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Gated Communities in Lahore, Pakistan

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## Sense of Community among the Residents of Gated and Non-Gated Communities in Lahore, Pakistan

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#### **Abstract**

Planned gated and non-gated communities have appeared rapidly all over the world due to the public amenities and quality of life they offer. It is generally assumed that gated communities provide better security as compared to non-gated communities. However, population growth and urban sprawl have led to many social and physiological issues including the death of old city traditions, community identity, and lack of the sense of community (SOC). Thus, modern urban development faces the challenge of meeting the habitation and social needs of people with lesser face-to-face interaction and more mobile and fluid ways of communication. Lahore is the second largest city of Pakistan. It has experienced the growth of private sector led gated communities over several years. This research aims to compare their physical characteristics, as well as the perception of security, extent of social interaction, and the sense of community among their residents. For this purpose, the data of interviews with the residents of 4 selected gated and non-gated communities of Lahore was collected. The findings revealed that the sense of community is strongly associated with the extent of social interaction in both gated and non-gated communities. Contrary to what the literature generally suggests, this study found a higher sense of security among the residents of non-gated communities than gated communities. Finally, it was concluded that the participation of the residents in community development and management activities would promote more socially cohesive and vibrant communities.

*Keywords:* community interaction, gated communities, housing societies, residents, sense of community, sense of security

#### Introduction

Gated communities are residential areas with surrounding walls or a fence, with limited access and prohibiting trespassing for security and other reasons. The number of gated communities has been increasing rapidly in

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all parts of the world including USA, Europe, and Asia (RafieManzelat, 2016). To overcome the issues of street crime, gated communities are given special importance by urban planners since they provide a safer environment. Crime rate in non-gated communities is nearly 25% higher than that in gated communities. These communities are economically seen as a good value for money since they provide secure and safe zones with a higher level of services and amenities (Manzi & Smith, 2005). Whereas, for some people, gated communities symbolize a luxurious lifestyle (Kim, 2006; Bint-e-Waheed & Nadeem, 2020). People choose to live in gated communities for various reasons, such as security, exclusivity, or lifestyle preferences. However, the impact of gated communities on the sense of community among residents is not distinct. Sense of community (SoC) is defined as "a feeling of belonging to a place, a feeling that they matter to each other, a mutual faith that all of their rights will be fulfilled with their mutual commitment towards each other" (McMillan & Chavis, 1986). Lu et al. (2018) found that the residents of gated communities feel social attachment with the place, since they are familiar with their neighbours and more actively involved in community level social events. This leads to developing a sense of community among the residents of such neighbourhoods. On the contrary, some authors found that there remains a lack of privacy and social cohesion in gated communities as compared to non-gated communities, arguing that people's relationships with others are influenced by their feelings about the living spaces (Mousavinia, 2022). This raises questions as to how far the socioeconomic status of the residents, physical design characteristics, public facilities, and attachment with the neighbourhood contribute to SoC across gated and non-gated communities (Li et al., 2021). Bandauko et al. (2022) suggested further research to determine the factors that motivate people to reside in different types of communities and help promote social interaction and SoC. In this context, Lahore offers an interesting case to explore different factors that affect how people connect and interact in gated and non-gated communities.

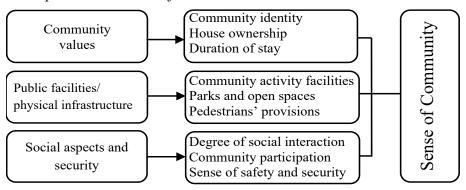
Lahore is the second largest city of Pakistan and its population is growing rapidly. Housing in Lahore has become one of the major needs of the public, thus creating a business opportunity for private developers. In this regard, gated communities have emerged as a new concept for providing a safe habitat and lavish lifestyle to the residents of Lahore. These are the main attraction for status-conscious people, making such communities unaffordable and inaccessible for the middle- and lower-

income groups. On the contrary, non-gated communities are said to be more accessible to different income groups and provide relatively greater opportunities for social interaction (Boonjubun, 2019). So far, there has been limited research on gated and non-gated communities in Pakistan. Rahmaan and Anis (2009) studied the dynamics of gated communities with respect to their impact on sustainable development. Their survey revealed that most of the residents moved into gated communities for a better living. social environment, and security reasons. They were satisfied with their neighbours and the management With higher income group people, valuing security more than the middle-income group. Bint-e-Waheed and Nadeem (2020) analysed the linkages between the perception of security risk in gated and non-gated communities of Lahore. They concluded that the residents of non-gated communities felt more insecure due to a very high crime rate than in gated communities. Gul et al. (2018) studied possible association between the perception of crime and walking in gated and non-gated neighbourhoods of Karachi but couldn't find any conclusive evidence of any kind of relationship. However, the nature of and variation in SoC and the factors that may promote social interaction and influence SoC in both the gated and non-gated communities have not been identified yet in case of Lahore through empirical research. This study determines the strength of the relationship between SoC and various attributes of gated and non-gated communities that would help to guide the future planning of socially cohesive and vibrant neighbourhoods in Lahore and across the country.

## Methodology

This research is aimed to assess the sense of community or SOC in both gated and non-gated communities of Lahore. To develop a deeper understanding of the relationship among neighbourhood characteristics, gated elements, and SOC, a thorough review of relevant literature was conducted. There is a consensus that communities' culture/core values, neighbourhood ties, sense of security, and availability of facilities/public spaces for the satisfaction of physical and social needs play an important role in promoting SOC (Moustafa, 2009; Link et al., 2021; Li et al., 2021). Hence, a conceptual framework encompassing community values was developed, taking into account the physical and social attributes of neighbourhoods and the residents' mutual interaction (see Fig. 1).

Figure 1
Conceptual Framework of SOC



The conceptual framework hypothesises that community values, physical infrastructure, social aspects, and security are the major factors that shape a community. Note that community values refer to the shared norms, beliefs, and goals that guide the behaviour and decisions of a group of people. Several authors have proposed this kind of conceptual framework, whilst arguing that such factors help to build the community identity, shape household characteristics, public facilities, physical and social activity patterns, and develop a sense of safety. Compared to community values, community identity refers to the sense of belonging and identification that individuals feel with a particular group. All these attributes also contribute toward developing SOC among the residents of a neighbourhood or housing scheme (Farahani & Lozanovska, 2014; Francis et al., 2012). Based on the above premise, the following four hypotheses were developed.

- H1: SOC is associated with the perception of security in the community.
- H2: SOC is associated with the extent of social interaction in the community.
- H3: Neighbourhood satisfaction is associated with the extent of social interaction in the community.
  - H4: SOC is associated with the duration of stay in the community.

#### **Data Collection**

To test the above hypotheses, a questionnaire survey was conducted with the residents of two gated and two non-gated communities located in different parts of Lahore, Pakistan. To select the communities, data of public and private housing societies were obtained from the Lahore Development Authority (LDA). In the year 2022, there were 15 public sector and 282 approved private sector housing societies in Lahore. The public sector housing societies are managed by LDA, whereas many private societies are managed by private developers or function as cooperative housing societies. Notably, most of the private housing societies are underdeveloped with an area of below 500 kanals.

The two selected gated communities from the private sector included WAPDA Town Phase I (a fully developed cooperative housing society spread at an area of 9280 kanals and largely belonging to the high-income group) and Pak Arab Housing Society (a fully developed private housing society spread at an area of 1530 kanals mainly belonging to the middle-income group). The two selected non-gated communities were Johar Town Phase I (8540 kanals) and Taj Pura (912 kanals). Both of these are public sector housing societies, one belongs to the high-income group and the other belongs to the low- and middle-income groups. Thus, the sample represented all income groups. The respondents were selected based on different sizes of plots/dwelling units using stratified random sampling technique. Sample size was calculated using Slovin's formula (Adhikari, 2021):

$$n = \frac{N}{1 + Ne^2}$$

where

Total number of households= N

Margin of error =e

n = Final number of sample size

Sample size of gated communities: 134

Sample size of non-gated communities: 136

Total sample size = 270

## **Statistical Analysis**

The interview data was analysed by using Statistical Package for Social Sciences (SPSS) and MS Excel software. In addition to calculating the frequencies of responses to each question, cross tables were generated and

Chi-square test was performed. The aim was to test the hypotheses to determine if there exists any relationship between different attributes of community and SOC among its residents. Chi-square test is a well-recognized inferential statistical method frequently used to test hypotheses. Cross tables are generated to compare the results of categorical independent and dependent variables as part of the Chi-square test. This is useful when it is intended to explore the association between two variables (Ewing & Park, 2020).

#### **Results and Discussion**

### **Socioeconomic Profile of the Respondents**

The results presented in Table 1 show that most of the respondents from both the gated and non-gated communities were aged between 18-50 years. All of them were well educated and had a bachelor or master degree, while only 31% were either matric or intermediate.

 Table 1

 Socioeconomic Profile of the Respondents

	Gated Communities	Non-Gated Communities
		e Percentage
Age of Respondent	1	8
18-30 years	29.6	36.5
Above 30 years	38.5	47.4
Above 50 years	31.9	16.1
Education of Respondent		
Matric	10.4	6.6
Intermediate	20.7	24.1
Bachelors	48.9	48.9
Masters	20	20.4
Monthly Income		
100,000-150,000	34.8	51.8
150,000-200,000	43	33.6
More than 250,000	22.2	14.6
Ownership of House		
Rented	16.3	15.3
Owned	83.7	84.7

	Gated Communities	Non-Gated Communities
	Response	e Percentage
Plot Size		
1 Kanal	19.3	16.1
10 Marla	43	25.5
5 Marla	37.8	27.0
3 Marla	None	31.4
Duration of Stay		
More than 5 years	32.6	40.9
More than 10 years	49.6	44.5
More than 20 years	16.3	13.9
More than 30 years	1.5	0.7

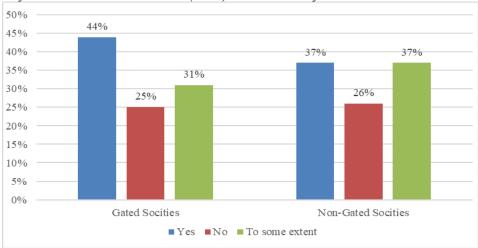
The reported monthly income of the residents of gated communities ranged between Rs. 100,000-200,000, while that of non-gated communities ranged between Rs.100,000-150,000. Most of the respondents from both types of societies owned their respective houses and only 16% were living on rent. However, the size of plot/dwelling unit varied, as a small proportion of respondents of gated communities were living in 1 Kanal houses, while almost half of them lived in 10 Marla houses, and 38% in 5 Marla houses. Similarly, a very small proportion of the respondents from non-gated communities lived in 1 Kanal houses, 25% of them in 10 Marla houses, and the rest of them in either 5 or 3 Marla houses. This indicates that a majority of the residents of gated communities belong to the high-income group, whilst those living in non-gated communities belong to the middle-income group. The duration of stay in a neighbourhood can play a vital role in developing one's affection and attachment with their neighbours and neighbourhood. Out of the respondents from gated communities, one third had been residing in their respective community for more than 5 years, half of them for more than 10 years, and only a small proportion for 20 years or more. Approximately, 40% respondents of non-gated communities had been residing there for more than 5 years, almost the same proportion for 10 years, and the remaining for 20 years or more. This suggested that the majority of respondents had been living there for the last 10 years or so.

### **Neighbourhood Characteristics**

## Physical Activity Facilities (PAF)

The respondents were asked about some physical characteristics of their neighbourhoods/societies, as well as the level of their engagement in various physical activities that may influence SOC. Figure 2 shows that 44% of the respondents from gated communities stated that the neighbourhood provided them with PAF, 25% said that PAF were not provided, and 31% said that these were provided to some extent.

Figure 2
Physical Activities Facilities (PAF) in Case Study Areas



On the other hand, 37% of the respondents from non-gated communities stated that PAF was provided, 26% responded negatively, and 37% responded that these were provided to some extent. Hence, the responses determined that most of the residents of gated communities were engaged in different types of physical activities including walking, jogging, cycling, and some other type of activity. As far as the engagement of the residents of non-gated communities is concerned, most of them were doing walking, whilst other were doing jogging and cycling (Figure 3). These results suggested that whether the residents considered the provision of PAF as adequate or not, they were conscious about their health and remained engaged in physical activities using various means to maintain their physical fitness.

■Cycling

■ Some other type of activity

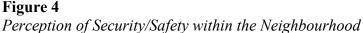
Figure 3
Engagement of Respondents in Physical Activities

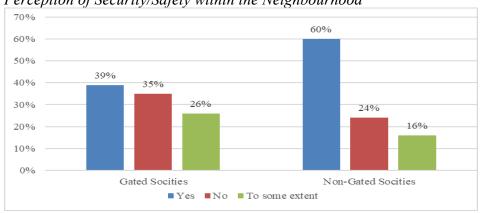
■ Jogging

#### Perception of Security

■ Walking

When asked about the perception of security/safety of their neighbourhood, only 39% of respondents from gated communities stated their neighbourhood was safe, 35% said that it was not safe, and 26% said that it was safe to some extent. Surprisingly, most of the respondents from non-gated communities stated that their neighbourhood was safe, 24% said it was not safe, and a small proportion of them said that it was safe to some extent (Figure 4). The relatively high level of the perception of safety among the residents of non-gated communities is because they have installed gates at both ends of their streets. This was also observed during field surveys/interviews with the residents.





### Sense of Community (SOC)

To determine the relationship of SOC with various attributes of gated and non-gated communities, it was imperative to know the awareness level of the respondents, both about SOC and their respective neighbourhoods. The results revealed that nearly 45% of respondents from gated communities had already heard about SOC, 35% were not aware about it, and 20% thought that they might have heard about it. Similarly, 42% were of the view that SOC existed within their neighbourhood, although a majority (56%) said it was non-existing. A relatively smaller proportion (32%) of the respondents from non-gated communities were aware of SOC, whilst most of them (51%) were not aware at all. When asked if SOC existed in their neighbourhood, 33% responded positively, 60% responded negatively, and 7% responded that it might have existed. In addition, more than 70% of respondents said that they had never been involved in any decision-making regarding the matters related to their community/society.

#### Social Interaction

A small proportion of the respondents (30%) from gated communities were of the view that their neighbourhood enjoyed high social interaction, 48% considered it as low, and 22% considered it as very low. In the case of non-gated communities, 29% of respondents were of the view that their neighbourhood enjoyed high social interaction, 54% considered it as low, and 17% considered it as very low. Hence, no significant difference was found in the extent of social interaction within both types of communities. The results also showed that 25% of respondents from gated communities used to meet or interact with their neighbours twice a week, 32% once a week, 30% fortnightly, and 13% only once a month. From non-gated communities, 19% interacted with their neighbours twice a week, 37% once a week, 31% fortnightly, and 13% only once a month. As far as the role of gated elements (boundary walls and gates) in reducing the opportunities for social interaction is concerned, most of the residents (56%) of gated communities were of the view that these were not responsible for social exclusion. Similarly, only 42% residents of non-gated communities believed that gated elements were responsible for social exclusion.

## Suggestions to Increase Social Interaction

The respondents gave some good suggestions to increase social interaction within their communities. From Table 2, it is evident that the

suggestions are diverse and the proportion of those giving each suggestion remains small. However, four suggestions given by 20% or more respondents may be given due consideration. These include holding more community events, open public meetings for area development, less commercialization, and provision of more public spaces.

 Table 2

 Suggestions to Increase Social Interaction

Sr. No.	Suggestions	Gated communities	Non-gated communities
110.		Response I	Percentage
1	More community events	15	25
2	Open public meetings for area development	20	17
3	Incorporate social media to highlight issues	15	12
4	Less commercialization and more focus on area planning	23	17
5	More public spaces	17	20
6	More security	10	9
	Total	100%	100

## **Hypotheses Testing**

This section presents the results of four hypotheses developed to determine the relationships between perception of security, extent of social interaction, neighbourhood satisfaction, and duration of stay in the neighbourhood with SOC among its residents.

Hypothesis 1. SOC is associated with the perception of security in the community.

Table 3 shows that observed values and expected values do not differ from each other, significantly. The calculated value of Chi Square is 3.200 for gated communities and 1.232 for non-gated communities (Table 4). Both the values are lower than the critical value, that is, 9.488 at 4 degrees of freedom and 0.05 level of significance. Thus, the hypothesis "SOC is associated with the perception of security in the community" is false or rejected in case of both gated and non-gated communities. Hence, the null hypothesis "SOC is not associated with the perception of security in the

community" is accepted. It indicates that whether people feel safe or not, they may have a good SOC and vice versa. The results presented in Table 3 also demonstrate that most respondents were of the view that there is no relationship between SOC and the perception of security in both gated and non-gated communities. The value of asymptotic significance given in Table 4 depicts that the observed values do not differ significantly from the expected values. Thus, there is no possibility of type II error of wrongly accepting a null hypothesis when it is actually false (George & Mallery, 2019).

 Table 3

 Relationship between Perception of Security and SOC

			Sense of Community (Gated)		Total	Sense of Community Total (Non-Gated)		ity	Total	
			Yes	No	May Be	-	Yes	No	May Be	
		Count	20	32	1	53	30	47	5	82
	Yes	Expected Count	22.4	29.4	1.2	53	27.5	49.1	5.4	82
Perception of		Count	19	26	2	47	9	22	2	33
Security	No	Expected Count	19.8	26.1	1	47	11.1	19.8	2.2	33
	To	Count	18	17	0	35	7	13	2	22
	some extent	Expected Count	14.8	19.4	0.8	35	7.4	13.2	1.4	22

**Table 4** *Chi-Square Test Results for the Relationship between Perception of Security and SOC* 

	Gate	ed Cor	nmunities	Non-G	ated (	Communities
	Value	df	Asymptotic Significance (2-sided)	Value	df	Asymptotic Significance (2-sided)
Pearson Chi- Square	3.200 <sup>a</sup>	4	0.525	1.232ª	4	0.873
Likelihood Ratio	3.764	4	0.439	1.223	4	0.874
Linear-by-Linear Association	1.567	1	0.211	0.56	1	0.454
No. of Valid Cases	135			137		

Hypothesis 2. SOC is associated with the extent of social interaction in the community.

Table 5 shows that the observed values of the relationship between the extent of social interaction and SOC significantly differ from the expected values. The calculated value of Chi Square is 48.814 for gated communities and 20.257 for non-gated communities and the significance value is < .001 (Table 6). Both the values are much higher than the critical value, that is, 9.488 at 4 degrees of freedom and 0.05 level of significance. Thus, the hypothesis "SOC is associated with the extent of social interaction in the community" is accepted. Indeed, SOC is strongly associated with the extent of social interaction in both gated and non-gated communities. This result is also supported by the responses presented in Table 5, since a majority stated that a high extent of social interaction is associated with SOC and vice versa. Studies in other developing countries including India and China also suggest that social interaction is positively correlated with residential satisfaction and SOC (Jacob & Chander, 2020; Li et al., 2021).

 Table 5

 Relationship between Extent of Social Interaction and SOC

			Co	Sense of Community (Gated)			Sense of Community (Non-Gated)			Total
			Yes	No	May Be		Yes	No	May Be	-
	High	Count	35	6	0	41	24	14	2	40
		Expected Count	17.3	22.8	0.9	41	13.4	23.9	2.6	40
E C	Low	Count	18	45	1	64	19	50	4	73
Extent of Social Interaction		Expected Count	27	35.6	1.4	64	24.5	43.7	4.8	73
	Very low	Count	4	24	2	30	3	18	3	24
		Expected Count	12.7	16.7	0.7	30	8.1	14.4	1.6	24

**Table 6**Chi-Square Test Results for the Relationship between the Extent of Social Interaction and SOC

	Gated	d Co	mmunities	Non-Ga	Non-Gated Communities			
	Value	df	Asymptotic Significance (2-sided)	Value	df	Asymptotic Significance (2-sided)		
Pearson Chi- Square	48.814 <sup>a</sup>	4	0.000	20.257 <sup>a</sup>	4	0.000		
Likelihood Ratio	51.818	4	0.000	20.155	4	0.000		
Linear-by- Linear Association	40.716	1	0.000	15.2	1	0.000		
No. of Valid Cases	135			137				

Hypothesis 3. Neighbourhood satisfaction is associated with the extent of social interaction in the community.

Table 7 shows that the observed values of the relationship between neighbourhood satisfaction and SOC significantly differ from the expected values. The calculated value of Chi Square for gated communities is 11.192 (Table 8). This value is higher than the critical value, that is, 9.488 at 4 degrees of freedom and 0.05 level of significance. Thus, the hypothesis "neighbourhood satisfaction is associated with the extent of social interaction in the community" is accepted. It indicates that in the case of gated communities, the residents who indulge into more social interaction are more satisfied with their neighbourhood. However, some variation can also be observed in Table 6, for instance, 36 respondents have low social interaction but still remain satisfied with their neighbourhood. Similarly, a considerable number of respondents either have low or very low social interaction but remain satisfied with their neighbourhood to some extent. These variations in the results suggest that the degree of social interaction may not be the only reason of satisfaction with the neighbourhood. A study of the gated and non-gated communities in USA suggests that the age of respondents and the lack of awareness of crime have an impact on neighbourhood satisfaction (Chapman & Lombard, 2006). Hence, further

research is needed in the context of a developing country to identify those factors, which may lead to satisfaction with the neighbourhood despite low social interaction among its residents.

**Table 7**Relationship between Neighbourhood Satisfaction and Extent of Social Interaction

				Gated			N	Ion-Gate	ed	
			High Low Very low		Total	High	Low	Very low	Total	
		Count	18	36	9	63	28	58	16	102
	Yes	Expected Count	19.1	29.9	14	63	29.8	54.4	17.9	102
Neighbourhood		Count	10	8	3	21	2	5	0	7
Satisfaction	No	Expected Count	6.4	10	4.7	21	2	3.7	1.2	7
	To	Count	13	20	18	51	10	10	8	28
	some extent	Expected Count	15.5	24.2	11.3	51	8.2	14.9	4.9	28

**Table 8**Chi-Square Test Results for the Relationship between Neighbourhood Satisfaction and Extent of Social Interaction

	Gate	ed Cor	nmunities	Non-	Gated Cor	nmunities
Value df Significa		Asymptotic Significance (2-sided)	Value	df	Asymptotic Significance (2-sided)	
Pearson Chi-Square	11.192ª	4	0.024	6.189ª	4	0.185
Likelihood Ratio	10.654	4	0.031	7.249	4	0.123
Linear-by- Linear Association	2.87	1	0.09	0.045	1	0.832
No. of Valid Cases	135			137		

However, in case of non-gated communities, this hypothesis is rejected because the observed values and expected values do not differ significantly. The calculated value of Chi Square is 6.189 (Table 8). This value is lower

than the critical value, that is, 9.488 at 4 degrees of freedom and 0.05 level of significance. It indicates that in case of non-gated communities, the association between the intensity of social interaction and neighbourhood satisfaction is insignificant. Hence, the residents who remain unsatisfied with their neighbourhood (due to other reasons) may still enjoy social interaction within their community and vice versa.

Hypothesis 4. SOC is associated with the duration of stay in the community.

Table 9 shows that the observed values for the relationship between the duration of stay in the community and SOC do not differ significantly from the expected values. The calculated values of Chi Square are 4.143 for gated communities and 3.444 for non-gated communities, respectively (Table 10). Both of these values are much lower than the critical value, that is, 9.488 at 4 degrees of freedom and 0.05 level of significance. Thus, the hypothesis "SOC is associated with the duration of stay in the community" is rejected. The main reason is that the case study areas fully developed only during the last decade, which is not a very long time, so most of the respondents have been residing there for less than 5 years. This might be the factor behind the absence of any relationship between SOC and residence duration in these areas. This is an unusual finding since it is normally assumed that SOC increases with the prolonged duration of residence in a particular community (Mousavinia et al., 2019; Li et al., 2021).

**Table 9** *Relationship between Duration of Stay and SOC* 

				Sense of				Sense o	f	
				Community			Community			
				(Gated)		Total	(N	on-Gat	ed)	Total
			Yes	No	May Be		Yes	No	May Be	
	More	Count	16	27	1	44	22	31	3	56
		Expected Count	18.6	24.4	1	44	18.8	33.5	3.7	56
Duration of	More	Count	29	36	2	67	17	37	4	58
Stay in the Town	Stay in the than 10 Town years	Expected Count	28.3	37.2	1.5	67	19.5	34.7	3.8	58
	More	Count	10	12	0	22	5	12	1	18
	than 20 Ex	Expected Count	9.3	12.2	0.5	22	6	10.8	1.2	18

			Sense of Community (Gated)			Sense of Community (Non-Gated)			Total
		Yes	No	May Be		Yes	No	May Be	
Mo	ore Count	2	0	0	2	2	2	1	5
than yea	Expected	0.8	1.1	0	2	1.7	3	0.3	5

**Table 10**Chi-Square Test Results for the Relationship between Duration of Stay and SOC

	Gate	d Co	mmunities	Non-	Non-Gated Communities			
	Value	df	Asymptotic Significance (2-sided)	Value	df	Asymptotic Significance (2-sided)		
Pearson Chi- Square	4.143ª	6	0.657	3.444ª	6	0.751		
Likelihood Ratio	5.335	6	0.502	2.999	6	0.809		
Linear-by-Linear Association	1.873	1	0.171	1.012	1	0.314		
N of Valid Cases	135			137				

#### Conclusion

The number of gated communities is rapidly growing in both developed and developing countries and Pakistan is no exception. Primarily, these communities were designed and developed to provide a safe and secure living environment. Although gated communities have succeeded to some extent in achieving their original objective, yet social exclusion and a decreasing Sense of Community (SOC) among their residents is a growing concern. This research attempted to identify the underlying factors that promote social interaction and hence SOC in both gated and non-gated communities. Based on the analysis of data generated through interviews with the residents of selected gated and non-gated communities of Lahore and testing of various hypotheses, the following conclusions were drawn:

 SOC is strongly associated with the extent of social interaction in both gated and non-gated communities. Although the current level of SOC is low among the residents of case study settlements, the results of hypothesis testing suggest that increasing opportunities for neighbourhood level social interaction would enhance it.

- Surprisingly, the sense of security/safety of neighbourhood in non-gated communities is higher than in gated communities. This is because of the fact that the residents of non-gated communities have installed gates after almost every two to three streets and hired security guards. However, based on data analysis and the results of hypothesis testing, it can safely be concluded that there is no relationship between SOC and perception of security in both gated and non-gated communities.
- In case of gated communities, the degree of neighbourhood satisfaction is associated with the extent of social interaction. The more the residents are satisfied with their neighbourhood, the more they are willing to socialize with their fellow neighbours.
- For non-gated communities, it concluded that there is no significant relationship between neighbourhood satisfaction and the extent of social interaction. Residents of non-gated communities may not be satisfied with their neighbourhood but may still interact with each other. This is contrary to what the literature generally suggests and warrants further investigation to identify the factors that may help to promote social interaction and satisfaction within the neighbourhood.
- It is generally well-established that the longer a person lives in an area the more SOC and affection that person has for this area. However, the results of this study showed that duration of residence does not affect SOC and affection about their neighbourhood. This finding is a new contribution to the exiting body of knowledge pointing towards other factors that may contribute to SOC.
- Most of the residents of both the gated and non-gated communities showed no active involvement in community development/management related matters.

#### Recommendations

To increase social interaction and SOC, it is very important to provide more physical activity facilities (such as for walking, jogging, cycling, indoor/outdoor games).

- Develop more community centres and improve the existing ones. Hence, people can have more frequent visits and may avail the opportunity to socially interact with their fellow residents. Pedestrian friendly streetscape and street furniture must be designed to enhance and encourage street interaction.
- Although there is no significant, relationship between perception of security and SOC, people tend to associate themselves with their area and fellow neighbours if they feel safe in their area. Efficient street security including CCTV cameras and community policing can help achieve this aim by making streets safer for residents and hence, encouraging street interaction as well as the children to play in the streets.
- To increase SOC or to enhance social cohesion within a neighbourhood, local community representatives and government/neighbourhood management officials should collaborate and arrange community meetings and social gatherings, thereby involving all the residents of the neighbourhood in planning and management related decisions and resolving issues of their areas.

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