




Moving Education and Individual Education as of Communities Health Education Models in Health Emergency Conditions

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Abstract

Health education in the community is a part that must receive special attention during health emergencies. The research objective was to obtain the results of the implementation of the Moving Education and Individual Education models as the basis for the model of health education in the community during health emergencies. Research using experimental research (pre-test and post-test group). It took place in Semarang City in 2022. The population is 3616 people. The sample is determined by an accidental sampling technique that meets the requirements (age over 40 years, willingness to be a respondent, participating in Moving Education or Individual education activities). The statistical test results for the difference in the behavior of respondents before and after the intervention with the Moving Education and Individual Education Models obtained a p-value = 0.002 ($p < 0.05$), or there was a difference between the two extension methods. The Individual Education method is stated to be more effective than the Moving Education method in implementing health protocols, but the impact on other factors is an important consideration.

Introduction

Public Health Emergency of International Concern (PHEIC) is a global public health problem that requires the support of international cooperation in all related fields according to the 2005 IHR (International Health Regulations), such as the pharmaceutical sector, drug and vaccine research, economics, medical technology. PHEIC is an extraordinary event that threatens the public health of other countries through global transmission and response requires a coordinated international response. The characteristics of PHEIC are causing concerned public health events, unusual/unforeseen events, risk of international spread, and risk of international travel/trade restrictions (Wilder-Smith Osman, 2020).

One of the PHEIC conditions was when the COVID-19 pandemic occurred, which

WHO identified as being caused by Severe Acute Respiratory Syndrome Coronavirus-2 (SARS-CoV-2) (Handayani et al., 2018), (Bhatt et al., 2021), (Zhou, Zhang Qu, 2020). On January 30, 2020, WHO designated this incident as a Kedaruratan Kesehatan Masyarakat yang Meresahkan Dunia (KKMMD)/ Public Health Emergency of International Concern (PHEIC). On March 11, 2020, WHO declared COVID-19 a pandemic (She et al., 2020). The spread and number of cases worldwide, including in Indonesia, are increasing rapidly, and the number of deaths is difficult to control. Health experts are competing to move quickly to seek treatment, treatment, and vaccination to control and improve the situation. It is known that the 5 provinces with the highest cases of Covid include DKI Jakarta, East Java, West Java, Central Java, and South Sulawesi.

The mortality rate for COVID-19 in Indonesia is 8.9%, the highest in Southeast Asia (WHO, 2020). Several rules had been issued by WHO and the Government regarding protocols for preventing the transmission of COVID-19, namely using masks, washing hands, avoiding touching the face area, coughing and sneezing etiquette, maintaining distance, self-isolation when not feeling well, and maintaining health. Changes in behavior in adapting to new habits amid the COVID-19 pandemic are vital because COVID-19 has changed human civilization, such as how to socialize, work, and work. In conveying information regarding the implementation of health protocols, appropriate educational methods are needed in the community (Alimansur Quayumi, 2020).

Health education in the community is a part that must receive special attention when a health emergency occurs, as an example of a very concerned health problem, namely during the COVID-19 Pandemic, which is still ongoing until early 2022. Health education health promotion programs, encouraged in health centers, are individual and mobile counseling. Mobile counseling (Moving Education) is counseling that is carried out around the community (moving) without gathering residents (Fahmi Sitompul, 2022), (Maiman Becker, 1974). Individual counseling (Individual Education) is the process of conveying health messages briefly and clearly through a personal approach (Maiman Becker, 1974), (Tiraihati, 2018). The results of Zul Fikar Ahmad's research (2021) regarding efforts to provide health education in cases of diarrhea outbreaks during a pandemic which can have an impact on increasing knowledge, attitudes, and better preventive health behavior, it is very vital to choose health education methods and media to convey messages clearly and safely for officials and the target community (Zulfikar, Ahmad, 2021).

The general objective of the research is to obtain the results of an analysis of the use of the Moving Education and Individual Education models as the basis for a model of health education in the community during health emergencies. The specific objectives of the research: 1) To analyze behavior changes in public health protocols before and after the

Moving Education model is implemented. 2) Analyze behavior changes in public health protocols before and after Individual Education. 3) Analyze the effectiveness of using the Moving Education and Individual Education models for changes in public health protocol behavior. 4) Get health education options in the community in health emergency conditions (PHEIC).

Method

This type of research uses experimental research with a pre-test and post-test group research design. The health emergency condition in this study, as an example that will be examined, is the condition of the COVID-19 Pandemic. The research location is in Kelurahan Sekayu, Semarang City, with a population of 3616 people (August 2020). The choice of location was based on the: it is located in the city of Semarang with high cases of COVID-19 (red zone), is an area visited by many migrants/workers living or boarding houses in the area, located in the area of a health center that has mobile and individual health education programs. The sample was determined using an accidental sampling technique to meet the requirements. The sample requirements are 1) Residents with an age range above 40 years, 2) Willing to be research respondents, and 3) Participating in Moving Education activities or individual education from the Sekayu Health Center. Determining the number of samples using the Slovin formula. So a minimum sample of 100 people is obtained (50 for the Individual Education group and 50 for the Moving Education group). The dependent variable in this study is community behavior concerning the COVID-19 health protocol. While, the independent variables are Individual Education and Moving Education models of health education.

Individual Education, is the process of conveying health messages, briefly and clearly, through an individual approach to increase knowledge and expected behavior changes, involving face-to-face contact between extension workers and targets, and counseling is carried out directly and does not use the media. Materials containing COVID-19 health protocols include: wearing masks, washing hands with soap and running

water, maintaining a safe distance, staying away from crowds, and limiting mobilization and interaction. Counseling was carried out for 15 minutes. Place in each other's homes or during a visit to the Health Center.

Moving Education, is counseling carried out around the community (moving) without gathering residents, using loudspeakers without using the media. Counseling was carried out by researchers with material on COVID-19 health protocols, including wearing masks, washing hands with soap and running water, maintaining a safe distance, staying away from crowds, and limiting mobilization and interaction. Counseling was carried out for 15 minutes. The behavior of the COVID-19 health protocol, is a community action concerning the Covid-19 health protocol (wearing a mask, washing hands with soap and running water, maintaining a safe distance, staying away from crowds, and limiting mobilization and interaction).

The research instruments consisted of counseling materials and questionnaires to assess community behavior regarding the COVID-19 health protocol, tested for validity and reliability. Univariate analysis to describe the characteristics of each research variable using the frequency distribution. Bivariate analysis to find differences in people's behavior concerning the COVID-19 health protocol before and after treatment using the Wilcoxon Test. Then to find out the differences in the effectiveness of using counseling methods on people's behavior concerning the COVID-19 health protocol, the Mann-Whitney Test was used. Meanwhile, to get health education options in the community in health emergency conditions (PHEIC) with literature studies, conclusions on the results of the effectiveness of health education obtained, and FGDs. FGD participants totaled 10 people, consisting of 4 people from the health promotion field from the puskesmas, 3 health promotion experts, and 3 community representatives. The research instruments consisted of counseling materials and questionnaires to assess community behavior regarding the COVID-19 health protocol, tested for validity and reliability. Univariate analysis to describe the characteristics of each research variable using

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Results and Discussions

The research area is the Sekayu Community Health Center located in the Central Semarang District, Semarang City, Central Java Province, a densely populated area. It is the center of government in Semarang City. Central Semarang District is divided into 15 Villages, 75 Community Units (RW), and 488 Household Units (RT). The income of most people is based on trade/entrepreneurship. There are 197 small industries with a workforce of 5,570 people and 21,791 home industries employing 19,062 people. There are 25 Hotels / Inns / Lodgings employing 1,100 people. There are 925 restaurants/food stalls employing 1,346 people. Trading 2,658 fruit with a workforce of 5,665 people. The transportation business has 50 units employing 158 people.

Table 1. Distribution of Health Protocol Behavior Before and After the Moving Education model intervention

Behavior	Before		After	
	n	%	n	%
Good	0	0	26	52
Medium	39	78	24	48
Low	11	22	0	0
Total	50	100	50	100

Source : Primary Data, 2020

Based on Table 1. the behavior of the respondent's health protocol before the intervention with the Moving Education model had the highest percentage in the moderate

category (78%). Meanwhile, the behavior of the respondents after the intervention was the highest in the good category (52%).

Table 2. Distribution of Health Protocol Behavior Before and After the Individual Education model intervention

Behavior	Before		After	
	n	%	n	%
Good	6	12	42	84
Medium	35	70	8	16
Low	9	18	0	0
Total	50	100	50	100

Source : Primary Data, 2020

Table 2 showed that the health protocol behavior before the intervention of the Individual Education model was the highest in the moderate category (70%), and after the intervention, the highest was good(84%).

The results of the pretest and post-test differential test of respondents' behavior in the Moving Education and Individual Education model intervention groups carried out by the Wilcoxon statistical test showed a p-value = 0.001 for the Moving Education model and a p-value = 0.000 for the Individual Education model. So it can be concluded that there are differences in people's behavior regarding health protocols before and after being given counseling using the Moving Education and Individual Education models.

Table 3. Differences in Respondents' Behavior Before and After the Intervention with the Moving Education and Individual Education Models

Methods	Before	After	Difference	p-value
Moving Education	35	45	10	0.002
Individual Education	35	55	20	

Source : Primary Data, 2020

The increase in the behavior of respondents before and after counseling with the Moving Education Method was an average of 10, while for the Individual Education Method, it was 20. The results of the Mann-Whitney statistical test obtained a p-value = 0.002 (p <0.05). So it was concluded that there was a difference between counseling with the Moving Education method and Individual Education. The Individual Education method is stated to be more effective than the

Moving Education method in implementing health protocols.

The results of the FGD concluded that the choice of health promotion methods in health emergencies is affected by the emergency form that occurred, such as an emergency outbreak of diarrheal disease or poisoning or health problems due to natural disasters, and whether the degree covers one region, one country or the world. This research is related to the COVID-19 pandemic, with existing characteristics related to the mode of transmission, the impact on morbidity, mortality, and many non-health aspects. So Moving Education is the safest to do for health workers and the community. Although, the highest level of effectiveness is in the Individual Education model. The combination model is the best way, where Individual Education is carried out in counseling form, along with face-to-face examinations or via the internet.

Health emergencies, such as the COVID-19 outbreak, have changed people's behavior regarding health and will not return to normal soon after the emergency policy is lifted (Hara Yamaguchi, 2021). It has caused changes in the use of health services, the ability to make in-person medical visits, and services cannot be implemented evenly (Wang et al., 2021). It is due to the existing health emergency followed by policies that must be obeyed. China empowers technological facilities to deal with the COVID-19 outbreak. It is evident from the use of internet hospital services to alleviate the unavailability and inequality of health services during the COVID-19 pandemic and reduce misinformation that spreads in various media (Wu et al., 2021). Health education in the community is a part that must receive special attention when a health outbreak occurs, as an example of a critical health problem, namely during the pandemic, which is still ongoing until early 2022. During the COVID-19 pandemic, health promotion carried out by the government and various health facilities is vital. Selection of health promotion methods/models is urgent to get maximum results (Handayani et al., 2015), (Handayani et al., 2017). In addition to getting maximum results, it also considers the safety and security of officers as a result of carrying out their duties. The public needs to get as much information as possible, considering that the SARS-CoV 1 virus that causes COVID-19 is a relatively new type of virus. In addition, the learning process for student health workers, such as nursing, must find appropriate methods to avoid negative impacts, especially when practicing in the field. Another example is the mobile training program on immunization for nurses and doctors (ADV T). (Pramana et al., 2022), (Rajasekaran Sriman Narayana Iyengar, 2013).

The results of the research related to the analysis of the use of Moving Education and Individual Education as models of health education in the community in health emergency conditions conclude that there are differences before and after health education is carried out from the two methods provided, which are in the form of increasing behavior related to bathing and changing clothes after carrying out activities in outside the home, exercise regularly, and consume vitamins regularly. The results of the study found that there was a difference in the average value of the behavior of the respondents after counseling was carried out both by the Moving Education and Individual Education methods, with an increase in the behavior value of the respondents on an average of 20 in Individual Education and 10 in Moving Education. So Individual Education is more effective than Moving Education with a p-value = 0.002 ($p < 0.05$). It is possible because the Individual Education method is given through an individual approach that directly involves face-to-face contact between extension officers and the target so that respondents will understand more about the presentation and can discuss respondents problems quickly and directly.

Even though the Individual Education method gives better, in conditions of a health emergency, other factors are important considerations, such as the level of security from the point of view of transmission, the spread of cases, and increased mortality. Safety from the point of view of sufferers or those who are positive cases or from the point of view of officers is also a factor that is an important consideration. Many victims of health workers carry out their duties well, which results in contracting the disease and even death, including the psychological impact on the officers who carry out their duties (Pollock et al., 2020). The Individual Education method in this study was carried out directly face-to-face. In addition, the Individual Education method can be realized in direct counseling or by each cell phone and carry out an individual approach that allows you to ask questions and answers. Many health education services are provided virtually, as is done for people with TB and HIV. Mobile education not only has a knowledge education function, but can also be integrated with clinical decision support, drug adherence, and quality of life and significantly increase knowledge (Guo et al., 2017). In Africa, the mobile education method is used for tuberculosis education media, like a TB screening medium for patient referrals and follow-up through increasing Public Private Mix (PPM) (Tumuhimbise Musiimenta, 2021). Mobile education is highly relevant in the context of the ongoing global pandemic, accelerating knowledge

transfer, increasing learning motivation, health promotion effects, and increasing self-management efficiency (Feng et al., 2021). Some of the obstacles experienced in the field, such as teletraining and telecardiology, which is the most appropriate method in the field, face several obstacles, like infrastructure and technology barriers, organizational and financial barriers, policy and regulatory barriers, and cultural barriers.

Other research states that E-learning can also be the method of choice for possible community characteristics, such as the results, which state that the use of online learning (e-learning) has a significant effect on increasing knowledge, attitudes, and behavior in preventing diarrhea during a pandemic (Meilinda et al., 2020). The use of digital information and communication technology (ICT) has enabled many professionals to continue providing their services during the COVID-19 pandemic, as research results suggest that compared to face-to-face interventions, psychologists recognize that preventive action/knowledge through ICT is an option for providing services can still run, fulfill client compliance, and produce positive results (Dores et al., 2020). The use of technology is also manifested in video media. Exposure to health education videos can enhance their social support and mental growth and can help them overcome the adverse effects of public health emergencies with better mental health and health-related behaviors (Yang et al., 2021).

In conditions of long-term health emergencies, a diversification strategy in health services needs to be implemented, including in terms of the selected health promotion program. Selvi DM's research (2020) found that the diversification of strategic services had an impact on a high community level in accessing and participating in Posyandu activities during the COVID-19 Pandemic, including those related to health education that had to be given to the target community using Posyandu (Integrated Health Service Post) (Meilinda et al., 2020). This diversification strategy can be utilized for selecting methods of health education activities in health emergency conditions, which are related to Individual Education carried out directly from door to door along with other visiting activities. For example, simultaneously weighing toddlers during pregnancy checks, or it can be a more comprehensive form in the counseling during health checks in health services. Research to determine the effectiveness of interventions during health emergencies is a high priority to get maximum results and consider the resilience and mental health of frontline workers, like during the COVID-19 Pandemic, where intervention evaluations need to

be carried out and become a lesson or study results for the future for proper and rigorous planning, including development, peer review, and reporting of research protocols that are transparent, following guidelines and standards for best practice, with an appropriate follow-up period. Factors that can act as barriers and facilitators to the implementation of interventions should be considered during planning when selecting interventions to be given and adapted to existing local circumstances (Pollock et al., 2020). In addition to socio-cultural, economic, psychological, and health factors that can be harmful to be considered, such as vulnerable groups or populations (elderly, children, people with comorbid diseases), as well as sociodemographic factors such as age, gender (Vaughan Tinker, 2009), (Onyeaka et al., 2021). Moving education is carried out in traditional societies with technological and socio-cultural limitations that do not support mobile education using digital devices, so it is the method of choice in health emergencies. Eventhough many research results state that mobile education has a success rate (Onyeaka et al., 2021), (Guo et al., 2017), (Abbaspur-Behbahani et al., 2022), (Asadzadeh Kalankesh, 2021).

Quality health education must involve delivering accurate information yet simple. A language that individuals or groups can understand, with the goals of raising awareness, changing behavior, and reducing disease and death. Health education is not a one-time event; but must be an ongoing activity and requires constant efforts to keep provider knowledge up to date (Pagliazzi et al., 2020). Behavior counseling/education can increase adherence to health improvement efforts. In this case, individual motivation to change unhealthy habits is an important enough factor to get effective results.

This study concluded the differences in people's behavior regarding the COVID-19 health protocol before and after being given counseling using the Moving Education method and the Individual Education method. Although the Individual Education Method results in better changes in people's behavior towards health protocols, compared to the Moving Education method, the impact on other factors is an important consideration. The combination will get better results, with better security for the community and officers. Deeper and broader information, in terms of, results for the community on morbidity and safety for health workers, is urgently needed for making appropriate program policies.

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