

Covid-19 stigmatization: A systematic literature review

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Abstract

Covid-19 has severe implications for the emergence of negative stigmatization of specific individuals and community groups. Due to labeling and discrimination, mental attacks cause psychological distress so seriously that it requires proper handling. Therefore, this study aims to conduct a systematic literature review on articles on COVID-19 stigmatization. This paper used descriptive analysis that 248 articles are from the Scopus database obtained by keyword Covid-19 stigmatization in the 2020–2021 time span were then processed and visualized using the Vosviewer software. The results reveal the three most dominant concepts studied: anxiety, isolation, and knowledge. The Covid-19 stigma arises due to low public knowledge, widespread Covid-19 disinformation, and lack of trust in the government. This research contributes to a description of the root causes and adverse effects of stigmatization during Covid-19 to help formulate recommendations for preventive and treatment actions that can be taken. Meanwhile, the limitation of this research is that the articles reviewed are only sourced from Scopus, so they do not have comparative data. Therefore, future studies require using a comparative analysis approach that uses a Web of Science (WoS) database.

Keywords

Stigmatization, Covid-19, anxiety, isolation, knowledge, community groups

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Introduction

The outbreak of the Coronavirus (Covid-19) which took root and was first discovered in China in December 2019 turned out to not only have an impact on physical health but also was able to influence human mental health which in this case was triggered by the presence of various stigmas in society.¹ The virus, which was declared by the WHO as a pandemic on March 11, 2020, was born as a deadly disease that has a comprehensive impact on the entire world community today.² In line with the previous view, in addition to physical health problems, Covid-19 also has an impact on mental health problems through the emergence of various kinds of stigma or what is known as the Covid stigma.³ The Covid stigma is a negative view that attaches to individuals due to the influence of a messy social environment due to the Covid-19 outbreak. Most of the stigma is present due to excessive public fear and anxiety so that the issue of stigma has a broad and negative impact on social life.⁴ Another view was expressed by Robert A. Hahn and Schoch-Spana, that according to their research, Covid-19 ruthlessly attacks people's psychology/

mental health.³ Stigmas are born because the related individuals experience anxiety because of economic difficulties due to social restrictions.

The stigma that was constructed as the effect of the Covid-19 pandemic is certainly not a simple matter. Stigma raises problems that are so complex and have an impact on people's mental health. The stigma of Covid is a problem that will have a wide impact on social life because it can last a long time if it is not responded to with effective and efficient social actions.⁵ A collection of mental health problems in the community caused, for example, in the form of excessive anxiety, depression, post-traumatic

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stress disorder to the presence of somatic symptoms.⁶ The stigma of Covid-19 also triggers the birth of social conflicts because there are individuals who carry out discriminatory actions against people who are currently or have been infected. Similar to the previous view, Is and Stigma reveals the social situation because various stigmas that arise make the atmosphere even more cloudy.⁷ The rise of labeling, discrimination, stereotyping of individuals or groups and the like actually complicates the situation so that other people are increasingly anxious and afraid amid a pandemic.

Javed et al.⁸ revealed that low and middle-income countries are more susceptible to mental disorders due to the development of stigma with a probability of 80%. The difficulty of the community in getting access to health, education, and the difficulty of finding financial sources have caused the stigma of Covid to be easily embedded in individuals, resulting in excessive anxiety. In addition, the stigma of Covid-19 also grows through various irresponsible individuals by spreading false information in the media, this kind of thing triggers divisions in society, especially those who lack knowledge about real information.⁹ Frequently, through the stigma that is formed, discriminatory actions occur, segregating community groups, the existence of marginalized groups, and having an impact on people's mental or psychological problems.¹⁰ It does not just happen to civilians in general, stigma is growing and attacking health workers. There are several groups of people who avoid and discriminate against health workers. Even though in terms of the main tasks and functions, health workers have worked very hard physically, in addition to the psychological problems caused by the stigma of Covid.¹¹

On the other hand, the danger of the Covid stigma being spread in the media also attacks individuals who have an extra-large body (Obesity). Mortality news is spread and aimed at obese survivors so that there is an excessive concern for this group. It should be more important to spread positive education and enthusiasm than to increase concern for this group.¹² Rosen et al.¹³ also explain that the circulating stigma triggers negative things psychologically in humans, excessive anxiety will be transmitted by the sufferer making individuals more overprotective and can blame other individuals brutally. Social conditions during a pandemic are getting worse because of the growing stigma. Ganesan et al. also added that the process of quarantine, isolation, and lockdown policies also triggers stigma.¹⁴ Social activities have changed drastically and people who are easily affected by stigma are those who are unable to adapt to it. In essence, that the impact of the Covid stigma needs to be minimized through education and optimizing the role of all relevant institutions and support from workers in the field of psychology, this step also needs to be at least intensified to suppress public panic in a pandemic that is so difficult today.¹⁵ Several previous

studies have discussed the stigma of Covid-19. The findings from Imran et al. stated that the stigma of Covid made the patients afraid of rejection from their environment. In addition, there is also the fear of being humiliated by others and the fear of losing business relationships on the entrepreneurship side.¹⁶ Yitayih et al.¹⁷ who conducted a study in Ethiopia explained that stress is the most common problem caused by the stigma of Covid. Therefore, according to him, there is a need for massive and periodic education to overcome these mental health problems. Chang et al.⁹ on the other hand, to reduce the impact of the Covid stigma, suggest maintaining the factuality of data circulating in various media. According to him, the media plays an important role in influencing public stigma. Therefore, news of enthusiasm and motivation, especially those related to mental health problems, should be broadcast more.

Another study related to stigma was also conducted by Baldassarre et al.¹⁸ Their study revealed that stigma can be prevented by understanding the empirical issues in previous outbreaks that also have an impact on mental health. Furthermore, according to the researchers, stigma can be dismissed by focusing attention on several aspects. These aspects include knowledge, education, and socioeconomic status. Another focus of the study discussed by Potash et al. recommends art therapists in supporting psychosocial public health.¹⁹ This can be actualized through the massive dissemination of positive information, fighting and challenging stigma mentally first to strengthen hope in individuals. The role of mental health is key in this art therapist. In addition, there is also another author, namely Lee et al.²⁰ who discusses related to the stigma of Covid. His research highlights the importance of precautionary behavior to prevent Covid-19 infection and the need to provide support (both psychological and financial) to patients and people in quarantine. In addition, effective communication strength, high social solidarity, and public health emergency preparedness are needed in a pandemic situation. According to him, through these steps, the situation will be much calmer and the stigma of Covid can be reduced.

The urgency of the study on the stigma of Covid is crucial to maintain the mental stability of the community amid a pandemic. The stigma that can exacerbate the situation needed to be researched and found how to minimize and remove it.²¹ Discrimination, intimidation, social stereotypes, and other forms that can influence the psyche of the community through the influence of stigma are analyzed for causes and how to overcome them. This is very relevant to do to minimize the impact of Covid-19, especially concerning mental health.⁹ The emergence of stigma is also rooted in the rise of fake news in various media. There is a lot of news related to the Covid-19 conspiracy, data manipulation, and so on, which adds to the confusion and anxiety of the public. Aspects that affect the public

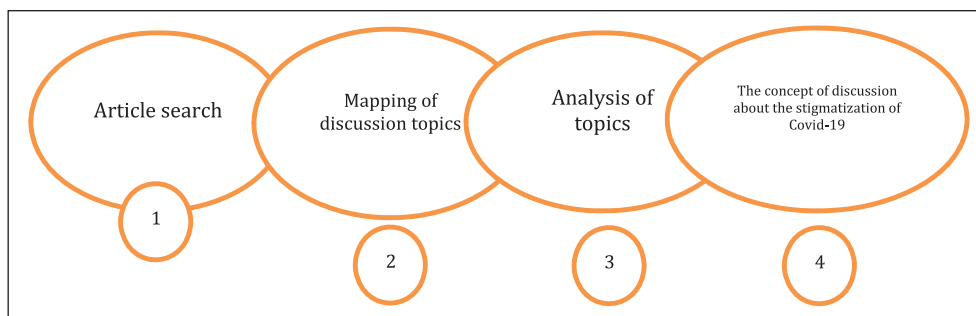


Figure 1. Article review process.

stigma are important to be thoroughly studied so as not to make the situation worse during the pandemic.²² The study of the Covid stigma is also important to find new methods of dealing with the circulating stigma, such as the art therapist proposed by Potash et al.¹⁹ or the behavioral approach pattern contained in the socio-cultural as studied by Yu et al.²³

On the other hand, the stigma of Covid also attacks and has an impact on nurses/health workers. Medical workers who are on the front line if they are also affected by stigma will certainly make things worse. One of the goals of the Covid stigma study is to address these stigma issues because stigma has a very broad impact.²⁴ The circulating stigmas are once again not a simple matter and are taken for granted. Psychological effects greatly affect patient recovery, research, and education related to stigma, which must continue to be carried out to overcome problems that need not arise.²⁵ A new polarization in overcoming the circulating Covid stigma must be found. In order to support this, massive and periodic studies are needed from various authors who have specifications in this field. Findings of patterns of overcoming the stigma of Covid are very useful for the world community today. These findings just need to be matched to certain community groups if appropriate.²⁶ In essence, the study of the Covid stigma is very important and has a big aim to reduce the evil caused by the pandemic, especially related to mental health problems.

Design and method

The research carried out had the intention of analyzing various articles that correlated with the problem of stigmatization of Covid-19. Various articles published in international journals were the main data sources to be used in this research. The reviews discussed in this study were based on several basic aspects of the problem, especially in knowing and understanding the concepts, impacts, and management patterns of Covid-19 stigmatization that were studied previously.

The various basic questions summarized by the author became the root reference to be used in analyzing the fundamental theme that was carried out. The SCOPUS database

was the primary source used by authors in searching for and finding articles related to the stigmatization of Covid-19. The articles found were then reviewed based on two stages, including (1) article search and (2) mapping of discussion topics (Figure 1).

Various related articles were obtained by the author through the following steps: First, identify the articles. Identifying articles can be intended as an effort to sort various articles so that later they would only pick up articles that were in line with the topic being discussed. This was done by entering the keywords “Stigmatization Covid-19” in the search column with restrictions from 2020 to 2021. In the search process, the authors obtained some 3521 articles relevant to the related topic. The second stage was to verify the various articles found so that they were narrowed down to articles that were really needed and were very closely related in compiling studies related to the stigmatization of Covid-19. The verification carried out resulted in 248 articles/journals which were assessed to be very appropriate to the topic of the study.

Results

Correlation and grouping of themes related to covid-19 stigmatization

The following description explains the verification process sourced from various post journals through the previous selection process. The results of the review which were processed using VOSviewer software categorize concepts based on groups. Figure 2 shows the various concept names displayed with cluster density. Differences in cluster color are an indication of differentiation between one group and another. This makes it easier for researchers to map groups of data so that they can be analyzed. Figure 2 below shows the different colors in each existing cluster and refers to each group.

Referring to the identification results contained in the picture, it can be seen that the themes that have been grouped and then were sorted by the ones that correlated based on the themes discussed. The following is a Table 1 that maps concepts based on existing clusters.

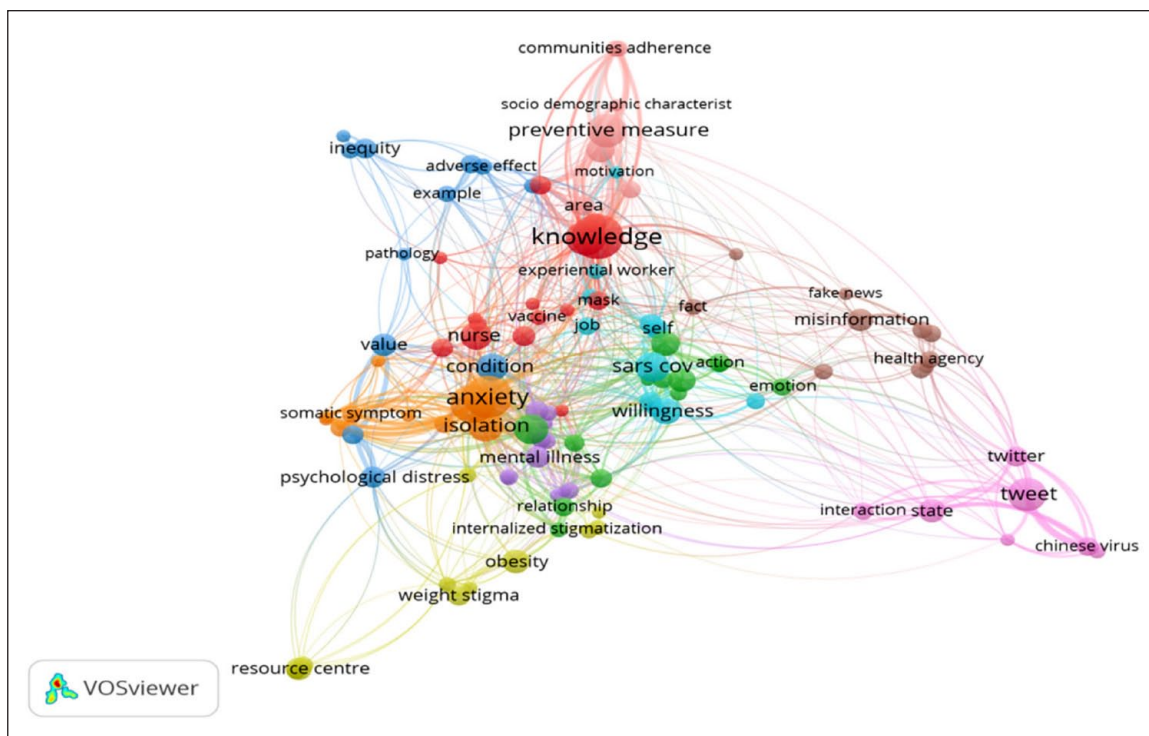


Figure 2. Theme relationships in Covid-19 stigmatization studies.

Cluster 1 shows that the dominant theme discussed relates to people's attitudes in dealing with the pandemic situation. The public's knowledge about Covid-19, the attitude of the community's compliance in obeying prevention directives such as keeping a distance and using masks, vaccinating, and respecting medical personnel is the fundamental points contained in the theme group in this cluster 1. Through the efforts implemented in the daily attitude of the community, the aim is also to keep the stigma from taking too many victims and being able to reduce the impact of the Covid-19 stigma in the community. Pan et al.²⁷ show comprehensive steps in overcoming the pandemic so as not to bias and cause various bad stigmas. Pan et al. argue that the aspect of public awareness is the main factor in preventing stigma. Public awareness can be obtained through massive education to the public so that they can comply with the patterns and regulations set by the government and medical personnel. Monolithic with the foregoing view, Adesegun et al.²⁸ researched Nigeria. Good knowledge significantly affects people's attitudes and practice values in dealing with the pandemic. Elgandy et al.²⁹ previously also studied the Covid stigma that grew in Egypt. Their findings revealed that out of 726 respondents, an accumulated 81.4% had good knowledge of Covid and its stigma. This implies that it also has a strong function in suppressing public concerns regarding the widespread Covid stigma.

Cluster 2 dominantly discusses objects that are psychologically affected due to the rampant stigma of Covid.

These psychological impacts can interfere with great mental health for the community. The stigma in grouping themes in cluster 2 has a strong impact on several groups including individuals who have acute stress reaction syndrome, especially stigma that is easy to attack health workers and health service providers. Therefore, to support the psychological well-being of these community objects, close relationships between each other and social support are very helpful in mitigating the impact of the stigma created by the current Covid-19 pandemic. Sulistiadi et al.⁵ identified the sticking stigma for health workers and funeral workers in Indonesia caused by a distortion of news from various media. On the other hand, Manik et al.³⁰ said that the social stigma experienced by medical workers apart from the general public also came from colleagues. Furthermore, Manik et al. suggested that medical staff should also be equipped with mental health to support optimally their role as the front liners in dealing with Covid-19 patients.

The dominant theme in cluster 3 pinpoints the stigmatization of Covid which has a bad effect on marginalized communities. Psychological pressure has been felt by this community group because they do not feel that there is a strong intervention/political will from the government in the form of regulations or policies. The difficulty of work, then added to the inequality and health gaps add to the psychological pressure of this community group. Of course, with social conditions like this, stigma can grow rapidly and worsen the situation amid a pandemic. Research conducted by Udaya Bahadur et al.³¹ found that job loss and

Table 1. Themes categorized by cluster.

Cluster	Concept names	Total
Cluster 1	Attitude, coronavirus infection, effectiveness, face mask, good knowledge, health worker, infectious disease outbreak, knowledge, mask, nurse, public attitude, public knowledge, stigma scale, stigma score, vaccine.	15
Cluster 2	Action, acute stress reaction syndrome, emotion, gender, healthcare provider, healthcare worker, internalized stigmatization, mental health problem, psychological impact, psychological wellbeing, region, relationship, social support.	13
Cluster 3	An adverse effect, condition, coronavirus stigmatization, for example, health disparity, health inequity, inequity, occupation, pathology, policy intervention, psychological distress, value.	12
Cluster 4	Depressive symptom, disruption, free information, health care worker, novel coronavirus covid, obesity, peritraumatic distress, physical activity, public news, resource center, risk factor, weight stigma.	12
Cluster 5	Health care, mental health care, mental health service, mental illness, psychiatric symptom, psychosis, social isolation, societal stigma, a university student.	11
Cluster 6	Bullying, child, experiential worker, job, medical internet research, motivation, public health emergency, sars cov, self, testing, willingness.	11
Cluster 7	Anxiety, depression, isolation, mental health issue, middle east respiratory syndrome, previous psychiatric history, significant risk factors, somatic symptom, stay, stress disorder.	10
Cluster 8	Conspiracy theory, fact, fake news, health agency, income, misinformation, public trust, rumor, socio-cultural factor, a world health organization.	10
Cluster 9	China virus, interaction, novel coronavirus, state, tweet, Twitter.	7
Cluster 10	Adherence, area, associated, factor, communities adherence, dirashe district, preventive measure, socio-demographic characteristic.	7

heavy financial responsibilities caused people with middle to lower economic classes to be very worried. The government in this case has to provide welfare support to the community so that these various concerns do not develop. On the other hand, the marginalized group according to Migita and Banerjee is the elderly.³² Marginalization and deprivation of human rights emerged as common pathways of suffering for the elderly during the pandemic. Migita and Banerjee recommend this solution taking into account the WHO concept of healthy aging and the United Nations sustainable development goals.

Cluster 4 tends to discuss the stigma associated with having a high-risk factor for individuals in society who are overweight/obese. Symptoms of depression rooted in the stigma should be avoided with various efforts. Stigma in this community group is a scourge that adds to the public's view of the dangers of Covid-19. The amount of news that is not based on scientific essence in various social media also affects people's views about this weight stigma. Petrova et al. describe that various news related to the virus is becoming more deadly for those who are overweight, which adds to the stigma and concern for this group of people.¹² According to him, this obesity group needs to be a priority and the government needs to make regulations that can facilitate the concerns of this obese group. Puhl et al.³³ concluded that people who have more weight would easily be stigmatized because of the large amount of related news.

Cluster 5 dominantly discusses the fundamental role of various mental health services in helping to overcome psychological problems caused by the stigma of Covid-19. The social isolation caused by the Covid-19 disease has an

impact on people's mental problems. On the other hand, the existence of discriminatory actions, stereotypes, and the like add to the problem of community psychosis. This, of course, cannot be considered a simple matter. Therefore, it is necessary for the cooperation of all relevant parties, especially in this grouping, manifested by psychiatrists or mental health service providers who will certainly help the community's mental problems due to being affected by the Covid-19 stigma. Various alternative solutions are needed to overcome the circulating stigma. Based on the opinion of Potash et al. for example, in managing the stigma caused by Covid-19, an art therapist method is needed.¹⁹ This pattern can be used as an alternative to support public health psychosocial. In line with previous thinking, Alkhamees et al. see that the high death rate due to Covid-19 attached stigma and excessive fear to society.³⁴ So the role of mental health services is needed to maintain the sanity of the community.

In cluster 6, the dominant theme discussed was the importance of community self-motivation in dealing with health emergencies caused by the Covid-19 pandemic. A strong finding in shaping and motivating oneself to be awake in understanding is also a positive factor. The existence of discriminatory attitudes and widespread oppression is caused by a lack of understanding. Therefore, it is important to have education within the individual. Individual willingness to understand the existing problems can be very helpful in maintaining social stability in society. Rahman et al. assess that strong self-motivation can fight the emergence of stigma within individuals.³⁵ Mental health has to be maintained so that it is not physically affected.

Furthermore, in cluster 7, the dominant theme discussed was the various psychological impacts (not physical) caused by the stigma of Covid. These mental health impacts are grouped as the presence of anxiety, depression, respiratory syndrome, somatic symptoms, and the like in individuals which were rooted in the stigma of Covid. This risk factor is quite significant in adding to the problems caused by the outbreak, plus people with a previous history of psychiatry would certainly be more severe and easily infected. Stress disorders and similar mental health problems must be faced and combated in the ways discussed in the previous clusters. Javed et al. revealed that stigma can be attached to individuals who have mental health problems.⁸ To improve it, he further explained the need for support from various sectors, such as social, cultural, economic, and religious sectors.

In cluster 8, the grouping of themes summarizes the root causes of the emergence of the Covid stigma in the community. The rise of fake news, the disclosure of various conspiracy theories, frequent disinformation, many rumors, and so on have an impact on public trust in related organizations, such as governments, health agencies, and the world health organization, WHO. People tend to believe that fake news can make things worse. The public should be more careful in collecting as actual and factual information as possible. That way, doubts about the existence of this epidemic can be overcome together and together against the stigma that continues to grow in the community. Sonekar and Ponnaiah³⁶ explained that stigmatization is caused by a lack of knowledge and has a strong causality of disinformation during the pandemic. Most of the miscommunication/disinformation arises from press coverage and social media. In addition, Habersaat et al.³⁷ emphasized the role of the government to work more effectively in managing the transformation of Covid-19 information. In this case, the government has to actively cooperate with various related parties, both public and private. Then, Sun et al.³⁸ explained that nowadays, a lot of news suggests Covid is a conspiracy. This has an impact on the level of public doubt to implement the vaccine provided by the government. Misinformation like this should be prevented immediately so as not to add to the problem in the health crisis that hit.

Then, cluster 9 generally discusses the source of the outbreak originating from China. Various social media broadcasts news thus impacting bias around the world, especially in the case of tweets broadcasted on the Twitter platform. Budhwani and Sun researched that the bad stigma for China stemmed from the many tweets referring to the “Chinese Virus” at the beginning of its existence.³⁹ This suggests the translation of knowledge is happening online and the stigma of Covid is likely to be perpetuated via Twitter.

Finally, cluster 10 displays that stigma can be prevented through community compliance, which cooperates comprehensively in overcoming this problem. There are

several factors of community compliance, for example, it is discussed that socio-demographic characteristics have an important role. In overcoming the growing stigma problem, it is necessary to pay attention to the socio-cultural conditions of the area occupied by the local community. This approach is needed to find a match in overcoming the growing problem of stigma. Yu et al.²³ explain that understanding the socio-cultural conditions of the community is one important aspect in managing information so that the negative stigma against Covid-19 does not bias into a more serious problem. In different socio-cultural conditions, different handling is needed. Therein lies the importance of using this approach.

Dominant theme in Covid-19 stigmatization study

Several dominant themes have a significant correlation to the Covid-19 stigmatization study discussed. The classification of dominant themes aims to make the study more focused to produce relevant conclusions. The categorization and classification of dominant themes are used because they can help the writer in mapping out any topics that correlate with the topic being studied. The study of the Covid-19 stigmatization study must involve a process of sorting out and selecting any theme or category that is aligned so that the discussion is not too general to be reviewed. The following are some of the dominant themes found regarding the Covid-19 stigmatization study (Figure 3).

Based on a search of the previous discussion topics, more specifically regarding the stigmatization of Covid-19, it was found that some of the most dominant concepts were studied. Software called VOSviewers was an application used by the author in categorizing the dominant concept regarding the stigmatization of Covid-19. Some of the most massive themes/concepts previously discussed include: *anxiety, isolation, knowledge, sars cov, preventive measure, weight stigma, relationship internalized stigmatization, stigmatization Covid-19, health agency, mental illness, misinformation, fake news, motivation, inequity, psychological distress, tweet, nurse condition, resource center*, and various other related theme groups.

These various topics had a distinction in terms of color thickness. The difference in color thickness meant that the group of topics that showed thickness was more of a dominant and massive topic that was discussed regarding the stigmatization of Covid-19 by several previous authors. The various kinds of dominant topic groups had complex causalities or relationships that made it easier for the author to conclude. The conclusion could be narrowed down according to the theme discussed, namely the stigmatization of Covid-19.

Based on the dominant concept of Covid-19 stigmatization as described in Figure 3 above, it was found that there were quite dominant topics (shown with different color

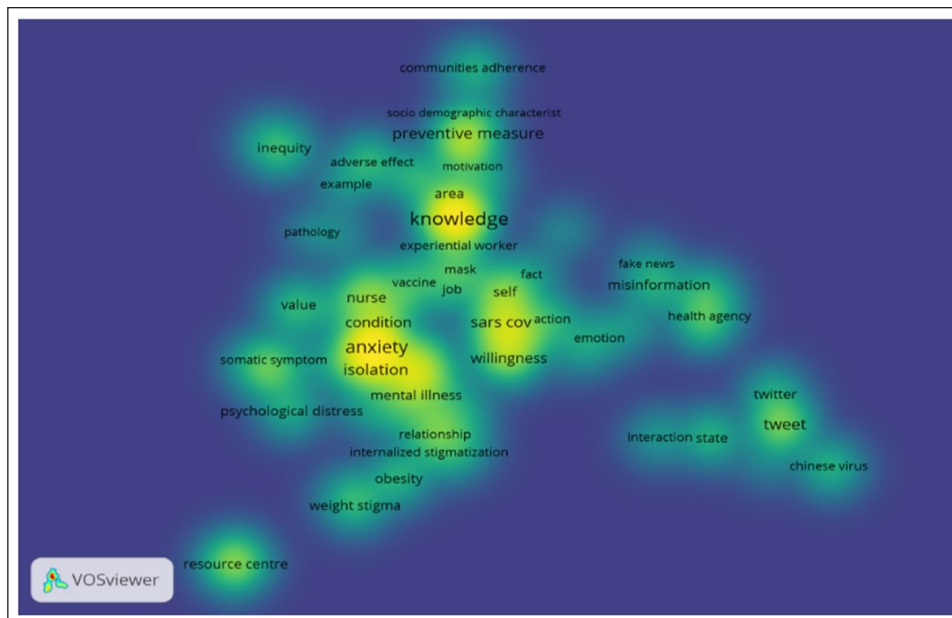


Figure 3. Dominant concept in Covid-19 stigmatization study.

thicknesses). The first dominant topic was knowledge. Public knowledge is a fundamental aspect that can affect the stigma of society. The lack and misunderstanding of the public were caused by several things, including the lack of socialization, the amount of disinformation caused by hoaxes, and various other related causes. Literacy and education were seen as important in increasing public knowledge, on the other hand, the public has to also be active and selective in dealing with the circulating Covid-19 pandemic news.

Another dominant topic was public anxiety. It was undeniable that the presence of this epidemic greatly impacted the level of public anxiety. Various factors that caused public anxiety should be minimized. These factors could be suppressed or eliminated by: motivating oneself, reviewing the right information, supporting each other among community groups, obeying government regulations, and carrying out various other types of mitigation actions that could be implemented amid people's lives during the outbreak. On the other hand, there was a dominant topic related to the preventive measure. Measures to prevent the stigma of Covid-19 were carried out through a socio-cultural approach to understand the state of the community concerned. Approach model like this was urgently needed so that stigma prevention was not only carried out simply and did not match the target of success but involved all socio-cultural elements and clean living habits of the community.

The last is the issue of psychological distress. The stigmatization of Covid-19 has a strong impact on people's mental health. In particular, stigma also attacks several groups such as health workers, individuals who are

overweight (obese), middle and lower middle-class groups, and several other community groups. Therefore, it is necessary to optimize the role of several elements such as mental health services, the religious sector, the private sector, and the government. Integrated cooperation between all of these elements is certainly an important part of suppressing the circulating stigmatization of Covid-19.

Conclusion

Studies related to the stigmatization of Covid-19 are necessary and important to be held. The stigmatization of Covid-19 is a complex issue that fundamentally affects the pattern of people's lives during the pandemic. The Covid stigma can have a bad impact and induce horizontal conflicts in society. Based on the findings of the author's research conducted using the "a systematic literature review" method, several factors were found causing the presence of the Covid-19 stigma in people's lives during the pandemic. These factors: First was public knowledge. Public knowledge was seen as the most basic aspect that caused stigma to easily develop. A public understanding was also related to community compliance in adopting the pattern of policies implemented by the government as the regulator. The second was the rise of disinformation related to Covid-19. The existence of fake and false news, especially those published by irresponsible persons, such as those distributed through the Twitter platform, became a serious problem if the intellectual understanding of the community is not yet at the level to be able to sort and choose news that should be consumed. The third factor was the lack of public trust for the government in handling

the pandemic. In particular, individuals from the lower-middle class economy strata, private sector actors, and several other groups such as obese people, the elderly, and individuals with congenital mental problems also tend to be more anxious because of the Covid-19 stigma.

Public anxiety caused by the stigma of Covid cannot be considered a trivial matter. The Covid-19 stigma can be biased and lead to discriminatory attitudes, racism, grouping, stereotypes, and other negative attitudes so that it greatly worsens the situation in today's pandemic. Horizontal conflicts cannot be tolerated and require the cooperation of the relevant stakeholders to resolve them. The government, the community, mental health services, health workers, and various related NGOs have to be aligned and focused in their respective fields to minimize the development of the Covid-19 stigma in the community during the pandemic.

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Author contributions

RK, contributed to the preparation of research concepts/designs, search data, and preparation of works; S, contributed to the practice of methods, data interpretation along with the preparation of the work; ITS, contributes to data processing, data interpretation, and preparation of the work. All authors approve the final version of the manuscript and agree to be responsible for all aspects of the work

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Ethics approval and consent to participate

Not applicable.

Patient consent for publication

Not applicable.

Informed consent

Not applicable.

Significance for public health

The Covid-19 pandemic harms negative stigma for specific individuals or groups of people. As a result, discrimination and violence occur, creating pressure and psychological disturbances for the victims. This study contributes to showing the background of the emergence of negative stigma and its negative impacts. These findings can help develop recommendations to prevent the emergence of negative stigma and ways to protect and treat victims.

Availability of data and materials

All the data supporting our findings have been presented in the manuscript, the data used to support the findings of this study are available from Scopus, which can be subscribed to by the corresponding author

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