Faculty of Human Ecology, IPB University
Jl. Raya Dramaga, Babakan, Bogor 16680 - Indonesia
Corresponding author: diahfebrina@univpancasila.ac.id

Submitted: June 9, 2024, **Revised**: August 19, 2024, **Accepted**: November 4, 2024
Accredited by Kemdikbudristek No. 152/E/KPT/2023

Abstract - The epidemiological transition has occurred significantly over the last two decades, with non-communicable diseases (NCDs) becoming the main burden. In context of health communication, health campaign activities are expected to reduce these problems. The objective of the research is to analyze health communication channels and the relationship between health communication channels and health behavior. Data were collected by applying a survey method using a self-administered questionnaire. The survey was conducted in Depok City, West Java, Indonesia. Respondents were residents of aged fifteen years and over, who had been exposed to health promotion campaigns or activities from the various communication channels used. Total sample size was 120 respondents. Univariate analysis was applied to get frequency distribution tables, while bivariate analysis was applied using Pearson correlation analysis. The research results indicate that majority of the residents are still in moderate category with regard to implementing health behaviors. There are still many people, who implement unhealthy behaviors, particularly with regard to regular health checks. Secondly, the frequency of use of health promotion communication channels remains low. New media channels, interpersonal media and community media are three channels that are perceived as trustworthy, attractive and credible. Thirdly, this study found that the frequency of using communication channels, channel trustworthiness, attractiveness and credibility have a significant relationship with health behavior. The findings of this study have implications for health campaign program designers, who should consider including campaign messages that can lead to improve public health behavior and prevent the occurrence of NCDs.
Keywords: communication channels, health behavior, health campaigns, health communication, NCDs

Introduction

Over the past few decades, non-communicable diseases (NCDs) have received increasing attention, both politically and in the field of public health. This is due to the fact that the cause of

majority of deaths is by this group of diseases (World Health Organization, 2023). The data of the increasing number of people suffer from NCDs throughout the world means that the 2030 Sustainable Development Goals (SDGs) agenda makes the issue of NCDs a main challenge. The sustainable development agenda has a target to reduce premature deaths due to NCDs by a third by 2030. SDGs targets in sustainable development include People, Prosperity, Partnership, Peace and Planet. There are 17 targets that must be achieved by 2030 from various sustainable development issues. One of the 17 targets is health, namely ensuring a healthy life and improving health for all ages (United Nations, n.d.).

The results of the 2023 Indonesian Health Survey indicated an increase prevalence of NCDs in Indonesia, with a notable rise in the number of individuals diagnosed with diabetes mellitus (DM). This increase has given a global impact, manifesting in form of poverty and financial constraints that impede access to health services (Agustina et al., 2019). In addition, hypertension and DM also have an impact on disability incidence. The data indicate that 59.1% of the causes of disability are NCDs, which are hypertension is accounting for 22.2% and DM is accounting for 10.5%. Moreover, Indonesia also experiences a high prevalence of depression among young individuals. As many as 61 percent of the 15-24 year age group experienced depression and had thought about ending their life (Ministry of Health, 2023).

The number of individuals afflicted with NCDs continues to rise due to changes in lifestyle and individual behavior. The fewer individuals who adopt healthy living behaviors, the greater the number of people suffering from NCDs will become. In response to this problem, the Indonesian government has established the Healthy Living Community Movement (Germas) in accordance to Presidential Instruction (Inpres) No. 1 of 2017. One form of these movements is increasing physical activity and healthy living behaviors. In accordance to this, a health campaign was initiated with the objective of establishing these behaviors as a tradition: (1) Periodic health checks, (2) Eliminating cigarette smoke, (3) Regular physical activity, (4) A balanced diet, (5) Getting sufficient rest, and (6) Managing stress, which was subsequently abbreviated into CERDIK.

The objective of a health campaign program is to reduce the prevalence of disease and associated mortality rates. In response to this issue, a number of initiatives have been implemented with the objective of preventing and controlling non-communicable diseases (NCDs). Some of the implemented activity programs include preventive efforts, such as health screenings and prevention for hypertension, diabetes mellitus (DM), cessation of smoking, and screening for cervical cancer and breast cancer. Additionally, several other programs have been implemented, including advocacy, community empowerment, and media-based campaigns. Some of the communication channels employed include seminars and talk shows, mass media, and social media. Furthermore, training for health cadres and health workers has been implemented (West Java Health Office, 2022).

Schiavo (2014) posits that alterations in knowledge and attitudes are also contingent upon the manner in which communication is conveyed. Pre (2014) defines health communication as the process of sharing, seeking, and understanding health-related information. In order to make communication channels be effective in health campaigns, it is essential to view the channel as a message source. This is because communication channels have been found to be related to individual perceptions and motivations in carrying out health behaviors (Muturi, 2022; Swoboda, et al., 2019). Consequently, it is crucial to examine the potential impact of communication, specifically the existence of health communication channels, on this phenomenon. In light of the aforementioned considerations, the objective of this research is to analyze the relationship between health communication channels and health behavior.

Theoretical Framework

Health communication is the most developed subdiscipline and has been the subject of numerous publications. This is due to the fact that one of the significant global developments is the advancement of health and health is one of the primary objectives of development communication programs (Cangara, 2020). The term "health communication" is defined broadly

as the study or use of communication techniques to improve the health status of a community (Mheidly & Fares, 2020).

Currently, the scope of health communication has expanded from the transmission of biomedical interventions at the individual level to encompass more context-based communication about health, including the social and environmental impacts on individual health (Malikhao, 2020). The field of health communication is of significant importance as it enables individuals to gain a deeper comprehension of the means by which they can maintain a healthy lifestyle and become informed about the potential health risks they may encounter (Mheidly & Fares, 2020).

Health communication has a potential to increase awareness, knowledge, and skills related to healthy lifestyles, as well as motivate individuals to adopt a healthy lifestyle (de Cocker et al., 2021). It is crucial to consider health communications when attempting to enhance the scale and efficacy of health campaign practices (Edmonds et al., 2021). Nevertheless, it is crucial to acknowledge that not all health communication processes are universally embraced by the public. Consequently, the capacity for effective communication is a crucial factor in the success of health campaign initiatives (Werder, 2019).

One method of modifying health behaviors is through the implementation of health campaigns. de Morais Pinto et al. (2021) posited that the objective of health campaigns is to influence individual behavior. The campaign messages conveyed related health messages for behavior change, including those pertaining to healthy eating, physical activity, anti-smoking, and early disease detection services. Zhao (2020) posited that a health campaign is a method of influencing the health behavior of a specific audience within a defined period of time and with a targeted number of individuals. Health campaigns are implemented through a series of structured and planned communication activities, disseminated through a variety of communication channels.

Schiavo (2014) categorized communication channels in the context of health communication into five distinct categories: mass media, new media, interpersonal media, community media, and professional media. Zhao (2020) posited the channels for disseminating campaign messages include the media, interpersonal networks, community channels, and promotional events. In the past, the primary method for disseminating large-scale campaign messages was through mass media, particularly television. Nevertheless, the advent and evolution of social media have led to a proliferation of increasingly creative and diverse campaign strategies. Goldberg et al. (2022) emphasized the use of mass media in campaigns. Television is the mass media most frequently utilized for the implementation of health campaigns. In addition, a combination of campaigns via television is typically disseminated through other media, including radio, print, and billboards.

Evans et al. (2022) discuss the development of the use of digital media for behavior change, emphasizing the importance of exploring the full range of functions of digital devices to identify the most effective strategies for behavior change. Haynes-Maslow et al. (2020) conducted an evaluation of a social marketing campaign designed to promote healthy eating behaviors. The campaign's objective is to encourage the adoption of healthy fruit and vegetable consumption behaviors by modelling these behaviors and utilizing various media platforms to reach targeted audiences. The study found that the campaign was effective in creating awareness of the campaign messages.

New media in various forms, such as social media, plays an important role in increasing social awareness, increasing exposure to honest information, promoting healthy living habits, and psychological well-being. The dissemination of health information via social media must consider the credibility of verified and unverified accounts. The dissemination of health information aims to ensure that the public is exposed to and understands the information from trusted sources and that the information is authentic (Mheidly & Fares, 2020).

The advent of social media has facilitated the dissemination of information in a multitude of ways, thereby enabling the formation of communities for the purpose of dialogue and the creation of content. The use of social media as a communication tool allows creation of access to audiences who have accounts for various health information. The utilisation of social media for

the advocacy and communication purposes in the context of health campaigns presents a promising avenue for achieving more extensive reach, enhanced efficiency, and reduced expenditure on communication and advocacy initiatives (Stellefson et al., 2020). Furthermore, social media has augmented the capacity for communication, thereby facilitating the influence of individuals to adopt healthier lifestyles. Users utilize social media to provide mutual support by discussing strategies for maintaining resilience, promoting health, and sharing methods for preventing disease (Schillinger et al., 2020).

Ezeah et al. (2020) conducted a study on the effectiveness of interpersonal communication. The study found that interpersonal communication about health issues was an effective method for creating awareness and increasing public knowledge. The credibility of the source in interpersonal communication plays an important role in influencing and determining changes in health behavior among the public. Ezeah et al. (2020) posited that health campaign studies should integrate studies of interpersonal communication with those of mass media and social media.

In order to optimize the efficacy of health campaigns, it is essential to consider the role of communication channels as a source of messages. The source of the message is a crucial aspect of health communication, and the source of health information plays a pivotal role in shaping an individual's attitudes and behaviors towards health issues (Muturi, 2022; Swoboda, et al., 2019). Consequently, it is essential to assess health communication channels in terms of their trustworthiness, attractiveness, and credibility (Weismueller et al., 2020).

A number of academic studies have highlighted this. Muturi (2022) and Hulchiy et al. (2020) elucidate the concept of understanding the trustworthiness of various sources of health information. Yeik et al. (2021) have considered the role of trust, attractiveness and source credibility. Yin et al. (2024) underscored the significance of source credibility and content quality. In addition, Aprianita and Hidayat (2020) conducted research on the attractiveness of health campaign content for individuals on social media. In light of the aforementioned considerations, this research proposes four hypotheses as follows:

Hypothesis 1:Frequency of using communication channels has a relationship with health behavior
Hypothesis 2: Trustworthiness of communication channels has a relationship with health behavior
Hypothesis 3: Attractiveness of communication channels has a relationship with health behavior
Hypothesis 4: Credibility of communication channels has a relationship with health behavior

Material and Methodology

The research applied a positivistic paradigm with explanatory quantitative method. The research was conducted in the Depok City area from December 2023 to January 2024, with unit of analysis is individuals. The choice of location is informed by the 2018 Riskesdas, which indicates that West Java is the second highest province for the prevalence of hypertension. In data on health behavior, this province ranks the second position for the proportion of less fruit or vegetable consumption. Depok City was selected for the research because it continues to experience an increase in NCD cases and is ranked the third for DM prevalence (West Java Health Office, 2022).

The research population is the people of Depok City who are exposed to health campaigns from various communication channels used. This community is aged 15 years and over, as this is the age at which Indonesia's health profile for NCDs begins. The sample site research is Sukmajaya District. This subdistrict was chosen because it exhibited the highest screening results for NCDs in 2022. The number of samples in this study was 120 individuals. The sample was selected using a purposive technique to ensure representation of the desired characteristics, namely individuals aged 15 years and over and exposed to health and behavioral health campaign activities through various existing channels during the previous year.

The present research employed five variables: frequency of using communication channels (X1), trustworthiness of communication channels (X2), attractiveness of communication channels (X3), credibility of communication channels (X4), and health behavior (Y). The five variables

were quantified using a Likert scale, with scores ranging from 1 to 5. The data were analyzed using univariate and bivariate techniques. The five variables were subjected to hypothesis testing in order to ascertain the nature of their relationship with one another. This was achieved through the use of the SPSS software, with the Pearson correlation test employed to this end.

The data were collected via a survey method, with the assistance of a questionnaire. The research questionnaire was subjected to a validity test using the Pearson correlation coefficient and a reliability test using Cronbach's alpha analysis on 30 respondents who were not part of the research population but who shared the same characteristics. The results of the construct validity test indicated that the correlation coefficient for the questions ranged from 0.117 to 0.903. The results indicated that ten statements were invalid (correlation coefficient smaller than the t-table 0.361). Some of the ten statements have been deleted and revised in accordance to the research requirements. The results of the reliability test for all variables indicated that the Cronbach alpha coefficient value ranged from 0.725 to 0.959, suggesting that these variables are reliable to very reliable.

Result and Discussion

Table 1 provides a general description of the respondents. The table indicates that the majority of respondents are female, comprising 64.2 percent of the total. Conversely, only 35.8 percent of respondents are male. In terms of occupational category, the majority of respondents were identified as housewives (39.2%) and entrepreneur (32.5%). Furthermore, the remaining respondents were classified as students (10%), private employees (8.3%), and those who were not employed (5%).

In this research, age was categorized into four groups: teenagers, adults, pre-elderly, and elderly. This categorization is in accordance to the Regulation of Ministry of Health, Republic of Indonesia No. 25 of 2016. The data indicate that the majority of respondents (60.0 %) are in the adult category (19-44 years). The pre-elderly age category represents 20.0 percent of the respondents, while the elderly account for 12.5 percent and teenagers for 7.5 percent.

Table 1. Respondent profile

	Category	Frequency	Percentage (%)
Gender	Man	43	35.8
	Woman	77	64.2
	Total	120	100
Age	Teenagers (15-18 years)	9	7.5
	Adults (19-44 years)	72	60.0
	Pre-elderly (45-59 years)	24	20.0
	Elderly (>60 years)	15	12.5
	Total	120	100
Education	<6 years	26	21.7
	6-9 years	25	20.8
	9-12 years	61	50.8
	>12 years	8	6.7
	Total	120	100
Occupation	Not working	6	5
	Housewife	47	39.2
	Student	12	10
	Private Sector Employee	10	8.3
	Entrepreneur	39	32.5
	Others	6	5
	Total	120	100

Source: Questionnaire

The majority of respondents had completed between nine and 12 years of education, with 50.8 percent of respondents residing in urban areas. A mere 6.7 percent of respondents have

completed more than 12 years of education or graduated from high school. Nevertheless, a considerable proportion of respondents have received between six and nine years of education, representing 20.8 percent of the total sample. In addition, 21.7 percent of respondents have received less than six years of education.

Frequency of Using Communication Channels

The frequency of channel use is related to the extent to which respondents engage with information and material related to health behavior, whether in whole or in part. The data presented in Table 2 indicates that respondents have not fully utilized the five health promotion communication channels as a medium for disseminating information about health behavior. This is due to the low frequency of use of these five channels. Of the five existing channels, mass media is one of the least utilized (74.2%), with a considerable proportion (17.5%) falling into the medium category.

In addition to the low usage of mass media channels, professional channels are also among the least utilized of the five channels studied, with a usage rate of 84.2 percent. The results were also consistent for new media channels. Despite the current advancement of communication technology, the new media channels in this study remain underutilized, with only 8.3% goes up to the high category. The majority of respondents is classified as the low (55%) and medium (35.8%) categories.

Table 2. Frequency of using communication channels

Channels	**Category (%)**			
	Low	Medium	High	Total
Mass media	74.2	17.5	8.3	100
New Media	55.0	35.8	9.2	100
Interpersonal	39.2	40.8	20.0	100
Community	52.5	30.0	17.5	100
Professional	84.2	15.0	0.8	100

Source: Questionnaire

The results of the study indicate that interpersonal channel and community channel yield intriguing findings. The results presented differ from those observed in the other four channels. The interpersonal channel category represents 40.8 percent of the total, with a significant proportion (20.0%) falling within the high category. Notwithstanding the fact that a considerable number of community channels are situated within the low category (52.5%), a sizeable proportion are also positioned within the medium (30.0%) and high (17.5%) categories.

In general, the frequency of use of new media is the only channel for which respondents report using it more often than other channels. These findings align with those of Dewi et al. (2018), which indicated that social media is the most frequently utilized channel for obtaining health-related information. The findings of their research indicated that individuals tend to prefer obtaining information via social media over non-media platforms, such as seeking information and advice from friends and doctors. The results of this study are in contrast to those of Goldberg et al. (2022), which found that television and other mass media are the most frequently used channels.

The research result demonstrated that exposure to various forms of media content can influence behaviors related to diet, physical activity, and overall health. Media exposure, encompassing traditional media, social media, and online platforms, has demonstrated to exert a profound influence on an individual's behavior and attitudes towards health. Swoboda et al. (2019) posited that the availability of diverse sources of health information presents an opportunity for individuals to engage in health behavior changes. In their research, Kim et al. (2020) emphasized the significance of media communication in fostering healthy behaviors. Furthermore, social media platforms have been identified as influential channels for the

promotion of health behaviors and the dissemination of information. Consequently, it is important to increase public exposure to various information about health campaigns.

Trustworthiness of Communication Channels

Table 3 presents the research results regarding respondents' perceptions of the trustworthiness of the five communication channels. Of the five channels included to in the research, new media, interpersonal channel, and community channel are three channels, which are in the high category. The results indicate that respondents trust new media as much as 52.5 percent, while for interpersonal channel as much as 80%, and community channel as much as 68.3 percent. The results in Table 3 indicate that respondents do not have sufficient trust in mass media and professional channels. Indeed, these two channels are in the low category. However, a notable proportion of mass media channels also believe in this channel, namely 35 percent. The majority of professional channels are in the low category, but a considerable number are also in the high category (35.8%).

Table 3. Trustworthiness of communication channels

Channels	**Category (%)**			
	Low	Medium	High	Total
Mass media	50.0	15.0	35.0	100
New Media	28.3	19.2	52.5	100
Interpersonal	15.0	5.0	80.0	100
Community	23.3	8.3	68.3	100
Professional	53.3	35.8	10.8	100

Source: Questionnaire

Attractiveness of Communication Channels

The subsequent table, Table 4, elucidates other indicators, namely attractiveness of communication channels. The results presented here are largely consistent with those observed in Table 3. In this variable, new media (55%), interpersonal channel (72.5%), and community channel (61.7%) remain the channels with the highest proportion of high-scoring items. The results for mass media and community media channels differ slightly between the two regions. In the case of mass media channels, a considerable proportion (46.7%) is situated within the low category, while the figure for professional channels is notably lower at 61.7 percent.

Table 4. Attractiveness of communication channels

Channels	**Category (%)**			
	Low	Medium	High	Total
Mass media	46.7	25.0	28.3	100
New Media	27.5	17.5	55.0	100
Interpersonal	19.2	8.3	72.5	100
Community	26.7	11.7	61.7	100
Professional	61.7	29.2	9.2	100

Source: Questionnaire

Credibility of Communication Channels

The final variable to be considered is that of the channel's credibility. Table 5 presents results that are not significantly different from those observed in Table 4, with the channel variables being perceived as trustworthy and attractiveness. Table 5 reveals that new media channels (59.2%), interpersonal channel (77.5%), and community channel (70.8%) remain the top three channels among the five channels under study. The majority of respondents indicated that they strongly agreed that these three channels have high credibility. The channels with the lowest credibility ratings are mass media channels (50.0%) and professional channel (56.7%). Nevertheless, in the case of professional channel, a considerable proportion of respondents

(32.5%) still fall into the medium category. It indicates that a significant proportion of respondents concur that health exhibitions and seminars are effective channels for disseminating campaign messages.

Table 5. Credibility of communication channels

Channels	Category (%)			
	Low	Medium	High	Total
Mass media	50.0	18.3	31.7	100
New Media	22.5	18.3	59.2	100
Interpersonal	16.7	5.8	77.5	100
Community	23.4	5.8	70.8	100
Professional	56.7	32.5	10.8	100

Source: Questionnaire

The results presented in Tables 3 to 5 warrant further discussion. As a message source, the five health campaign communication channels in this study exhibit a comparable assessment of new media channels, interpersonal channel, and community channel. The measurement of these three variables is important because it is consistent with previous research that indicates the importance of considering credibility and reliability, particularly in the context of building trust (Huo et al., 2018). Wang and Qi (2021) also identify factors that influence behavior, including source credibility. In the field of marketing, Yeik et al. (2021) posited that trust, attractiveness, and source credibility are pivotal factors influencing attitudes and behavior.

In their research, Hulchiy et al. (2020) focused on NCDs. The findings of the study indicated that health workers were perceived as a more reliable source of information than friends, relatives, or television. These findings are consistent with the results of this study. The interpersonal and community channels are those that not only have high levels of trust but also attract attention and have credibility. Muturi (2022) also corroborates this finding, indicating that interpersonal sources play a pivotal role in influencing health perceptions and behaviors.

The interpersonal channel of influence examined in this research is face-to-face interaction with health cadres, while community media is face-to-face interaction through group socialization through health groups and schools. This implies that health promotion initiatives spearheaded by health cadres and opinion leaders have a high probability of influencing perceptions and motivation in health behaviors due to their trustworthiness, attractiveness, and credibility. These findings indicate a need for increased utilization of these three communication channels to achieve the desired outcomes. The current research results are not yet at the desired levels.

In addition to these two channels, the research findings indicated that new media is also a communication channel with a high level of trust, attractiveness, and credibility. Borah and Xiao (2018) demonstrated that social media platforms are a significant source of information and are considered to have credibility, thus enabling them to shape individual perceptions of online health information. In addition to credibility, the traction on social media platforms can influence the individual intentions and attitudes (Roy & Mehendale, 2021). Moreover, Aprianita and Hidayat (2020) corroborate this finding. The research indicates that social media campaigns on Instagram are effective in attracting individual attention to campaign programs. These attractions include images, colors, and the novelty of content.

Health Behavior

The health behavior campaign represents an initiative undertaken by the government with the objective of modifying the behaviors of the Indonesian population in order to reduce the prevalence of NCDs. In this study, health behavior was defined as the frequency of implementing periodic health check, eliminating cigarette smoke, engaging in regular physical activity, balanced diet, getting adequate rest, and managing stress.

Table 6. Health Behavior

Behavior	**Category (%)**			
	Low	Medium	High	Total
Periodic health check	56.6	34.2	9.2	100
Eliminating cigarette smoke	10.8	45.0	44.2	100
Regular physical activity	24.2	70.8	5.0	100
A balanced diet	2.5	57.5	40.0	100
Getting adequate rest	4.2	74.2	21.7	100
Managing stress	16.7	50.0	33.3	100

Source: Questionnaire

Table 6 illustrates the general results, indicating that the majority of respondents remain in the moderate category with regard to the implementation of this health behavior in their lives. The application of this behavior is not contingent upon the presence or absence of NCDs. The results of the study indicated that there were noteworthy findings with regard to the frequency of undergoing periodic health checks. The lowest results were found in the behavior of periodic health checks, with 56.7 percent of respondents indicating that they do not engage in this behavior. This suggests that the preventive measures recommended by the government through Ministry of Health Regulation No. 71 of 2015 have not been fully implemented by the public. The Ministry of Health recommends that individuals undergo regular health checks, with a minimum frequency of once every six months.

Another noteworthy finding is the behavior of individuals in eliminating cigarette smoke. The majority of respondents do not smoke, yet a considerable number have not attempted to avoid cigarette smoke or smoking environments. Consequently, this behavior is also only in the moderate category. If these results are referenced in Table 1, gender may be identified as a potential causal factor. Most respondents are women. According to the 2018 Basic Health Research (Riskesdas) data, the majority of tobacco consumption among men aged 15 years and over is 62.9 percent throughout Indonesia.

Additionally, an open-ended question was posed to ascertain the rationale behind smoking among those who engage in the practice. Some of the responses included the following: "Smoking has become a habit," "You have become addicted, so it is difficult to stop," "Your mouth tastes sour if you don't smoke," and "You won't be enthusiastic while you are working if you don't smoke." This response indicates that the individual in question is influenced by their thoughts and mindset. Consequently, health campaigns designed to alter attitudes should be a priority for the government.

Martínez-Gómez et al. (2023) demonstrate that optimal sleep is essential for optimal organism function, thus establishing sleep as a fundamental need. A lack of sleep is associated with unhealthy dietary habits and the development of chronic illnesses. It is regrettable that the majority of respondents (74.2%) were classified in the moderate category with regard to this behavior. This indicates that a significant proportion of the population in Depok City is not sleeping according to the government's recommended 7-8 hours per day.

The adoption of a balanced and healthy diet, coupled with the management of stress, has been demonstrated to yield positive outcomes. The majority of respondents exhibited behaviors consistent with a healthy, balanced diet, with 57.5 percent falling into the medium category and 40 percent into the high category.

The findings of the research indicate that one aspect that cannot be entirely constrained is the consumption of salt. This inability is in accordance to the results of the World Health Organization (2022) which indicate that Indonesia has not yet achieved the policy target regarding salt/sodium. It is evident that excessive salt consumption is closely related to an increased risk of hypertension and heart disease. With regard to stress management behaviors, the majority are also in the medium category (50%), while a considerable number are in the high category (33.3%).

This indicates that individuals residing in urban areas remain susceptible to stress-related behaviors. This corroborates the findings of Gruebner et al. (2017), which indicated that urban areas exhibited a higher prevalence of psychological illness than rural areas.

Hypothesis Test Results

Table 7 presents the results of the relationship test decisions. Hypothesis 1 is accepted. The frequency of communication channel usage is found to be significantly related to health behavior ($r = 0.478$, $p < 0.01$). The relationship is positive in direction and of moderate strength. In addition, hypothesis 2 is also accepted. The results indicate that trustworthiness of communication channels are associated with health behavior ($r=0.313$, $p<0.01$). The direction of the relationship is positive, and the strength of the relationship is weak. Hypotheses 3 and 4 were also accepted. Attractiveness of communication channels are related to health behavior ($r = 0.297$, $p < 0.01$), and credibility of communication channels are related to health behavior ($r = 0.231$, $p < 0.05$). These two hypotheses also exhibit a positive direction and a weak relationship strength. The positive direction indicates that the greater the frequency of use of a channel, the greater the trustworthiness, the greater the channel's ability to attract attention, and the greater the channel's credibility, the more positive the health behavior will be.

Tabel 7. Hypothesis test results

Correlations	r	Result
H1: Frequency of using communication channels has a relationship with health behavior	.478**	accepted
H2: Trustworthiness of communication channels has a relationship with health behavior	.313**	accepted
H3: Attractiveness of communication channels has a relationship with health behavior	.297**	accepted
H4: Credibility of communication channels has a relationship with health behavior	.231*	accepted

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

The establishment of effective communication channels can facilitate the dissemination of accurate, relevant, and trustworthy information about health. For instance, public health campaigns, health education programs in schools, interactions between individuals in families and the surrounding environment, as well as mass media that provide balanced coverage of health issues. Those manners can all be considered examples of effective communication channels. By ensuring that existing communication channels provide accurate, motivating, and supportive information about health practices, they can contribute significantly to create an environment that supports positive health behaviors in society.

The results of this relationship test are also consistent to the findings of Banerjee and Ho (2019), which indicate that individuals who engage in regular interpersonal communication and pay close attention to health information tend to have a strong relationship with health behavior. Furthermore, the findings align with those of Swoboda et al. (2019), Muturi (2022), and Roy and Mehendale (2021), which indicate that the frequency of media use, trust, attractiveness, and credibility of message sources are related to health behavior.

Conclusions

The results of the research allow us to draw three conclusions. First, the frequency of using health promotion communication channels is still low, where new media channels, personal media and community media are three channels that can be trusted, attractiveness and have credibility. Secondly, the implementation of health behaviors among the residents of Depok City is still in the medium category. One of the behaviors that requires the greatest degree of attention is periodic health check behavior. The population of Depok City exhibits a low level of awareness regarding the importance of regular health checks. Third, the research revealed a significant correlation

between the frequency of communication channel usage and the implementation of health behaviors. Channels, which are perceived as trustworthy, attractiveness, and have credibility were found to be particularly influential.

The preceding analysis leads to the conclusion that the Depok City government should prioritize enhancing the efficacy of health campaign initiatives with the objective of augmenting the prevalence of CERDIK health behaviors. The performance in question is the creation of messages that are trustworthy, attractiveness, and have credibility through the use of channels. In addition, it is imperative to enhance the frequency of campaigns across all communication channels and to encourage health cadres to be more active and to involve more community leaders in Depok City.

References

Agustina, R., Dartanto, T., Sitompul, R., Susiloretni, K. A., Suparmi, Achadi, E. L., … Indonesian Health Systems Group. (2019). Universal health coverage in Indonesia: concept, progress, and challenges. *Lancet (London, England)*, *393*(10166), 75–102. https://doi.org/10.1016/S0140-6736(18)31647-7

Aprianita, D., & Hidayat, D. (2020). Analisis pesan kampanye #dirumahaja di tengah pandemi COVID-19. *Komunikologi: Jurnal Pengembangan Ilmu Komunikasi Dan Sosial*, *4*(2), 78–96. https://doi.org/10.30829/komunikologi.v4i2.7910

Banerjee, S., & Ho, S. S. (2019). Applying the theory of planned behavior: Examining how communication, attitudes, social norms, and perceived behavioral control relate to healthy lifestyle intention in Singapore. *International Journal of Healthcare Management*, *13*(1), 496–503. https://doi.org/10.1080/20479700.2019.1605687

Borah, P., & Xiao, X. (2018). The importance of 'likes': The interplay of message framing, source, and social endorsement on credibility perceptions of health information on Facebook. *Journal of Health Communication*, *23*(4), 399–411. https://doi.org/10.1080/10810730.2018.1455770

Cangara, H. (2020). *Komunikasi pembangunan: Telaah untuk memahami konsep, filosofi, serta peran komunikasi terhadap pembangunan dan pembangunan komunikasi dalam era digital*. Rajawali Pers.

De Cocker, K., Verloigne, M., Cardon, G., & Van Acker, R. (2021). Public health communication and education to promote more physical activity and less sedentary behaviour: Development and formative evaluation of the 'physical activity triangle.' *Patient Education and Counseling*, *104*(1), 75–84. https://doi.org/10.1016/j.pec.2020.06.025

de Morais Pinto, R., de Medeiros Valentim, R. A., da Silva, L. F., de Moura Santos Lima, T. G. F., Kumar, V., de Oliveira, C. A. P., … de Andrade, I. (2021). Analyzing the reach of public health campaigns based on multidimensional aspects: The case of the syphilis epidemic in Brazil. *BMC Public Health*, *21*(1), 1–13. https://doi.org/10.1186/s12889-021-11588-w

Dewi, R., Janitra, P. A., & Aristi, N. (2018). Pemanfaatan internet sebagai sumber informasi kesehatan bagi masyarakat. *Media Karya Kesehatan*, *1*(2), 162–172. https://doi.org/10.24198/mkk.v1i2.18721

Edmonds, T., Drake, H., Miller, J., Trabue, N., Lister, C., Salunkhe, S. S., … Levinson, A. (2021). A framework for integrating arts, science, and social justice into culturally responsive public health communication and innovation designs. *Health Promotion Practice*, *22*(1), 70–82. https://doi.org/10.1177/1524839921996796

Evans, W. D., Abroms, L. C., Broniatowski, D., Napolitano, M., Arnold, J., Ichimiya, M., & Agha, S. (2022). Digital media for behavior change: Review of an emerging field of study. *International Journal of Environmental Research and Public Health*, *19*(15), 9129. https://doi.org/10.3390/ijerph19159129

Ezeah, G., Ogechi, E. O., Ohia, N. C., & Celestine, G. V. (2020). Measuring the effect of interpersonal communication on awareness and knowledge of COVID-19 among rural communities in Eastern Nigeria. *Health Education Research*, *35*(5), 481–489. https://doi.org/10.1093/her/cyaa033

Goldberg, E., Eberhard, J., Bauman, A., & Smith, B. J. (2022). Mass media campaigns for the promotion of oral health: A scoping review. *BMC Oral Health*, *22*(1), 1–18. https://doi.org/10.1186/s12903-022-02212-3

Gruebner, O., Rapp, M. A., Adli, M., Kluge, U., Galea, S., & Heinz, A. (2017). Cities and mental health. *Deutsches Arzteblatt International*, *114*(8), 121–127. https://doi.org/10.3238/arztebl.2017.0121

Haynes-Maslow, L., Hofing, G. L., & Marks, A. A. (2020). Use of a social marketing campaign to promote healthy eating behaviors among low-income caregivers. *Journal of Human Sciences and Extension*, *8*(3), 74–92. https://doi.org/10.54718/XKRR3751

Hulchiy, O. P., Slabkiy, G., & Balashov, K. (2020). Evidence-based approaches to communication of non-communicable diseases risks in Ukraine: Identification of channel. *Україна Здоров'я Нації*, *2*(3), 6–12. https://doi.org/10.24144/2077-6594.3.2.2020.213700

Huo, C., Zhang, M., & Ma, F. (2018). Factors influencing people's health knowledge adoption in social media: The mediating effect of trust and the moderating effect of health threat. *Library Hi Tech*, *36*(1), 129–151. https://doi.org/10.1108/LHT-04-2017-0074

Kim, H.-K., Lee, K.-Y., & Baek, W.-Y. (2020). Effect of celebrity athlete endorsement on sporting goods consumers' brand passion and loyalty. *Social Behavior and Personality*, *48*(5), 1–11. https://doi.org/10.2224/sbp.9117

Malikhao, P. (2020). Health communication: Approaches, strategies, and ways to sustainability on health or health for all. In J. Servaes (Ed.), *Handbook of communication for development and social change* (pp. 1015–1037). Springer Nature Singapore. https://doi.org/10.1007/978-981-15-2014-3_137

Martínez-Gómez, J., Fernández-Alvira, J. M., de Cos-Gandoy, A., Bodega, P., de Miguel, M., Tresserra-Rimbau, A., … Fernández-Jiménez, R. (2023). Sleep duration and its association with adiposity markers in adolescence: A cross-sectional and longitudinal study. *European Journal of Preventive Cardiology*, *30*(12), 1236–1244. https://doi.org/10.1093/eurjpc/zwad137

Mheidly, N., & Fares, J. (2020). Leveraging media and health communication strategies to overcome the COVID-19 infodemic. *Journal of Public Health Policy*, *41*(4), 410–420. https://doi.org/10.1057/s41271-020-00247-w

Ministry of Health. (2015). *Ministry of Health Regulation No. 71 of 2015 concerning Non-Communicable Disease Control*. Ministry of Health.

Ministry of Health. (2016). *Ministry of Health Regulation No. 25 of 2016 concerning Health National Action Plan for Elderly 2016-2019*. Ministry of Health.

Ministry of Health. (2023). *Laporan tematik survei kesehatan Indonesia (SKI) tahun 2023*. https://www.badankebijakan.kemkes.go.id/laporan-tematik-ski/

Muturi, N. (2022). The influence of information source on COVID-19 vaccine efficacy and motivation for self-protective behavior. *Journal of Health Communication*, *27*(4), 1–9. https://doi.org/10.1080/10810730.2022.2096729

Pre, A. D. (2014). Communication, basic concept of. In T. L. Thompson (Ed.), *Encyclopedia of health communication* (pp. 205–208). SAGE Publication, Inc.

President of Indonesia. (2017). *Presidential Instruction (Inpres) No. 1 of 2017*. President of Indonesia.

Roy, T. K., & Mehendale, S. (2021). Effectiveness of healthcare and fitness influencers during COVID times. *Journal of Pharmaceutical Research International*, *33*(35B), 19–28. https://doi.org/10.9734/jpri/2021/v33i35B31894

Schiavo, R. (2014). *Health communication: From theory to practice* (2nd ed.). Jossey-Bass A Wiley Brand.

Schillinger, D., Chittamuru, D., & Ramírez, A. S. (2020). From "infodemics" to health promotion: A novel framework for the role of social media in public health. *American Journal of Public Health*, *110*(9), 1393–1396. https://doi.org/10.2105/AJPH.2020.305746

Stellefson, M., Paige, S. R., Chaney, B. H., & Chaney, J. D. (2020). Evolving role of social media in health promotion: Updated responsibilities for health education specialists. *International*

Journal of Environmental Research and Public Health, *17*(4), 1153. https://doi.org/10.3390/ijerph17041153

Swoboda, C. M., Walker, D. M., & Huerta, T. (2019). Odds of meeting cancer prevention behavior recommendations by health information seeking behavior: A cross-sectional HINTS analysis. *Journal of Cancer Education*, *36*(1), 56–64. https://doi.org/10.1007/s13187-019-01597-0

United Nations. (n.d.). *The 17 goals*. https://sdgs.un.org/goals

Wang, C., & Qi, H. (2021). Influencing factors of acceptance and use behavior of mobile health application users: Systematic review. *Healthcare*, *9*(3), 357. https://doi.org/10.3390/healthcare9030357

Weismueller, J., Harrigan, P., Wang, S., & Soutar, G. N. (2020). Influencer endorsements: How advertising disclosure and source credibility affect consumer purchase intention on social media. *Australian Marketing Journal*, *28*(4), 160–170. https://doi.org/10.1016/j.ausmj.2020.03.002

Werder, O. (2019). Toward a humanistic model in health communication. *Global Health Promotion*, *26*(1), 33–40. https://doi.org/10.1177/1757975916683385

West Java Health Office. (2022). *Profil kesehatan Jawa Barat tahun 2022*. West Java Health Office.

World Health Organization. (2022). *Noncommunicable diseases progress monitor 2022*. WHO.

World Health Organization. (2023). *Advancing the global agenda on prevention and control of noncommunicable diseases 2000 to 2020: Looking forwards to 2030*. WHO.

Yeik, K. K., Teoh, C. W., & Teoh, C. W. (2021). Instagram influencer marketing: Perceived social media marketing activities and online impulse buying. *First Monday*, *26*(9), 1–18. https://doi.org/10.5210/fm.v26i9.11598

Yin, H., Huang, X., & Zhou, G. (2024). An empirical investigation into the impact of social media fitness videos on users' exercise intentions. *Behavioral Sciences*, *14*(3), 157. https://doi.org/10.3390/bs14030157

Zhao, X. (2020). Health communication campaigns: A brief introduction and call for dialogue. *International Journal of Nursing Sciences*, *7*(1), 11–15. https://doi.org/10.1016/j.ijnss.2020.04.009