

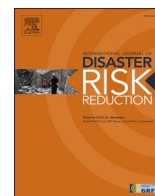


Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.

Contents lists available at [ScienceDirect](https://www.sciencedirect.com)

## International Journal of Disaster Risk Reduction

journal homepage: [www.elsevier.com/locate/ijdr](http://www.elsevier.com/locate/ijdr)

# An evaluation of community satisfaction with the government's COVID-19 pandemic response in Aceh, Indonesia

Aulina Adamy<sup>a,b,\*</sup>, Hafnidar A. Rani<sup>c</sup>

<sup>a</sup> Magister of Public Health, Postgraduate Study, University of Muhammadiyah Aceh, Jl. Muhammadiyah No 91, Batoh, Kec. Lueng Bata, Kota Banda Aceh, Aceh, 23123, Indonesia

<sup>b</sup> Hypatia Initiative Project, Jl. Lada II No 66, Komplek Gue Gajah, Meusara Agung, Kec. Darul Imarah, Aceh Besar, Aceh, Indonesia

<sup>c</sup> Faculty of Engineering, University of Muhammadiyah Aceh, Jl. Muhammadiyah No 91, Batoh, Kec. Lueng Bata, Kota Banda Aceh, Aceh, 23123, Indonesia

## ARTICLE INFO

## Keywords:

Covid-19 pandemic  
Government performance  
Community satisfaction

## ABSTRACT

Countries around the world are still struggling due to the COVID-19 pandemic. No exception with Indonesia, a developing country with the highest mortality rate and the lowest number of tests in Asia. Located in the northernmost, Aceh is one of the poorest provinces with a history of long-term conflict is not in the best condition to face a pandemic. This study's objective is to assess the local government's performance in responding to this pandemic according to the Acehnese community's level of satisfaction. Additionally, this study proposes a priority list for the local government to follow up on. A total of 529 respondents were collected within a week by the criteria of having internet access, being literate, and using WhatsApp messenger. The results show that the Acehnese are dissatisfied with the local government's performance in all districts or cities and at all stages, which include: anticipation, early detection, containment, control and mitigation, and elimination. Meanwhile, the top five priority recommendations are: conducting more rapid test and COVID-19 test; providing more test tools; performing detection; and inhibiting spread. These findings lead to many interpretations: lower trust towards the government, a poor health system, and potential influence on the political output. While vaccines are now being distributed in Aceh, the main focus is still to minimize spread and heal the sick. Looking at these results, the Aceh provincial government needs to work harder to improve both its performance and reputation with the Acehnese people.

## 1. Introduction

The novel coronavirus disease (COVID-19, as it is currently known) was first reported in Wuhan, China, in December 2019 [1] and recognized by Chinese authorities as a new virus in January 2020 [2]. WHO declared it as a Public Health Emergency of International Concern at the end of January 2020 and announced it as a global pandemic on March 11th, 2020 [1]. As of March 5th, 2021, the virus had affected 219 countries with 116, 222, 578 positive cases and 2,581,754 deaths [3].

Although several COVID-19 vaccines have been approved for use [4], countries are still struggling to respond to this new viral pandemic [5]. Moreover, newer variants of the coronavirus [6] are more likely to be quickly transmitted [7]. The epidemiological

\* Corresponding author. Magister of Public Health, Postgraduate Study, University of Muhammadiyah Aceh, Jl. Muhammadiyah No 91, Batoh, Kec. Lueng Bata, Kota Banda Aceh, Aceh, 23123, Indonesia.

E-mail address: [aulina.adamy@unmuha.ac.id](mailto:aulina.adamy@unmuha.ac.id) (A. Adamy).

<https://doi.org/10.1016/j.ijdr.2021.102723>

Received 5 March 2021; Received in revised form 2 December 2021; Accepted 5 December 2021

Available online 7 December 2021

2212-4209/© 2021 Elsevier Ltd. All rights reserved.



Fig. 1. Location of Aceh province on Indonesia map [21].

novelty of COVID-19, which was caused by a strain of coronavirus 2 [8], has revealed a vast lack of preparedness, as observed through its sudden and rapid spread that has caught many governments unprepared [9]. Developed countries, including the United States, the UK, Italy [10], and Sweden [11], have all been criticized on their handling of the pandemic. As such, high-income countries have generally fared worse, not better, than countries with lower incomes [12]. Although South Korea and New Zealand had initially been praised for successfully attenuating the curve, they are facing a second wave and are forced to lock down their countries again [10].

Indonesia, the fourth most populous country in the world, will most likely be significantly affected by the pandemic for years to come [9]. Starting with denial at the beginning of the pandemic, the Indonesian government claimed to have zero cases [13] while neighboring countries such as Singapore and Malaysia had been affected since January 2020 [14], which perplexed public health experts. It was only on March 2nd, 2020, that Indonesia reported the first two confirmed cases of COVID-19 [9]. In November 2020, Indonesia had the highest COVID-19 mortality rate in Asia (8% in 2020, while the global average mortality rate was 4%) [3] and continues to have a high positive rate, up to 34.3% (data on February 18th, 2021) [15]. According to the WHO, a positive rate of less than 5% is an indicator that an epidemic is under control in a country [2].

Aceh province in the northern part of Sumatra Island cannot escape the pandemic (Fig. 1). As one of the poorest provinces of the country [16], Aceh is famous for its strong hold of the Islamic religion and its long history of war fighting for independence from Indonesia [17]. With this background, Aceh is a unique case in learning how local governments are responding to the pandemic. As Aceh is a province that ended a 30-year conflict in 2005 [18] and recently experienced an enormous earthquake and tsunami, the new coronavirus will certainly pose to be a tough challenge for the local government [19]. In July 2020, the central government praised the manner in which the Aceh government dealt with the pandemic, along with four other provinces [20]. Therefore, to serve as a comparison, the community appraisal of local government performance will also be required.

According to Kusumasari and Alam [22], regarding the role of local governments in society, it is essential to explore the characteristics and capacities of local governments in disaster management, particularly local governments in developing countries. Unfortunately, the local government is one of the most understudied institutions in disaster literature [23]. With this background, the goal of this study is as follows: to determine the Aceh local government performance in responding to the COVID-19 pandemic and the improvements that need to be immediately implemented according to the needs of the community.

### 1.1. The role of the local government in the disaster response phase

At the time of publication of this report, August 2021, the world is going through the response phase of the COVID-19 pandemic. Response measures are usually taken immediately prior to and following a disaster impact [24]. They are directed toward saving lives, protecting property and the environment, and dealing with the immediate damage and other consequences of the disaster [25,26]. The response phase is a highly testing time for leaders, since the decisions made under emergency constraints influence the fate of many victims. At this critical time, leadership requires the ability to decide correctly, quickly, and with the lowest likely risk [9], since how the government handles the disaster in the response phase will determine the number of deaths.

Although existing disaster management initiatives have focused on central government-led orders and controls, recent disaster management has changed to a governance-based approach on communication and collaboration between the central government and local governments [27]. This means that the central role of disaster management is increasingly being transferred from “central” to “local” [28]. Although the pandemic is global, its responses have been local, depending on local governance and the socio-economic and cultural context of the region [1].

There are several reasons why disaster management at the local government level has been attracting recent attention: First, disaster management is implemented by local governments [29]. Second, there is a growing understanding within disaster management field that local governments play the most active role in emergency operations [30]. Third, there has been a shift in the central government towards decentralizing power and authority to the local government to deal with disaster activities [31]. Fourth, there is an emerging need to adopt and develop a sense of locality in emergency planning, as local government is crucial in terms of responsibility for emergency management [32].

In Indonesia, regulations have clearly stated that local governments are the principal actors to formulate and implement disaster management policies [33]. Unfortunately, not many studies concerning local government performance have been executed in Indonesia. Djalante, Shaw [34] showed that the focus has mainly been on the national government response, with a limited and varied

focus on cross-sector and cross-government levels.

### 1.2. Community satisfaction on government performance

Currently, assessment of the quality of governance mostly relies on socioeconomic statistics and expert opinions while largely neglecting the perceptions of local citizens [35]. Wang [35] stated that “official” conceptualizations of good governance mainly come from donor organizations, such as the World Bank and International Monetary Fund. These “good governance” measurements designed by experts (and mostly Western agencies) are often criticized for failing to capture the realities on the ground [36].

Satisfaction with the quality of public services is also known as citizen satisfaction [37]. Public administrations have mainly used so-called “hard indicators” (such as resources and outputs), and increased attention on accountability and issues around impacts and outcomes have stimulated the introduction of “soft” indicators — e.g., citizen and user satisfaction targets [38].

Community satisfaction is not new. At the end of the 1970s and the beginning of the 1980s, there was an increase in social surveying, in general, and in satisfaction surveying, more specifically, especially with regard to local services [39]. When researchers examine citizen satisfaction with government performance, it has often been found to be difficult to measure and highly service specific. In the public administration literature, for example, one can expect to find service- or issue-specific studies of customer (citizen) satisfaction but not general satisfaction with government performance or governance [38]. This includes factors such as primary education and public health [37]. The present study only focused on the government performance in responding to the disaster of the COVID-19 pandemic.

Based on the WHO guidelines [40], five crucial stages are needed to respond to an epidemic or pandemic: anticipation, early detection, containment, control and mitigation, and elimination or eradication. Under these five stages, this study constructed 19 indicators as a measurement to handle the response phase of the COVID-19 pandemic (Table 1). Two items were eliminated to reach the satisfaction score in validity analysis (see Section 2.2).

## 2. Methods

### 2.1. Research in a pandemic

This study was conducted in the middle of the COVID-19 pandemic, when face-to-face activities were widely restricted. Adopting quantitative methodology, this study collected data online to follow health protocol requirements. The questionnaire was made in Google Forms and distributed via the WhatsApp (WA) messenger application. Google Forms was used because it is user friendly, commonly used in distributing questionnaires in Aceh, and free of charge. The questionnaire was distributed through WA is because it is the most dominant chat application in Indonesia [41,42]. Since the questionnaire was designed to be self-reported, respondents were required to be literate and able to use the WA application, as well as have internet access. These criteria put potential participants in this study at a disadvantage. Aceh is a poor province [16] that recently ended a long civil war [18], thus not all citizens have access to reliable infrastructure and internet access. The consequence is that people with no access to the internet or WA could not participate in the study.

### 2.2. Validity and reliability of the questionnaire

The questionnaire was developed through three stages. First, a content validity test was conducted with five experts in disaster management, public health, and epidemics in Aceh and at the national level. Those experts were the head of the Agency of Health Research and Development of Aceh (*Badan Penelitian dan Pengembangan Kesehatan*); the head of the Regional Disaster Management Agency of Aceh (*Badan Penanggulangan Bencana Daerah*); a public health lecturer at the University of Indonesia, who also served as chairman of the Association of Public Health Experts of Indonesia (*Ikatan Ahli Kesehatan Masyarakat Indonesia*); a lecturer in Post-graduate Study of Disaster Management at University Syiah Kuala; and a senior staff member from the Aceh Health Office. After the questionnaire was revised, it went through the second and third stages: reliability and validity tests with 100 respondents in the Aceh Besar region, all collected online by Google Forms. The questionnaires were developed from a literature review with a proposal of 21 items. After eliminating two items, the final questionnaire met a confidence score. For reliability, the Cronbach’s Alpha coefficient was 0.965 (high). For the validity test, this research used two approaches: Pearson correlation and factor analysis (FA). The Pearson coefficient correlation  $r$  is close to 1, bigger than the  $r$  table product moment ( $>0.195$ ), and all the items are statistically significant ( $p <$

**Table 1**  
Responding indicators for a pandemic.

No.	Indicators	No.	Indicators
1	Anticipating disaster	11	Have health workers who work professionally
2	Quickly perform detection	12	Have conducted many tests to reduce the risk of transmission
3	Respond immediately to disasters	13	Trying to reduce the impact of pandemic
4	Immediately investigate the source of the spread	14	Trying to reduce the number of additional cases
5	Coordinate with all related parties in taking steps to prevent the spread	15	Trying to reduce the death rate
6	Do the rapid test vigorously	16	Reduce the economic, political and social impact
7	Has a laboratory that meets the standards	17	Control so that the spread of the plague does not increase
8	Protect health workers from catching and spreading the spread	18	Intervening to stop the spread of the plague
9	Efforts to inhibit spread effectively and quickly	19	Provides an efficient diagnostic tool to detect
10	Isolate patients in order to reduce the risk of transmission in the community		

Source: WHO [40].

.05). In addition, the FA results show that the KMO score is 0.9 (high), the Bartlett's Test of Sphericity is significant ( $<0.001$ ), all the items have a high communality score ( $>0.4$ ), and the Structure Matrix based on EFA with PCA extraction shows all items scored above 0.3 with one component. This research required ethical approval from each respondent at all stages of the survey. Informed consent was provided on the front page of the questionnaire and respondents are required to fill out a voluntary participation form before starting.

### 2.3. Population, sample, and data analysis

The Aceh population in 2020 consisted of 5,371,532 people, with adolescent and adult age groups (above 15 years old), as the criteria of this study, comprising 4,852,555 people [43]. With a 95% confidence and 4.26% margin error, this research successfully collected 529 respondents after a one-week distribution of the final questionnaire version. The questionnaire is categorized as an interval type with scores from 1 to 5. The data were analyzed using the mean of the scores, and the level of satisfaction was measured using the relative importance index (RII) to identify lists of priorities. The formula below was used for the RII score [44]:

$$RII = \Sigma W / (A \times N)$$

W = Weight given to each factor by the respondents.

A = Highest weight (i.e., 5).

N = the total number of respondents (529 respondents).

After the quantitative analysis was complete, the results were verified with a focus group discussion (FGD) involving experts in public health, representation from the Aceh province and the Department of Health of Indonesia in Aceh, communities, journalists, and activists. This FGD was conducted through a webinar and press conference via the Zoom application in October 2020 as part of the dissemination of the research results. The final analysis here was a combination from the results of the survey and the FGD.

## 3. Results

### 3.1. Respondent profile

Nearly 50% of the population in Aceh has access to the internet. In 2017, the Indonesian Internet Service Provider Association (APJII) found that there were 1.2 million active internet users in the Aceh province [45]. Although the number of internet users is enough for the sample, most of them fall into the middle and upper classes (with the assumption that there is a lack of literacy and access to mobile phones and the internet for lower classes). In the case of the pandemic, all class groups have been affected and should be permitted to evaluate the performance of their government. This limitation needs to be considered when reading the research

**Table 2**  
Characteristics of respondents (n = 529).

No.	Variable	f	
		N	%
<b>Gender:</b>			
1	Male	267	50.5
2	Female	262	49.5
<b>Age (years old):</b>			
1	Teenager (>15–18)	2	4.0
2	Adult (19–45)	430	81.3
3	Elderly (>45)	97	18.3
<b>Domicile (region or city):</b>			
1	Banda Aceh.	271	51.2
2	Aceh Utara.	30	5.7
3	Bener Meriah.	4	0.8
4	Pidie.	31	5.9
5	Simeulue.	1	0.2
6	Aceh Barat Daya.	10	1.9
7	Aceh Tamiang.	10	1.9
8	Gayo Luwes.	3	0.6
9	Lhokseumawe.	19	3.6
10	Others.	150	28.4
<b>Level of Education</b>			
1	Postgraduate.	174	32.9
2	Diploma/Graduate.	289	54.6
3	High school.	64	12.1
4	Middle school.	1	0.2
5	Not enrolled in school.	1	0.2
<b>Monthly Income (IDR)*</b>			
1	High >3.500.000.	272	51.4
2	Middle 3.500.000–1.990.170.	142	26.8
3	Low <1.990.170.	115	21.7

Note: \*according to Indonesia Statistic Agency (BPS) in 2019.

results.

Aceh is divided into 23 regions/cities, with Banda Aceh as the capital city. When the data were collected in August 2020, there were eight regions/cities that were categorized as red zones (high number of COVID-19 positive patients) by the Aceh Governor Decree No: 440/7810 [46], including Banda Aceh. In Table 2, from the total 529 respondents, gender parity was almost reached in this study (50.5% male and 49.5% female). The majority of the respondents were adults (81.3%) and lived in the capital city of Banda Aceh (51.2%). The second largest group of respondents fell into the "other" domicile option (28.4%), and the rest were distributed into eight regencies/cities.

From the same table, it is shown that the majority of the respondents had a high level of education, with 54.6% graduates (diploma or undergraduate) and 32.9% with postgraduate education. Monthly income shows that high-income respondents were dominant (51.4%). This figure appears to support the limitation mentioned earlier, that most respondents with internet access have a high level of education and income levels.

Another factor measured for the respondents' backgrounds was related to sources of information about the COVID-19 pandemic (Table 3). Information sources were the basis from which the respondents could assess the government performance in responding to the pandemic, especially in regard to hoaxes and misinformation in social media [47]. This study provided seven sources, and respondents could select more than one: TV news, online news, social media (e.g., Facebook, WA, Twitter, Instagram, etc.), newspapers, discussions with family members or friends, other, and the last option for "no source." The results covered five categories: only one source, two sources, three sources, four sources, and five or more sources. Using several sources of information may result in better information compared to merely relying on only one source, especially if said source is social media [48]. Only 21.7% of the respondents used one source of information, with 11% relying on social media. The rest followed more than one source, with the majority of respondents receiving information from four sources of information (32.8%). Therefore, most respondents had more than

**Table 3**  
Respondent source of information Related to COVID-19 pandemic (n = 529).

Source of Covid-19 Information		f	
		n	%
1 source	TV news.	29	5.5
	Newspaper.	2	0.4
	Online news/website.	19	3.6
	Social Media (FB, WA, Twitter, IG, etc*).	58	11
	Discussion with family members or friends.	4	0.8
	Others.	2	0.4
	Σ	<b>114</b>	<b>21.7</b>
2 sources	TV news & Online news/website.	8	1.5
	TV news & Social Media.	28	5.3
	Newspaper & Online news/website.	1	0.2
	Online news/website & Social Media	29	5.5
	Online news/website & Discussion with family members or friends.	1	0.2
	Online news/website & Others.	1	0.2
	Discussion with family members or friends & Others.	4	0.8
	Social Media & Discussion with family members or friends	6	1.1
TV news & Others.	1	0.2	
	Σ	<b>79</b>	<b>15</b>
3 sources	TV news, Newspaper, & Online news/website.	3	0.6
	TV news, Newspaper, & Social Media.	1	0.2
	TV news, Newspaper, & Discussion with family members or friends.	1	0.2
	TV news, Online news/website, & Social Media	46	8.7
	Newspaper, Online news/website, & Social Media	6	1.1
	Online news/website, Social Media, & Discussion with family members or friends.	25	4.7
	Online news/website, Social Media, & Others.	2	0.4
	TV news, Social Media, & Discussion with family members or friends.	11	2.1
	Newspaper, Social Media, & Others.	1	0.2
	TV news, Online news/website, & Discussion with family members or friends.	3	0.6
	Σ	<b>99</b>	<b>18.8</b>
4 sources	TV news, Newspaper, Online news/website, & Social Media.	47	8.9
	TV news, Newspaper, Online news/website, & Discussion with family members or friends.	66	12.5
	TV news, Online news/website, Social Media, & Discussion with family members or friends.	52	9.8
	Newspaper, Online news/website, Social Media, & Discussion with family members or friends.	3	0.6
	TV news, Newspaper, Social Media, & Discussion with family members or friends.	2	0.4
	TV news, Newspaper, Online news/website, & Others.	2	0.4
	TV news, Newspaper, Social Media, & Others.	1	0.2
	Σ	<b>173</b>	<b>32.8</b>
>5 sources	TV news, Newspaper, Online news/website, Social Media, & Discussion with family members or friends.	4	0.8
	TV news, Newspaper, Online news/website, Social Media, & Others.	10	1.9
	TV news, Online news/website, Social Media, & Discussion with family members or friends, Others.	17	3.2
	TV news, Newspaper, Online news/website, Social Media, Discussion with family members or friends, & Others.	33	6.2
	Σ	<b>64</b>	<b>12.1</b>

Note: \*FB = Facebook, WA = WhatsApp, IG = Instagram.

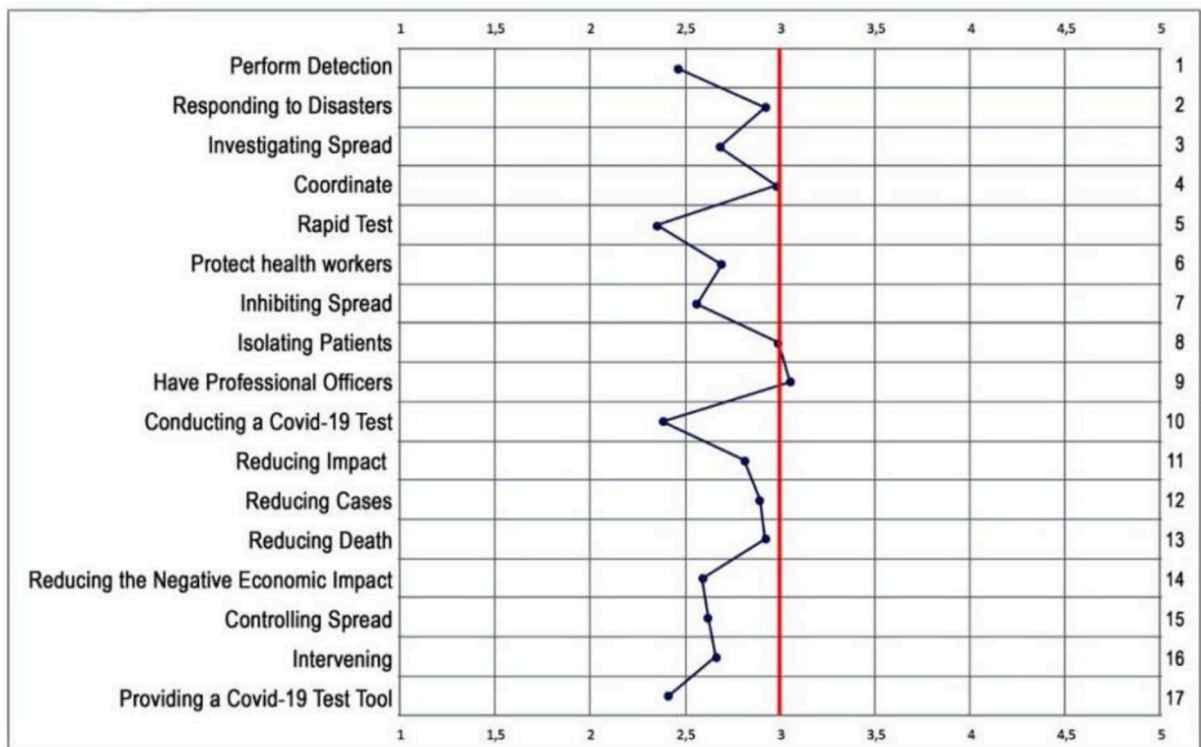
one source of information about COVID-19 and the government performance.

### 3.2. Community satisfaction of Aceh Government performance in response phase

When in the face of a disaster, governments are tested on their capabilities to respond; this is especially true when recovering from an epidemic. The local government plays an important role before, during, and after disasters due to its profound knowledge of the community and its challenges [19]. Seventeen indicators were extracted from the WHO guidelines for epidemics to measure the Aceh local government performance in the response phase of COVID-19. Interval questionnaires with a range of scores from 1 as “very dissatisfied” to 5 as “very satisfied” were distributed online through mobile messenger in the Aceh province. The test of normality using the Kolmogorov-Smirnov formula showed that the data were not normally distributed ( $\alpha > 0.05$ ). Using the mean values, the scores of the satisfaction level for each indicator from the 529 respondents are presented in Fig. 2.

From the figure, it is clear that most indicators scored below 3, meaning that the Aceh communities are dissatisfied with the Aceh government performance. Detail scoring is available in Table 4. Only one indicator scored above 3, “having professional health officers.” The lowest score was 2.38 for “conducting a COVID-19 test.” “Conducting rapid tests,” “COVID-19 tests,” and “providing COVID-19 test tools” were the indicators with the lowest scores. Therefore, it is safe to conclude that, in general, the Acehnese are not satisfied with the local government performance in the response phase of the COVID-19 pandemic. As citizens become more educated, their expectations of government performance rise. Hence, if citizens’ expectations rise faster than the performance of the government, trust and satisfaction might decline [49]. This argument supports the dissatisfaction found in this study, where the majority of the respondents are from educated backgrounds. For a comparison, an earlier study found that while most Indonesian communities were satisfied with the response from the Indonesian government, similar to this study, highly educated citizens tended to be less satisfied [50]. Apart from the respondents’ education background, trust in the government during all stages of the COVID-19 pandemic deteriorated in many countries in 2021 (data sample included Indonesia) [51]. Ample empirical evidence has shown that satisfaction and trust are positively correlated [52].

A similar study was conducted by Yusnaidi et al. [53] about the level of public satisfaction with the Aceh government performance in relation to the COVID-19 response, with different indicators. They used eight indicators from the Decree of the Governor of Aceh (No: 440/924/2020), as their objective was to assess the level of public satisfaction of the policies adopted by the Aceh Government to fight the virus. The survey was carried out through online questionnaires distributed in April 2020 with 257 respondents, showing that the Acehnese were not satisfied (Interval Conversion Value is 66.69). These results arrived at a similar conclusion, even with different indicators.



Note: 1 = very dissatisfied; 3 = neutral; and 5 = very satisfied

Fig. 2. Performance satisfaction of the Aceh government in the COVID-19 emergency response (n = 529).

**Table 4**

The level of satisfaction of the Acehese community with the local government performance in the Covid-19 emergency response (n = 529).

No	Indicator	f					Σ	Mean	SD
		1	2	3	4	5			
1	Perform Detection	129	144	166	64	26	1301	2.46	0.753
2	Responding to Disasters	47	154	170	110	48	1545	2.92	0.821
3	Investigating Spread	97	140	158	101	33	1420	2.68	0.815
4	Coordinate	54	128	180	111	56	1574	2.98	0.813
5	Rapid Test	137	159	161	53	19	1245	2.35	0.719
6	Protect health workers	89	153	163	81	43	1423	2.69	0.802
7	Inhibiting Spread	95	171	165	67	31	1355	2.56	0.767
8	Isolating Patients	61	113	175	132	48	1580	2.99	0.819
9	Have Professional Officers	51	106	193	121	58	1616	3.05	0.797
10	Conducting a Covid-19 Test	136	162	151	55	25	1258	2.38	0.739
11	Reducing Impact	62	149	182	97	39	1489	2.81	0.798
12	Reducing Cases	62	142	169	103	53	1530	2.89	0.821
13	Reducing Death	54	138	182	105	50	1546	2.92	0.808
14	Reducing the Negative Economic Impact	111	141	166	77	34	1369	2.59	0.785
15	Controlling Spread	92	157	175	72	33	1384	2.62	0.772
16	Intervening	82	151	192	71	33	1409	2.66	0.761
17	Providing a Covid-19 Test Tool	121	176	148	62	22	1275	2.41	0.748

What does it mean when communities are not satisfied with government performance?

Weber, Steinmetz [54] suggested the existence of strong relations between personal satisfaction and satisfaction with the government. Government performance can affect citizens' life satisfaction; for example, Helliwell and Huang [55] found that individual life satisfaction is more closely linked to measures of the quality of the government than to real per capita incomes. Turning the causality arrow the other way, citizens' life satisfaction can lead to satisfaction with government performance [35]. In this case, there is a possibility of major dissatisfaction towards local government performance due to low life satisfaction. Many studies have shown that people have been less satisfied with their lives during the pandemic, such as in Turkey [56], Spain [57], Lebanon [58], and Indonesia, where life satisfaction has deteriorated [59]. A possible explanation for this is the expectation that challenging life circumstances during the pandemic could have been reduced with a better performance by the local authorities.

Most respondents were from Banda Aceh (51.6%), which is the most populated city and has the highest number of cases (Table 5); the city has been labeled as a red zone several times. In Indonesia, red zones are classified as high risk zones with increasing COVID-19 cases [60]. From the same table, all nine districts/cities, from a total of 23 in the Aceh province, are dissatisfied with local government performance; the rest (excluding Aceh Besar) gathered together also shows dissatisfaction. None of the rankings surpassed the mean score of 3 (neutral), with a standard deviation of less than 1 except in Bener Meriah (1.155).

Footman, Roberts [61] suggested that satisfaction with government performance can provide useful insights into the public opinion of the health system performance. In another perspective, a central critique of the concept of population satisfaction has been that people cannot distinguish between government performance and health system performance [62]. In Indonesia, the health system, in general, possesses insufficient facilities. There are significant regional disparities in terms of health status and the quality, availability, and capacity of health services. The health facilities in Aceh are far from adequate. While the tsunami reconstruction in 2005–2009 has helped to improve them, the health system performance is still poor [63]. Therefore, this dissatisfaction in government performance may lead to an interpretation of a generally poor performance in the health system in Aceh.

Public issues (public satisfaction, such as education and public safety) all positively correlate with satisfaction with government performance [37]. Therefore, responding to the pandemic may contribute to government performance. Furthermore, public satisfaction appears to have the highest correlation with satisfaction with the government [35]. Therefore, a firm result of dissatisfaction, as viewed in this study, might influence dissatisfaction with the overall performance of the Aceh province. In the long term, this could

**Table 5**

Satisfaction of government performance based on district/city (n = 529).

No	District/City	n	%	Mean	Std. Deviation	Satisfaction Categories	COVID-19 cases*	Color of Risk Zones**
1	Banda Aceh	271	51.6	1.65	.843	Dissatisfied	602	Red
2	Aceh Utara	30	5.6	1.67	.884	Dissatisfied	29	Red
3	Bener Meriah	4	0.7	2.00	1.155	Dissatisfied	37	Red
4	Pidie	31	5.8	1.55	.850	Dissatisfied	33	Yellow
5	Simeulue	1	0.1	1.00	.	Dissatisfied	15	Green
6	Aceh Barat Daya	10	1.8	1.80	.919	Dissatisfied	48	Green
7	Aceh Tamiang	10	1.8	1.20	.632	Dissatisfied	85	Red
8	Gayo Luwes	3	0.5	2.33	.577	Dissatisfied	23	Red
9	Lhokseumawe	19	3.5	1.68	.885	Dissatisfied	54	Red
10	Others (exclude Aceh Besar district)	150	28.3	1.77	.861	Dissatisfied	237	Red

Note: \*Number of cases from September 2020 and \*\*Zone status from March 2020: red is high risk (level 4), yellow is moderate risk (level 3), green is small risk (level 2), and green is no impact (level 1) [60].



determine political decisions, such as the 2022 local election. Higher disappointment leads to lower trust in public agencies [52]. Political trust concerns normative expectations towards political institutions and actors, whereas satisfaction may be regarded as an indicator of attitudes to policy outputs [64].

### 3.3. Priority in responding to COVID-19 pandemic

Many mayors and local governments have felt overwhelmed and unsure of what steps to take to prevent and, hopefully, put a stop to the spread of the new pandemic [65]. As such, another objective of this study was to provide a list of priorities for the local government as a follow-up guide. With the RII analysis, it is possible to rank the criteria according to their relative importance [44]. Table 6 shows the ranking of priorities in the respond phase according to the Aceh community. RII ranges between 0 and 1, where the higher the RII value [66], the more important it is in responding to a pandemic. According to Akadiri [67], five important levels are transformed from RI values: high (H) ( $0.8 \leq RI \leq 1$ ), high-medium (H-M) ( $0.6 \leq RI \leq 0.8$ ), medium (M) ( $0.4 \leq RI \leq 0.6$ ), medium-low (M-L) ( $0.2 \leq RI \leq 0.4$ ), and low (L) ( $0 \leq RI \leq 0.2$ ). All indicators were categorized as high-medium importance values except for “having professional health officers,” which was considered as medium importance. As a note, this particular indicator was the only one that scored above 3 on the satisfaction analysis (Fig. 2). In addition, the top three indicators that were rated with the lowest dissatisfaction levels were the top three priorities according to the RII analysis.

The top priorities involve having more people tested. From the beginning, the main problem regarding responding to the COVID-19 pandemic in Indonesia has been an extremely low number of tests [9]. The WHO standard for testing is one test per 1000 population per week [2]. Based on Worldometers data, Indonesia has only conducted 11,948 tests per 1 million population [3], resulting in Indonesia ranking 157 out of 215 countries. It is not surprising that the same problem exists in Aceh, which is far away from the central government on Jawa island. In the FGD, representation from the Aceh Province and Department of Health of Indonesia in Aceh confirmed the issue of the lack of testing. While there was a moment where COVID-19 testing was being withheld in Aceh due to a lack of test kits in April 2020 [68], during the discussion, the head of the Agency of Health Research and Development clarified that the problem had already been resolved.

Transparency with COVID-19 data was also found to be problematic. It was difficult to obtain certain data from the Aceh government related to COVID-19. A website (<https://covid19.acehprov.go.id/halaman/peta-sebaran>) is available but not comprehensive enough. This lack of transparency from the Public Health Office in Aceh was also expressed as a complaint from the local journalists and activists in the FGD. At the time of submission of this paper, a request letter for COVID-19 data in Aceh province had yet to receive a response. The non-transparent information from the government made it hard to conceptualize the extent of the COVID-19 problem in Aceh. A similar problem was found at the national level, where Djalante et al. [9] stated that the lack of data transparency in Indonesia might have caused the underreporting or dissemination of the number of cases detected. Transparency is closely related to an increase of trust [69]. Countries with high societal trust and high trust in the government appear to have had better experiences during the pandemic [12]. A 2019 study showed that responsiveness and reliability in delivering public services are crucial for boosting trust in institutions, which will be crucial for planning and implementing an inclusive recovery plan for the COVID-19 emergency [49].

A strong indication of a disaster management problem in responding to the pandemic as found in Aceh has also been observed in Indonesia [9]. In the FGD, the local government representative admitted to many challenges due to a lack of experience in epidemic control. The head of the Regional Disaster Management Agency in Aceh stated that one of the main obstacles was that policies often change, thereby causing confusion; this includes lengthy bureaucracy from the central government and limited authority at the local level. Early in 2020, there was a tug of war between the central government and local governments in implementing quarantine measures to prohibit people from leaving their houses; in the end, the decision was made based on local government assessments [70]. After health affairs were decentralized to local governments, each region ended up formulating unilateral policies to deal with the spread of COVID-19 [71]. Furthermore, the central government is also taking action on its own, often conflicting with local regulations

**Table 6**  
Ranking of priorities in the respond phase (n = 529).

No	Indicators	Weight	RII	Importance Ranking	Importance Value
1	Perform Detection	1873	0.708	4	H-M
2	Responding to Disasters	1629	0.616	13	H-M
3	Investigating Spread	1754	0.663	9	H-M
4	Coordinate	1600	0.605	14	H-M
5	Rapid Test	1929	0.729	1	H-M
6	Protect health workers	1751	0.662	10	H-M
7	Inhibiting Spread	1819	0.688	5	H-M
8	Isolating Patients	1594	0.603	15	H-M
9	Have Professional Officers	1558	0.589	16	M
10	Conducting a Covid-19 Test	1916	0.724	2	H-M
11	Reducing Impact	1685	0.637	11	H-M
12	Reducing Cases	1644	0.622	12	H-M
13	Reducing Death	1628	0.616	13	H-M
14	Reducing the Negative Economic Impact	1805	0.682	6	H-M
15	Controlling Spread	1790	0.677	7	H-M
16	Intervening	1765	0.667	8	H-M
17	Providing a Covid-19 Test Tool	1899	0.718	3	H-M

[72].

In addition, the refusals by the Acehnese made it more difficult to implement any policy on the ground. The head of the Regional Disaster Management Agency stated that one of the reasons for the limited number of tests was due to the Acehnese refusing to be tested. After the COVID-19 became vaccine available, Aceh was one of the provinces with the lowest vaccine coverage [73] and levels of vaccine acceptance [74]. This is not surprising, as apart from the COVID-19 vaccine, Aceh is one of three provinces with the lowest immunization coverage. Concerns over the halal status of vaccines are among the main reasons for vaccine refusal [74]. As the province has implemented sharia laws and customs as a background, this reluctant behavior [75] might have increased the challenges faced by the local government in responding to the pandemic. According to Shaw, Kimb [1], a comprehensive strategy is needed to face this pandemic, including science-based decision making by the local governance as well as community behavior.

Some of the abovementioned reasons have aspects in common with the barriers found in the National Local Government Emergency Management Survey by Elsworth and Anthony-Harvey-Beavis [76]. They stated that while local governments generally accepted their role and took emergency management seriously, there were issues and barriers that affected their adoption of required roles and responsibilities, such as a lack of resources both in funding and emergency (disaster) management staff/staff time; variability and gaps in local hazard risk information and assessments; and difficulties concerning relationships with other agencies.

#### 4. Conclusion

This study arrived at two conclusions. (1) The Acehnese community is not satisfied with the local government performance in the COVID-19 response thus far. Of the 17 important items in response to the pandemic, none of them were rated as satisfied in all districts/cities. This finding can be interpreted in many ways. Since numerous studies have shown that satisfaction and trust are positively related, low trust in government is possible. This dissatisfaction may be related to the local government performance and ultimately influence and predict political output, such as the upcoming election. In addition, this could be signify poor health system performance in Aceh. However, it is important to note that many countries are facing lower trust in their governments during the pandemic. (2) The Acehnese listed the top five priorities that needed immediate follow-up from the local government: conducting more rapid tests, conducting more COVID-19 tests, providing COVID-19 test kits, performing detection, and inhibiting spread. These shortages have been admitted by the Aceh province government. There are several challenges to overcome: lack of experience in endemics, complicated bureaucracy, constantly changing rules, tug of war between the central and the regional governments, and rejection from the community itself, which might be related to the trust factor and the influence of a strong background of Syariah customs in Aceh. Future research needs to verify these propositions. The main criticism is that the government is not being transparent with the COVID-19 data. While vaccines are now being distributed in Indonesia and Aceh, according to public health experts, the main focus is still to minimize spread and heal the sick. Therefore, the study findings are still relevant for consideration. Looking at these results, the Aceh province government needs to work harder to improve both its performance and reputation with the Acehnese people.

#### Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

#### References

- [1] R. Shaw, Y.-k. Kimb, J. Hua, Governance, technology and citizen behavior in pandemic: lessons from COVID-19 in East Asia, *Prog. Disaster Sci.* 6 (2020), <https://doi.org/10.1016/j.pdisas.2020.100090>.
- [2] WHO, *Novel Coronavirus (2019-nCoV)*, The World Health Organization, 2020.
- [3] Worldometers.info, *Coronavirus data in Indonesia*. <https://www.worldometers.info/coronavirus/country/indonesia/>, 2021. (Accessed 20 February 2021).
- [4] O. Sharma, A.A. Sultan, H. Ding, C.R. Triggler, A review of the progress and challenges of developing a vaccine for COVID-19, *Front. Immunol.* 11 (2020), <https://doi.org/10.3389/fimmu.2020.585354>.
- [5] M. Ishiwatari, T. Koike, K. Hiroki, T. Toda, T. Katsube, Managing disasters amid COVID-19 pandemic: approaches of response to flood disasters, *Prog. Disaster Sci.* 6 (2020), <https://doi.org/10.1016/j.pdisas.2020.100096>.
- [6] M. Elisabeth, *Covid-19: what have we learnt about the new variant in the UK?* *BMJ* (2020) 371.
- [7] T.B. Arif, The 501.V2 and B.1.1.7 variants of coronavirus disease 2019 (COVID-19): a new time-bomb in the making? *Infect. Control Hosp. Epidemiol.* (2021) 1–2, <https://doi.org/10.1017/ice.2020.1434>. <https://www.cambridge.org/core/journals/infection-control-and-hospital-epidemiology/article/501v2-and-b117-variants-of-coronavirus-disease-2019-covid19-a-new-timebomb-in-the-making/88E37CB9582DE3480C5DA8432171A100>.
- [8] SARS-CoV-2 Variants, WHO. <https://www.who.int/csr/don/31-december-2020-sars-cov-2-variants/en/>, 2021. (Accessed 25 February 2021).
- [9] R. Djalante, J. Lassa, D. Setiamarga, A. Sudjatma, M. Indrawan, B. Haryanto, C. Mahfud, M.S. Sinapoy, S. Djalante, I. Rafliana, L.A. Gunawan, G.A.K. Surtiari, H. Warsilah, Review and analysis of current responses to COVID-19 in Indonesia, *Prog. Disaster Sci.* 6 (2020), <https://doi.org/10.1016/j.pdisas.2020.100091>. Available at: <https://www.sciencedirect.com/science/article/pii/S2590061720300284>.
- [10] D. Lewis, Why many countries failed at COVID contact-tracing — but some got it right, *Nature* 588 (2020) 384–387, <https://doi.org/10.1038/d41586-020-03518-4>. Available at <https://www.nature.com/articles/d41586-020-03518-4>.
- [11] M. Claeson, S. Hanson, COVID-19 and the Swedish enigma, *Lancet J.* 397 (2020) 259–261, [https://doi.org/10.1016/S0140-6736\(20\)32750-1](https://doi.org/10.1016/S0140-6736(20)32750-1). Available at: [https://www.thelancet.com/journals/lancet/article/PIIS0140-6736\(20\)32750-1/fulltext](https://www.thelancet.com/journals/lancet/article/PIIS0140-6736(20)32750-1/fulltext).
- [12] T. Besley, S. Dray, Institutions, trust and responsiveness: patterns of government and private action during the COVID-19 pandemic, *LSE Pub. Policy Rev.* 1 (2021) 10, <https://doi.org/10.31389/lseppr.30>.
- [13] T. Lindsey, T. Mann, Indonesia was in denial over coronavirus, in: *Now it May Be Facing a Looming Disaster*, *The Conversation*, 2020.
- [14] K. Tay, T. Kamarul, W.Y. Lok, M. Mansor, X. Li, J. Wong, A. Saw, COVID-19 in Singapore and Malaysia: rising to the challenges of orthopaedic practice in an evolving pandemic, *Malays. Orthop. J.* 14 (2020) 7–15, <https://doi.org/10.5704/MOJ.2007.001>. Available at: <https://pubmed.ncbi.nlm.nih.gov/32313613/>.
- [15] H. Ritchie, E. Ortiz-Ospina, D. Beltekian, E. Mathieu, J. Hasell, B. Macdonald, C. Giattino, M. Roser, A cross-country database of COVID-19 testing, our world in data. <https://ourworldindata.org/coronavirus-testing>. (Accessed 20 February 2021).
- [16] BPS (The Central Bureau of Statistics), Aceh: *'Berita Resmi Statistik: Profil Kemiskinan dan Ketimpangan Pengeluaran Penduduk Aceh Maret 2020 (Statistical News: Profile of Poverty and Expenditure Inequality of Aceh's Population March 2020)'*, BPS Aceh, Aceh, 2020.

- [17] E. Aspinall, Islam and Nation: Separatist Rebellion in Aceh, Indonesia, Stanford University Press, Stanford, CA, 2009.
- [18] P. Zeccola, Dividing disasters in Aceh, Indonesia: separatist conflict and tsunami, human rights and humanitarianism, *Disasters* 35 (2011) 308–328.
- [19] Jeanne-Marie Col, Managing disasters: the role of local government, *Publ. Adm. Rev.* 67 (2007) 114–124, <https://doi.org/10.1111/j.1540-6210.2007.00820.x>. Available at <https://onlinelibrary.wiley.com/doi/abs/10.1111/j.1540-6210.2007.00820.x>.
- [20] Pemerintah pusat apresiasi penanganan Covid-19 di Aceh (the central government appreciates the handling of Covid-19 in Aceh), public relations and protocol bureau of the Aceh regional secretariat. <http://humas.acehprov.go.id/pemerintah-pusat-apresiasi-penanganan-covid-19-di-aceh/>. (Accessed 23 February 2021).
- [21] A.M. Duva, Aceh's road to peace and autonomy, *frontline world*. <https://www.pbs.org/frontlineworld/stories/indonesia605/autonomy.html#map>. (Accessed 22 February 2021).
- [22] B. Kusumasari, Q. Alam, Bridging the gaps: the role of local government capability and the management of a natural disaster in Bantul, Indonesia, *Nat. Hazards* 60 (2011), <https://doi.org/10.1007/s11069-011-0016-1>.
- [23] R.P. Wolensky, K.C. Wolensky, Local Government's problem with disaster management: a literature review and structural analysis, *Rev. Policy Res.* 9 (1990) 703–725.
- [24] F.A.O. The, The disaster management cycle, The FAO (2018). <http://www.fao.org/3/ad710e/ad710e03.htm#:~:text=Involves%20measures%20taken%20immediately%20prior,food%2C%20shelter%2C%20medical%20assistance>. (Accessed 22 February 2021).
- [25] W.N. Carter, in: A.D.B. The (Ed.), *Disaster Management: A Disaster Manager's Handbook*, 2008. The Philippines.
- [26] I. Mohamed Shaluf, Technological disaster stages and management, *Disaster Prev. Manag.* 17 (2008) 114–126, <https://doi.org/10.1108/09653560810855928>.
- [27] Dae Woong Lee, Local government's disaster management capacity and disaster resilience, *Local Govern. Stud.* 45 (2019) 1–24, <https://doi.org/10.1080/03003930.2019.1653284>.
- [28] H. Hermansson, Challenges to decentralization of disaster management in Turkey: the role of political-administrative context, *Int. J. Publ. Adm.* 42 (2019) 417–431, <https://doi.org/10.1080/01900692.2018.1466898>.
- [29] R.W. Perry, A. Mushkatel, *Disaster Management: Warning Response and Community Relocation*, Quorum Books, Westport, CT, 1984.
- [30] R.E. Herman, *Disaster Planning for Local Government*, 1982. Universe, New York, NY.
- [31] P.J. May, *Recovering from Catastrophes: Federal Disaster Relief Policy and Politics*, Greenwood Press, Westport, Connecticut, 1985.
- [32] B.A. Cigler, Emergency management and public administration, in: M.T. Charles, J.C.K. Kim (Eds.), *Crisis Management: A Case Book*, Springfield Leader and Press, Springfield, MO, 1987.
- [33] National Agency for Disaster Management (BNPb), National disaster management plan 2010–2014, in: National Agency for Disaster Management (BNPb), 2012.
- [34] R. Djalante, R. Shaw, A. DeWit, Building resilience against biological hazards and pandemics: COVID-19 and its implications for the Sendai Framework, *Prog. Disaster Sci.* 6 (2020), <https://doi.org/10.1016/j.pdisas.2020.100080>.
- [35] Z. Wang, Citizens' satisfaction with government performance in six asian-pacific giants, *Jpn. J. Polit. Sci.* 11 (2010) 51–75.
- [36] C. Santiso, Good governance and aid effectiveness: the World Bank and conditionality, *Georgetown Pub. Pol. Rev.* 7 (2001) 1–22.
- [37] M. Salim, X. Peng, S. Almaktary, S. Karmoshi, The impact of citizen satisfaction with government performance on public trust in the government: empirical evidence from urban Yemen, *Open J. Bus. Manag.* 5 (2017) 348–365, <https://doi.org/10.4236/ojbm.2017.52030>.
- [38] G. Bouckaert, S.v.d. Walle, Comparing measures of citizen trust and user satisfaction as indicators of 'good governance': difficulties in linking trust and satisfaction indicators, *Int. Rev. Adm. Sci.* 69 (2003) 329–343, <https://doi.org/10.1177/0020852303693003>.
- [39] B. Stipak, Citizen satisfaction with urban services: potential misuse as a performance indicator, *Publ. Adm. Rev.* 39 (1979) 46–52, <https://doi.org/10.2307/3110378>. Available at: <https://www.jstor.org/stable/3110378?seq=1>.
- [40] WHO, *Managing epidemics, Key Facts about Major Deadly Diseases*, World Health Organization, Geneva, 2018.
- [41] M. Grazella, WhatsApp: RI Strong Market in Usage, *Growth the Jakarta Post*, 2013.
- [42] R. Mudassir, *Whatsapp Dominasi Chatting di Indonesia, Penetrasinya 83 Persen* (Whatsapp Dominates Chat in Indonesia, Penetration is 83 Percent), *Bisnis.com*, 2019.
- [43] BPS (The Central Bureau of Statistics), Aceh, *provinsi Aceh dalam angka* (Aceh province in figures) 2020, in: BPS ACEH, Banda Aceh, 2020.
- [44] M.A. Kassem, M.A. Khoiry, N. Hamzah, Using relative importance index method for developing risk map in oil and gas construction projects, *J. Kujurteraan* 32 (2020) 85–97, [https://doi.org/10.17576/jkukm-2020-32\(3\)-09](https://doi.org/10.17576/jkukm-2020-32(3)-09). Available at: [https://www.researchgate.net/publication/343629006\\_Using\\_Relative\\_Importance\\_Index\\_Method\\_for\\_Developing\\_Risk\\_Map\\_in\\_Oil\\_and\\_Gas\\_Construction\\_Projects](https://www.researchgate.net/publication/343629006_Using_Relative_Importance_Index_Method_for_Developing_Risk_Map_in_Oil_and_Gas_Construction_Projects).
- [45] Association of Indonesian Internet Service Providers, Profil Pengguna Internet Indonesia 2014 (Indonesian Internet User Profile 2014), APJII, 2014.
- [46] Gubernur Aceh (Aceh Governor), *Penerapan Masyarakat Produktif dan Aman Corona Virus Disease 2019 (COVID-19) pada Kriteria Zona Merah dan Zona Hijau di Aceh* (Application of Productive and Safe Communities Corona Virus Disease 2019 (COVID-19) on the Criteria for the Red Zone and Green Zone in Aceh), Aceh Government, Banda Aceh, 2020.
- [47] G.B. Ferreira, S. Borges, Media and misinformation in times of COVID-19: how people informed themselves in the days following the Portuguese declaration of the state of emergency, *J. Media* 1 (2020) 108–121, <https://doi.org/10.3390/journalmedia1010008>.
- [48] D.O. Cooley, R. Parks-Yancy, The effect of social media on perceived information credibility and decision making, *J. Internet Commer.* 18 (2019) 249–269, <https://doi.org/10.1080/15332861.2019.1595362>.
- [49] OECD, *Trust in government, policy effectiveness and the governance agenda*, in: Government at a Glance 2013, OECD Publishing, Paris, 2013.
- [50] Indikator, Persepsi Publik terhadap Penanganan Covid-19, Kinerja ekonomi dan implikasi politiknya: temuan survei Nasional: 16–18 mei 2020 (public perceptions of handling Covid-19, economic performance and political implications: national survey findings: 16–18 may 2020), in: Lembaga Survei Indikator, 2020.
- [51] OECD, *Trust in government*, in: Government at a Glance 2021, OECD Publishing, Paris, 2021.
- [52] Jarl K. Kampen, Steven Van De Walle, Greet Bouckaert, Assessing the Relation between Satisfaction with Public Service Delivery and Trust in Government: the Impact of the Predisposition of Citizens toward Government on Evaluations of its Performance, *Source*, vol. 29, Public Performance & Management Review, 2006, pp. 387–404. Available at: <https://www.jstor.org/stable/20447604>.
- [53] Mirdha Fahley Yusnaldi, Marlizar, Level of public satisfaction with Aceh government performance in relation to Covid-19 responses, in: 6th International Conference on Social and Political Sciences (ICOSAPS 2020), Advances in Social Science, Education and Humanities Research, 2020.
- [54] P. Weber, H. Steinmetz, R. Kabst, Trust in politicians and satisfaction with government – a reciprocal causation approach for European countries, *J. Civ. Soc.* (2017), <https://doi.org/10.1080/17448689.2017.1385160>. Available at: <https://doi.org/10.1080/17448689.2017.138>.
- [55] J.F. Helliwell, H. Huang, How's your government? International evidence linking good government and well-being, *Br. J. Polit. Sci.* 38 (2006), <https://doi.org/10.1017/S0007123408000306>. Available at: [https://www.researchgate.net/publication/5186775\\_How's\\_Your\\_Government\\_International\\_Evidence\\_Linking\\_Good\\_Government\\_and\\_Well-Being](https://www.researchgate.net/publication/5186775_How's_Your_Government_International_Evidence_Linking_Good_Government_and_Well-Being).
- [56] Z. Karataş, K. Uzun, Tagay Ö, Relationships between the life satisfaction, meaning in life, hope and COVID-19 fear for Turkish adults during the COVID-19 outbreak, *Front. Psychol.* 12 (2021), <https://doi.org/10.3389/fpsyg.2021.633384>.
- [57] J.J. Gonzalez-Bernal, P. Rodríguez-Fernández, M. Santamaría-Peláez, J. González-Santos, B. León-del-Barco, L.A. Minguez, R. Soto-Cámara, Life satisfaction during forced social distancing and home confinement derived from the COVID-19 pandemic in Spain, *Int. J. Environ. Res. Publ. Health* 18 (2021), <https://doi.org/10.3390/ijerph18041474>.
- [58] I. Bou-Hamad, R. Hoteit, D. Harajli, Health worries, life satisfaction, and social well-being concerns during the COVID-19 pandemic: insights from Lebanon, *PLoS One* 16 (2021), <https://doi.org/10.1371/journal.pone.0254989>.
- [59] D. Dwidenawati, D. Tjahjana, D. Gandasar, M. Faisal, Happiness and satisfaction after 1 Year of the COVID-19 pandemic, *Xinan Jiatong Daxue Xuebao J. Southwest Jiaotong Univ.* 56 (2021) 111–123, <https://doi.org/10.35741/issn.0258-2724.56.2.10>.
- [60] The Minister of Home Affairs, Regarding the Enforcement of Restrictions on Community Activities Level 4 Corona Virus Disease 2019 in the Java and Bali Regions, 2021.

- [61] Katharine Footman, Bayard Roberts, Anne Mills, Erica Richardson, Martin McKee, Public satisfaction as a measure of health system performance: a study of nine countries in the former Soviet Union, *Health Pol.* 112 (2013) 62–69, <https://doi.org/10.1016/j.healthpol.2013.03.004>. Available at: <https://pubmed.ncbi.nlm.nih.gov/23545269/>.
- [62] I. Papanicolas, P.C. Smith, in: *Health System Performance Comparison: an Agenda for Policy, Information and Research*, Open University Press, 2012, pp. 1–50.
- [63] L. Rahayu, S. Rusdiana, S. Mahdi, W.D. Safitri, M. Ikhwan, N. Sari, T. Akhdansya, State Mapping of the Public Health Development Index in Aceh Province Using K-Medoids Method, IOP Publishing, 2021, p. 1863, <https://doi.org/10.1088/1742-6596/1863/1/012070>.
- [64] K.S.M. Gronlunda, Political trust, satisfaction and voter turnout, *Comp. Eur. Polit.* 5 (2007) 400–422.
- [65] United Nations Office for disaster risk reduction - regional Office for Asia and Pacific, role of local governance in responding to COVID-19 in asia-pacific. <https://www.undrr.org/news/role-local-governance-responding-covid-19-asia-pacific>. (Accessed 23 February 2021).
- [66] M. Gündüz, Y. Nielsen, M. Özdemir, Quantification of delay factors using the relative importance index method for construction projects in Turkey, *J. Manag. Eng.* 29 (2013). Available at: <https://ascelibrary.org/doi/10.1061/%28ASCE%29ME.1943-5479.0000129>.
- [67] O.P. Akadiri, Development of a Multi-Criteria Approach for the Selection of Sustainable Materials for Building Projects, University of Wolverhampton, Wolverhampton, UK., 2011.
- [68] M. Saifullah, *Lawan COVID-19, Pemprov Aceh Kekurangan Reagen dan Alat Rapid Test! (Facing COVID-19, Aceh Provincial Government Lacks Rapid Test Reagents and Equipment!)*, IDN Times, 2020.
- [69] Luisa Enria, Naomi Waterlow, Nina Trivedy Rogers, Hannah Brindle, Sham Lal, M. Rosalind, Eggo, Shelley Lees, Chrissy h. Roberts, Trust and transparency in times of crisis: results from an online survey during the first wave (April 2020) of the COVID-19 epidemic in the UK, *PLoS One* 16 (2021), <https://doi.org/10.1371/journal.pone.0239247>.
- [70] The Center for Political Studies, Webinar desentralisasi dan otonomi Daerah “relasi pusat dan Daerah dalam mengatasi COVID-19 (webinar of decentralization and regional autonomy “central and regional relations in overcoming COVID-19), LIPI (The Indonesian Institute of Sciences) (2020). <http://politik.lipi.go.id/kegiatan/tahun-2020/1377-webinar-desentralisasi-dan-otonomi-daerah-relasi-pusat-dan-daerah-dalam-mengatasi-covid-19>.
- [71] S. Chadijah, Harmonization of handling authority Covid-19 pandemic between central governments and area, *Jurnal Kertha Semaya* 8 (2020) 858–866.
- [72] R. Katharina, Central-regional government relations in handling Covid-19, in: *Bidang Politik Dalam Negeri: Info Singkat*, Research Center DPR RI Expertise Board, 2020, p. 25.
- [73] A. Renaldi, ‘There’s No Virus Here’: an Epic Vaccine Race against All Odds in Indonesia, *The Washington Post*, 2021.
- [74] The Ministry of Health of Indonesia, COVID-19 vaccine acceptance survey in Indonesia, in: *The Ministry of Health, NITAG, UNICEF, and WHO*, 2020.
- [75] F. Nurrahmi, T. Masykar, H. Harapan, T. Masykar, Paradox of protective behaviors among Muslim men during the early stage of the COVID-19 pandemic in Aceh, Indonesia, *Disaster Med. Public Health Prep.* (2021) 1–8, <https://doi.org/10.1017/dmp.2021.110>.
- [76] G. Elsworth, K. Anthony-Harvey-Beavis, National local government emergency management survey, Final Report, in: *Australian Local Government Association and Royal Melbourne Institute of Technology*, 2007.