SOB

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Spatial Factors Influencing Sense of Belonging of the Middle-income Residents Living in Planned Housing in Jabodetabek

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Abstract. Sense of belonging (SOB) is a psychosocial construct used to describe a person's acceptance to the condition of the community in which he or she lives. Spatial condition is one influencing the SOB of community members. The purpose of this study was to determine the spatial factors that affect the SOB of middle-income residents living in planned housing in Jabodetabek. The research design used is a questionnaire survey method. The questionnaire uses a Likert scale. The samples are the residents of planned housing in Jabodetabek, from both of flats and landed housing. The analysis method uses Smart-PLS. Spatial factors tested include amenities, accessibility, and identity. The results showed that accessibility and place identity had a significant effect on SOB.

INTRODUCTION

Policymakers focus on local community development to improve urban sustainability because local communities are one of the main drivers for this improvement [1]. According to [2], the resident's sense of belonging is an important aspect that needs to be examined.

SOB is people's emotional attachment including senses of involvement, belonging, accepted, supported, needed, respected, identical or similar, and willingness to sacrifice for the neighborhood [2,3,4]. According to [5], spatial characteristics are relevant to psychological well-being including accessibility, public-private area relations, configuration, and others. Furthermore, [6] explained that environmental quality associated with neighborly ties helps to form a sense of belonging. The study of [1] in Canada showed that neighborhood characteristics are consistently correlated with its belonging.

This study seeks to understand the spatial factors affecting the community's sense of belonging. Also, it aims to identify spatial factors that affect the SOB among middle-income living in planned housing in Jakarta, Bogor, Depok, Tangerang, and Bekasi. The participants selected are people residing in Jabodetabek from both flats and landed housing as the largest metropolitan area in Indonesia with diverse neighborhood characteristics. Meanwhile, the study selects planned housing because it has open spaces, amenities, clear boundaries, and different identity markers. The middle-upper class is the only group that can afford to buy a house in both the flat and landed communities. Therefore, this study focuses on the middle-income residents as the object.

METHOD

This study is quantitative with a unit of analysis covering both the simple flats owned (rusunami) and the landed housing at the neighborhood level. However, exogenous variables include amenities (X1), accessibility (X2), and place identity (X3), while the endogenous variable Y is the sense of belonging. Data were collected using a questionnaire survey method with a Likert scale comprised of 5 levels of answers including very suitable, suitable,

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neutral, unsuitable, and strongly unsuitable. Meanwhile, the questionnaire uses Google docs and it is the main tool to measure all the variables including amenities, accessibility, place identity, and SOB. The participants selected are all middle-class residents of both flat and landed housing in the Jabodetabek community. Furthermore, the influence of spatial factor was measured against SOB using the Structural Equation Modeling (SEM) analysis method with Partial Least Squares (PLS-SEM) using SmartPLS software. The following are the study indicators.

Sense of Belonging (Y)

The following is the indicators and construct questions of the variable Y, SOB [2-4,7].

TABLE 1. SOB Construct Questions and Indicators

Definition	Indicators	Question Items (y)
SOB is a feeling of emotional attachment to someone in an environment including feelings of involvement, feeling of belonging, feeling accepted, feeling supported, feeling needed, feeling respected, feeling identical/similar, and a sense of willingness to sacrifice for the environment.	There is a feeling of someone's involvement in a common problem in the neighbourhood (Rukun Tetangga/ RT) where they live	In general, I feel the common difficulties faced by the majority of residents in the neighbourhood (RT) where I live.
	Feeling difficult to leave the neighbourhood where he lives	I have a solid feeling with my neighbours in the same neighbourhood, so moving house is impossible for me.
	The feeling of being accepted for his existence by people in the neighbourhood where he lives	I feel that my presence in the neighbourhood is recognized, for example, my neighbours are always involved in solving common problems.
	A person's feeling of getting support from the environment where he lives	I feel that I have the support of the neighbourhood environment so I feel light in dealing with problems.
	A person's feeling that he is needed by the neighbourhood where he lives	I feel needed by the neighbourhood environment, such as being involved by neighbours when looking for solutions to solve common problems.
	One's feeling of receiving respect from other people who live in the same neighbourhood.	I feel almost all neighbours give respect.
	The feeling of someone's similarity with people who live in the same neighbourhood.	I feel that there are certain similarities with my neighbours
	Feelings of being willing/sincere to spend time, energy, thoughts, or money for the benefit of the neighborhood where they live	I am willing to spend time/energy/thoughts/money for the common good/environment of one neighbourhood.

Amenity (X1)

The following is the indicators and construct questions of the Amenity (X1) variable [8-10].

TABLE 2. Amenity Construct Questions and Indicators

Definition	Indicators	Question Items (x)
Residential environmental amenities are elements that include natural and built elements that make up the character of housing or that are attractive to live in, or that affect the pleasure of its residents.	Availability of facilities/elements that make up the character of housing	In the residential area where I live, there are facilities (such as schools, mosques, clinics, restaurants, etc.) that characterize it.
	Availability of facilities that are attractive to live in	In the residential area where I live, there are facilities (such as schools, mosques, clinics, restaurants, etc.) that attract people to stay here.
	Availability of facilities that affect residents' enjoyment.	In the residential area I live in, there are various facilities that generally meet my expectations.
	Utility services that please residents	Almost all kinds of utilities that residents need are available in the housing I live in. In general, the utility services available in the residential area where I live meet my expectations.
	Fresh air condition in housing area	The air condition in the residential area where I live is generally refreshing so I never hesitate to take a deep breath when walking around the residential neighborhood.
	The view inside and towards the housing area	The scenery on the left and right of the road leading to my house is interesting to enjoy. The scenery in the neighborhood where I live is really interesting to enjoy.

Accessibility (X2)

The following is the indicators and construct questions of the Accessibility variable (X2) [11-16].

TABLE 3. Accessibility Construct Questions and Indicators

Definition	Indicators	Question Items (x)
Housing accessibility is the ease with which residents can reach and take advantage of the various services available in housing or the amount of opportunity to be able to participate in various activities in the area where they live.	Ease of residents to reach service facilities	1) Generally, the facilities for meeting daily needs (stalls, shops, minimarkets) can be reached in less than 15 minutes walking from my house. 2) Generally, educational facilities (below junior high school level) can be reached in less than 15 minutes on foot from my house. 3) General practitioner practice is less than 15 minutes' walk from my house. 4) Drug store or pharmacy can be reached less than 15 minutes' walk from my house. 5) Places of worship can be reached less than 15 minutes' walk from my house. 6) Sports venues (parks, fields, etc.) are less than 15 minutes' walk from my house.
	The location of various activities is easy to reach from the house	7) To reach my place of work, there is transportation that is easy to reach from my house. 8) To reach educational facilities (from junior high school and above) available transportation that is easy to reach from my house.

Place identity (X3)

The following is the indicators and construct questions of the place identity variable (X3) [17-21].

TABLE 4. Place Identity Construct Questions and Indicators

Definition	Indicators	Question Items (x)
The identity of the place is the uniqueness of the housing as a self-image of the occupants that can be recognized through the attributes of certain physical elements or structures that have meaning for the occupants.	Typical housing physical elements, distinguishing it from other housing such as gates, gardens, building shapes, colors,	1) Visually, the road in front of the house where I live has a characteristic so it is easy to distinguish it from the others. 2) The gate or entrance to the housing where I live is unique so it is easy to distinguish it from the others. 3) The garden is the hallmark of the residential area where I live. 4) The paint color of the houses where I live has a uniqueness that is easy to distinguish from the others.
	Physical elements of housing that are known to outsiders and used as benchmarks to remember them	5) My place of residence is difficult to find by friends/guests/taxi/etc because of the lack of distinguishing elements that can be used as benchmarks.
	There are physical elements of housing that are suitable to represent the identity of the occupants	6) I feel proud to live in this residential area. 7) In general, the physical condition of the housing where I live is sufficient to show my identity 8) In general, the quality of the facilities available in the residential area where I live is in accordance with my identity.

RESULT AND DISCUSSION

The questionnaire results were organized and analyzed by using PLS technique to find out the factors that impacting the resident's SOB to their neighborhood area. The online survey results showed that a total of 119 people is residing in both flat and landed housing in Jabodetabek. Therefore, this meets the requirements of selecting at least 100 participants for the study and the majority of them live in Jakarta. The results also showed that the landed houses occupancy ratio is much higher than vertical houses in the Jabodetabek community. The residential building is +/- 200.74m² with an average number of occupants of about 4 to 5. The average income of the participant's family members is +/- IDR 22,500,000 and the monthly household expenditure for housing and utilities ranges from +/- IDR

5,500,000. According to BPS [22], the poverty line in Jakarta as the nation's capital is around +/- IDR 3,358,360 per month. It indicates that average income of the respondents is way higher than the poverty line. The participants' household income, as well as the building average size and location, showed that they belong to the middle-upper class group.

Results

The t-statistic generated from the PLS output is compared with the t-table value to test the hypothesis. This help to determine the test criteria with a significance level of 5% for the positive and negative effect. Meanwhile, the PLS output is the latent variable estimate that is an aggregate linear of the indicators. The comparison of the t-table and t-count results are seen as follows:

- The H_0 is rejected and H_1 is accepted if t-count > t-table is 1.64.
- The H_0 is accepted and H_1 is rejected if t-count < t-table is 1.64.

Meanwhile, the significant effect between variables for the one-way test is seen as follows:

- There is a significant effect if the p-value is sig/2 < 0.05.
- There is no significant effect if the p-value is sig/2 > 0.05.

TABLE 5. influence of Spatial Factors (variable x1,x2,x3) on SOB (variable y)

Connection	Original Sample (O)	T Statistics (|O/STDEV|)	P Value	Decision	Conclusion
Accessibility -> SOB	0.278	2.428	**0.008**	reject Ho	affected
Amenity -> SOB	-0.031	0.326	**0.372**	accept Ho	Has no effect
Place Identity -> SOB	0.351	3.737	**0.000**	reject Ho	affected

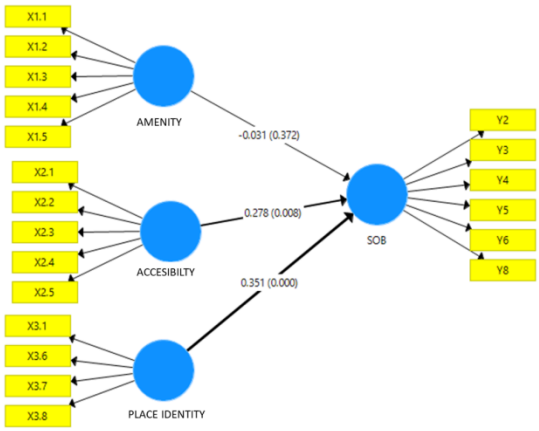

FIGURE 1. Spatial Factor Hypothesis Test (variable X1, X2, X3) against SOB (variable Y)

The regression equation resulting from the spatial factor hypothesis test (X1, X2, X3) against SOB (Y) is as follows:

$$SOB=-0.031Amenity+0.278Accessibility+0.351Place\ Identity \quad (1)$$

The interpretation of the regression equation above is:

- Accessibility directly and positively affects SOB with a coefficient of 0.278, while the t-stat is 2.428 > t-table of 1.64 and p-value is 0.008 < alpha of 0.05. This means that an increase of 1 point in Accessibility improves the sense of belonging by 0.278 while other variables are constant.
- Place Identity directly and positively affect SOB with a coefficient of 0.351, while the t-stat is 3.737 > t-table of 1.64 and the p-value is 0.000 < alpha of 0.05. This means that an increase of 1 point in Place Identity improves the sense of belonging by 0.351 while other variables are constant.
- Amenity did not significantly affect SOB with a coefficient of 0.031, while the t-stat is 0.326 < t-table of 1.64 and p-value is 0.372 > alpha of 0.05. This means that there is not enough evidence that an increase in amenities improves the sense of belonging while other variables are constant.

Discussion

The hypothesis test showed that accessibility and place identity are the two spatial factors affecting the residents' sense of belonging. Meanwhile, the place identity has the highest influencing value. Previous studies explained that the amenities are the most formative factor for SOB, followed by accessibility, and then the place identity.

This study results indicated that the sense of belonging is more affected by the neighborhood uniqueness or identity than the completeness of its facilities and utilities. Therefore, the place identity gives pride and prestige to improve residents' "Sense of Belonging". Easy access to public service facilities and places of activity including offices and schools is important in the Jabodetabek neighborhood. This provides comfort and time efficiency to improve residents' sense of belonging.

The less influential factor shows that residents of planned housing in Jabodetabek do not take advantage of the amenities in their neighborhood. This usually occurs in the upper-class where shared facilities including parks and meeting halls are not necessary because of the activities outside the home and the residents' nature that are more dominant than the lower-class residing in urban villages.

CONCLUSION

The conclusions are as follows: The accessibility and place identity is the spatial factors that significantly affect the sense of belonging, while amenities have no effect. The amenity indicators consisting of adequate facilities and utility services, fresh air conditions, as well as inside views have no effect on building SOB among residents living in planned housing. Access to service facilities, locations of various activities typical physical elements of housing that are recognized and become benchmarks, as well as the residents' identity are indicators that affect the sense of belonging.

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