

Dairy Farmer's Knowledge System About Covid-19 and Its Implications for the Formation of Healthy Behavior

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ABSTRACT

The COVID-19 pandemic has brought significant changes to life in all segments of society, including the dairy farmer groups. The most significant changes are the increased awareness in maintaining a clean environment and the emergence of healthy behavior that comes from local knowledge and modern medical knowledge. As a segment of society who work as dairy farmers, healthy behavior is often overlooked because their job is always taking care of livestock. But after the outbreak of COVID-19, they made efforts to prevent the spread of the virus based on their knowledge system. This research uses qualitative methods through data collection techniques, namely observation, interviews, and documentation. The main informant in this study was a group of dairy farmers in Plalangan Village, Gunungpati District, Semarang City. This study aims to: (1) determine the values of local knowledge of the dairy farmer groups related to health and illness. (2) Knowing the change in healthy behavior habits during the COVID-19 pandemic and 3) Knowing the impact of changes in knowledge and habits after the COVID-19 pandemic on the healthy behavior of dairy farmers

Keywords: COVID-19, Dairy Farmers, Healthy Behavior, Knowledge System

1. INTRODUCTION

The Corona 19 virus is a new type of virus that has shocked the world because it has caused a large number of deaths in various countries and has implications for the economy, health, education and socio-cultural life of the community[1], [2][3],[4]. This virus has been detected since 2019 and has spread in various parts of the world, so that the World Health Association (WHO) officially on March 11, 2020, declared this virus a pandemic[5]. Currently, the Corona Virus Disease-19 or COVID-19 pandemic has penetrated various countries, including Indonesia[6]. Not a few people have been infected with the virus. Reporting from CNN Indonesia (16/04/20), it was said that the number of cases of corona virus infection worldwide as of Friday, April 17, 2020 reached 2,179,905 people. Whereas in Indonesia as of April 16, 2020, the total positive cases of corona reached 5,516 with the number of patients who recovered were 548 people and who died were 496 people[7].

To reduce the spread of this virus, various preventive efforts were made in various countries, for example by imposing a lockdown policy[2],[3]. Reporting from KOMPAS.com (22/3/20), states that several countries have locked down, including China, Italy, Spain, France, Ireland, El-Salvador, Belgium, Poland, Argentina, Jordan and many more. Most of the developed countries have successfully implemented lockdown policies and suppressed the spread of the corona virus[9]. Countries that have succeeded in suppressing the corona virus include Taiwan, South Korea, Canada, Georgia, Iceland, Sweden and Russia. South Korea has succeeded in suppressing the corona virus through a lockdown policy because it has done several things, including drive-thru-clinics, information disclosure, physical distancing, and lockdown[10]–[12].

However, the lockdown policy in Indonesia cannot be implemented strictly because the majority of the work of the community includes workers in the informal sector. If the lockdown policy is forced to be implemented, it is feared that it will create chaos

situations such as in India[13]. The thing that then made India failed to implement this policy was because of the large number of workers in the informal sector. The government's unpreparedness before the implementation of the lockdown actually made people lose their jobs, disrupted the supply of goods, displaced thousands of homeless on the roads, malnutrition, causing many casualties due to hunger.

The Indonesian government took the policy of Large-Scale Social Restrictions (PSBB) in which people could still be active in public spaces but still paid attention to health protocols[14], [15]. In Semarang City, although this PSBB policy is not implemented, the regional government is quite strict in enforcing the Health protocol on the community[16]. The Semarang City Government urges the public to do several things, including: Work From Home, Physical Distancing, Not touching faces frequently, covering the mouth when sneezing and coughing, use a mask when going out, and wash your hands more often.

The implementation of a healthy lifestyle in accordance with the Covid-19 Health protocol in Semarang is applied to all segments of society, including the dairy farming community. As part of society who daily touches livestock, this healthy behavior is a top priority in order to avoid illness and other virus attacks. The incessant Health campaign by the government has made the dairy farmer community also carry out a series of activities to prevent the corona virus, including others adopt a healthy lifestyle, improve hygiene habits, wear masks, and increase the intensity of hand washing. However, these dairy farmers actually have local knowledge about clean lifestyles. During the Covid-19 Pandemic, the local knowledge system correlated with the modern knowledge system about healthy behavior that the government campaigned for. This paper will explain about the implementation of a healthy lifestyle for Dairy Farmers in fighting Covid-19 based on their local knowledge system.

2. RESEARCH METHOD

This paper is the result of qualitative research using a case study approach. The research was conducted in Jongkong Village, Plalangam Village, Gunungpati District, Semarang City. The reason for choosing this village to be the location of the research was because there is a community of dairy farmers who are currently implementing the Covid-19 Health protocol. The research data were obtained by observation, interview and literature study methods which were conducted for 8 months, starting from March to October 2020. The data analysis method starts from the process of data collection, data reduction, data presentation, and drawing conclusions[17]. Meanwhile, the data validity was carried out by triangulation techniques of sources and methods.

3. DISCUSSION

3.1. The existence of Dairy Farmers in Semarang City

Semarang City is an area that has the potential as a location for a center for dairy farming. This is marked by the visit of the vice mayor of Semarang after conducting an assessment of the Achievement Animal Farmers Group Competition at the Central Java level in Semarang. That there are at least three sub-districts in this city that have great potential for the development of cattle farms. The three sub-districts include Mijen, Gunungpati, and Ngaliyan Districts[18].

In Gunungpati District, one of the locations for dairy farming is in Plalangan Village, precisely in Terwidi Hamlet and Jongkong Hamlet. Of the two places, Jongkong hamlet is a very strategic location to be used as a center for dairy farming. This is supported by the availability of grass which can be obtained from PT Perkebunan Sidoredjo and 'damen' or rice plants that have entered the harvest period. In addition, local people also use dry land in the highlands known as 'tegal' or 'gogo' as a location for planting grass to meet the feed needs of cows. Dusun Jongkong dairy farm is located in the south of Jongkong Hamlet, to be precise standing on bent land owned by the government. The location of the farm is about ± 2.6 km from Plalangan Village, ± 5.0 km from the Gunungpati District Office, and is about ± 10 km from Ungaran City, Semarang Regency.

According to Prapto (57 years), the dairy farm in Jongkong Hamlet has been established since the 1980s. The existence of this dairy farm is one of the realization of the government program, and the cows that are raised on the farm are not private or individual property. The existence of this dairy farm is an investment from the government using the 'gadoh' system, which means that if each farmer has deposited two calves, the cows will belong to the breeders.

3.2. Local Knowledge of Dairy Farmers Group on Healthy Lifestyle

Basically, the people of Dusun Jongkong have local knowledge which they have implemented long ago. Especially with regard to a healthy lifestyle, the people of Jongkong Hamlet have several strategies to implement a healthy lifestyle, especially among cattle breeders. The things they usually do include:

First, when doing activities in the pen they usually clean the dirt, bathe it, and provide enough food and drink to the cows. This is done to maintain the health of the cow. In addition, cleaning the cage is an important part of maintaining a healthy lifestyle for breeders.

Second, after cleaning the cage they regularly wash their hands. This aims to avoid dirt sticking to the breeders' bodies. They also think that washing hands can reduce the spread of diseases that may arise from cow dung.

"Washing hands is important. Because after cleaning the stables there is definitely '*lethong*' or cow dung stuck to it. Either because of being hit by a cow or because of the '*lethong*' splash that sticks because the cow's tail is '*kopat-kapi*' or moves to the right and left (Prpto, 57 years).

Third, after doing their activities to look for grass or feed for cows in fields, *tegalan*, *gogo*, rice fields, or rubber gardens, usually the breeders' bodies will sweat. So they have to shower or change clothes several times before returning to their activities.

"Usually, after looking for grass, I immediately shower and change clothes. Because the body must feel "picky" or sticky due to sweating. By showering and changing clothes, the body usually feels fresher. So that it can continue with other activities. When you finish your activity, you don't immediately take a shower, your body will usually feel itchy and even swell. Moreover, my skin is not too immune" (Sutiyam, 53 years old).

This was also done by Siswati (50 years old) who said:

"I showered in a day, sometimes more than twice. Especially if it's the dry season. After looking for grass I usually take a shower. Later, when my husband comes home and brings a hunchback of '*damen*' or grass, I have to help '*nglangsir suket*' or bring grass into the stable. After that I sweat again, so I shower again "

Besides that, after looking for grass and doing activities in the cage, the breeders routinely wash their hands. This statement was supported by Sutiyam (53 years) who said:

"Every time I finish looking for grass, I always take the time to wash my hands before eating or drinking. I don't have the heart if I have to eat '*weak gabhul* hands' or hands that get dirty when looking for cow's feed or even after cleaning the stables".

Fourth, the habit of consuming organic vegetables which are usually grown behind their houses, yards, rice fields or in their fields. This is no less important in maintaining the health of cattle breeders, especially in strengthening their immune system. In meeting their fiber needs from fruit and vegetables, most of them get it from their own crops. Plants that are usually grown

are *wit gedhang* (banana), *kates* (papaya), *pogong* (cassava), *vines* (sweet potato), and nuts.

"How can people nowadays not get sick easily? What are they eating, they are given preservatives. I see food now has strange shapes, there are packaged chili sauce, packaged kitchen spices, anything instant. Back then I didn't exist. The food is only *tiwul* (processed from steamed cassava flour and then added with coconut sugar and grated coconut), cassava (dried, steamed and grated coconut), *sawut* (coarsely grated cassava, steamed then grated coconut) *sego* corn (rice), corn), vegetable leaves such as *godhong kates* *godhong tales*, *godhong pogong*, *godhong jlonggrong* (a type of wild plant that has fiber roots and watery stems), purslane *kluban* (wild plants in rice fields boiled with red stems), *godhong genjer* (wild plants in rice fields with wide, round leaves), *caonan* (wild plants with slightly downy leaves that can be used as a base for making jelly) and many more. That's why people used to be healthy and live a long life because the food didn't have any preservatives "(Parti, 75 years old)

Fifth, in growing these plants, they rarely use chemical fertilizers (artificial). Usually they prefer to use organic fertilizer from dry cow dung to fertilize their plants.

"Wet cow *lethong* cannot be used directly to fertilize crops. The problem is that if you use it immediately, the plants will be crisp and eventually die from overheating. Before being used for planting (fertilizing) plants, *lethong* must be left to rest in a place exposed to direct sunlight or by burying it in a *cemplongan* (soil that is dug to store cow dung). After a few weeks or months, the dried cow dung can be used to fertilize crops. " (Prpto, 57 years old)

Based on the information from the informants above, it can be seen that the dairy farming community actually has local knowledge about healthy lifestyles and has practiced it in their daily lives. They get this local knowledge from generation to generation from their parents and also from their life experiences. Healthy living behavior like this is believed by the local community to make the breeders healthy.

3.3. Change in The Healthy Behavior Dairy Farmers During the Covid-19 Pandemic

Around the 1980s, the people of Jongkong Hamlet, including breeders, usually used wild plants, such as *lerak* seeds and *dilem* leaves which were used as cleaners when washing their hands. However, over time, these wild plants were no longer used. This happens

because it is considered no longer functional. The existence of soaps made from chemical substances have been found and are very easy to obtain by the public. In addition, many wild plants that were used to wash hands, such as *lerak* seeds and *dilem* leaves, are now dying. Although sometimes they can still be found, the numbers have decreased significantly.

"I wash my hands using *godhong dilem* (dilem leaf) which is a medium-sized tree like a small guava tree. Usually take an old leaf, knead it until there is foam, then wash your hands. The leaves are wide" (Salimin, 77 years).

"There are also using *lerak* seeds. The shape is like the contents of longan fruit shaped like marbles. Apart from washing clothes, *lerak* seeds are used for washing hands. A *lerak* tree is like a *kedondong* fruit tree. Young *lerak* fruit is green, when it's old it is yellow, sometimes blue, some is black like longan" (Sutiyam, 53 years old).

At present, people are not finding *lerak* seeds and *dilem* leaves, so they often use soap to wash their hands. Changes in the activity of washing hands using soap have occurred for a long time, since modernization entered their lives. When the corona outbreak broke out, their knowledge about washing hands increased with the use of hand sanitizer that contain alcohol. However, the use of soap is more widely used than the hand sanitizer because they feel foreign to the hand sanitizer. The healthy behavior of cattle breeders during this pandemic is shown by washing their hands more frequently with soap. As said by Salimin (77 years old), since COVID-19, he often washed his hands with soap up to 4-5 times a day. Basically, a healthy lifestyle among breeders has been around for a long time. However, the COVID-19 pandemic has increasingly made people aware of the importance of cleanliness to maintain their health.

3.4. The Impact of the Covid-19 Pandemic on the formation a new habits on the healthy behavior of dairy farmers.

This pandemic has succeeded in forming a habitus in the healthy behavior of dairy farmers. The existence of a pandemic has succeeded in increasing the curiosity of the public. They have become active in seeking information related to this pandemic. They usually get information through television, close relatives, neighbours, or from officers at the community primary health institutions (PUSKESMAS) or security forces such as the police and soldiers who sometimes come to check on the situation of the people of Jongkong Hamlet during the COVID-19 pandemic. This is done to ensure that the public health protocol can be implemented optimally.

During this pandemic, the people of Jongkong Hamlet, especially the breeders, became increasingly concerned about their own health. With the information obtained, public knowledge regarding the handling of this virus will be better. They understand more about the function of washing hands, maintaining distance, and wearing masks when leaving the house. They can also distinguish good masks to suppress the spread of this virus.

"Masks are for the health of the nose and mouth so that no dust or dirt gets in it" (Salimin, 77 years old)

"Maintaining health is the same for style too. Same for filtering dust or viruses. A good mask is a bit thick, if possible, a non-scuba mask or a one-layer mask. Because of that, it will usually be stretchy and too thin, so it's not good enough to ward off viruses and dirt from outside" (Rusmanto, 33 years old)

Apart from trying to adopt a healthy lifestyle, breeders also think that the death caused by this virus is part of the destiny of the Almighty.

"I was resigned. Just great. Moreover, I am old. From time to time, God will call me to come home. The human age is estimated to be 50 years. If possible, we should be more grateful. Lha, one of them is by maintaining a healthy lifestyle so that it is kept away from disease. Alhamdulillah we are given healthy love. People used to be healthier because their food was natural. Not like most preservatives now. I used to eat cassava, irut and others, so I can still live it. It's not like now the food is weird" (Rasinah, 60 years old)

"Corona is a powerful destiny. If indeed the ration dies, then without corona it will die. Corona is only one of the ways given by God for His servant to die. Corona is what makes it not human. But *Gusti* (God) Allah SWT. Corona is like flour spread from the sky by God" (Siswati, 50 years old)

For breeders, mortality and a healthy lifestyle are two different things, but a healthy lifestyle can lead to a better life. The practice of maintaining health and hygiene carried out by breeders is the result of their socialization since childhood and even teaching their children to practice the same. Not only to avoid viruses, but also to make them more comfortable working and interacting with each other. But along with the Covid-19 pandemic, namely with the increasingly aggressive campaign for a healthy lifestyle in accordance with the Covid-19 Health protocol, their intensity of maintaining cleanliness has also increased, especially in wearing masks and hand washing practices.

4. CONCLUSION

The Covid-19 pandemic not only has a negative impact on society in the form of anxiety and the spread of viruses that can cause death, but also has a positive impact in the form of forming new habits for people. In the community of dairy cattle farmers in Kampung Jongkong, Semarang City, they have long been doing a healthy lifestyle that has even taken root in their life. In the past, they had the habit of washing their hands with *lerak* seeds and *dilem* leaves which come from wild plants that grow around the village. The function of this leaf is like soap which can remove fatty elements from the human body and in other objects such as clothes. However, when Covid-19 took place, this plant was no longer used because it was rarely found in Jongkong village. The habit of washing hands is then replaced with soap and other chemicals. Even though the habits of farmers in washing hands, wearing masks and practicing other healthy lifestyles are increasing because of the strict implementation of the Covid-19 Health protocol. For this reason, efforts to promote the planting of *lerak* and *dilem* plants can be made so that there is a synergy between the revitalization of local wisdom and the handling of Covid-19 in Indonesia.

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