



Health Landscape Approaches for Community in Westport, Baltimore

Keren Zhang^(✉)

L&A Design (Shenzhen) Co., Ltd., Hangzhou Office, Shenzhen, China
zhang.kren@gmail.com

Abstract. This study investigates how to improve neighborhood existing conditions, such as vacant lots and streets, to have a favorable impact on inhabitants' physical, mental, and social health outcomes in light of the increasing focus that people have placed on health in recent years. It also looks at how to use various activities in public areas to draw people in and foster a sense of community.

Keywords: vacant lots · health street · social engagement · green spaces · community · health

1 Introduction

Public health is associated with community environment. Therefore, community planning and landscape design should consider both people and the environment, as well as citizens' health. Health is "a condition of total physical, mental, and social well-being and not only the absence of disease or disability," according to the World Health Organization (WHO) [1]. The most conventional meaning of health is physical health, which refers to a person's physical condition. According to one definition of the mental component of health, it is a state of wellbeing in which a person is able to reach their full potential, do tasks well, deal with challenges in life, and give back to their community [2]. The terminology "social well-being" is typically used to describe when a person recognizes their capacity for interpersonal interaction and social adjustment [3]. Green public spaces are directly linked to public health since they are nature-focused urban open spaces. Community green areas can significantly contribute to an improvement in general health. Therefore, when designing a community, it is important to carefully consider how to develop landscape places that can preserve everyone's physical, mental, and social health.

2 The Health Effect of Green Space

The health of citizens can be greatly improved by expanding green spaces and fostering a sense of community. There is mounting evidence that the number of green spaces and health are positively correlated. According to a study, natural landscapes have a much better impact on health than urban ones because they lower stress, shield people from

illness, and boost social well-being [4]. Therefore, public green spaces contribute to inhabitants' overall health and serve as a buffer against psychological crises. In addition to the advantages of physical and mental health, it can also help to improve social health.

2.1 Physical Health

Residents may use neighborhood green spaces for recreation and exercise, lowering their chance of developing chronic illnesses and passing away. According to one study, those who live in areas with a greater than 15% green cover had a lower chance of developing cardiovascular disease than people who don't [5]. A 2010 study also discovered that towns with a lot of green space could lower their people's risk of developing Type II diabetes and cardiovascular disease [6]. The risk of diseases linked to obesity can also be reduced by neighborhood green spaces. A strategically created green space that may be used regularly and promote walking behavior was proven by a study [7]. According to a study, exercising in a natural setting is typically more beneficial than doing so in an artificial setting. Elderly individuals' life expectancy is also correlated with green places. A long-term study in Japan confirmed that senior residents who live in green community have longer life and better life quality than those who live in ordinary community [9].

2.2 Mental Health

There is evidence that having access to green spaces helps neighborhood inhabitants feel less stressed and have better psychological health. Ulrich created the Stress Reduction Theory based on the characteristics of stress (SRT) [8]. Natural scenery had been thought to have a good impact on people's physical and mental wellbeing. Additionally, exposure to green landscapes and other natural landscape imagery can help with stress relief and concentration [10]. Another study looked at how activities like walking, riding, and other forms of recreation in green places can affect people's emotions and sense of self [11]. People who live near parks or frequently visit these green areas have lower stress levels than other inhabitants, according to residents who were asked about it in England [13]. A Wisconsin study [14] that looked at the impact of nearby green areas on residents' mental health likewise found that these effects were favorable.

2.3 Social Health

Green spaces and community parks can help enhance social well-being. Low levels of social engagement have been linked to higher rates of chronic illnesses and mental health issues, according to research by Hassen and Kaufman [14]. However, being actively involved in social activities helps build social capital, which is linked to people's physical and mental health. A research indicated that green spaces have been linked to an increase in people's social interaction and reduction in people's feelings of loneliness and shortage of social support, especially for children, elderly, and low-income people [15]. Additionally, community green spaces can encourage people of all socioeconomic levels to engage in similar activities and can enhance social relationships [16].

Increasing the quantity and quality of green spaces in a community can also help to lower crime rates and improve people's perceptions of safety. According to a study,

there is a link between crime and greenery, especially in inner-city areas with high rates of poverty. Residential environments that are more green can reduce the psychological motivations behind violent crimes and boost neighborhood surveillance [17]. However, this study also discovered that the impact of green spaces on crime rates might be both good and bad. In general, public green spaces with large meadows, tall trees, flowers, and low-growing bushes are unlikely to obstruct views or encourage criminal activity. On the other hand, some green areas, such as those covered in dense vegetation like woodlands and big shrubs, could serve as a cover for criminal activity. This study also demonstrated how neighborhood green areas can foster a sense of community among locals by motivating them to take part in activities that create a peaceful, green neighborhood.

3 Case Study Area

Westport is a neighborhood in the south shore of Baltimore, Maryland, and it has a total area of around 129 acres. The neighborhood, which has a large African-American population, frequently struggles with a high vacancy rate, a lack of recreational opportunities, poor health, crime, and dilapidated homes and businesses.

3.1 Health Condition

The physical health results of people who live in Westport/Mt. Winans/Lakeland are significantly worse than the city average, according to the 2017 Neighborhood Health Profile. As an illustration, Westport/Mt. Winans/Lakeland performed poorly on a number of health indicators, such as heart disease, cancer of all types, lung cancer, and stroke, all of which are higher than city rates [18]. Additionally, people in Westport, Mount Winans, and Lakeland experience mental health issues. According to the Public Behavioral Health System (PBHS), around one in five Baltimore residents experience mental health problems. Thus, converting unused land in the community into green spaces can help to improve the neighborhood's residents' social, mental, and physical health.

3.2 Vacancy Rate

The Westport neighborhood is constantly experiencing population decline, which has resulted in a large number of vacant lots and abandoned homes. According to the Baltimore City Department of Housing & Community Development, there are about 14,000 vacant lots and about 30,000 unoccupied homes in total [18]. According to the Baltimore Neighborhood Indicators Alliance (BNIA), Westport has a vacancy rate of 36% with 252 unoccupied buildings out of a total of 696 buildings. Additionally, a sizable tract of post-industrial sites surrounds this community, dividing its residents' access to the shoreline from the city. In order to develop a healthy community and draw new inhabitants from various backgrounds to this community, the unoccupied land can be turned into green areas. Recreational Resources.

The Westport neighbor has two public parks totaling of 4.7 acres. This is representing 3.6 percent of the neighborhood land area. One of the existing parks is composed by a basketball playground, exercise facilities, large meadow and resting spaces. Children

can play on the smaller one since it contains features like slides and swings. Residents must walk more than 15 min to get to the big park because the Baltimore-Washington Parkway divides it from the neighborhood. The area is next to a tiny park, but as it is just about an acre in size, it cannot adequately serve the needs of the locals. In order to address concerns about the absence of green spaces in this community, it is vital to use the vacant property. This can give exercise, relaxation, and interactive areas for inhabitants to better their health conditions.

3.3 Crime and Safety

The high crime rates in a neighborhood can make residents feel unsafe, which will prevent them from interacting with one another. Homicide and non-fatal gunshot rates in Westport/Mt. Winans/Lakeland are higher than the city average. Open green spaces are associated with lower crime rates, according to research [18]. Therefore, converting abandoned land into open green spaces could aid in enhancing people's emotions of safety and security, offering spaces for communication, and strengthening residents' mental and social well-being.

4 The Approach to Improve Health Conditions

The body of research demonstrates that having green spaces in a neighborhood has several advantages for the health of its inhabitants. Therefore, in light of Westport's dearth of green spaces and the people's poor health outcomes, it is imperative to improve the community's access to green outdoor places. In order to develop healthy streets, turn existing vacant lots into green areas, and incentivize inhabitants to socialize with their neighbors, this study will investigate how to improve the health of the residents.

4.1 Vacant Lots Transformation

Many of Westport's current green spaces are close to homes, which satisfies the need for a convenient walking distance. In order to encourage people to participate in outdoor activities and civic engagement, these vacant lots can be transformed.

The benefits of increasing community green spaces do not only achieve by enhancing the engagement in green spaces, and can fulfill by creating green view connection as well. Views of green spaces have been linked to improved health, lower levels of stress, and improved focus. There are several vacant lots close to homes that might be turned into green open spaces, even though the current situation does not allow the concept of developing view connections for the community. Through the windows, these areas are visible, and they can also improve inhabitants' mental health. More visible green open spaces can result in more criminality being perceived, which equals fewer criminal acts because visibility is a key element in crime prevention.

4.2 Health Streets

As a crucial part of the community, community streets work closely with locals. It is crucial to design healthy streets for the community since roadways serve multiple roles, including traffic control, promoting ecological advantages, offering areas for activities, linking green spaces, and forming scenes in the neighborhood.

By establishing environments that are conducive to walking, running, and cycling as well as expanding the amount of trees, health streets can enhance outcomes for physical, mental, and social health. Westport's street system has high continuity and integrity, which is the cornerstone of a healthy street composition. However, the streets are in disrepair, an unsuitable width, full with cars, and lack a connection to the shoreline, indicating that the current situation cannot provide appropriate spaces for walking, jogging, and cycling. But since this community is close to a post-industrial waterfront and a portion of the Gwynns Falls Trail runs through it, maintaining the streets and improving access to the waterfront can give locals more opportunities to get exercise, take in the surrounding natural beauty, reestablish connections with the waterfront and the city, and improve their health. For the establishment of sustainable neighborhood, tree canopy coverage is another crucial consideration. Westport has a remarkably small amount of tree canopy coverage, according to the Baltimore City Department of Recreation & Parks. Westport's tree canopy coverage is only about 18% compared to the city's tree canopy coverage of 28%. By planting trees in the streets and the vast amount of unoccupied land in Westport, it is possible to improve the tree canopy coverage in addition to the rejuvenation and reconnecting of the streets. The development of healthy roadways and an increase in the community's tree cover can both encourage residents to adopt healthy habits and create a healthy neighborhood.

4.3 Social Engagement

Community green spaces can have the biggest impact on health improvement when people use them for recreation. As was already said, building healthy streets and turning unused lots into community green spaces can give locals enough places to exercise. Some additional functions could also be considered in the design of green spaces to help residents to make more effective use of green open spaces and engage in various activities. For example, the green spaces can combine with community garden or urban farms, which does not only can increase green coverage and pleasing greenery landscape for the community, but also can create spaces for residents for use and enjoy. The community farms may also contribute to the provision of healthy food, present employment opportunities for local residents, and foster a sense of community ownership. Additionally, therapeutic gardens might be established in vacant city lots. Elderly and stressed people can reduce stress and enhance their physical and mental health by being outside and participating in horticultural activities, according to research on the therapeutic garden's impact on public health [19]. By incorporating these many uses into public green areas, it may be possible to engage inhabitants in a range of social activities and foster a sense of community.

5 Conclusion

The purpose of this article is to investigate how redesigning and reusing some community spaces can enhance inhabitants' health outcomes. Because it involves the three different facets of physical, mental, and social health, improving health outcomes is challenging. As a result, these papers use the neighborhood of Westport as an example and primarily discuss how to improve the current neighborhood's conditions to achieve this objective. Specific strategies discussed include converting vacant lots into green spaces, creating health streets, creating connections between the community and the local environment, and implementing horticulture and therapeutic activities in green spaces. All of these things can help to promote locals' health conditions and build a healthy community.

References

1. World Health Organization. Constitution of WHO: WHO remains firmly committed to the principles set out in the preamble to the Constitution. <https://www.who.int/about/governance/constitution>
2. World Health Organization (2005). Promoting Mental Health: Concepts, Emerging evidence, Practice. https://apps.who.int/iris/bitstream/handle/10665/43286/9241562943_eng.pdf?sequence=1&isAllowed=y
3. M. Huber, Knottnerus, J. A.; Green, L.; H. v. d. Horst, A. R., Jadad, D. Kromhout, B. Leonard, K. Lorig, M. I. Loureiro, J. W. M. v. d. Meer, P. Schnabel, R. Smith, C. v. Weel, H. Smid (2011). How should we define health?. *BMJ*, 343(jul26 2), d4163–d4163. <https://doi.org/10.1136/bmj.d4163>
4. M.D. Velarde, G. Fry, M. Tveit. Health effects of viewing landscapes: Landscape types in environmental psychology[J]. *Urban Forestry & Urban Greening*, 2007, 6(4): 199–212. <https://doi.org/10.1016/j.ufug.2007.07.001>
5. Richardson, E.A.; Pearce, J.; Mitchell, R.; Kingham, S. (2013). Role of physical activity in the relationship between urban green space and health. *Public Health*, 127(4), 318–324. <https://doi.org/10.1016/j.puhe.2013.01.004>
6. R. L. STORGAARD, H. S. HANSEN, M. AADAHL, & C. GLÜMER (2013). Association between neighbourhood green space and sedentary leisure time in a Danish population. *Scandinavian Journal of Public Health*, 41(8), 846–852. <http://www.jstor.org/stable/45151089>
7. Billie Giles-Corti; Melissa H. Broomhall; Matthew Knuiaman; Catherine Collins; Kate Douglas; Kevin Ng; Andrea Lange; Robert J. Donovan (2005). Increasing walking: How important is distance to, attractiveness, and size of public open space?. , 28(2-suppl-S2), 0–176. <https://doi.org/10.1016/j.amepre.2004.10.018>
8. A. Ellaway, S. Macintyre, X. Bonnefoy, 2005. Graffiti, greenery, and obesity in adults: secondary analysis of European cross sectional survey. *British Medical Journal* 331, 611–612. <https://doi.org/10.1136/bmj.38575.664549.F7>
9. T Takano, K Nakamura, M Watanabe (2002). Urban residential environments and senior citizens' longevity in megacity areas: the importance of walkable green spaces. *Journal of Epidemiology & Community Health*, 56(12), 913–918. <https://doi.org/10.1136/jech.56.12.913>
10. R. S. Ulrich (1981). Natural Versus Urban Scenes: Some Psychophysiological Effects. *Environment and Behavior*, 13(5), 523–556. <https://doi.org/10.1177/0013916581135001>
11. Pretty, J.; Peacock, J.; Hine, R.; Sellens, M.; South, N.; Griffin, M. (2007). Green exercise in the UK countryside: Effects on health and psychological well-being, and implications for policy and planning. *Journal of Environmental Planning and Management*, 50(2), 211–231. <https://doi.org/10.1080/09640560601156466>

12. U. K. Stigsdotter, O. Ekholm, J. Schipperijn, M. Toftager, F. Kamper-Jorgensen, T. B. Randrup (2010). Health promoting outdoor environments - Associations between green space, and health, health-related quality of life and stress based on a Danish national representative survey. *Scandinavian Journal of Public Health*, 38(4), 411–417. <https://doi.org/10.1177/1403494810367468>
13. Beyer, Kirsten; Kaltenbach, Andrea; Szabo, Aniko; Bogar, Sandra; Nieto, F.; Malecki, Kristen (2014). Exposure to Neighborhood Green Space and Mental Health: Evidence from the Survey of the Health of Wisconsin. *International Journal of Environmental Research and Public Health*, 11(3), 3453–3472. <https://doi.org/10.3390/ijerph110303453>
14. Hassen, Nadha; Kaufman, Pamela (2016). Examining the role of urban street design in enhancing community engagement: A literature review. *Health & Place*, 41(), 119–132.
15. Jolanda Maas; Sonja M.E. van Dillen; Robert A. Verheij; Peter P. Groenewegen (2009). Social contacts as a possible mechanism behind the relation between green space and health. , 15(2), 586–595. <https://doi.org/10.1016/j.healthplace.2008.09.006>
16. Vicky Cattell; Nick Dines; Wil Gesler; Sarah Curtis (2008). Mingling, observing, and lingering: Everyday public spaces and their implications for well-being and social relations. , 14(3), 544–561. <https://doi.org/10.1016/j.healthplace.2007.10.007>
17. Kuo, F. E.; Sullivan, W. C. (2001). Environment and Crime in the Inner City: Does Vegetation Reduce Crime?. *Environment and Behavior*, 33(3), 343–367. <https://doi.org/10.1177/00139165013333002>
18. Baltimore City Health Department. 2017 Neighborhood Health Profile for Westport/Mt. Winans/Lakeland, June 2017
19. Detweiler, M. B., Sharma, T., Detweiler, J. G., Murphy, P. F., Lane, S., Carman, J., Chudhary, A. S., Halling, M. H., & Kim, K. Y. (2012). What Is the Evidence to Support the Use of Therapeutic Gardens for the Elderly? *Psychiatry Investigation*, 9(2), 100. <https://doi.org/10.4306/pi.2012.9.2.100>

Open Access This chapter is licensed under the terms of the Creative Commons Attribution-NonCommercial 4.0 International License (<http://creativecommons.org/licenses/by-nc/4.0/>), which permits any noncommercial use, sharing, adaptation, distribution and reproduction in any medium or format, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license and indicate if changes were made.

The images or other third party material in this chapter are included in the chapter's Creative Commons license, unless indicated otherwise in a credit line to the material. If material is not included in the chapter's Creative Commons license and your intended use is not permitted by statutory regulation or exceeds the permitted use, you will need to obtain permission directly from the copyright holder.

