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Population growth and housing demand in greater Abidjan, Ivory Coast

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Abstract: African cities are experiencing population growth. This growth results from both natural movements and migration. The city of Abidjan is a prime migration hub given the economic opportunities it offers. This urban growth generates a strong demand for housing in the city. The objective of this article is to highlight the difficulties in accessing housing resulting from Abidjan's urban dynamics. Using a methodology that combines qualitative and quantitative aspects, we interviewed 200 households and 50 real estate developers in four municipalities of Greater Abidjan. We found that the housing supply in Abidjan is lower than the demand. Furthermore, housing has experienced speculation over the years; homeowners also impose excessive conditions that limit access to housing in the city. This study involves actions to improve housing projects through to completion to avoid unfinished projects. The state can also make the cost of building materials affordable for middle-income populations. Granting lease loans to the population can help eradicate this situation. It is also necessary to encourage donors to invest in the city, which is another action the state should consider. *Keywords: Abidjan, Housing, Urban growth.*

1. Introduction

Urbanization is a phenomenon that is gaining momentum around the world today, particularly in the developing world. Northern or developed countries have practically reached the threshold of 70% or even 90% urbanization rates. These are highly urbanized countries, and the territories are under urban influence. In these countries, urban growth is long-standing and has given rise to large metropolises such as Paris, London, Amsterdam, Rome, and Athens. In Europe, this urbanization rate is 74%; 81% in North America; 73% in Oceania [1, 2] and 50% in China. In Africa and Asia, this rate is below average, and according to Veron, it is estimated at 41%. Africa and Asia are the two least developed continents with major social, political, and economic problems. These are also the places where the highest urban growth rates are recorded in the world: 3.1% according to the United Nations (UN) while the average is 0.47% in developed countries [3]. As a result, the global and urban population is growing very rapidly, particularly in Africa with the decline in mortality due to the improvement of the living conditions and environment of the populations. According to Bonnet [4] late, but rapid, the strongest urban growth is in Africa, but the continent remains still poorly urbanized. Urbanization therefore consists of the establishment of cities which are the places of concentration of populations, activities, infrastructure and housing. It constitutes the place where the needs of the populations are satisfied in all forms. It creates value and is a source of modernization. This modernization is distinguished at all levels of social life especially in the field of housing. With the advancement of technology, the development of cities has had an unprecedented expansion. This rapid increase in the urban population will lead to a demand for

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housing. In this dynamic, every state aims to satisfy its population by investing heavily in housing. However, the housing issue remains critical. The factors that make access to housing difficult are multiple and differ from one country to another. Thus, having undergone their urbanization process during the colonial period, African cities are the most affected by this phenomenon. Since then, cities have been born in a process of accelerated urbanization. The number of urban dwellers in Africa is constantly growing. This exponential increase in the number of city dwellers rhymes with the increase in the size and number of cities. The objective of this study is to highlight the difficulties in accessing housing resulting from the urban growth of Abidjan.

2. Literature Review

The literature review examines the link between urban growth and housing demand.

Urbanization in Africa is proving rapid. Urbanization on the continent, which began primarily during the colonial period, accelerated after independence. As evidence, colonial capitals, which were once small towns, expanded rapidly after 1960 and are now metropolises. Furthermore, the proliferation of cities on the continent is remarkable. While urbanization in Africa occurred later than in other continents, it was nevertheless faster, with rates averaging more than 5% per year between 1960 and 1990, compared to 3.3% per year in Asia and 3.7% in Latin America. By 2030, cities, both large and small, in developing countries will house 80% of the urban population, and the African urban population is expected to double between 2000 and 2030 United Nations Population Fund (UNFPA) [5]. Dziwonou [6] in an analysis of urban growth and land mechanisms, estimated that in 2000, the urban growth rate in Africa was already at a record rate of 5%. According to him, "The region (understanding black Africa) is entering an extremely rapid process of urbanization characterized by a process of structuring and population growth for the benefit of capital cities." Despite their recent development, African cities are just as affected by urban sprawl as cities in the North. By the very fact of their very rapid population growth, these cities are experiencing impressive spatial growth. This is what leads [7] to describe the dynamics of West African capitals on both the demographic and spatial levels. According to him, "the excess population that no longer finds good housing conditions in the official or formal city is pouring daily into the peripheries, thus leading to the phenomenon of peri-urbanization." This phenomenon (peri-urbanization) today affects all the agglomerations and metropolises of the countries of the South and particularly those of sub-Saharan Africa [8]. Urban development is, in Ivory Coast, a phenomenon of the 20th century. Current cities are colonial creations that responded to a concern for effective occupation of the territory under the control of military and administrative posts and to the needs created by the development of the forest zone According to Cotten $\lceil 9 \rceil$. For Haeringer $\lceil 10 \rceil$ the housing problem derives from demographic pressure in the city of Abidjan. According to the author, the growth rate of the Abidjan population was 10% per year before [11] in "Image and practices of African cities" tenaciously exposes the problems that arise from the rapid growth of African cities, especially capital cities. It shows us, in this way, how poverty rubs shoulders on a daily basis with urban populations, especially those who have recently arrived from rural areas without any qualifications and are constantly seeking better living conditions. As a result, the changes that the land system will undergo will force new migrants, especially those with low incomes, to crowd into shantytowns, as can be seen most often in the urban landscape of most large African cities. For Dihouegbeu [12] the attractiveness of Abidjan is due to its economic potential, mainly industrial and commercial. Indeed, the construction of the port of Abidjan has led to a densification of economic activities in the city. As a result, it is stormed by countless immigrants and nationals coming from rural areas in search of jobs, which promotes dizzying population growth. This growth is the source of several problems. The city is facing many difficulties, including the housing problem. This problem, known well before independence, still remains today. According to Kanga [13] in less than five decades since its independence, Côte d'Ivoire has moved from a largely rural society to a more urban one. Abidjan today has nearly 4.5 million inhabitants, with an average annual demographic rate of 3%. This significant increase in Abidjan's population has led to a strong demand for urban land for construction and housing.

3. Methodology

The methodological approach adopted for the conduct of this study is qualitative and quantitative with secondary data from the reading of newspaper articles, already published works, internet sources, scientific magazines, technical and administrative documents. Primary data from field surveys of municipalities and the Ministry of Economic Infrastructure were collected and processed.

Regarding secondary data, most of the works were consulted at the University of Cocody-Abidjan and others on the internet. This provided textual data on urban growth and the housing issue in African cities.

As for the field survey, it was carried out through direct observation and interviews. The field observation allowed for the collection of primary data relating to housing. As for the interview survey, questions were addressed to 25 real estate developers in the city of Abidjan in order to collect data on real estate promotion and policy in Abidjan. The questionnaires were administered to 200 heads of households in four districts of Abidjan.

4. Results

4.1. The urban dynamics of Abidjan

Abidjan, the economic capital of Côte d'Ivoire, has experienced significant population growth since the 1950s. In 1950, the city had a population of nearly 65,000. Between 1960 and 1970, the average annual population growth rate was 10.8%. This rate increased to 8.2% between 1970 and 1980. The population then increased from 211,000 inhabitants in 1960 to 588,000 inhabitants in 1970, then to 1,288,000 inhabitants in 1980. It had approximately 951,000 inhabitants in 1975, then 2,000,000 inhabitants in 1988. The General Population and Housing Census of 1998 gave 2,877,948 inhabitants to the city of Abidjan, or nearly 19% of the total population of the country and 44% of the urbanized population. Today this large West African city is home to nearly 4.5 million inhabitants, corresponding to approximately 20% of the estimated national population, with an average annual demographic rate of 3% [2]. The city of Abidjan alone accounts for 36% of the urban population [14]. Figure 1 shows the evolutionary trend of Abidjan's population.

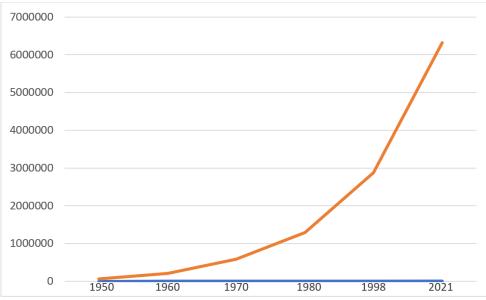


Figure 1.

Evolution of the population of Abidjan between 1950 and 2021. Source: RGPH [14].

Edelweiss Applied Science and Technology ISSN: 2576-8484 Vol. 9, No. 4: 1842-1852, 2025 DOI: 10.55214/25768484.v9i4.6418 © 2025 by the authors; licensee Learning Gate This significant population increase is largely explained by the hope of a better life in urban centers. This phenomenon is therefore due to the rural exodus and immigration from neighboring countries. In Abidjan, it is essentially linked to the exceptional economic development of this city which concentrates the majority of the country's economic activities. Indeed, the economic growth of Côte d'Ivoire accelerated after the first ten years of its independence. The capital benefited from this strong growth and its modern functions multiplied in commerce, banking and services [15]. This situation of strong urban growth generated housing needs which became increasingly important over the years.

From year to year, the number of households increases at the rate of population growth with the birth of new households Table 1.

| Year | Population | Number of households | Number of new households |
|-------------|------------|----------------------|--------------------------|
| 1998 | 2,877,948 | 575,590 | |
| 2000 | 3,071,758 | 614,352 | 38,762 |
| 2005 | 3,576,581 | 701,290 | 86,938 |
| 2010 | 4,118,613 | 792,041 | 90,751 |
| 2012 | 4,345,546 | 819,914 | 27,873 |
| 2015 | 4,693,912 | 885,644 | 65,730 |
| Annual aver | age | 18,200 | |

Population and number of households in Abidjan.

Source: National Institute of Statistics, cited by Kanga [13].

The ever-increasing number of households is generating strong demand for housing.

4.2. A Strong Need for Social and Economic Housing

Housing demand comes primarily from all newly employed adults who wish to access housing. They either register with a real estate company or seek rental opportunities from landlords. However, a distinction must be made between gross demand and net demand. A distinction will necessarily be made in the flow of housing demand between "gross housing demand" and "net housing demand," which could be linked to the labor force and the employed labor force. According to the National Institute of Statistics (INS), the employed labor force represents the population having or having had an occupation, even temporary (for one hour during the week preceding the survey) or having the certainty of working in the month following the survey. While the labor force is the entire employed labor force and the unemployed [16]. Table 2 provides an overview of housing demand in 2013 by socio-professional category.

Table 2.

Table 1.

Distribution of housing requests by socio-professional category.

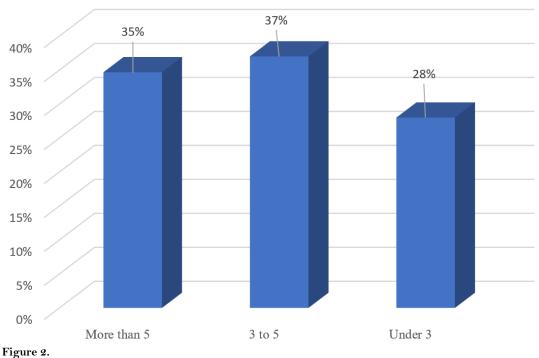
| Socio-professional category | Number of files | Percentage (%) |
|-----------------------------|-----------------|----------------|
| Formal liberal | 2,060 | 3.77 |
| Informal Liberal | 8,454 | 15.49 |
| For Public | 2,292 | 4.20 |
| Private | 18,812 | 34.46 |
| Audience | 16,814 | 30.80 |
| Agricultural sector | 1,582 | 2.90 |
| Unidentified | 4,571 | 8.37 |
| Grand Total | 54,585 | 100 |

Source: Ministry of Construction, Housing, Sanitation and Urban Planning, July 2013

This table shows that demand for housing is strong and affects all socio-professional categories. It is important to note household size and occupancy status.

4.3. A Relatively High Household Size with Priority Tenant Status

The size of the households surveyed varies from 1 to 9 people, with a concentration in the 5 to 9 person range (Figure 2).



Size of respondents' households.

This figure shows that household sizes are relatively high. More than 70% of the households surveyed have at least 3 members, and 34.67% of households have more than 5 members. This creates a problem of overcrowding, which is the basis of a high demand for housing. It is also important to make a small comparison between the size of housing and the type of housing (Table 3).

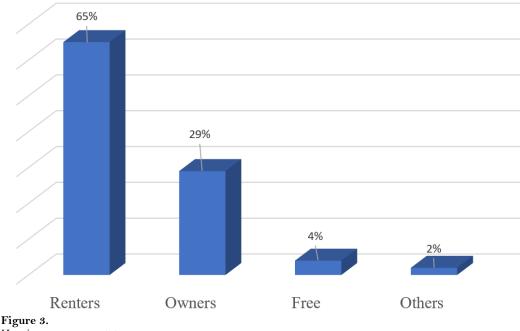
Table 3.

| Household size and type of housing. | | | | |
|-------------------------------------|----------------|--|--|--|
| Type of accommodation | Household size | | | |
| Precarious | 3 | | | |
| On the courtyard | 5 | | | |
| Economic | 5 | | | |
| Average Standing | 7 | | | |
| High Standing | 4 | | | |

Reading this table, we see that household size depends on the type of housing. Precarious and highend housing houses fewer people than intermediate housing.

Our surveys also revealed that not all occupants own the homes (Figure 3).

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Housing occupancy status.

Renters are the most numerous, representing just over 65% of respondents, compared to approximately 29% of homeowners. The proportion of those living rent-free is 4%, and other types of occupancy represent 2%.

Rents range from 40,000 CFA francs to 200,000 CFA francs. In fact, approximately 42% of tenants pay a monthly rent between 40,000 CFA francs and 100,000 CFA francs, while 44% pay rent above 100,000 CFA francs and less than or equal to 150,000 CFA francs. Nearly 14% of tenants pay rents above 150,000 CFA francs. Among tenants, the majority (67%) expressed the desire to have their own home. However, an analysis of the owners' profile shows that in nearly 6.5 out of 10 cases, access to property is achieved following an inheritance or a gift: only 35% of the owners surveyed stated that they acquired their home following an investment.

The ever-increasing population, coupled with the increase in the number of households, is generating a strong demand for housing.

4.4. A Strong Need for Social and Economic Housing

The housing demand forecast takes into account both the number of new households and the number of households moving out of residence. This figure should correspond to the number of housing units needed to accommodate these new households. According to the Ministry of Construction and Housing [17] the housing deficit is enormous and amounts to 600,000 units per year. Consequently, these are as many new housing units as the production sectors should, in the best case scenario, put on the real estate market in this agglomeration.

4.5. Insufficient Housing Production in Ivory Coast

Housing production is at the heart of any country's development policy. In Côte d'Ivoire, current housing production only offers a few thousand homes per year on the market. While the needs are estimated at at least 25,000 homes per year for Abidjan and 25,000 homes per year for the interior of the country [18]. If we look at the history of housing policy in Côte d'Ivoire, we see that the promotion of Abidjan, established as the capital of the territory of Côte d'Ivoire in 1934, to the rank of colonial capital, immediately gave rise to land control. As early as 1926, the Office of Economic Housing (HE) was

created for all of French West Africa. A 1949 decree set its objectives: construction of healthy, low-cost housing and guidance towards individual home ownership. Following this 1949 decree, the Côte d'Ivoire Real Estate Housing Company (SIHCI) was created in 1952. Following the dissolution of several real estate companies, SICOGI was created, which is also a mixed-economy real estate development and management company [19]. In addition to real estate companies, Côte d'Ivoire has also created subdivision structures. Between 1973 and 1987, SETU developed approximately 33,000 hectares of land and produced just over 20,000 equipped lots, including 9 lots of 100 to 150 m² intended for low-cost housing, lots of more than 600 m² intended for the construction of private collective housing, and lots of 800 to 1,500 m² intended for villas, according to the CAHF (Centre for Affordable Housing Finance in Africa) [18]. All this shows that housing is at the heart of development policy. This policy continues through the adoption in 2012 of a comprehensive national strategy for mass housing production as well as a series of measures aimed at strengthening supply. This resulted in the construction of 60,000 housing units in Abidjan and in the cities of the interior of the country, including 50,000 social housing units and 10,000 low-cost housing units. As part of the social housing program, the State of Côte d'Ivoire has committed to tax-exempting inputs, particularly VAT. The standard VAT rate being 18% and the share of inputs representing approximately 70% of construction costs, this represents a reduction in construction costs of approximately 12.5% [20]. These writings show that the State of Côte d'Ivoire takes a favorable view of the housing problem of its population. However, this production is insufficient.

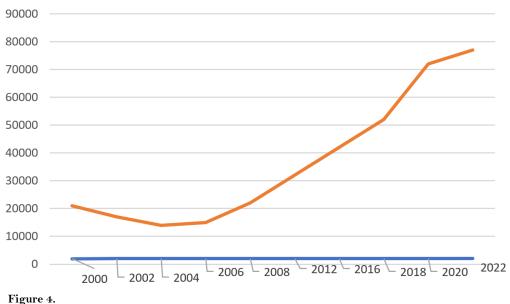
Beyond this lack of production, there are constraints that limit access to housing in Abidjan.

4.6. Constraints on Access to Housing

The constraints on access to housing, apart from the inadequacy mentioned above, are economic and social: the fluctuation of rent prices and the excessive conditions imposed by owners.

4.6.1. Fluctuations in Rental Housing Prices in Abidjan

Housing prices have continued to rise year after year. It must be acknowledged that since the postcrisis period in 2008, we have witnessed a surge in rental prices in the city of Abidjan. This increase continues today and is gaining momentum (Figure 4).



Evolution of rental prices in average-standard housing in Abidjan.

Edelweiss Applied Science and Technology ISSN: 2576-8484 Vol. 9, No. 4: 1842-1852, 2025 DOI: 10.55214/25768484.v9i4.6418 © 2025 by the authors; licensee Learning Gate Real estate in Abidjan has seen a price increase over two decades. In two decades, prices have increased 400%. Before the military-political crisis of 2002, rental housing was reasonably priced and accessible to all. Then, during the crisis period (2002 to 2008), the city of Abidjan saw a decrease in rental costs as the number of housing units increased following the massive displacement of its population to calmer regions. This offered the opportunity for non-executives to find decent housing, and above all, at a lower cost. Finally, with the calm accompanied by the city's economic and demographic dynamism since 2008, we are witnessing an explosion in rental costs. According to our surveys, housing tends to be less expensive when it is located in undesirable areas or on the outskirts. However, it is not uncommon to find two houses that meet the same conditions but whose rent differs depending on their location (accessibility) and the level of standing of the neighborhood. In a post-crisis context marked by the accentuation of the poverty rate by households (32% in 2002 to 57% in 2008 according to INS (Institut National de la Statistique) $\lceil 2 \rceil$) the weight of rents on the income of the populations has particularly high. This situation will generate risks of non-payment, indebtedness and even eviction.

Furthermore, the income of the respondents is not at all sufficient to cover the costs of decent and adequate housing. According to our surveys, nearly 50% of the respondents earn less than 200,000 CFA francs, which is insignificant for affording an acceptable standard of living in the city of Abidjan.

4.6.2. The Owners' Excessive Conditions

The city of Abidjan is a prime area for migrants, resulting in an increase in its population, resulting in a significant need for housing. As a result, property owners are taking advantage of this high demand to offer exorbitant rents and contracts that are too onerous for those seeking housing to bear. Thus, to regulate the rental property sector and combat this overbidding, the Government of Côte d'Ivoire adopted a measure in July 2016 that now caps advance payments for renting a home. This measure strictly regulates the payment of advance rent as well as the rental guarantee (deposit) by now limiting them to 3 months, including 2 months for the deposit and 1 month for the advance. Also, the payment of amounts other than those stipulated by the government constitutes a tax offense and is punishable [21]. Despite the adoption of this law, housing applicants are faced with an advance payment of more than 3 months, including one month's agency pay for canvassers. Apart from the requested deposit of between 4 and 6 months' rent advance, tenants most often see their lease contract unilaterally terminated by the landlord or a rent increase without notice. Indeed, 37% of tenants surveyed have experienced at least one rent increase. Furthermore, according to the tenants surveyed, this situation often leads to the risk of non-payment, and discussions between them and landlords, which often lead to unforeseen moves.

4.7. Recommendations and Perspectives

As recommendations, there are several actions to be taken to improve the living environment in Abidjan in the area of housing. Thus, to resolve the housing problem, there are actions to be taken on the political, economic, and social levels.

First, on a political level, it is up to the state to see its social housing projects through to completion to avoid unfinished projects. The state can also make the cost of building materials affordable for middle-income populations. Granting lease loans to the population can help eradicate this situation. Encouraging donors is also an action the state should consider when investing in the city.

The state must always intervene by improving the economic conditions of the population in order to produce housing. It is necessary to raise public awareness of the issue of urban planning. Encourage them to adopt modernization habits.

At the local government level, they must facilitate the conditions for the production of modern housing, especially with regard to formalities. They must also carry out development actions in the housing sector in the municipalities of Abidjan. To truly relieve congestion in downtown Abidjan, the State must take a positive look at the outskirts in the housing sector by establishing various roads and networks in these areas to facilitate the settlement of populations. The State must also grant housing loans to the population.

5. Discussions

Dupont $\lceil 22 \rceil$ points out that due to the housing crisis in Indian cities in general and particularly in Mumbai, 42% of urban households do not have toilets within their building. For Lasla and Oukaci [23] with the housing crisis in Algeria, a significant number of homes do not meet the minimum comfort conditions. Philippe $\lceil 24 \rceil$ states that since independence, there has been a change in housing that has profoundly changed the urban landscape of Abidjan. The fight against central slums advocated by the Ivorian public authorities has resulted in the recovery of numerous empty spaces that were quickly urbanized and served as a basis for the construction of housing intended for low-income social classes. These results are consistent with those of Réné and Charbonneau $\lceil 25 \rceil$ who state that between 1960 and 1979 the two state companies SICOGI and the Housing Management and Financing Company (SOGEFIHA) built nearly 70,000 so-called low-cost housing units, mainly in Abidjan for households. This political will of the Ivorian public authorities was confirmed by the approval of 56 real estate operations for the cumulative construction of 11,652 housing units in Abidjan in 1994 [26]. In Bouaké as in Korhogo, the difficult access to decent housing generates overcrowding of occupied housing. The results of this study show that nearly 70% of households are tenants with a high number of household members. In Bouaké, overcrowding affects 40.9% of tenants compared to 20.4% in Korhogo. Despite this difference, these figures are indicators of poor housing due to the increasing difficulties in accessing decent housing. These results are consistent with those of Lasla and Oukaci [23] and Sangaré [27]. For the former, rapid population growth has consequences for housing. It leads to increased housing needs and, above all, overcrowding. However, they emphasize that the pace of housing growth in Algeria has led to a slight improvement in the occupancy rate per dwelling. As for the latter, they show that 46% of tenant households live in promiscuity. In order to curb the housing crisis, the World Bank $\lceil 28 \rceil$ states that the cost of materials must be reduced; the cost of housing construction could be significantly reduced. The example of the two most commonly used materials in construction, namely cement and reinforcing iron, is instructive. If their prices could be brought down to the level of prices in Senegal (see Chapter 3), the reduction in construction costs for a single-family home would be around 2.5% (1.8% for cement and 0.7% for steel); in the case of multi-story buildings, this saving would be even higher, around 5.3% (2.8% for cement and 2.5% for steel). It is also necessary to use more modern and standardized construction techniques and site organization methods, which would increase the volume of housing produced and the speed of production, and would lower costs for very large production volumes. International comparisons estimate the cost reduction at around 30% and the reduction in completion times at 40 to 50%55 by combining industrial construction logic and optimized design.

6. Conclusion

This study has highlighted the difficulties of access to housing in the city of Abidjan. The city of Abidjan is experiencing ever-increasing population growth, which leads to a strong demand for housing. The State is making efforts by setting up social housing, but these efforts remain insufficient given the persistence of housing needs (600,000 units per year). It should also be said that over the years, housing has experienced significant speculation which limits the ability of residents to afford decent housing. In two decades, rents have quadrupled. Furthermore, the exacerbation of the business side of homeowners in support of real estate agents and the resulting rent increases is a reality in Abidjan. All these situations constrain access to housing in the city. Faced with this situation, measures must be taken by the State on the one hand; awareness of homeowners on the other hand with a view to facilitating access to housing in the city of Abidjan.

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Transparency:

The authors confirm that the manuscript is an honest, accurate and transparent account of the study that no vital features of the study have been omitted and that any discrepancies from the study as planned have been explained. This study followed all ethical practices during writing.

Competing Interests:

The authors declare that they have no competing interests.

Authors' Contributions:

Conceptualization, DKTP and ZK. K,; methodology, all authors; validation, DKTP, ZK. K. and TBD; format analysis, ZK.K. and TBD; investigations, DKTP; resources, DKTP; data acquisition, DKTP; writing, DKTP; manuscript review, ZK.K., TBD and JCMM; funding acquisition, DKTP All authors have read and agreed to the publication of the article.

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