

# Evaluation Of Shape Of Balconies In Flats Observed From Aspects Of Beauty And Safety

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## Evaluation of the shape of balconies in flats viewed from aspects of beauty and safety

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**ABSTRACT.** Government flats provide a balcony or back porch for each residence. The main function of this balcony is actually as a place for relaxing activities with the family enjoying the outdoor scenery and as a place for fresh air from outside. This is in accordance with the Technical Requirements for the Construction of Flats mentioned in Article number 37, which states that the apartment unit, which is the area provided for apartment housing, can consist of one main room (sleeping room) and another space (supporting space) inside and/or outside the main room. One of the supporting rooms is a balcony. The purpose of this study is to find answers to the role of the shape of the balcony on the aspects of beauty and safety so that it can provide recommendations on the design of the next balcony in the apartment so that the function of the balcony can be fulfilled and it is expected to produce a balcony that can fulfill the beauty and safety aspects. This study uses a quantitative descriptive approach carried out on balconies in several flats with variations in type. In this study there are two variables, among others, the independent variable, namely the perception of occupants and the dependent variable, which is the aspect of beauty and safety. The research data analysis used descriptive cross tabulation with the results of the study that the occupants' perceptions of the aspect of beauty were in the bad category of 38%. Some residents use balconies that are quite narrow for various activities such as cooking, drying clothes, storing items, even for bathing. The condition of flats, especially balconies, has decreased the quality and appearance of apartment buildings to look shabby. Whereas in the safety aspect the results were quite good at 62% because almost most of the balconies were equipped with safety railings so that residents felt safe when on the balcony.

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Keywords: balcony, beauty, safety, shape, railing

### Background

The increase in population and the need for housing, especially for the middle and lower classes, made the Government make a policy by building flats. In accordance with the regulation of the Minister of Public Works on the technical requirements for the construction of flats, article 37 states that the area provided by the government in residential flats is a minimum of 18m<sup>2</sup> consisting of one main space and other spaces inside / outside the main space which is a unit to meet daily needs. The other room is a supporting room for one of them is a balcony. Vertically designed buildings usually use balconies in each of the various functions.

In a previous study of a shared kitchen in an 18m<sup>2</sup> apartment, it was found that residents used a balcony that was quite narrow for cooking and drying clothes. The condition of the apartment has decreased, including the condition of the balcony. Quality degradation occurs in the technical, functional, and aesthetic aspects of the building, as seen from the condition of the balcony which has undergone many changes in shape and function. The level of occupant satisfaction with building quality is low both in terms of comfort and organization of space (Prasojo P, 2014). The balcony's role is the face of the apartment buildings' appearance so that if the balcony changes its function and form, it will also change the facade of

the building. The main priority of facilities that must be in flats is one of them is the availability of drying places (Hapsari W, 2006).

This study is expected to find the right shape of the functional balcony in terms of beauty and security so that it can be used as reference for government guidelines in designing flats. In designing a simple apartment, residents are the main elements that play a role in building maintenance and facilities so that sustainability can be maintained (Anindya A, 2016).

### Literature Review

Definition of Balcony according to the KBBI is a ledge or upper porch or a top floor terrace in a multi-storey building or a seat on the upper level. A balcony in a flat is a terrace that is located on the outside of the room and is located above and is used for good activities that support the inhabited process. For residents of the apartment flats are considered as one of the helper rooms. Balconies are more private than the front porch. Therefore the main function is as a place to relax and gather for all family members. Balconies can be equipped with plants that can soften the atmosphere of the room. The presence of a balcony for flats is very important, it can be used as a lounge or a room to lay plants that can provide coolness to the building (Septyadinda L, 2013). The balcony is also called the back porch for multi-storey buildings, it can be a seat that is located at the top level.

Beauty comes from the word Beautiful, Beauty is the nature of something that gives us pleasure when we see it. In KBBI, beauty is defined as a state that is pleasing to the eye, beautiful, good or right. Beauty is studied as part of aesthetics, sociology, social psychology, and culture. While security is a safe adjective derived from the meaning of the word security, which has a meaning free from danger. If it is associated with a building, building security is a condition free from risks related to human lives in it and building assets in the building.

Flats are multi-storey buildings that are built in an environment, which are divided into functionally structured parts in a horizontal or vertical direction and are units that can be owned and used separately, especially for residential areas equipped with parts together, shared objects and shared land (Richard, 2010). There are several types in the apartment typology associated with the level of financial ability of apartment owners :

- a. Small type: T-18, T-21, T-24, T-28  
Namely, flats which only consist of a common room, terrace , balcony and bathroom
- b. Medium type: T-36, T-54, T- 70  
Namely the type of apartment consisting of a common room, bedroom, terrace, kitchen, balcony and bathroom.
- c. Luxury type: T-100 and above

According to Government regulation no.4 of 1998 concerning flats, it is explained that open balconies or terraces are provided at the back of apartment housing and are equipped with safety walls on each side with a minimum height of 1.20 meters. The terrace / balcony has 9 functions, namely (Septyadinda L, 2013) :

- a. The balcony has a psychological function as a place of interaction between family members.
- b. Balcony as an extension of space, because it is located right next to the inner room
- c. The balcony widens the view, because the balcony has a wider viewing window so that it can be a great place to enjoy the scenery around
- d. Balcony as a floor level reinforcement
- e. The balcony is an element of revitalization, with a balcony, the facade can be more attractive
- f. Balconies add to the design value of a building and its space organization
- g. The balcony is an expression of the taste of the owner or occupant

- h. The balcony reduces the impact of climate, serves to protect the space below it from solar thermal radiation
- i. Balcony as a marker or differentiator of a house from another house

### Methodology

This study uses a descriptive approach that is by describing the nature of a situation observed at the time of the study and connecting with the causes of a particular symptom. Observations were made on balconies in several flats with variations in type. The research variable is everything in the form of anything and is used by researchers to be studied and draw conclusions (Sugiyono, 2012). In this study there are two variables, among others, the independent variable, namely the perception of occupants and the dependent variable, which is the aspect of beauty and safety. The research data analysis used a descriptive cross tabulation carried out in 3 flats in Surabaya with different types of occupancy. Population is a complete group of elements in a unit where the data is collected (Sukandari, 2006). In this case the study population is residents in the apartment house Penjaringan Sari I represents the type of occupancy of 18m<sup>2</sup>, the Wonorejo Flats represent the type of occupancy of 21m<sup>2</sup> and the Flat Housing Penjaringan Sari III Surabaya represents the type of 24m<sup>2</sup>.

Data collection is done by distributing questionnaires on the grounds that it saves more time. While data processing is carried out by weighting on the quality of the balcony of a flat with a Likert scale, which is a scale that contains the level of answer which is the ordinal type scale as follows: 5 = very good; 4 = good; 3 = normal; 2 = bad; 1 = very bad. It is said to be an ordinal type because very good questions have a higher level of good and good, higher than normal, and so on.

### Results and Discussions

Balcony is one of the choices of additional space for residents, but many are less concerned about the role of balconies in their dwellings. Most apartment managers do not heed the role of balconies due to the high cost factor in terms of balcony maintenance. Some activities are carried out by residents in the balcony area. From the results of the questionnaire it was found that the activities most often carried out by residents on the balcony were drying clothes (38%), then cooking activities (28%) and bathing (24%). While the smallest is eating and sitting each 5%. This is because there is no place to hang clothes so that most residents use a balcony to dry clothes. Whereas in cooking activities several flats for example in Penjaringan Sari I have a shared kitchen which is used for cooking activities. But some residents use balconies for cooking activities and shared kitchens are used as warehouses.

Table 1: Occupational Activity Data on the Balcony

Activity	Total	%
1. Drying	16	38
2. Cooking	12	28
3. Bathing	10	24
4. dining	2	5
5. sitting	2	5
total	42	100

Source: (Questionnaire results with respondents , 2019)

Meanwhile, The conditions of balconies nowadays are:

- a. Reduced aesthetic value which is a result of the habit of residents hanging out clothes on the balcony.
- b. Residents do not understand the function of the balcony.



Figure 1: Photos of cooking activities on the balcony  
Source: (Dyan, 2019)



Figure 2: Photo of clothes drying on the balcony  
Source: (Dyan, 2019)

Some of the problems that arise on the balcony include the presence of heat from the balcony caused by the direction of the building where the side facing the afternoon sun will receive higher heat and the absence of vegetation as shade of the building. Some of the problems that arise on the balcony include the presence of heat from the balcony caused by the direction of the building where the side facing the afternoon sun will receive higher heat and the absence of vegetation as shade of the building. Most of the residents of the flats feel that the balcony they have is not spacious and they are happy if their balcony is used for greening as a filter for the air and heat of the sun.

Penjaringan Sari I Flats



Figure 3: Front View of Penjaringan Sari I Flats  
Source: (Dyan, 2019)

The area of the balcony in the Penjaringan I apartment is 3m<sup>2</sup> located at the rear of the housing. Most of the activities carried out on the balcony by residents in the flats in Penjaringan Sari I are activities for drying clothes and cooking. They make a private kitchen on their balcony because the shared kitchen provided by the government according to them is less comfortable and less private. They prefer to cook in the balcony area because they feel freer and not ashamed to be seen by their neighbors. Other activities besides cooking which are also done by most residents are drying clothes. This activity they do because the manager does not provide a common drying place so they use the balcony area. The shape of the balcony trellis also affects the way they hang clothes. The presence of a horizontal elongated trellis at the bottom that protrudes out is used by residents to associate the clothesline so that their clothes are visible directly from the outside. This is done by residents because they want their clothes to dry quickly. By hanging directly on the area outside their balcony hoping that the wind and the heat of the sun could dry their clothes directly.

Table 2: Factors affecting the visual quality assessment of Penjaringan Sari I flat façade

judgment	Value	Element									
		Roof		Wall paint		Balcony		Ornaments		Material	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Very bad	1	1	1	10	10	20	20	2	2	6	6
bad	2	2	4	10	20	2	4	12	24	14	28
normal	3	20	60	4	12	2	6	10	30	2	6
good	4	1	4	0	0	0	0	0	0	0	0
Very good	5	0	0	0	0	0	0	0	0	0	0
Total		24	69	24	42	24	30	24	56	24	40
Assessment		2,8 = 3		1,7 = 2		1,2=1		2,3=2		1,7 = 2	
Information		normal		bad		Very bad		bad		bad	

Description: \* 1 = very bad; 2 = bad; 3 = normal; 4 = good; 5 = very good

#### Wonorejo Flats



Figure 4: Front View of Wonorejo Flats  
Source: (Dyan, 2019)

The area of the balcony in the Wonorejo apartment is 1.5 m<sup>2</sup> which is located at the back of the residence next to the bathroom. Most of the activities carried out on the balcony by residents in the Wonorejo flats are drying clothes and cooking. They make a private kitchen on their balcony because there is no separate kitchen room. Whereas the place for drying is also not available so that residents use the balcony as a drying area. The shape of the balcony trellis is also arranged vertically so that residents can hang clothes out of the balcony railing. The shape of the balcony that has a flat facade wall makes it look less good and hot facade. Canopies mounted on top of each balcony seemed not to fuse with the facade.

Table 3: Factors affecting the visual quality assessment of Wonorejo flat façade

judgment	Value	Element									
		Roof		Wall paint		Balcony		Ornaments		Material	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Very bad	1	0	0	0	0	0	0	0	0	0	0
bad	2	1	2	0	0	5	10	3	6	4	8

normal	3	5	15	6	18	4	12	6	18	5	15
good	4	4	16	3	12	0	0	0	0	0	0
Very good	5	0	0	0	0	0	0	0	0	0	0
Total		9	33	9	30	9	22	9	24	9	23
Assessment		3,6 = 4			3,3 = 3			2,4 = 2		2,6 = 3	
Information		good			Normal			bad		normal	

Description: \* 1 = very bad; 2 = bad; 3 = normal; 4 = good; 5 = very good

#### Penjaringan Sari III Flats



Figure 5: Front View of Penjaringan Sari III Flats  
Source: (Dyan, 2019)

The area of the balcony in the Penjaringan Sari III apartment is 2.6 m<sup>2</sup>, which is located in the back of the residential area next to the bedroom. Most of the activities carried out on the balcony by residents in the Wonorejo flats are drying clothes. While cooking activities are carried out in the inner area next to the bedroom. The place for drying is also not available so residents use the balcony as a drying area. The shape of the balcony trellis is arranged horizontally with sufficient density so that residents cannot put their clothes out of the balcony trellis. According to the interview results, the clothes they dry can still be dry because the wind can still enter through the gap in the railing. Besides that their balcony did not feel hot because the shape of the overhanging balcony provided shade for the balcony below.

Table 4: Factors affecting the visual quality assessment of Penjaringan Sari III flat façade

judgment	Value	Element									
		Roof		Wall paint		Balcony		Ornaments		Material	
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Very bad	1	0	0	0	0	0	0	0	0	0	0
bad	2	0	0	0	0	0	0	0	0	0	0
normal	3	2	6	2	6	1	3	6	18	1	3
good	4	7	28	6	24	7	28	3	12	8	32
Very good	5	0	0	1	5	1	5	0	0	0	0
Total		9	34	9	35	9	36	9	30	9	35
Assessment		3,7 = 4		3,8 = 4		4		3,3 = 3		3,8 = 4	
Information		good		good		good		normal		good	

Description: \* 1 = very bad; 2 = bad; 3 = normal; 4 = good; 5 = very good

From the results of the study, an assessment of the quality of the balcony of the apartment in selected objects has been assessed. The data can be seen in the following table 5:

Table 5: Evaluation of apartment flats



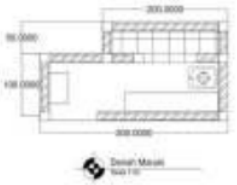






No	Flats	Area per unit	Assessment	Information
1	Penjaringan Sari I	18 m <sup>2</sup>	1,2	Very bad
2	Wonorejo	21 m <sup>2</sup>	2,4	bad
3	Penjaringan Sari III	24 m <sup>2</sup>	4	good

Source: (Author, 2019)

From the analysis it can be seen that in the 18m2 residential unit the balcony value is very bad, while the Penjaringan Sari III with residential type 24 m2 gets good value. The relationship between the size of residential units and quality is a narrow residential unit that makes the space available for use. In the type of 18m2 residential unit there is no kitchen, bathroom and drying area for each residential unit. So that all three activities were carried out on the balcony. Whereas the 24m2 type Penjaringan Sari III flat gets good value because the kitchen and bathroom area are provided in the interior, so the balcony is only used as a drying place. Thus, the fewer activities that occur on the balcony, the better the quality of the balcony.

The assessment was also influenced by the shape of the balcony. The analysis of the security aspect of the flat in Penjaringan Sari III is also the safest because of the thick shape of its trellis railing. The results of the balcony shape analysis on the aspects of the beauty and safety of flats can be seen in the table below:

Table 6: Balcony Shape Analysis of the Beauty and Safety aspects

	Penjaringan Sari I flat	Wonorejo flat	Penjaringan Sari III flat
Shape of Balcony	   <ul style="list-style-type: none"> <li>• The shape of the balcony protrudes out</li> <li>• The shape of the trellis is arranged vertically with less tight distance</li> <li>• There is a canopy attached to the balcony</li> </ul>	   <ul style="list-style-type: none"> <li>• Form a flat wall balcony</li> <li>• The shape of the trellis is arranged vertically with less tight distance</li> <li>• There is a canopy attached to the balcony</li> </ul>	   <ul style="list-style-type: none"> <li>• The shape of the balcony protrudes out</li> <li>• The shape of the trellis is arranged horizontally with a fairly tight distance</li> <li>• Canopy into one with a balcony</li> </ul>
Beauty Rating	<p>Less beautiful</p> <p>With the shape of a trellis railing that is arranged vertically with a tenuous distance to make residents can hang out to the balcony, this can reduce the visual quality of flat facade</p>	<p>Less beautiful</p> <p>With the shape of a trellis railing that is arranged vertically with a tenuous distance to make residents can hang out to the balcony, this can reduce the visual quality of flat facade</p>	<p>Beautiful</p> <p>With the form of a trellis railing that is arranged horizontally and tightly, the occupants cannot hang out outside the balcony, so that the clothesline is not visible from the outside and can still maintain the visual quality of the flat facade.</p>



	Not safe	Safe	Very safe
Security Assessment	With the distance of the trellis that is not too tight and the trellis protrusion makes the occupancy less secure, for example items placed on the upper floor may fall Besides that the thickness of the trellis can reduce the occupants' sense of security especially those on the upper floors.	With the distance of the trellis which is quite tight and flat with the wall, it is felt quite safe by the occupants. Only the thickness of the trellis is felt lacking because it still seems less strong.	With the distance of a fairly tight and thick trellis increases the occupants' sense of security.

Source: (Dyan, 2019)

Questionnaires were distributed to 42 respondents. From the results of the research data analysis, it was found that the respondents' perceptions of the shape of the apartment flats. A total of 16 people (38%) said their balconies were beautiful, the remaining 26 (62%) respondents considered their balconies safe. Aspects of beauty are included in the bad category. Some residents use balconies that are quite narrow for various activities such as cooking, drying clothes, storing items, even for bathing. The condition of flats, especially balconies, has decreased the quality and appearance of apartment buildings to look shabby. Whereas in the aspect of safety, the results are quite good because most of the balconies are equipped with safety railings so that residents feel safe when on the balcony.

## Conclusion

From the evaluation of the shape of the balcony of the apartment it can be summarized as follows:

- a. Safety aspect:
  - The shape of a balcony equipped with a high trellis/safety railing increases the sense of security for residents.
  - The form of balcony railings/railings arranged horizontally is safer
  - The density of railings / trellises also affects the safety of the balcony.
- b. Beauty aspects:
  - The extent of occupancy affects the beauty of the balcony. The link between the size of the residential unit and the beauty of the balcony is in a narrow residential unit making the space available to be used so that residents will use the balcony to deal with it.
  - The shape of a balcony that protrudes out makes the apartment look more beautiful and can provide added value because the facade looks more alive.
  - The form of balcony railings / railings arranged horizontally is more beautiful than those arranged vertically because they are arranged horizontally and cannot be used to hang clothes out of the balcony.
  - The density of railings / trellises also affects the beauty and safety of the balcony.
  - The importance of the availability of a drying place for residents of the apartment so that they can hang clothes in a special drying place so that the quality of the balcony is maintained.

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