ARTICLE

Investigation of informal housing challenges and issues: experiences from slum and squatter of Lahore

Sana Malik[1] · **Ruhizal Roosli**[1] · **Fariha Tariq**[2]

Abstract

The twin problems of uncontrolled urbanization and shortfall of affordable housing for low income groups are the bane of almost all developing countries. This is true in case of Pakistan undergoing rapid urban transformation with 207 million population at present. According to UN resources, half of the country's urban population i.e. more than 27 million people continue to live in informal settlements. Lahore being the second largest city, is home to 11 million people, covering more than 300 informal housing settlements in the form of slums and squatters. Adoption of informal housing is a depiction of poor governance system, showing little concerns for welfare of urban poor. This paper investigates the issues of informal housing based on field research and in-depth interviews of the residents of Karol Ghatti slum and Qalandarpura squatter. The objective of the study is to understand the complex phenomena of informal housing development by digging out respective reasons and their impacts on dwellers as a part of their daily survival challenge. Results confirm that inhabitants of slum and squatters exhibit socio-economic deprivations and lack basic infrastructure. This paper delivers a complete synthesis informal housing issues by providing social, environmental, operational and physical constructs, which can lead to thorough understanding and thus, are viable approaches to tackle the challenge of slums and squatters at a national level.

✉ Sana Malik
  sana.malik@student.usm.my; sana.malik@umt.edu.pk

  Ruhizal Roosli
  ruhizal@usm.my

  Fariha Tariq
  fariha.tariq@umt.edu.pk

1   School of Housing, Building and Planning, Universiti Sains Malaysia, 11800, Gelugor, Penang, Malaysia

2   Department of City and Regional Planning, School of Architecture and Planning, University of Management and Technology, C-II Johar Town, Lahore, Pakistan

🖄 Springer

1 Introduction

Urbanization is one of the most significant trends of the past and present century providing the foundation and momentum for global change (UN-HABITAT 2016). It is expected that the urban population is going to increase by 500 million inhabitants in the period of the next 5 years. Statistics imply that by 2030, around 60% of the population on earth will be living in urban centers (FIG Report 2010). Also, several studies such as Berner (2000), Ball (2006), and Arnott (2008), as well as UN-Habitat reports on the situations of human settlements show that about 70% of the urban population dwells in informal settlements. On the other hand, following the current trends of urbanization, the figure of slum inhabitants is expected to grow up to 2 billion in the next decade, and up to 3 billion by 2050 (UN-HABITAT 2010). Poor and developing countries are more likely to experience this shift as they are the least prepared to finance the infrastructure including proper sanitation, sewerage and housing provision along with a lack of fundamental money-making opportunities for the poor community in the urban spaces (CEISIN 2006). Cohen (2006) and Montgomery (2008) also mentioned the insufficient infrastructure and absence of basic facilities (water, sanitation and healthcare) for an increasing number of people in the cities of less developed countries. The developing world today faces a persistent shortage of affordable housing for the urban poor. Some developing countries have shown a promising attitude towards solving this problem; however the problem of housing deficit is still going to get more crucial over the next twenty years due to rapid urbanization. Rondinelli (1990) suggested appropriately that in such a scenario, upper income groups can access housing with little effort while poor and low income groups who formulate a greater percentage of urban dwellers will continue to face the most severe housing issues. In the global South, an ever-increasing number of city dwellers can only find places to live in the informal settlements with ambiguous land ownership, precarious tenure security, and substandard infrastructure. Based on the latest census, 41% of Mumbai's population lives in slums (Government of India 2011). The proliferation of informal settlements—described as "planet of slums" (Davis 2006), "shadow cities" (Neuwirth 2004), or "undercity" (Boo 2012)—is perhaps the most striking example of urban poverty and entrenched housing inequality at the global scale.

1.1 Informal housing

Informal housing is not a new phenomenon and it exists in many different forms like slums, squatters, shacks etc. Such types of informal settlements differ from each other based on the mode of land acquisition which can be established through employment, invasion or securing the land casually without undergoing necessary procedures of purchase (Gilbert 1981). Gelder (2013) defined how housing informality that ultimately takes shape varies between countries and cities, within countries, and even between different areas and administrations within the same city. Gelder (2013) also talked about how this housing informality critically depends on the attitude of the state. According to UN-HABITAT's definition, slum/squatter refers to group of people living under one roof in an urban setting who lack permanent housing, enough livable space, or provision of drinking water and a proper sanitation system. However, the concepts of slums and informal housing settlements are considered to be similar and that is further emphasized in literature. Moreover, they are generally considered to be an unlawful residency spot. Tipple and Speak (2006) established

Table 1 Differentiating parameters for informally housed (squatters) and homeless (slums). Modified from Tipple and Speak (2006)

Differentiation factors	People in informal settlements	
	Inadequately housed (sqautters)	Homeless (slums)
Security		
Type of settlement	Spontaneous/informal	Spontaneous
Access to land	Invasion (legal)	Invasion (illegal)
Type of government land	Not assigned for other use or not likely to be used as intended	May be assigned for other use
Security of tenure	Partial or temporary/psychological security	None, little or misplaced psychological security
Type of accommodation and location		
Physical planning	Quasi/informal planning	Quasi/informal planning
Building quality	Improving/consolidating	Not improving/consolidating
Personal safety	Moderate safety	Minimum safety
Type of accommodation	Renting or informally constructed owner	Nomadic arrangements
	Occupation	
Social status and organization		
Social status	Moderate but accepted for most employment	Very low but accepted for most employment

differentiating parameters for the informally housed and the homeless, showing that squatter settlements come under informal housing with limited infrastructure provision, while slums come under the category of homeless, based on their specifications (Table 1).

1.2 Impacts of slums and squatters

Unsecure tenure, congestion, crime, violence, lack of access to educational and health facilities and unstable employment are salient features of slums (Garland et al. 2005). Mahabir et al. (2016) established if slums and informal settlements are viewed separately or as a single entity and how they represent the disadvantaged communities which continue to have a large impact on the physical and economic landscapes. Also, the growing numbers of informal housing settlements are predicted to have significant consequences on both the natural and physical environment. Residents of squatters and slums are the most affected ones due to improper housing conditions in which they live and are under threat from natural disasters (Napier 2007). As a result of this, slum dwellers also impact the environment in the same manner i.e. they cause contaminated soil, air and water ways due to the inadequacy of basic facilities. This ultimately concludes into a continued deterioration pattern for both humans and the environment in which they live, creating an extension of the platform for the urban circle beyond squatters and slums (Ali and Sulaiman 2006). The urban economy is also greatly obstructed by the growth of such informal settlements. For instance, slums display the burden of commuting costs, unsecure tenure, unhygienic conditions and high expenditures due to insufficient infrastructure, as a large percentage of urban population lives in slums (Fox 2008). Therefore, expansion of informal settlements can cause several threats to sustainable urban development at a local, as well as national level.

1.3 Case of Pakistan

In Pakistan, slums are usually formed by nomadic groups of people or people migrated in search of better employment opportunities from nearby suburbs. While squatter settlements come under the term *katchi abadis* and are formed by permanent urban poor of metropolitans. *Katchi abadis* at national level can be further subdivided into two types:

(1) *Authorized katchi abadis:* Such type of settlements are marked by the government through a 99-year lease and the local government is responsible for infrastructure development.
(2) *Unauthorized katchi abadis:* Such settlements are not legalized as they are in demand for development by the private or government sector.

Pakistan is home to the sixth largest population in the world where the majority of the country's poor either live in rural areas or in urban slums. The country is going through urban transformation at present with 207 million population at present (GoP 2017). Half of the country's urban population i.e. more than 27 million people continue to live in informal settlements (UN-HABITAT 2011). With reference of affordable housing provision to poor, disappointing performance of the state and market can be regarded as evidence behind the phenomenal expansion of these informal settlements. This suggests that a variety of informal housing exists in the major cities of Pakistan. The housing demand was predicted to be 570,000 units a decade ago and the supply units were only 300,000, thereby creating a deficit of 270,000 units per annum. Presently, the country is facing a housing backlog of 9 million units and standing housing profile features unsecure tenure and inadequate infrastructural facilities (Jabeena et al. 2015). Malik and Wahid (2014) established that economic inequality, limited planning perspective, skyrocketing land cost, insufficient community participation, lack of partnership among key stake holders and insecurity of land tenure are the fundamental gaps between housing demand and supply in Pakistan. Kalim and Bhatti (2006) demonstrated that 65% of inhabitants of squatter settlements have no access to socio-economic opportunities, meaning that the majority of inhabitants are deprived of the basic socio-economic services. In addition to this, recent studies show that a long term strategic planning is required to address the socioeconomic and infrastructural issues for the health and well-being of slum dwellers in Pakistan (Ghafoor et al. 2014). This implies that an in-depth understanding of informal settlements is needed in order to achieve sustainable development goal of providing safe and affordable housing to everyone.

1.4 Case of Lahore

Punjab is the largest province of the country with Lahore as its capital and largest city by population with current population of 11 million (GoP 2017). At present, Punjab has 194 urban settlements headed by a Metropolitan corporation at the provincial capital, 11 municipal corporations in the four large cities and various intermediate cities (UrbanUnit 2018). Effective urban management of Punjab's cities is desired to navigate the agricultural-based transition to industrial and manufacturing, the scale and speed of urbanization is so fast, which can impose great challenges for state and local governments (Dowall and Ellis 2009). There is huge influx of urban poor coming from smaller

adjacent cities and suburbs in search of employment opportunities. This comes along with demand for shelter and associated facilities. On the other hand, supply is biased, as the lower income groups are in need of serviced land plots, however the developers are not offering them at affordable prices (Bajwa et al. 2007). Private sector is also playing to please land speculation and profit-generating businesses in the present circumstances of housing industry. Ali and Khan (2017) reported that because of a lack of availability of affordable housing, a large part of the city's population is left with no option but to settle in slums where they lack basic utilities needed for a dignified life. Environmental situations, land ownership, and construction patterns in these informal settlements vary, but they have one common factor: uncertainty of tenure. There are two factors that affect them. Firstly, as these settlements are customarily illegal, they tend to invite the governmental agencies to confiscate them. Secondly, the inhabitants mostly lack access to basic infrastructure and facilities.

This paper draws attention towards this complex social phenomenon through a comparative case study research, providing an opportunity to get deep insights of the context and socio-economic and physical constructs behind this informal housing sector of the city of Lahore, which has not been investigated in past. Furthermore, the study aims to shed light on the social, physical, environmental and governance issues and challenges faced by squatter and slum inhabitants. In-depth qualitative study is conducted to provide a complete understanding in order to implement and explore current technological advancements i.e. remote sensing, crowd sourced information and innovative computational models, which can lead to better monitoring and analysis of slums.

2 Research methodology and study area

Policy address to the housing disaster for urban poor requires qualitative investigation to bring the spotlight to daily life challenges within informal settlements. Quilgars et al. (2005) established that qualitative research provides opportunities to gain more detailed understandings of behavior, attitudes and experiences. The study of existing forms of all informal housing in Lahore is merely an unrealistic ambition. The present research is exploratory in its nature, since previous housing studies of present context provides little or no scientific knowledge about the informal housing issues, encompassing situations, activities and elements worth discovering. Stebbins (2001) believes that to explore effectively a given phenomenon, researchers must approach it with two special orientations: flexibility in looking for data and open-mindedness about where to find them. Both factors have been incorporated in current study of investigating the housing issues among dwellers of informal settlements through multiple case studies and inductive mode of inquiry. Both forms of informal housing (slum and squatter) were deeply scrutinized through the comparative analysis of both case studies. Why case study is methodology for exploration of in present research revolving around informal housing phenomenon? This is because of its well suited nature for empirical investigation of phenomenon within environmental context, where the relationship between the phenomena and the environment is not clear and unit of measurement is in accordance with individuality of concept (Yin 1994). Selection of first form of informal housing is Karol Ghatti Slum and second form is Qalandarpura squatter. These two were selected due to their location on the outskirts of Lahore and proximity to each other, ensuring the fundamental parameter set earlier, that people are coming to metropolitan for better employment and ending up into informal settlements. For this reason, they

cannot merely consider as representatives of existing slums and squatters within old and central locations of city. However, accent in exploration is forever on the inductive generation of new concepts and empirical generalizations Stebbins (2001), performs here the role of complimentary research component to overwhelm this study limitation.

2.1 Karol Ghatti slum

Slum near Karol Ghatti on Band Road within the vicinity of Wagha Town, Lahore near flour mill has been chosen for the study of housing conditions of urban poor living in extremely informal settlements. The choice of slum area is strongly justified with the location being parallel to the main highway (Band Road); acting as sharp change in the urban context across the road displaying inadequate living conditions of the urban poor (Fig. 1). The close network of the developed slum with Grand Trunk road known as G.T road implies that people migrate from nearby smaller towns in search of better earning opportunities for their livelihood. The attainment of temporary shelter brings relief to such migrants. This slow evolution of migrants constitutes the foundation for informal housing.

2.2 Qalandarpura squatter

Qalandarpura is one of the certified squatters in Lahore. The close links of this informal settlement with Lahore ring road and Lahore Canal road accounts for the strategic location of this squatter settlement implying that this study area has strong connections with other city centers (Fig. 2). The mega Lahore Ring Road connects this katchi abadi to

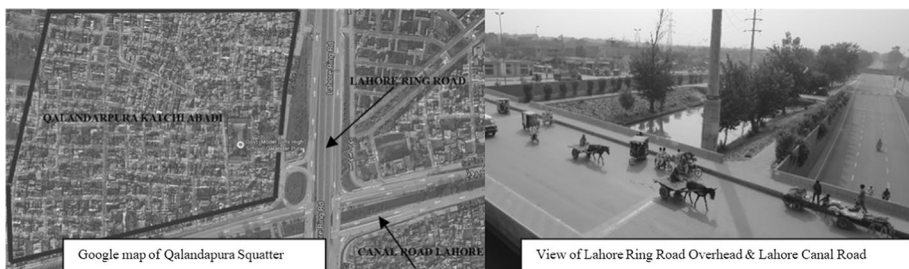**Fig. 1** Location map of Karol Ghatti slum, Lahore. *Source*: Author

Fig. 2 Location of Qalandarpura squatter, Lahore. *Source*: Author

well-established housing schemes for the elite class of Lahore, for instance, Defence Housing Authority (DHA) is just 10 min away by road. This obvious connection depicts a clear picture of the extremely contrasting environments between the two ends of city users situated at close location.

2.3 Data collection and sampling

Primary data was collected from the field research as participant observation and in-depth interviews with the residents to get the following information:

- Family size per unit
- Occupation and its type
- Reason of coming to Lahore city and dwelling informally
- Duration of stay
- Future housing strategy
- Status of tenure
- Infrastructure facilities (electricity, drinking water, sewerage, sanitation, network of streets)
- Governance of informal housing settlements

The interviews were conducted on the basis of open-ended questions, seeking for answers through informal conversations and picking up further constructive questions from within the given answers from the respondents to sustain the exploratory mode of research.

Systematic sampling has been selected for data collection. For Karol Ghatti slums, the sampling has been done by picking up every 10th unit out of 50 units on the site. Applying the rule of systematic sampling here; $N = 50$, $n = 10$ therefore $k = 50/10 = 5$. This shows that a numerical value of 5 units is taken as a sample for the selected population of 50 household units of Karol Ghatti slums. Although the *Qalandarpura squatter* is widely distributed over thousands of households, the selected population is restricted to 100 houses as pilot study. Out of the selected population of 100 households, the expected sample size is 10. Applying the rule of systematic sampling here, $N = 100$, $n = 10$ therefore $k = 100/10 = 10$. So the systematic interval implies that every 10th housing unit has been picked up for data collection. The head of the family and earning hand of the household are selected as the respondents. This is to make sure that more accurate and valid information can be collected from each household, in order to have a reliable analysis. Moreover, in order to assure the availability of respondents, we made sure to interview them at suitable times.

2.4 Justification of small sample size

Against the background of increased interest in qualitative methods (Flick 2002), interview-based studies involving a small number of respondents are becoming more common in social science. However, above description of sampling for data collection in both case studies in present study, can put question on small sample size especially in case of squatter settlement. Therefore, it is important to put a discussion on it, since scholars have provided justifications to support small-sample studies with phenomenological basis to endorse investigations of personal experiences in a largely subjectivist framework. Previous studies shared viewpoint of empirical evidence that labor-intensive nature of depth-focused research can justify a small sample size. Since it is mostly employed in investigations of

subjective feelings and reactions, and commonly in relation to ''sensitive'' topics and conducted through in-depth, relatively free-flowing interviews (Renzetti and Lee 1993). Also, such studies guides to select respondents on basis of their experience in an unsettling or disturbing situation (McKenzie and Crouch 2004).

Crouch and McKenzie (2006) discussed that qualitative analysis of in-depth interview material with an exploratory research strategy can result in establishing conceptual and theoretical links between individual experience and social context. The terminology of small sample size is a usual expression to signify small number of respondents involved in data collection nearly less than 20. Previous studies on slums (Kimani-Murage and Ngindu 2007; Riley et al. 2007) have relied on short sample size to study the health issues of dwellers in slum settings. Acknowledging Blumer's (1999) contention that the concepts of social science are intrinsically sensitizing rather than definitive, can help us in accepting small-scale interview driven and pure qualitative research as conceptually generative. In sum, exploratory studies are meant to indicate rather to conclude in research setting. Analytic and inductive nature of exploratory studies is best served in light of above arguments, an important qualifier of justifying small sample size.

2.5 Analytical parameters

Thematic Analysis enables the researcher to bring in diversity of information by analyzing the data. Maguire and Delahunt (2017) described that goal of a thematic analysis is to identify themes, i.e. patterns in the data that are important or interesting, and use these themes to address the research or say something about an issue. Based on this analytical approach, themes were extorted from collected data through field research and in-depth interviews from the households of Karol Ghatti slum and Qalandarpura squatter. The themes have been categorized jointly for squatter and slum by synchronizing the different issues documented during the case study. The following sequence has been applied in analyzing the collected data: formulating themes, coding the themes, supporting documented facts and figures as constructive findings with literature and knowledge. Analysis of collected data from different perceptions of selected population is carried out to justify the set objectives of study, which was to investigate the corresponding causes of informal housing and impact of poor living conditions, hence delivering set of semantic themes within analytical framework. Semantic level of thematic analysis is employed here to complete the analysis process, it involves a progression from description, where the data have simply been organized to show patterns in explicit content, and summarized, to interpretation (Braun and Clarke 2006). In lieu of this, following parameters were given consideration to analyze the multidisciplinary issues in comparative manner among two case studies:

- Physical: infrastructure and basic facilities, living conditions
- Social: accessible shelter and sustained existence, intellectual perspective and behavior
- Policy: governance, concerns of public authorities and NGOs
- Economic: employment and commuting issues

These parameters helped in determining the main findings against the themes emerged from the data. Results are represented in a descriptive manner through interpretation of viewpoints of interviewees, and emerging themes are then labelled A, B, C etc. to reveal the different meanings, experiences and behaviors against the each parameter at one time for both slum and squatter separately. Multiple interpretations are then combined in tabular form for

each case study i.e. slum and squatter separately to execute the fine understanding of exploratory research by examining their individual issues and challenges of informal housing.

3 Results

3.1 Lack of infrastructure and facilities

3.1.1 Karol Ghatti slum

The slums of Karol Ghatti represent the lowest degree of living without basic facilities of infrastructure like electricity, sewerage and sanitation. The slum community was provided with only one drinking water facility (Theme A, Table 2). The major drawback was the absence of proper toilet facility. The slum dwellers make use of temporary structures which depict their toilet and shower area (Theme B, Fig. 3, Table 2). The developing countries more or less present a generalized view of slums in the context of inadequate infrastructure and facilities. As discussed by Risbud (2003) about slum profiles of Mumbai in India, sanitation in slums is very poor, with 73% of slums depending on community toilets provided by the government, 28% defecating in the open, 0.7% of the slums having pay-to-use toilets managed by NGOs and only 1% of slums having separate toilets. This situation still persists in the present day slums as well. In The insufficient number of temporary defecation spot causes long waiting hours for users, stimulates unhygienic environment due to in turn excessive use and inadequate maintenance. Another interviewee further emphasized about roughness of daily activities (Theme C, Fig. 4, Table 2).

Table 2 Slum—lack of infrastructure and facilities

	A	B	C
Emerged themes	Limited facility of drinking water	Absence of proper toilet facility	Roughness of daily activities
Interviewee notes	Only one water tap for slum community comprising of almost 50 units	We are used to such type of setting as our way of living. We use the temporary structure as toilet and dump the waste by digging the mud"	Really difficult to carry out daily activities
Pictorial reference			

Fig. 3 Temporary setting for toilet in Karol Ghatti slum. *Source*: Author

Fig. 4 Household activities under open sky. *Source*: Author

3.1.2 Qalandarpura squatter

Qalandarpura squatter exhibited several issues regarding infrastructural insufficiency. In the case of garbage disposal, there were no specific points for disposing waste in the area. Open plots were in use for throwing the domestic waste from the houses (Fig. 5). This open garbage accumulation was acting as major contributor to the unhealthy life-style of residents.

Streets were poorly constructed and in the rainy season, the lanes were an awful sight, resulting in people slipping and various other accidents (Fig. 6). Authorized members of the provincial government put in some short-lived efforts in developing the street net-work, however no periodic endeavors were observed for the timely improvement of the lanes (Theme A, Table 3). Sewerage system was not installed properly in the squatter, and was observed with open manholes, acting as an open call to diseases and pollu-tion (Fig. 7). This poor sewerage system has also resulted in various unwanted acci-dents (Theme B, Table 3). In addition to this, the authorized solid waste management of the city is inattentive towards this issue, portraying negligent attitude in addressing the complaints and requests of community. Such irresponsible mind-set of the concerned authorities was revealed by an interviewee by mentioning how the certified authority does not entertain their complaints for sewerage drain cleanliness of the community and how the officials rather make them wait for hours, eventually causing them to return back home hopelessly (Theme B, Table 3). Street lights were not installed properly in the squatter, facilitating the theft activities at night and creating sense of insecurity among residents (Theme C, Table 3). The network of electric wires was poorly managed that alleys are over shadowed and flowing freely like hanging threads in random direc-tions (Fig. 8). Households used to get charged for electricity usage even where there is load shedding for long hours. The facility of drinking water connection was being managed by some groups through self-installation of their own pipes into existing main water pipeline illegally. This way-out was considered economical for them as no bill is being charged for such connections (Theme D, Table 3). Such acts further play a role in creating the image of such informal settlements as prohibited and illiterate. Another interviewee gave similar remarks regarding the water provision facility by mentioning that "no water connection is allocated by the government for domestic usage in each household, due to which they have bought their own water motor to deal with this short-coming "(Fig. 9).

Fig. 5 Garbage disposal in empty plot of Qalandarpura. *Source*: Author

Table 3 Squatter—lack of infrastructure and facilities

	A	B	C	D
Themes	Improper street network	Poor sewerage system	Mismanaged electric wiring and billing	Limited water supply
Interviewee notes	Some roads are being assisted by government officials, though it was a short-term effort	(i) Unattended kids playing can fall into manholes; thereby endangering the life and health of young tenants (ii) Unconcerned behavior of local authorities towards complaints about cleanliness of sewerage drains	(i) Night time theft activities have become common in the area (ii) Electricity is just for the sake of name as there is no proper provision of electricity. On the contrary, billing is more than the actual usage even when there is load shedding for most of the day"	(i) No bill for the monthly water usage due to illegal installation of water connection in the houses (ii) Self-help in the form of own water motor to meet the daily water usage
Pictorial reference	Fig. 6 View of street in Qalandarpura. *Source*: Author	Fig. 7 Open manholes on the street. *Source*: Author source	Fig. 8 Poorly managed electric wires. *Source*: Author	Fig. 9 Self installed water motor on the roof of one of the squatter houses. *Source*: Author

3.2 Accessible shelter and sustained existence

3.2.1 Karol Ghatti slum

The groups of urban poor living in such slums used to get adjust easily in such insecure tenure settings. This is probably because eviction from previous settings and moving into a new slum location is not a big deal for them. The debates on issues of urban development have led a few researchers to visualize a metropolitan without slums in the upcoming period. However the regional discussions on urban poverty, including perspectives on both 'slums of hope' and 'slums of despair', support and acknowledge slums as a constantly continuing aspect of urbanization. The present setting of slums has been established with scattered, crude and temporary units which are easy to pack and install in case of sudden eviction happenings (Figs. 10, 11). The careless and ignorant attitude of slum community towards formal housing and basic infrastructure have made their perception of existing living style as permanent one. Stuck into trap of urban poor, they seem to be contended with this label than being a villager and most of them end in early marriages of their children due to this limited vision (Theme A, Table 4). Their pattern of life depends upon natural resources more than mechanical means of living, due to this, they wake up early in morning and sleep early in the night (Theme B, Table 4). Because of this limited lifestyle, slum dwellers also plan for early-age marriages of their children in order to cut down the daily expenses and distribute the duties of family (Theme C, Table 4).

Table 4 Slum—accessible shelter and sustained existence

	A	B	C
Themes	Capability of shifting and settling down	Limited lifestyle	Early-age marriages
Interviewee notes	We were living in same improvised setting in other section of city before coming to Karol Ghatti. We are used to this mode of living; our former generations had also lived in the slums as we have been in like this for 25 years	Unavailability of electricity and other facilities have limited our lives and we depend purely on natural sources to carry out our daily activities	We plan for our children's marriages at young age to cut down the family responsibilities
Pictorial reference	**Fig. 10** An overview of Karol Ghatti slums from Band Road Lahore. *Source*: Author	**Fig. 11** View of one sheltering unit for living in slum. *Source*: Author	

Table 5 Squatter—accessible shelter and sustained existence

	A	B	C
Themes	Accessible shelter and timely relief	Insecurity of tenure	Consideration of existing living conditions as permanent
Interviewee notes	This comes as a great relief to us in the time of need and we continue to start living without proper investigation and documentation. Here, some tenants get the property as a gift from their forefathers without knowing the legal status of it	We had to leave the previous house on government orders because of bypass construction in the Dharampura (one of the oldest business hubs and well-populated area of Lahore). We came here in search of shelter and now we wish to get the secure tenure as well as other basic facilities, as it is difficult to keep moving for housing settlement	We want the basic facilities to be provided in this place as shifting to another place is really difficult as it is social and economic discomfort for deprived people like us. We view ourselves to keep living here with limited facilities of housing

3.2.2 Qalandarpura squatter

Squatters provide ease of getting housing units as their preferred housing settlement for urban poor. This is because of illicit practice by some groups within real estate sector, convincing them to settle on cheaper costs instead of opting for rental property or purchasing the property through right channel. At times, management corporations for such squatters, are dishonest with the needy groups of people and show them fake property documents. The registry of houses based on counterfeit stamp papers encourages them to live without further paperwork (Theme A, Table 5). Possessions based on stamp paper have now become a source of inspiration for many tenants to settle down here permanently. Most of the households have settled down here due to previous eviction or better employment opportunities. The existing neighborhood is now intended to get complete tenure security for the squatter as the residents no longer wish to live life in short-term settlements (Theme B, Table 5). The uninformed approach and seldom participation in upgrading the squatter settlement drives them away from helping themselves to fulfill their wish for a better life and left them with little inquisitiveness for up gradation efforts. Many of the interviewees showed their eagerness to continue living in their present living circumstances since they believe that current housing conditions is satisfactory for them in the sense that it is providing them relief from constant movement from one place to another after some period of time, which is common habit in urban poor groups in such big cities (Theme C, Table 5).

3.3 Lack of effective governance

3.3.1 Karol Ghatti slum

People were quite hopeless about getting assistance through state and provincial governments to improve their living conditions. In fact, they were annoyed by the biased behavior of the national political parties. During the election campaigns at state and provincial level, visits to informal housing settlements comprise of promising statements for the housing and infrastructure enhancement. However, such vigorous public stopovers are aimed at

Table 6 SLUM—governance issues

	A	B
Themes	Biased behavior of government representatives	Promising attitude of NGOs
Interviewee notes	Government parties pay visits to gain maximum percentage of voters by manipulating their concerns	NGOs carry out a dedicated coverage of socio-economic concerns; however there is no practical outcome of their efforts due to the unavailability of appropriate funds

gathering votes and ensuring the political victory of party, rather than serving the needy groups of people (Theme A, Table 6). On the other hand, NGOs do play an important role in highlighting the problems and issues of slum societies. NGOs along with TV channels and press media make visits and give coverage to the issues of the slum community (Theme B, Table 6). However their efforts have not been fruitful due to the insufficient funds and lack of involvement from the state. Now the Karol Ghatti slum community doubts the promises of NGOs, as the outcomes of their efforts are not evident.

3.3.2 Qalandarpura squatter

Qalandarpura is one the certified squatters of Lahore (Fig. 12). Authorized departments for the regularization of squatters in Lahore include The Directorate General (Katchi Abadis and Urban Improvement) Punjab Province in collaboration with Local Government and Rural Development and Government of Punjab which are designated to govern such informal settlements. Furthermore, at district[1] level, the respective departments for squatters come under local authorities such as Tehsil[2] Authority, Union Council[3] and Lahore Development Authority (LDA). Such local authorities are subjected to prepare the land use plans, master plans, development plans and small town development plans. At the squatter level, elected committee members act as support officers with these local authorities (Akhtar et al. n.d). Major reason for lack of governance, is the shortage of technical expertise at district, tehsil and union councils levels which restrict their planning capacity and delivery to the communities. Also, the financial dependence of local authorities on provincial and federal government lessens self-sufficiency of their operation due to limited ownership of resources (Haider and Haider 2006). For instance, an interviewee supported this literature by mentioning about unconcerned behavior of the designated officials towards their job duties (Theme A, Table 7). Limited partnership and association with NGO community is also a major reason behind the poor living environment. Although, NGOs do pay visits for highlighting the housing issues to public and private sectors, but the established uncertainty among squatter community contributes towards non-cooperative attitude towards them (Theme B, Table 7). In addition to this, people hold grudges against the political parties due to non-fulfillment of their promises

---

[1] Districts are the third order of administrative divisions, below provinces and "divisions".

[2] A tehsil (also known as taluka) is an administrative division of some countries of South Asia. It is normally sub-division of division.

[3] Union council in Pakistan is an elected local government body consisting of 21 councilors, and headed by a nazim now called Chairman (which is equivalent to a Mayor) and a naib-nazim now called Vice Chairman.

Table 7 Squatter—governance issues

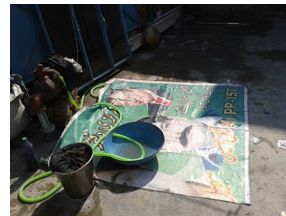|	A	B	C
Themes	Unconcerned behavior of officials	Limited participation with NGOs	False promises by political leaders
Interviewee notes	No proper attention has been paid by officials of regulating authorities for governance. We have placed applications so many times for providing us the basic infrastructure facilities (road pavement, garbage management, street lighting) but nothing has been done yet, as the concerned officials are mostly not present in office during duty hours	Due to the uncooperative attitude of the authorities, NGO visits are not welcomed by the most of the people in the community	During the election campaigns, political leaders visit the dwellings of such squatters, intending to get votes by making big promises of infrastructure provision. However, when it is the time to fulfill their promises, the politicians don't incorporate the well-being of urban poor in housing policies at national and municipal levels
Pictorial reference	**Fig. 12** Sign Board (in Urdu language) indicating the street and block number of Qalandarpura. *Source*: Author		**Fig. 13** Poster of a Political party campaign for election now on the floor for domestic use. *Source*: Author

with the Qalandarpura neighborhood (Theme C, Table 7). Ruined posters of elected government officials on the floor signal the discontent of squatter population (Fig. 13).

3.4 Limited intellectual perception and negligent behavior

3.4.1 Karol Ghatti slum

The interesting aspects of slum community about limited intellectual perception and negligent behavior are comprised of two things. Firstly, they do not show an urge in getting familiar to modern world and secondly, they have a non-participatory approach towards making efforts on their own to improve their living conditions (Theme A, Table 8). Another viewpoint revolves around ignorant behavior of mothers and poor childcare (Theme B, Fig. 14, Table 8). This can cause major social disasters later on by producing socially, mentally and physically disturbed adults. This understanding is most crucial one among all other daily life challenges and has been studied extensively in past literature. With reference to this, D'souza (1997) established the fact through his research that children under 5 years of age in lower income areas are at additional risk to health because of poor environmental conditions. Previous studies provide Evidence of malnutrition among children living in slum is Ejaz Ali Khan and Azid (2011) in their analysis, pointed out gender and

Table 8 Slum-limited intellectual perception and negligent behavior

	A	B
Themes	Limited vision for future planning	Ignorant behavior
Interviewee notes	(i) We cannot upgrade our living conditions, due to limited financial sources (ii) We do planning for our children here in crude shelter and start preparing for their wedding as we cannot send them school. We sell our domestic animals to get some money to bear wedding expense"	Prohibiting children from wandering would make them bored as there are no entertainment facilities like television through which they can amuse themselves by watching cartoons
Pictorial reference		

Fig. 14 Showcase of poor childcare in slum setting. *Source*: Author

activity of child, parents' education, household, per capita income, ownership of assets, number of children in the household, congestion in the household, provision of electricity, potable water and drainage facility to the household and slum locality of the household as important predictors. A study estimated the prevalence of intestinal parasitic infections (IPIs) and factors associated with IPIs among children 1–5 years of age from an urban slum of Karachi, indicated that age of the child, rented household and history of excessive crying were significantly associated with intestinal parasitic infection (Mehraj et al. 2008).

3.4.2 Qalandarpura squatter

Insensitive attitudes of public sector towards inadequate infrastructure and amenities limited the hope of achieving improved living conditions in the Qalandarpura squatter. Infrequent participation in squatter improvement programs drives them away from helping themselves in order to achieve a better lifestyle. Findings of such an ignorant approach were established via multiple statements from the interviewees, echoing the sustained existence of present housing situation and no sense of social initiative or self-help (Theme A, Table 9). The social awareness is highly restricted in such underdeveloped areas as people do not have knowledge about the official platforms for addressing urban and housing issues such as PURC (Punjab Urban Resource Centre) and Directorate General of *Katchi Abadis* and Urban Improvement, where they can put forward their concerns in order to attain healthy living environments(Theme B, Table 9).

Table 9 Squatter-limited intellectual perception and negligent behavior

	A	B
Themes	Limited participation in up gradation initiatives	Unfamiliarity with resource centers
Interviewee notes	We view ourselves to continue living here with limited facilities, with no future plans. However, we have been looking for a better location to shift but the inflated land prices leave us with questioning the possibility of this outlook. Still, we really wish to upgrade our lifestyle while being living here, but we have no clue how this will happen?	We do not have any knowledge about the official platforms for addressing urban and housing issues of poor communities like us

3.5 Vulnerable living conditions

3.5.1 Karol Ghatti slum

Vulnerable living conditions of the slums can cause severe injuries to the inhabitants. Lack of concern of nearby communities is also a contribution towards continuation of such livelihood. Few units showcased the sight of poor living conditions comprised of fragile structures without any protective measures (Theme A, Fig. 15, Table 10). Well-planned gated communities beside the slum create feelings of extreme discrimination among the inhabitants of the slums. In addition to open toilet spaces, heaps of garbage and dirty water points in the slums

Table 10 Slum—vulnerable living conditions

	A	B
Themes	Fragile structures for shelter	Unhygienic conditions
Interviewee notes	2 young sons in one family of slum community have lost their lives due to fall of temporary wall after getting severe injuries on the heads. Even after such a big incident there is no regulatory measure has been carried out by our government and nearby rich people	Open toilet areas and no proper disposal of waste is a major reason behind health issues in the slums. Mosquitoes are abundant in the locality and this problem becomes critical at night
Pictorial reference		

Fig. 15 Old lady laying down on the floor under temporary shelter setting. *Source*: Author

were causing people to suffer from contagious diseases. All in all, such poor hygienic conditions often lead to health problems in most of the tenants (Theme B, Table 10).

3.5.2 Qalandarpura squatter

Security concerns were recorded as more sensitive issue in squatters, as the community is spread over thousands of units, unlike the slum settlement. Unpleasant incidents such as theft and kidnapping activities were recurrent and were not monitored by the police via investigations and inquiry processes (Theme A, Table 11). This implies that absence of security guards and neighborhood watch resulted in strengthening the unwanted criminal activities. Inadequate design of dwelling units portrays the picture of substandard living

Table 11 Squatter—vulnerable living conditions

	A	B
Themes	Insecure environment	Inadequate house design and construction
Interviewee notes	Absence of proper security in the neighborhood has elevated the rate of unpleasant incidents in the squatter. A girl was once kidnapped and police has not found her yet	(i) There is one room and toilet for a family of five members. There is no separate kitchen in the house and only one room is used for different activities simultaneously (ii) Eight members are living in a house with one room and toilet, while the courtyard is being used as an open kitchen. They are just living a routine, not a life (iii) Due to the raised road level over a period of time, the formerly built room has now become the basement. Presently, due to this level difference, rain water accumulates in the room, resulting in an unhygienic environment (iv) Another thing disturbing their daily lives is the entrance of snakes due to the poor finish of the back wall opening into adjacent green fields. They cannot even afford the finishing costs of the wall
Pictorial reference		arrangement in courtyard. **Fig. 17** Curtain entrance into one of squatter housing unit. *Source*: Author

conditions. Units are not properly planned and there is no provision of spaces for cooking, studying, washing, praying, eating and sleeping etc. (Figure 16). Some units display an orthodox outlook of entrance by hanging a fabric cover on the door (Fig. 17). Most dwellings in the squatter have dark narrow passages with a toilet on one side, courtyard in the center, and one room at the end of the plot which is used as multifunctional space by the whole family. Inappropriate construction techniques of housing units are causing hazardous impacts on the daily life of tenants. The unfinished walls, floors and ceilings cause the residents to suffer in unfavorable weather conditions significantly. All these perceptions of different interviewees have been categorized into one single theme 'Inadequate house design and Construction 'on behalf of their content (Theme B, Table 11).

3.6 Employment and commuting issues

3.6.1 Karol Ghatti slum

Slum dwellers in current context were earning money with limited sources and no proactive approach was observed as discussed earlier as well under section of limited thinking perspective (Theme A, Table 12). Miseries of slum life has still not been able to warn the dwellers to limit the family size, as average size of each household was recorded to be at least seven family members. It shows that with least social and economic provisions, this section of society is majorly responsible for population growth. Uncontrolled growth of families, with a temporary earning source is considered to be a significant feature behind their poor lifestyle (Theme B, Fig. 19). Urge for better jobs has brought groups of people to the city, however their limited vision end up majority of them to work on a temporary

Table 12 Slum—temporary and limited sources of income. *Source*: Author

	A	B
Themes	Daily wages as source of income	Limited income and large family size
Interviewee notes	Majority of the people are employed on daily basis. Some work as part time supplier in a nearby factory and some as raw material collector. All these people have come to this city from different smaller towns in search of better employment and living standard. However some came as a result of eviction or natural disaster like flood	One of the household profiles a picture of the father of eight children, earns money through a temporary income source by selling raw iron for the whole family
Pictorial reference		

<div align="center">

Fig. 18 Limited income resources for the slum dwellers. *Source*: Author

</div>

basis. Recent research regarding slums and their socio-economic profile indicated the fundamental reason behind this sustained state of temporary and limited sources of income among these urban poor. In this regard, Marx et al. (2013) argued that slum dwellers may find themselves trapped in a low-skilled, low-income equilibrium as the continuous influx of rural migrants maintains wages at near-subsistence levels, hindering the investments in human capital that would be required to offset the adverse effects of slum living.

3.6.2 Qalandarpura squatter

Urban poor tend to make necessary contributions to different divisions of the economic development of a city through assigned job duties. This argument is further supported by Mehrotra (2014) quoting that squatters make an economy too, which is why urban planners need to soften social thresholds for such informal settlements. The subordinate functions performed by this section of urban population plays an important role in mega development of cities. However, the urban poor do not get a reward for this contribution; rather they have to deal with long commuting distances from their homes to workplaces on a daily basis (Theme A, Table 13). The fatigue and raised travel costs involved in commuting

Table 13 Squatters: employment and commuting issues. *Source*: Author

	A	B
Themes	Long commuting distress	Work from home as an alternative
Interviewee notes	(i) In one of the squatter households, one family member works nearby in transportation services, and the second one is employed in a private company near Thokar Niaz Baig, which is in another corner of the city from there. For the latter, the commuting time is around 2 h due to the multiple travelling route. Because of the daily extra expenditure on travelling, there is not much saving of money and it affects their livelihood adversely (ii) There are two employed persons in the family; one works as a car mechanic in the vicinity while the other works as a railway officer and uses a bicycle as his source of transportation, taking around 2 h for both sides of travel	Here, we have a workshop for cloth stitching and embroidery work. We manage our business at workshop by taking work orders from vendors located in the city centers and then supplying the finished product back to them. Before coming here, we lived near the business center at Badami Bagh (commercial hub of Lahore) but the labor costs were expensive there. The shifting to squatter brought the relief of cheap labor rates and limited visits to the city center i.e. twice a week. As a result, we get profit, as our earnings are more than our expenditures in this case
Pictorial reference		

<div align="center">

Fig. 19 In-house shop in one of houses in Qalandarpura. *Source*: Author

</div>

further reduces their saving capacity, emerging as an obstacle in improving the living conditions of tenants. To cope with this issue, some of the households adopted the idea of shop house by converting the space on the ground floor of their house into shop (Fig. 19). The economic initiative "work from home" has evolved as a better earning resource in comparison to the work which involves long commuting hours (Theme B, Table 13). Switch to this mode of employment exposes the learning of dwellers about better knowledge of local markets and familiarity with operations of economic activities within city centers. Such learning provide them pace with developed small and medium enterprises by acquiring professional links.

4 Discussions and policy implications

Exploration in social sciences provides opportunity to create enhanced rigor in methodological and theoretical frameworks by dedicated study of social processes to highlight grounded issues and their development. The research has revolved around informal housing issues of urban poor in Lahore. The informal housing settlements of urban poor developed, as consequence of emerging trends of urbanization, are studied extensively in context of study area including Qalandarpura squatter and Karol Ghatti slum. Results have established that rapid urbanization is emerging as a threat to formal housing development of urban poor communities. The theoretical framework of housing overview in Pakistan and research findings reveals that migration to big cities is accompanied with hope to get better livelihood. The idea of better living is complemented with provision of all basic infrastructure with permanent source of earning in a healthy environment. However, it is very disappointing to say that most of them end up in informal settlements for rest of their lives that are insecure, poorly governed and lacks adequate infrastructure and basic facilities. The emerged themes from the qualitative data were crosschecked with respect to set analytical parameters in both cases of Qalandarpura squatter and Karol Ghatti slum (Table 14).

From the results across the six parameters, a clear picture develops that lack of infrastructure and sustained existence of such informal settlements appeared as most rigorous physical and social issue respectively. It is also interesting to note that some of the themes are recurring, despite the fact that socio-economic aspects of both localities were different. Both case studies reveal the similarity in experiences of dwellers against the particular parameters i.e. limited supply of water facility and unresponsive attitude of government officials and are exposed as common issues in both informal settlements. Slum dwellers due to provisional and spontaneous mode of habitat, no doubt, are experiencing more critical issues and challenges in their daily routine in comparison to community of Qalandarpura squatter, which is dealing with low provision of public services and poor governance. However, findings in the present research reveal that their challenges of housing and living are also of same altitude. The inadequacy of infrastructure and public facilities is surely the biggest predicament of informal housing settlements including squatters and slums of Lahore city. This accompanied by open defecation which is considered as alarming factor towards stunting in the country. According to UNICEF official "There are 41 million people who do not have access to a toilet in Pakistan and as a result they are defecating in the open. And open defecation has significant health and nutritional consequences," (Gupta 2015). The limitations of basic infrastructure including electricity, water supply, sanitation, sewerage, garbage management, street lights, road network, telecommunication in deprived

Table 14 Cross check of main themes emerging from data in both case studies against the set parameters

	Analytical Parameters					
	Lack of infrastructure and facilities	Vulnerable living conditions	Accessible shelter and sustained existence	Limited intellectual perception and negligent behavior	Lack of effective governance	Employment and commuting issues
	Physical	*Physical*	*Social*	*Social*	*Policy*	*Economic*
karol ghatti slum	Limited facility of drinking water Absence of proper toilet facility Roughness of daily activities	Fragile structures for shelter Unhygienic conditions	Capability of shifting and settling down Limited lifestyle Early-age marriages	Limited vision for future planning Ignorant behavior	Biased behavior of government officials Promising attitude of NGOs	Daily wages as income source Limited income and large family size
Qalandar-pura squatter	Improper street network Poor sewerage system Mismanaged electric wiring and billing Limited water supply	Insecure environment Inadequate house design and construction Consideration of existing living conditions as permanent	Accessible shelter and timely relief Insecurity of tenure	Limited participation in up gradation initiatives Unfamiliarity with resource centers	Unconcerned behavior of officials Limited participation with NGOs False promises by political leaders	Suffering from long commuting Work from home as an alternative

communities, without any doubt, is obstruction in letting urban poor to live a healthy and progressive life. Limited thinking and negligent behavior found to be more evident in slum community, exposing the poor childcare as prominent issue. Study of 2–24-month-old children in Lahore comprising cases of slum, peri urban slum, village and middle income group also confirmed that the high prevalence of malnutrition in the poorer groups of study population lead to visual and speech impairment in addition to severe mental retardation in developing countries like Pakistan (Yaqoob et al. 1995).

Previous studies from other developing countries also discussed the range of different issues including employment, health and hygiene in informal settlements. All the empirical studies during last decade have stressed the magnitude of the problem. Health issues in particular were highlighted in one of the favelas (informal settlement like slum) called Pau da Lima, a community of 58,000 people in Salvador, third largest city of Brazil. Riley et al. (2007) in the process of performing this community-based study, discovered that a large proportion of the residents of this shantytown suffered from a variety of chronic illnesses, both infectious and non-infectious. In addition to this, sanitary practices are also examined in overcrowded slums, a cross-section study was conducted on residents of Kenyan urban slum and fecal contamination of their domestic water sources. Kimani-Murage and Ngindu (2007) confirmed after analyzing forty water samples used by respondents in laboratory that sources of domestic water in slum are contaminated with fecal matter as pit latrines were a major source of contamination of the wells since the urban poor often use inexpensive pit latrines and at the same time may draw domestic water from nearby wells. Policy perspective was also studied in previous informal housing studies. Bangladesh being developing country faces severe issues of slums. Recent research on national policy framework for urban slums reveal that there is lack of clarity among government officials because of the fact that subject of urban slum settlements is not official segment of papers of public policy or national analytical reports (Rashid 2009). Health and sanitation issues are rendered more problematic by the lack of provision of a social safety net in slums, among the range of risks. Recent study has illustrated the common aspects of life among slum dwellers in the developing work through surveys collected in in slums of four countries: Bangladesh, India, Kenya, and Sierra Leone. Despite the tremendous variations, Marx et al. (2013) conveyed that issues common to all slum settings are a lack of adequate living space, insufficient public goods provision, and the poor quality of basic amenities, all of which lead to extremely poor health and low levels of human capital.

To provide adequate housing to the urban poor is not an unachievable objective. It just requires dedicated efforts from all the key players of housing development sector. Findings have directed us towards deficiency of communication between government sector, NGO's and communities. The separate visits and unmatched approach of public institutions leave slum and squatter dwellers in state of disappointment and socio-economic suffering. This accounts for their uncertainty on governance system and lack of concern from government officials further convert this feeling into restricted participation. Urban poor Community residing in such informal settlements must be involved in planning process and up gradation programs of slums and squatters. The culture of community based development should be promoted nationally by public and private authorities to overcome the communal issues of informal housing societies community based up gradation projects including Orangi Pilot Project (OPP) in Karachi, Pakistan and UPDF Project in Phnom Penh, Cambodia have established that the involvement of affected communities is very significant for victorious execution of the project (Hasan and Mohib 2003; UN-HABITAT 2008). Culture of community involvement can be achieved through provision of needed solutions from

neighborhood groups of people from middle and higher income groups and business individuals in mobilization of community based efforts (Henry et al. 2006).

The alarming rate of informal housing developments stresses to revitalize successful initiatives on national level in the past, recipient of global appreciation. In this regard, Incremental Development Scheme in Hyderabad, Pakistan based on '*sites & services*' approach is successful model in this regard. Such schemes modify the role of government agencies to 'enabler' rather than acting as 'provider' reducing the scarcity of resources by sharing the housing responsibility with anticipated recipients as well (Aliani and Sheng 1990). Similarly, public–private partnerships should be encouraged for housing projects as the success story of Khuda Ki Basti (KKB) in major cities of Pakistan including Lahore and Hyderabad have delivered positive results in providing low-cost housing to urban poor. Siddique and Zaidi (2009) reported that unanimously all the resident families responded that they were feeling happy due to a feeling of ownership as key feature of KKB. Infrastructure and related facilities must be brought into efficient operating system through community based programs supervised by NGOs. The successful informal initiatives by qualified individuals, being in the Philosophy and Approach of Orangi Pilot Project, for instance MUAWIN (Movement for the Urban Area Wellbeing through Information and Networking) and LPP-Lodhran Pilot Project working as support organizations in Punjab in different domains like Low Cost Sanitation, Solid Waste Management, Education and Health and Income Generation Sectors for poor urban living in slums and squatters (Lodhran Pilot Project; Muawin).

Policy framework from national and provincial governments is limited in its approaches towards the perspective of future demand of housing units for urban poor. The housing demand is growing in Lahore due to increase in urban population as a result of rural–urban migration and other socio-economic reasons. The government agencies while formulating planning framework and strategies for housing sector should include special consideration for the future influx of migrants in addition to existing urban poor groups. Hence, Informal housing settlements represent a major policy challenge for developing economies in the 21st century. On a general account, little theoretical and empirical evidence from present study about the challenges and issues faced by dwellers of slums and squatters in daily lives, further guides towards systematic research agenda on informal housing in three ways. First, the research culture should be promoted and encouraged by involving young researchers including university students and postgraduates to work on real projects for their academic assignments as it will help to highlight the actual problems and their solutions. This will in turn provide constructive addition to data base of national slums and squatters being built on actual facts and figures. In doing so, national political processes would better integrate the urban slum policies on behalf of better understanding of critical pressing issues slum and squatter dwellers and a better integration of these dwellers in national political processes. Second, all the key stakeholders associated with formal and informal housing development sector should gather on common platform for a successful execution of public projects dealing with launch of new housing project, slum up gradation, squatter relocation or provision of tenure security. The transparent framework should be accessible to each stakeholder and debatable sessions should be promoted like the Karachi urban resource center. The existing Punjab Urban Resource Center in Lahore and Urban Resource Centre Karachi in Karachi are not playing active role in conducting public hearing and dialogues to enhance the participation concerned stakeholders. This needs to be effective to create collaboration avenues for sectors of public, private and civil society. Third, learning from the successful lessons in the past on development of low-income housing would allow the urban poor to settle down within periphery of metropolitans in a decent way. Replication

of Cost effective projects like OPP and KKB in accordance with present factual picture of urbanization could assist in providing discernable welfare and relief to the needy groups of people suffering from survival challenges of daily life due to temporary source of income, inflated house rents and insufficient infrastructural facilities.

5 Conclusions

This study highlighted the need to acknowledge the sustained existence of slums and squatters for improving the housing conditions of the urban poor, which persists to be an inherent gap in the present urban policies of Pakistan. Discussions showed that the habitants of such informal housing settlements face critical issues in their daily survival due to infrastructural inadequacy, poor governance and unhygienic environment. Slums and squatters experience similar problems and challenges encountered by the urban poor, however the mode and scope of issues is different in some cases. Based on discussions above, following key points have been concluded;

1. *Inefficient governance of government and non-government organizations* – Documented as a common aspect in both cases, however the squatter issues get addressed more occasionally based on the recognition by local government.
2. *Disparity of infrastructure*—The problem of inadequate infrastructure is critical in the case of squatter settlements, as slums do not receive access to even the basic infrastructure facilities.
3. *Land issues*—For the slum community, living in temporary shacks, the land tenure is out of question, whereas the certified *squatters* have tenure security for a short period of time. However, there is no secure tenure due to episodes of sudden eviction on government orders and hence, the fear of eviction. Regardless, the fear of unsecure tenure has not prohibited tenants from living there.
4. *Social issues*—Squatters encounter more social and environmental challenges due to a developed network of several informal housing units, as compared to the short-term and open environment of slums.
5. *Limited community participation*—Ignorant behavior towards improving living conditions has been observed in both communities; however the intensity of such behavior is higher in the case of slums.
6. *Vulnerable living conditions*—Squatter housing units display poor layout of houses without any proper spaces allocated for performing daily tasks. On the other hand, slum tenants are exposed to extremely unhygienic environments.

Karol Ghatti slum and Qalandarpura squatter are small segments of informal housing developments in the context of Lahore only. However throughout the city, even though the existing makeshifts and illegal housing areas have similar characteristics and issues, the profile of each informal housing setup is heterogeneous in nature and based on the location and contextual circumstances, therefore the respective research findings for the two housing set ups in Lahore are not particularly applicable on other unofficial housing settings. Also, some of the interviewees were reluctant to share their personal experiences and information. For example, when asked about the land tenure, due to the fear of eviction or being reported for occupying unlawful property, they were reluctant to respond.

However this limitation was dealt with by using informal contacts to identify cooperative key respondents. A more detailed research model is required to develop understanding of rural–urban linkages near mobilization routes between rural, peri-urban and urban junctions of Lahore in order to conceptualize housing demand and supply for the present and future influx of urban poor from nearby areas.

Informal housing in the form of slums and squatters has become a global issue. The recognition of this issue is not a new one and it has been associated with other global issues such as climate change and flooding, due to its broader impact on a local and national level. To cope with these challenges, multidimensional viewpoint and multidisciplinary studies are required for informal housing. Also, standardized procedures and further research is a dire need for data collection of slums. This paper frames an argument that such data is prerequisite in order to formulate acceptable spatial and chronological resolutions for better living of low-income groups. The study particularly highlights the severe housing issues in low income groups of Lahore and demonstrates the mechanism of this complex social phenomenon. This research is the first stepping stone towards opening up further avenues of exploration for slums and squatters in order to speed up the involvement of global innovative solutions for the informal housing problem, in the case of a developing country of Pakistan.

References

Ali, S., & Khan, A. (2017). *Lahore—A city of slums and shanties*. Retrieved April 30, 2018, from Daily Times, October 27. https://dailytimes.com.pk/131048/lahore-city-slums-shanties/.

Ali, M. H., & Sulaiman, M. S. (2006). The causes and consequences of the informal settlements in Zanzibar. In *XXIII congress of the international federation of surveyors*, Munich, Germany.

Aliani, A. H., & Sheng, Y. K. (1990). The incremental development scheme in Hyderabad: An innovative approach to low income housing. *Cities, 7*(2), 133–148.

Arnott, R. (2008). *Housing policy in developing countries: The importance of the informal economy*. Commission on Growth and Development, Working Paper No. 13, Washington, DC: World Bank.

Bajwa, I. U., Ahmad, I., & Khan, Z. (2007). Urban housing development in Pakistan: A case study of Lahore Metropolitan Area. *Pakistan Engineering Congress, 29,* 64–73.

Ball, M. (2006). *Market and institutions in real estate and construction*. Oxford: Blackwell Publishing.

Berner, E. (2000). Learning from informal markets: Innovative approaches to land and housing provision. Paper Presented at *ESF/N-AERUS and UNRISD workshop "Cities of the South: Sustainable for whom?* Geneva.

Blumer, H. (1999). What is wrong with social theory? In A. Bryman & R. G. Burgess (Eds.), *Qualitative research* (Vol. I, pp. 25–33). London: Sage. **(Orig. published 1954.)**

Boo, C. (2012). *Behind the beautiful forever: Life, death, hope in a Mumbai undercity*. New York, NY: Random House.

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology, 3*(2), 77–101.

CEISIN. (2006). *Where the poor are—An atlas of poverty*. New York: CIESIN, Center for International Earth Science Information Network.

Cohen, B. (2006). Urbanization in developing countries: Current trends, future projections, and key challenges for sustainability. *Technology in Society, 28,* 63–80. https://doi.org/10.1016/j.techsoc.2005.10.005.

Crouch, M., & McKenzie, H. (2006). The logic of small samples in interview-based qualitative research. *Social Science Information, 45*(4), 483–499.

Davis, M. (2006). *Planet of slums*. New York, NY: Verso.

Dowall, D. E., & Ellis, P. D. (2009). Urban land and housing markets in the Punjab, Pakistan. *Urban Studies, 46*(11), 2277–2300.

D'souza, R. M. (1997). Housing and environmental factors and their effects on the health of children in the slums of Karachi, Pakistan. *Journal of Biosocial Science, 29*(3), 271–281.

Ejaz Ali Khan, R., & Azid, T. (2011). Malnutrition in primary school-age children: A case of urban and slum areas of Bahawalpur, Pakistan. *International Journal of Social Economics, 38*(9), 748–766.

FIG Report. (2010). *Rapid urbanization and mega cities: The need for spatial information management.* No 48. Copenhagen: The International Federation of Surveyors.

Flick, U. (2002). Qualitative research—State of the art. *Social Science Information, 41*(1), 5–24.

Fox, S. (2008). *On the origins and consequences of slums.* In *Centre for the study of African economies—Economic development in Africa conference*. Oxford: Center for the Study of African Economies.

Garland, A. M., Massoumi, M., & Ruble, B. A. (2005). *Global urban poverty—Setting the agenda*. Washington, DC: Woodrow Wilson International Center for Scholars.

Gelder, J-L.v. (2013). Paradoxes of urban housing informality in the developing world. *Law & Society Review, 47*(3), 493–522.

Ghafoor, G. Z., Qureshi, E. M., Ghafoor, N., & Shehzad, L. (2014). Health status and hygiene practices in slums: A case study of Lahore, Pakistan. *BIOLOGIA (PAKISTAN), 60*(2), 273–278.

Gilbert, A. (1981). Pirates and invaders: Land acquisition in urban Colombia and Venezuela. *World Development, 9*(7), 657–678.

GoP. (2017). *Provisional summary of 6th population & housing census 2017* (Press release).

Government of India. (2011). *Slums in India: A statistical compendium*. New Delhi: Government of India, Ministry of Housing and Poverty Alleviation.

Gupta, R. G. (2015). *More than 40 m Pakistanis defecate openly: UNICEF*. Published in DAWN 08 March 2015. Accessed on March 14, 2019, from https://www.dawn.com/news/1168181.

Haider, M., & Haider, I. (2006). Urban development in Pakistan. In *Urbanization and sustainability in Asia* (pp. 245–268). Philippines: Asian Development Bank.

Hasan, A., & Mohib, M. (2003). *The case of Karachi, Pakistan. Understanding slums: Case studies for the global report 2003*. Development Planning Unit (DPU), University College London.

Henry, R. K., Yongsheng, Z., & Jun, D. (2006). Municipal solid waste management challenges in developing countries—Kenyan case study. *Waste Management, 26*(1), 92–100.

Jabeena, A., Shengb, H. X., & Aamir, M. (2015). Housing crises in Pakistan: Review of population growth and deficiencies in housing laws and policies. *International Journal of Sciences: Basic and Applied Research (IJSBAR), 24*(3), 323–347.

Kalim, R., & Bhatti, S. (2006). Quantification of socio economic deprivations of squatter settlement's inhabitants: A case study of Lahore. In *6th Global conference on business & economics*. Boston.

Kimani-Murage, E. W., & Ngindu, A. M. (2007). Quality of water the slum dwellers use: The case of a Kenyan slum. *Journal of Urban Health, 84*(6), 829–838.

Lodhran Pilot Project. http://lpp.org.pk/water-sanitation-hygiene-wash/#water. Accessed 12 Mar 2019.

Maguire, M., & Delahunt, B. (2017). Doing a thematic analysis: A practical, step-by-step guide for learning and teaching scholars. *AISHE-J: The All Ireland Journal of Teaching and Learning in Higher Education, 9*(3), 3351–33514.

Mahabir, R., Crooks, A., Croitoru, A., & Agouris, P. (2016). The study of slums as social and physical constructs: Challenges and emerging research opportunities. *Regional Studies, Regional Science, 3*(1), 399–419.

Malik, S., & Wahid, J. (2014). Rapid urbanization: Problems and challenges for adequate housing in Pakistan. *Journal of Sociology and Social Work, 2*(2), 87–110.

Marx, B., Stoker, T., & Suri, T. (2013). The economics of slums in the developing world. *Journal of Economic Perspectives, 27*(4), 187–210.

McKenzie, H., & Crouch, M. (2004). Discordant feelings in the life world of cancer survivors. *Health, 8*(2), 139–157.

Mehraj, V., Hatcher, J., Akhtar, S., Rafique, G., & Beg, M. A. (2008). Prevalence and factors associated with intestinal parasitic infection among children in an urban slum of Karachi. *PLoS ONE, 3*(11), e3680.

Mehrotra, R. (2014). *With elasticity of spaces, let spaces find their own solution*. Express Tribune.

Montgomery, M. R. (2008). The urban transformation of the developing world. *Science, 319,* 761–764. https://doi.org/10.1126/science.1153012.

Muawin. Taking it global. https://orgs.tigweb.org/muawinmovement-for-the-urban-area-wellbeing-through-information-and-networking. Accessed 10 Mar 2019.

Napier, M. (2007). *Informal settlement integration, the environment and sustainable livelihoods in Sub-Saharan Africa*. Montreal: University of Montreal.

Neuwirth, R. (2004). *Shadow cities: A billion squatters, a new urban world*. New York, NY: Routledge.

Quilgars, D., Jones, A., Elsinga, M., & Toussaint, J. (2005). Qualitative, comparative housing research: Some reflections on methodology. In *Paper to the ENHR conference, Iceland, June*.

Rashid, S. F. (2009). Strategies to reduce exclusion among populations living in urban slum settlements in Bangladesh. *Journal of Health, Population, and Nutrition, 27*(4), 574.

Renzetti, C. M., & Lee, R. M. (1993). *Researching sensitive topics*. Newbury Park, CA: Sage.

Riley, L. W., Ko, A. I., Unger, A., & Reis, M. G. (2007). Slum health: Diseases of neglected populations. *BMC International Health and Human Rights, 7*(1), 2.

Risbud, N. (2003). *Understanding slums: Case studies for the global report 2003*. London: Development Planning Unit, University College London.

Rondinelli, D. A. (1990). Housing the urban poor in developing countries: The magnitude of housing deficiencies and the failure of conventional strategies are world-wide problem. *American Journal of Economics and Sociology, 49,* 153–166.

Siddique, M. H., & Zaidi, S. S. U. H. (2009). Community oriented low-income housing—'Khuda-Ki-Basti', Kala Shah Kaku, Lahore—A step forward. *Greater Mekong Subregion Academic and Research Network, GMSARN International Journal, 3,* 117.

Stebbins, R. A. (2001). *Exploratory research in the social sciences* (Vol. 48). Newbury Park: Sage Publications.

Tipple, G., & Speak, S. (2006). Who is homeless in developing countries? Differentiating between inadequately housed and homeless people. *International Development Planning Review, 28,* 57–84.

UN-HABITAT. (2008). Quick guides for policy makers 1; Urbanization. The role the poor play in urban development. ISBN: 978-92-113-1937-8, 1–38

UN-Habitat. (2010). *State of the cities 2010–11—Cities for all: Bridging the urban divide*. Nairobi: UN-Habitat.

UN-Habitat. (2011). *Affordable land and housing in Asia*. Kenya: Nairobi.

UN-HABITAT. (2016). *Urbanization and development: Emerging futures*. Nairobi: United Nations Human Settlements Programme (UN-Habitat).

UrbanUnit. (2018). *Urban infrastructure housing and municipal services*. Urban Infrastructure Housing & Municipal Services.

Yaqoob, M., Bashir, A., Tareen, K., Gustavson, K. H., Nazir, R., Jalil, F., et al. (1995). Severe mental retardation in 2 to 24 month-old children in Lahore, Pakistan: A prospective cohort study. *Acta Paediatrica, 84*(3), 267–272.

Yin, R. K. (1994). Discovering the future of the case study. Method in evaluation research. *Evaluation Practice, 15*(3), 283–290.