UTILIZATION OF SOCIAL FACILITIES TO REINFORCE SOCIAL INTERACTION IN FORMAL HOUSING

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Keywords

formal housing; social facilities; community halls; worship facilities; social interaction.

Abstract

Formal housing development in Indonesia is supported by the availability of social facilities to develop social, economy, and culture of residents. Social facilities have an essential role to enhance the social values of residents by providing a space for interaction. This paper aims to examine utilization of social facilities to reinforce social interaction in a neighborhood by comparing the utilization of social facilities at two formal housings, built by the government and a private developer. The analytical method used is quantitative descriptive analysis through Crosstab Analysis. The study presented that the accessibility is the most important factor influencing the use of social facilities. Furthermore, social facilities at a private housing development are more effective to conduct social interaction than at a public housing development. Social facilities at private housing developments have a significant role as spaces for gathering and fostering social relationships among residents. Meanwhile, social interaction among residents at a public housing development is regardless of the use of social facilities due to a sense of community.

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INTRODUCTION

Housing has a significant role in supporting people or family well-being in various living aspects, including social, cultural, and economic. Initiation of formal housing development in Indonesia started in the early 1970’s through the development of housing institutions. Formal housing is built on a clear rule of housing development and well-organized scheme. Government and the private developers organize the formal housing development. In 1972, the Indonesian government tried to develop mass housing through private developers joined in an association of Indonesia’s private residential developers called Real Estate Indonesia (REI). Furthermore, in 1974, the Indonesian government formed Agency for National Housing Policy or PERUMNAS (Indonesian National Housing Authority). PERUMNAS has the role of a public enterprise housing and financial institution to facilitate construction of housing in Indonesia (Kuswartojo, Rosnarti, Effendi, Eko, & Sidi, 2005). Formal housing development in Indonesia is also supported by financing programs, completed by the availability of facilities and well-designed infrastructures.

Providing high quality social facilities has a significant role in increasing the quality of life of residents. The existence of social facilities in formal housing has the functions of giving services and supporting community needs in social, economic, and cultural aspects. Based on the National Standard of Republic Indonesia (SNI) 03-1733-2004 about Housing Planning Procedures in Urban Areas (National Standardization Agency of Indonesia, 2004), the social facility is defined as supporting facility to hold and develop social, economic, and cultural of public life. It consists of governmental and public services, school, health centers, worship facilities, commercial facilities, culture and recreation, and open space facilities. Similarly, in the Kamus Tata Ruang (Soefaat, 1997), the social facility refers to networks or buildings that provide services to support community needs, such as health, worship, and school. Social facilities or community facilities refer to buildings owned by government or the community used as public services, such as church, mosque, and sports field (Soefaat, 1997). As the combination of hard and soft infrastructures, social infrastructures are meaningful to improve the quality of life of the community (Teriman & Yigitcanlar, 2011).

Social facilities in housing neighborhoods have significant meaning for residents as public meeting space and improve their life. Social facilities are used to conduct social activities, such as formal meetings, recitation, healthcare, and other social activities (Yuliastuti & Widiastomo, 2015). Chitrakar, Baker, & Guaralda (2016) and Pasaogullari & Doratli (2004) stated that the rapid of urban development influences the provision of public spaces, including social facilities in a planned new neighborhood. Moreover, Chitrakar (2016) revealed that the loss of public space has significant impacts on life within urban neighborhoods, such as the residents feeling it is difficult to find a place to meet and interact with the others. The challenge in improving the social interaction in public space is how to encourage residents to interact socially and spend their time to have social activities with the others (Zhang & Lawson, 2009).

Some of the previous studies had confirmed the relationship between community facilities to support social activities. Public space, particularly parks and green spaces, have values as space to influence social interaction in accordance with their function as leisure spaces to conduct outdoor activities (Farida, 2013; Kaźmierczak, 2013; Krellenberg, Welz, & Reyes-Päcke, 2014; Moulay & Ujang, 2016; Rasidi, Jamirsah, & Said, 2012). Pasaogullari & Doratli (2004), who evaluated the significance of public space in an urban setting, found that public space particularly parks and community centers have the role to promote social interaction. Moreover, they also addressed that accessibility influences the use of public space as well as facilitates social interaction. Völker & Flap (2007) argued that local facilities like primary schools and day care facilities could strengthen the personal network. Francis, Giles-Corti,
Wood, & Knuiman (2012), who investigated the relationship of public open space, community centers, school and shop and sense of community, showed that a high quality of public space has a significant meaning to enhance a sense of community. Moulay & Ujang (2016), who presented neighborhood park legibility and its impact on social interaction, found that quality of park determines park legibility and affects park utilization as well as the user interaction. Chitrakar (2016), who examined the meaning of public space and sense of community, argued that the residents in a new neighborhood have known that the use of public space helps in developing social interaction. However, due to lack of active use, no elements of interest feature, and poor maintenance, neighborhood public space relatively have a less significant impact on fostering a sense of community. Farahani & Lozanovskas (2014) revealed that the built environment condition influences the number of interactions. Furthermore, a stronger social interaction leads to a high sense of community. Good design, physical characteristics, and good accessibility influence the social life as well as a sense of community.

Besides determined by the physical factor, the socio-demographic background of the users also affects the use of facilities and social interaction. As noted by Farida (2013) the socio-demographic factor, such as age, marital status, length of stay, educational background, and income level affect the social interaction condition and the use of shared outdoor space. Furthermore, she also stated that the arrangement and quality also enhance the use of outdoor space and social interaction. In contrast, Pasaogullari & Doratli (2004) argued that the user characteristics not affect the utilization of public space.

Findings from previous studies highlight that the physical condition of facilities, particularly the accessibility and quality of facilities as well as socio-demographic backgrounds of the users, determine the use of facilities as a mean to help in developing social interaction. In this study, we use proximity and way to reach the facilities to measure the accessibility level of facilities. Furthermore, we also assume that facilities with an excellent access will encourage its utilization as well as strengthen social interaction of the user. We use the residents’ engagement in social activities to measure social interaction since there is an automatically social interaction among the residents as the user inside social activities.

However, few studies designated to show the use of social facilities in the form of building to encourage and foster social interaction. Accordingly, this study focuses only on the social facilities in the form of buildings. Moreover, social facilities in the form of buildings also tend to have a better utilization, since it can be used by various groups of people (man, woman, teenager, and elderly) to conduct various social activities within a variety of using time. The characteristic of social facility provision in Indonesia is also integrated with other facilities due to the limited land and financial support, for example, a community hall, which is built with a playground or park integrated in the front of community hall building.

This paper aims to examine the use of social facilities, i.e., community halls and worship facilities (mosque and mushola or small mosque) as the social facilities in the shape of buildings to reinforce social interaction in a neighborhood. The study was conducted by comparing the use of social facilities at two formal housings built by the government and a private developer in Semarang City, Indonesia; they are Perumnas Banyumanik (PB) and Bukit Kencana Jaya (PBKJ). Community halls and worship facilities are chosen as the object of study since both of them are regularly used to conduct a variety of community social activities. Community halls are commonly used for community discussion and posyandu (Integrated Care Center) activities. Meanwhile, mosque and mushola are commonly used for praying, recitation, and community discussion activities. The community halls at PB have the maximum availability, as well as the worship facilities at PBKJ also have the maximum availability. The purpose of comparing the utilization of social facilities between PERUMNAS

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and private housing is to show whether there is a different background, both physically and non-physically, to use social facilities in a case of community halls and worship facilities at both of those formal housings.

**SOCIAL FACILITIES AS SOCIAL INTERACTION SPACE**

Social interaction has a significant role as emotional and informational sharing to each other to create awareness to a neighborhood (Chavis & Wandersman, 1990). Similarly, according to Zhang & Lawson (2009), social interaction is addressed in coping with stressful daily activities. Similarly, as stated by Gehl (1987), social activities usually occur in public space, such as children playing, greetings, and conversations. Further, he also revealed that staying in outdoor space improves the opportunity for social interaction.

The neighboring relation has a significant impact on community well-being. Zhang & Lawson (2009) argued that the serious problem in a high-density residential community be lack of social contact, whereas social interaction increases health condition, sense of community, and quality of life (Behrad & Bahrami, 2015; Unger & Wandersman, 1982). Social interaction consists of formal and informal social opportunities in fostering the quality of relationship among residents, such as neighboring interaction, casual social encounter, community participation, and social support which reflects the involvement of a person in a community (Kim & Kaplan, 2004). The interpersonal contact encourages an individual to participate in a formal organization. The participation of a person in a formal organization creates an informal interaction to foster the organization and community sustainability (Unger & Wandersman, 1982).

Public mass housings, which occupied by middle-low income households are regularly conducted social activities to enhance opportunities to develop the society and interact with the other residents (Said & Yuliastuti, 2013; Yuliastuti & Widiastomo, 2015). The intensity of interaction among neighbors, regardless the occupation and educational background show the quality of interaction (Said & Yuliastuti, 2013). Moreover, involvement in various social activities improves opportunities to interact with the other residents (Lemke & Moos, 1989; Said & Yuliastuti, 2013). A high quality of social interaction increases the harmony of residents, prevents from any conflict, and shows their concern for the environment. A robust social interaction builds a sense to recognize the environment and neighbors; hence it will create the mutual trust and willingness to do proactive actions in actualizing a better living environment (Rasidi et al., 2012; Said & Yuliastuti, 2013). Two factors are influencing the utilization of social facilities as social interaction, namely socio-demographic conditions, and physical elements. A homogeneous residents background relatively has a higher social interaction (Farida, 2013; Lemke & Moos, 1989; Said & Yuliastuti, 2013). In the meantime, socio-demographic characteristics consist of age, marital status, gender, the number of children, the length of residence, educational background, and income level (Behrad & Bahrami, 2015; Farida, 2013). Also, a better education people take an active informal activity (George, 1978). Gender influences the interaction behaviors conducted (Behrad & Bahrami, 2015) and females relatively have a higher social contact (Lemke & Moos, 1989). Younger people are more likely to engage in community activities (Lemke & Moos, 1989) and a high level of employment relatively has low social ties (Guest & Wierzbicki, 1999). Meanwhile, people living longer have a closer relationship with neighbors (Kaźmierczak, 2013; Keene, Bader, & Ailshire, 2013; Lelévrier, 2013).

The accessibility and design influence the using of community facilities. Social interaction is promoted through a high quality of physical design of community facilities. The residents prefer to use the facilities close to their home (Abu-Ghazze, 1999; Tsai, 2014). In the
meantime, the low-income households also prefer to use the nearest facilities to minimize transportation cost (Lotfi & Koohsari, 2009). On the other hand, as explained in The National Standard of Republic Indonesia (SNI) 03-1733-2004 about Housing Planning Procedures in Urban Areas (National Standardization Agency of Indonesia, 2004), that the distance of each social facility on RWs area is not more than 500 meters. Zhang & Lawson (2009) pointed out that there was a relationship between outdoor space and building condition to support more attractive social activities. They revealed that the size and number of outdoor spaces do not influence the social interaction. The most important thing that determines the use of public outdoor space is how to make the outdoor space have a good quality as space for interaction. They also suggested that residential buildings and public space should be had a proximity and a good design to encourage social activities. Similarly, Pasaogullari & Dorati (2004) highlighted that there is a positive relationship between the accessibility and utilization of public space. A well-used public space is located in the center of the neighborhood and has a proximity to the residential neighborhood. The quality of public space, such as comfort, safety, maintenance, cleanliness and variety of facilities determine the utilization of facilities. They suggested that the public space should be located in a proper place, which should be a maximum distance of 10 minutes of travel time. The physical condition and accessibility influence the use of public space. Good design and access can attract the use and encourage the opportunity for the user to socialize with the users (Chitrakar, Baker, & Guaralda, 2017).

Francis et al. (2012) stated that the sense of community is influenced by the public space or shop quality than the frequency of visitors. Similarly, Zhang & Lawson (2009) also found that the location, form, size, and landscape of public space were not significantly associated with social interaction. The quality of public space influences the social interaction so that a design of public space needs to be appropriate to the residents’ behavior.

**RESEARCH METHODS**

**Case study area**

Semarang City is one of the cities in Indonesia experiencing a high level of urbanization. This condition has an impact on the emergence of formal housing dominated by the provision of private housing. Unfortunately, many developers have not completed housing with social facilities due to the high costs incurred and other particular reasons. Social facilities also have a lack of condition due to the unclear responsibility for the maintenance. In contrast, the formal housing provided by PERUMNAS is completed with enough social facilities. Limitations of social facilities as public spaces for social interaction may cause the residents out of social relations between neighbors. However, social facilities have a function as social space to conduct an informal and formal relationship with residents living in the same area of RT (Neighborhood Association in which one RT consists of 30-40 households), RW (Community Association which consists of 8-10 RTs), and in the broader area of housing.

This study was conducted in two suburban areas in Semarang City, Indonesia; Banyumanik and Tembalang District. These districts are located in the fastest developing location for formal housing in Semarang City. Perumnas Banyumanik (PB) is a formal housing built by Semarang City’s Government through Perum Perumnas in 1978, located in Banyumanik District. Meanwhile, Bukit Kencana Jaya (PBKJ) is a formal housing built by a private developer in 1987 located in Tembalang District. The PB and PBKJ have been selected as case study areas since they have complete facilities and infrastructures. Furthermore, both PB and PBKJ also have the same characteristics with both built for more than 20 years, dominated by a small type of houses, and relatively have the same of areas. The PB and
PBKJ are divided into RW and RT. The PB (see Figure 1 (left side)) has 49.97 hectares consisting of 15 RWs, called RW 3 to RW 17 with a total population of 10,691 people or 3,211 households in 2014. The PB is dominated by housing type 21/84m$^2$ (58%) from the total of 2,213 houses). Meanwhile, the PBKJ (see Figure 1 (right side)) has 45 hectares consisting of 5 RWs, i.e., RW 11 to RW 15. The PBKJ has a total population of 3,156 people or 967 households in 2014 and dominated by housing type 21/60m$^2$ (59%) from the total of 1,766 houses).

![Figure 1: (Left) PB Housing at Banyumanik District (Source: Author, 2015); (Right) PBKJ Housing at Tembalang District (Source: Authors).](image)

There are different rules for providing social facilities between PERUMNAS and private housing developer. In the PB, PERUMNAS is entirely responsible for the procurement of all social facilities and the maintenance until the handover to the municipality within the maximum period of six months after the residential units are sold out. Meanwhile, in the PBKJ, the provision of social facilities is dominated by the residents, which are organized by local organizations since the developer is only obliged to provide land.

Each RW at PB has its facilities, such as community hall, mushola, and parks or playgrounds provided by the PERUMNAS. In contrast to PBKJ, the residents through RW forum provide their social facilities independently on the land given by the developer. Not all of RWs at PBKJ have the same facilities since all depend on the consensus, financial capability, and the availability of land in each RW.

**Data collection methods**

This study compared the use of the community hall at PB and the worship facilities at PBKJ using quantitative methods. Primary data collection methods used were questionnaires, field observations, and interviews. The sampling technique used was stratified random sampling. The samples were distributed proportionally in all of the RWs consisted of 97 households at PB and 100 households at PBKJ. In this study, the users of social facilities are limited to the residents. This is to facilitate us to distribute questionnaires to the respondents, who consisted of the households at PB and PBKJ. On the other hand, the social facilities located in the neighborhood are used to carry out local social activities, so that they are closed to access for outside users.
The questionnaires were designed to obtain the social and economic condition of families, residents’ perception about the accessibility of community halls and worship facilities around their neighborhood, and their involvement in social activities conducted in community halls and worship facilities. Measuring the level of accessibility, the respondents are questioned about the proximity and how to reach community halls and worship facilities. Moreover, for the level of involvement of respondents in neighborhood social activities, the open questions are used to uncover what kinds of social activities are regularly conducted in their neighborhood, where the social activities take place, and the frequency of involvement in social activities. The field of observation was conducted for three months by taking photographs of the availability of social facilities, the users of social facilities, and activities undertaken in community halls and worship facilities. The field observation also shows social interaction characteristics, such as social interaction activities like meeting, chatting, playing, and discussing; actors; and activity time. The interviews were with heads of RWs, the housing developer, and PERUMNAS Regional V about the provision and the utilization of social facilities. Further questions for heads of RWs are also intended to explore the information about social activities regularly conducted and how social interaction condition between the neighbors in their neighborhood. The field observation and interview are the complementary methods used to confirm and accomplish the questionnaire answers.

Data analysis methods

This study used quantitative research methods. The analysis was conducted by quantitative descriptive analysis with Crosstab Analysis to examine the correlation between accessibility and quality of social interaction and to show the role of social facilities’ utilization to reinforce social interaction. In this study, there were two indicators used to assess the accessibility, i.e., the proximity and way to reach the facilities. Meanwhile, quality of social interaction was measured by using the frequency of involvement in social activities.

Each indicator is weighted from 1 (bad) to 3 (good) using Likert Scale. Table 1 shows the variables, indicators, and the weight of each indicator. Furthermore, it is required to the weighting; each indicator is to bear the index values as a benchmark of each variable as shown in Table 2.

<table>
<thead>
<tr>
<th>Variables</th>
<th>Indicators</th>
<th>Explanation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accessibility</td>
<td>Proximity</td>
<td>1 = Community halls or worship facilities are reachable more than one kilometer</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 = Community halls or worship facilities are reachable between 500 meters to 1 kilometer</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 = Community halls or worship facilities are reachable less than 500 meters</td>
</tr>
<tr>
<td></td>
<td>Way to reach the facilities</td>
<td>1 = Low walkability or had to use a motor vehicle</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 = Medium walkability</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 = High walkability</td>
</tr>
<tr>
<td>Quality of social interaction</td>
<td>The frequency of involvement in social activities conducted in community halls or worship facilities</td>
<td>1 = Rarely</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 = Sometimes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3 = Always</td>
</tr>
</tbody>
</table>

Table 1: The selected variables and indicators (Source: Authors).
Table 2: The range index value of accessibility and quality of social interaction variables
(Source: Authors).

<table>
<thead>
<tr>
<th>Categories</th>
<th>Range Index Value of Accessibility and Quality of Social Interaction Variables</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bad (1)</td>
<td>1 – 1.7</td>
</tr>
<tr>
<td>Medium (2)</td>
<td>1.8 – 2.3</td>
</tr>
<tr>
<td>Good (3)</td>
<td>2.4 – 3</td>
</tr>
</tbody>
</table>

Crosstab Analysis was used to analyze the correlation of the use of social facilities to reinforce social interaction. There are two variables analyzed by Crosstab analysis; accessibility and quality of social interaction. Crosstab Analysis was undertaken using SPSS 16.0. Chi-Square Pearson Test on Crosstab Analysis has shown the correlation between accessibility and quality of social interaction based on probability or significance value (see on Asymp.Sig. value). The hypotheses are if the probability value is more than 0.05, H₀ is acceptable, or there is no correlation between accessibility and quality of social interaction. Conversely, if the probability value is less than 0.05, it implies that H₀ is rejected or there is a relationship between accessibility and quality of social interaction. In the end, it would be possible to understand how social facilities in formal housing constructed by the government and private developer are used to reinforce social interaction of residents.

UTILIZATION OF SOCIAL FACILITIES AND QUALITY OF SOCIAL INTERACTION

Socio-economic characteristics

Socio-economic characteristics are divided into employment, income level, educational level, and length of residence (see Table 3). Perumnas Banyumanik (PB) is inhabited by middle-low income households, while Bukit Kencana Jaya (PBKJ) is inhabited by middle-high income households. Income rate level per month indicates that both PB and PBKJ are dominated by middle-income level (IDR 3,000,000 – IDR 5,000,000) households. Viewing from the percentage of the height of households' income level (more than IDR 5,000,000), PBKJ is higher than of PB.

Table 3: Household characteristics at PB and PBKJ (Source: Authors).

<table>
<thead>
<tr>
<th>Social Economic Characteristics</th>
<th>PB</th>
<th></th>
<th>PBKJ</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>%</td>
<td>Number</td>
<td>%</td>
</tr>
<tr>
<td>Employment of Household</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Private Employees</td>
<td>20</td>
<td>21</td>
<td>51</td>
<td>51</td>
</tr>
<tr>
<td>Civil Servant</td>
<td>9</td>
<td>9</td>
<td>29</td>
<td>29</td>
</tr>
<tr>
<td>Informal Sector</td>
<td>18</td>
<td>18</td>
<td>8</td>
<td>8</td>
</tr>
<tr>
<td>Housewife</td>
<td>19</td>
<td>20</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Retired</td>
<td>23</td>
<td>24</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>8</td>
<td>8</td>
<td>12</td>
<td>12</td>
</tr>
<tr>
<td>Income Rate (per month)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Under IDR 2,000,000</td>
<td>41</td>
<td>42</td>
<td>34</td>
<td>34</td>
</tr>
<tr>
<td>Between IDR 3,000,000 until 5,000,000</td>
<td>45</td>
<td>47</td>
<td>38</td>
<td>38</td>
</tr>
<tr>
<td>More than IDR 5,000,000</td>
<td>11</td>
<td>11</td>
<td>28</td>
<td>28</td>
</tr>
<tr>
<td>Educational Background</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Primary School and Junior High School Graduates</td>
<td>18</td>
<td>18</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Senior High School and Vocational High School Graduates</td>
<td>53</td>
<td>55</td>
<td>40</td>
<td>40</td>
</tr>
<tr>
<td>University Graduates</td>
<td>26</td>
<td>27</td>
<td>55</td>
<td>55</td>
</tr>
<tr>
<td>Length of Residence</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Less than five years</td>
<td>17</td>
<td>18</td>
<td>7</td>
<td>7</td>
</tr>
<tr>
<td>5 to 15 years</td>
<td>16</td>
<td>16</td>
<td>64</td>
<td>64</td>
</tr>
<tr>
<td>More than 15 years</td>
<td>64</td>
<td>66</td>
<td>33</td>
<td>33</td>
</tr>
</tbody>
</table>
Seen from the employment condition viewpoint, the PB is dominated by retired inhabitants (24%), while PBKJ is dominated by productive inhabitants as private employees (51%). The type of the employment influences the interaction and participation in social activities. The retired people relatively have more time at home and get more interaction with neighbors. Meanwhile, private employees have less time to conduct their interaction with neighbors. Employed people usually carry out their interaction in the evening after working or on weekends. In the meantime, the educational background shows that the PB is dominated by middle educational background (55%), while the high educational background (55%) residents dominate the PBKJ. Educational background influences the involvement of residents in social activities. Concerning the length of residency, the PB is dominated by those who have been living there for more than 15 years (66%), while the residents with 5 to 15 years of residency (64%) dominate the PBKJ.

Utilization of community halls facilities and quality of social interaction at PB

Utilization of community halls at PB is influenced by the accessibility condition measured by using proximity and way to reach indicators. Figure 2 shows the accessibility condition at PB based on questionnaires results. The proximity indicates that in a total of 97 respondents, 64% respondents said that community halls are reachable less than 500 meters and 33% respondents argued that community halls facilities be reachable more than 1 kilometer. Meanwhile, 56% respondents stated that they usually go to community halls only on foot due to high walkability and close to their houses. As many as 41% respondents revealed that community halls facilities have low walkability.

The proximity indicator shows that PB has a medium level of proximity with an index value of 2.3 (category and range index value as shown in Table 2). The way to reach social facilities indicator is also categorized in medium level with an index value of 2.2. Overall, accessibility variable indicates that community halls of PB are classified in medium level with an index value of 2.2. A good accessibility of community halls is influenced by the availability of this facility, which each RW at PB has a community hall which provided by PERUMNAS. Furthermore, community halls at PB are appropriately located and appropriated with the government’s standard design of the neighborhood; hence make it more accessible.

Neighborhood regularly conducts formal social activities as a forum for gathering among the residents and shows the residents’ concern with the environment and community. Community halls are regularly used to conduct casual social encounters among neighbors. The community halls are utilized to take a variety of formal social activities, such as PKK (Family Welfare and Empowerment) for mothers, meetings for fathers, posyandu (Integrated Care Center) for infants and children under five years old, and exercise for elderly and women. The diversity of social activities shows the social interaction conditions in a neighborhood and strengthens social relations with neighbors in the scope of the RT or RW. In a variety of social activities, many kinds of social interactions arise like meeting, chatting, joking, and discussing which impact on self-improvement. There is transmitting valuable information by sharing the knowledge and experience as well as discussing neighborhood condition.
As many as 67% respondents stated that they always engage in various social activities. In the meantime, 27% respondents said that they sometimes engage in social activities and the rest of 3% respondents answered that they rarely engage (see Figure 3). Overall, the frequency of involvement in social activities at PB is categorized in high level with the range index value of 2.7.

As many as 66% of respondents agreed that the community halls in their neighborhood are used as social activities space. Men, women, children, and elderly use community halls to conduct social activities (see Figure 4). However, a community hall at PB is used regularly once a month for social activities. The residents usually use the neighborhood road to take their daily social interaction like meeting, chatting, and playing.
Figure 4: Posyandu activities in a community hall at PB (Source: Authors).

Utilization of worship facilities and quality of social interaction at PBKJ

Worship facilities at PBKJ consist of mushola (the small mosque), mosque, and chapel. Musholas and mosques are scattered in every RW as recitation place for Muslims. A chapel is also established to serve PBKJ Christians residents and the public. RW community groups provide the mosques and musholas independently. The mosque and mushola are built on the lands designated by the developer for social facilities and planned in the site plan. The mosque is provided by the developer, while the chapel is built by a group of the Christian community which uses a house converted into a chapel.

The proximity of worship at PBKJ indicates that 87% respondents said that worship facilities are reachable less than 500 meters, 7% respondents argued that worship facilities are reachable between 500 meters to 1 kilometer, and 6% of respondents stated that worship facilities are reachable more than 1 kilometer. Meanwhile, 84% respondents claimed that they usually go to worship facilities only on foot due to the high walkability and close to their houses, 5% respondents stated that worship facilities have medium walkability, and 11% respondents revealed that worship facilities have low walkability.

The proximity indicator shows that PBKJ has a good level of proximity with an index value of 2.8. Further, the way to reach social facilities indicator is also categorized in high level with an index value of 2.7. Overall, accessibility variable shows that worship facilities at PBKJ are classified in good standard with an index value of 2.8. A good accessibility of worship facilities is influenced by the availability. Each RW requires worship facilities, especially mushola or mosque as a worship place. The worship facilities found in each RW are in the distances between 100 to 300 meters away.

In some RWs, the buildings of mosque and mushola are integrated with other facilities, such as playgrounds and sports facilities. The existence of multifunction location indicates that residents want to use the land optimally as the public space that can be utilized together to organize various community activities and supporting the social interaction.
In total 100 respondents, 58% respondents stated that they are often involved in religious activities (see Figure 6), while 28% respondents said they sometimes engage in religious activities, and 14% respondents answered that they rarely engage. Musholasm and mosques are used every day to conduct various religious activities as well as social activities, such as prayer for Muslims, recitation, the commemoration of the religious day, and some religious discussions (see Figure 7). Both in these religious and social activities, the kinds of social interaction, like meeting, praying, discussing, and chatting.

Overall, the frequency of engagement in social activities at PBKJ is categorized in high level with the range index value of 2.4. As many as 91% respondents said that the worship facilities are used as a place for praying. The religious activities have variety benefit for enlarging and enhancing social relationship among the residents. After praying activities,
communities can discuss their neighborhood condition. It indicates that the worship facilities are built based on the need of residents.

Figure 7: (Left) recitation in a mosque at PBKJ (Source: Authors, 2015); (Right) children are playing at mushola (Source: Authors).

Physically, the provision of social facilities, such as community halls at PB and worship facilities at PBKJ have been designed according to the concept of Neighborhood Unit in which facilities should not be located more than ¼ miles or 500 meters away. This is consistent with the concept of Neighborhood Unit, which describes that the development of these formal housing aims to create an ideal condition of the neighborhood that will increase the value of social interaction among residents through the physical arrangement of a good environment. As highlighted by previous studies, the design of facilities, mainly from the proximity indicator, affects the residents’ satisfaction as the users of facilities (Chitrakar, 2016; Pasaogullari & Doratli, 2004; Tsai, 2014; Abu-Ghazzeh, 1999). A safe distance increases the frequency of users to use the facilities as it affects their perception of the availability of the facilities. Moreover, a variety of activities undertaken in social facilities also influences the use of facilities. As revealed by Chitrakar (2016), the active use, a good design, and complementary facilities of public space help in developing social interaction.

UTILIZATION OF SOCIAL FACILITIES TO REINFORCE SOCIAL INTERACTION

The formal social activities are functioned to increase social relationship among RW residents since the activities involve RT residents. Based on Pearson Chi-square test, Table 4 show that the correlation value between utilization of community halls and engagement in social activities at PB is 0.383 (see at Asymp. Sig. value), which indicates the correlation values is more than 0.05. It implies that there is no relationship between the use of community halls and the involvement of residents in various social activities or it means that social interaction is not influenced by the place of activity. It is supported by field observation that daily social interaction among the residents at PB is usually conducted in neighborhood road.

The graph in Figure 8 shows that the involvement in social activities is not related to the utilization level of community hall facilities. Social interaction of residents at PB is not directly influenced by the availability of social facilities, mainly community halls in this case. The PB residents prefer to talk and discuss everything about their neighborhood at that time without waiting for a formal meeting at the community hall. The involvement of PB residents in social activity reflects their concern about the neighborhood due to a high sense of community. A
A strong sense of community determines the residents' involvement in local social activities, regardless the use of community hall as a space to conduct this activity. The length of residence influences a high sense of community. Moreover, sense of community affects the number of interactions (Francis et al., 2012). As argued by Lemke & Moos (1989) and Said & Yuliastuti (2013), the involvement in various social activities gives opportunities to interact with other residents. The quality of social interaction between PB's residents is shown by their participation intensity in social activities (see Figure 8). Also, the local institution also plays an important role to strengthen community involvement in line with its function to encourage social interaction (Yuliastuti, Wahyono, Syafrudin, & Sarifuddin, 2017).

<table>
<thead>
<tr>
<th>Table 4: Chi-square test of utilization of community halls related to social interaction at PB (Source: Authors).</th>
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<tbody>
<tr>
<td><strong>Value</strong></td>
</tr>
<tr>
<td>Pearson Chi-Square</td>
</tr>
<tr>
<td>Likelihood Ratio</td>
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<tr>
<td>Linear-by-Linear Association</td>
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<tr>
<td>N of Valid Cases</td>
</tr>
</tbody>
</table>

Community involvement in neighborhood social activities has a significant role in the development of society and improvement of environmental conditions. Social interaction through regularly neighboring casual meeting is only one way to increase the social condition among neighbors. The PB residents usually conduct their social interaction every time and everywhere, not limited by space and time. It reflects that social interaction has an essential role in their daily life. On the other hand, a robust social interaction builds a mutual trust and willingness to do proactive actions in actualizing a better living environment (Rasidi et al., 2012; Said & Yuliastuti, 2013).

As many as 66% respondents at PB have been staying more than 15 years. It influences the quality of social interaction among neighbors. People who live longer have a closer relationship with neighbors (Kaźmierczak, 2013; Keene et al., 2013; Lelévrier, 2013). Households that have more length of residence have more sense of belonging to the neighbors as the old residents. The term of stay as an old resident has created a power for the community to be able to compact with each other, living in harmony, and care about the condition of their neighborhood. Meanwhile, the difference between the educational background and income do not influence the quality of social interaction at PB due to a high sense of belonging and awareness of the environment and neighbors. In line with Said & Yuliastuti (2013) who revealed that intensity of interaction among neighbors at public mass housing is regardless of the occupation and educational background.

The quality of interaction between PBKJ residents is shown by their interaction during religious activities persisted. Religious activities not only functioned to enhance the sense of faith in God but also to reinforce the social life among residents. Table 5 shows the role of worship facilities to strengthen social interaction among residents based on their engagement in religious activities.
Figure 8: The correlation between the use of community halls and involvement in social activities at PB (Source: Authors).

Based on Chi-square test in Table 5, the correlation value between utilization of worship facilities and social interaction is 0.000 (less than 0.05). It implies that there is a relationship between the use of worship services and the social interaction persisted during religious activities take place. It also supported by the graph in Figure 9, which shows the correlation between the utilization of worship services and the social interaction activities. Figure 9 indicates that the religious activities, such as pray for Muslims and recitation are useful as these activities may enhance the social interaction.

The PBKJ is dominated by private employees (51%). Residents who have been staying for 5 to 15 years (64%) also dominate PBKJ. As stated by Guest & Wierzbicki (1999), a high level of employment reduces the social ties. Consequently, residents require social facilities to accommodate their social interaction. Worship facilities are needed to conduct regularly religious activities and establish a social relationship with the other residents. Mosque or mushola is used every day to perform five-time prayers and recitation in the evenings. Through these religious activities, the other benefit is to enlarge and enhance the social relationship among the residents. The residents usually discuss their neighborhood after praying activities. Moreover, the recitation for children is regularly conducted in the afternoon. After recitation activities, children usually play with their friends since mushola or mosque is completed with open space that allows children to interact and play with their friends.
The variety of religious and social activities in worship facilities makes housing residents often use these facilities to increase the sense of faith and strengthen social relationships. Religious and social activities facilitate the residents to enhance their relationship in the midst of their work dominated by private employees. On the other hand, as housing occupied by productive inhabitants, recitation which taken place every evening at mushola and mosque is meaningful for children to meet and play with friends as well as man, woman, and elderly to the meeting, greeting, chatting, and discussing with other residents. The mosque and mushola, which are scattered in all of RW area, have an excellent accessibility. It serves safety place for children as a place to interact since the area is close to their houses.

CONCLUSION

The accessibility of social facilities plays an essential role to determine the utilization of social facilities. The accessibility condition determines the residents’ perception of the availability of social facilities in their neighborhood. Furthermore, it encourages the residents’ desire to use those facilities due to the proximity and way to reach factors. However, there is a difference in the motivation of using the social facilities at public and private housing. The socio-demographic backgrounds do not highly influence the utilization of social facilities at public housing due to a sense of community. The length of residence influences a sense of community and the number of interaction. A higher sense of community determines the level of residents’ involvement in local social activities. In line with Chitrakar (2016) who stated that residents who are actively engaged with local organizations have a better sense of community, regardless of the use of public space. In contrast, the utilization of social facilities in private housing is affected by socio-demographic background, particularly due to the employment status. At a public housing, residents usually conduct their social interaction every time and everywhere, not limited by space and time. The social facilities are highly required as a means to gather and improve their social relationships in private housing. Based on these crucial issues, the housing developer needs to consider the provision of social facilities by the residents' preference as well as the maintenance of those facilities.
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REFERENCES


