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Contents

Original Article

The Occupant's Perception toward Open Space in Two Different Types of Housing

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There are changes in the housing matter in Yogyakarta related to the utilization of open space since the perception between housing developers and residents occurs tremendously. It is important to pay attention to the needed of open space as it is urgent to forecast the future housing concept. This reseach aims to describe both the present condition and resident's priority toward the term of open space surely based on the perception of residents. Moreover the reasearch utilizes multiple case study method in order to explore further the perception and resident's priority as well toward the availability of the open space in the estate. As many as 178 residents from 8 housing estates are chosen to represent middle-high and middle-low estates resident. The result of the research shows that most of the respondents give positive responds to the shady, beautiful, safe, private, comfortable kind of open space which is easy to get. Moreover, the residents also show good safety and privacy provided in both types of housing will increase the interaction and utilization of space in the middle-low type instead of middle-high type.

Keywords: *Resident's Perception, Open Space Priority, Yogyakarta, Case Study, Middle-High Estate, Middle-Low Estate*

1. Introduction

Open space is basically one of the estate facilities which must be provided by developer in Indonesia so that the standard regulation arranging the availability of this space based on the type and amount itself is applied equally for all housing estates in Indonesia. However, the change in the concept of open space occurs significantly compared to the preliminary concept as the standard and guidance of the house construction does still not fulfil the resident's need. So far, this discrepancy of those regulations and developer's construction design concept toward the occupant's need still must be facilitated through the exploration of kind of open space that the occupants expect to have. This research will then provide deeper description related to the perception of the occupants toward not only the availability of open space in their estate but also the type of open space as well. This research is a sort of case study taken

place in two types of housing estates namely middle-high and middle-low estate.

So far, similar researches related to the perception of the residents have been conducted by some researchers during these 12 years. Some of them have concerned about the perception of the residents toward housing element (Dewey, 2008), spatial location (Wu et al, 2003, Dunse et al, 2007, Sugiyama et al 2010), the need level of green space (Erowati in Itja, 2009), and the relationship between space safety and privacy (Berk, 2005). This research also thrives to enhance the concept of occupants' perception toward the shade, aesthetic, safety, achievement and comfort of open space in their surrounding followed by the existence of open space that should be available there. For the future, this type of open space is certainly needed to forecast the future housing project.

The research takes place in Yogyakarta for some important reasons as this city provides housing estate in small scale, and Yogyakarta presently shows up as the most comfortable city in Indonesia (IAP, 2010). Moreover, Yogyakarta is also chosen as the third most popular cities in Indonesia straight after Bali and Jakarta (Travbuddy, 2012), and the same time Yogyakarta is famous for its local culture. Yogyakarta's position as the most comfortable city as well as the third most famous city causes the great demand of housing construction for people in Indonesia. As it is explained by Kuswartojo (2005), greater variation will be found more in small scale housing than in that of big scale. The possibility of greater conflict causing the city with the majority of small scale housing and good local culture is interesting for the research location.

Based on this situation, it is then important to find out at the same time the similarities and differences in both perception and priority of the residents toward the open space in middle-high and middle-low housing estate. The research then aims to study the perception and priority of the residents about the availability of open space in their environment. This research is fundamentally a past of research aiming to find out the characteristic of public open space in Yogyakarta. Focusing on the residents' perception, this research is conducted through the perception analyses toward the availability of open space.

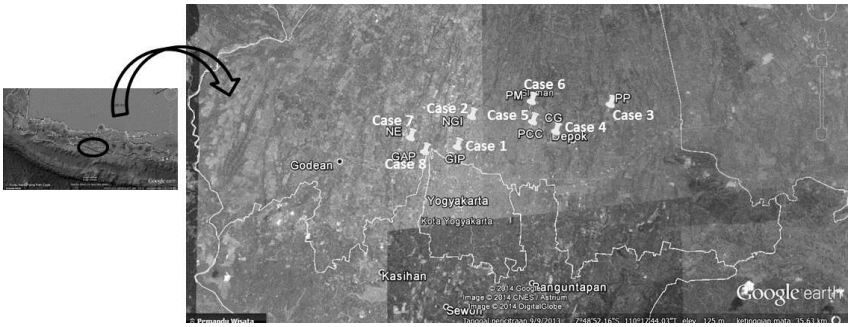

Fig. 1 the Cases Location Site in Yogyakarta

2. Literature Review

Krier (1979), Wooley (2003), and Moughtin (2003) state that the elements of city space consist of street and square which in fact apply equally to the elements of open space in one single estate. Referring Towers, (2005), Zhou (2006), Biddulph (2007) and Hwang (2009), the availability of open space in housing estate is considered important in order to increase the quality of life especially the physical and mental health of both residents and neighbourhood as well. As stated by Madanipour (2003) that the

active availability of open space in residential centre can hereby be used to increase the image of the house, the value of the sales, and at the same time the participation of the developer to facilitate the social class gap eventually. Zhou (2006) moreover asserts that the public open space serves to provide "a family room" in a residential area while exactly at the same time the research conducted by Kristin (2010), Thompson (2008), Madanipour (2003), Poerbo (2010), Kusumawijaya (2000), and Bultimer (1972) showed that the public open space takes a role as the place of social interaction to meet and gather the need of the occupants themselves and the surrounding environment. Another research done by Engwicht (1999) related to the availability of street space reveals that the street functions perfectly as the centre point of one local community action, socializing place, playground for children, education centre, festival, and last but not least the economics activity. Moughtin (2003) will also participate to show that the street is utilized importantly as the space to express the resident's social life.

According to Abu-Ghazzeh (1996), the ideal open space is its which has the open access and designed to increase the activity of human and social relationship involved around. Another research has also shown that the ideal open space is basically the place which has easy access (Thompson, 2008) scattered into some locations (Wu et al, 2003). To continue, that kind of ideal open space is best located in the centre point of the residential housing (Towers, 2005, Winandari 2006, Kusumawati 2007, Torridge 2005, SNI 03-1733-2004). The maximum distance of square based on SNI 03-1733-2004 and SNI 03-6981-2004 is 100 m from the occupancy unit.

The perception related to the open space has explored so far by some researchers. Winandari et al (2013) reveal the relationship that the more spacious the place and the less permanent and semi-permanent elements, the more barren and empty the space is. Referring to Indonesian standard SNI 03-6891-2004 the maximum distance from the square to exactly the dwelling unit is 100 m.

In the study about housing perception, Dewey (2008) shows that the respondents pay more attention to the road and park condition rather than the green space and the club house themselves. Moreover, referring to the concept of comfort, Yuen (1996) illustrates that the residential square should function as a way of interaction among all appearing groups in that community namely the youth and elderly, male and female, and group and individual though. The regulation of Bantul Regency No 13/2009 decreed that housing open space ought to be clean, attracting and nice in order to maintain the resident's comfort living there. In another research, Sugiyama et al (2010) comments that the short distance of an attractive open space from the residential housing will cause the high resident's recreational walking. This comment is also in accordance to Wu et al (2003) who assumes that residents will prefer to consider housing which has a scattered open space. Dunse et al (2007) reinforces the research by saying that the chosen location for a park is considered as a good image for those flat residents but this assumption on the other hand does not apply vice versa for other types of residents because of some important factors such as safety reason, dangerous perception, and anti-social one. In line also with Dunse, Berk (2005) states that the lower the safety level, the higher the privacy rate, the less the social interaction among those residents in their daily life. Moreover in 2010, Sugiyama et al confirms strongly that a large park equipped by high quality in the area of walking distance is considered more important than several squares in short distance for adult's category.

Based on economic level's category perception, Johnson (1993) argues that the people from

middle-high income level tend to pull out themselves from other kinds of economic level which is strongly supported by Low (2003) describing the restriction of access surrounding exclusive housing estate for the high level income people. This kind of behaviour is explained by Lang (1987) as the reason to fulfil one of the human's basic needs namely identity and security altogether. According to Altman (1975) there are three groups of territory namely primary, secondary, and public territory. In the primary type, a single object or area can be used only by specific persons, while in the secondary territory this area can be functioned by a group of related persons. The last territory, the public one, will stand for the utilization of one single subject or area by many people. Erowati (Itja, 2009) who researched the relationship between the economic level and the need of an open space argues that the middle-low level of residents do not concern much about the green open space while at the same time the middle level of those assume it is necessary to have and ultimately the middle-high level of residents do really take account into the availability of green open space.

3. Method

The sample of the respondents were taken from two types of housing namely middle-high level of housing estate and middle-low level of housing estate as well. These middle-high estates consisted of Griya Intan Permata Estate, Nandan Griya Idaman Estate, Pertamina Estate, and Casa Grande Estate while the middle-low estates being researched here were Condong Catur Public Housing, Minomartani Public Housing, Griya Arga Permai Estate, and Nogotirto Elok Estate. From those estates, seven were located in Sleman Regency and others rested in Yogyakarta Regency. Another characteristic of those estates was given to the attributes of them as a part of Special Region in Yogyakarta territory. From those some hundred occupants, there were 185 persons were successfully interviewed, but form this number, only 178 respondents completed the form of questionnaire obtained from middle-high estate as much as 72 and 106 from middle-low one. This research was conducted through several sequential steps namely literature review, field surveys, data analysis and conclusion as the last part.

Literature review played a role to obtain some variables used to both identify and analyse the data, while the field surveys were an activity conducted to study the factual and real condition of opens spaces followed by the residents' perception toward the availability of an open space in their surrounding estate. The observers, in this case were the researchers captured the factual and real condition of the availability of open space in those kinds of estate by using camera and video recorder altogether. Moreover, the researchers also conducted interview using questioners with the occupants in order to get their perception toward the open space itself. The interview took place at both the respondents' houses and open space in the morning, afternoon, and evening from August 2011 to December 2012. The interview was assisted by under graduate students from Department of Architecture, Gadjah Mada University.

The analysis of data was carried on through qualitative and quantitative analysis along two stages namely case analysis and case comparison. Further, to make it clear, the qualitative analysis was done by exploring the existing open space in 8 estates while on the other hand, the quantitative analysis was counted using statistical method which utilized a Likert Scale and a rank value based on SPSS 20 program. Likert Scale was used as it was the way to obtain the mean value of the occupants' perception toward shade, beauty, safety, achievement, and comfort factors from the estate. It was known also that

variable correlation based on occupants' economic level was analysed by a model summary and the coefficient which came along. The value of rank, then, is conducted in order to obtain the types of open space priority based on the respondents' perception. Thus, the last part, which was conclusion of the research, would be described using the theoretical discussion as well.

4. Result

This research had set up some clear boundaries which stand for the discrepancy between the middle-high one and the middle-low estate lying on the nature of estate's entrance gate. It was then explained that most middle-high estates would have a restricted access entrance gate marking by high wall or steel fence surrounding them and absolutely been guarded by a 24 hours team of security. On the opposite side, the middle-low estates had an open access entrance where everyone could easily get into the estates even though some of them were surrounded by low wall along to the river for the reason of safety matter. It could also be resulted that in general by comparing these two kinds of estate, there were some differences and similarities in the term of physical open space, occupant's perception, and the priority to set up the open space in the estate. The difference part took part on the form of open space itself. In the middle-high estate, the developer designed the room for open space on a specific reason underlining the construction of it in better feature than that of middle-low estate. Then, the research taken place on these two difference estates could be grouped into some categories namely the existence and availability of open space, the occupant's perception toward the open space, and the priority of open space itself.

4.1 The Existence and availability of Open Space

The existing open spaces in this research structuring from street and square could be grouped based on some factors such as the distance of the open space from the occupant's house, the location of the open space, the width of the square and the street altogether. Seen from the distance of open space to the furthest house, the middle-high estates reached up to 335 m and the middle-low come with 280 m. From the factor of square location, there were 3 types of the location named as the main street side, the middle of the estate, and the edge of the estate. It was known from the research that middle-high estates had most squares located on the edge of the estate which approximately reached 45% whereas the middle-low estates located their squares mostly in the middle of the estates estimated by 44%.

To the next factor, the width of both square and street in the middle-high estates were surely wider that the width of square and street in middle-low estates. It was shown by the range of square's width in the most middle-high estates from 145% to 270% based on the estate's minimum standard while at the same time the middle-low estates range from 42% to 51%. Still in association with it, the width of the middle-high estate's main street ranged from 12m to 15 m accompanied by the secondary street ranging from 6 m to 10 m. In the sample of middle-low estates the main street ranged from 7 m and the secondary street is 4 m.

Table 1 the Open Space Physical Condition in Both Cases

No	Open Space Type	Middle-High Estate	Middle-Low Estate
1	Location type		
a	The main street side	22 %	28 %
b	The middle of the estate	33 %	44 %
c	The edge of the estate	45 %	28 %
2	Square distance to the unit	335 m	280 m
3	The width of the square	145 % - 270 %	42 % - 51 %
4	The width of the street		
a	Main street	12 m – 15 m	7 m
b	Secondary street	6 m – 10 m	4 m

4.2 Occupant's Perceptions and Priorities

Resulted from 178 respondents being interviewed, the data analysis showed some similarities and differences on those two kinds of estate. The similarity lied on the occupant's perception toward some other supported factors such as aesthetic, safety, achievement, comfort and both first and second rank of priority. The occupants of those two estates gave opinion that the open space in their estate had already given them the esthetical of the living, the safety, and an easy access to reach from their house and the comfort feeling. A slight difference appeared on the level of shade on which the occupants at the middle-high estate state that they got better shade than that of the occupants at the middle-low estate (illustrated in Table 2 and 3)

Table 2 Occupants Perception from Middle-High Estates

		Comfort	Shade	Aesthetic	Safety	Achievement
N	Valid	72	72	72	72	72
	Missing	2	2	2	2	2
Mean		4,1667	4,3333	3,6250	4,1528	4,6806

Table 3 Occupants Perception from Middle-Low Estates

		Comfort	Shade	Aesthetic	Safety	Achievement
N	Valid	106	106	106	106	105
	Missing	5	5	5	5	6
Mean		4,3774	3,3113	3,8302	4,2642	4,6286

The different perception in the factor of shade was then confirmed by the result of coefficient among those five variables seen at Table 4. Among those five variables namely comfort, shade, aesthetic, safety and achievement, the greatest B value and the smallest significant value referred to the shade variable marked by positive result. This value showed that the occupant's economic level was just in linier to the shade perception of open space in their housing environment. It was also then illustrated that the higher the economic level of the occupants, the higher value the level of shade was (in this case the higher economic level referred perfectly to the middle-high estates).

Table 4 Coefficient of Occupants Perception Based on Economic level

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1,319	,358		3,687	,000
	comfort	-,060	,053	-,088	-1,140	,256
	shade	,145	,026	,387	5,508	,000
	beauty	-,071	,044	-,119	-1,614	,108
	safety	-,007	,043	-,013	-,171	,865
	achieve	,023	,061	,026	,369	,713

a. Dependent Variable: housing_type

Providing responds from those occupants from the two kinds of estate, there were so called the first and the second type of open space that should be available in their surrounding namely parks and playgrounds. It did not come into surprise also that street and shuttle cock courts must be available there even though the priority for the street would likely be the third one for the middle-low housing and the fourth for the middle-high housing estates. Taking shuttle cock courts for the next criterion, it was actually the fourth rank in the perception of occupants in middle-low one and exactly ranked as the sixth from the middle-high housing occupant's perception on the contrary. The great respond from the occupants toward the shuttle cock field caused the developer add some net poles and pave the floor of that field. On the other hand, the difference for both cases occurred in the type of multifunctional park and the barrier of garden. Multifunctional park was set up as the third priority of the occupant's perception in the middle-high housing, yet the same park ranked for the tenth priority for the occupants in the middle-low estates. Almost similar case also happened to the garden barrier in where the occupants from the middle-low put it forward at the fifth priority, while at the same time the occupants of middle-high estates sound to prioritize the barrier at the eleventh position. Moreover, the result of the interview also showed that the swimming pool facility would be at the ninth priority for both of occupants from two different kinds of housing.

Table 5 Open Space's Priority in Both Cases

No	Open Space Type	Middle-High Estate	Middle-Low Estate
1	Park	1	1
2	Playground	2	2
3	Jogging track	7	9
4	Football courts	12	8
5	Tennis courts	5	7
6	Multifunction square	3	10
7	Barrier park	11	5
8	Street	4	3
9	Volleyball courts	8	6

10	Badminton courts	6	4
11	Basketball courts	10	13
12	Swimming pool	9	-
13	Parking area	-	11

5. Discussion

The comparison between the occupant's perception and priorities in two kinds of housing type is conducted basically to study further how the residents respond similarly and differently toward the existence of open space in their housing environment. There are also several methods to study those kinds of similarities and differences and as well as other factors influencing the occupant's perception and priorities.

5.1 Occupant's Perception

There are some perceptions can be obtained from the interview conducted by the researcher to the occupants of middle-high and middle-low housing estate. On the first place, the condition of the existence open space in these two types of living has already been in well maintenance, but the occupants from middle-high housing add some more criteria such as easy access and viewed from the surrounding units of house, more well prepared and arranged kind of open space, shady trees, and many more playing facilities or gazebo.

> *Playgrounds will be much more beautiful if equipped by some children playing facilities and colourful flowers (Mr Mir)*

The middle-low estates occupants also add some more criteria such as shelter, hall, courts, green area and clean flower garden. Some of the residents also argue that the open space will look nicer if all people from different age can also enjoy it altogether without barrier. On the other hand, based on their perception, poor open space refers to the kind of it with smaller room and less manageable.

Second place, also in accordance to Low (2003), most of the middle-high estates have restricted access. It is basically in contrast with Johnson (1993) arguing that the occupants in this area on purpose restrict the access in order to improve their safety reason. In line with Altman (1975), restricted access belongs to the secondary territory in where only one group of people or those who are labelled as a member of club that will benefit from this access. It is done actually to fulfil their needs toward the identity and safety feeling as argued by Lang (1987).

> *The access is restricted only to the residents due to some factors such as safety, privacy, and condition of external party who does not know anything but the rules of the estate (Mrs Pr)*

In contrast to Abu Ghazzah (1996), the restriction of access in this case does not always reduce social interaction given example one of middle-high estates with restricted access which in fact have a good interaction not only among the residents themselves but also the surrounding environment. The safety factor in open space related to the residents' perception can be easily seen from surrounding square or dwelling unit of house, in this case the square location surrounded by dwelling unit of house is 44% and 33% in middle-low and middle-high respectively. This result then reinforces.

Mrs Ling and Mrs Hel explain that they will feel comfortable as long as they can watch out their children playing in the park near by their houses. Along with Dunse et al (2007), occupants in middle-low

estates state that square laid in the central of the houses really can improve the safety factor. Moreover, most squares with open access provided in middle-low estates have higher privacy than any other squares caused by the dwelling units surrounding the squares themselves. In both cases, the residents perceive that safe square which is children-friendly actually is mainly essential for them. The squares may be structured from a flat terrain with sufficient lighting accompanied by the street bumps altogether.

> *The tunnelling area located in our square functioned as the children's cycling track was levelled up by the residents since there was an unexpected accident causing the children injured. (Mr. Rah)*
>
> *The street bumps were built in our estate for the sake of protecting the children from the high speed up vehicles (Mr. SW).*
>
> *The less illumination park facility was proven dangerous for the children. In fact, playground should be made as children-friendly user equipped by soft flooring and non-metal toys (Mrs. Hel)*

Thirdly, all squares in both cases heighted up to 335 m from the furthest dwelling unit which actually is not in accordant to the maximum standard of 100 m based on SNI 03-1733-2004 and SNI 03-6981-2004. Yet, this is actually suitable and fit to the perception of residents. Contrast to what Sugiyama et al (2010) state that the distance between the square and the dwelling unit do not affect the occupant's recreational track to walk. Towers (2005), Torridge (2005), and Winandari (2006) argue that the square placed exactly at the centre of the dwelling unit cause the residents perceive that distance is relatively short now that the square offers an ease for the residents to access. Dealing also with Thompson (2008), who states that the ideal open spaces are basically those which are easy to access proven by 44% proportion of the distance in the middle-low and 33% of it in the middle-high estate.

> *Since the square was wide and nearby many people would like to utilize it. On the other hand, far distance of the square will not attract people to visit (Mr. Sup).*

In contrast with Wu et al (2003), a square centered specifically in some estates has maximal utilization.

In the fourth place, most of the residents in middle-high housing state that the open space in their estate is quite shady while on the other hand, middle-low residents housing argue that the open space is just average. The shade is merely caused by green and well-arranged shady plants and trees.

> *The square's edge was planted to make green environment (Mrs. Es)*

Other criteria are also added by residents namely lush, fresh, and neat in where the row of palm trees, shady and fruit trees would exactly reinforce the comfortable living in the estates. Stated by Winandari et al (2013) also, the residents consider the centre of the football court is still barren even though some shady trees are already planted in the edge.

What comes as the fifth is the reason that easy access and well-managed open space provided in the estate make the occupants feel much more comfortable. Some residents from middle-low housing estates moreover comment that shady, fresh and lush would also make them breathing well. For some other occupants, some opposite criteria such as worse-managed, difficult access, and publicly used can terribly make the open space facility uncomfortable otherwise. According to the policy taken out by Bantul Regent No 13/2009, the estate should construct a well-managed, clean, and esthetical open space. Together with Yuen (1996), the middle-low estate occupants add wider space and useful for any age

criteria which would make them comfortable and pleased. On the other hand, the unavailability of shady trees causes the occupants really uncomfortable.

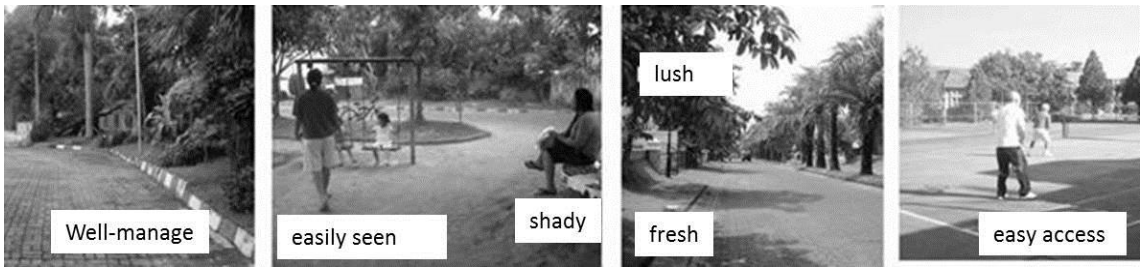

Fig. 2 the Comfortable and Beautiful Space Based on Occupants Perception

5.2 The Priority of the Occupants

Contrast to Erowati in Itja (2009), occupants in both types of estate concern about the open space's existence, in this case, parks and playground are placed as the first and second priority respectively. Further, the residents need space to maintain their health, freshness, comfort, environment aesthetic, and a good place to interact with others. These conditions reinforce what Zhou (2006), Kristin (2010), Thompson (2008), Madanipour (2003, and Buttimer (1972) claim that open space should play role as a place of interaction among residents as well as Madanipour (2003) argued about the developer's contribution to create some personal gaps.

> *Park is needed to get fresh air. People will feel uneasy then if they destroy the beauty and attractive thing from the estate (Mr. Sar)*
>
> *Children surely need playground (Mr. DS)*
>
> *Park is used by not only children but also their mom and caregiver (Mr. SW)*
>
> *The park is used to hold some events such as meeting, tirakatan, sports, and even a garden party (Mrs. Smh and Mrs Hel)*

The availability of good condition of the street and shuttlecock court takes place as the next priority chosen by the occupants in both estates. In contrast to Dewey (2008), the condition of the street is also considered important even though the priority of it is put below the availability of the park. For the occupants, wider street is totally functioned as circulation air, place to play, and medium to interact with neighbours. Especially for the occupants in the middle-high estates, this street is basically needed to manoeuvre the car. For those middle-low residents, however, along with Engwicht (1999) and Moughtin (2003), the street is aimed for various activities such as both a place to play and a medium to express their social life.

> *Street should be big enough in order to ease the car manoeuvre so the street bumps are not needed (Mrs Ling)*

Similar reason appeared to the availability of park and playground selection, occupants in both estates needed shuttlecock court as a place to interact with others as well as a place to maintain the fresh air, the health of the occupants, the comfort and not to forget, the aesthetic of the environment. Some great interests are indicated by the structure of net poles addition and a pavement floor.

> *The bike path in our park was converted into a shuttlecock court (Mr Rah)*

Anyway, the different perception in both estates is shown by the types of multifunctional court and garden barrier and it laid on the condition of the initial open space. Hereby, multifunctional courts chosen as the 3rd priority in middle-high estates takes place as the 10th priority in middle-low one, while at the same time the residents of middle-high put garden barrier as the 11th rank and those middle-low selected it as the 5th. The initial condition of the square in middle-high housing designed with a specific type such as tennis court or playground does not unexpectedly fulfil the residents' need such as for religion celebration. On the other hand, the residents in middle-low estates equipped by multifunctional court prefer to have garden barrier instead of multifunctional court.

They should build a garden barrier in our estate to maintain the secure factor (Mrs Ling)

Unfortunately, there is unexpected thing related to the availability of the swimming pool in middle-high estate. There is tendency from the developer to equip the swimming pool in the estate for the last 10 years. However, this research proves the opposite thing out of the phenomenon now that the residents from this type of estate prioritized the swimming pool at the 9th place.

Overall the condition of the initial open space and the need of the occupants need to be fulfilled in order to meet the desire of the residents to the selection of open space. It is known that the need of the open space will increase in the estates facilitated by either multifunctional court or special type of building. In both estates, the occupant's preference to get along together with others and to play with children makes the chosen for the park and playground take the higher priority. In Indonesia this habit has lasted for a long time ago especially in indigenous community. As Winandari (2013) indicated that a public open space in the kampong tradition functioned as the centre of communal life used for a variety of daily activities and ceremonies. Nowadays this custom is still maintained even in both middle-high and low housing estates.

6. Conclusion

From 178 respondents' perception living at 8 housing estates in Yogyakarta, it is clear that there are some similarities and differences in the occupant's perception staying in these both types of estate. The result is obtained through the interview asking about the residents' perception toward the condition of open space at their environment. They have assumed that the estates where they live have already fulfilled the state of aesthetic, safety, easy access, and comfort. Further, they also put park and playground as the priority for the provided facilitate in the estates. The residents will obviously feel comfortable living in the area which is easy to access, shady, well-maintained and wide. The esthetical space refers to the condition of the open space which is well maintained and at the same time the safe place is due to the easily sighted one. It is fact that the dwelling units surrounding the square enhance the occupant's privacy. Moreover, parks and playgrounds are needed to maintain the occupants' health since they can get fresh air, the comfort and aesthetic of the environment and what is not less important, the place to interact with others. The same priority also takes place for the availability of the street and the shuttlecock court where the wider street is aimed to function either the circulation way or place to play and interact with others as well. In middle-high estates especially, the occupants require a wider street to manoeuvre the car and on the other hand the middle-low residents will do all their activities including play with the children in that same wider street.

The difference in both types of housing is illustrated by the perception of shade and the priority chosen. The occupants in middle-high one concern much more about the shade rather than that of middle-high estates. It is proven by the fact that the higher the occupant's income, the more the shade they demand for. Additionally, the different in the classification of category takes place at the multifunctional court and the garden barriers. The residents prefer to have the initial open space's condition and the necessity to interact with others as the amenities offered by the developer.

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