



Zoning as a Human Rights Violation: Is Zoning Associated with Increased Health-Risk and Health Care Disparity?

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Abstract

Human rights violations are not always as clear as people would like. When they involve the direct violation of an individual's life, such as forced labor or false imprisonment, or they result in death, society can easily identify and oppose them. On the other hand less conspicuous risks derived from governmental policies such as zoning laws are difficult to recognize. This review provides evidence of how zoning is associated with health-risk and disparity in health care delivery. Disparities resulting from zoning heighten human stress and lead to maladapted behavioral changes that cluster with diseased conditions like obesity. Zoning, as a human rights violation is difficult to understand, however, this lack of recognition is a direct result from socially acceptable processes that have created the way we live our life.

There are multiple social processes masking human rights violations resulting from the construction of our built environment. Without a close examination of these processes it can appear that those violated are the victims of chance or bad choices, but in fact, it is socially constructed circumstances that lead these people to be violated. The depth of the human rights violations runs much deeper than just the individual. These human rights violations penetrate and become pervasive all the way to the unborn next generation. The subsequent impacts from the infringement of a person's rights linger when violations inform the circumstances that determine the type of education and employment available to a person.

The aim of this paper will be to outline the process of how the built environment leads to human rights violations. Processes begin with the act of creating the zoning laws; zoning has the unintentional and intentional act of creating segregation, further, it is segregation that leads to discrimination, and the impact of discrimination has very real and lasting adverse health outcomes. The presence of disparities created by socially constructed processes such as zoning results in stress and the increase in adverse health outcomes such as obesity, one of the major forerunners of the current global epidemic of non-communicable diseases.

What human rights violations occur?

To describe human rights the United Nations employees words such as inherent and inalienable, rights that apply to all persons, with no exceptions. The United Nations drafted the Universal Declaration of Human Rights in December 1948 [1]. In the Declaration, they created 30 Articles that describe the rights subscribed to every person. Below are the particular Articles this paper will be referring to. The aim of this paper is to demonstrate that human rights are not only a term used to describe genocides but also that human rights abuses are derived from the processes that we have accepted as normal and almost vital to our way of life.

Article I: All human beings are born free and equal in dignity and rights. They are endowed with reason and conscience and should act towards one another in a spirit of brotherhood [1].

Article 2: Everyone is entitled to all the rights and freedoms set forth in this Declaration, without distinction of any kind, such as race, colour, sex, language, religion, political or other opinion, national or social origin, property, birth or other status [1].

Article 25

1. Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control.
2. Motherhood and childhood are entitled to special care and assistance. All children, whether born in or out of wedlock, shall enjoy the same social protection.

Certainly, these three Articles of The Universal Declaration of Human Rights are not the only Articles that can apply to the violation described in the following sections [1].

What is the process of zoning?

How zoning transformed from a formulized process to manage urban areas and evolved into a tool to segregated populations, resulting in complex adverse health outcomes is shown in (Figure 1). Zoning in America began around 1899 in Washington, DC as a way to regulate the height of buildings and was implemented in a much broader way in Los Angeles as a way to protect residential areas from the encroachment of industrial areas [2]. Fischel suggests that in New York zoning began as a way to ensure skyscrapers were built to allow for light and air to reach the sidewalk [3]. Certainly, these types of zoning had benefits. However, the aims of zoning shifted to benefit only selected populations in society.

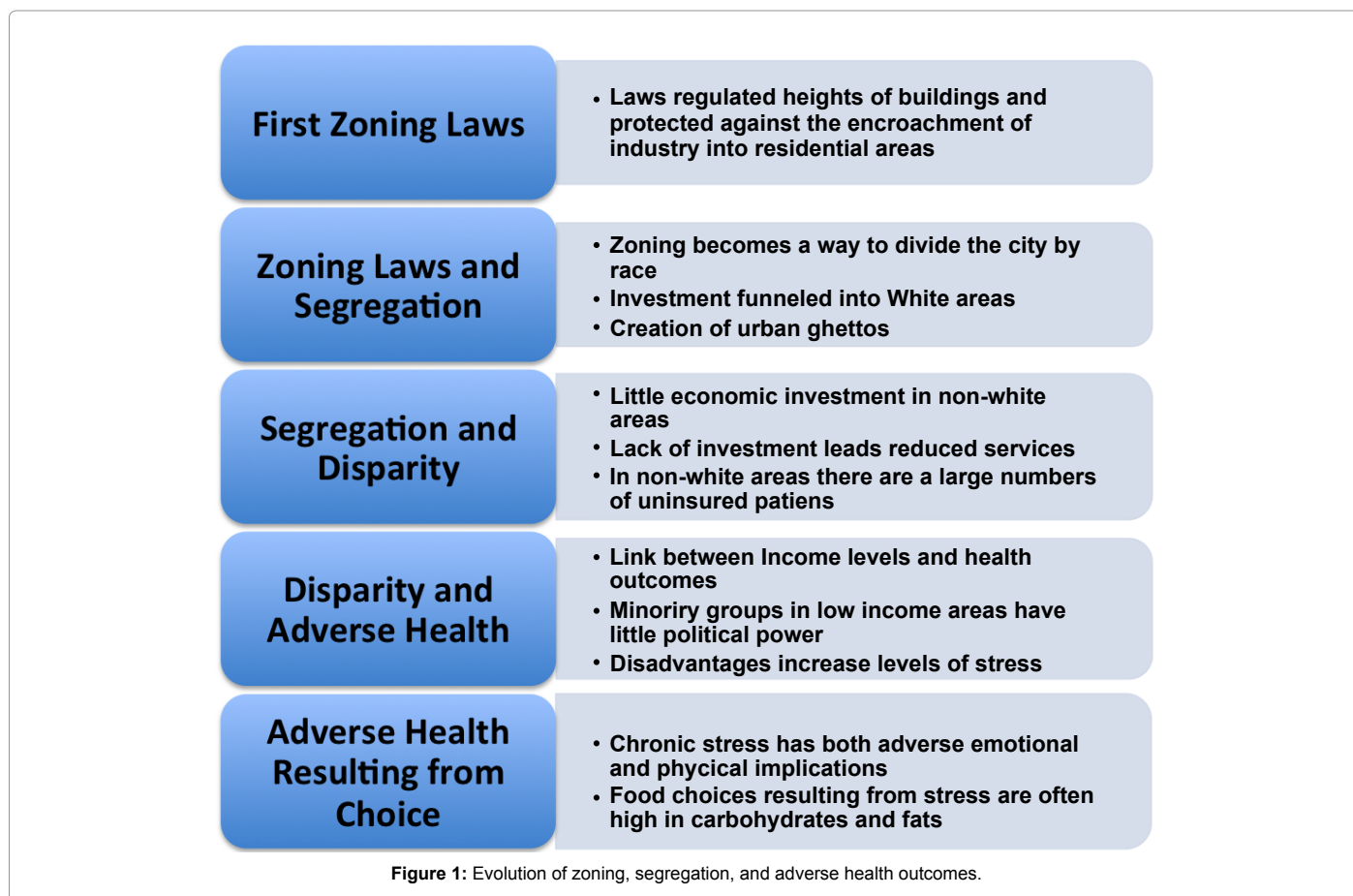
In an article about the history of zoning Ericson [4] stated that prior to the formation of zoning laws cities regulated development and growth in urban areas through nuisance laws. Ericson goes on to say

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that the development of zoning was a way of assuring landowners that their neighborhood wouldn't be changed adversely. Perhaps it is the fear of adverse change that led to the growth of the "not in my back yard movement" (NIMBY), that that people feel entitled to protect not just the relatively small area that they live in but any area that they form an emotional attachment to [5].

How does zoning create segregation?

It might be said that NIMBY is at the heart of segregation. Relatively quickly, zoning practices forced African Americans to be relegated to particular areas, which soon became areas viewed as undesirable [5]. Prior to the implementation of zoning in America, African Americans lived scattered within white communities. Lake, suggests that at the time African Americans held many positions in white households and lived side by side with their employers. However Lake points out that with the development of zoning came segregationist zoning, that legally divided streets by race, some researchers point to this as the time when urban ghettos developed [6]. Practices such as red-lining, a rating system used to assign risk for bank loans based on where a person lived, and the building of interstate highways that physically divided cities, acted to keep minorities, and most often African Americans, in defined areas of a city; these practices allowed for investment to be infused into the more "desirable" areas [7,8].

As African Americans began to move into urban areas, white people began to move out to the suburban areas [4]. Erickson states that this shift in whites out to suburban areas funneled investment away from the urban areas and into the suburban communities [4]. These investments

included schools, parks and infrastructures such as road improvements and the addition of sidewalks [7]. In the suburban communities, zoning was used to stop the building of apartment complexes, this prevented low-income minorities, who could not afford to buy a home or lacked the means to get a mortgage, from establishing outside of the urban areas [6]. Essentially, zoning was used as a tool to segregate undesirable groups from the groups of people who held more power and income.

How does segregation lead to disparities?

Segregation is directly correlated with health and wealth as segregation can impact the types of jobs available to the people in a neighborhood [9]. There is a large body of evidence to suggest that a job will determine what type of health care a person can afford. Further, the factors of wealth and health follow a class gradient, where the more income one has, the better their health is [9].

Researchers like Williams and Collin [10] suggest that the neighborhoods with poorer public schools, fewer employment opportunities and smaller return on real estate investment are most often where non-white populations live. What most research tends to suggest is that little investment is put into non-white neighborhoods, and it is the lack of resources that lead to the compounding issues for non-Whites in the neighborhoods they live in. White et al. [11] state "important variations in health care financing, spending and the delivery of services are associated with geographic location." Further White et al. point to research that suggests that large numbers of uninsured patients live in non-White neighborhoods, and this can put a great deal of stress on the institutions that provide care for these people [11].

How disparities lead to adverse health outcomes?

There is a growing body of research that is linking neighborhood levels of income and health outcomes. Ly et al. [12] add to this argument by claiming that institutions (hospitals and health clinics) that lack the financial means to invest in equipment, either in purchasing equipment or maintaining equipment, result in higher rates of adverse patient safety events.

The core of disparities within minority groups, especially African-Americans, is a lack of political power. The role of political power can determine the way that zoning and land use take shape in a community. Rossen and Pollack state [13] "A longitudinal analysis of the siting of hazardous waste facilities in Michigan between 1950 and 1990 concluded that hazardous facilities followed the 'path of least (political) resistance' and were more likely to be sited in poor communities of color." It was claimed that industries locate where land prices are low and where there is easy access to labor, and it happens that in minority neighborhoods both of the conditions can be filled.

How does stress follow diminished political power?

Increased levels of stress and negative life events among those in lower socioeconomic strata are important not only as determinants of health but also as mechanisms by which socioeconomic inequalities in physical and mental health are produced [14]. Baum et al. [15] conclude that socioeconomic status is associated with the frequency of stress, further, they state that social environmental features perceived as stressful, such as crime, lack of services and discrimination are prevalent within communities with greater disparities. Taylor and Seeman [16] suggest that exposure to stress should cumulate more in lower socioeconomic status because of the associated financial crises that people with limited economic resources face.

What does stress do to a body?

A growing body of literature is documenting the results of chronic stress. The research indicates that chronic stress can lead to a variety of diseases and disorders, primarily obesity; this furthers the growing research about the adverse health that is associated with obesity [17]. The research indicates there are mechanisms that result from stress and lead to adverse health. Jackson et al. [18] suggest that the impacts of chronic stress on a child at different developmental stages, from prenatal to infancy, can lead to life-long physiological issues when dealing with stress in later life.

Stress in small doses is a normal part of any organism's life cycle. Sapolsky [19] goes on to state when an organism is feeling stressed the normal response is to suppress food-seeking behavior and focus on overcoming the stress; this requires the use of energy reserves. Once the stress is elevated, the organism's feeding behavior is stimulated signaling the organism to consume nutrient-rich food as well as entering into an energy conservation period. This food consuming and reserving cycle happens in an organism that experiences stress periodically, not as a normal aspect of daily life, and certainly not for sustained periods of time, this is referred to as chronic stress [11]. For organisms that experience stress for elevated and prolonged periods their bodies use their energy reserves to cope with the stress, this means that they need to replace the energy by increasing feeding [20].

It is not simply that following periods of stress or during chronic stress that organisms have an increase in appetite, it is made more complicated because the actual foods they desire, calorie rich, carbohydrate dense and high in fats, lead to the core of adverse

health issues [18]. Sominsky and Spencer [17] outline the biological response that the body has to stress, starting with the activation of the hypothalamic-pituitary-adrenocortical axis (HPA). HPA is triggered by the release of corticotropin-release factor (CFR). CFR tells the body it is in stress. Dallman et al. [21] explain that during periods of stress or anxiety that organisms search out foods high in carbohydrates and fats, or what is typically referred to as comfort food for people. These foods will provide the organism with longer term energy storage; it is creating a store of energy in case food resources become scarce or if a stressor appears.

Unlike other organisms, human beings have increased access to comfort foods. In the wild, foods rich in fats and carbohydrates would be difficult to secure. Sominsky and Spencer [17] state that once the organism begins to consume the fats and carbohydrates its body believes that the stress is over. Jackson et al. [22] suggests that the consumption of the comfort foods rich in fats and carbohydrates inhibit the release of the CFR, the comfort food stops the body from feeling stressed. The body stores the energy from these comfort foods because that is the natural, biological response to the intake of fats and carbohydrates. For people who experience chronic stress, and, therefore, want to elevate the stress, they continuously eat the comfort food [22]. All of this can lead to a greater increase in caloric intake, and because the actual energy is stored in the body this can impact the ability to maintain a healthy body weight [23].

On the Center for Disease Control and Prevention (CDC) website, they list a number of health impacts that people who are overweight or obese are at a greater risk for, including among others: high blood pressure, type 2 diabetes, coronary heart disease, stroke, some cancers, sleep apnea and mental illness. Onyike et al. [24] explain that isolated these conditions (type 2 diabetes and high blood pressure, etc.) take the assistance of health professionals to help manage, but being overweight increases the chance of developing concurrent adverse health outcomes and managing them takes on increased difficulty.

Undoubtedly, there are more adverse health outcomes that result from stress. However, behaviors that lead to choices that produce ill health also have a direct association with the stress that comes from disparity generated by segregation. Jackson and Knight [25] claim that behaviors, such as drinking and smoking, act as buffers to reduce the chronic stress of discrimination. It is not simply that minorities have more stress and choose to smoke or drink; rather it is that minority groups are exposed to smoking and drinking because of zoning laws that permit increased access to stores that sell and advertise these products [18]. In a 2008 report by the Robert Wood Johnson Foundation they explain "an individual's ability-and motivation-to exercise and avoid smoking and excess drinking can be constrained by living in a neighborhood that lacks safe areas to exercise, where intensive tobacco and alcohol advertising targets poorer and minority youth and liquor stores are plentiful, and where healthy role models are scarce" [26]. The problems highlighted above, in regards to advertisements and the types of stores that exist in a neighborhood, or the fact that there are no safe places to be physically active all have the possibility to be changed [27-30].

The link between physical activity and the built environment (informed by zoning), have a direct link to health, where there are more parks and playgrounds there are higher levels of physical activity [21]. Physical activity can be associated with a social gradient, the more advantaged a person is the more active they will be, additional factors that influence physical activity include gender, ethnicity and presence of disabilities [31]. Zoning informs the way a city is designed, this

can include the access to transportation infrastructure, availability of sidewalks, bike paths, and single or multi use zoning. Areas with poor transportation infrastructure, lack of sidewalks and bike paths and single use zoning result in lower levels of physical activity [32].

Promotion of strategies that improve community health through restructuring of land, supporting farmers markets and community gardens, and vending and discounted eating outlets in parks and recreation facilities have been suggested for overcoming maladapted behavioral practices related to zoning policies [33-36].

Summary

If Health is a Human Right than it is a right entitled to all people, and cannot be limited in any way. However, if social processes that have become a part of the way that society functions, such as zoning, result in the limitation of groups of people to access basic health, this is a violation of the many human rights. To further this point, if society is structured in a way that limits the access to choices that are available to a group of people and this denies people the access to options to make healthy choices over choices that are detrimental to their health, this is also a violation of human rights. At the core of the abuses is that the abused are pushed into settings that force them to unknowingly sacrifice their health.

This opinion piece attempts to demonstrate the disparities created by the policy of zoning which heightens stress and maladapted behaviors health related to disorders such as obesity. Because of the presence of disparities, there is a lack of investment in health care in these communities and the compounding impact is that minority groups, especially African American's, are facing a greater burden of disease.

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