

The Effectiveness of ISPA Disease Prevention Video Media on Increasing Public Knowledge in the Working Area of the Minanga Health Center, Manado City

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Abstract

Acute Respiratory Infection (ARI) are one of the major remains a health problem with a high incidence in Indonesia, including in the Minanga Community Health Center (Puskesmas) area in Manado City. Health promotion efforts through educational media are an important strategy for increasing public knowledge about ARI prevention. This study aims to illustrate the effectiveness of video media in improving public knowledge, attitudes, and behaviors regarding ARI prevention. This study used a qualitative method with a descriptive approach, involving seven core informants (people aged 25–40 years) and one supporting informant (a health promotion officer), and is supplemented with observation data. Data collection was conducted through in-depth interviews and direct observation of educational activities in the field. The results of the study indicate that video media used in ISPA education has a positive impact on increasing public understanding. Information conveyed through videos is considered easier to understand due to its visual presentation and short duration. Most informants stated that there were changes in behavior after watching the videos, such as wearing masks when sick, maintaining cough etiquette, and washing hands regularly. Interviews with health promotion officers and observations support these findings. In conclusion, video media is an effective educational tool in public health promotion related to ISPA prevention. Efforts are needed to expand access and distribution of videos to reach more levels of society.

Keywords: ARI, Health Education, Video Media, Health Promotion, Public Knowledge.

Abstrak (Indonesian)

Penyakit Infeksi Saluran Pernapasan Akut (ISPA) merupakan salah satu masalah kesehatan yang masih tinggi angka kejadiannya di Indonesia, termasuk di wilayah kerja Puskesmas Minanga, Kota Manado. Penelitian ini bertujuan untuk menggambarkan efektivitas media video dalam meningkatkan pengetahuan, sikap, dan perilaku masyarakat terkait pencegahan ISPA. Penelitian ini menggunakan metode kualitatif dengan pendekatan deskriptif, melibatkan 7 informan inti (masyarakat usia 25–40 tahun) dan 1 informan pendukung (petugas promosi kesehatan), serta dilengkapi dengan data observasi. Pengumpulan data dilakukan melalui wawancara mendalam dan observasi langsung terhadap kegiatan edukasi di lapangan. Hasil penelitian menunjukkan bahwa media video yang digunakan dalam edukasi ISPA memberikan dampak positif terhadap peningkatan pemahaman masyarakat. Informasi yang disampaikan melalui video dinilai lebih mudah dipahami karena penyajian visual dan durasi yang singkat. Sebagian besar informan menyatakan terjadi perubahan perilaku setelah menonton video, seperti menggunakan masker saat sakit, menjaga etika batuk, dan mencuci tangan secara rutin. Hasil wawancara dengan petugas promkes dan observasi mendukung temuan tersebut. Kesimpulannya, media video merupakan alat edukasi yang efektif dalam promosi kesehatan masyarakat terkait pencegahan ISPA. Diperlukan upaya untuk memperluas akses dan distribusi video agar menjangkau lebih banyak lapisan masyarakat.

Kata Kunci: ISPA, Edukasi Kesehatan, Media Video, Promosi Kesehatan, Pengetahuan Masyarakat.

INTRODUCTION

Acute respiratory tract infections (ARI) are the most common diseases that cause newborn death. Population growth, which leads to population density in socially, culturally, and health-unorganized areas, is the most common cause of disease in developing countries. WHO in 2016 stated that the rate of illness and death due to ISPA is quite high, especially in children under five. ISPA is the leading cause of infant death, accounting for 16% of 920,136 cases, mainly in Asia and Africa. Parents should know how to prevent ISPA. ISPA can be fatal if not treated promptly

One of the leading causes of morbidity and mortality due to infectious diseases in the world is acute respiratory infection disease (ARI), with nearly 4 million deaths each year, mainly in toddlers in low- and middle-income countries. Pneumonia, a type of ARI, kills more than 700,000 children under five each year, including about 190,000 newborns. The highest incidence of ISPA occurs in South Asia (2,500 cases per 100,000 children) and in South Africa 2,500 cases per 100,000

According to data from the 2023 Indonesian Health Survey (SKI), the prevalence of Acute Respiratory Infections (ARI) in North Sulawesi Province is 1.3% with a confidence range (95% CI) of 1.1-1.6%. The proportion of ISPA cases in all ages in this province reached 19.6%, with a confidence range of 18.3-20.9%. The number of weighted samples in North Sulawesi was recorded at 8,439. This figure reflects the significant incidence rate of ISPA in the region, indicating the need for increased health promotion efforts and preventive interventions to reduce the number of ISPA cases

According to the World Health Organization (2020), ISPA is the infectious disease that most often causes death (morbidity) and pain (mortality) worldwide. About four million people die each year from this disease, and 98% of all deaths are the result of ISPA. The death was caused by the lower ISPA. In low- and middle-income countries, infant, toddler, and elderly mortality rates are particularly high. The mortality rate of ISPA in toddlers reaches 40 per 1000 live births, or 15-20 percent per year. The number of ISPA in Indonesia is 9.3%.

The Minanga Health Center as a first-level health service facility in Manado City, has carried out various health education activities to the community, including regarding the prevention of ISPA. However, in practice, the education provided is still conventional and limited, such as through oral counseling, leaflet distribution, and poster media. Recently, health centers have begun to try to use simple short video media that is played during home visits or in the waiting room of the health center. The video contains light animations about what ISPA is, common symptoms, and preventive measures such as washing hands and wearing masks.

Although the use of video media has begun, the video used is still very simple, not widely available for the public to access independently, and has not gone through an effectiveness evaluation process. Some people may have watched, but it is not yet known to what extent they understand the content of the video, whether the information conveyed is easy to understand, interesting, and really has an impact on changing attitudes or behaviors.

This condition shows that there is an urgent need to conduct evaluation and research, in order to see how effective the simple video media that has been used by the Minanga Health Center in increasing public knowledge about ISPA. The results of this research are expected to be the basis for the development of more effective and targeted educational media, as well as strengthen audiovisual-based health promotion strategies that are relevant to the characteristics of the community in the work area of the Minanga Health Center.

Based on this background, the researcher is interested in conducting further research on the analysis of the effectiveness of video media on the prevention of ispa disease in the working area of the Minanga Health Center, Manado City.

METHODS

Design, place and time

This study uses a qualitative approach with a case study method. The qualitative approach was chosen because this study aims to explore an in-depth understanding of the effectiveness of health promotion through video media in the prevention of ARI. This study also aims to explore the perception of the public and health workers regarding the impact of health promotion videos that have been carried out at the Minanga Health Center, Manado City. This research has been carried out in the working area of the Minanga Health Center, Manado City. The time for this research has been carried out in June 2025.

Number and method of taking subjects

The core informants are respondents who control android cellphones with an age group of 25-40 years old in the working area of the Minanga Health Center, Manado City. Supporting informants are health promotion health workers who serve at the Minanga Health Center in Manado City for at least 1 year. The subject of this study was taken using purposive sampling.

Types and Methods of Data Collection

Interviews were conducted with different respondents, namely people who receive health services, as well as supporting informants such as health professionals, nurses and expert doctors, regarding digital media-based health services to improve healthy living behaviors. It is done to obtain data from different sources with the same technique.

Data processing and analysis

1. Transcribe data from in-depth interviews and observations from existing recordings or records.
2. Open coding, which is processing transcript data made into smaller units (Codes), then the code obtained is grouped into categories (Categories).
3. Connecting between categories (Axial coding), i.e. finding and creating attachment relationships between categories. Thus the data that has been categorized will give a clear picture.
4. Determining the theme (Core), which is arranging the categories into a single theme (core).

RESULTS AND DISCUSSION

A. HASIL

Pengetahuan

1. Have you received information or education from the Minanga Health Center regarding the prevention of ISPA? If so, when and in what form?

Answer :

"I have never had direct counseling. When we have a child who has a cough or a lump in the health center, the nurse just says that he drinks a lot of ice by keeping the house clean" R1 (34 years old, housewife).

(Never participated in direct counseling. But when my child coughed to the health center, the nurse just told me not to drink ice and told me to keep the house clean)

"Never, have we ever seen posters sticky on the walls of health centers, there are pictures of people wearing masks." R2 (29 years old, trader)

(Never. But I have seen leaflets pasted on the walls of the health center, there are pictures of people wearing masks)

"We have only heard from the officer when he checked it, Dorang said that Bato must keep his mouth shut and not to smoke near the child. R3 (40 years old, online motorcycle taxi)

(I only heard from the officer during the check, he said that if you cough you should keep your mouth shut and not smoke near children)

"ND has never heard of it directly. Mar when immunizing children there is counseling only capat, mar us who are not too far to understand". R4 (36 years old, tailor)

(Never told directly. But when immunizing children, there was counseling for a while, but I didn't hear much about it)

"We have never done counseling, only we have ever known that it is only a short time when the cough medicine is used, and we say that the air in the house must be clean". R5 (38 years old, labourer)

(I have never participated in counseling. I was only told briefly when to take cough medicine, he said he had to rest a lot and keep the air in the house)

"Never, if we have a lot of information about ISPA on youtube or from the Instagram of the health center, it's rarely updated". R6 (25 years old, freelancer)

(Never. I see more information about ISPA myself on YouTube or from the Instagram of the health center, it is also rarely updated)

"When we have a sick child, there is a midwife who said that if you can stay in the tattoo room for a long time, you can explain a lot". R7 (30 years old, employee)

(When my son was sick, the midwife only told me not to stay in a closed room for too long. But not much explained)

2. In your opinion, how do health workers at the Minanga Health Center convey information about the prevention of ISPA disease is it easy to understand?

Answer :

"If Dorang Bacirita is direct when we are treated, it is quite clear, sometimes we are capat, so we don't have to ask Bale" R1 (34 years old, housewife) (If they talk directly when I am treated, it is quite clear. But sometimes it's rushed, so I don't have time to ask back)

"We have never heard a direct explanation from the officer, but the poster in the health center, the DPE writing kwa kecil deng tlatu a lot". R2 (29 years old, trader)

(I have never heard a direct explanation from the officer. But if the poster in the health center is small, the writing is small and too much)

"If it's from the officer, you explain it just a little bit, nda then it's called, you know it's sometimes malo mo ba ask more". R3 (40 years old, online motorcycle taxi)

(If it is from the officer, it is usually brief. Not too detailed. I am also sometimes embarrassed to ask for more)

"If you say langsug, it's easy to understand, but you rarely go home, so we just hear that there is a new need for health centers". R4 (36 years old, tailor)

(If you tell them directly, it's easier to understand. But they rarely come to the house, so we only hear if there is a need for a health center.

"Sometimes the language is difficult, if you can explain it in the language of Manado, it will be easier to understand" R5 (38 years old, worker)

(The language is sometimes difficult. If it can be explained in Manado language, it must be more connected).

We think that officers rarely use digital media like that, even though if we use short videos in the Wa group, we understand it". R6 (25 years old, freelancer)

(I think officers rarely use digital media. Even though if you give a short video in the WA group, we will catch it faster)

"The way Dorang BA is explained is quite clear, it's just not because it's always a dorang beking, it should be education for it, not just when there are people who are saki". R7 (30 years old, employee)

(The way they explain it is quite clear, it's just not done often. Education should be like that, not only when people are sick)

Attitude

1. What is your attitude towards the importance of maintaining respiratory health to prevent ISPA?

Answer :

"We think it's important to scale, especially if there are small children at home. So now we are more diligent in cleaning the house by reminding children to wash their hands." R1 (34 years old, housewife)

(I think that's very important, especially if there are small children at home. So now I am more diligent in cleaning the house and reminding the children to wash their hands)

"We are more concerned. In the past, if you were coughing, you should wear a mask to keep your distance so that you can spread it to others." R2 (29 years old, trader)

(I became more concerned. In the past, if I coughed, I just let it go, now I immediately wear a mask and keep my distance so that it doesn't spread to others)

"It is important to scale. We're on the road every day, so we need to know how to take care of ourselves, like wearing a mask and avoiding smoking around people." R3 (40 years old, online motorcycle taxi)

(Very important. I'm on the road every day, so I have to know how to take care of myself, such as wearing a mask and not smoking around people)

"Now we realize that breathing is important to scale. If you are distracted, it becomes difficult to work. So we try to maintain a clean diet with a clean environment." R4 (36 years old, tailor)

(Now I realize that breathing is very important. If we are distracted, we will find it difficult to work. So I try to keep my diet and environment clean)

"We are starting to get used to closing our mouths when coughing, and we are constantly spitting carelessly. Because it turns out that it can make other people sick too." R5 (38 years old, labourer)

(I have started to get used to closing my mouth when coughing, and I also don't spit carelessly. Because it turns out that it can make others sick too)

"Previously, we paid too much attention. But now it's more of a concern, especially when it's in the midst of a pandemic." R6 (25 years old, freelance)

(Previously I didn't pay much attention. But now it's more realistic, especially if there are more diseases like there are now.)

"We consider it important. If you don't take care of your respiratory health, it can cause other people to get sick too." R7 (30 years old, employee)

(I consider it important. If we don't take care of our respiratory health, we can be the cause of others getting sick too)

Behavior

1. Before watching educational videos, what are your habits in maintaining respiratory hygiene, such as covering your mouth when coughing/sneezing?

Answer :

"Sometimes we forget. If you cough or sneeze, usually just cover it with your hands, so you don't usually use tissues or sleeves." R1 (34 years old, housewife)

(Sometimes I forget. If you cough or sneeze, usually cover it with your hands, you are not used to using tissues or sleeves)

"Honestly, I haven't paid much attention to it. Usually if you cough you just turn your head to the side without covering your mouth." R2 (29 years old, trader)

(Honestly, haven't paid much attention yet. Usually if you cough just turn your head to the side without closing your mouth)

"If you want to keep your mouth shut, keep your mouth shut. But I don't know the right way, for example using an arm or a tissue." R3 (40 years old, online motorcycle taxi)

(If you remember, I covered my mouth with my hands. But you don't know the right way, such as covering it with an arm or tissue)

"We usually close our mouths when we sneeze, but we don't use tissues. Sometimes you wash your hands right away." R4 (36 years old, tailor)

(I usually close my mouth when I sneeze, but I don't use tissues. Sometimes immediately use your hands and continue to wash your hands)

"In the past, we didn't think it was important. But now I'm so conscious, because I used to cough a lot without a mouthful." R5 (38 years old, labourer)

(I used not to think it was important. But now that I'm aware, I used to cough a lot without a mouthful)

"Usually it just closes with your hands. But when I saw the video, I knew there was a safer way." R6 (25 years old, freelance)

(I usually just close it with my hands. It was only after watching the video that I knew there was a safer way)

"I am not used to using masks or tissues. Sometimes you forget to keep your mouth shut, especially when the cough comes on suddenly." R7 (30 years old, employee)

(I'm not used to wearing masks or tissues yet. Sometimes you forget to shut your mouth, especially when you cough suddenly:)

DISCUSSION

1. Interview Results from Informants Regarding the Experience of Receiving Information and Education

Based on interviews with 7 core informants, it was found that most of the informants had never received specific information about ISPA directly from the Minanga Health Center before the visit from the researcher. The information they knew before was more obtained from personal experiences, the stories of fellow citizens, and the remains of understanding from public counseling in the past. The majority of informants stated that the content of the educational video was quite complete and in accordance with their needs. They can remember explanations of the definition of ISPA, common symptoms such as cough, cold, and fever, and how they are transmitted through droplets and contact with contaminated objects.

These findings are in line with research in Lampung that shows that low maternal knowledge is significantly related to the incidence of ISPA in toddlers, as well as research in West Sumba that uses the Health Belief Model (HBM) framework and found that low perception of vulnerability and seriousness has an impact on the high recurrence of ARI. According to HBM's theory, the lack of "cues to action" such as counseling from health workers will make it difficult for people to increase the perception of risks and benefits of preventive behaviors, so the tendency to act is still low.

2. Results of Informant Interviews on Knowledge of Disease Prevention of ISPA

Based on the results of in-depth interviews, the knowledge of the core informants about ISPA disease before watching the educational video is still relatively limited. Most consider ISPA to be only a mild symptom such as a common cough or cold that does not require special attention. They do not fully understand the causes of ARI, how it is transmitted, and who is at high risk.

This change in understanding can be explained by The findings of this study can be explained through the framework of the Health Belief Model (HBM). Before being given an educational video, the informant's knowledge was still limited so that their perception of the susceptibility and severity of the ISPA disease was also low, because they considered ISPA to be only limited to a common cough or cold. After watching the educational video, there was an increase in understanding that made informants realize that ISPA is caused by viruses or bacteria, easily transmitted through droplets, and is at high risk in vulnerable groups such as toddlers, the elderly, and people with chronic diseases.

3. Results of Informant Interviews on ISPA Disease Prevention Attitudes

After obtaining information through video media, the informant's attitude towards the importance of preventing ISPA became more positive. They show a willingness to maintain personal and environmental hygiene, and begin to feel responsible for not transmitting the disease to others.

Perubahan sikap informan setelah mendapatkan informasi melalui media video dapat dijelaskan dengan Health Belief Model (HBM). Sebelumnya, kurangnya pengetahuan membuat mereka memiliki persepsi rendah terhadap kerentanan dan keseriusan ISPA, sehingga sikap pencegahan juga minim. Namun, setelah menonton video edukasi, sikap mereka menjadi lebih positif karena terjadi peningkatan pemahaman tentang manfaat (perceived benefits) dari perilaku pencegahan, seperti menjaga kebersihan diri, ventilasi rumah, dan etika batuk. Informasi yang jelas dari video juga membantu mengurangi hambatan (perceived barriers), misalnya anggapan bahwa ISPA hanyalah penyakit ringan yang tidak perlu dicegah.

4. Results of Informant Interviews on ISPA Disease Prevention Behavior

The results of the interviews showed that most of the informants experienced real behavioral changes after watching the educational videos. These behaviors include washing hands before eating and after going out of the house, wearing a mask when coughing or cold, opening windows every morning to maintain ventilation, maintaining environmental cleanliness and avoiding smoking indoors, teaching children about cough and hand washing etiquette, providing wipes and hand soap at home.

The change in informant behavior after watching the educational video can be explained through the Health Belief Model (HBM) framework. Increased handwashing practices, the use of masks, maintaining ventilation, and avoiding smoking indoors reflect the strengthening of perceived benefits, namely the belief that healthy behaviors can prevent the transmission of ISPA. The barriers that previously arose due to the lack of knowledge were also reduced, so that perceived barriers became lower. Awareness to involve children in healthy behaviors and reprimand non-compliant family members shows an increase in self-efficacy, which is self-confidence that they are able to carry out and transmit preventive behaviors.

5. Interview Results with Health Promotion Officer

An in-depth interview with a health promotion officer at the Minanga Health Center revealed various important aspects regarding the use of video media as an educational tool in the ISPA prevention program. These results support and strengthen data from community informants as well as the results of field observations.

The officer stated that the Minanga Health Center has indeed used video media as part of its health counseling strategy, especially in the prevention of ISPA. This short video is played through the officer's cellphone device when making home visits or during small group education in the community. This is in line with the results of observations that note that education through audiovisual media is indeed carried out directly by officers, not through online platforms. This information reinforces the results of public interviews, where most informants stated that they watched videos during home visits and felt that the content of the information was easy to understand.

This is in accordance with the results of observations that show that even though videos are used in education, there have been no instructions for residents to watch them independently. This means that the effectiveness of video media still depends heavily on the existence of officers as facilitators.

6. Observation Results in the Community of Informants and Health Promotion Officers

Observation of the ISPA education recipients was carried out as part of the triangulation method to strengthen the results of interviews and in-depth interviews. The main focus of observation was how the community responded to the delivery of education carried out by health promotion officers, especially the use of video media in counseling on the prevention of ARI.

In the context of *the Dual Coding Theory* (Paivio, 1986), information conveyed verbally and visually together will be easier for the audience to remember and understand. This explains why the use of video is considered more effective in the context of health promotion in communities with diverse educational backgrounds.

These findings show that video media is not only a visual aid, but also a reinforcement of health message delivery when combined with a direct approach from health workers. To achieve a wider impact, policy support is needed to provide videos in digital formats that are easily accessible to the public, as well as training officers in producing and distributing digital content in a structured manner.

7. The Relationship between the Effectiveness of Video Media and the Prevention of ISPA Disease on Increasing Public Knowledge

From interviews with the public, most of the informants stated that they had received education from health promotion officers about the prevention of ISPA, especially through home visits. The information is provided briefly and accompanied by a short-duration educational video playback. The video contains an explanation of ARI, vulnerable groups, symptoms, and prevention through clean and healthy living behaviors (PHBS). The majority of informants said that the content of the video was quite easy to understand, conveyed in simple language, and supported by attractive animations. This makes information feel closer to everyday life. However, there are some informants who feel that the counseling

time is too short and does not give them the opportunity to ask questions, even thinking that the explanation is only done at a glance.

The findings of the interview are in line with the results of in-depth interviews with health promotion officers. The officer explained that the use of video media in health education is carried out regularly, especially during home visits to residents who have cases of ISPA or who are classified as vulnerable groups. They mentioned that videos are used to shorten the delivery of information but are still effective in explaining the content of education. The officers are also aware of the limitations they face, such as the unavailability of special support devices (using personal cellphones), the absence of online video access for the public, and the lack of time for discussions due to the tight visit schedule. In this case, the officer felt that video media was very helpful, but it was not optimal in building two-way communication between the officer and the community. This field finding is also strengthened by the results of observations. In the observation of the community,

CONCLUSION

1. The core informants in this study consisted of people of productive age (25–40 years), with diverse work backgrounds such as housewives, traders, tailors, online motorcycle taxi drivers, freelance graphic designers, and private employees. The majority have secondary to high education levels. The length of suffering from ISPA ranges from 1 to more than 7 days. Meanwhile, the supporting informant is a 31-year-old health promotion officer who has worked for more than a year at the Minanga Health Center.
2. The majority of people already have basic knowledge about ISPA, but their understanding has increased significantly after watching educational video media.
3. The public's attitude towards the prevention of ISPA shows a change in a more positive direction after receiving education through video media.
4. Public behavior towards the prevention of ISPA disease such as washing hands with soap, opening house windows for air circulation, wearing masks when sick, and avoiding smoking indoors.
5. Video media is effective in increasing knowledge of the prevention of ISPA disease in the community in the work area of the Minanga Health Center, Manado City.

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