

# FAMILY EMPOWERMENT IN THE COVID-19 PANDEMIC WITH THE FAMILY-CENTERED NURSING APPROACH AND THE UTILIZATION OF FAMILY MEDICINAL PLANTS: A SYSTEMATIC REVIEW

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## Abstract

**Background:** COVID-19 has become a worldwide pandemic. The virus that causes various disorders until death is still the focus of world health problems. Various preventive measures have been recommended to stop the spread of COVID-19 in all levels of society, especially families. In this condition, the family is expected to be able to take preventive steps through family health tasks. This study aims to provide an overview of family empowerment in COVID-19 based on family health tasks using a family-centered nursing approach, as well as to provide information about the benefits of Family Medicinal Plants (TOGA) as alternative prevention of COVID-19 infection.

**Methods:** This research is a type of systematic review that is arranged systematically with the PRISMA-P principle. From the search results, 174 articles were obtained, and 27 articles met the study inclusion criteria.

**Results:** Family management is something that needs to be considered in the COVID-19 pandemic. Families are expected to know and can carry out various preventive steps together with COVID-19 infection.

**Conclusion:** Management in the family can help reduce COVID-19 transmission rates. The family, as the smallest system in the community, is expected to be able to work together in taking various preventative measures, so that it can help shorten the occurrence of a COVID-19 pandemic and remain in optimal health.

**Keywords:** family management, family-centered nursing, pandemic, role, TOGA, COVID-19

## 1. INTRODUCTION

The rapid spread of Novel Coronavirus 2 (SARS-CoV-2) or better known as COVID-19, has become a worldwide pandemic. Globally on April 19, 2020, the World Health Organization (WHO) recorded around 2,241,359 confirmed COVID-19 cases, and as many as 152,551 deaths due to COVID-19 occurred in 213 countries in the world<sup>1</sup>. A coronavirus is a group of viruses that are covered in unfragmented and single-stranded RNA. Initially, corona infects pigs and chickens. However, recently corona is also found in humans; humans who contract Coronavirus and become hosts will experience symptoms of coronavirus respiratory syndrome (SARS-CoV), which causes upper and lower channel infections<sup>23</sup>.

The coronavirus novel is a virus from China caused by the SARS CoV 2 virus in a family with Middle East Respiratory Syndrome (MERS) and Severe Acute Respiratory Syndrome (SARS) viruses. Various types of Coronavirus vary depending on the severity of the disease caused, and how far it has spread, at this time, health workers have identified

seven types of Coronavirus that can infect humans<sup>4</sup>. Outbreaks caused by zoonotic Coronavirus have occurred in 2012 and are widely known as MERS virus or Middle Eastern respiratory syndrome. In early January 2020, COVID-19 was first identified in the city of Wuhan, China, precisely after many Wuhan residents who mysteriously experienced respiratory problems with symptoms such as pneumonia but could not yet know the exact cause<sup>5</sup>.

The main reservoir of COVID-19 is a bat, and it is based on the similarity in sequence with the Coronavirus in bats<sup>56</sup>. Common signs that appear in someone infected with COVID-19 are dizziness, muscle aches, dry cough, fever, respiratory problems, and this infection can cause the severe respiratory syndrome, kidney damage, and even death<sup>7-9</sup>. Prevention and management is a thing that is very important to control the spread of COVID-19. In the prevention of transmission of COVID-19 are getting faster, the WHO, on March 26, 2020, issued six priority strategies that will be done by the government together with the community to address the pandemic. The strategy in the form of expanding

distance, training and placement officer of health in health facilities, implementing operational standards in the alleged discovery of new cases, increase test coverage bulk and availability of screening tools, clicking identification of facilities that can be transformed into a health center coronavirus, develop a plan of quarantine case, and focus the work of the government to reduce the incidence of COVID-19<sup>10</sup>. One strategy that is currently being promoted by the Indonesian government in suppressing COVID-19 transmission rates is to expand the distance or better known as physical distancing.

Physical distancing is one of the strategies of non-pharmaceutical infection control measures intended to stop or slow the spread of infectious diseases by keeping more than the one-meter distance from others, increasing physical space between people, including staying home more, working from home if possible, restricting guests at home, avoiding large gatherings and limiting the use of public transportation<sup>1</sup>. In the context of physical distancing, all educational institutions are closed, and some workers must do their work from home. However, some government policies to work from home or dismiss educational institutions from elementary to tertiary level have not been able to be fully implemented by the community, and this is because the process of self-isolation is a new norm in society, which is seldom a public reflection and a sub-culture in several countries such as Indonesia<sup>11</sup>.

The application of physical distancing causes many activities to be carried out from home, and the interactions that occur are mostly from the family<sup>2</sup>. In this condition, family members become a system of mutually supporting each other. Family members take on each other's roles in complementing family health tasks such as identifying family health problems, making appropriate health care decisions, providing care for sick family members, maintaining a healthy home environment, and using existing health facilities in the community<sup>12</sup>. Families are also expected to be able to empower themselves in taking various preventive steps. One of them is by utilizing Family Medicinal Plants (TOGA), which can be used by families while at home. This study aims to provide an overview of family empowerment in COVID-19 based on family health tasks using a family-centered nursing approach *as well as* providing information about the benefits of TOGA as alternative prevention of COVID-19 infection.

#### **a. Search strategy**

This literature review is compiled systematically based on Preferred Reporting Items for Systematic Review and Meta-Analysis Protocols (PRISMA-P). Search articles carried in various databases of electronics such as Scopus, Science Direct, ProQuest, EBSCOhost PubMed, Springer Nature, and Google Scholar. Keywords used in literature search are family, parents, roles, management, support, family-centered nursing, family nursing, nursing in family, TOGA, herbal, traditional medicine, COVID-19. There are no restrictions on the types of study designs included, but most sources are obtained using quantitative studies. The focus of this literature review is on family management in COVID-19.

The main results obtained are 1) Management of families that have been recommended to be effective in dealing with COVID-19, regardless of the varying characteristics of the family stick. 2) Clinical results of the management of the

family (family comfort, reduction in stress levels) 3) Preventive steps that can be taken by the family in dealing with COVID-19. Duplicate articles found have been deleted. Article titles, abstracts, and overall article content are filtered based on compatibility with the keywords searched, inclusion and exclusion criteria are written based on PRISMA-P guidelines and presented in the form of a flow chart based on the reasons for exclusion.

Critical assessment checklists that are appropriate for each study design are applied and examined by the authors. Every bias or quality problem identified is considered before the quantitative meta-analysis and meta-narrative. The CASP assessment checklist tool is used to assess the quality of the article. Ethical approval is not required for existing peer-reviewed literature reviews.

#### **b. Inclusion criteria**

The inclusion criteria of the article used are 1) Describes the problems that occurred in the family during a pandemic COVID-19 2) Describes the role of family nursing were successfully or recommended to be able to resolve problems that occur in the family during a pandemic COVID-19 3) Explain how the management of COVID-19 prevention and treatment.

#### **c. Exclusion criteria**

Article exclusion criteria are 1) Did not explain in detail the form of family management used 2) The sample used in the study was not explained

#### **d. Extra Information from Article**

See the Figure 1

## **2. FINDINGS / RESULTS**

#### **a. Search Results**

On May 2, 2020, the original text was identified (n = 174 ); 27 manuscripts that met the inclusion criteria were included in this study. The manuscripts obtained consisted of systematic reviews (n = 18 ), case reports (n = 4 ), quantitative studies (n = 3 ), and experimental studies (n = 1). The 13 papers research texts did not mention the location of the study, and as many as 9 studies were conducted in China.

#### **b. Descriptive Results Articles**

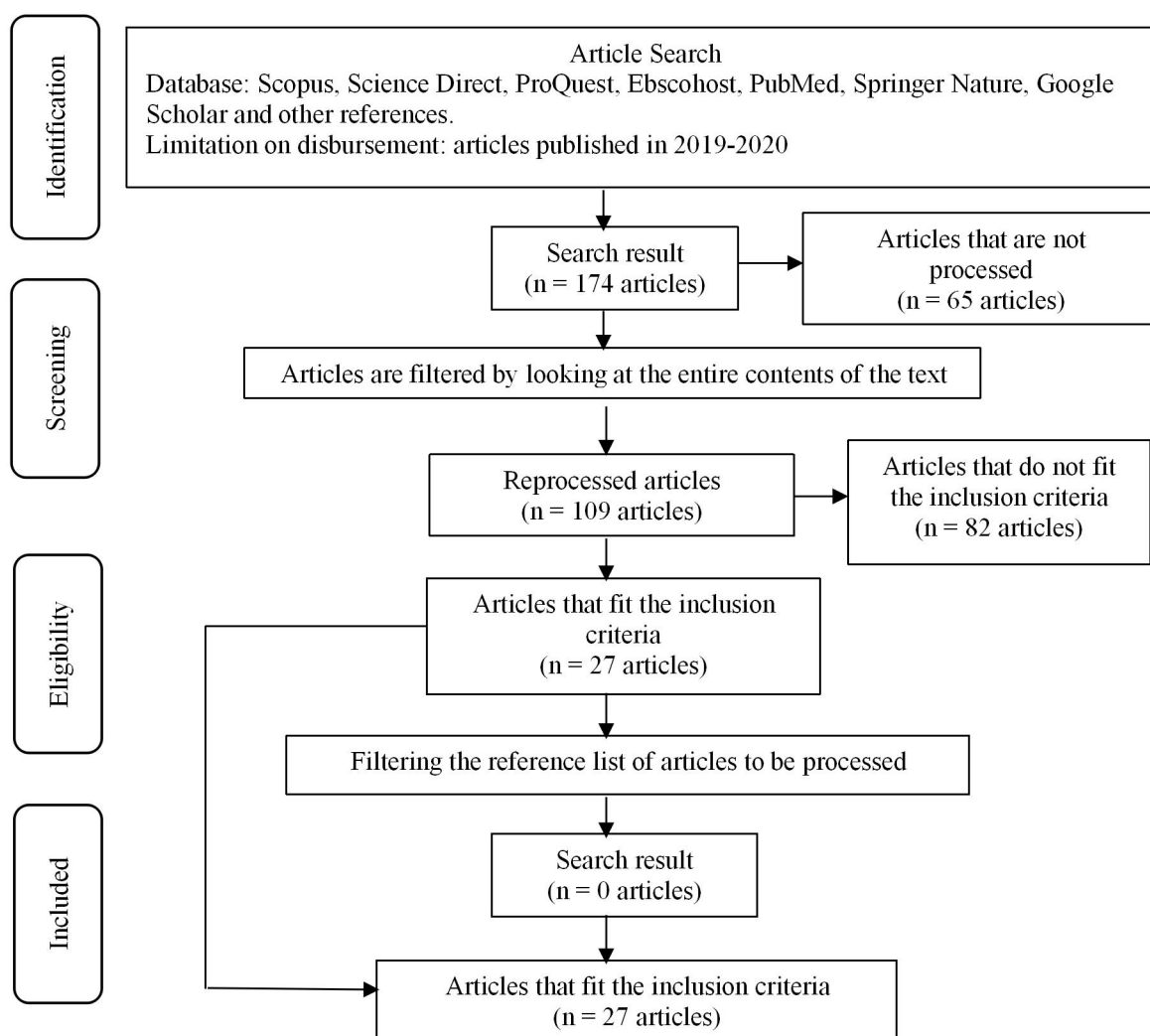
(Appendix 1)

#### **c. Quality Assessment of Articles**

A quality review of systematic reviews was conducted to evaluate the methodological accuracy included. The instrument used was the CASP checklist consisting of 10 question items that were widely used in assessing the quality of research. The CASP checklist consists of answers, "Yes," "No," and "Not mentioned." The CASP checklist (randomized controlled trial & systematic review) is based on JAMA's users' guidelines for the 1994 medical literature (adapted from Guyatt GH, Sackett DL, and Cook DJ). Article scoring is not recommended in this instrument. Reviews that meet the 10 item criteria are considered the best quality.

#### **d. Articles Features**

None



**Figure 1.** Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA)

### 3. DISCUSSION

The family has a role in carrying out health care practices, which is to prevent health problems or care for sick family members. The family's ability to provide health care affects the health status of the family. The ability of the family to carry out health maintenance can be seen from the family's health duties carried out. A family that can carry out health tasks means being able to solve health problems. The various family health tasks that must be fulfilled in the COVID-19 pandemic are as follows.

#### Get to know family health problems

In the first health function, families are expected to be able to identify risk factors owned by other family members based on the level of likelihood of being exposed by COVID-19. Based on reports from China and Italy show that a high mortality rate of COVID-19 occurs in male patients with advanced age and disorientation with several comorbidities<sup>1314</sup>. Other risk factors include the host's metabolic rate, which is influenced by age, sex, medical conditions, and lifestyle factors such as smoking, which can determine the clinical severity of COVID-19<sup>1516</sup>.

Some studies explain that SARS-CoV is zoonotic and comes from bats. It was observed in various countries that many people consumed various wild animals as food. Some animals, such as bats, snakes, cats, mice, dogs, pigs, are consumed freely. In this function, the family must be able to know that these animals must not be consumed because of the presence of harmful microbial contents, which can

increase the risk of exposure to COVID-19<sup>6</sup>. In addition to knowing COVID-19 risk factors, families are also expected to be able to recognize health problems in families who have symptoms of COVID-19 infection such as dizziness, muscle aches, dry cough, fever, respiratory problems, and advanced infections that can cause respiratory syndromes: severe, kidney damage and even death<sup>89</sup>.

#### Make the right health action decisions

The next ability of the family is to make decisions regarding appropriate health actions. When the family has been able to identify various risk factors that cause COVID-19, the family can take preventive measures, one of which is the consumption of a healthy and balanced diet and nutrition, because this can affect the competence of the immune system and can prevent the increasing severity of infection<sup>17</sup>. Macronutrients, micronutrients, and phytonutrients in foods, especially fruits and colorful vegetables, generally are improving a healthy immune response. These microclimates and phytonutrients provide antioxidants and anti-inflammatory nutrients, including beta-carotene, vitamin C, vitamin E, and polyphenol compounds, which modulate immune function<sup>1819</sup>. Another preventive action that can be done by maintaining cleanliness is by washing hands using soap<sup>20</sup>.

If one family member has the infected symptoms of COVID-19, it is expected that other family members were able to carry out health actions as follows:

1. *Isolation of cases at home:* Someone with symptoms of

COVID-19, recommended staying at home for seven days. The person is expected to reduce the number of contacts outside the home by 75% during this time period<sup>21</sup>. All forms of social contact must be avoided by symptomatic individuals<sup>22</sup>.

2. *Voluntary home quarantine*: If it is asymptomatic case identified in the household, the whole family must remain to be at home for 14 days. They are expected to reduce outside contact by 75%, and household contact has doubled<sup>21</sup>.
3. *Extending the distance for those over 70 years*: People over 70 years must practice physical distancing, which is to maintain a distance of 2 meters from others if possible and to avoid meetings or gatherings with many people<sup>17</sup>. The action targeted is to reduce contact by up to 50% at work and to reduce another contact by up to 75%, and increasing home contact by 25%<sup>21</sup>.
4. *Extending distances for the entire population*: All individuals must practice social distance as described above. This method is considered to reduce contacts outside the home by 75% and contacts at work by 25%. The level of school contacts remain the same and contact Ruma h stairs increased 25%<sup>21</sup>. The use of public transportation must be avoided and, if possible, advice to work from home should be carried out. Individuals must use remote technology to keep in touch with friends and family because all large and small gatherings must be avoided. Telephone and online services must be used to contact health professionals and other essential services<sup>23</sup>.
5. *The closure of schools and universities*: All schools remain closed, and only 25% of universities that remained open for administrative services. This increases household contact for student families by 50% and community contact by 25% during closing time<sup>21</sup>.

#### **Providing care for sick family members**

COVID-19 can affect all ages, including neonates to the elderly. The treatment of family members who have symptoms of COVID-19 infection is slightly different, depending on the age of the family member<sup>22</sup>. In neonates and asymptomatic young children with suspected COVID-19 infection, supportive monitoring and support in quarantined wards are very important. Vital observations, including heart rate, respiratory rate, SpO<sub>2</sub> must be monitored closely. Feeding the newborns also have to be considered if positive mothers COVID-19. For neonates with symptoms, treatment and medical intervention are needed<sup>24</sup>.

In adults with mild infections, usually characterized by mild symptoms without acute respiratory infections (ARS), patients only need to manage independently with self-isolation and do outpatient care at home. A key aspect of treating patients with COVID-19 symptoms is monitoring the patient's condition, especially if there is a decrease in the clinical aspects that require immediate hospitalization. For patients who perform care at home, support from the family is essential to be provided<sup>22</sup>.

Independent quarantine measures at home carried out for 14 days. During this period, they must carry out periodic health monitoring, wear masks, reduce close contact with their families, eat and drink separately, maintain hand hygiene, avoid going out of the room and receive follow-up tests<sup>25</sup>.

#### **Maintaining a healthy home environment**

The authors report that the conveniences expected survival of COVID-19 had at a temperature of 40°C or a temperature high with low humidity<sup>6</sup>. Besides, COVID-19 is known to remain in aerosol for three hours. COVID-19 can also live on the surface of objects made of polypropylene plastic for three days, stainless steel for more than three days, twenty-four

hours on karts, and four hours on copper<sup>26</sup>. To prevent transmission of the virus to objects in the house, some studies recommend surface disinfecting.

Materials that can be used for surface disinfectants such as ethanol 62-71%, hydrogen peroxide 0.5%, or sodium hypochlorite 0.1%, which have been proven to be able to deactivate COVID-19 in one minute efficiently. In contrast, biocidal agents such as benzalkonium chloride 0.05-0.2%, or chlorhexidine digluconate 0.02%, are considered less effective<sup>27</sup>. Simple home care disinfectants can kill viruses on the surface of an object. Regular surface cleaning by disinfectants can control a virus outbreak. So those families are expected to be able to maintain the cleanliness of the environment in which they live and ensure that their homes get enough sunshine every day.

#### **Using health facilities in the community**

At present, about 20% of patients who are positive for COVID-19 have significant problems and require hospitalization and 5% of the total infected can cause severe acute respiratory diseases, and require intensive care including the use of mechanical ventilation; the latter group has a high case fatality, especially among parents and patients with concomitant diseases<sup>28</sup>.

In the absence of antiviral drugs that have proven to be effective, all patients need symptomatic therapy and support. Patients may need intensive care for weeks. In some countries, hospitals are faced with problems of lack of beds in the ICU, given the sudden surge in positive cases of COVID-19. Therefore, in the face of the limited treatment tools available in hospitals, families are expected to be able to do independent management in the management of COVID-19<sup>29</sup>. Families are advised to go to a health care center if the symptoms are felt to result in a decrease in clinical aspects and require immediate treatment. Because when a patient is indicated COVID-19, then isolation treatment must be performed<sup>30</sup>. In that situation, the patient cannot be seen by anyone, including his immediate family members, so that it can cause psychological pressure on some patients and their families.

#### **Utilization of Family Medicinal Plants (TOGA) in COVID-19**

Traditional medicine is a form of health treatment that has developed in Indonesia since time immemorial and was widely used by the public before the advent of modern medicine<sup>31</sup>. Family medicinal plants (TOGA) are plants that are planted in the yard, garden or plot of land that are used as medicinal plants for medicinal purposes in order to meet the family's needs for medicines. Family medicinal plants also function as the use of the environment around homes and gardens. In this era, more and more families are well aware of the benefits of medicinal plants themselves<sup>32</sup>.

Types of family medicinal plants that can be cultivated in the form of roots, rhizomes, fruit stems, leaves, and flowers. Some traditional medicines are also widely sold in the market in the form of capsules, powder, liquid, and tablets<sup>33</sup>. In supporting this physical distancing policy, families are expected to be able to understand how to use TOGA that is planted in their homes. COVID-19 infection causes many people to look for supplements that can be used to maintain the body's immunity in order to fight the virus. Some traditional herbal ingredients are used to increase endurance, but not to cure diseases caused by viral infections, including COVID-19. Herbal properties of traditional medicinal plants are focused on increasing endurance. Herbs are efficacious in maintaining good body immunity if consumed regularly and regularly, and processed properly and correctly<sup>34,35</sup>. The interaction of herbal treatments with other drugs can affect



the performance of drugs, the risk of side effects, and drug metabolism in the body<sup>36</sup>. Therefore families must make wise choices in taking herbs as an additional alternative medicine for the disease.

Based on the results of Supardi & Susyanty's 2010 research in Muhammad Hadi et al. (2020), several family medicinal plants can be used as herbal medicine or traditional medicine, namely<sup>31</sup>:

- 1) *Turmeric*: Has antioxidant content that can overcome free radical attacks. Turmeric also has curcuminoid content, which functions as an anti-inflammatory drug. Besides that, turmeric is useful in increasing one's stamina so that it causes the body's immunity also to increase.
- 2) *Temulawak*: Temulawak is one of the plants that is known to be efficacious to keep the body fit. Temulawak is suitable for consumption by people who have dense activities so that the body's immunity is maintained.
- 3) *Kencur*: Kencur has many benefits to treat cough, relieve breathing, and eliminate phlegm due to cough.
- 4) *Ginger*: This plant has properties to prevent growth and overcome harmful bacteria that are in the body. The type of ginger that is widely used as traditional herbal medicine is red ginger because it has a stronger color and flavor.
- 5) *Citrus fruits*: One example is grapefruit. This plant has a high vitamin C content, which can increase the production of white blood cells so that it can increase resistance to viral infections in the body.
- 6) *Garlic*: The benefits that are owned are to fight infections, help lower blood pressure, and prevent the hardening of the arteries.
- 7) *Papaya*: Papaya fruit is known to contain quite a lot of vitamin C, so it can be chosen as one of the foods that can be consumed to increase endurance.
- 8) *Kiwi*: The content of vitamin C, vitamin K and folic acid in kiwifruit also makes it an option in improving the body's immune system and maintaining proper functioning of the body.

Based on the statement of WHO and some experts who have yet to find a cure or vaccine for COVID-19, various steps in preventing COVID-19 infection need to be taken<sup>4</sup>. By utilizing several family medicinal plants (TOGA) in maintaining good body immunity, it is expected to be able to help the family to avoid infection and always be in an optimal healthy state.

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Appendix 1 (Included Characteristic Studies)

No	Authors/Objective	Main Topic	Specific Topic	Research Country	Methodology	Results
1	<b>Bansal, P., Bingemann, TA, Greenhawt, M., Mosnaim, G., Nanda, A., Oppenheimer, J., ... Shaker, M. (2020)</b> / Understanding the causes of stress due to COVID-19 can help identify management to return to the point of health.	Stress in COVID-19	Identify the factors that cause stress that occurs during COVID-19 and its prevention strategies	Not mentioned	Systematic review	Being aware of the early warning signs of anxiety, depression, substance abuse, and post-traumatic stress disorder is essential to access safe and confidential resources. Implementing a health strategy can increase flexibility, resilience, and outlook. Historical parallels show that perseverance is as inevitable as a pandemic, and we do not need to navigate this unprecedented time alone.
2	<b>Calder, PC, Carr, AC, Gombart, AF, &amp; Eggersdorfer, M. (2020)</b> / Identify sources of nutrition in food that can help support immune function	Nutrition	A good source of nutrition is consumed to increase body immunity during COVID-19	Not mentioned	Systematic review	(1) supplements with micronutrients and omega-3 fatty acids are safe, effective and inexpensive strategies to help support optimal immune function; (2) the above supplement is the Recommended Dietary Allowance (RDA), but within the upper recommended safety limits, for certain nutrients such as vitamins C and D are needed; and (3) public health officials are encouraged to include nutrition strategies in their recommendations to improve public health.
3	<b>Chen, N., Zhou, M., Dong, X., Qu, J., Gong, F., Han, Y., ... Wei, Y. (2020)</b> / Clarifies the epidemiological and clinical characteristics of COVID-19.	Characteristics of COVID-19	Identification of characteristics and distribution of COVID-19 along with prevention strategies that can be done in preventing transmission of the virus.	Asia (China)	Quantitative Study	COVID-19 infection is an onset clustering, is more likely to affect older men with comorbidities, and can result in severe and even fatal respiratory diseases such as acute respiratory distress syndrome. In general, the characteristics of patients who die are in line with the MuLBSTA score, an early warning model for predicting

						death in viral pneumonia. Further investigation is needed to explore the application of the MuLBSTA score in predicting the risk of death in COVID-19 infection.
4	<b>Djalante, R., Lassa, J., Setiamarga, D., Mahfud, C., Sudjatma, A., Indrawan, M., ... Djalante, S. (2020)</b> / Providing detailed reports and analysis of current rapid responses to COVID-19 in Indonesia.	COVID-19 Management in Indonesia	Present various strategies that are undertaken by the government to COVID-19 in Indonesia.	Asia (Indonesia)	Systematic Review	Various strategies and key roles related to health from various state institutions have been carried out in Indonesia. The results of the study also mentioned an analysis of gaps and limitations in the current strategy of the government.
5	<b>Ferguson, NM, Laydon, D., Nedjati Gilani, G., Imai, N., Ainslie, K., Baguelin, M., ... Cuomo-Dannenburg, G. (2020)</b> / Conduct analysis of non-pharmaceutical public health measures to reduce virus transmission	COVID-19 Management	Provides an overview of virus transmission and how to control COVID-19 transmission	The United Kingdom and the United States	Systematic Review	In the results presented here, we apply the previously published microsimulation model for two countries: Britain (specifically Great Britain) and the US. We conclude that the effectiveness of each intervention in isolation is likely to be limited, which requires several interventions to be combined with having a substantial impact on transmission.
6	<b>Gasmi, A., Noor, S., Tippairote, T., Dadar, M., Menzel, A., &amp; Bjørklund, G. (2020)</b> / Conduct individual risk assessments and management strategies in order to prevent the spread of COVID-19	COVID-19 Management	Observe personal preventive measures, predisposing <i>the host</i> , some of the potential therapeutic options, and suggests a comprehensive approach to the management COVID 19.	Not Mentioned	Systematic Review	Individual prevention and protection measures encourage personal risk of disease. Among hosts who have contracted the virus, their different metabolic status, as determined by diet, nutrition, age, sex, medical condition, lifestyle, and environmental factors, regulates personal destiny for the different clinical severity of COVID-19, starting from asymptomatic, mild, moderate, to death. A careful individual assessment of possible dietary, nutritional, medical, lifestyle, and environmental risks, together with relevant risk management strategies, is a reasonable way to deal with the SARS-CoV-II pandemic.
7	<b>Jin, H., Lu, L., Liu, J., &amp; Cui, M. (2020)</b> / Provide an overview of the experience and management carried out in dealing with the COVID-19 pandemic	COVID-19 Management	Review about the experience in COVID-19 management along with strategies to prevent the spread of viruses that have been carried out by the government	Asia (Zhuhai China)	Systematic review	Considering that COVID-19 has a strong infection capacity, there must be high vigilance in dealing with this emergency. Policymaking must be based on resource integration, social mobilization, funding inputs, the supply of medicines, vaccine development, and international cooperation. Sources of science and technology must be fully utilized. The complex emergencies of infectious diseases must be fully understood, and this is a process that requires continuous

						learning. A highly reactive, multifunctional, and efficient emergency management system needs to be established, and the importance of information communication must be fully understood for the future.
8	<b>Kannan, S., Ali, PSS, Sheeza, A., &amp; Hemalatha, K. (2020)</b> / Conducting a morphological, diagnosis, and epidemiological review of COVID-19.	Characteristics of COVID-19	Discusses the development of COVID-19 into a worldwide viral pandemic and recommended health protocols	Not explained	Systematic review	The COVID-19 outbreak from China has the potential to reach pandemic proportions if not adequately contained. The symptoms of COVID-19 are milder, but their infectivity is higher compared to SARS-CoV and MERS-CoV COVID-19; it might be considered a severe public health threat in this decade. The cure for COVID-19 is far away, and therefore the spread of COVID-19 can be conceived by following strict quarantine protocols.
9	<b>Lai, C.-C., Shih, T.-P., Ko, W.-C., Tang, H.-J., &amp; Hsueh, P.-R. (2020)</b> / Explain Coronavirus	Characteristics of COVID-19	Explain in detail about COVID-19 ranging from epidemiology, signs to symptoms of treatment and prevention strategies	Asia (China)	Systematic review	Knowledge of coronaviruses is still limited; drugs and vaccines that are still in the development stage require us to take various prevention strategies to stop the spread of the virus.
10	<b>Li, HC, Ma, J., Zhang, H., Cheng, Y., Wang, X., Hu, ZW, ... Zheng, XZ (2020)</b> / Provide recommendations for the management of COVID-19 in high-risk patients	COVID-19 Management	COVID-19 management, especially in high-risk groups, especially the elderly and people with comorbidities	Asia (China)	Systematic review	In high-risk COVID-19 patients, the elderly, and people with comorbidities, adjuvant therapy is recommended to improve coagulation dysfunction, provide proper nutritional support, accurate volume control, and safety monitoring and control of individual blood glucose.
12	<b>Lodha, R., &amp; Kabra, SK (2020)</b> / Provide recommendations for the prevention of COVID-19 transmission	COVID-19 Management	Discuss the management of COVID-19 along with strategies to prevent the spread of viruses that can be done by the community	Not mentioned	Systematic review	Health workers are the chief guard in handling COVID-19, where their conditions are in danger at all times. In the absence of specific antiviral treatment as it is now, supportive care for the sick and the use of various prevention strategies are vital in controlling a pandemic.
13	<b>Ng, M.-Y., Lee, EYP, Yang, J., Yang, F., Li, X., Wang, H., ... Khong, P.-L. (2020)</b> / Gives a chest radiograph on COVID-19 positive patients	Diagnosis of COVID-19	Provide an explanation of the similarity in diagnosis results in 21 positive COVID-19 patients through CT Scan	Asia (China)	Case Report – Systematic Review	Lung manifestations of COVID-19 infection are dominated by ground-glass opacification with CT consolidation. Radiographic findings in patients who came to Shenzhen and Hong Kong were following 4 previous publications from other sites.
14	<b>Nicola, M., Alsafi, Z., Sohrabi, C., Kerwan, A., &amp; Al-jabir, A. (2020)</b> / Resuming the COVID-19 effects on individual aspects of the world	Impact of COVID-19	Many individuals felt the Impact of COVID-19 especially in the economic field throughout the world	Not mentioned	Systematic review	Social restrictions, self-isolation, and travel restrictions force a decrease in the number of workers in all sectors of the economy and cause many jobs to be lost. Schools were closed, and demand for commodities and manufactured products



	economy					declined. On the contrary, the need for medical supplies has increased significantly. The food sector has also seen massive demand due to panic buying and hoarding of food products. Medium and long term planning is needed for how the economy is rebalanced and re-energized after this crisis. Broad socio-economic development plans, including sector by sector and ecosystem plans that encourage entrepreneurship so that those who have a strong and sustainable business model, can be allowed to develop.
15	<b>Nicola, M., O'Neill, N., Sohrabi, C., Khan, M., Agha, M., &amp; Agha, R. (2020)</b> / Provide evidence-based reviews of COVID-19 management	COVID-19 Management	Management focuses on providing supportive care, with oxygen therapy representing the primary treatment interventions.	Not mentioned	Systematic review	Implementation and adherence to tighter social restrictions to reduce and reduce the spread of COVID-19 will prove very important in the coming months. Current evidence-based guidelines for acute management of COVID-19 are essential to guide physicians through a rapidly developing pandemic. When new evidence emerged, the current treatment options and must be considered a potential frequently re-evaluated to offer the best care in a state that has never happened before.
16	<b>Onder, G., Rezza, G., &amp; Brusaferro, S. (2020)</b> / Provide reports related to the characteristics of patients who died due to COVID-19	Impact of COVID-19	Deaths caused by COVID-19	Italy	Case-report	Italy has a high mortality rate after the US due to COVID-19 infection caused by people not complying with established health protocols
17	<b>Roy, D., Tripathy, S., Kar, SK, Sharma, N., Verma, SK, &amp; Kaushal, V. (2020)</b> / To evaluate the knowledge, attitudes, anxiety and mental health care needs in the community felt during coronavirus pandemic in India	COVID-19 Management	Management of COVID-19 in aspects of knowledge, attitudes and mental health of the community	India	Quantitative (Cross-sectional)	During this coronavirus pandemic, most educated people and health professionals were aware of this infection, possible precautions, the importance of social distance, and government initiatives taken to limit the spread of infection. However, there is increasing concern and concern among the public about the transmission of COVID-19 infection. People have a higher need to overcome their mental health difficulties. There is a need to intensify awareness programs and address mental health problems in people during the COVID-19 pandemic.

18	<b>Van Doremalen, N., Bushmaker, T., Morris, DH, Holbrook, MG, Gamble, A., Williamson, BN, ... Gerber, SI (2020)</b> / Evaluates the stability of SARS-CoV-2 and SARS-CoV-1 in aerosols and on various surfaces and estimate the rate of decay	Characteristics of COVID-19	COVID-19 stability in a variety of surface objects and aerosols	Not mentioned	Experimental study	The results show that the transmission of aerosols and fomites from SARS-CoV-2 can occur because the virus can remain alive and be transmitted on aerosols for hours and on the surface for several days (depending on the inoculum shed). These findings confirm that forms of COVID-19 transmission can be associated with nosocomial infections and large-scale transmission events
19	<b>Wang, L., Shi, Y., Xiao, T., Fu, J., Feng, X., Mu, D., ... Li, Z. (2020)</b> / Explain the steps to prevent and control COVID infections - 19 in neonates.	COVID-19 Management	Flood protection and infection control COVID-19 in neonates.	Asia (China)	Systematic Review	However, been no reported cases of vertical transmission from mother to child are reported. If the newborn has no symptoms after birth and the mother is suspected of having a negative test for 2019-nCoV, the newborn can be placed in the same room as the mother; if a maternal test is positive for 2019-nCoV, maternal quarantine is required, neonates need to be isolated, and a 2019-nCoV test must be performed. If the test results are negative, the newborn can be routinely treated by a guardian; however, if the test is positive, the case must be managed according to the management of the diagnosed newborn. If infants show clinical symptoms of suspected 2019-nCoV, they must be treated in the neonatal department for further diagnosis and treatment.
20	<b>Xu, Z., Shi, L., Wang, Y., Zhang, J., Huang, L., Zhang, C., ... Zhu, L. (2020)</b> / Explain the pathophysiological COVID-19	Characteristics of COVID-19	The course of the COVID-19 virus causes acute respiratory syndromes and their symptoms	Not mentioned	Case-report	Knowing the clinical and pathological signs in COVID-19 cases can help identify the cause of death, and provide new insights about the pathogenesis of pneumonia related to SARS-CoV-2, which can help doctors formulate therapeutic strategies for critical patients and reduce mortality.
21	<b>Ye, Z., Zhang, Y., Wang, Y., Huang, Z., &amp; Song, B. (2020)</b> / Reviewing CT manifestations typical and atypical relative to the case COVID-19 representative in the hospital, and hope to strengthen the recognition of these features with radiologists and help them make quick and accurate diagnoses.	Diagnosis of COVID-19	Determination of COVID-19 diagnosis based on the results of the CT scan	Not mentioned	Pictorial Review	Early recognition and isolation of COVID-19 patients are significant in controlling this outbreak, especially in patients with false-negative or asymptomatic RT-PCR. Although bilateral and consolidated GGO is reported as the dominant imaging characteristic in COVID-19, the manifestations of chest CT can vary in different patients and stages.

22	<b>Zhang, L., &amp; Liu, Y. (2020)</b> / To find alternative solutions to prevent and control the replication and spread of the virus	COVID-19 Management	COVID-19 transmission control strategies	Asia (China)	Systematic review	In controlling the transmission of COVID-19, it is recommended that children and medical personnel be given influenza vaccine. Besides, convalescent therapy is also recommended in the management of COVID-19.
23	<b>Zhou, F., Yu, T., Du, R., Fan, G., Liu, Y., Liu, Z., ... Gu, X. (2020)</b> / Explores the risk factors for hospital mortality for patients and patients. provide clinical symptoms, viral release, and temporal changes from laboratory findings during hospitalization	Diagnosis of COVID-19	Explain the general symptoms and diagnoses in COVID-19 patients	Asia (China)	Retrospective Cohort Study	This retrospective cohort study identified several risk factors for death in adults in Wuhan who were hospitalized with COVID-19. Specifically, older age, d-dimer levels greater than 1 µg / mL, and higher SOFA scores at admission were associated with a higher likelihood of hospital death. Also, elevated levels of IL-6 in the blood, high-sensitivity cardiac troponin I, and lactate dehydrogenase and lymphopenia are more commonly seen in severe COVID-19 disease. Continuous virus detection in throat samples was observed in survivors and non-survivors.
24	<b>Ye, F., Xu, S., Rong, Z., Xu, R., Liu, X. Deng, P., ... &amp; Xu, X. (2020)</b> / Report clinical features of cluster family involved five cases of COVID-19 in Luzhou	COVID-19 Management	Explain the background of COVID-19 transmission in family clusters	Asia (China)	Case-report	Among them, three family members (Case 3/4/5) have returned from Wuhan. Besides, two family members, those who did not travel to Wuhan, were also infected with COVID-19 after making contact with three other family members. Case 1 developed severe pneumonia and was treated in the ICU. Cases 3 and Case 5 showed fever and cough on days 2 to 3 in the hospital and experienced changes in opacity in their lungs. Case 4 was accompanied by diarrhea and pharyngalgia after admission without radiographic abnormalities. Case 2 did not show clinical or radiographic abnormalities. All cases had elevated levels of C-reactive protein.
25	<b>De Bruin, Y. B., Lequarre, A. S., McCourt, J., Clevestig, P., Pigazzani, F., Jeddi, M. Z., ... &amp; Goulart, M. (2020)</b> / To gather information about prevention and effectiveness, and can allow for increased preparedness and response to further outbreaks	COVID-19 Management	Preventive steps that can be done in COVID019	Not mentioned	Systematic review	Lack of general understanding about this new virus causes confusion and different understanding between professionals and authorities. The global community (political, medical, and international organizations) are shocked at the speed of COVID-19. Various countries have implemented measures to mitigate the risk of spreading the virus and making updates every day
26	<b>Segars, J., Katler, Q., McQueen, DB, Kotlyar, A., Glenn,</b>	Impact of Coronavirus	The Impact caused by COVID-19	Not mentioned	Systematic review	COVID-19 infection can adversely affect some pregnant women and their offspring.

	<b>T., Knight, Z., ... &amp; Kawwass, JF (2020)</b> / To summarize the current understanding of the effects of new and previous coronaviruses on human reproduction, mainly male and female gametes, and in pregnancy		infection, especially in the human reproductive system			Additional studies are needed to assess the effect of SARS-CoV-2 infection on male and female fertility.
27	<b>Tobaiqy, M., Qashqary, M., Al-Dahery, S., Mujallad, A., Hershah, AA, Kamal, MA, &amp; Helmi, N. (2020)</b> / To reported evidence of therapy used for the management of patients COVID -19 in clinical practice since the advent of the virus.	COVID-19 Management	Evidence of therapy used in the practice of handling COVID-19	Not mentioned	Systematic review	It is the first systematic review to date regarding the therapy used in COVID-19 patients. Only 41 research articles on COVID-19 and therapies that were eligible for inclusion were mostly carried out in China. Corticosteroid therapy is found as the most studied drug in the literature.

Appendix 2 (CASP Checklist Question for Systematic Review )

Item 1	Did the review address a clearly focused question?
Item 2	Did the author look for the right types of paper?
Item 3	Do you think all the important, relevant studies were included?
Item 4	Did the review's authors do enough to assess the quality of the included studies?
Item 5	If the results of the review have been combined, is it reasonable to do so?
Item 6	What are the overall results of the review?
Item 7	How precise are the results?
Item 8	Can the results be applied to the local population?
Item 9	Were all important outcomes considered?
Item 10	Are the benefits worth the harm and cost?

Appendix 3 (CASP Checklist Question for Quantitative Studies)

Item 1	Did the study ask a clearly focused question?
Item 2	Was this a randomized controlled trial (RCT), and was it appropriately so?
Item 3	Were participants appropriately allocated to intervention and control groups?
Item 4	Were participants, staff, and study personnel 'blind' to participants' study groups?
Item 5	Were all of the participants who entered the trial accounted for at its conclusion?
Item 6	Were the participants in all groups followed up and data collected in the same way?
Item 7	Did the study have enough participants to minimize the play of chance?
Item 8	How are the results presented, and what is the main result?
Item 9	How precise are these results?
Item 10	Were all important outcomes considered so the results could be applied?