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Urban platform approach in Covid-19 pandemic management (case of Semarang and Yogyakarta, Indonesia)

Y P Heston[1], B Setiawan[1], and D F Swasto[1]

[1]Department of Architecture, Faculty of Engineering, Gadjah Mada University, Yogyakarta, Indonesia

Corresponding author's email: pracastino@gmail.com

Abstract. The world population is experiencing urban life disruption since early 2020 due to the Covid-19 pandemic. In Indonesia, Semarang and Yogyakarta both are the capital cities of respective provinces, undergone the peak of pandemic twice. The first peak occurred between January and February 2021, and the second peak occurred in July 2021. The pandemic that occurred in those two cities altered the dynamics of urban social, political, and cultural dynamics. This paper attempted to discover the phenomenon of urban management in Semarang and Yogyakarta in dealing with the Covid-19 pandemic. In this study, statistical description was used by comparing indicators and investigating their relationship using urban platform approach. The study found four major variables in Semarang and Yogyakarta: the quality of the environment; collaboration and coordination among government, society, and private parties; the presence of infrastructure to deal with Covid-19; and pandemic handling in planning and implementation.

Keywords: Management; Pandemic; Planning; Urban

1. Introduction

Recent development on technology generates inclusive and plural city management [1]. One of the city disruptions experienced by almost all cities in the world is Covid-19 pandemics. Thus, city management that emphasises mutual cooperation among pluralism is more required [2]. In Java, Indonesia, two major cities of Semarang and Yogyakarta, hit significantly by Covid-19. Semarang is the capital of Central Java Province and Yogyakarta is the capital of the Special Region of Yogyakarta. During the first wave of Covid-19 in January-February 2021 and the second wave in July 2021, like most cities in Indonesia, both Semarang and Yogyakarta experienced a sudden changes in urban daily life . The dynamics of social, political, and cultural

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life happened in those two cities during the first and second waves of Covid-19 is the focus of this paper.

The dynamics of social, political, and cultural life in the urban area results in urban management dynamics especially when trying to cope with changes caused by Covid-19 [3]. In this era of digital communication and information, the socio-cultural condition of the urban world mostly applies to technology information media. These days, incremental and participative urban planning is applied through the use of urban platform. The main focus of urban management is on the integration and development of stakeholders as well as strengthening factors that support welfare, life sustainability, economic opportunity, and environment quality [4,5]. Some experts prefer to use the phrase "institutional capital" to refer to institutional capacity. Four concepts used in institutional capital are intellectual, social, materials, and politics. This paper discussed the relationshop of urban management, specifically using platform theory and the dynamics brought by the pandemic in the context of planning theory. Planning, in dealing with the Covid-19 pandemic, provide transformative theory to implement the plan, while the execution made by the urban managers using urban management theory.

1.1. Urban management in planning theory

Planning theory evolves in four stages according to evaluation theory and method [6]. The first stage is classical planning (consist of survey, analysis, and planning) that has individual attribute size as its characteristics. The second stage is a comprehensive rational planning process with the presence of the description of the program and goal. The third planning stage is communicative planning with practice and discussion. This stage has contextual value and assessment. The last stage is when new planning theories emerge in which claims on negotiation, issue, and attention characterise this stage.

Friedman stated that sometimes planning is an act that is difficult to understand and is misunderstood [7]. Planning in public has several characteristics. Planning is related to decision-making and giving information about certain acts socially. Recent implementation of technical and theoretical planning is very different compared to planning projection in the early period. Friedman also stated that planning is an activity that connects knowledge and technical action in public [7]. In this activity, tentative classification is being proposed which are four planning thinking traditions related to political-ideological aspects including policy analysis, social reformation, social learning, and social mobilisation.

Planning reveals the structural weakness of the capitalist community, criticises truth, establishes elaborated charts and descriptions in the future, prepares pieces of advice about power resistance, and facilitates self-empowerment collectively. Understanding of the theory is an idealistic project, not materialistic, which is separated from intellectual history, visionary, and from democratic communities, not scientific communities.

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As the territorial context of planning, cities are seen as not just problems, but also a set of capitals to deal with problems. These capitals are developed into power which is able to deal with problems that happen in the cities such as the Covid-19 pandemic. The four concepts in institutional capital is translated as the resources of an urban entity to strive during the pandemic. The first concept, intellectual capital, is knowledge owned by society and is continuously growing. Social capital as the second is the institutional capacity basis derived from the connection between the actor and the character of the interaction. The role of social capital is related to trust, norm, cooperation, and community social network [8]. The third is material capital that is the availability and adequacy of resources such as money or other goods for economic agents in a certain area. Furthermore, political capital is relationships and acts among the authorities and their ability to distribute resources [4].

Urban management is applied to manage the use of capitals owned by cities. Davey stated that urban management is closely related to the role of regional government in the neoliberal era where the terms of local government or regional government are more acknowledged [9]. Moreover, Dijk in Bačlija stated that the term urban management has been known since the 1980s as another term to describe specific management attempts which are different from the old management concept [10]. The understanding of urban management, according to Davey, refers to the reformation of regional government and the geographic concept of urban materialism [9]. Urban management is complex and holistic, thus, various definitions of urban management from the different scientific fields can be found.

However, Mattingly believed that the definition of urban management is minimal and has not been classified [11]. Urban management is the public administration and sustainable responsibility that a city government has to act to achieve certain goals. Mattingly also presented a new scope for urban management as well as its instruments and emphasises the city's success that is affected by urban economic performance and the role of stakeholders [11]. Sharma in Bačlija defined urban management as a set of activities that construct and guide the social, physical, and economic development of the urban area [10]. The implementation of urban management is a real indication of urban integrated management to manage the Covid-19 pandemic.

1.2. Platform theory

City development is marked by technology development and enhancement [12]. Modern cities, nowadays, use four types of capital classified as human, data, infrastructure, and technology. Those four types of capitals can interact more flexibly (or probably weaker) and synergize better. Verhulst as cited in Bollier explains examples of the interaction between those four types of capitals by describing that it is easy for an individual to apply his skills for certain jobs and to make social preferences compared to his experience [12]. There is abundant data that is easy to distribute as a result of new infrastructures such as broadband, cloud computing, and Wi-Fi. Furthermore, other elements of the platform are network–marketplace/community, infrastructure, and data [13].

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Constructing a city into a platform is not an easy move. It might be against the system and norm that the city has. However, there should be an attempt to open a network so that citizens can participate through their intellectual capacity, imagination, and commitment. Besides, the four capitals that the city has, human, data, infrastructure, and technology, make the process easier. The convergence of these factors makes people think that a city is not just a place but more of a platform. A lot of things happen in the city but the government is unable to manage them one by one. Therefore, giving chances to experiment and contribute is needed.

When a pandemic hits a city, some economic and social problems emerge [12]. Problems such as income inequality, transportation problem, and lack of affordable dwellings are often experienced by cities. Hence, an urban platform is an alternative approach to solve problems in the urban areas, and may discover a new field. Studying the symptoms and strategies to handle Covid-19 in urban areas through urban planning and management approach is needed to draw a lesson on how to cope with unprecendented pandemic. This study focuses on identifying symptoms and solving problems. Problem question posed in this study is what symptoms found in urban planning in Semarang and Yogyakarta related to overcoming problems related to Covid-19.

2. Methods

This study was held in Semarang and Yogyakarta because those two cities have applied smart cities in their management system. At the beginning of the Covid-19 outbreak, those two cities decided to apply a strategy called micro lockdown in their area independently. This micro lockdown was applied in small neighbourhood areas in Semarang and Yogyakarta by restricting people's activities in those areas.

Semarang, as the capital city of Central Java Province, is a metropolis city located in the northern area of Central Java. In July 2021, Covid-19 cases and bed occupancy rate (BOR) in Semarang decreased. However, the mortality rate was 6.2 % which was considered high. It was higher than the average mortality rate in Indonesia which was 5 %. Thus, in that month, Semarang was in level 4 of Emergency Enforcement of Restrictions on Community Activities (PPKM Darurat). On July 3, 2021, 340 deaths were recorded and from July 3 until July 20, there were 271 deaths in a week. At that time, the government had 5 days until PPKM Darurat ended. The activities restriction was meant to reduce people's activities in restaurants, in traditional markets, and areas with food street vendors as well as other areas. Data collected showed that in July 2021, there were 2,052 cases of Covid-19, 1,408 were Semarang residents and other 644 were not Semarang residents [14].

The other city, Yogyakarta, is the capital of the Special Region of Yogyakarta. Yogyakarta is the centre of economic, education, socio-cultural, and service on a regional scale. Most of the residents of Yogyakarta have sufficient knowledge about personal hygiene habits which is washing hands regularly. Most of the residents chose to apply hand sanitizer to clean their hands because not all facilities provided water and soap to wash their hands.

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A statistical descriptive was applied in this study by using comparison and correlation to compare two variables. A trial and error approach was used to select two indicators to compare. This approach was done by selecting two indicators with a significant correlation. The researcher then went through the result of the statistical descriptive analysis and comparison of the indicators. This study used a quantitative approach through google form to collect data. Google form was selected to gather data because this study was conducted during the Covid-19 pandemic when people's activities were restricted.

The respondents were chosen randomly by applying simple random sampling. Meanwhile, when selecting the respondents, the researcher made sure that all the respondents had similar knowledge and understanding about their area. The questionnaire was distributed in WhatsApp, directly to each individual as well as through several WhatsApp groups. Sixty-four (64) respondents filled out the questionnaire. Table 1 shows the characteristics of the respondents.

Table 1. Respondent characteristics.

No	Code	Characteristics	Semarang		Yogyakarta	
			f	%	f	%
			56		64	
1	**Gender**					
	1	Male	19	33.9	31	48.4
	2	Female	37	66.1	33	51.6
2	**Age**					
	1	< 20	2	3.6	0	0.0
	2	>51	2	3.6	10	15.6
	3	21-30	28	50.0	16	25.0
	4	31-40	18	32.1	21	32.8
	5	41-50	6	10.7	17	26.6
3	**Occupation**					
	1	Housewife	3	5.4	1	1.6
	2	Civil servant	10	17.9	24	37.5
	3	University student	3	5.4	4	6.3
	4	Private sector worker	23	41.1	6	9.4
	5	Entrepreneur	5	8.9	5	7.8
	6	Other	12	21.4	24	37.5

The data collected from the questionnaire distributed in Semarang and Yogyakarta were analysed by describing the statistical data univariate. Only 17 indicators out of 54 available indicators correlated. From the univariate data, two indicators were selected and compared using cross-tabulation analysis, with Statistical Program for Social Science (SPSS) software. The result was then narratively described. After that, the indicators were processed using correlation analysis to see the significance of the correlation as well as the correlation coefficient.

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The next step was to narrate the correlation to describe the connection between the indicators. From the narration, a discussion was made to find the conclusion. There were four main variables in the analysis namely quality of the environment; collaboration and coordination among government, society, and private parties; the existence of infrastructure to overcome Covid-19 pandemic; and planning and implementation of pandemic handling. The indicators for the quality of environment variable were taken only from Semarang because there was no correlation among indicators in Yogyakarta.

3. Result and discussion

This section describes four variables shown in the result of data collection namely quality of the environment; collaboration and coordination among government, society, and private parties; the existence of infrastructure to overcome Covid-19 pandemic; and planning and implementation of pandemic handling. It also describes the correlation among the variables.

3.1. Quality of environment

The result of the questionnaire shows that there was an improvement in the quality of the environment in Semarang as a result of the Covid-19 pandemic (see Table 2). It shows that forty eight percent (48%) of residential areas in Semarang improve the quality of their environment. Only a small percentage of urban areas in Semarang felt that the quality of their environment had not improved compared to before the pandemic.

Almost half (48%) of the respondents agreed that the quality of the environment in their neighbourhood had improved. Respondents believed that the government's environmental awareness was high (30%) but some of them believed that it was on average (18%). Meanwhile, thirty-seven percent (37%) of the respondents did not feel that there was an improvement in the quality of the environment.

Table 2. Government awareness – environmental quality in Semarang.

Government Awareness	Environmental Quality				Total	Sig	Correlation Coefficient
	Better	Same	Worse	No Answer			
High	30.4%	10.7%	1.8%	3.6%	46.4%	0.016	0.320
Medium	17.9%	21.4%	.0%	7.1%	46.4%	(correlate)	(strong
Low	.0%	5.4%	1.8%	.0%	7.1%		enough)
Total	**48.2%**	**37.5%**	**3.6%**	**10.7%**	**100.0%**		

There is a correlation between environmental awareness related to the attempt to prevent the spread of the coronavirus and the quality of the environment before and after the pandemic in Semarang. The coefficient correlation between those two indicators was high which indicates that there is a strong relationship between the two indicators as the significance level was 0.32. It means that there is a 32% probability that those two indicators were correlated. Thus, it also shows that there are 68% other factors affecting that correlation. The awareness of local government is believed to improve the quality of the environment in the area.

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3.2. Collaboration and coordination among the government, society, and private parties

Most of the respondents (57%) in Semarang were aware that the government, society, and private parties collaborated and coordinated to handle Covid-19 cases in their area (see Table 3). However, the number of respondents that did not know about the coordination was quite significant (39%). The data showed that Covid-19 handling management in Semarang was rather organised as stated by 34% of respondents.

There is a correlation between the coordination of the government, society, and private parties' effort in handling pandemic and the orderliness of Covid-19 handling management. Good orderliness of Covid-19 handling management means that there was coordination among the government, society, and private parties in handling Covid-19. Correlation value for "very orderly" condition was 14.3%, "orderly" was 26.8%, and "quite orderly" was 12.5%.

Table 3. Effort coordination – management control in Semarang.

Effort Coordination	Management control (order)					Total	Sig	Correlation Coefficient
	Very Low	Low	Quite Orderly	Orderly	Very Orderly			
Available	.0%	3.6%	12.5%	26.8%	14.3%	57.1%	0.000	-0.515
Not available	.0%	1.8%	1.8%	.0%	.0%	3.6%	(correlate)	(strong
Don't know	1.8%	3.6%	26.8%	7.1%	.0%	39.3%		correlation, unsame
Total	**1.8%**	**8.9%**	**41.1%**	**33.9%**	**14.3%**	**100.0%**		direction)

A negative correlation was found between those two indicators with a value 51.5%. The other 49.5% indicates that the relationship was affected by other indicators. Improving the orderliness of Covid-19 handling management will reduce the need of formal coordination in pandemic handling involving the government, society, and private parties. The network built has a dominant role in handling Covid-19 in settlement areas in Yogyakarta and Semarang. Around fifty percent (50%) to fifty two percent (52%) respondents agreed. Furthermore, the data shows that twenty five percent (25%) of Semarang residents and thirty one (31%) of Yogyakarta residents believed that the network had a significant and very dominant role.

The condition during Covid-19 handling planning and also during implementation was quite similar. It seemed that there were no significant differences. Meanwhile, in Semarang, forty eight percent (48%) of the respondents believed that all citizen communities took part in planning to handle Covid-19 as well as implementing the programs (see Table 4). A similar number of respondents, forty six percent (46%), believed that some of the residents took part in each step of Covid-19 handling.

In Semarang, the role of the network built within communities has a strong negative correlation with the community member's involvement in implementing programs to handle Covid-19. The data shows that most of the community members were involved in the programs (94.6%). It was found that the parties' engagement was described as active and very active. The correlation coefficient between community members' involvement and network

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role was 44.5%. Thus, other indicators affected the relationship (65.5%). It was a negative correlation. If the community involvement is higher, the involvement of other network parties will decrease.

Table 4. Network contribution – community involvement in Semarang.

Network Contribution	Community involvement				Total	Sig	Correlation Coefficient
	Full	Partially	No Involvement	No Answer			
Very low	1.8%	.0%	1.8%	.0%	3.6%	0.001	-0.445
Low	.0%	3.6%	.0%	.0%	3.6%	(correlate)	(strong
Medium	3.6%	10.7%	1.8%	1.8%	17.9%		enough,
High	23.2%	26.8%	.0%	.0%	50.0%		unsame
Very high	19.6%	5.4%	.0%	.0%	25.0%		direction)
Total	**48.2%**	**46.4%**	**3.6%**	**1.8%**	**100.0%**		

The data also shows that twenty five percent (25%) of the residents of Semarang did not know the topic for data collection. Those who knew about it stated that the data collected was about medical history (23%). After data was collected, there were follow-up actions (see Table 5). Two of the follow-up actions were providing help (27%) and the socialisation process (23%). Meanwhile, twenty five (25%) of the respondents did not know about the follow-up actions.

The topic for data collection and follow-up actions had a correlation. The analysis result shows that there was a strong relationship between those two indicators (73.3%). The follow-up actions were affected by the result of data collection. Thus, it can be concluded that only small part of other indicators were affecting the relationship between those two indicators.

Table 5. Data collection – follow up in Semarang.

Data Collection	Data Collection Follow Up					Total	Sig.	Correlation Coefficient
	Ministration	Socialisation	Result Explanation	No Data Collecting	Dont Know			
Medical record	5.4%	14.3%	3.6%	.0%	.0%	23.2%	0.000	0.733
Social economic	16.1%	.0%	1.8%	.0%	1.8%	19.6%	(correlate)	(strong)
Housing environmental	5.4%	7.1%	.0%	.0%	1.8%	14.3%		
No survey	.0%	1.8%	.0%	16.1%	.0%	17.9%		
Others	.0%	.0%	.0%	3.6%	21.4%	25.0%		
Total	**26.8%**	**23.2%**	**5.4%**	**19.6%**	**25.0%**	**100.0%**		

Furthermore, a different result was found in Yogyakarta. Thirty six percent (36%) of the residents claimed there was no data collection in their areas. Moreover, thirty six percent (36%) of them did not know that there were follow-up actions. Another thirty percent (30%)

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of the respondents claimed there was no data collection. Similarly, the residents' understanding of the information collected from them and follow-up actions correlated. The correlation was thirty percent (30%). Thus, it means that there was a strong correlation between those two indicators (see Table 6). On the other hand, these two indicators were also affected by other indicators found in Yogyakarta. The follow-up actions were affected by the result of data collection.

Table 6. Data collection – follow up in Yogyakarta.

Data Collection Follow Up	Data Collection						Total	Sig	Correlation Coefficient
	Medical Record	Social Economic	Housing Environ-mental	No Survey	No Answer	Travel History			
Ministration	4.7%	6.2%	.0%	1.6%	.0%	.0%	12.5%	0.016	0.300
Socialisation	3.1%	.0%	7.8%	1.6%	.0%	.0%	12.5%	(correlate)	(strong
Result explanation	1.6%	1.6%	1.6%	.0%	.0%	.0%	4.7%		enough)
No data collecting	.0%	.0%	.0%	28.1%	1.6%	.0%	29.7%		
Don't know	7.8%	6.2%	6.2%	4.7%	10.9%	.0%	35.9%		
Research	1.6%	.0%	.0%	.0%	.0%	.0%	1.6%		
Quarantine	.0%	.0%	.0%	.0%	.0%	3.1%	3.1%		
Total	**18.8%**	**14.1%**	**15.6%**	**35.9%**	**12.5%**	**3.1%**	**100.0%**		

3.3. The existence of infrastructure to overcome the Covid-19 pandemic

The data shows that fifty seven percent (57%) of respondents in Semarang believed that WhatsApp group chat was the most effective way of communication (see Table 7). The other applications used to communicate during the pandemic were, other social media (Facebook, Instagram, Twitter) newspaper, television, radio, and public announcement board. Twenty seven percent of the respondents claimed that social media was effective, the other seventeen percent Semarang's respondent (17%) and the other thirteen percent Yogyakarta's respondent (13%) was effective believed that other social media (Facebook, Instagram, Twitter) was also effective. Furthermore, most of the respondents in Semarang claimed that providing handwashing facilities was important. The result shows that seventy three percent (73%) of the respondents agreed. Another fourteen percent (14%) believed that a place for quarantine or self-isolation was needed.

Moreover, these two indicators, effective communication, and infrastructure needed in the residential area had a strong relationship. It was found that the correlation was 29.9%. Hence, the relationship between those two indicators was affected largely by other indicators.

As it is said before that seventy percent (73%) of the respondents agreed that handwashing facilities were important and fourteen percent (14%) believed that a place for quarantine or self-isolation was needed. Meanwhile, when talking about transportation facilities needed during the pandemic, seventy seven percent (77%) of the respondents claimed that

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ambulance was extremely needed in Semarang more than private cars, with fourteen percent (14%) of them agreeing (see Table 8). A strong relationship was found between the needs of transportation facilities and the kind of infrastructure needed in the residential area to handle Covid-19. The significance level was strong which was 33.6%. From the result, it was found that other indicators also affected the relationship between these two indicators.

Table 7. Information and technology infrastructure – housing and human settlement infrastructure in Semarang.

Information and Technology Infrastructure	Housing and Human Settlement Infrastructure				Total	Sig.	Correlation Coefficient
	Wash Basin	Quarantine	Information Hub	No Answer			
Social media	23.2%	1.8%	1.8%	.0%	26.8%	0.025	0.299
WhatsApp group	42.9%	8.9%	3.6%	1.8%	57.1%	(correlate)	(strong
Printed mass media	.0%	1.8%	.0%	.0%	1.8%		enough)
Television and radio	3.6%	.0%	.0%	.0%	3.6%		
Direct announcement	1.8%	1.8%	.0%	.0%	3.6%		
Announcement board	1.8%	.0%	3.6%	.0%	5.4%		
No answer	.0%	.0%	.0%	.0%	.0%		
All answer	.0%	.0%	1.8%	.0%	1.8%		
Total	**73.2%**	**14.3%**	**10.7%**	**1.8%**	**100.0%**		

Table 8. Housing and human settlement infrastructure – transportation vehicles in Semarang.

Housing and Human Settlement Infrastructure	Transportation Vehicles					Total	Sig.	Correlation Coefficient
	Ambulance	Private	Public Online	Public Non-Online	No Answer			
Wash basin	62.5%	5.4%	3.6%	.0%	1.8%	73.2%	0.011	0.336
Quarantine	8.9%	5.4%	.0%	.0%	.0%	14.3%	(correlate)	(strong
Information hub	3.6%	3.6%	.0%	1.8%	1.8%	10.7%		enough)
No answer	1.8%	.0%	.0%	.0%	.0%	1.8%		
Total	**76.8%**	**14.3%**	**3.6%**	**1.8%**	**3.6%**	**100.0%**		

When planning the programs and actions to overcome Covid-19, two types of activity were conducted. The first one was having the discussion and meeting formal and non-formal leaders and their subordinates. This condition happened in Yogyakarta and forty two percent (42%) of the residents claimed it. WhatsApp was the most used application during implementing programs to handle Covid-19. Eighty four percent (84%) of the respondents believed that WhatsApp group chat was the most effective application to use. There was a correlation between informational technology used and the design of the plans. The result of the analysis shows 27.1% correlation between those two indicators. Thus, it means that this relationship was also affected largely by other indicators (72.9%).

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3.4. Planning and implementation of pandemic handling

When planning the programs to handle Covid-19, community members' involvement is important. In Semarang, forty eight percent (48%) of the respondents believed that some of the citizen communities took part in planning and forty one percent (41%) claimed that all communities took part. Similarly, during the implementation of the programs in Semarang, forty eight percent (48%) agreed that all communities took part in implementing the programs. Another forty six percent (46%) claimed that only some communities took part (see Table 9). The relationship between the planning and the implementation in terms of the community members' involvement was strong with 72.1%. A positive correlation was found, thus, the more residents engaged in the planning process, the more residents also engaged in the implementation process. However, it was also found that other indicators were affecting the relationship between those two indicators.

Table 9. Community involving in planning – implementation in Semarang.

Community Involving in Planning	Community Involving in Implementation				Total	Sig.	Correlation Coefficient
	All	Partially	No Involvement	No Answer			
All	39.3%	1.8%	.0%	.0%	41.1%	0.000	0.721
Partially	5.4%	41.1%	1.8%	.0%	48.2%	(correlate)	(strong)
No involvement	1.8%	3.6%	1.8%	.0%	7.1%		
No answer	1.8%	.0%	.0%	1.8%	3.6%		
Total	**48.2%**	**46.4%**	**3.6%**	**1.8%**	**100.0%**		

Meanwhile, the data shows that most of the residents in Semarang did not know about the document made by the government. Seventy nine percent (79%) of them did not know about it. Furthermore, sixty six percent (66%) of them never read the document about planning the programs for handling Covid-19 (see Table 10). A strong relationship was found between the respondents' awareness of the document and their experience reading the document. The relationship value was 53.5%. Hence, there is still 46.5% value that shows the two indicators being affected by other indicators.

The result in Yogyakarta was slightly different. It was found that fifty seven percent (57%) of the respondents believed that not all communities took part in planning the programs. Similarly, sixty four percent (64%) of the respondents claimed that only some communities took part in implementing the programs (see Table 11).

Table 10. Planning document awareness in Semarang.

Planning document awareness	Read			Total	Sig.	Correlation coefficient
	Once	Not Yet	No Answer			
Know	14.3%	5.4%	1.8%	21.4%	0.000	0.535
Don't know	1.8%	60.7%	16.1%	78.6%	(correlate)	(strong)
Total	**16.1%**	**66.1%**	**17.9%**	**100.0%**		

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Table 11. Community involving in planning – implementation in Yogyakarta.

Community Involving in Planning	Community Involving in Action				Total	Sig.	Correlation Coefficient
	All	Partially	No Involvement	No Answer			
All	18.8%	7.8%	.0%	.0%	26.6%	0.000	0.541
Partially	7.8%	50.0%	.0%	.0%	57.8%	(correlate)	(strong)
No involvement	1.6%	3.1%	1.6%	.0%	6.2%		
No answer	1.6%	3.1%	1.6%	3.1%	9.4%		
Total	**29.7%**	**64.1%**	**3.1%**	**3.1%**	**100.0%**		

Program planning and implementation and community members' involvement had a strong relationship. The relationship value was 54.1%. The more residents engaged in the planning process; the more residents also engaged in the implementation process. It was also found that other indicators were affecting the relationship between those two indicators with 45.9%.

The respondents who knew about the document related to planning programs for Covid-19 handling also read the document. However, most of the residents of Yogyakarta did not know that the document existed. Seventy six percent (67%) did not know about the document and fifty eight (58%) percent never read the document made by the government of Yogyakarta (see Table 12).

Table 12. Planning document awareness in Yogyakarta.

Planning Document Awareness	Read			Total	Sig.	Correlation Coefficient
	Once	Not Yet	No Answer			
Know	23.4%	9.4%	.0%	32.8%	0.000	0.701
Don’t know	1.6%	48.4%	17.2%	67.2%	(correlate)	(strong)
Total	**25.0%**	**57.8%**	**17.2%**	**100.0%**		

Between the two indicators stated previously, there was a strong relationship. The relationship value was 70.1% which means that there was a 29.9% possibility that other indicators affected the relationship of the two indicators. A negative correlation was found between the two indicators. When more community members were involved in the planning and implementation, other parties' involvement was reduced.

4. Conclusions

Several indicators found in Semarang and Yogyakarta explain the phenomena that happened there in July 2021 when Covid-19 cases were high. The first thing is related to the quality of the city environment. To prevent the spread of coronavirus, it is important to raise awareness to maintain the quality of the surrounding environment. Hence, the government should also take part to improve the quality of the environment. Furthermore, collaboration and coordination between the government, community, and private parties in handling Covid-19 is needed. The need for formal coordination between those network parties can be minimised if there is an improvement in the orderliness of the implementation of pandemic handling management.

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Another thing found during the study related to community members' involvement in handling Covid-19. The more engaged community members in handling Covid-19, the other network parties' involvement reduces. Moreover, improving community members' awareness to obey the rules is important so that it can reduce the dependency on other parties' control. When it comes to collecting information and data from the residents, it is important to select suitable topics. By doing so, planning follow-up actions can be done easier and better. Concerning the infrastructure needed to handle Covid-19, effective and efficient communication is important. Information and communication are strongly related to the infrastructure provided in the residential areas such as handwashing facilities. Planning programs for handling Covid-19 is closely related to its implementation. Community members' involvement is a significant factor because the more they are involved in the planning process, the more they will be involved in the implementation stage. A similar relationship also happens between community members' awareness of the document related to programs planning and their experience in reading such document. If they know that such a document exists, they will be more likely to read the document.

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