



## The Role of Online Media in Promoting Pet Well-Being During the COVID-19 Pandemic: A Sustainability Perspective

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### ABSTRACT

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In health promotion efforts, online media have functioned as educational tools by forming pet well-being coverage in the news. During the current COVID-19 pandemic, education through information on how to interact between pet owners and their pets is very important. The purpose of this study is to describe the role of online media in disseminating information about pet well-being in a pandemic situation. The research was conducted qualitatively on five Indonesian online media, with the selection of the analysis unit for the news at [tribunnews.com](http://tribunnews.com), [detik.com](http://detik.com), [kompas.com](http://kompas.com), [okezone.com](http://okezone.com), and [cnnindonesia.com](http://cnnindonesia.com). The basis for selection is based on the order of the five best online news portals in Indonesia in 2020. The news selected according to the criteria is a feature type that contains how humans and pets interact during the pandemic. The analysis technique used mixed methods in media text analysis, with quantitative content analysis for mapping news emergence and qualitative framing analysis for elaborating media frames. The findings of this study show that online media have roles in health promotion supported by coverage emphasizing mitigation with a focus on ways to prevent transmission of COVID-19 in pets and the interactions that owners need to make with their pets. The conclusion of this study is that online media has a role as a supporting media in health promotion, as well as being used as a means of educational media. However, the dissemination of health information on online media still needs to be presented more intensively, integrated with other issues, and educational in nature, not only reported in lifestyle and health rubrics. The contribution of this study is regarding the role of online media in providing education to support the sustainability of urban health by shaping health literacy regarding the importance of balancing interactions between humans and their pets.

## 1. INTRODUCTION

In emergency situations of natural disasters and non-natural disasters, public knowledge of health becomes important [1]. With the current COVID-19 pandemic, which is a non-natural disaster, health care is not only for humans but also for pets. To achieve a healthy city, education, and dissemination of information about pet health during the pandemic cannot be ignored. The adoption of pets increases during the pandemic situation [2], but if pet owners do not have knowledge about pet well-being, it will cause misunderstandings in interaction with their pets.

According to Chandler [3], there must several domains be considered in pets' welfare, such as emotional and physical care, sense of family, purpose, friendship or companionship, social interaction, spirituality, play, and physical health. Welfare includes health and body function, mental health, behavior, as well as normal and emotional development. It can be concluded that to achieve the pet's welfare, it requires the intervention of animal owners in the context of raising, to

ensure the physical and mental health of animals [4]. For this reason, animal care is now carried out by promoting responsible practices in rearing, which are considered capable of supporting animal welfare improvement. So, animal welfare refers to a state of physical and mental health which consists of five aspects of animal welfare including freedom from hunger and thirst; freedom from discomfort; free from pain, injury and disease; freedom to express normal behavior; and freedom from fear and distress.

Pets are part of human interaction in the prevention of transmission and health maintenance. Health promotion activities are very important to reduce anxiety and panic due to the fear of COVID-19 transmission from pets. Although the dissemination of health information in various media currently is related to ways of preventing the transmission of COVID-19, it also has caused anxiety among the public. Even though information about how to behave during the COVID-19 pandemic is very much needed with the hope that a certain level of attention from the public is an important driving force for protective action. Increasing levels of anxiety can lead to

cognitive avoidance strategies, this condition forms the perception of minimizing the perceived threat, thus ignoring suggestions for infection prevention behavior [5]. People who have digital literacy can access more and faster via the internet and social media [6].

This must be addressed immediately in the dissemination of information presented by the media. Currently, mainstream media with a good reputation can still be trusted by the public to obtain educational and informative information. The position of online media can be part of education tools to reduce rejection or neglect of the truth of fact and evidence in society. This effort is known as the formation of resistance knowledge [7].

The urgency of maintaining animal welfare has become an important issue globally since 2020 with WHO (World Health Organization) publishing an integrated One Health and One Welfare approach for COVID-19 recovery so that it can address and support the interconnectedness of animals, humans, and the environment in an integrated manner. Pet health raising is related to the community's health literacy so that it can be precise and according to the needs of animal maintenance. The dissemination of educational information is one of the roles of mass media, including online media. Public education is an important aspect of animal welfare and preventing the spread of disease when human-animal interactions occur. At the time of the COVID-19 pandemic, pet owners and the public need information about how to interact with pets in an effort to prevent transmission. This knowledge will also support animal welfare in urban areas. However, the limitations of information dissemination and constraints on access to information still result in low knowledge of how to keep animals healthy when the COVID-19 pandemic occurs until many people neglect their pets.

An increasing population of pets in urban areas will result in animal abandonment or negligence. When these animals roam, it can cause discomfort to the community because animals can bite, attack, cause fecal pollution, forage in trash cans, and disturb cleanliness [8]. In addition, roaming animals can spread diseases and parasites, including rabies, *Ancylostoma caninum*, *Toxocara canis* [9], *Trypanosoma cruzi* [10], and *Toxoplasma gondii* [11]. In fact, to achieve a healthy city is to strive for the welfare of all elements of city residents who are not only humans, including animal welfare as an integral part of the city's environmental health system. In Prata [12], based on the results of research in Portugal, it is shown that a strategy for improving the health and welfare of pets in Portugal is by increasing people's perceptions of the value and importance of animal care, reducing the number of lost and abandoned pets and increasing awareness and education.

Various problems related to pets have affected the pet's welfare. It can be said that the care efforts made by the owner greatly affect the pet's welfare because humans are agents who have a great influence on pets. Moreover, this issue has become more complicated in recent years. The 2019 was quite a tough year globally, the pandemic caused stress not only for the community but also for the pets who lived with them. Animal welfare had experienced a fairly strong shock in early 2020. For example, in the psychological aspect. The period of the kennel has put emotional stress on not only humans but pets as well. Reported some pets have behavioral disorders. The existence of lockdowns in various areas limits the mobility of owners and pets. Pets have difficulty leaving the house due to regulations to stay at home, which has an impact

on decreasing welfare. In addition, lockdown also raises irregularities in meeting food and health needs for animals, such as difficulty in getting food and lack of access to animal health check-ups. Animal behavior deviation was reported in Israel in 11.6% of dog owners. The quality of pets' lives has declined. Thus, the researchers assessed that the period of lockdown threatened the deterioration of the pet's welfare. This is certainly something to be worried about, considering that behind the deterioration in welfare, the presence of pets has reduced the level of tension for their owners due to the COVID-19 lockdown period. The presence of pets has stimulated the owner's immune system against COVID-19, although further research must be carried out regarding this because there is little evidence to support it. However, the issue of pet welfare actually existed long before the pandemic. For example, problems related to food and nutrition. This is supported by research that reported deviant behavior, obesity, and poor health of domestic pets.

The reason making pet welfare all the more worthy of discussion is the fact that the deterioration quality of animal welfare affects not only the pets themselves, but their owners as well. The behavior of pets which are in a low emotional state can cause emotional disturbances for their owners. The deviant behavior of the animal causes sadness, anger, or shame. The issue of animal behavior causes an increase in the burden of parenting by the owner, so it is not uncommon for emotional disturbances to occur by the owner [13]. Emotional disturbances cause disturbances in the owner's activities, so there needs mental counseling for the owner.

Between pets and owners have a strong bond making them influence each other [12]. But of course, the agent in charge of raising the pet's welfare is the owner, because the owner is the agent who has dominance in the relationship with their pets. Thus, the owner's values, beliefs, knowledge, behavior, and actions should be highlighted in order to improve the pet's welfare.

Health promotion efforts to create a healthy city require support from all elements of society to be able to contribute to achieving it, in conjunction with the 11th Sustainable Development Goals (SDG): "to make cities and human settlements inclusive, safe, resilient, and sustainable". Technology and education are very closely related. To disseminate information about environmental health, use information and communication technology such as mobile applications, websites and social media. Apart from technology, improving environmental health also requires community participation in environmental health programs [14]. Disseminating information about pet welfare is needed to provide knowledge to the public in general, as well as pet owners. This is in accordance with the Ottawa Charter emphasizing the importance of forming a healthy society, including through education, to condition a stable and balanced ecosystem, as well as sustainable resources. This condition will be embodied with the support from all parties, including the mass media for community reinforcement and social support to create an empowered community [15].

As in the studies of Marsa-Sambola et al. [16] and Bir et al. [17], pet owners need information and must know about animal welfare. Because as the research of Howel et al. [18] shows that the owner's low education level and poor relationship with companion animals are factors associated with animal negligence and abuse. Knowledge of raising animals when abandoned by their owners, rescue during disasters, and preventing an increase in the pet population are

essential for animal welfare. Regarding the selection of studies in online media because of the tendency of the public to select the internet as a source of health information as a source of health information [18]. People choose to access information and even consult with communication experts via internet interactions, which are relatively easy to do, less costly, and personal. Likewise, during the COVID-19 pandemic, the existence of policies for social distancing or physical distancing led to increased internet access and digital media while at home.

In the last five years, there has been a trend towards public awareness of raising animals and adopting pets. There is a bond between humans and animals today than ever before. Thus, this situation requires preventive and regular animal care as the key to helping pets stay healthy and prosperous. Furthermore, in Indonesia, since 2015 there has been an increase in the number of raising animals. Types of cats and dogs are the two most preferred pets and are chosen as pets [19]. At the same time, there are more than 120 animal companion organizations and communities throughout Indonesia that are needed to help and save mistreated animals. In fact, since 2013, one organization has handled about three cases and reports per day of abuse to animals or forms of negligence in animals. Cases that occur in wild animals include acts of negligence and torture, including tying stray cats using a rope or rubber band, neglecting cats and dogs that are very sick, malnourished, doused with hot water, and even dogs are hit by vehicles. Based on data from Garda Satwa Indonesia (2018), most of the types of dogs reported to have been neglected are pure breeds, and those misused for their maintenance are mixed breeds. This is due to the limited knowledge of animal owners in their maintenance.

Due to the importance of animal welfare, forms of neglect of pets and neglect of their health constitute animal abuse. Acts of violence against animals, known as animal abuse, are still common, especially in Indonesia [20]. Animal abuse is when someone tortures animals for personal gain or to follow lust, such as being angry with animals. There are several factors in the torture and mistreatment of animals. First, the boredom of pets. When they start to feel bored, the owner will tend to abandon their pet and not pay attention as if they still love their pet. Not giving attention to pets can already be classified as actions that do not fulfill animal rights. One of the basic rights of pets is to be given attention and welfare. Second, pets are sickly; many owners throw away their pets when the animals start to get sick. Owners do not have enough money to pay for treatment and provide proper care for their pets, so they prefer to throw away their pets. Not only throwing them away, but some owners also abuse their pets to death so they do not feel pain anymore. The cases presented provide information to us that the pets abused or mistreated in our environment are dogs and cats.

Dissemination of information on animal welfare is an important matter not only for animal owners to know. Several studies have shown the role of the mass media in influencing people's behavior in choosing pets. Currently, social media also assists in reporting cases of animal abuse and negligence by providing a platform to send pictures and videos in addition to calling animal rescue organizations by phone. Information contained on social media and distributed by influencers also has dysfunction in spreading negative ideas about treating pets, as well as increasing demand for puppy and cat care, but there is no clear and precise information about how to get it, how to care for it, and how much does it actually cost to own

a pet [21, 22]. In MacKay et.al [23], media content and media attitudes expressed in it can provide insight for people looking at certain issues, and the internet allows individuals to make important editorials for themselves. Therefore, the role of online media is needed in disseminating information on pet welfare.

Efforts to build health and create a healthy city is an approach that places health as the top priority on the political and social agenda in urban development and builds a strong movement for public health at the local level. Aspects of equality, participatory governance, and solidarity, cross-sectoral collaboration, and action address determinants of health. As in Barton and Grant [24], planning to create a healthy city must be carried out in an integrated manner and supported through educational efforts to the public regarding the health and welfare of the people in the city. Health information coverage by the media will shape pet owner's knowledge in interacting with pets. The purpose of this study is to describe the role of online media in disseminating information about pet well-being in the pandemic situation. The contribution of this study is regarding the role of online media in providing education to support the sustainability of urban health by shaping health literacy regarding the importance of balancing interactions between humans and their pets.

## 2. METHODOLOGY

The research was conducted qualitatively on four Indonesian online media from January to July 2020 related to the COVID-19 pandemic situation that occurred. The online media were *tribunnews.com*, *detik.com*, *kompas.com*, *okezone.com*, and *cnnindonesia.com*. These five online media were selected as research subjects because, in 2020, they were among the 13 best portals in Indonesia based on <https://www.akudigital.com/> and included in online media that are widely accessed based on *www.alex.com*. The selection of the five best news portals was due to the quality and completeness of their reporting content, apart from these media portals having received awards as trustworthy online media.

The unit of analysis researched was feature articles, with selection of articles through purposive selection in summative approach content analysis, by using keywords as the basis for the determination [25]. The article criteria specified are regarding human and pet interactions concerning transmission, prevention, and maintenance. The analysis unit was determined by using the keyword "pets and COVID-19 pandemic" and then 35 news articles were obtained. The analysis technique uses mixed methods, namely conducting surveys and media studies [26]. Analysis using quantitative content analysis was carried out by making the concept of clarity and operationalization completeness (relating to aspects of factuality). The indicators measured were the frequency of the type of article, the selection of sources (expert and non-expert) and the type of information (facts/cases, research results, and individual experiences), the tendency for neutrality (non-evaluative and non-sensational), and the tone of presentation (formal, informal, serious, and optimistic). Data coding was carried out by calculating the tone found in sentences and word choices in features so that tones could be mapped which indicated formal and optimistic. Presentation of analysis results employed descriptive statistics and

presented with graphs. Meanwhile, the application of qualitative content analysis was text selection according to the analysis unit that has been determined in the context according to the research problem. Then the concepts of clarity and completeness were defined in presenting articles in online media. In coding, the focus was on the context of the approach to writing and the facts presented. The analysis was carried out by descriptions found from its contextual analysis. The quality of the research emphasizes trustworthiness by maintaining reliability and validity through an inter-coder for the coding process of all articles [27].

### 3. RESULT AND DISCUSSION

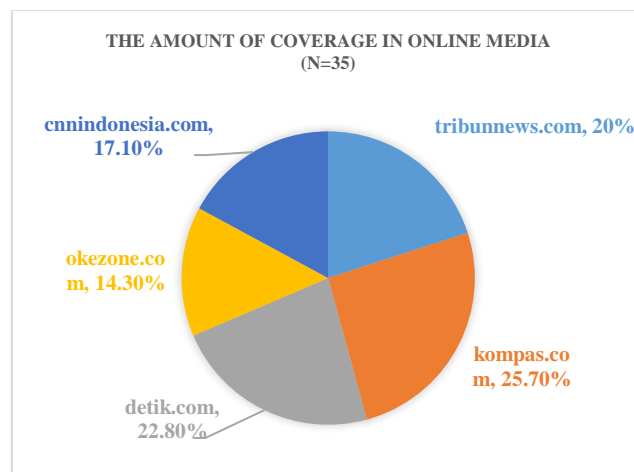
The findings in this study indicate that the choice of words in the title and content of articles are with the words "caring", "maintaining", and "interaction" with the context during COVID-19 pandemic. All online media place emphasis on how to maintain the pets' health during COVID-19 pandemic and prevention of COVID-19 transmission to pets. Several online media presented cases of COVID-19 transmission in pets and several other types of animals in zoos that have been infected by COVID-19. In the content of the article, more emphasis is placed on pets as animals that are adopted and live with their family in one house. However, due to other animals that have contracted COVID-19, the contents of the article include several types of animals, including cats and dogs (suspected of being infected, after their owner was exposed to COVID-19), tigers (in zoos affected by COVID-19), and orangutans (being in a rehabilitation center, considered susceptible to infection and thus closing public access). The content of all articles confirms that there is no evidence that animals transmit to humans, but animals can be transmitted from humans. Therefore, it is important to keep the distance between the owner and the pets when interacting to prevent transmission.

The number of articles appearing in the topic of pets and COVID-19 pandemic can be seen in Figure 1. Articles appear in the health rubric (as part of lifestyle), science, and news (relating to cases of pets in Hong Kong, Belgium, and New York who is infected by COVID-19). As shown in Figure 1, during January to July 2020, online media provided more than 20% of the frequency of news about pets and how to care for them during COVID-19 pandemic, namely *kompas.com* (9 articles) and *detik.com* (8 articles). The appearance of articles that discuss the topic of pets during a pandemic and the topic of pet care to prevent infection are more frequent in April-May, compared to other months with only one or two articles.

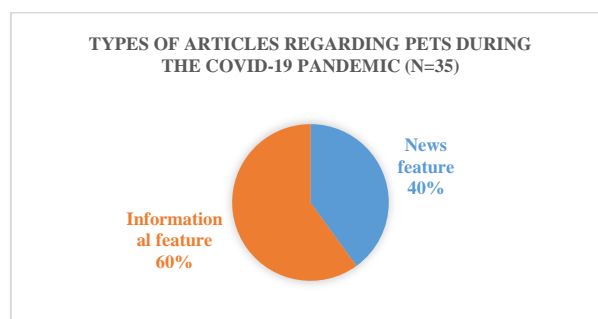
However, he emphasized that there is no evidence proving animals can transmit COVID-19 to animal owners, but transmission occurs from animal owners to their pets. The presentation method with direct quotations from the source confirms that there is no evidence of transmission. The informants in the article also have credibility in terms of expertise, namely the World Health Organization (WHO), veterinarians, researchers from the Indonesian Institute of Sciences (Lembaga Ilmu Pengetahuan Indonesia/LIPI), and various sources of scientific research abroad.

In Figure 2, it is known that the type of article writing is in the form of features, with more informational features than news features. The content of informational features is more in-depth in describing context, not only emphasizing facts. For information about tips or how to raise pets during COVID-19

pandemic, it is clearer and more detailed describing the types of informational features. Exposure about the unproven animal-to-human transmission was also described in detail accompanied by a confirmation that it was not proven based on the research results.



**Figure 1.** The amount of coverage of pet wellbeing during the pandemic COVID-19 in online media



**Figure 2.** The types of articles

The focus in presenting article content in all articles emphasizes the thematic type where the feature article content has topics on how to raise pets and prevent infection. In addition, the content of the article has societal relevance, even though it focuses on people who have pets. However, with an emergency situation like today, information regarding the need to maintain human-animal interactions must be known by all people, even though it is presented with human interest approach, it is not the information of personal relevance. All articles also use a formal and serious tone. This is because information about health is supported by data from research results and from sources who do have expertise in research on diseases in animals, who also have experience in raising pets. The topics discussed were also included in the information for health education so that the tone of the presentation was serious and did not go overboard in the information delivery. Articles that provide tips or how to raise pets have an optimistic tone that pet owners will not infect if they interact by keeping their distance in the right way. Likewise, good care through routine checks and paying attention to food for pets will prevent animals from getting infected. The following is an example of text in a feature article that was studied on how to prevent transmission of COVID-19 to pets:

In addition, before and after raising animals, such as feeding them, wash your hands immediately with soap. Prof. Deni

recommends that you immediately consult a veterinarian or clinic if the animal shows symptoms of illness, such as no appetite, decreased drinking, or looks weak. "Currently, several veterinarians and clinics provide online services, which can help animal owners maintain animal health well," said Prof. Deni. It is also best to keep the animals in a cage and not release to prevent the animals from roaming outside (Kompas.com in educational rubric, April 29th, 2020, with title: Tips for Interaction with Pets in the Middle of Corona by IPB Experts).

Concerning the completeness aspect, the emphasis on the "who" element or the sources used in the article, all articles maintain the accuracy and credibility of the source. The data citation in the article uses sources from the World Health Organization / WHO and CDC. Informants in the article are experts, namely veterinarians, pathologists, virologists, and animal researchers from credible institutions, such as the Indonesian Institute of Sciences/LIPI, Bogor Agricultural University/IPB, and several campuses abroad, including the University of Wisconsin-Madison, Ohio State University, Wageningen University in the Netherlands, and several other universities conducting research on the transmission of COVID-19.

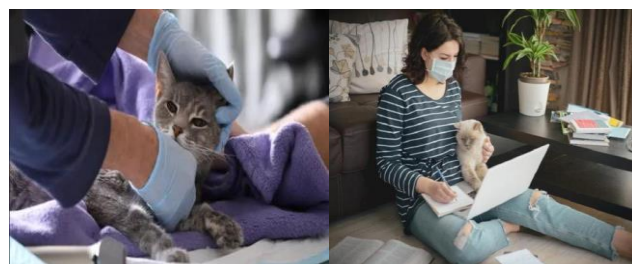
Meanwhile, the accuracy of the article content, by quoting from expert sources, in all articles emphasizes the facts for the case and is in accordance with the data, and the presentation of the research results is used to refute the assumption that pets are infectious to their owners. Because on the other hand, pets are infected by owners who have been infected by COVID-19. The type of information presented in all articles is scientific and factual. In one of the articles on okezone.com in the lifestyle section, the informant is a pet owner who has owned a pet for a long time. The presence of pet owner sources makes the content of the article more balanced by taking the perspective of the individuals' experiences who carry out maintenance to prevent COVID-19 transmission. All articles are non-evaluative, without opinions from journalists, and are not sensational. Ethically, the presentation of health information must indeed be in accordance with the rules and references used to maintain conformity with the data.

Feature articles presented in online media use the article presentation style in the form of a text orientation style for news feature-type articles, while articles with informational feature type use a visual orientation style. In the news feature type, the consultation approach is also a way of presenting the news. To maintain the pets' health, informants (veterinarians) who become sources in online news, advised pet owners to maintain nutrition and avoid food problems for pets by cooking their own food so that their pet food can be more preserved. The advice given in online news still pays attention to the situation of large-scale social restrictions (which in Indonesia is called PSBB/Large Scale Social Restrictions), by carrying pets walking outside the house at a close distance / around the place of residence, not far and avoiding crowded places (owners can take their pet dog to the park in a residential compound and choose a route around the quiet house). While suggestions for cat owners, it is advisable to find new ways to still be able to play together indoors (stay indoors), take advantage of the types of toys available, or play using cardboard boxes and others. The game will be a source of entertainment for pet owners and cats at home. This is the way to avoid stress during the pandemic. The visual orientation style uses several photos as illustrations of the narrative of the article. Photos are used to provide emotional context that

supports the content of the exposure in the article. As with some photo examples in the image below. Based on the photo in Figure 3, the interaction between owners and pets is done by avoiding close physical contact, and using masks and gloves when touching will be a way to prevent transmission.

As quoted from an informant who is a psychologist in one of the online news items namely CNN Indonesia analyzed that during COVID-19 pandemic, there was a feeling of isolation and anxiety that many people experience, the presence of pets helps one to ward off both. Pets are good for mental health because they can provide a feeling of unconditional love and make a person avoid the cycle of loneliness.

In the context of using online media to provide health information on how to maintain pet health and interactions with animal owners, it is still necessary to optimize the application of health journalism, both the completeness and factual elements. Because the need for health information that is human interest with a narrative approach will be easier for the public to understand. Figure 4 shows, the use of photos in online media which emphasizes the need for a pet examination by a veterinarian as an effort to prevent disease. These photos can provide context for the content of the news presented.



**Figure 3.** An example of a photo in an article that shows the interactions between owners and pets during COVID-19 pandemic



**Figure 4.** An example of photos in an article that shows the importance of pet inspection during the COVID-19 pandemic (Source: tribunnews.com, 2020, okezone.com, 2020)

As the findings shown in Table 1, this study found four frames in online media regarding the way animal owners interacted with their pets during the COVID-19 pandemic, there were frames when interacting with pets, frames when pets got sick, frames related to interactions when pet owners were sick and frames for interactions with pets to prevent transmission of COVID-19. The four frames provide emphasis on the interactions that pet owners should pay attention to during a pandemic. Basically, these interaction frames become a mitigation that must be done so that the health of animal owners and their pets is maintained. It shows that health information plays a very important role in shaping people's knowledge in behaving and living habits during the COVID-19 pandemic. Some aspects that have been considered in the content of the article are aspects of clarity and completeness in presenting facts and paying attention to the credibility of the

sources.

As a means of education, speed, and ease of access to online media will greatly support the public in obtaining the necessary health information [28]. Information in online media with a combination of text and visuals becomes the basis for the cognitive formation of the community to form awareness and knowledge about the importance of a healthy lifestyle [29]. This information can support the Clean and

Healthy Behavior Program (Perilaku Hidup Bersih dan Sehat/PHBS) during the COVID-19 pandemic in Indonesia by prioritizing the habit of washing hands, maintaining cleanliness, wearing masks, and keeping distance (<http://promkes.kemkes.go.id/phbs>). The availability of health information in online media will support the reinforcement of health behaviors that must be done and increase public awareness in accessing online news, not only for pet owners.

**Table 1.** The establishment of a "how to interact" frame on issues on pet articles in media

Frames When Interacting with Pets	Frames When Pets Are Sick	Frames Regarding Interaction When Pet Owners Are Sick	Frame for the Prevention of COVID-19 Transmission
<ol style="list-style-type: none"> <li>1. Do not allow pets to interact with people or other animals outside the home.</li> <li>2. Keep domestic animals indoors if possible to prevent them from interacting with other animals or humans.</li> <li>3. If you go outside with your dog, walk on a leash, and keep a distance of at least two meters from people and other animals.</li> <li>4. Avoid dog parks or public places where lots of people and dogs gather.</li> <li>5. Avoid contact with pets such as petting, snuggling, and kissing them. Recommended to keep wearing a mask</li> <li>6. Always wash your hands before and after contact with pets</li> </ol>	<p>Consult a vet if your pet is sick or concerned about his health.</p>	<ol style="list-style-type: none"> <li>1. If you have COVID-19 then limit contact with pets, just as you would with other people.</li> <li>2. If possible, ask other family members from your home to take care of your pets when you are sick.</li> <li>3. If you have to care for pets or be near animals when sick, then wear a face cloth and wash your hands diligently before and after interacting with them.</li> </ol>	<ol style="list-style-type: none"> <li>1. Pay attention to good food consumption, cook boiled fish, and mix it with vegetables.</li> <li>2. Keep animals and cages clean. Besides that, don't forget to get a complete vaccine.</li> </ol>

(Source: Researcher Synthesized)

The emphasis of the issue is presenting health information in online media on the way of interaction between owners and pets. The contents of the article provide knowledge about how to interact by keeping a distance and maintaining cleanliness (washing hands and using masks) as a way to prevent COVID-19 transmission. There is a suggestion that owners and pets do social and physical distancing, this is related to the developing discourse as a way to prevent transmission in society. Apart from being needed to maintaining a distance between animal owners and their pets, how to care for pets by maintaining food nutrition, physical care, and preventing disease in pets are basic knowledge needed during a pandemic because animal welfare will contribute to human welfare, and vice versa. This is shown by the contribution of pets during the lockdown period which can help humans to reduce levels of anxiety and stress.

The bonds that occur between humans and animals determine the balance in the ecosystem. During a pandemic, reported that pet interactions are related to how animal owners maintain the health of their animals. The factor of providing proper nutrition really needs attention, which is closely related to public knowledge, educational level, and the practice in society. As in Herwijnen et al. [30], anthropomorphism factors affect how animal owners interact with their pets and how they feed, which should also pay attention to the health impact on their pets. Supposedly a strong bond between owners and pets should form the basis of a logical and unemotional assessment of the well-being of their pets, with knowledge of the costs of raising pets, including appropriate nutritional costs, medical expenses, emotional enrichment, physical care, and disease preventive treatment.

The informational approach in presenting health news still

needs to be supported by a more integrated health promotion system to form public health literacy [31]. The role of online media in disseminating information containing content on the importance of pet welfare for human health and urban sustainability, as in Colonius and Earley [32], they require an interdisciplinary approach in order to form knowledge about the balance of human and animal interactions and promote the welfare of humans and animals in the city ecosystem. The characteristics of online media that allow for more interactive audience participation between journalists and media editors will make it more possible for the media to know the need for more intensive information and reports. The use of digital media as a supporting medium for the dissemination of health information and a healthy lifestyle is very important to support health promotion [33]. Online media which is part of the convergence of media in mainstream media organizations will be able to further assist health promotion by focusing on the downstream level with an emphasis on changing individual behavior and managing disease (including prevention of transmission) [34]. As an educational effort, for the purpose of news content, veterinarians can be used as sources who recommend the necessary information, as well as community intervention for general topics, such as the need for pets to be neutered or spayed and preventive parasite prevention treatment is needed, this is in accordance with Priya [35] who stated that it is an effort to increase awareness and education through the use of internet and social media. The importance of disseminating information on how to care for pets with an educational approach is also in accordance with Lawson et.al [36], because sustainable maintenance of the owner must be supported by increasing basic knowledge and education on how to care for improving pet welfare [37]. The education

about the importance of animal welfare which correlates to human health and urban sustainability is important not only during pandemics or disasters that occur in urban areas. In connection with the need for a balance of interactions between humans and pets [38], adequate environmental support is needed for the needs of animals and human health. In the ecological aspect, the interaction between humans and animals that needs to be maintained and considered is one of the important elements in achieving a healthy city [39]. Previous studies show that the social impacts produced by ecological changes can lead to environmental conflicts [40].

Based on the socio-ecological approach to developing health information on online media, the findings of this study indicate that the dissemination of information for public education is an important element in helping people know how to interact socially and prepare a supportive environment [41]. The interaction of humans with animals in urban ecosystems greatly determines the welfare and health of humans and animals which is the basis for the sustainability of a healthy city [42]. Promotion of pet health and dissemination of information through online media is not only for pet owners, but also for all people in order to reduce abandoned pets, and the unpopularity of adopting an animal from a shelter will further contribute to the increase in the number of animals that are lost or abandoned. Social media plays an important role in helping humans work in various fields, as many organizations and individuals use it to promote services, share information and connect with a wider audience [43]. This education requires intervention from the authorities and stakeholders as in Prata [44], as well as support from the animal lover community so that awareness and knowledge of the community can be increased and environmental conditions become more supportive of animal welfare in urban areas. Apart from that, the use of online media as a means of health education requires support from multi-stakeholders. The media approach in producing educational content needs to be supported by health communication policies and the involvement of health practitioners, academics, and regulators who regulate digitalization in regulating news dissemination by online media.

The implications of this study are for pet owners to be more selective in seeking pet health information and utilize credible online media as a source of information. Meanwhile, for society in general, this study shows the importance of health literacy in the interaction of pet voters with their pets, both to prevent and overcome the spread of disease. So, it is very important for health policymakers to evaluate health policies by paying attention to One Health and One Welfare to maintain balance and integration of health for humans and animals, as well as using online media as a medium for educating the public.

#### 4. CONCLUSION

The content of online media coverage during the COVID-19 pandemic regarding pets has provided knowledge about how pet owners can interact with their pets by maintaining distance and maintaining cleanliness (washing hands and using masks) in an effort to prevent transmission of COVID-19. Emphasizing health issues that are disseminated can support the current One Health Approach education as an effort to prevent and handle COVID-19. Online media has a role as media supporting health promotion, as well as being

used as tools for educational media. News coverage in online media has formed a frame that educates the public on how to interact between animal owners and pets during the pandemic as a mitigation effort to maintain health. Dissemination of information on pet care through online media should not only be carried out during a pandemic, it should be carried out regularly as a form of education to the public for animal welfare improvement in urban areas. This is related to the function of news media for social responsibility and the delivery of health values to form health literacy in the community. Dissemination of health information in online media still needs to be optimized with the intensity of the coverage and the placement of the information in a more "searchable to read" rubric. Recommendations for future research are to further explore the formation of health issues in online media and their integration with various health information sources. Exploring the media's perspective on the trends and ways of presenting health information, especially about pet health and wellbeing is very important for exploring the potential of the media in supporting the formation of health literacy in society. In addition, methodologically it is necessary to conduct research on the dissemination of information in online media with other methods for the development of research studies using digital data supported by extracting knowledge from media users.

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