INFRASTRUCTURE FACILITY NEEDS ANALYSIS CITY PARK IN THE NEW NORMAL ERA (CASE STUDY: TAMAN ADIPURA MUARA ENIM)

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Abstract

After COVID-19, city parks such as Taman Adipura Muara Enim were again filled with people to play and exercise. City park facilities in the new normal era need to be improved to provide the best service. To determine the "level of service" (LOS) and assess the need for infrastructure, research was conducted. This study used a descriptive survey data collection method in the form of observing physical arrangements, functional aspects and similar research theories and then distributing questionnaires with several variables, namely the level of service facilities, the level of activity, the level of significance and the level of ease of marketing. Attitudes were assessed using a Likert scale and the "level of service" (LOS) analysis method. The findings show that the level of service at Taman Adipura Muara Enim is F (5), indicating that there has been an accumulation of user activity as a result of the uneven distribution of facilities. To meet the criteria for a new normal, it is necessary to add and modify the design of facilities such as the addition of an outdoor gym, guard post, information media boards, hand washing facilities, body temperature measuring devices, single seats, and vegetation as barriers between facilities.

Keywords: Covid 19, New Normal, City Park
Introduction

After the restrictions on outdoor activities ended, parks began to become crowded with people. People are very enthusiastic about playing, exercising, and enjoying sunlight. This makes us worried that the spread of Covid-19 will spike again if the facilities in the park do not implement standard health protocols. To ensure that visitors to parks can enjoy their activities in safety, health, and comfort, creative thinking and solutions are required for park design and infrastructure. Parks are important for cities because they indicate a livable city.

A livable city is a city where people can have a healthy life and have easy movement. One way to promote the flow of social interaction in urban populations is the presence of green open spaces (Iswara et al., 2017). Due to its affordability, Green Open Space is used as a substitute location for refreshing and leisure that can be accessed by all metropolitan communities (Tambunan et al., 2019). Urban green open space is a portion of an urban area's open space that is covered in vegetation for ecological, social, cultural, economic, and aesthetic purposes (Kemendagri, 2007). At least 30% of metropolitan areas have green open space, of which 10% are private green open space and 20% are public green open space (UU RI No 26, 2007).

City parks are a part of a green open space that function as a public open space (Saputri, 2018). City park serves as a buffer between the mass of buildings, ensuring that the city's growth still depends on the natural environment's delicate balance (Jatmiko, 2016). Taman Kota, including every component that was previously only used as a creative and relaxing environment, must be developed to its full potential in order to promote productive days for workers, students, and the general public in the form of coworking spaces (Bayuadi, 2020). During the transition to the new normal, social perceptions about where to sit in public settings change (Ayu & Dian, 2022). Designers are encouraged by the shift from the pandemic to the new normal period to reflect more on or understand their own context and to think more carefully about the process of creating meaning in a design product in order to have worth (Julianto, 2021). Urban parks must be designed in response to the new normal in order to be secure and to influence the neighborhood toward a healthy way of life. The presence of public open spaces in metropolitan areas is crucial in the new normal period. The first step in post-pandemic rehabilitation is to return to regular life in order to reestablish the social structure and even tourism (Andri Kurniawan, Nibrasatul Yumna, 2020).

Adipura Park is a public park in Muara Enim. The size of this park is 4.25 hectares. A plaza, jogging track, pedestrian walk, play area, vegetation, parking space, and prayer room are among the amenities. There are also 2 retention ponds. Residents of the city frequently come here for sports and relaxation. Nevertheless, it is believed that the current facilities cannot give visitors a

The municipal park has a cultural legacy that needs to be protected and preserved (Setiawan & Darho Mirandia, 2017). Government-built city parks serve as recreational spaces for both active recreation on sports fields and passive recreation to get some fresh air and beat monotony (Rizgiandra et al., 2020). As a result of society's response to the Covid-19 epidemic, which had previously forced social isolation, the creation of a perfect city park must promote positive social interaction while also serving ecological needs.

The Covid-19 epidemic has not yet been officially declared over. Many aspects of the technique for exploiting space have changed throughout the Covid-19 pandemic crisis (Wasista, 2021). The Covid-19 epidemic has not yet been officially declared over. Many aspects of the technique for exploiting space have changed throughout the Covid-19 pandemic crisis (Elistia, 2020). During the transition to the new normal, social perceptions about where to sit in public settings change (Ayu & Dian, 2022). Designers are encouraged by the shift from the pandemic to the new normal period to reflect more on or understand their own context and to think more carefully about the process of creating meaning in a design product in order to have worth (Julianto, 2021). Urban parks must be designed in response to the new normal in order to be secure and to influence the neighborhood toward a healthy way of life. The presence of public open spaces in metropolitan areas is crucial in the new normal period. The first step in post-pandemic rehabilitation is to return to regular life in order to reestablish the social structure and even tourism (Andri Kurniawan, Nibrasatul Yumna, 2020).
sense of security and comfort with relation to Covid-19, such as the absence of handwashing stations and social distance facilities. Concepts for the design and arrangement of facilities are needed in response to health protocols in the new normal period.

Concerning measures taken to stop the Covid-19 epidemic from spreading to Indonesia, the government has released a warning. One of these involves enforcing new standard conduct when engaging in activities away from the home (Almafahir, 2021). The Republic of Indonesia's President has a vision for improving infrastructure to support economic growth and basic services, and part of that vision includes fostering healthy lifestyle habits through the Healthy Living Community Movement by creating environments that promote physical activity. Examples of such environments include public open spaces, mass transit, intermodal connectivity, a healthy environment, and a reduction in air pollution (Bappenas, 2020).

Customer satisfaction at a tourist destination is an emotional response to the service facilities there (Aldila et al., 2022). The new normal concept, which many people have been waiting for, is now available as a substitute for restoring optimism about the future (Ningrum, 2021). In order for community activities to continue as planned and to safeguard the community from the corona virus, which is worrying the community, an infrastructure arrangement strategy that is adaptable to the Covid 19 pandemic is required (Suriadi et al., 2021). Urban parks require research that examines the needs of public open space infrastructure facilities in the new normal era with a concept that satisfies the needs of users from every potential and problem that exists in their environment so that it has aesthetic and functional value in facing the new normal era in order for them to function optimally and actively.

Public space serves as a place for movement, a gathering place, and a place for leisure and recreation. It is crucial to daily living (Putri, 2021). Public open space is essential to the development process, an essential component of the life of an urban region, and it also provides comfort (Darmawan, 2018). The general public will always attend appealing public venues, regardless of their socioeconomic status, ethnicity, degree of education, or level of interest (Hargianti, 2021). Public areas should be created to meet user needs and facilitate their activity (Fikriyah et al., 2021). The intricacy of land governance issues in public places must also take into account how public space users' perspectives are changing, such as during a pandemic (Reza, 2020). Public spaces with features of amenities that can support the meaning and function of public space in addressing the demands of enhancing health and welfare are the ones that people like to use and conduct activities in during the Covid 19 pandemic (Winarna et al., 2021). A good urban park should have a variety of physical characteristics, activities, and users (Pratomo et al., 2019). Urban open space components include landscaping, streets, pedestrians, parks, and recreation areas (Anggriani, N, 2011).

Public open space is essential to the development process, an essential component of the life of an urban region, and it also provides comfort (Darmawan, 2018). Attractive public open spaces will always be visited by people of the general public from all walks of life, no matter their socioeconomic status, background, level of education, or level of interest (Hargianti, 2021). Public spaces should be designed to accommodate user needs and facilitate their activity (Fikriyah et al., 2021). The intricacy of land governance issues in public places must also take into account how public space users perspectives, such as during a pandemic (Reza, 2020). Public spaces with features of amenities that can support the meaning and function of public space in addressing the demands of enhancing health and welfare are the ones that people like to use and conduct activities in during the Covid 19 pandemic (Winarna et al., 2021). An ideal urban park should have a variety of physical characteristics, activities, and users (Pratomo et al., 2019). Urban open space components include landscaping, streets, pedestrians,
parks, and recreation areas (Anggriani, N, 2011).

Keeping your distance from others and avoiding crowds has become widespread in the new normal age as one of the initiatives to prevent and control Covid-19 (Rudiyanto & Sugiarto, 2020). To maintain contact and adhere to health regulations in public facilities, three actions can be taken: a) The installation of glass barriers to keep buyers and sellers apart; b) The layout of stalls that are separated from one another and by small, green parks with greenery and natural light; and c) If at all possible, provide a drive-through section where customers may speak with sellers and select their items without getting out of the car (Komariah et al., 2021). Changes in behavior to prevent disease exposure through adherence to health protocols, such as wearing masks, washing hands, and keeping a safe distance, are also a positive trend that must be maintained so that people are independent in maintaining their personal hygiene and environment (MENKES, 2022). Implementing health protocols is how the community may play a part in preventing the spread of Covid-19 (Sabana et al., 2021). In order to stop the Covid-19 virus from spreading during this pandemic, adaptation to space must satisfy certain conditions, including those for sunshine, social isolation, and air circulation (Siwi et al., 2022). Spacing, adding areas and/or facilities, and limiting the capacity of a space are all examples of adaptation adjustments that can be made to park facilities (Instinari et al., 2023).

Based on the type of public facility, Muara Enim's application of punishment and legal enforcement of health norms includes; 1) Mask wear is required; 2) installing media outlets for information on COVID-19 transmission prevention in key locations; 3) At the entrance, set up sinks with running water, soap, and hand sanitizer; 4) restrictions requiring a minimum of 1 (one) meter between chairs and seating configurations, as indicated by a particular sign on the ground, or both; 5) usage barriers/partitions (such as flexy glass) on tables or counters as additional protection for staff (cashiers, customer service, and others) in order to reduce interaction with consumers. You should also promote the usage of non-cash (contactless) payment methods. (directly) and 6) Implement PHBS (Bupati Muara Enim, 2020). One of the newest problems in design is the quest to prevent COVID 19. We believe that there is a chance that between now and when the epidemic is over, there will be changes or new standards for urban landscape design (Hadid, 2020).

The problems raised by this study are: 1) What infrastructure Taman Adipura Muara Enim will need in the new normal period; and 2) How good is the quality of service in the Taman Adipura Muara Enim area. The goals of the study were to: 1) examine the requirement for infrastructure facilities in Taman Adipura Muara Enim Park's public open spaces in the new normal age; and 2) obtain a "level of service" (LOS) from the park's public open space area. This research is expected to provide different facility types and design options that are safe and hospitable for users of public open space in the new normal.

Research Methodology

The research methodology used in this study is both descriptive and quantitative. Descriptive research is an objective depiction of observable phenomena and other things that are captured as they are, without blending it with personal opinion (subjective), without value judgments, without suggestions or recommendations for action, without justification or claim of opinion, but rather its nature as a problem solving in the current/actual situation (Abdullah, 2018). The goal of quantitative research is to explain or characterize an existing social phenomenon. It is systematic, structured, and has distinct stages (Ahmad & dkk, 2022). In the new normal period, functional characteristics (activities) in public areas are added to observational surveys as filling and forming element variables. Sampling strategies Using members of a small group that already exists or is made up of natural groups known as clusters, cluster sampling is done.
The questionnaire was developed using the findings of the previous theoretical synthesis, paying close attention to the quality of creating Public Open Spaces beginning with the aspects of needs, aspects of rights, and adjusted to the pattern of people's lives in the new normal era based on health protocol guidelines in freedom of activity. The statements on the Likert scale describe the respondents' attitudes toward the research item. According to the Agree/Disagree scale, each statement has a score of 5. To determine the respondent's overall score, the item scores are put together. The Likert scale is divided into two sections: the item and the evaluation element. Items are claims made about a certain good, experience, or attitude. A range of statements ranging from "strongly agree" to "strongly disagree" make up the evaluation section. Here, a five-point scale is employed. (Marihot et al., 2022). The level of service (LOS) approach is used to assess observation data processing for planning reasons, regulations relating to the maximum capacity usage of natural resources, speed in unit area, or in some circumstances.

**Research Results and Discussion**

**Shape and Size**

Taman Adipura Muara Enim is designed as an elongated/linear park that runs along to Jalan Jenderal Sudirman and faces two sizable ponds that are encircled by a pedestrian area or jogging path. accompanied by two tiny ponds that serve as a settling area for the main pool's sewage overflow water. The park has a 4.25 Ha area. It is possible to spread out park amenities over a sizable enough area so that activity does not concentrate in one spot.

**Softscape and Hardscape**

Two retention ponds and vegetation serve as the softscape components of Taman Adipura. Hardscape components include concrete-paved parking lots, ceramic-paved walkways, and concrete-paved plazas. Hardscape features are less prevalent than softscape elements in the landscape. The area is cooler because to the many softscape components.

**Filler Element**

Retention pond, pergola, gazebos, security posts, playground area, parking lot, plaza, mushola, monument, food area, jogging tracks, stage, toilets, and plant are a few of the filling features of Taman Adipura Muara Enim. The condition of the facilities is fair.
Observation of activities

Based on the findings of a survey of events at Adipura Muara Enim Park over the course of three weeks. The primary focus of the observed activity is how park visitors interact with the already-existing amenities, particularly those that are connected to health procedures for Covid 19 prevention. They are separated into three areas to make survey activities more convenient. Every Monday through Friday, which corresponds to working days, observations are planned with a total of 4114 users. While there are 3039 users on Sunday because it is a holiday. The survey was carried out in September 2022.

<table>
<thead>
<tr>
<th>Visitors</th>
<th>Application of health protocols</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>438</td>
</tr>
<tr>
<td>Week 2</td>
<td>236</td>
</tr>
<tr>
<td>Week 3</td>
<td>2365 No (There is a fishing contest)</td>
</tr>
<tr>
<td>Amount</td>
<td>3039</td>
</tr>
</tbody>
</table>

Table 2. Number of weekday visitors

<table>
<thead>
<tr>
<th>Visitors</th>
<th>Total health protocols</th>
</tr>
</thead>
<tbody>
<tr>
<td>W1</td>
<td>W2</td>
</tr>
<tr>
<td>Monday</td>
<td>200</td>
</tr>
<tr>
<td>Tuesday</td>
<td>192</td>
</tr>
<tr>
<td>Wednesday</td>
<td>216</td>
</tr>
<tr>
<td>Thursday</td>
<td>216</td>
</tr>
<tr>
<td>Friday</td>
<td>272</td>
</tr>
<tr>
<td>Amount</td>
<td>4114</td>
</tr>
</tbody>
</table>

The following elements of the users' behavior in Spot 1 of Adipura Park were observed: a) Needs from the perspective of: Taman Adipura is one of the sites you want to visit because of the activities already taking place there, such as playing, lounging around, doing sports or running by the pond, and hosting fishing competitions. Additionally, location 1 has a section with street vendors where people can stay for a while; b) Rights-related aspects; Parking space 1 is easily accessible because it is situated next to the main entrance and the highway. The activities are really varied because there is a sizable courtyard where many people frequently host events like making maps, renting children's games, and other activities.; c) Aspects of the meaning include: the park's location and identity, which are clearly visible from the outside, as well as the presence of a pond with a dancing fountain, which serves as the park's primary draw for visitors. d) Aspects of behavior (health protocol); There is no user behavior that enacts health protocols, whether it be donning a mask, washing your hands, or keeping your distance. You can still observe crowds without masks both when the area is quiet and when the fishing competition is busy.

Observation of user activity in spot 2 from various angles, including: a) Needs in terms of: Activities like sports and running, relaxing and comfortable lingering for fishing in the retention pond Right perspective; b) Accessing location 2 is difficult because it is next to location 1, which lacks the same games and courts. As a result, if there are no activities in the pool area, there won't be much activity in location 2; c) The positioning of spot 2 across from spot 1 so that it is far from the entrance is one of the aspects of meaning (meanings). However, site 2 is still facing a pond with a dancing fountain due to its orientation, which draws visitors there; d) Aspect of behavior (health protocol); Users in spot 2 were not observed to be washing their hands, using masks, or maintaining a safe distance from one another. It is evident that park visitors crowded even during the fishing competition sans masks.

Observation of user activity in spot 3 from various angles, including: a) There are activities in the form of park visitors who are unwinding, playing, relaxing, sitting in the gazebo, cycling, and sports/jogging. These are aspects of needs. The presence of ongoing children's activities encourages youngsters to participate and play for extended periods of time; b) Aspect of the right (right): Due to its proximity to the entrance and parking lot, getting to spot 3 is quite simple; c) Aspects of meaning: In location 3, it is still facing the second small pond that lacks a dancing fountain. Spot 3 includes a tiny, circular courtyard with a
gazebo in the center, and swings and seesaws are permanently placed throughout the area, making it a great draw for visitors with kids;
d) Behavioral Aspects (Health Protocol): At location 3, some visitors still congregate without wearing masks, washing their hands, or keeping their distance from one another.

The Ability of a Facility to Serve Its Intended Purpose as a Filler for Public Open Spaces in the New Normal Era

The service level of the activity area in Adipura Muara Enim Park is determined using LOS standard planning, and the activity area has a size of 21.973 m². The biggest visitor peak was 2365 on Sunday, according to the findings of measurements of peak user activity.

NAU = \frac{21973 \text{ m}^2}{2365} = 9.29 \text{ m}^2/\text{person/day}

RC = \frac{1}{9.29} = 0.1 \text{ m}^2/\text{person} = 0.32 \text{ ft}^2/\text{person}

Adipura Muara Enim Park’s service level F (5) suggests a mass buildup that presents a chance for the transmission of Covid 19 based on the LOS planning observations.

To learn how users of Adipura Park feel about the current amenities, particularly those that deal with health protocols in the new normal period. After that, a survey was created utilizing the Likert Scale data processing technique and then modified to the one already in place at the Adipura Park location.

Table 3. Results of facility attitude assessment

<table>
<thead>
<tr>
<th>Existing facilities</th>
<th>score</th>
<th>Attitude assessment (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1) Plaza</td>
<td>81</td>
<td>64.8 Strong</td>
</tr>
<tr>
<td>2) Parking lot</td>
<td>89</td>
<td>71.2 Strong</td>
</tr>
<tr>
<td>3) Toilets</td>
<td>75</td>
<td>60 Strong</td>
</tr>
<tr>
<td>4) Garden seating</td>
<td>93</td>
<td>74.4 Strong</td>
</tr>
<tr>
<td>5) Mushola</td>
<td>97</td>
<td>77.6 Strong</td>
</tr>
<tr>
<td>6) Cleaning room</td>
<td>87</td>
<td>69.6 Strong</td>
</tr>
<tr>
<td>7) Sports facilities</td>
<td>64</td>
<td>51.2 Fair</td>
</tr>
<tr>
<td>8) Children's play facilities</td>
<td>81</td>
<td>64.8 Strong</td>
</tr>
<tr>
<td>9) Security post</td>
<td>68</td>
<td>54.4 Fair</td>
</tr>
</tbody>
</table>

According to the findings of surveys and questionnaires, there are no health protocols-related facilities at all at Adipura Park. All 25 respondents said Taman Adipura Muara Enim did not have these amenities. Some tourists merely wash their hands in the toilets next to the mushola.

Design Simulation Concept for Taman Adipura in the New Normal Era

The following are the top priorities for deciding attitudes toward the facilities at Adipura Muara Emim Park in the new normal period based on the current and survey results:

a) Sports Facilities

Increased and more evenly distributed outdoor gym equipment is required, including elliptical machines, treadmills, double swing boards, rowing machines, single pole parallel boards, handstand racks, air walkers, big spinning wheels, bicycles, waist and back stretchers, and double sit-up boards. As a method for physical activity in the park, this sports facility is important.

b) Security post

In order to avoid noise and other security problems, more security infrastructure and staff are required, especially at night.

c) Media Information on COVID’s Spread

Billboard-based COVID information media must be visually appealing.

d) Facilities for hand washing

To execute the health protocol, Taman Adipura does not yet have a handwashing/washing sink, so it is necessary to add these facilities at various locations with a typical touchless handwashing facility complete with soap and dryer.
Figure 3. Facilities for hand washing

e) Body Temperature Monitor
The usage of body temperature monitoring chambers is no longer required since Taman Adipura is an outdoor park. However, if there is a special event at the park, according to an analysis of park activities, it attracts a lot of visitors. As a result, it is sometimes still necessary to check body temperature. It is required to offer a non-permanent monitoring space that can be set up at any time to address this issue.

f) Distance limiter
By employing the already-present street furniture in the park, special barriers will be installed. Where, existing pavement serves as street furniture in the form of intriguing patterns that depict each person's boundary. Because of this, especially in some areas of the rental plots for children's games in the courtyard and the food plots at spot 1, it serves to inadvertently warn park patrons that there is a distance barrier between guests.

g) Seat distance
Replacing many chairs with a single, stationary chair that is spaced at least one meter apart from the others to prevent direct contact. The seating arrangement, which stacked up in places 1 and 2 only at first, modified to spread.

h) Using vegetation to set distance boundaries
In order to give users who sit under them some space and comfort, vegetation acts as a barrier between groups of garden chairs.

Figure 4. Pavement/floor covering pattern

Figure 5. Illustration of new normal era garden chairs

Conclusion

The study's findings and analysis lead to the conclusion that Taman Adipura Muara Enim is a public area that already possesses a number of needs, rights, and meanings as forming attributes. The elements of creating a public space in response to the New Normal Era have not, however, been put into practice. The Adipura Muara Enim Park's service level is F (5), which denotes a build-up of people, creating potential for Covid-19 transmission. Additionally, a number of facilities are distributed unevenly across the park, creating busy and quiet areas. Taman Adipura needs to make repairs and additions to a number of the existing facilities in order to create quality friendships in dealing with the New Normal Era, including: a) the addition of an outdoor gym, which is referred to by several points as health support; b) the addition of guard posts that are spread out in three points to create a sense of security when users are active far apart from other users, especially at night; c) Providing information on health precautions during a pandemic by erecting banners and warning signs in various places around Adipura Park; d) included touchless handwashing stations with dryers and soap; e) putting in an external, demountable,
automatic body temperature measuring device that will be subsequently installed in a small area in front of the entry that has a barrier; f). Using the Park’s current floor/pavement patterns to apply special borders; and g). adding a seating arrangement with a minimum of one meter between chairs and enough lighting and airflow; h). The distance and comfort for people who sit under lawn chair clusters are created by vegetation acting as a barrier between them.

This study’s contribution is anticipated to act as a guide for future research that will more in-depth analyze the social, economic, and cultural elements of problems. Moreover, in the New Normal Era, one should build a more quantifiable understanding of public space. The help of additional survey respondents, the 2022 Beginner Lecturer Research Grant, and the Directorate General of Higher Education is gratefully appreciated.

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