

Shared Space's Physical Aspects in Forming Place Dependence of Boarding House Residents

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Abstract— *Place dependence in the boarding house is formed when the residents of the boarding house feel comfortable or at home while living in the boarding house. There is a phenomenon in boarding houses when residents often move from one boarding house to another. This causes material losses for the boarding house owner and harms the occupants because it makes activities difficult. One factor that makes boarding house residents often move is the availability of existing facilities. Therefore, to increase place dependence on boarding house residents, the physical aspects must be able to accommodate the needs of the user's activities, in particular for the shared space. This study aims to understand the influence of the physical aspects of the shared space in the formation of place dependence for boarding house residents by using a combined strategy: dominant-less dominant research design. It was conducted in a female boarding house inhabited by a group of students and workers. In the early stages of this study, data were obtained from the results of the place dependence questionnaire on boarding house residents. This paper then discusses the results of observations and in-depth interviews, which were analyzed using qualitative analysis tools to validate the results of the questionnaire analysis. The results of this study indicate that the physical aspects of the shared space, which include furniture, floors, walls, and ceilings, can affect the formation of place dependence for boarding house residents.*

Keywords— *Boarding House, Place Dependence, Physical Aspect.*

I. INTRODUCTION

A boarding house is a temporary residence for migrants or those who work or study away from their hometown. Due to the urbanization, more migrants work or continuing their education in the city of Surabaya. Boarding houses are temporary rentals for people who want to rent at a more affordable price than apartments or hotels rented out for a certain period. Compared to apartments or hotels that use the daily system, boarding houses are preferred by temporary residences because they offer longer terms (Bakti, 2012).

The phenomenon is that the residents of the boarding house often move from one boarding house to another, which is caused by the residents' dissatisfaction with the existing facilities and environment. The level of satisfaction in choosing a boarding house can be measured based on several influencing aspects, namely aspects of environmental sanitation, distance from the intended location, price, available facilities, environmental safety, and accessibility (Devri & Ananto, 2019). According to Canter in Groat and Wang (2002), the primary function of the physical environment is the result of the correlation of 3 aspects, namely: physical location, activities carried out in the physical environment, and the meaning

contained in the location that can be mixed with user places and activities. The behaviour itself can be seen when residents carry out activities.

Human behaviour towards space is believed to have a reciprocal relationship between humans and their spatial environment, including the artificial and natural environments. In architecture that studies the relationship between humans and space, space as a place of activity is designed to meet human needs, providing a space that satisfies the user. The environment is directly related to human activities. Therefore, by identifying the system of activities that occur in space, the environmental system is associated with the presence of elements in space (Rapoport, 2005).

The place is the attribute of space with a specific meaning, experience, and physical form. The space in the boarding house has different spatial properties, namely public, private, and service. An example of a public room is the dining room, for a private room, namely the bedroom or bedroom of the boarding house. The service room is the kitchen or pantry and bathroom.

The existing facilities in the boarding house do not provide only a bedroom but spaces that support the activities of the occupants, such as shared room facilities. A shared space allows a group of people to interact by providing space for a group of people to carry out activities together (Lang, 1987). Shared space is not only limited by physical space, but space to interact with other people, a space to share and carry out various activities, including social, economic, and cultural interactions, social activities, and space to gather (Sunaryo et al. 2004).

Looking at the various attributes, the researcher tries to relate it to the theory of place of dependence as a stage in seeing the influence of shared space in the attachment of the residents of the boarding house to their environment.

II. THEORETICAL FRAMEWORK

A. Boarding House

A boarding house is a temporary residence rented out to other people with the availability of certain facilities and at a more affordable cost than in a hotel or inn. The boarding house is used as a new residence for its residents because the majority of boarding houses are rented for a monthly or yearly period, while hotels or inns use a matter of days. The term boarding house cannot be separated from and co-exist with students because usually, boarding houses are rented out to students. However, boarding houses are also rented out to those already working and have families. In boarding houses, the residents

are very diverse, from the rental method, the facilities available, and the prices. In addition, a boarding house is a promising investment for the owner because the owner can earn a monthly income.

According to Bakti (2012), there are four characteristics for boarding houses as temporary residences, including (1) Short or long-term rental term, (2) Affordable compared to apartments or hotels, (3) Mostly are accessible and comfortable, located in campus areas, offices, and schools, (4) A variety of rental system is available from daily, monthly, semester, or annual.

B. Shared Space

According to Lang (1987), shared space is to accommodate activities for a group of people to interact with one another and to make space for a group of people to do activities together. Sunaryo et al. (2004) explained the criteria for shared space as (1) a place for human interaction, (2) a space for sharing and carrying out various activities with social activities as the main focus, (3) being a place for community activities for community interaction where various activities occur, and (4) a space where people gather.

This shared space has three standards mentioned by Scurpton in Beng-Huat (1992), among others: (1) Anyone can access (Accessible). (2) Shared space is more synonymous with community activities. (3) This kind of activity is more dominant in the social aspect (4) User behaviour is governed by local social norms. The interaction process between the occupants of the boarding house and the shared space setting in the boarding house can produce phenomena of behaviour, adaptation, comfort, accessibility, and privacy. From the previous explanation, the limitations of the criteria for the shared space in this study are the space used to interact between the residents of the boarding house, the space that all residents of the boarding house can access, and the space to share and carry out various activities.

C. Place Theory

Place theory in architecture lies in the culture and individual characteristics of the place. Humans need a meaningful place to develop their life and culture. The need arises because there is a human understanding of something broader than physical problems. According to David Canter (1977), showing the ultimate goal in environmental design is to create a place. Canter defines a place as a unit of experience that integrates activities and the physical environment. A place is a space with its characteristics. The place has an abstract meaning and may be located in space. According to Trancik (1986), a space will exist if a void limit it, and space becomes a place if it has meaning from the area that comes from the local culture. A space can be created in its entirety if there are elements that make it up according to (Ching, 1996), namely the components of the physical aspects of the shared space in the boarding house, including elements of furniture, floors, walls, and ceilings.

D. Place Dependence

Place dependence is the development of the concept of place attachment, which defines individual dependence on a particular place, and how the individual can reach a goal with

some preferences that exist in a place (Stokols and Shumaker, 1998, in Jorgensen, 2001). If the individual has a long-standing bond with a place (because of staying or constantly visiting), and this supports goals and activities that are wholly important to that person, then at that time, that person will form a relationship with that place. Place dependence will be formed (1) when the activity of the relationship between the individual and the environment depends on the match between a need, including physical factors and psychological factors (activities), (2) material resources and social conditions that exist in the environment (preference), (3) individual satisfaction with the situation or place of residence (satisfaction), (4) more comfortable place to live compared to various alternatives (best) (Giuliani, 2003).

Based on these theories, the research will look at the physical aspects of the shared space and analyze it based on Giuliani (2003). Aspects of place dependence: (1) The activities of the residents of the boarding house (activities). (2) Material resources and social conditions that exist in the boarding house (preference). (3) Occupant satisfaction with the shared space of the boarding house (satisfaction). (4) Residents are more comfortable in the shared space compared to various alternatives (best).

III. MATERIAL AND METHODS

The method used in this research is a combination strategy: dominant-less dominant. According to Groat and Wang (2013), the combination strategy: dominant-less dominant design is a type of research that maintains research coherence. Overall owned by the dominant research design and less dominant designs are then used to provide greater depth and validity regarding certain aspects of the research.

The location of this research is a boarding house located close to campus A and B Universitas Airlangga, Doctor Soetomo Hospital, and a location close to shops and offices. The limitation is a boarding house located in a residential area in the Airlangga Village, Surabaya. The boarding house was chosen in the Airlangga Village settlement due to the area's location in the middle of Surabaya City and to get perspectives from various respondents because the boarding house residents have various backgrounds.

In this study, the researcher determined the respondent's criteria for conducting in-depth interviews were (1) occupants with monthly rental system (2) having occupied a boarding room for a minimum of one month which is considered familiar with the boarding environment. According to Scannell and Gifford (2010), on an individual scale, the user's attachment to space arises because of the experiences people feel in the place.

The data collection method was used to analyze the physical aspects of the shared space of the boarding house and the activity patterns of the residents of the boarding house through observation and in-depth interviews. These were analyzed qualitatively. The following stage analyses the place dependence aspect, including indicators of activities, preference, satisfaction, and best (Giuliani, 2003), by the residents of the boarding house.

IV. RESULT AND DISCUSSIONS

1. The Research Location

The location of this research is aimed at boarding houses around the Unair B campus, which are intended from various backgrounds, ranging from those currently studying in school or college and those currently working. Four boarding house locations have a female boarding house typology which is used as the research location. Figure 1 shows the proximity of boarding house in the research locations (1 to 4), which are with the radius 1 kilometer.

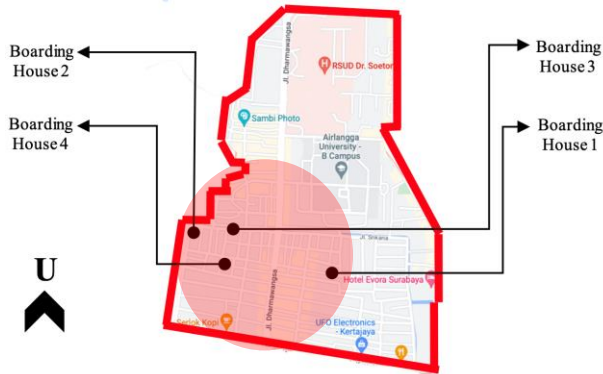


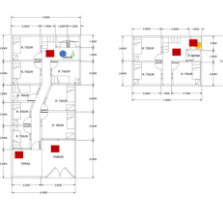

Fig. 1. The research locations 1 to 4



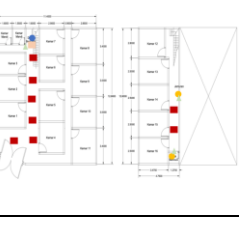
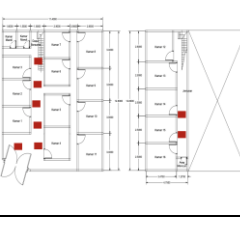



Source: Personal documentation, 2022.

2. Types of Activities and Spatial Behavior of Boarding House

The types of activities and spatial behaviour of the occupants were obtained from the observations of the boarding house. According to the theory of Lang and Moleski (2010), spatial behaviour is daily behaviour consisting of activities, interactions with other people, and emotional ways. It is related to behaviour that fulfils a goal. Data collection on the behaviour and activities of the residents of the boarding house is carried out by observing on weekdays (weekdays) and weekends (holidays) in the morning from 06:30 – 08:30 and the afternoon from 15:00 – 17:30. Table 1 shows the types of activities and behaviour of the boarding house residents in the morning, and table 2 shows the types of activities and behaviour of the boarding house residents in the afternoon. All of the activities identified are located in the shared spaces.

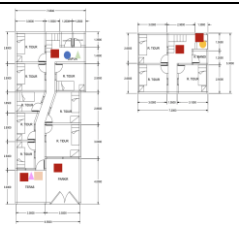

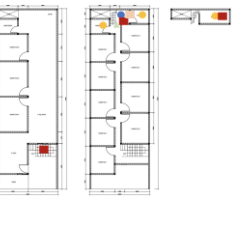

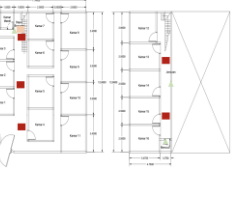
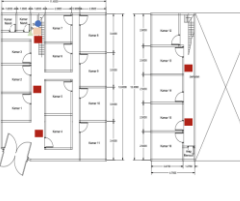
TABLE 1. Types of activities and behaviour of the boarding house residents in the morning

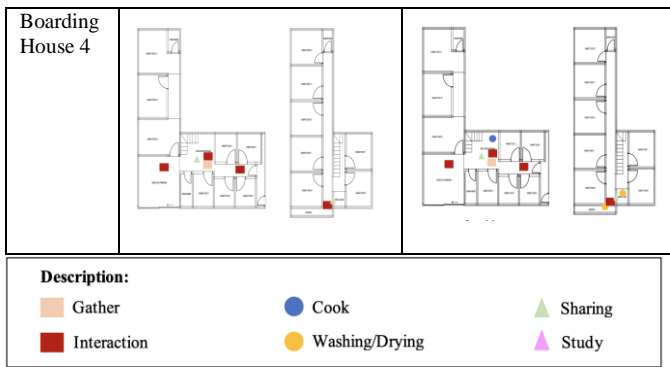
Location	Type of Activity and Behavior – Morning (06:30 am – 08:30 am)	
	Weekend	Weekday
Boarding House 1		

Boarding House 2		
Boarding House 3		
Boarding House 4		
Description: 		

Source: Personal documentation, 2022.

TABLE 2. Types of activities and behaviour of the boarding house residents in the afternoon.

Location	Type of Activity and Behavior – Afternoon (15:00 pm – 17:30 pm)	
	Weekend	Weekday
Boarding House 1		
Boarding House 2		
Boarding House 3		



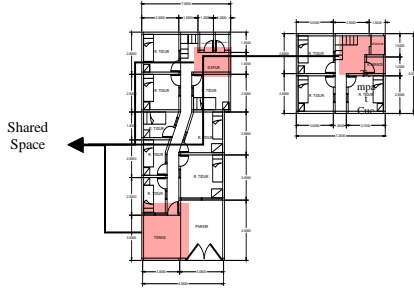
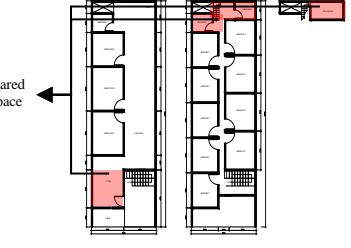
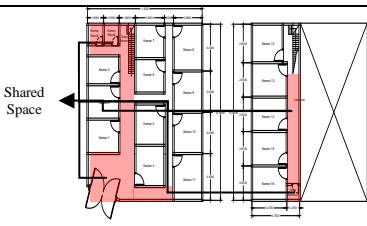
Source: Personal documentation, 2022.

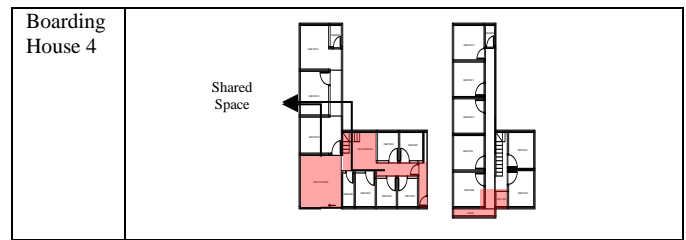
From the observations, it can be seen that activities are relatively the same between morning and afternoon at the weekend. It is most likely because residents spent most of the weekend at the boarding house.

3. Spatial Pattern

Based on the analysis of the activities and behavior of the occupants of the four boarding houses, two patterns of shared space arrangement are often used. The pattern of shared space arrangement for boarding houses 1 and 2 has a spreading pattern of shared space arrangement, while for boarding houses 3 and 4, it has a linear pattern arrangement, can be seen in table 3.

TABLE 3. Pattern of shared space arrangement

Location	Shared Space Layout Pattern
	Picture
Boarding House 1	
Boarding House 2	
Boarding House 3	



Source: Personal documentation, 2022.

From the results of observations on the types of activities and activities of the residents of the boarding house, which has a spreading spatial pattern and a linear spatial pattern, the analysis of the shared space pattern can be seen in Figure 2.

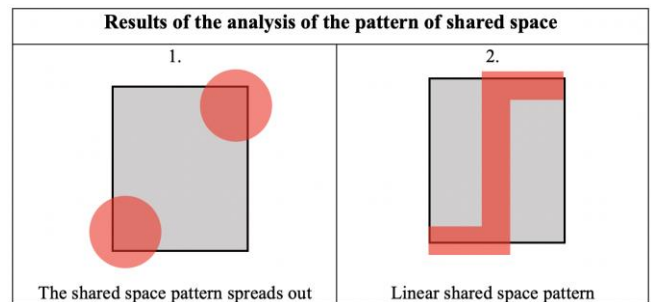


Fig. 2. The results of the analysis of the pattern of shared space
Source: Personal documentation, 2022.

4. Questionnaire Result

In the questionnaire, the questions include (1) the activities of the boarding house occupants (activities). (2) Material resources and social conditions in the boarding house (preference). (3) Residents' satisfaction with the shared space of the boarding house (satisfaction). (4) Occupants are more comfortable in the shared spaces compared to various (best) alternatives.

The questionnaire in this study was closed, respondents (residents of boarding houses) answered questions with predetermined answers, closed questionnaires with a Likert scale. On the likert scale, four choices represent the degree of agreement of the informants namely, (1) strongly disagree, (2) disagree, (3) agree, and (4) strongly agree.

Guidelines from the questionnaire data on the location dependence indicators include activities indicators (X1.1 and X1.2), preference indicators (X1.3 and X1.4), satisfaction indicators (X1.5 and X1.6), and best indicators (X1.7), table 4 shows the average place dependence of the residents of the boarding house.

From the questionnaire data on the indicators of the place dependence aspect of the two groups of boarding house residents, the average of each indicator was calculated so that the highest and the small place dependence indicators could be seen.

The highest average indicator value of the two groups of boarding house occupants is the satisfaction indicator (X1,5 and X1,6), with an average of 3.1 and 3.1. This result is because the house residents are satisfied with the physical aspects of the shared space.

TABLE 4. The average place dependence of the residents of the boarding house

No	Length of stay	Work	Place Dependence							Total X1
			X1.1	X1.2	X1.3	X1.4	X1.5	X1.6	X1.7	
1	3 month	Student	3	2	4	3	3	3	3	21
2	3 month	Student	3	3	4	3	4	3	4	24
3	1 month	Student	3	3	3	3	3	3	3	21
4	1 week	Student	4	4	4	4	4	3	4	27
5	2 week	Student	2	2	3	2	3	4	3	19
6	1.5 week	Student	2	2	3	3	3	4	2	19
7	3 year	Student	4	2	4	3	4	4	3	24
8	4 month	Student	1	1	2	1	2	3	1	11
9	1 week	Student	2	2	2	4	3	2	3	18
10	1 month	Student	1	2	4	2	4	3	2	18
11	3 year	Student	1	2	2	1	2	2	2	12
12	1 month	Student	2	4	2	3	2	3	2	18
13	2 month	Student	2	1	2	2	3	3	3	16
14	30 month	Student	2	1	3	3	3	4	2	18
15	1 week	Student	2	1	3	3	3	4	1	17
16	>1 month	Student	1	1	3	2	3	3	2	15
17	5 year	Student	3	2	4	3	3	4	1	20
18	4 month	Student	2	2	2	2	2	2	2	14
19	4 month	Student	4	4	4	4	4	4	4	28
20	1 month	Student	4	4	4	4	4	4	4	28
21	2 month	Student	4	4	4	4	4	4	4	28
22	1 month	Student	4	4	4	4	4	4	4	28
23	1 month	Student	3	3	3	3	3	4	3	22
24	1 month	Student	3	3	3	3	3	3	3	21
25	1 week	Student	3	3	2	4	4	3	3	22
26	1 month	Student	2	2	3	3	3	3	2	18
27	3 month	Student	1	1	2	1	2	2	1	10
28	2 month	Student	3	4	3	4	3	3	4	24
29	8 month	Wokers	1	1	3	2	2	2	1	12
30	3 day	Wokers	3	4	3	4	4	4	4	26
31	6 month	Wokers	1	1	3	3	3	2	2	15
32	6 month	Wokers	1	1	2	1	3	1	1	10
33	2 month	Wokers	1	2	3	2	2	3	2	15
34	6 eyar	Wokers	2	1	3	3	4	3	2	18
35	6 month	Wokers	1	1	2	1	3	2	1	11
36	5 month	Wokers	2	1	3	2	3	3	2	16
37	1,6 year	Wokers	3	3	3	3	3	4	3	22
38	± 6 year	Wokers	3	3	3	3	3	3	3	21
39	± 6 year	Wokers	3	3	3	3	3	3	3	21
40	3 month	Wokers	2	2	3	3	3	3	2	18
Average			2.35	2.3	3	2.78	3.1	3.1	2.53	19.15

Source: Questionnaire results, 2022.

As for the average results, the small indicator is the activity indicator (X1.1 & X1.2), which has an average value of 2.35 and 2.3. These results can be assumed in the student group that the activities in the shared spaces are still not optimal because the boarding house where the research is carried out does not yet have a special place to accommodate each activity. Meanwhile, the workers are less active in the boarding house because the residents are more active outside the boarding house (working).

5. Interview Result

This study looks at the condition of the physical aspects of the shared space in the boarding house. The physical aspect of the shared space includes elements of furniture, floors, walls, and ceilings. To determine the effect of physical aspects on the formation of place dependence, data were collected through in-depth interviews with respondents who met the criteria for this study. Therefore, several questions were asked to the residents of the boarding house. The questions asked were about the opinion of the boarding house residents regarding the physical aspects that could affect place dependence. In the list of questions, residents have explained the results of the analysis of the physical aspects of the observations and an explanation of

place dependence so that the informants can understand the topic to be asked.

Respondent (1) is a statement according to the residents of the boarding house regarding the physical aspects, which include elements of furniture, floors, walls, and ceilings.

Respondent (1)

"In terms of conditions, it is just like that, the area of the shared space is quite wide, but what is less likely is cleanliness, the other occupants should put their things in the place that has been provided, that is all, bro" (In-depth interview with respondents 1, 2022).

From the statement the of respondent (1), it can be concluded that the residents of the boarding house are pretty satisfied with the condition of the shared space. Therefore, place dependence (an indicator of satisfaction) on residents is relatively high due to occupant satisfaction with the shared space in the boarding house.

In respondent (2), according to the boarding house residents, there needs to be additional specific shared space, such as a gathering room, to accommodate the residents' social interaction. From this statement, it is necessary to have a gathering room in a boarding house. If the boarding house has a gathering room, the aspect of place dependence (preference indicator) on the residents of the boarding house will be high.

Respondent (2)

"In my opinion, the existing shared space is sufficient. If there is a need for additional space, such as a gathering room, that is it" (In-depth interview with respondent 2, 2022).

Respondent (3) is a statement by residents of the boarding house regarding the intensity of activities carried out in the shared space more often than the group of workers.

Respondent (3)

"In terms of activity, maybe outside the boarding house more often, because I was at work at 7 in the morning, I came home from work at four until the boarding house took a break. For example, if you want to buy food via online motorcycle taxis, but on weekends, you usually cook together with other boarding children" (In-depth interview with respondent 3, 2022).

From the statement of respondent (3), it is necessary to have a gathering room in a boarding house. If the boarding house has a gathering room, the place dependence aspect (an indicator of activities) on the residents of the boarding house is low. The boarding house occupants assume that the function will be a shared space, namely as a place to facilitate activities in the boarding house. In the data, four residents of the boarding house prefer the shared space in the boarding house compared to outside the boarding house. However, according to residents, there needs to be additional space to accommodate joint activities.

Respondent (4)

"I prefer to stay in a boarding house, because it can save expenses. However, if, for example, there are specific spaces to accommodate specific activities, it is better, such as the gathering room or dining room" (In-depth interview with respondent 4, 2022).

From respondent (4) obtained based on the results of interviews, the residents of the boarding house will use the shared space in the boarding house. However, the residents of the boarding house still feel a lack of space to accommodate joint activities such as a gathering room. The availability of space that can accommodate the activities of the occupants of the boarding house will be able to form a place of dependence (the best indicator).

Respondent (5)

"I'm actually quite satisfied (physical aspect: includes elements of furniture, floors, walls, and ceilings), but if possible, the kitchen was a bit bigger so that we can cook together freely" In-depth interview with respondent 5, 2022).

Respondent (6)

"In my opinion, the area of this place (washing area) is a little less wide, because for two it feels very narrow, that's all, bro" In-depth interview with respondent 6, 2022).

Based on respondents (5) and (6), the physical aspects of the washroom and kitchen with the occupants are not satisfactory because the area of the washing area is relatively small. Meanwhile, for other physical aspects (including elements of furniture, floors, walls, and ceilings) in the boarding house, according to residents, they have met their criteria or needs. From these data, it can be concluded that the physical aspect that meets the needs of the boarding house residents can lead to place dependence on both groups of boarding house residents.

V. CONCLUSION

This study's results indicate that the research location's boarding house has shared space, including a terrace/parking area, a shared kitchen and a washing/drying area. The pattern of spatial arrangement in the shared space is a linear pattern. The pattern of spatial arrangement is formed by the activities and behaviour of the boarding house residents. The activities and behaviours of the residents of the boarding house that occur in the shared space include gathering, interacting, cooking, washing/drying, and sharing.

From the observations in boarding houses 1 to 4, two spatial arrangement patterns were found, namely the liner pattern and the spread pattern. In a shared space with a spread pattern, the physical aspect that affects residents using the shared space is the distance between the shared space and the boarding room, so that the intensity of the occupants' activities using the shared space becomes less. Meanwhile, the activities tend to be more dynamic in the linear spatial pattern.

Based on Giuliani's (2003) place dependence theory, with indicators of activities, satisfaction, preference, and best. The

initial data comes from the analysis of the questionnaire results with the implementation of indicators of activities, satisfaction, preference, and best, there are differences in place dependence on the shared space of the boarding house. The place's dependence on the shared space is higher in the student group than in the working group. The data was validated by in-depth interviews in this study which showed that this was due to the activity level of the student group more often using the shared space than the occupants of the working group.

The results of this study indicate that the physical aspect of the shared space, which includes elements of furniture, floors, walls, and ceilings, can affect the formation of place dependence for boarding house residents. In addition, this study shows that the physical aspect that meets the needs of the boarding house residents can increase the place's dependence.

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