

HOME-BASED ENTERPRISE AS POTENTIAL CATALYST TO STRENGTHEN THE SENSE OF COMMUNITY IN NEIGHBOURHOOD PLANNING

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Received: 24 August 2022

Accepted: 29 September 2022

Published: 31 March 2023

ABSTRACT

This study aims to investigate the association between the sense of community and the new home-based enterprises, which emerged as a mitigation strategy to deal with the COVID-19 pandemic, and its implication with neighbourhood planning. A set of questionnaires based on a four-factor dimension of Sense of Community Index 2 was distributed to the virtual communities called 'Bromo Ladies' in a residential cluster at Lippo Karawaci Tangerang. The results showed that independent variables of shared emotional connection and influence correlated more significantly with the sense of community than needs fulfilment and membership dimensions. The findings were triangulated using an ethnographic approach through participant observation. The thematic discussions under togetherness and care and the COVID-19 pandemic had the highest reoccurrence in the virtual community discussion. This study concluded that the new home-based enterprises acted as catalysts for the neighbourhood's sense of community during the pandemic through communication, participation, and informal involvement among virtual community members. This study highlighted an evidence-based understanding of the home-based enterprise's performance and its potential impacts on a residential neighbourhood's quality of life and well-being during the pandemic. This study offered that integrated home-based enterprises' neighbourhood planning could increase a sense of community.



Keywords: *Home-based enterprise, Sense of community, Virtual community, Neighbourhood planning, Covid-19 pandemic*

INTRODUCTION

The emerging new home-based enterprises triggered this study during the COVID-19 pandemic at Taman Bromo, a gated residential cluster at Lippo Karawaci Tangerang, Indonesia. Home-based enterprise is described as income-earning activities in the home, using personal assets and living quarters for income-generating activities (Lawanson & Olanrewaju, 2012; Reuschke & Domecka, 2018; Tipple & Kellett, 2003). Despite the land use restriction and building control in the housing cluster, many new home-based enterprises appeared. The new home-based enterprises' owners saw the mobility restriction during the Covid-19 outbreak as an opportunity and started new economic activities in their homes to serve residents' everyday necessities. It formed to supply and demand transactions among residents during the crisis. The transactions manifested into social connections among members through a social media platform. In the beginning, the social connection in the virtual room was perceived as a place to exchange everyday necessities. Then it progressively resulted in connection and belonging among the community members in a residential neighbourhood, which was never experienced before.

Despite the disturbance effects of the pandemic on community life, a sense of community and social connections are considered vital sources of support among community members, particularly during the crisis, which fosters mental health benefits for members, increases a sense of unity among members and at the end promote the well-being of the neighbourhood as a whole (Bowe et al., 2021; South et al., 2020). A sense of community is a concept to describe the affective experience of community members that can be expressed in a geographical context or social entities. A strong sense of community has been the critical aim of neighbourhood planning since Perry's neighbourhood planning unit until the contemporary approaches to neighbourhood planning (Kim & Kaplan, 2004; Rohe, 2009). A neighbourhood sense of community leads to trust in

one's neighbour, community empowerment, community participation and community satisfaction (Perkins & Long, 2002).

The emergence of new home-based enterprises at Taman Bromo indicated changes in uses in the residents' houses and progressively affected the social connection among the residents. Understanding these changes should be considered in neighbourhood planning. Planners should recognize distinctive physical and social characteristics of the neighbourhood units, which is essential to comprehensive neighbourhood planning, and should also understand the changes that happen in the residents' homes and their surroundings, socially and economically (Rohe, 2009). Neighbourhood planning should address local and global concerns and changes in the neighbourhood to create a sense of community (Francis et al., 2012; Rohe, 2009).

Empirically, the physical attributes of neighbourhood planning are associated with a stronger sense of community (Farrell et al., 2004; French et al., 2014; Jabareen & Zilberman, 2017; Tsai, 2014). However, little has been done empirically to link home-based enterprise with a sense of community in neighbourhood planning. Most home-based enterprise studies emphasized the use of space and spatial planning of home-based enterprise homes (Adeokun & Ibem, 2016; Marsoyo, 2012; Tipple et al., 2002; Tipple & Kellett, 2003) and highlighted the positive economic impact of home-based enterprise on the general welfare of low-income people in the context of informal settlements (Ezeadichie et al., 2018; Lawanson, 2012; Lawanson & Olanrewaju, 2012; Matsebe, 2009; Tipple et al., 2002; Tipple & Kellett, 2003). Only a limited home-based enterprise study, mainly in the context of low-income people living in informal settlements, showed that home-based enterprise had strengthened the sense of community through participation in social groups (Lawanson & Olanrewaju, 2012) and shared collaborative skills among home-based enterprise owners (Brown, 2012).

This research paper investigates the association between the sense of community and the new home-based enterprises which emerged during the Covid-19 pandemic. The objectives of this research are to validate the role of the new home-based enterprises in stimulating a sense of community. The second objective is to determine what mechanism drove the association between the new home-based enterprises and members' sense of community

in the neighbourhood context. Understanding the performance of the home-based enterprise and its association with a sense of community will provide insights into the neighbourhood design interventions that promote the well-being of the neighbourhood as a whole.

In this paper, a brief literature study on home-based enterprises is discussed, including definitions and related studies before and amid Covid-19. Then the concept of a sense of community and its association with neighbourhood planning is reviewed. Taman Bromo's case study is presented, and the methodology is explained. Finally, the association between the new home-based enterprises and the sense of community is investigated. The study concludes that the new home-based enterprises as a socio-economic factor could act as a potential catalyst for the neighbourhood's sense of community. It should be considered in the neighbourhood planning and design while mitigating the potential adverse environmental effects.

The Context of Home-Based Enterprise's Studies Before and Amid COVID-19

A home-based enterprise is described as income-earning activities in the home. Residents used personal assets and living quarters for income-generating activities, such as working, workshops and storage (Lawanson & Olanrewaju, 2012; Reuschke & Domecka, 2018; Tipple & Kellett, 2003). The examples of home-based enterprise building typology can be found worldwide in every culture and have a long tradition. Name of this type of building, which combines living and working in the same unit, was called 'shophouse' in China and Southeast Asia (Davis, 2012; Davison & Tettoni, 2011) or called 'flex house' by the urbanist (Dolan, 2012) or 'machiya' in Japan (Holliss, 2015). In the global North, like the US, Europe, UK, and Australia, this type of building was called 'live-work' and has evolved and built in a diversity of forms, scales, locations and constructions since the emerging loft development phenomena in the 1970s in SoHo, New York (Dolan, 2012; Holliss, 2015). This type of 'live-work' or 'SoHo' building was mainly formal, registered enterprises, using technology and communication advancement for doing business (Dolan, 2012; Mason et al., 2011; Reuschke & Domecka, 2018), and quite distinguished from the phenomena of home-based enterprise found in the global South.

In the global South countries, the phenomena of a home-based enterprise are prominent in dwellings occupied by low-income people. One out of every three households in Indonesia is estimated to have a home-based enterprise (Mehrotra & Biggeri, 2002). Home-based enterprise located in an informal settlement was the primary domain of home-based enterprise case studies investigated by many scholars (Ezeadichie et al., 2018; Lawanson, 2012; Lawanson & Olanrewaju, 2012; Matsebe, 2009; Nadim, 2016; Tipple et al., 2002; Tipple & Kellett, 2003). Most home-based enterprise studies emphasized using space & spatial planning of home-based enterprise homes (Adeokun & Ibem, 2016; Marsoyo, 2012; Tipple et al., 2002; Tipple & Kellett, 2003). A study by Tipple and Kellett (2003) discovered that home-based enterprises occurred in the smallest dwelling space, and space was not an issue of not having a home-based enterprise. Home-based enterprise was more common activated by women than men (Ezeadichie et al., 2018; Reuschke & Domecka, 2018; Tipple et al., 2002). Residents utilized their homes as economic activities to generate income without paying an extra fee for renting a workplace outside the home. Most studies highlighted the positive economic impact of home-based enterprise on the general welfare of low-income people in the context of informal settlements (Ezeadichie et al., 2018; Lawanson, 2012; Lawanson & Olanrewaju, 2012; Matsebe, 2009; Tipple & Kellett, 2003). Thus, many studies recommended to recognized the importance of home-based enterprise in the scheme of urban planning and social housing policies while mitigating the downsides of home-based enterprise to the neighbourhood and environment (Ezeadichie et al., 2018; Lawanson & Olanrewaju, 2012; Matsebe, 2009; Tipple et al., 2002; Tipple & Kellett, 2003).

In the context of the COVID-19 pandemic, many existing studies highlighted the tremendous negative impact of the pandemic on the performance of the existing home-based enterprise (Hamdan et al., 2021; Shafi et al., 2020; Sultan & Sultan, 2020). Existing home-based enterprises had suffered income losses due to demand and supply chain disruptions, operation disruptions, and sales losses. Using the internet for searching for information, contacting buyers/customers, and marketing purposes had been a part of the home-based enterprise discovered in the developing countries before the Covid-19 pandemic (Tyas et al., 2019). Thus, when the outbreak of Covid-19 hit the global world, existing home-based enterprise entrepreneurs were forced to adopt the new norm and demonstrated their

ability to survive by using the role of the internet and social media for digital marketing, cash management and product delivery (Kimuli et al., 2021; Saleh, 2020; Sultan & Sultan, 2020)

Sense of Community and Neighbourhood Planning

A sense of community is a concept to describe the affective experience of community members that can be expressed in a geographical context or social entities. By definition, a sense of community is "a feeling that members have of belonging, a feeling that members matter to one another and the group, and a shared faith that members needs will be met through their commitment to being together" (McMillan & Chavis, 1986, p. 9). These definitions of a sense of community, which were coined in the fields of community psychology, have dominated many studies in the fields of architecture and built environment studies (French et al., 2014; Jabareen & Zilberman, 2017; Mahmoudi Farahani, 2016; Sakip et al., 2016; Tsai, 2014; Wood et al., 2010).

A sense of community involves four dimensions, and its dimensions are dynamically interrelated (McMillan & Chavis, 1986): (1) Membership refers to the interrelated feeling of five attributes: boundaries, emotional safety, a sense of belonging and identification, personal investment and a standard symbol system; (2) Influence refers to the capability of members to influence and produce conformity and cohesiveness in the community, (3) Integration and fulfilment of needs refer to the feeling that members experience when some needs are mutually fulfilled between members of the community, which affects community reinforcement.; and (4) A shared emotional connection refers to the opportunities to interact and share community history, important events, rewards or humiliation, and opportunities to invest and share a spiritual bond among members.

The concept of a sense of community was mostly applied to an offline community. Recently, the concept of a sense of community has also been studied in online communities (Blanchard, 2007). It was called a sense of virtual community and was defined as "members' feelings of membership, identity, belonging, and attachment to a group that interacts primarily through electronic communication" (Blanchard, 2007, p. 827). The sense of community index was the most frequent instrument to measure the sense

of community in the offline community, which was based on the theory of sense of community presented by McMillan and Chavis (1986). The sense of community index has been validated in different communities and diverse contexts and cultures. Chavis et al. (2008) refined the earlier version of the sense of community index by McMillan and Chavis (1986). Their revised instrument, called a sense of community index version 2, showed reliability and validity that had applied to a more extensive survey in diverse intercultural settings. Lately, Abfalter et al. (2012) tested the sense of community index version 2 to measure a sense of community in an online community. Their findings validated that the sense of community index version 2 can be used to measure an online community, although they suggested adding additional unique characteristics of the virtual community into the measurement instruments.

Enhancing and strengthening a sense of community has been the critical aim of neighbourhood planning and an asset of new urbanism (Kim & Kaplan, 2004; Rohe, 2009). A neighbourhood sense of community leads to trust in one's neighbour, community empowerment, community participation and community satisfaction (Perkins & Long, 2002). Planners should identify and create conditions to enhance and strengthen a sense of community in neighbourhood planning. In neighbourhood planning, many studies revealed that physical attributes are associated with a stronger sense of community. For example, studies by Kim and Kaplan (2004) at two neotraditional residential communities found that natural features and open spaces played an essential role in fostering a sense of community. Other similar studies also confirmed that the perceived quality of neighbourhood public open spaces or natural features was significantly and positively associated with a sense of community (Bow & Buys, 2003; Francis et al., 2012; Gomez et al., 2015; Sakip et al., 2016). A stronger sense of community was also associated with the pedestrian-friendly residential design to encourage walking and foster streetside activities (Kim & Kaplan, 2004; Lund, 2002; Mathew et al., 2022; Rogers & Sukolratanamettee, 2009; Wood et al., 2010). A sense of community was found to be negatively associated with residential density (French et al., 2014), automobile-centred neighbourhood design with disconnected accessibility to town centres, and highly visible garages (Rogers & Sukolratanamettee, 2009). Gated element in residential areas was also discovered to discourage a sense of community (Sakip et al., 2012) because the walls and gate caused introverted

communities (Rafiemanzelat, 2016).

DATA AND METHODS

This study took the Taman Bromo residential cluster case study at Lippo Village Karawaci Tangerang, built-in 1993. Lippo Village is a satellite city located 35 kilometres west of Central Jakarta. It is built on 500 hectares of land, and currently, about 30,000 residents live in a range of thematized estates. Taman Bromo is a gated residential cluster built on 19 hectares of land and one of the thematized estates located about 3,5 kilometres from the town centre. Figure 1 shows the location of Taman Bromo and its relation with the overall land use plan of Lippo Karawaci Central.

Taman Bromo's residential cluster design is characterized by low population density, rowhouses, and curvilinear street patterns (see Figure 2). Approximately 450 units ranging from 120-200 square metres are occupied in the cluster. All are single-family homes. The residents have to drive about 10 minutes or walk for about 40 minutes to reach the town centre, where facilities like an entertainment centre, restaurants, shops, shopping mall, education and health facilities are located. There are no everyday needs facilities within the 5-10 minutes walking distance. Thus, the residents tend to drive to meet their daily needs.



Figure 1. Lippo Village Karawaci and Study Site

Source: Author, 2021



Figure 2. Pictures of Taman Bromo

Source: author, 2021

Amid the COVID-19 pandemic, this study found 21 emerging new home-based enterprises in the cluster, all gathered in one virtual community called 'Bromo Ladies' (see Figure 3). The virtual community was set up through the WhatsApp group in May 2020 and consisted of 153 members. All are Taman Bromo's residents.

This study combined quantitative and qualitative methods for triangulation. The ethnographic approach was deployed through participant observation. One of the researchers of this study was a member of the WhatsApp group 'Bromo Ladies' and had lived in Taman Bromo residential cluster for more than 20 years. From the beginning, she immersed herself in the community's day-to-day lives and closely observed the group—all textual data recorded through WhatsApp group chat from April-July 2021 were collected to identify discussion themes.



Figure 3. Taman Bromo Residential Cluster and Location of New Home-Based Enterprises

Source: Author, 2021

Data were collected from participants (n=63) aged 20 to above 50 to measure their sense of community (see Table 1). Participants completed a set of questionnaires to measure their sense of community. Questionnaires were developed based on the sense of community index version 2 (SCI2), validated in different communities and diverse contexts and cultures (Chavis et al., 2008). The SCI2 was based on the sense of community index presented by McMillan and Chavis (1986), which measured the sense of community based on four dimensions: membership, influence, meeting needs, and a shared emotional connection. This study measured 18 five-point Likert-type scale items (1 = strongly disagree, 5 = strongly agree). The results were analyzed using structural equation modelling (PLS-SEM) with SmartPLS3.

Table 1. Characteristics of the Sample

Characteristics		n= 63
Gender	Female	100%
Age	<20	0%
	20-29	5%
	30-39	16%
	40-50	24%
	>50	56%
Length of residence	< 1 year	6%
	1-4 years	10%
	5-9 years	14%
	10-20 years	27%
	> 20 years	43%
Home-based enterprise ownership	Home-based enterprise entrepreneurs	33%
	Non-home-based enterprise entrepreneurs	67%

Source: Author, 2021

RESULT AND DISCUSSION

Sense of Community Measurements

The first objective of this research was to validate the role of the new home-based enterprises in stimulating a sense of community. Validation was conducted by measuring the sense of community index based on four dimensions: membership, influence, meeting needs, and a shared emotional connection. This study measured 18 items based on the sense of community index version 2 validated by Chavis et al. (2008) in different communities and diverse contexts and cultures.

A confirmatory factor analysis (CFA) using structural equation modelling (PLS-SEM) with SmartPLS3 was conducted. Validity and reliability analysis were employed to empirically validate the sense of community 2 in a virtual community context. Figure 4 demonstrates the path model comprised of four dimensions as a sense of community predictor.

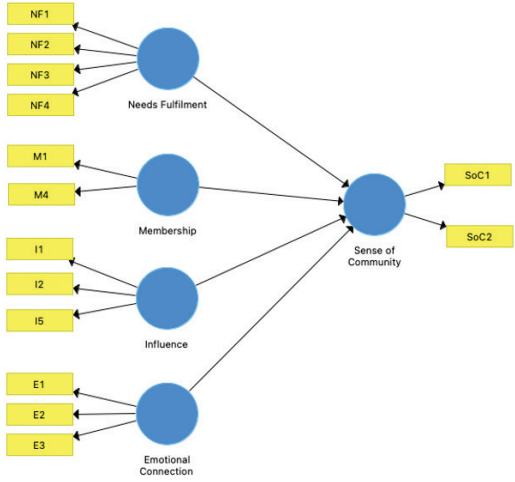


Figure 4. Path Model

Source: Author, 2021

This study followed good fit indicators, including the Normal Fit Index (NFI), which equals 0.607 or between 0-1. Due to poor loading factor and indicator reliability, four items of the sense of community index were eliminated, as they appeared not qualified to measure a sense of community. The remaining 14 items suggested that the four dimensions of a sense of community were in good fit. Table 2 summarizes the validity and reliability analysis that measured the sense of community.

Table 2. Validity and Reliability of Data Analysis Conforming to a Sense of Community

Dimensions items	Mean	SD	Loading Factor	Composite Reliability	Cronbach's (alpha)	AVE
Shared Emotional Connection				0.872	0.778	0.694
E1: I enjoy being part of the community with other members	0.766	0.062	0.767			
E2: Members of this community care for each other	0.896	0.030	0.897			
E3: I get the updated information on what happens around the residential cluster through this community	0.827	0.050	0.831			
Influence				0.850	0.735	0.655
I1: Being a member of this community is essential for me	0.794	0.059	0.789			

I2: This community can be an excellent example for other communities	0.861	0.047	0.863			
I5: If a problem occurs, members of the community solve it together	0.770	0.060	0.772			
Membership				0.850	0.735	0.655
I1: Being a member of this community is essential for me	0.794	0.059	0.789			
I2: This community can be an excellent example for other communities	0.861	0.047	0.863			
I5: If a problem occurs, members of the community solve it together	0.770	0.060	0.772			
Membership				0.817	0.554	0.691
M1: Being a member of this community enables me to recognize other residents who live in the cluster	0.821	0.076	0.813			
M4: Being a member of this community is part of my identity as Bromo's resident	0.848	0.040	0.849			
Needs Fulfilment				0.843	0.757	0.574
NF1: I quickly get essential needs of mine met through this community	0.789	0.097	0.802			
NF2: Other members of this community care for what I need	0.679	0.133	0.702			
NF3: This community offers a variety of products needed by me	0.764	0.154	0.798			
NF4: I have similar needs, priorities and goals with the other members of this community	0.694	0.147	0.724			
Sense of Community				0.905	0.795	0.827
SoC1: I expect to be part of this community for a long time	0.936	0.014	0.936			
SoC2: I feel hopeful for the future of this community	0.881	0.037	0.882			

Source: Author's analysis, 2021

The analysis for reliability and validity presented satisfactory results based on acceptable scale values (David Garson, 2016). Data and path model were valid and reliable according to the confirmatory factor analysis, as follows: the R-square value = 0.559, meaning that the model explained about 55.9% of the variance in the sense of community, factor loading value >0.7, composite reliability >0.8, Cronbach's alpha for four latent variables (emotion, membership, needs fulfilment and sense of community) >0.7 except for influence with Cronbach's alpha >0.5, and discriminant validity AVE >0.5.

The bootstrapping results in the path coefficient analysis presented in Table 3 reported the sense of community path coefficients, means,

standard errors, t-values, and p-values. The test was based on the default 0.05 significance level (David Garson, 2016).

Table 3. Path coefficient Analysis

Latent variables	Original sample	Sample Mean	Standard Deviation	T Statistics	P Values
Shared emotional connection-> Sense of community	0.394	0.322	0.176	1.979	0.048
Influence -> Sense of community	0.309	0.324	0.153	2.014	0.045
Membership -> Sense of community	0.225	0.226	0.131	1.721	0.086
Needs fulfilment -> Sense of community	-0.1	-0.069	0.100	0.998	0.319

Source: author’s analysis, 2021

Table 3 shows that shared emotional connection had a significant positive correlation (original sample +0.394) with a sense of community (T-Statistics 1.979 and P Values 0.048). Influence also had a significant positive correlation (original sample +0.309) with a sense of community (T-statistics 2.014 and P Values 0.045). Membership and needs fulfilment revealed no significant correlation with a sense of community, as both variables resulted in the T-statistics <1.96 and P-value >0.05. Thus, the sense of community as a dependent variable significantly correlated with two independent variables, i.e. shared emotional connection and influence.

Mechanism Driven The Sense of Community

The investigation was conducted to determine the mechanism that drove the association between the new home-based enterprises and members' sense of community in the neighbourhood by analyzing the textual data recorded through WhatsApp group chat from April to July 2021. The topic of discussion was identified and grouped into themes. The topic was organized based on the number of occurrences discussed among members.

Figure 4 presents 19 topics grouped into four themes, i.e. product promotion, neighbourhood information, togetherness and care, and specific information related to the Covid-19 pandemic. Each theme was repeated weekly during close observation of WhatsApp group chats for four months.

Two themes related to togetherness and care and Covid-19 had the highest occurrences compared to the other themes.

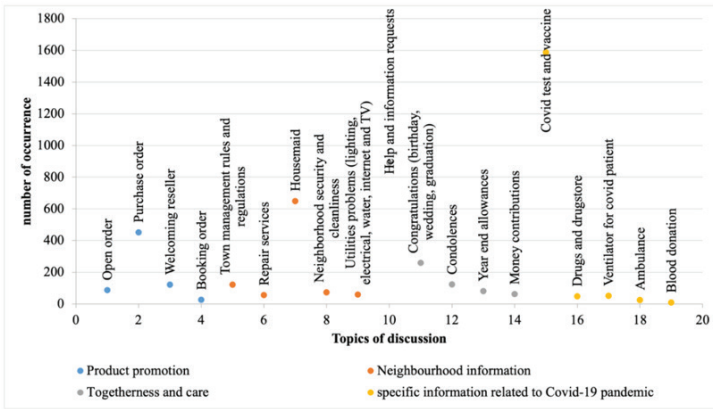


Figure 4. Themes and Topics of Discussion

Source: Author, 2021

Lippo Karawaci Town Management distinctly regulates residential use only in all residential clusters. Against the regulations, this study identified 21 residents who took advantage of their homes into a home-based enterprise in the Taman Bromo cluster. This study found home-based enterprises in 120-200 square metres of dwelling space of middle-income people who lived in a formal gated residential. This finding was in contrast to the other empirical studies, where home-based enterprises are prominently found in the tiny homes of low-income people in informal settlements (Ezeadichie et al., 2018; Lawanson, 2012; Lawanson & Olanrewaju, 2012; Matsebe, 2009; Nadim, 2016; Tipple et al., 2002; Tipple & Kellett, 2003). As was claimed by most empirical studies, this study has assuredly admitted that the phenomena of home-based enterprises in any setting are driven by improving residents' economic situations without paying an extra fee for renting a workplace outside the home. The sample profile (see Table 1) again aligned with the previous studies that home-based enterprise was more common operated by women than men (Ezeadichie et al., 2018; Reuschke & Domecka, 2018; Tipple et al., 2002).

The global health crisis drove the emergence of 21 new home-based enterprises in Taman Bromo. The home-based enterprises were established as a mitigation strategy since the Covid-19 pandemic. The new home-based enterprises' owners responded by initiating economic activities to generate

additional household income. The home-based enterprises' owners adopted the new norm and demonstrated their ability to get through the crisis by using the internet and social media for digital marketing, cash management and product delivery. At first, the home-based enterprises' entrepreneurs set up the virtual community through the WhatsApp group to promote products, such as ready meals, fresh produce (meats, eggs and vegetables), medical masks, drugs and vitamins, to their immediate neighbours. Covid-19 has caused Taman Bromo residents to be locked up in their own houses, and their immediate housing cluster became the limits of their daily lives. The residents realized that accessing living necessities in their immediate neighbourhood has become a problem. As shown in Figure 1, the location of retail shops was beyond the residents' immediate housing cluster. The virtual community was seen as a marketplace where residents could fulfil their fundamental needs amid the crisis.

Next, the virtual community developed into a place for exchanging information related to the current issues in the neighbourhood, such as facilities, maintenance, security, and cleanliness. The discussions among members manifested as informal community involvements, which improved the neighbourhood's social and physical conditions. Gradually, the virtual community turned into a place of expressing care for others, for example: sending condolences and birthday and wedding greetings. The virtual community frequently shared resources, such as homegrown plants, eco enzyme, pets adoption, and event raised money to help others in need. Recently, the virtual community progressed into a place for exchanging information related to medication for Covid-19 and the availability of vaccines. These emerging members' behaviours had never existed before among Taman Bromo residents.

As Figure 4 presented, these four themes and discussion topics appeared weekly in the virtual community. Themes under togetherness and care and themes under the Covid-19 pandemic had the highest number of occurrences in the virtual community discussion than the other two, i.e. promoting products and neighbourhood information. These data displayed confirmatory results with the sense of community index version 2 measurements. The variables of shared emotional connection and influence dimensions significantly correlated with the sense of community than the needs fulfilment and membership dimensions. This study presented that

members of the Bromo Ladies community perceived a sense of community. 79.36% of the members of Bromo Ladies agreed and strongly agreed with the importance of a sense of community for them.

This study triangulated the findings to the residential design of the Taman Bromo cluster and its relations to the Lippo Village development. The shops to meet necessities are located beyond the wall of the Taman Bromo cluster, and it takes 10 minutes drive or a 40-minute walk to get there. During the pandemic, when most residents feared going out, the residential design of Taman Bromo offered nothing to fulfil their needs. Aside of pedestrian-friendly with greenery along the street, the cluster has no other significant physical features that were positively associated with a sense of community, like the perceived quality of neighbourhood open spaces for residents to meet and gather. Similar to Rafiemanzelat (2016), this study discovered that although the members of Bromo Ladies were living in the same Bromo cluster, not all knew each other and recognized each other face to face. The residents exhibited introverted behaviour communities.

The findings strongly indicate that the new home-based enterprises played their role as catalysts of the neighbourhood's sense of community during the pandemic through communications, participation and informal involvement. Home-based enterprises can turn the introverted behaviour communities into a more social community, even virtually. Communication among members in a virtual group initiated by the home-based enterprises was confirmed to substantially stimulate a sense of community. These findings were aligned with studies by Blanchard (2007); Doolittle and MacDonald (1978) indicated that communication among urban residents has a substantial role in engendering and sustaining a sense of community. Participation and informal community involvement as behavioural dimensions of social capital have evolved into neighbouring solid relationships among members, resulting in the sense of community (Mahmoudi Farahani, 2016; Perkins & Long, 2002).

CONCLUSION

The global health crisis has disrupted a residential neighbourhood's social and economic characteristics. The Covid-19 outbreak had converted a home

into economic activity. Modification from a dwelling into a home-based enterprise was inevitable despite the land use restriction and building control in the housing cluster. The new home-based enterprises had triggered social interaction in a virtual room from a transactional place of essential needs during the pandemic into a community place for expressing togetherness and care within the community members in a residential neighbourhood, which was never experienced before. This study validated that the new home-based enterprises stimulated a sense of community among the community members.

Regarding the neighbourhood design of the Taman Bromo cluster, which is relatively aesthetically pleasing with greeneries and pedestrian-friendly with curvilinear street patterns, the members of the Bromo Ladies exhibited introverted behaviour, not knowing each other and not recognizing each other face to face. Communication among residents on social media platforms initiated by the home-based enterprises was able to drive the residents to actively participate and involve in improving and problem-solving raised issues or concerns in the neighbourhood. The new home-based enterprises were able to turn the introverted behaviour into a more open and active behaviour even though virtually. This study highlighted that communication, participation and informal community involvements as behavioural dimensions of social capital have a substantial role in engendering and sustaining a sense of community in the neighbourhood context.

The findings confirm that the new home-based enterprises as a socio-economic factor played their role as catalysts of the neighbourhood's sense of community during the pandemic. Understanding changes that happened in the resident's homes both economically and socially should be considered in neighbourhood planning. Planners should recognize not only distinctive physical characteristics associated with a stronger sense of community but also acknowledge the social and economic characteristics of the neighbourhood units, which is essential to comprehensive neighbourhood planning. This study offers an evidence-based understanding of home-based enterprise performance and the potential impacts on a residential neighbourhood's quality of life and well-being.

This study suggests that home-based enterprise as a catalyst of the

neighbourhood sense of community manifested from a virtual place shall be transformed into a physical place. Although, the formation of a physical place requires further investigation. In practice, this study encourages planners to emphasize the multidimensional aspects that contribute to the neighbourhood's sense of community development. This study offers implications on housing designers' and policymakers' suggestions to integrate home-based enterprise with domestic spaces in the housing design and planning decisions in a post-pandemic era while mitigating their potential adverse effects on the environment.

This study acknowledges limitations. Only about 41% of the Bromo Ladies responded to the survey. Moreover, all samples were ladies. Thus, the study's findings have yet to represent most Taman Bromo residents' community members and all age groups. This study still needs to expand its sample, to enhance and validate the findings that include a more diverse sample and neighbourhood design.

ACKNOWLEDGEMENT

The authors are grateful to the community who participated in the study described in the present article, particularly for their interest in and willingness to spend time on this research. The authors have nothing to disclose.

AUTHOR CONTRIBUTIONS

Both authors designed the study, analyzed the data, and developed the questionnaire. The second author distributed the questionnaire, collected data, performed statistical analyses, and provided all images needed for this paper. The first author wrote the initial drafts of the paper. Both authors finalized the paper.

FUNDING

This study was funded by The Center of Research and Community

Development Universitas Pelita Harapan under contract No. 438/LPPM-UPH/XII/2021.

CONFLICT OF INTEREST

The authors declare no conflict of interest.

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Surat kami : 700-KPK (PRP.UP.1/20/1)

Tarikh : 20 Januari 2023

Prof. Madya Dr. Nur Hisham Ibrahim
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Tuan,

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Sekian, terima kasih.

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Saya yang menjalankan amanah,

Setuju.

27.1.2023

SITI BASRIYAH SHAIK BAHARUDIN
Timbalan Ketua Pustakawan

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