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## Informal settlement and COVID-19: Vulnerability the case of district 13<sup>th</sup> in Kabul, Afghanistan

**Mohammad Yonus Wafa, Maqsood Rezayee and Sayed Adnan Mosavi**

### Abstract

The built environment exhibits strong connection to the novel of disease and viruses. Diseases have been hugely influenced in shaping the cities. Nonetheless, now cities are on the front lines of the COVID-19 crisis. However, the impact of COVID-19 has, so far, been geographically and socially diverse, cities with a high concentration of urban poor and deep inequalities are potentially more vulnerable than those that are better resourced, less crowded, and more inclusive. Hence, Afghanistan where cities have been recognized with high concentration of urban poor and inequalities is not exempt. Kabul, which is the capital of Afghanistan, is affected more than other cities where people suffer lack of adequate infrastructure, drainage systems, and solid waste management. However, the household with proper basic hygiene facilities is figured as place of protection during the quarantine. Then, for residents of Kabul, those who live in a crowded and informal settlement and lack the proper shelter and housing, such quarantines, staying indoors, and self-isolating are very high challenges. Therefore, aims to evaluate the informal settlement's vulnerability during the COVID-19 pandemic and quarantine in District 13 of Kabul. To reach the aim of this research survey questionnaires have been used as an instrument for data collection to have deep understanding on level of access to basic services and facilities during quarantine. As well as, to know whether absence of those basic services leads to which challenges during home staying. However, the finding of this research indicates that staying home is a challenge for the majority of the residents. Besides, this home staying posed another problem for residents of District 13 which income is losing. On the other hand, almost half of the residents rent houses and shelters. Then, they forced to leave their homes due to their inability to pay the rent.

**Keywords:** COVID-19, hygiene, vulnerability, informal settlement, district 13

### 1. Introductions

The built environment exhibits strong connection to the novel of disease and viruses. In history, the buildings and the cities have been reimaged in response to disease (Honey-Roses *et al.*, 2020) <sup>[10]</sup>. Diseases have been hugely influenced in shaping the cities (Akar *et al.*, 2020; Peters, 2020) <sup>[2]</sup>. Nonetheless, now cities are on the front lines of the COVID-19 crisis.

However, the impact of COVID-19 has, so far, been geographically and socially diverse (Regmi, 2020) <sup>[24]</sup>, cities with a high concentration of urban poor and deep inequalities are potentially more vulnerable than those that are better resourced, less crowded, and more inclusive. Hence, Afghanistan where cities have been recognized with high concentration of urban poor and inequalities is not exempt, where the rapid urbanization impacted large cities of Afghanistan with the manifestation of informal settlement. Kabul, which is the capital of Afghanistan, is affected more than other cities by the migration and rapid urbanization and is home to 52.3% of urban population of Afghanistan (Nabizada, 2012; Nazire & Kita, 2016) <sup>[20-22]</sup>. On the other hand, the limited capacity of the urban authority to provide plots for the residents and shortage of budget for the urban sector has led to the growth of informal settlements in Kabul. Therefore, 80% of the population of Kabul now live in informal areas (Fazli, 2016) <sup>[9]</sup>. Furthermore, population growth and rapid urbanization in Kabul have been outpacing the Urban Authority's capacity to provide infrastructure, basic services, and public amenities in the informal settlements. The people who are living in informal areas suffer from lack of adequate infrastructure, drainage systems, solid waste management lack of access to public services, traffic congestion, and natural disaster (Bismill, 2014) <sup>[8]</sup>.

However, the COVID-19 originated in Wuhan, China, and has spread around the world, the first confirmed case of COVID-19 was reported on 24 February 2020 by the Ministry of Public Health of Afghanistan from the Western province of Herat (Shah, *et al.*, 2020) <sup>[19]</sup>.

In efforts to curb the pandemic, initially the travel restriction and avoiding social gathering have been confirmed by the Afghan government cabinet to limit the spread of COVID-19. This restriction included banning the Nowruz celebration, suspending the schooling, and preventing of other spring gatherings and cultural celebrations. However, later on, on 27 March 2020, the Afghan government cabinet approved the imposition of compulsory quarantine in big cities such as Kabul, Herat, and Mazar-e-Sharif, and the initial restriction was tightened, then the residents have been forced to stay home (Shah, *et al.*, 2020) [19]. However, the household with proper basic hygiene facilities is figured as place of protection during the quarantine (Abdul Rashid, 2020) [1]. Moreover, public health officials advise people to stay home and reduce contact with other people. However, for residents of Kabul, those who live in crowded and informal settlement and lack the proper shelter and housing, such quarantines, staying indoors and self-isolating are very high challenges. Besides, the residents of informal settlement in Kabul suffer the absence of waste management, shortage of basic services, and social facilities. Then, there is a higher risk of fast contagion for any infectious disease in such environments. Besides without access to basic services and infrastructure, provision of drinking water, water for hand washing, reducing physical contact, and improvement of hygiene posed other challenges for both government and informal residents to curb the COVID-19 pandemic.

Therefore, the COVID-19 pandemic hits the people who live in informal settlement in Kabul, where hand washing and social distancing due to minimal health facilities shortage of waste management, lack of basic services, and

poor housing, are often impossible. Moreover, the economic consequences of COVID-19 for those in informal settlements will be long-lasting. As cities suspend daily activities and restricted movement, then, day laborers and those in informal employment will lose their income. This can result in people being forced to leave their homes due to their inability to pay the rent. Thus, preventing and managing COVID-19 outbreaks is most challenging in informal settlement in Kabul, where people depend on informal health facilities, and use overcrowded or poorly maintained public transport systems to commute long distances between home and work. As a result, the outbreak of COVID-19 has had a profound impact on informal residents and will be just one more tragedy for those who live informal settlement in Kabul. With all above this paper aims to evaluate the informal settlement’s vulnerability during the COVID-19 pandemic and quarantine in District 13 of Kabul.

**2. Research methodology**

**2.1. Study area**

Afghanistan located in Central Asia which is a landlocked and mountain country. It includes an area of 652000 km<sup>2</sup>. Furthermore, it shares border with Iran in the West, Pakistan in East and South, and Central Asian countries such as Tajikistan, Uzbekistan, and Turkmenistan in the North. Apart from that, Afghanistan is the 41st largest countries in term of land areas which has 34 provinces and each province divided into cities, districts, and villages. Kabul city is its capital which located in Kabul province (Javed, 2013) [11]. Figure 1 shows the location of Afghanistan in the world.



Source: Javed (2013) [11]

**Fig 1:** Location map of Afghanistan

Kabul which is the capital of Afghanistan known as the largest city of Afghanistan located in the Eastern part of the

country (Ahmadi & Kajita, 2017) [4]. Figure 2 shows the location of Kabul province in Afghanistan.





### 3.1 Demographic background

The Demographic background includes the demographic background of participants of questionnaire survey referring to the age, gender, job, education level, housing ownership. 100 questionnaires have been distributed, however, 92 questionnaires have been returned and 8 questionnaires have not been returned. Hence, the total respondents in this research are 92 respondents in including 32 females and 60 males. And in term of age, the participants of this research include 35 persons 18-24 years old, 25 persons 25-34 years, 10 persons 35-44 years old, 12 persons 45-54 years old, 7 persons 55-64 years old and 3 persons elder than 64 years.

**Table 1:** Shows the age group of respondents of research

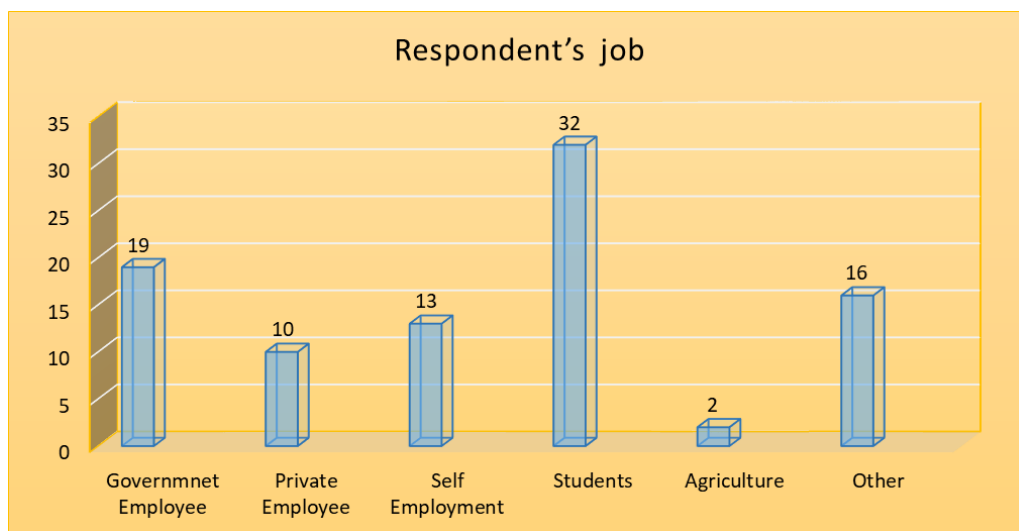
Age group	Number of respondents
18-24	35
25-34	25
35-44	10
45-54	12
55-64	7
>65	3

The participants with different education levels have been chosen for this research including, uneducated people, secondary school level, high school level, religious school level, Diploma level, Master Degree and other. Table 2 shows the respondent’s education level.

**Table 2:** Respondent’s education level

Number	Education	Number of respondents
1	Ph.D. level	2
2	Master degree	10
3	Bachelor degree	41
4	High school	14
5	Secondary school	3
6	Religious School	1
7	Uneducated	16
8	Other	5

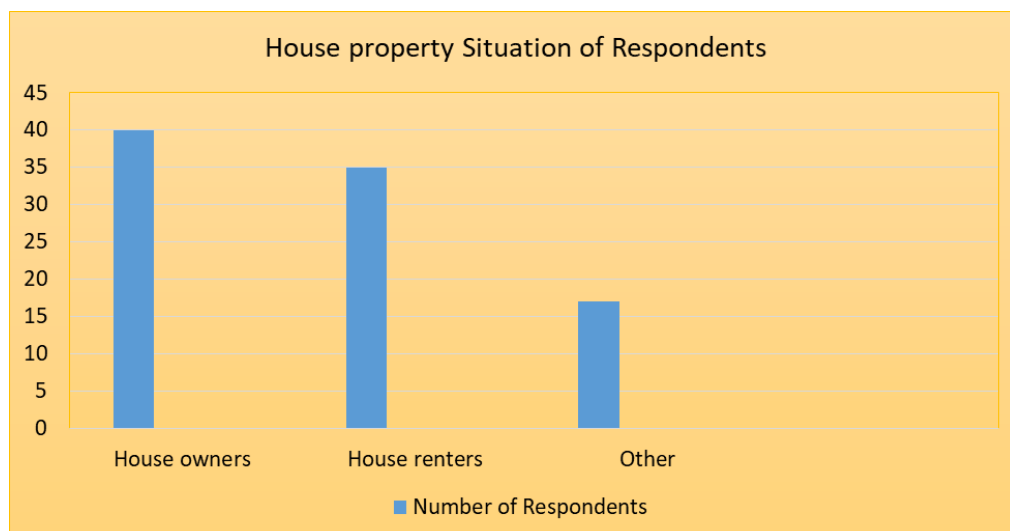
People with different jobs have been chosen for this research, including government employee, private employee, self-employment, agriculture, students, and others. Figure 5 shows the Respondent’s job.



**Fig 4:** Respondent’s job

In term of house ownership and property, 40 respondents indicated that they are house owners, 35 respondents stated that they rented the houses in which they live, and 17

respondents have chosen the other option. Figure 6 shows the house property situation of the respondents.



**Fig 5:** Respondent’s house property situation

**3.2. Key finding of questionnaire survey**

The household with proper basic hygiene facilities is figured as place of protection during the quarantine. However, the finding of this research indicates that the respondent did not

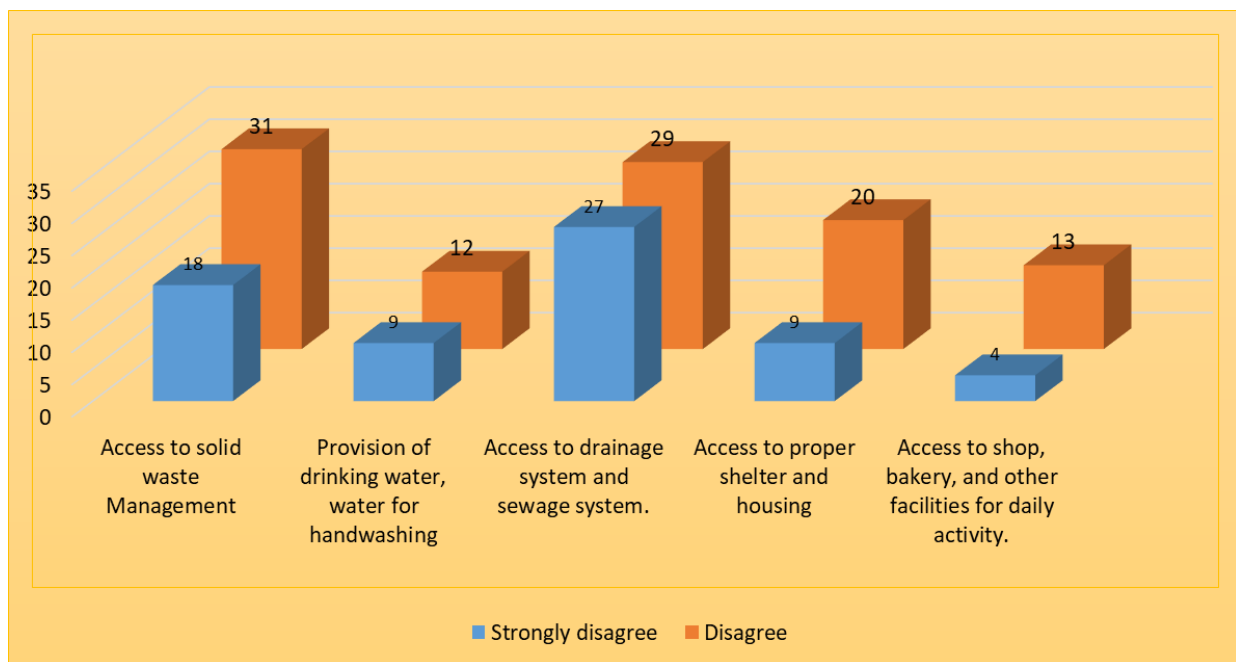
have access to proper hygiene, especially to public healthcare facilities. Table 3 shows respondent’s level of access to basic services and facilities during quarantine.

**Table 3:** Respondent’s level of access to basic services and facilities

No	Facilities	Likert Scale				
		Strong agree	Agree	Neutral	Disagree	Strong disagree
1	Access to solid waste Management	11	21	11	31	18
2	Provision of drinking water, water for handwashing	12	33	26	12	9
3	Access to drainage system and sewage system.	9	7	20	29	27
4	Access to proper shelter and housing	10	27	26	20	9
5	Access to shops, bakery, and other facilities for daily activity.	16	40	19	13	4

Based on Table 3, 18 respondents strongly disagree and 31 respondents disagree with access to solid waste management. 9 respondents strongly disagree and 12 respondents disagree with access to drinking water and water for handwashing. 27 respondents strongly disagree and 29 respondents disagree with access drainage system

and sewage system. 9 respondents strongly disagree and 20 respondents disagree with access to proper shelter and housing. And 9 respondents strongly disagree and 20 respondents disagree with access shop, bakery, and other facilities for daily activity. Figure 7.



**Fig 6:** Perception of respondents on access to different basic services and public facilities

Furthermore, during the quarantine, the residents have been forced to stay home and reduce contact with other people. However, this evaluated whether such quarantines, staying indoors and self-isolating challenges or not? Nonetheless the

finding of this research presents that such quarantines, staying indoors and self-isolating are very high challenges for residents of District 13. Table 4

**Table 4:** Respondent’s problems during the quarantine

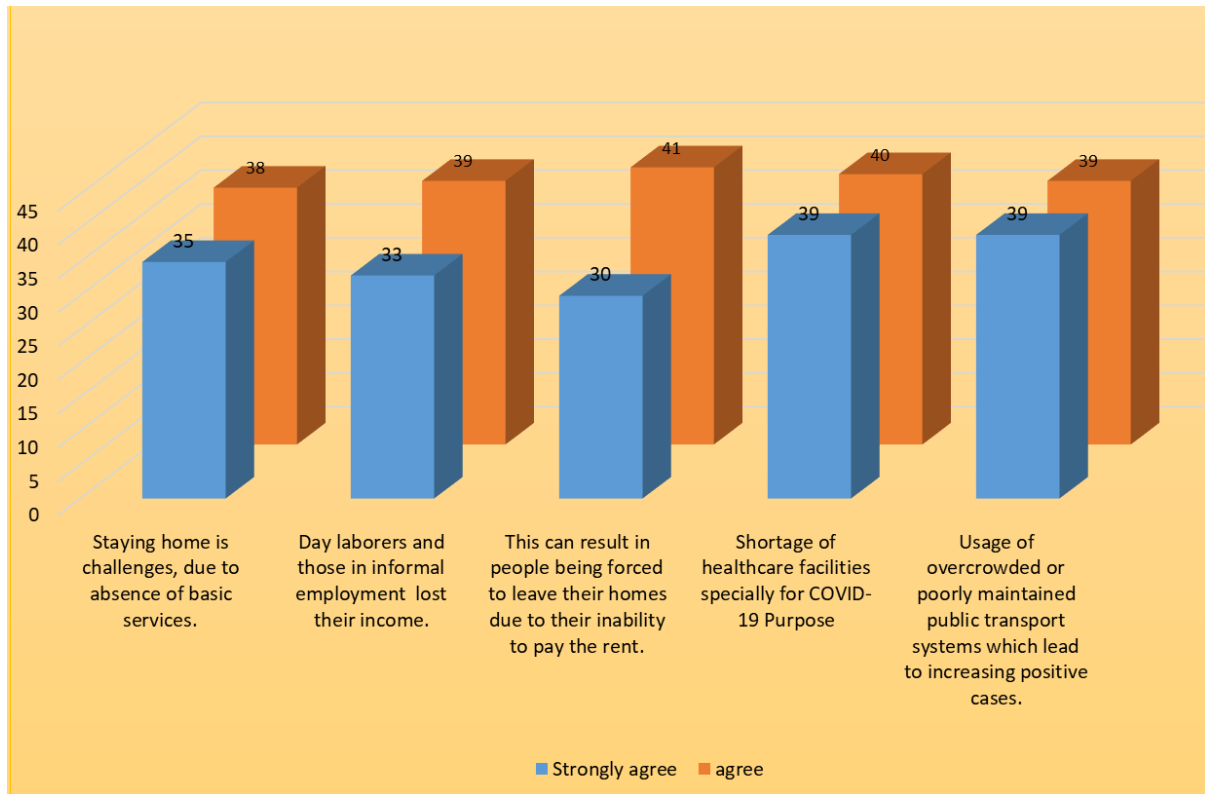
No	Problems and Challenges	Likert Scale				
		Strong agree	Agree	Neutral	Disagree	Strong disagree
1	Staying home is a challenge, due to absence of basic services.	35	38	9	7	3
2	Day laborers and those in informal employment lost their income.	33	39	13	7	
3	This can result in people being forced to leave their homes due to their inability to pay the rent.	30	41	16	2	3
4	Shortage of healthcare facilities specially for COVID-19 purpose	39	40	11	9	3
5	Usage of overcrowded or poorly maintained public transport systems which lead to increasing positive cases.	39	39	5	5	4

Based on Table 4, 35 respondents strongly agree and 38 respondents agree with staying home is a challenge due to the lack of basic services and infrastructure. 33 respondents strongly agree and 39 respondents agree with quarantine can

impact people to leave their homes due to their inability to pay the rent. And 39 respondents strongly agree and 40 respondents agree with shortage of healthcare facilities especially for COVID-19 purposes. As well as 39

respondents strongly agree and 39 respondents agree that usage of overcrowded or poorly maintained public transport

systems which lead to increasing positive cases. Figure 8.



**Fig 8:** Perception of respondents their problem during quarantine

**4. Conclusion and Recommendation**

Based on the finding of this research residents of District 13 do not access proper hygiene. Especially shortage of drainage system and sewage are the most influential problems on them during Quarantine. However, provision of water supply system is problem for minority of the residents. This is because there are private companies that provide the water for the small specific areas. In addition to private companies, some of the families have their personal water well. On the other hand, people are comfortable with access to shops, bakery, and other facilities for daily activity.

In addition, because of lack and shortage of basic services and hygiene facilities staying home is challenge for majority of the residents. Besides, this home staying posed another problem for residents of District 13 which income is losing. On the other hand, based on Figure 5 almost the majority of residents rent houses and shelter. Then, almost half of residents being forced to leave their homes due to their inability to pay the rent.

Another problem which leads to vulnerability for informal settlements is shortage of healthcare facilities especially for COVID-19 purpose. There are not enough healthcare facilities in District 13. Only one public hospital by the name of Mohammad Ali Jinnah Public Hospital serves those who tested positive for COVID-19. Nevertheless, only this one hospital cannot cover the daily need of the people. Furthermore, as the area developed informally hence, there are not proper transportation systems and facilities. Therefore, usage of overcrowded and poorly maintained public transport systems leads to an increase in positive cases.

With all the above even, it has been made the effort to reduce homeless and improve informal settlement in Kabul, but emerging of COVID-19 is leading to be doubled this effort urgently by taking into account not only the risk to homeless people but also to residents with inadequate and unhealthy home. Therefore, now is the time to be added informal settlement improvements in post-pandemic government agenda's.

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