

Urban Sprawl by Densification as a Public Health Issue

A Critical Review on the Peripheral Urbanization of Ankara

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Abstract

Today, urbanization is spreading all over the planet faster than ever before in history. The hypothesis of the complete urbanization of society revealed by Henri Lefebvre in his book 'Urban Revolution' dated 1970 provides a strong theoretical foundation for the interpretation and critique of this current and global state of urbanization. This contemporary condition of the urban and urbanization manifests itself not only within the spatial context but also in the everyday life practices. The capital city of Turkey, Ankara, is the radical case for this global condition of urbanization because of the recent urbanization process in its peripheries. A fragmented, shapeless, formless, and market-driven urbanization process is taking place on the peripheries of Ankara for the last decade, in which neither wealthy nor healthy urban space has been built. Therefore, a critical approach is needed to start a discussion on the alternative planning and design processes for these urban spaces to make them livable and healthy for urban society. To support the critical theoretical approach of this study, ethnographic fieldwork was carried out together with spatial analysis of the case areas. Preliminary results of the spatial analysis show that these newly urbanizing areas have limited access to health services, while at the same time, automobile-oriented mobility caused by unlimited urban sprawl is detrimental to air quality. In addition, the ethnographic field research revealed that the isolated urban life produced in the case areas has negative effects on mental health as well. It can be said that the urbanization experience in the peripheries of Ankara under the neoliberal policies is far from creating a healthy society.

Keywords

Planetary urbanization, Urban sprawl, Public Health, Ankara

1. The 'Complete' Urbanization

The tension and diffusion between rural and urban become one of the key concepts of contemporary urbanism literature and urbanization processes. As it can be seen in today's cities all over the world, the interwoven rural-urban relationship prevents a city border from being drawn explicitly and makes it impossible to define a rural area where traditional agricultural activities are carried out independent of the city (Lefebvre, 1970;2003, p. 3). With each passing day, the rural-urban distinction is intertwined and blurred. In the remarkable work of Lefebvre, 'The Urban Revolution', he presented the hypothesis of the complete urbanization of society (1970;2003, p. 1). This hypothesis revealed a fundamental turning point in critical urban theory and developed a new way of thinking about the urban (Schmid et al., 2014, p. 2). After 40 years since Lefebvre raised this hypothesis, with each passing day, the condition of complete urbanization proves itself in every area of life. This contemporary condition of the urban and urbanization manifests itself not only within the spatial context but also in the everyday life practices. As Soja & Kanai stated, this global condition of urbanization has been substantiated by two aspects; "the urbanization of

the entire globe" and "the globalization of urbanism as a way of life" (2014, p. 142). Those two aspects can be discussed in parallel to the concepts of 'urban fabric' and 'urban society,' in relation to Lefebvre (1970;2003). On the one hand, while the urban fabric is spatially expanding over the entire globe, on the other hand, a certain kind of urban lifestyle imposes itself on various societies and cultures.

The urbanization of the entire globe, for sure, does not mean that the whole surface of the planet is completely covered by one single city, yet. Relatedly, the urban fabric is not defined by Lefebvre in this context, as in science fiction, but his approach refers to the domination of the city over the country (1970;2003, p. 4). This domination manifests itself with spatial units like the infrastructure such as highways, power, or pipelines; transportation routes, not only highways and railways but also airways and shipping routes; mining sites and forestry fields; resort regions or vacation homes; etc. Brenner & Schmid point to the worldwide condition of the urban in which all elements of social, economic, political, and environmental interactions are entwined, spanning locations, and territories (2015). The influence of the urban, such as the expansion of cities and the existence of mega-city regions, and/or production, consumption, and distribution networks to feed these cities, spreads over even the most remote places of the earth now. In other words, the dominance of the urban over the countryside and natural areas has reached a peak point today, and this is still increasing every passing day.

Except for the expansion of such urban fabric globally, the society and the everyday life practices of the society have been urbanizing all over the world in parallel to this. The world market and its global brands can now reach every individual on earth and this whole system imposes a certain kind of urban life everywhere. Debord explains this process which started with the industrial revolution, as that the commodity has emerged as "a force aspiring the complete colonization of social life" (1967;1994, p. 29). Commodity and commodification are becoming the center of today's urban society and presently, everyday life continues to be colonized by global capitalism. The "globalization of urbanism as a way of life" does not come into being only in the context of colonization of social life by capitalism, but also under the hegemonic implementations of the capitalist state. Consequently, while globalization tends to homogenize society under a market-driven orientation, the relations and contradictions in society deepen and become more and more complicated. Lately, it is not easy to answer the following questions clearly in urban studies; Where is rural? Where does the city end? Is it possible to draw a border between rural and urban? Is there still a rural society free from the 'urban' world?

To analyze the complex nature of the contemporary urban phenomenon, the approach of Lefebvre, in which common methodological concepts of dimensions and levels are used (1970/2003, p. 77), should be revisited. Within this context, he takes the urban as a mixed level between the levels of 'global' and 'private' (Lefebvre, 1970/2003, p. 78) and takes the urban as an intermediary level between two others; the private level, which is the everyday life, individual(s), dwelling; and global level, which is the state(s), world market, ideologies, institutions (Schmid, 2012, p. 46). In this regard, the urban form, the city, is defined by centrality; a place of the encounter, the unit of capital accumulation, and a site of class struggle (Schmid, 2012; Merrifield, 2002). Lefebvre warns that the historic center - not only the city center but also the centrality of the city - has disappeared and remains from it become "the centers for power and decision-making," and "fake and artificial spaces" (2014b, p. 567). In a sense, "the city" is turning into the center of hegemonic spatial representations of the power image of the state, and at the same time, with touristification and the dominance of the commodity over everyday life, as Debord (1994) revealed, it becomes a scene of *the society of the spectacle*. In this context, cities are moving towards a sort of pseudo-centralization.

In this regard, in a completely urbanized society, the urban level is in danger of perishment between the private and global; by the urban space's fragmentation and unresisting to corporate and individual logic from the private level, and by homogenization of the society under the logic of the world market shaped

by technology from the global level (Schmid, 2012, p. 47). In other words, under planetary urbanization, while everything is becoming urbanized and related to the urban, the urban is losing its foundational characteristics to the attacks from global and private levels and it is resolving in-between them (Figure 1).

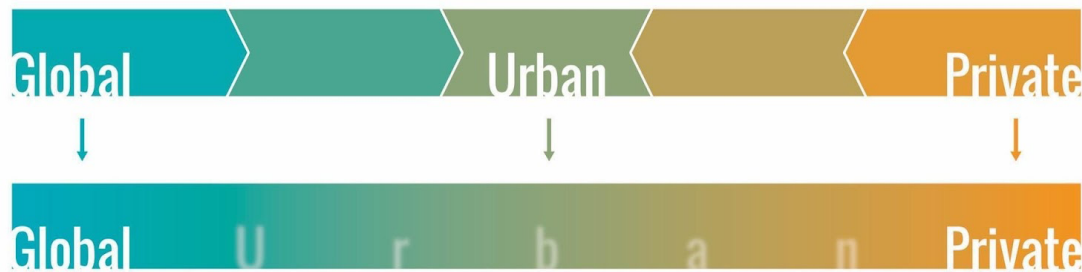


Figure 1 Level analysis of the urban phenomenon. Drawn by the author.

2. Urban Sprawl and Public Health

The hypothesis of complete urbanization by Lefebvre and the recent debates on the concept of planetary urbanization aims to draw a holistic picture of the contemporary condition of urbanization all over the globe. Although such broad conceptualizations offer a strong theoretical foundation and methodological implications, they also run the risk of being stuck on a highly abstract and theoretical plane. For this reason, it is thought that this holistic theoretical approach will be enriched through empirical approaches within a spatial context. Merrifield discusses the spatial context under the condition of planetary urbanization and argues that "urbanization is increasing its reach everywhere"; urban turn into shapeless, formless, and boundless, and it is riven with new contradictions and tensions that are unlikely to tell where borders reside, what is inside and what is outside (2013, p. 909). Such spatial formation of the urban intensifies in and around the historical urban centers. While the core areas have been going through a continuous process of condensation, transformation, and dispossession, a similar process is taking place in the peripheries as well and cities are becoming limitless and shapeless spatial units. However, this situation does not only occur in and around the traditional urban agglomerations but also causes deep socio-spatial transformations in the regions between these centers, especially through infrastructure networks (Brenner, 2012, p. 21). As a result, within and around the traditional urban agglomerations and through the networks in between them, the forms and patterns of urbanization diversify more than ever before. However, it can be argued that there is a noticeable gap in the literature on the relationship between the emergent situation of planetary urbanization and public health. Without using a spatial context, it is rather difficult to establish a relationship between them. Therefore, this study focuses on the recent urban sprawl experience of the capital of Turkey, Ankara to build a bridge between these two concepts.

Within the context of the Turkish urbanization process, the recent practices in the last decade driven by neoliberal policies are rather different from the highly industrialized or developing industrialized countries. And also, different major cities of Turkey such as İstanbul, Ankara, and İzmir experience different urban concentration and extension processes than each other. Ankara has some common categories and development patterns with other cases but also has considerable unique and authentic characteristics in terms of the urban sprawl patterns and urbanization process in the peripheries. Therefore, within the context of this study, it is thought that Ankara can be taken as a unique laboratory in terms of urbanization on the peripheries. This urbanization and planning experience produced a fragmental, shapeless, and formless urban fabric on the peripheries of Ankara. In short, the urban sprawl pattern of Ankara took the form of fragmented high-density gated communities, in contrast to the low-

density, single-family housing pattern of western countries (Figure 2). This urbanization experience, which originated from the market-driven land speculations, and construction-led capital accumulation policies under the neoliberal agenda of the AKP government, contains many social, economic, and morphological problems not only for the present but also for the future. Within this context, public health problems are among the most significant problems in these areas.



Figure 2 Urban fabric in the periphery of Ankara. Taken by the author.

Recently, there has been an increase in research focusing on the relationship between urban sprawl and public health, not only in urban studies but also in the field of public health. Frumkin et al (2004) explore how the built environment affects public health and well-being by focusing on the recent urban sprawl experience in US cities. They elaborate on some of the implications of urban sprawl on health such as the issues regarding air and water quality, physical activity - most significantly walking - of the residents, injury and fatal accidents related to automobile-oriented mobility, mental health disorders, and loss of social capital, etc. by focusing on the urban sprawl of the US cities (Frumkin et al, 2004, p. 22). However, despite the little research which focuses on non-western examples (Iram et al, 2012; Yan, Liu and He, 2021; Zhao, Li, and Liu, 2020), it is possible to argue that studies investigating the relationship between urban sprawl and public health are mostly carried out by focusing on the western cities (Frumkin et al, 2004; Jalaludin and Garden, 2011; Garrido-Cumbrera et al, 2018; Hamidi et al, 2018). The current body of literature on the relationship of urban sprawl can be classified under two main themes related to public health; physical health and mental health.

In the context of physical health, research on obesity due to low physical activity has come to the fore (Lathey, Guhathakurta, and Aggarwal, 2009; Parise, Abbott, and Trankle, 2022). This research is highly related to the lower micro-mobility caused by the automobile-oriented transportation system. Because of the limited walkability of the urban space, high dependence on cars because of the long distances, and non-pedestrian friendly environment, there is a significant lack of physical everyday activities of the residents. Therefore, walkability is another key concept within the literature on the relationship between

urban sprawl and public health (Baobeid, Koç, and Al-Ghamdi, 2021; Bereitschaft, 2021; Lathey, Guhathakurta and Aggarwal, 2009). Undoubtedly, one of the reasons for this lack of physical activity is the automobile-dependent transportation system that emerged as a result of the dictation of long travel distances and the production of an urban fabric where micro-mobility is impossible. One of the negative effects of urban sprawl on human health is the decrease in air quality as a result of increased carbon emissions arising from inadequate public transportation and extensive automobile usage. Large metropolitan areas resulting from urban sprawl have a significant impact on air quality and ozone exceedances (Stone, 2008, p. 695). Also, research shows the negative impact of low air quality on public health (Levy, 2001; Silva et al, 2013).

The second focus that has emerged among research examining the relationship between urban sprawl and public health has been on mental health. Some research reveals that there is no direct relationship between mental health disorders and urban sprawl (Sturm and Cohen, 2004; Garrido-Cumbrera et al, 2018). Despite this, urban sprawl has a significant impact on mental health, although there is no direct relationship between the two (Yan, Liu, and He, 2021). One of the most significant spatial impacts of urban sprawl on daily life is longer daily commuting and traffic congestion resulting from high automobile usage. As cited by Garrido-Cumbrera et al (2018, p. 382) there is a significant number of studies that show how traffic congestion can cause stress (Stokols et al, 1978; Gulian et al, 1989; Evans and Carrere, 1991; Hennessy and Wiesenthal, 1997). Although studies are showing that urban sprawl is not directly related to mental disorders among the residents, there is a significant lack in the current literature regarding the indirect effects of urban sprawl on mental health. For instance, there is a need for research on mental disorders created by the stress which is caused by long daily journeys and traffic jams in the medium and long term. In addition to these, it is necessary to investigate the direct or indirect effects of the fragmented, isolated, and segregated everyday life experiences caused by the sprawled urban fabric on mental disorders. Lastly, there is an increase in the research on the relationship between epidemics and urbanization, especially with the COVID-19 pandemic (Bil, Buława and Swierzawski, 2021; Connolly, Keil and Ali, 2021; Mouratidis, 2022).

Within this general context, this study aims to discuss new theoretical and methodological openings to bring the issues regarding public health to the urban studies' area of interest. Especially with the consequences of the COVID-19 pandemic such as lockdowns, quarantines, or other obligations in the public space, there is a significant meaning shift in the urban space and everyday life experiences in the cities. Therefore, there is a need for a holistic perspective on the relationship between the urban space and public health. Accordingly, this study focuses on the urban sprawl process of Ankara to reveal the impacts of this experience on public health, not only physical but also mental.

3. Public Health and the Peripheral Urbanization of Ankara

The modern planning history and urbanization process of Ankara involves both implosion and explosion moments within less than a century. Before the establishment of the Turkish Republic, Ankara was a small central Anatolian city with the majority of the population living in rural areas. In 1914, the population of the city center was around 75.000 while slightly more than 230.000 people used to live in rural areas such as small towns or villages (Karpas, 1985, p. 172). The historical city center of Ankara which was built on the ruins of the Roman Empire, Byzantines, and Seljuks, was nothing more than a worn rural town. However, being chosen as the capital of the new republic changed the destiny of Ankara and the population started to increase rapidly. Therefore, the city center and its surrounding areas started to face a rapid urbanization process in parallel to this. As a result, a need for modern spatial planning became inevitable and there had been several planning attempts for this purpose (Tankut, 1988,

p. 103). Starting from the very beginning of the republic period, the new capital has been experiencing the urbanization processes with modern planning approaches.

With the neoliberal policies under the conservative AKP government, the whole city, with its center and peripheries, turned into a construction site. As a result, this urbanization and planning experience produced a fragmental, shapeless, and formless urban fabric on the peripheries of Ankara. This practice of fragmental urban sprawl represents a transitory state of being under which shifting from rural to urban. These areas are 'under construction and big holes, empty lands, agricultural fields, orchards, old villages, high and low density gated communities with high or middle-income social groups, exist together within the same spatiality and temporality. The case area is examined under two main categories; the first is the spatial context to focus on the physical health issues and the second is the societal context to explore mental health issues. The spatial context consists of air quality, noise pollution, access to healthcare facilities and infrastructures, and mobility concerning walkability and automobile-dependent transportation. The societal context is explored about the quality of life and segregation and isolation issues within the society.

Ankara is settled at the bottom of a calyx surrounded by geological edges like hills, mountains, and valleys on the north, east, and south. Therefore, the core area of the city dealt with the air pollution problem until the 1990s. The master plan which was prepared in 1975 envisaged a controlled open system that would help solve the ongoing air-pollution problem by opening new development zones on the western corridor (Çalışkan, 2009, p. 37). After this plan, the air pollution problem in the core area decreased to a certain point. The study area (Aşağıyurtçu-Yukarıyurtçu-Yapracık Districts) is chosen on the western corridor of the city, and it is located approximately 35 km from the city center. The area is mostly developed by a central governmental institution, Housing Developmental Administration (TOKİ), to produce 'qualified and affordable low-cost housing.' Compared to the residential neighborhoods (such as Ulus and Bahçelievler measurement station) of the city, the study area (Yaşamkent measurement station) has slightly better air quality according to the data published by the Ministry of Environment, Urbanization and Climate Change in 2022 (Figure 3). However, the sustainability of this positive situation observed at first glance is open to discussion. The air quality of the study area is under a serious threat due to the fragmented urban fabric, automobile-oriented transportation system, and long daily commuting durations. It is clear that if the study area continues to urbanize at a similar pace and density, the negative effects of carbon emissions from automobile-oriented transportation, especially on air quality, will increase in the future. In addition, particulate emissions due to the region's steppe landscape, limited green and water elements, and increased construction and excavation assets are another major threat to air quality.

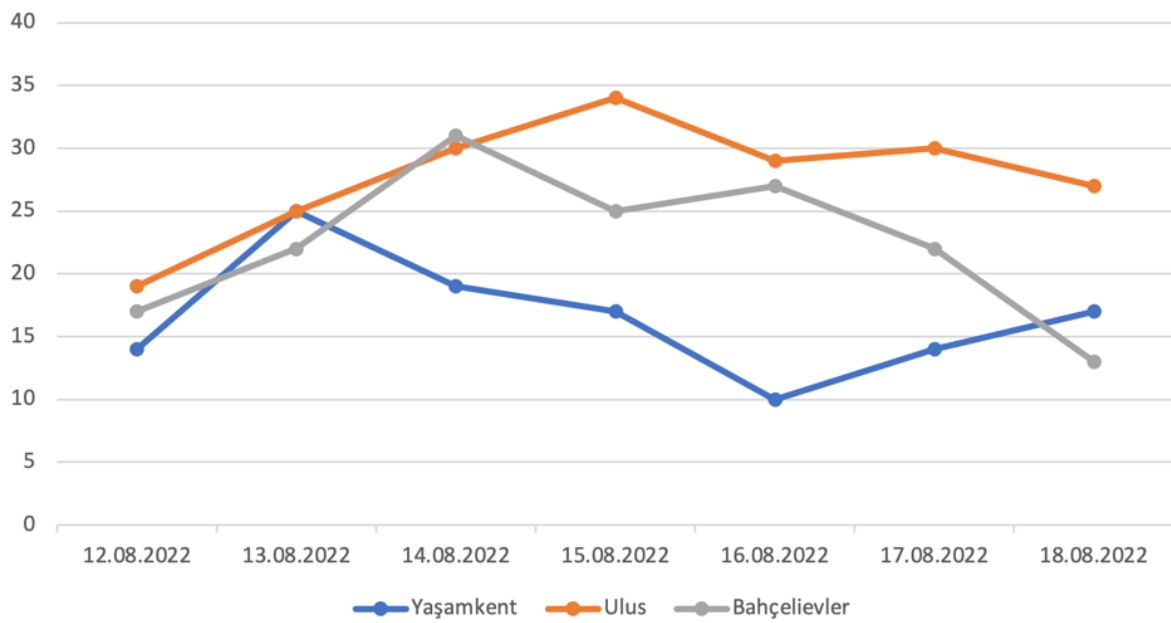


Figure 3 Weekly Air Quality Index of Different Neighborhoods in Ankara. Source Ministry of Environment, Urbanization and Climate Change

The next important category related to health is noise pollution. As can be seen in Figure 4, noise pollution concentrates around the highways and arteries (Ankara Metropolitan Municipality, 2020). Similar to the air quality category, it is clear that the main source of noise pollution is the automobile-oriented transportation system. In addition, heavy tonnage vehicles and ongoing constructions caused by the construction and excavation also contribute to noise pollution. The noise pollution around the roads, especially in the newly urbanized areas, is remarkable. This problem will increase exponentially if the region intensifies in the future.

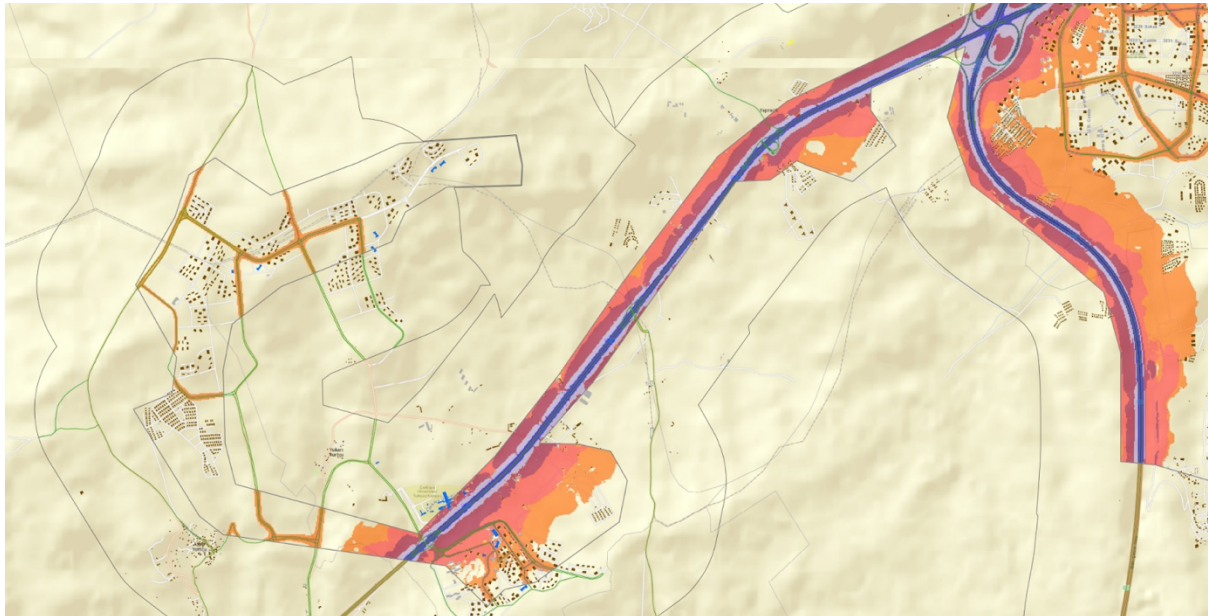


Figure 4 The map of noise pollution in Ankara. Source Ankara Metropolitan Municipality

The next important issue in the study area is the distance to the healthcare facilities and infrastructures. Three family practice centers provide primary health care in the study area and three more at a relatively close distance (Figure 5). However, better-equipped health institutions are located quite far from the working area. Four private sector and one public outpatient clinics are 12 to 18 km away from the study area. Also, three relatively smaller private hospitals are located 15 to 20 km and two full-fledged public hospitals are 23 km away from the study area. Although private hospitals also offer emergency services, the location of public hospitals in such a remote location extends the time to reach the hospital, especially in emergencies (Figure 6).

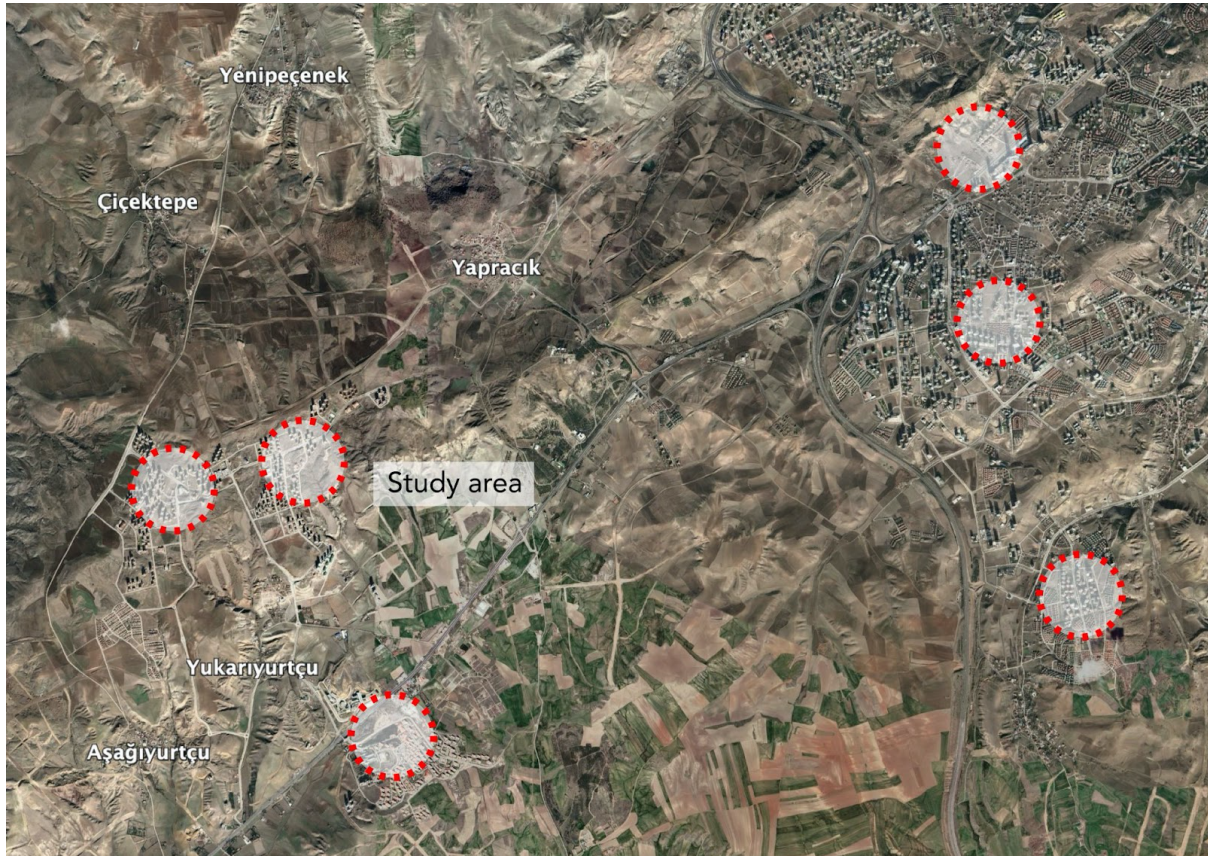


Figure 5 Family practice centers around the study area. Source Google Earth.

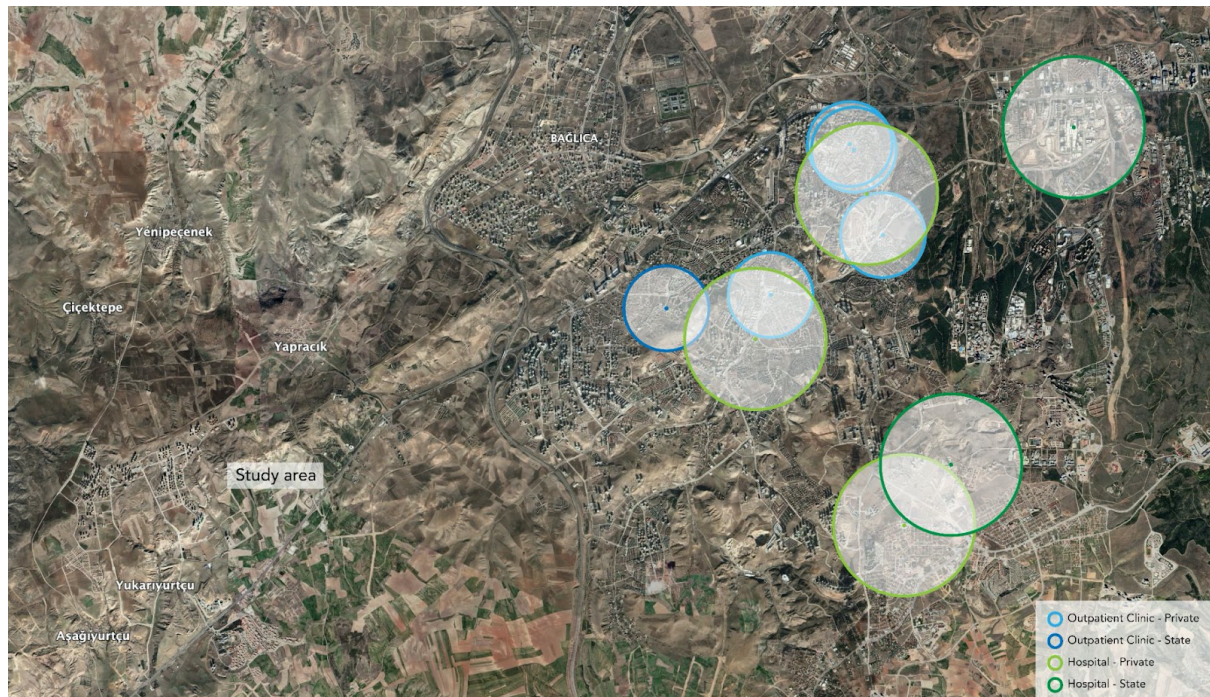


Figure 6 Hospitals around the study area. Source Google Earth.

In summary, the study area is highly automobile-dependent and this is the basis of many reasons such as air quality, noise pollution, and difficulty in reaching health institutions in emergencies. All these pose a serious threat to physical health. This degree of automobile-oriented urbanization and low walkability also reduces the mobility of people and can cause various diseases as summarized in the previous sections of the article. A walkable urban environment is an essential criterion for a healthy society.

It is not possible to claim that there is a direct relationship between urban sprawl and mental disorders, as was specifically mentioned in the previous sections of the article. However, especially on daily commutes to the city center, regardless of public transport or private vehicle, the traffic congestion and the time spent in traffic cause stress, tension or anger. It is necessary to carry out studies on direct or indirect mental disorders that this situation may cause in the medium and long term. Another negative effect of the urbanization experience in Ankara's urban periphery is isolation and segregation. Especially the lack of public space where people can come together and the everyday life within the gated communities makes people lonely and distanced from each other. This situation harms both the psychological state of the individual and, as Frumkin et al. emphasize, the social capital of the society (2004, p.161-184). As previous studies have shown, there is a relationship between urban space and mental health, and the fieldwork also shows that this new urban form has effects on mental health.

4. In Lieu of Conclusion

The recent urbanization process in the peripheries of Ankara has current and potential threats to public health. Mobility issues such as long distances, automobile-oriented transportation, low walkability, etc. are located within the center of these threats. The uncontrolled, fragmented and shapeless urban sprawl of the city creates an urban environment that is isolated, segregated, and far from the other parts of the city and society. Designing the city as a place of encounters, the existence of qualified public spaces where people can come together and communicate with each other, a walkable urban environment, and a clean, affordable and comfortable public transportation system are essential for a healthy society, not only in terms of physical but also mental health. However, this new form of urbanization that took place in the periphery of Ankara does not contain any of these qualities. Therefore, it is essential to develop

new planning and design approaches for the future of these areas. Otherwise, an unhealthy society is inevitable.

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