ANALYSIS OF CHANGE BEHAVIOR PREVENTION OF COVID-19 TRANSMISSION BASED ON INTEGRATED BEHAVIOR MODEL

Abstract

Introduction: Covid 19 pandemic forces people to limit their activities to prevent the spread of the virus. Covid 19 transmission prevention behaviors that can be done include: washing hands using soap and running water, using masks when leaving the house and doing social distancing. This health behavior based on the integrated behavior model theory is influenced by many factors, including demographic factors, knowledge, past habits, attitudes, norms, environment and media.

Objective: For analyze changes in Covid 19 transmission prevention behavior in terms of the integrated behavior model.

Method: The research method used by survey. A total of 103 respondents in Banyumas obtained by convenience sampling in April to May 2020. Statistical analysis used with frequency distribution.

Result: The data obtained were age dominated in the range of 21-59 years as many as 68 people or around 66%, the majority of high school graduates are 76 people or around 74%, urban areas are 63% and rural are 37%. Handwashing behavior used soap and running water very well reaches 84.5%. The used of masks when leaving the house was 92.2%. The application of social distancing was only 47.6%. Public knowledge about Covid 19 good categories reached 81.5%. Positive attitude as many as 80 people or about 77%. The application of norms/ rules reaches 100%. The availability of supporting facilities is 92%. 75% of media accessibility. Only 10% of the community previously had the habit of washing their hands and wearing masks.

Conclusion: A person's behavior is influenced by demographic factors, knowledge, attitudes, norms, habits, environment, media. These factors become a unity that influences each other until the creation of new expected behavior.

Keywords: integrated behavior model, covid 19, health behavior, health promotion, pandemic

Kommentar [s1]: Without your research, we knew the person behavior influenced by more factors.

Kommentar [s2]: Is this your finding in your research? You should perform the prevention behavior and contributed factor as main topic in your research. Commonly, are the prevention behavior and contributed factor good or no in your result?

Abstrak

Pendahuluan: Pandemic Covid 19 memaksa orang untuk membatasi aktivitasnya untuk mencegah penyebaran virus. Perilaku pencegahan penularan Covid 19 yang dapat dilakukan antara lain: cuci tangan menggunakan sabun dan air mengalir, penggunaan masker saat keluar rumah dan melakukan social distancing. Perilaku kesehatan ini berdasarkan teori integrated behavior model dipengaruhi oleh banyak faktor, diantaranya adalah faktor demografi, pengetahuan, kebiasaan masa lalu, sikap, norma, lingkungan dan media.
Tujuan: Untuk menganalisis perubahan perilaku pencegahan penularan Covid 19 ditinjau dari integrated behavior model. Metode penelitian yang digunakan dengan survei. Sebanyak 103 responden di Banyumas diperoleh secara *convenience sampling* pada bulan April hingga Mei 2020. Analisis statistik yang digunakan dengan distrubisi frekuensi.
Hasil: Data yang diperoleh adalah usia didominasi pada rentang 21-59 tahun sebanyak 68 orang atau sekitar 66%, mayoritas tingkat pendidikan lulusan SMA sebanyak 76 orang atau sekitar 74%, wilayah tempat tinggal di perkotaan sebanyak 63% dan pedesaan sebanyak 37%.Perilaku cuci tangan menggunakan sabun dan air mengalir sangat baik mencapai 84.5%. Penggunaan masker saat keluar rumah sebesar 92.2%. Penerapan social distancing hanya 47.6%. Pengetahuan masyarakat tentang covid 19 kategori baik mencapai 81.5%. Sikap positif sebanyak 80 orang atau sekitar 77%. Penerapan norma/aturan mencapai 100%. Ketersediaan fasilitas yang mendukung sebanyak 92%. Aksesibilitas media sebanyak 75%. Hanya 10% saja masyarakat yang sebelumnya memiliki kebiasaan cuci tangan dan memakai masker.
Kesimpulan: Perilaku seseorang dipengaruhi faktor demografi, pengetahuan, sikap, norma, kebiasaan, lingkungan, media. Faktor-faktor tersebut menjadi satu kesatuan yang saling memengaruhi sampai terciptanya perilaku baru yang diharapkan.

Kata-kata kunci : integrated behavior model, covid 19, perilaku kesehatan, promosi kesehatan, pandemi

Background

A new coronavirus (SARS-CoV-2 / covid 19) was discovered in December 2019. This virus causes an epidemic of acute respiratory syndrome in humans. The virus began to spread from Wuhan, China(Zhou et al., 2020). In a short time, this virus has spread to 216 countries. WHO announced a global pandemic due to the spread of covid 19 that occurred in almost all parts of the world. The number of cases infected globally has reached 7,761,609 people(WHO, 2020). In Indonesia, based on data from the Ministry of Health as of June 15, 2020, there were 39,294 cases with a death rate reaching 2,198 people(Acob, 2020). In the report there is still an increase in the number of cases of covid infection 19, so it can be concluded that the pandemic is not over.

Covid pandemic 19 causes dit looks bad for the Indonesian people. These adverse effects occur in almost all sectors of community life. Business actors close their businesses, because the purchasing power of the people is down. The existence of Large Scale Social Restrictions (PSBB) implemented by the Indonesian government turned out to result in the weakening of the economy of the lower classes(Thorik, 2020). Forms of restrictions on social activities include: restricted transportation, closed tourism, shopping center closed, working from home. This turned out to cause social problems, namely increased crime and community stigma against health workers(Abdillah, 2020). The available evidence can be seen from the community's rejection of health workers. The cause of this community action can be influenced by the limited knowledge of the community towards covid transmission 19.

Kommentar [s3]: ??

The President of the Republic of Indonesia has declared the status of this disease to be a stage Emergency Response on March 17, 2020 by issuing Presidential Decree No. 7 of 2020 concerning the Task Force for the Acceleration of Corona Handling which is chaired by the Head of the National Disaster Management Agency (BNPB). This Task Force aims to improve national resilience in the health sector; accelerate the handling of covid 19 through synergy between ministries / institutions and local governments; increase anticipation of the development of escalation in covid spread 19; increase the synergy of operational policy making; and increase readiness and ability to prevent, detect and respond to covid cases 19(Lerik & Damayanti, 2020). Campaign for Community Movement (Germas) is carried out on a large scale to slow the spread of the virus by increasing hand washing, the use of masks and the application of social distancing and physical distancing(Ngronggah et al., 2020).

Based on information published in Tempo National Media on March 18, 2020, a grand tabligh was held in Gowa, which brought thousands of people. The government's suggestion to conduct social distancing by avoiding mass meetings is not obeyed by the community(Irawan, 2020). Most people still consider the corona virus to be a normal and harmless virus. Triyanto and Kusumawardani's survey (2020) found that distance keeping behavior was only carried out around 47.6% of the community. This distance behavior is a behavior that is difficult to achieve.

Changes in community behavior that have increased significantly are in terms of the use of masks and hand washing. Based on research findings, the use of masks and washing people's hands increased very high, reaching 84% (Jacob, 2020). Similar results from research conducted byBavel et al., (2020), changes in the behavior of washing hands using soap with running water is mostly done by urban communities. Likewise, the use of masks is dominated by people who

live in urban areas. Communities living in rural areas still find it difficult to apply the behavior of using masks and washing hands.

Many factors are scientifically proven to influence behavior change. Integrated Behavior Model (IBM) is one theory that comprehensively explains the factors that contribute to changes in a person's behavior(Lunn, Belton, Timmons, & Robertson, 2020). Hand washing behavior and the use of masks are very rarely practiced by the majority of Indonesian people, in fact almost never apply social distancing. Someone will make changes in behavior divided into easy and difficult which is influenced by many factors. Therefore, researchers conducted a descriptive study of hand washing behavior, social distancing and the use of masks in terms of the Integrated Behavior Model theory.

Objective

The purpose of this study was to analyze changes in covid transmission prevention behavior in terms of the integrated behavior model.

Research methods

The research method used is non-experimental quantitative with survey design. Data was collected online by researchers using a questionnaire via Google form on 103 respondents in Banyumas during April to May 2020. The sampling technique used was convenience sampling. The questionnaire consisted of 14 items about hand washing behavior, the use of masks and factors that influence the behavior itself, including: knowledge, age, norms, attitudes, myths, habits, environment. The questionnaire was distributed through the WhatsApp (WA) group network. Survey data obtained through Google form, then analyzed descriptively with frequency distribution.

Results and Discussion

(Table 1)

The number of respondents who were willing to fill out the google form from the survey results was 103 people. Respondent characteristics presented in Table 1 include age, sex, job location, education level and area of residence. Age is dominated in the range of 21-59 years by 68 people or around 66%. The next sequence is in the adolescent age range of 34 people (33%). The sex of the respondents was almost balanced, 42% male and 58% female. Location of work is divided into work carried out inside the building (68%) and outside the building (32%). The majority of respondent education levels are 76 high school graduates or around 74%. Respondent's residential areas are spread in urban areas by 63% and rural areas by 37%.

(Table 2)

Researchers measured covid transmission prevention behaviors 19 by respondents including washing hands with soap and running water; use of a mask when leaving the house; and the application of social distancing. The results of the third measurement of covid transmission prevention behavior 19 are presented in Table 2. The behavior of washing hands using soap and running water is very good at 84.5%. The use of masks when leaving the house was also very good at 92.2%. Both of these behaviors experienced a very high increase from before which was only around 10%. This proves that the Banyumas people are already aware of the danger of the

Kommentar [s4]: Is there a difference of covid incidences rate between urban and rural? Its very interesting if you show this fenomenon.

Kommentar [s5]: Write down this reference!

Kommentar [s6]: Who are they? You should explain inclusion criteria, are they come from all of Banyumas area, or only part of Banyumas city?

spread of covid 19. However, data on the application of social distancing is still lacking. From Table 2 it shows that only 49 people (47.6%) of 103 people always apply social distancing.

(Table 3)
Based on the integrated behavior model theory, the factors that contribute to behavior change prove to be very complex. The research data in Table 3 outlined the factors that contribute to behavioral change including knowledge, attitudes, past habits, norms, environment / facilities as well as media accessibility. The six factors that most influence someone's behavior (Fishbein & Ajzen, 2007). Nowadays almost everyone has a smartphone. This technology product is widely used by the public to disseminate information. Data on public knowledge about covid 19 is increasing rapidly, reaching 81.5%.

Variable attitudes are known to affect a person's behavior. From the results of this study showed a positive attitude of 80 people or about 77%, and a negative attitude of 23 people or 33%. Another factor that also contributed to the change in behavior from the results of this study was the application of norms / rules that reached 100%, meaning that the government seemed disciplined in applying the rules made. People who are seen outside the house do not obey the rules will get sanctions. Factor availability of facilities that are included in the category of support as much as 92%. The government is free to distribute masks to the public. Some public places such as markets, offices have available hand washing facilities complete with antiseptic soap.

Another factor that plays an important role by increasing public knowledge at the time of the CBDR is media accessibility. Based on the data in Table 3, it is known that the accessibility of health education media is very easy to reach by urban communities, which is as much as 75%. Media distribution is mostly done by the public through smartphones and the internet, even the government provides support in the form of data packages. However, there are still data on the habits of the people who used to use masks or wash their hands using soap and running water. Only 10% of the community previously had the habit of washing their hands and wearing masks. These factors are then analyzed based on the integrated behavior model theory.

In the theory of integrated behavior models, several factors that influence a person's behavior are known, including demographic, knowledge, attitudes, norms, habits, environment, media(Lunn et al., 2020.). Actually there are still other factors that also affect a person's behavior, namely self efficacy, skills, salience of behavior. These factors were not examined in this study with consideration of security of data collection, because they had to meet face to face. Based on the findings in this study about the prevention behavior of covid 19 transmission conducted by respondents showed a very high increase namely washing hands using soap and running water reached 84.5% and the use of masks when leaving the house by 92.2%.
Changes in the behavior of respondents who are fast and sharply increased are strongly influenced by behavioral factors. In this case, the respondent commits the prevention of covid transmission 19 can be motivated by fear of being punished and fear of contracting covid 19. According to the results of the studyLerik & Damayanti (2020)behavior based on fear of punishment is usually a change in behavior is temporary. During the covidus 19, the government was very serious in preventing the spread of the virus. As the norm applied by the government by

monitoring the use of masks to people who cross the road. People who do not wear masks are given strict sanctions. This norm is based on data obtained applied 100% to all levels of society.

Changes in behavior that originate from self-awareness of the importance of maintaining health, then behavior change will last a long time(Bavel et al., 2020). Someone who understands the benefits of expected behavioral change, according to research (Faasse & Newby, 2020), so he tends to maintain his new behavior. Background changes in the behavior of each person is certainly different. As a nurse, it should educate and motivate people to have self-awareness in preventing covid transmission. Sometimes, new awareness will arise when the person is forced first (Hanoatubun, et al, 2020)

Distancing social behavior is known to still need to be improved because it has only reached47.6%. They still think that people they talk to are healthy without symptoms. The condition of people without symptoms even though there is a possibility of being infected indicates a healthy condition(Pujilestari, 2020). Therefore, people feel no need to keep their distance from each other. This condition is very risky for covid transmission 19. As is known from the results of the study Wise, Zbozinek, Michelini, Hagan, & Mobbs, (2020) which states that covid 19 can be transmitted by droplets. If the community still does not implement social distancing, it will potentially increase the number of new infected patients. Based on the findings of this study it is known that people feel immune from disease attacks. These false beliefs lead to failure in changing behavior in prevention of covid transmission 19. False beliefs can be influenced by knowledge factors.

Correct knowledge of covid 19 greatly influences the determination of behavior change. Knowledge as the basis for one's decision making and determining subsequent behavior. New behavior starts from the cognitive domain and will form attitudes and actions. Knowledge about covid-19 prevention makes a person aware of the importance of preventing transmission of disease. This researcher's statement is in line with research conducted byBavel et al., (2020)that knowledge has a close relationship with the decision to be taken and the achievement of a positive attitude until the realization of new behaviors. From the results of this study found a positive attitude reached 77%. This positive attitude will support changes in one's behavior. This is evident in the results of this study, the achievement of hand washing behavior and the use of masks is almost 100%.

During the covid pandemic 19, the government together with health workers created information media about covid 19. This media can be found through the internet and social media. Many media dissemination activities are carried out by the community through WhatsApp group messages. The role of the media is quite effective in increasing knowledge about the risk of covid transmission 19. The results of this study indicate media accessibility reaches 75%. Media accessibility will increase public awareness about the importance of preventing covid transmission 19. This statement is in line with researchLunn et al., (2020.)who discovered that ka clear public information campaign can facilitate involvement in the change in behavior prevention covid 19. The dissemination of this information is widely reached by people living in urban areas. Communities living in rural areas have a tendency to have limited access. Respondents in this study who lived in rural areas were 37%. Therefore, of course health workers need to carry out campaigns in different ways, such as through posters and leaflets. Both

of these media also proved effective in increasing public knowledge about covid 19(Acob, 2020; Saputro, 2018).

After getting adequate knowledge and supported by a high level of education, a person is expected to have a positive attitude. The results of this study indicate that most respondents have a high school education level with a good level of knowledge and a positive attitude. Changes in behavior are also influenced by the availability of facilities. Someone will behave which is expected to be supported by the availability of facilities in the community(Smolkowski et al., 2017). Factor availability of facilities found in this study included 92% support category. The availability of facilities can be seen from the free distribution of masks to the public, the existence of hand washing facilities using soap and running water in several public places such as markets and offices. Adequate facilities that can be used by the community based on research will support the expected behavior(Wise et al., 2020).

There is one factor in this research that is important to note also is habit. Changes in behavior are strongly influenced by past habits. The habits of the past that completely or at least do certain behaviors based on researchLee, Kwok, Hons, & Diptroppubhlth (2015) will inhibit the achievement of new expected behavior. The findings in this study indicate honly 10% of people who previously had the habit of washing hands and wearing masks. This kind of thing can be assumed that the behavior of covid transmission prevention by potential respondents is only temporary, if there is no reinforcement by health workers through family empowerment. The family as a supporter and supervisor of behavior change plays an important role to civilize the behavior that has been achieved to be permanent(Friedman & Pfiffner, 2020). Health workers in conducting health promotion about covid transmission 19 will be successful if it involves the family as a support system.

Kommentar [s7]: What is your study limitation in your research? This research doesn't analysis distinguish of original area of respondent, educational level and etc, so you cannot concluded that factors is influence. You can only describe its factors.

Kommentar [s8]: It should be related with your founded

Conclusions and recommendations

Based on the integrated behavior model theory, it can be explained that changes in a person's behavior are influenced by many factors, including demographic, knowledge, attitudes, norms, habits, environment, media. These factors become a unity that influences each other until the creation of new expected behavior. By ignoring one factor, it is possible to prevent someone from changing his behavior. Good behavior that is created can become a culture in everyday life with family empowerment. People's background for changing their behavior is unknown.
Recommendations based on the results of this study are to be able to find out the background of behavior change. Further studies are needed by conducting in-depth interviews as a basis for optimizing expected behavioral changes. Health workers should partner with families as support systems to improve covid transmission prevention behaviors 19.

Conflict of interest

The authors declare that they have no conflict of interest

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Table 1. Characteristics of Research Respondents in Banyumas in 2020

No	Characteristics of Respondents		Frequency (N)	Percentage (%)
1	Age			
	a.	Teen (11-20 years)	34	33
	b.	Adult (21-59 years old)	68	66
	c.	Seniors (over 60 years)	1	1
2	Gender			
	a.	Male	43	42
	b.	Girl	60	58
3	Job location			
	a.	In the building	70	68
	b.	Outside the building	33	32
4	Level of education			
	a.	Elementary school	4	3
	b.	Middle School	8	6
	c.	High school	76	74
	d.	Bachelor	15	17
5	Region of residence			
	a.	Urban	65	63
	b.	Rural	38	37

Table 2. Covid transmission prevention behaviors 19 in Banyumas 2020

No	Behavioral Prevention	Frequency (N)	Percentage (%)
A	Wash your hands using soap and running water		
1	Always	87	84.5
2	Sometimes	16	15.5
3	Never	0	0
B	The use of masks		
1	Always	95	92.2
2	Sometimes	8	7.8
3	Never	0	0
C	Application of social distancing		
1	Always	49	47.6
2	Sometimes	50	48.5
3	Never	4	3.9

Table 3. Factors contributing to changes in the behavior of respondents in Banyumas in 2020

No	Factors that contribute to behavior	Frequency (N)	Percentage (%)
1	Knowledge		
	a. Good	84	81.5
	b. Less	19	18.5
2	Attitude		
	a. Positive	80	77
	b. Negative	23	23
3	Habit		
	a. To do habit	10	10
	b. Not habit	93	90
4	Norm		
	a. There is norm	103	100
	b. There is no norm	0	0
5	Environment / facilities		
	a. Support	95	92
	b. Does not support	8	8
6	Media		
	a. Accessibility	78	75
	b. Not access	25	25

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Kommentar [A1]: All the contents of abstract and the content of article needs English editing

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A new coronavirus (SARS-CoV-2 / covid 19) was discovered in December 2019. This virus causes an epidemic of acute respiratory syndrome in humans. The virus began to spread from Wuhan, China(Zhou et al., 2020). In a short time, this virus has spread to 216 countries. WHO announced a global pandemic due to the spread of covid 19 that occurred in almost all parts of the world. The number of cases infected globally has reached 7,761,609 people(WHO, 2020). In Indonesia, based on data from the Ministry of Health as of June 15, 2020, there were 39,294 cases with a death rate reaching 2,198 people(Acob, 2020). In the report there is still an increase in the number of cases of covid infection 19, so it can be concluded that the pandemic is not over.

Covid pandemic 19 causes dit looks bad for the Indonesian people. These adverse effects occur in almost all sectors of community life. Business actors close their businesses, because the purchasing power of the people is down. The existence of Large Scale Social Restrictions (PSBB) implemented by the Indonesian government turned out to result in the weakening of the economy of the lower classes(Thorik, 2020). Forms of restrictions on social activities include: restricted transportation, closed tourism, shopping center closed, working from home. This turned out to cause social problems, namely increased crime and community stigma against health workers(Abdillah, 2020). The available evidence can be seen from the community's rejection of health workers. The cause of this community action can be influenced by the limited knowledge of the community towards covid transmission 19.

The President of the Republic of Indonesia has declared the status of this disease to be a stage Emergency Response on March 17, 2020 by issuing Presidential Decree No. 7 of 2020 concerning the Task Force for the Acceleration of Corona Handling which is chaired by the Head of the National Disaster Management Agency (BNPB). This Task Force aims to improve national resilience in the health sector; accelerate the handling of covid 19 through synergy between ministries / institutions and local governments; increase anticipation of the development of escalation in covid spread 19; increase the synergy of operational policy making; and increase readiness and ability to prevent, detect and respond to covid cases 19(Lerik & Damayanti, 2020). Campaign for Community Movement (Germas) is carried out on a large scale to slow the spread of the virus by increasing hand washing, the use of masks and the application of social distancing and physical distancing(Ngronggah et al., 2020).

Based on information published in Tempo National Media on March 18, 2020, a grand tabligh was held in Gowa, which brought thousands of people. The government's suggestion to conduct social distancing by avoiding mass meetings is not obeyed by the community(Irawan, 2020). Most people still consider the corona virus to be a normal and harmless virus. Triyanto and Kusumawardani's survey (2020) found that distance keeping behavior was only carried out around 47.6% of the community. This distance behavior is a behavior that is difficult to achieve.

Changes in community behavior that have increased significantly are in terms of the use of masks and hand washing. Based on research findings, the use of masks and washing people's hands increased very high, reaching 84% (Jacob, 2020). Similar results from research conducted byBavel et al., (2020), changes in the behavior of washing hands using soap with running water is mostly done by urban communities. Likewise, the use of masks is dominated by people who

live in urban areas. Communities living in rural areas still find it difficult to apply the behavior of using masks and washing hands.

Many factors are scientifically proven to influence behavior change. Integrated Behavior Model (IBM) is one theory that comprehensively explains the factors that contribute to changes in a person's behavior(Lunn, Belton, Timmons, & Robertson, 2020). Hand washing behavior and the use of masks are very rarely practiced by the majority of Indonesian people, in fact almost never apply social distancing. Someone will make changes in behavior divided into easy and difficult which is influenced by many factors. Therefore, researchers conducted a descriptive study of hand washing behavior, social distancing and the use of masks in terms of the Integrated Behavior Model theory.

Kommentar [A2]: Describe here the originality of the study

Objective

The purpose of this study was to analyze changes in covid transmission prevention behavior in terms of the integrated behavior model.

Research methods

The research method used is non-experimental quantitative with survey design. Data was collected online by researchers using a questionnaire via Google form on 103 respondents in Banyumas during April to May 2020. The sampling technique used was convenience sampling. The questionnaire consisted of 14 items about hand washing behavior, the use of masks and factors that influence the behavior itself, including: knowledge, age, norms, attitudes, myths, habits, environment. The questionnaire was distributed through the WhatsApp (WA) group network. Survey data obtained through Google form, then analyzed descriptively with frequency distribution.

Results and Discussion

Kommentar [A3]: Describe again here the originality of the study compared with other similar studies.

(Table 1)

The number of respondents who were willing to fill out the google form from the survey results was 103 people. Respondent characteristics presented in Table 1 include age, sex, job location, education level and area of residence. Age is dominated in the range of 21-59 years by 68 people or around 66%. The next sequence is in the adolescent age range of 34 people (33%). The sex of the respondents was almost balanced, 42% male and 58% female. Location of work is divided into work carried out inside the building (68%) and outside the building (32%). The majority of respondent education levels are 76 high school graduates or around 74%. Respondent's residential areas are spread in urban areas by 63% and rural areas by 37%.

(Table 2)

Researchers measured covid transmission prevention behaviors 19 by respondents including washing hands with soap and running water; use of a mask when leaving the house; and the application of social distancing. The results of the third measurement of covid transmission prevention behavior 19 are presented in Table 2. The behavior of washing hands using soap and running water is very good at 84.5%. The use of masks when leaving the house was also very good at 92.2%. Both of these behaviors experienced a very high increase from before which was only around 10%. This proves that the Banyumas people are already aware of the danger of the

spread of covid 19. However, data on the application of social distancing is still lacking. From Table 2 it shows that only 49 people (47.6%) of 103 people always apply social distancing.

(Table 3)
Based on the integrated behavior model theory, the factors that contribute to behavior change prove to be very complex. The research data in Table 3 outlined the factors that contribute to behavioral change including knowledge, attitudes, past habits, norms, environment / facilities as well as media accessibility. The six factors that most influence someone's behavior (Fishbein & Ajzen, 2007). Nowadays almost everyone has a smartphone. This technology product is widely used by the public to disseminate information. Data on public knowledge about covid 19 is increasing rapidly, reaching 81.5%.

Variable attitudes are known to affect a person's behavior. From the results of this study showed a positive attitude of 80 people or about 77%, and a negative attitude of 23 people or 33%. Another factor that also contributed to the change in behavior from the results of this study was the application of norms / rules that reached 100%, meaning that the government seemed disciplined in applying the rules made. People who are seen outside the house do not obey the rules will get sanctions. Factor availability of facilities that are included in the category of support as much as 92%. The government is free to distribute masks to the public. Some public places such as markets, offices have available hand washing facilities complete with antiseptic soap.

Another factor that plays an important role by increasing public knowledge at the time of the CBDR is media accessibility. Based on the data in Table 3, it is known that the accessibility of health education media is very easy to reach by urban communities, which is as much as 75%. Media distribution is mostly done by the public through smartphones and the internet, even the government provides support in the form of data packages. However, there are still data on the habits of the people who used to use masks or wash their hands using soap and running water. Only 10% of the community previously had the habit of washing their hands and wearing masks. These factors are then analyzed based on the integrated behavior model theory.

In the theory of integrated behavior models, several factors that influence a person's behavior are known, including demographic, knowledge, attitudes, norms, habits, environment, media(Lunn et al., 2020.). Actually there are still other factors that also affect a person's behavior, namely self efficacy, skills, salience of behavior. These factors were not examined in this study with consideration of security of data collection, because they had to meet face to face. Based on the findings in this study about the prevention behavior of covid 19 transmission conducted by respondents showed a very high increase namely washing hands using soap and running water reached 84.5% and the use of masks when leaving the house by 92.2%.
Changes in the behavior of respondents who are fast and sharply increased are strongly influenced by behavioral factors. In this case, the respondent commits the prevention of covid transmission 19 can be motivated by fear of being punished and fear of contracting covid 19. According to the results of the studyLerik & Damayanti (2020)behavior based on fear of punishment is usually a change in behavior is temporary. During the covidus 19, the government was very serious in preventing the spread of the virus. As the norm applied by the government by

monitoring the use of masks to people who cross the road. People who do not wear masks are given strict sanctions. This norm is based on data obtained applied 100% to all levels of society.

Changes in behavior that originate from self-awareness of the importance of maintaining health, then behavior change will last a long time(Bavel et al., 2020). Someone who understands the benefits of expected behavioral change, according to research (Faasse & Newby, 2020), so he tends to maintain his new behavior. Background changes in the behavior of each person is certainly different. As a nurse, it should educate and motivate people to have self-awareness in preventing covid transmission. Sometimes, new awareness will arise when the person is forced first (Hanoatubun, et al, 2020)

Distancing social behavior is known to still need to be improved because it has only reached47.6%. They still think that people they talk to are healthy without symptoms. The condition of people without symptoms even though there is a possibility of being infected indicates a healthy condition(Pujilestari, 2020). Therefore, people feel no need to keep their distance from each other. This condition is very risky for covid transmission 19. As is known from the results of the study Wise, Zbozinek, Michelini, Hagan, & Mobbs, (2020) which states that covid 19 can be transmitted by droplets. If the community still does not implement social distancing, it will potentially increase the number of new infected patients. Based on the findings of this study it is known that people feel immune from disease attacks. These false beliefs lead to failure in changing behavior in prevention of covid transmission 19. False beliefs can be influenced by knowledge factors.

Correct knowledge of covid 19 greatly influences the determination of behavior change. Knowledge as the basis for one's decision making and determining subsequent behavior. New behavior starts from the cognitive domain and will form attitudes and actions. Knowledge about covid-19 prevention makes a person aware of the importance of preventing transmission of disease. This researcher's statement is in line with research conducted byBavel et al., (2020)that knowledge has a close relationship with the decision to be taken and the achievement of a positive attitude until the realization of new behaviors. From the results of this study found a positive attitude reached 77%. This positive attitude will support changes in one's behavior. This is evident in the results of this study, the achievement of hand washing behavior and the use of masks is almost 100%.

During the covid pandemic 19, the government together with health workers created information media about covid 19. This media can be found through the internet and social media. Many media dissemination activities are carried out by the community through WhatsApp group messages. The role of the media is quite effective in increasing knowledge about the risk of covid transmission 19. The results of this study indicate media accessibility reaches 75%. Media accessibility will increase public awareness about the importance of preventing covid transmission 19. This statement is in line with researchLunn et al., (2020.)who discovered that ka clear public information campaign can facilitate involvement in the change in behavior prevention covid 19. The dissemination of this information is widely reached by people living in urban areas. Communities living in rural areas have a tendency to have limited access. Respondents in this study who lived in rural areas were 37%. Therefore, of course health workers need to carry out campaigns in different ways, such as through posters and leaflets. Both

of these media also proved effective in increasing public knowledge about covid 19(Acob, 2020; Saputro, 2018).

After getting adequate knowledge and supported by a high level of education, a person is expected to have a positive attitude. The results of this study indicate that most respondents have a high school education level with a good level of knowledge and a positive attitude. Changes in behavior are also influenced by the availability of facilities. Someone will behave which is expected to be supported by the availability of facilities in the community(Smolkowski et al., 2017). Factor availability of facilities found in this study included 92% support category. The availability of facilities can be seen from the free distribution of masks to the public, the existence of hand washing facilities using soap and running water in several public places such as markets and offices. Adequate facilities that can be used by the community based on research will support the expected behavior(Wise et al., 2020).

There is one factor in this research that is important to note also is habit. Changes in behavior are strongly influenced by past habits. The habits of the past that completely or at least do certain behaviors based on researchLee, Kwok, Hons, & Diptroppubhlth (2015) will inhibit the achievement of new expected behavior. The findings in this study indicate honly 10% of people who previously had the habit of washing hands and wearing masks. This kind of thing can be assumed that the behavior of covid transmission prevention by potential respondents is only temporary, if there is no reinforcement by health workers through family empowerment. The family as a supporter and supervisor of behavior change plays an important role to civilize the behavior that has been achieved to be permanent(Friedman & Pfiffner, 2020). Health workers in conducting health promotion about covid transmission 19 will be successful if it involves the family as a support system.

Kommentar [A4]: Describe here the limitation of the study

Conclusions and recommendations

Based on the integrated behavior model theory, it can be explained that changes in a person's behavior are influenced by many factors, including demographic, knowledge, attitudes, norms, habits, environment, media. These factors become a unity that influences each other until the creation of new expected behavior. By ignoring one factor, it is possible to prevent someone from changing his behavior. Good behavior that is created can become a culture in everyday life with family empowerment. People's background for changing their behavior is unknown.

Recommendations based on the results of this study are to be able to find out the background of behavior change. Further studies are needed by conducting in-depth interviews as a basis for optimizing expected behavioral changes. Health workers should partner with families as support systems to improve covid transmission prevention behaviors 19.

Conflict of interest

The authors declare that they have no conflict of interest

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Table 1. Characteristics of Research Respondents in Banyumas in 2020

No	Characteristics of Respondents		Frequency (N)	Percentage (%)
1	Age			
	a.	Teen (11-20 years)	34	33
	b.	Adult (21-59 years old)	68	66
	c.	Seniors (over 60 years)	1	1
2	Gender			
	a.	Male	43	42
	b.	Girl	60	58
3	Job location			
	a.	In the building	70	68
	b.	Outside the building	33	32
4	Level of education			
	a.	Elementary school	4	3
	b.	Middle School	8	6
	c.	High school	76	74
	d.	Bachelor	15	17
5	Region of residence			
	a.	Urban	65	63
	b.	Rural	38	37

Table 2. Covid transmission prevention behaviors 19 in Banyumas 2020

No	Behavioral Prevention	Frequency (N)	Percentage (%)
A	Wash your hands using soap and running water		
1	Always	87	84.5
2	Sometimes	16	15.5
3	Never	0	0
B	The use of masks		
1	Always	95	92.2
2	Sometimes	8	7.8
3	Never	0	0
C	Application of social distancing		
1	Always	49	47.6
2	Sometimes	50	48.5
3	Never	4	3.9

Table 3. Factors contributing to changes in the behavior of respondents in Banyumas in 2020

No	Factors that contribute to behavior	Frequency (N)	Percentage (%)
1	Knowledge		
	a. Good	84	81.5
	b. Less	19	18.5
2	Attitude		
	a. Positive	80	77
	b. Negative	23	23
3	Habit		
	a. To do habit	10	10
	b. Not habit	93	90
4	Norm		
	a. There is norm	103	100
	b. There is no norm	0	0
5	Environment / facilities		
	a. Support	95	92
	b. Does not support	8	8
6	Media		
	a. Accessibility	78	75
	b. Not access	25	25