

Healthy Neighbourhood Elements for Sustainable Development and Social Well-Being: An Overview

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Abstract

Neighbourhood concept has long been discussed and implemented since 1920's. Many contemporary neighbourhood concepts have been created and used such as green, sustainable, liveable, quality, new urbanism, safe, compact neighbourhood. The recent developments in the concept of neighbourhood are geared towards a healthy neighbourhood. Therefore, this paper conducts a thorough assessment of the literature in order to synthesise the current framework knowledge in terms of healthy neighbourhood purposes, elements, principles and also the framework and model used from previous research. A search was done from 1999 to the present to gather only applicable models or frameworks in general, with the inclusion criteria of no period, worldwide, and English language. There were 51 publications or journals identified with the keyword healthy neighbourhood, liveable neighbourhood, and sustainable neighbourhood. The purposes, elements, and principles of a healthy neighbourhood in relation to sustainable development and social well-being were screened in all titles and abstracts. Only 28 publications were found to be relevant and closed linked in creating the conceptual framework for this paper after the filtering procedure of all relevant key phrases. This paper utilised a snowball approach to collect the necessary papers after an extensive check on the key terms. Basically, the previous theoretical and modelling framework was related to sustainable development and social well-being. For the development of comprehensive conceptual framework for healthy neighbourhood, the researcher will use 3 elements and 8 principles. For the future, the conceptual framework will be used and tested for comprehensive healthy neighbourhood.

Keywords: Elements, Healthy Neighbourhood, Principles, Purposes, Social Well-Being, Sustainable Development

Introduction

Since the 1920s, the notion of a neighbourhood has been debated and later implemented. Some of the modern neighbourhood concepts which have been introduced and applied are green, sustainable, liveable, quality, new urbanism, and safe, compact neighbourhoods. Today, advancements in the notion of neighbourhood are focused toward creating a healthy neighbourhood. Research on the concept of a healthy neighbourhood were conducted by many, over the years. The research started with the severe previous epidemic such infectious diseases, such as tuberculosis, cholera, typhoid and yellow fever which were all critical factors to human life in the late 19th and early 20th centuries. Widespread diseases took place due to poor urban environment and posed as a grave threat to the city residents throughout their life (Bassett & Howerton, 2014). Poor urban environment involves issues with the aspects of public infrastructure, sewerage, human waste, public parks, traffic congestion and urban overcrowding. These epidemics were effectively mitigated through investment in public infrastructure and better urban planning (Perdue et al., 2003). It is crucial for to the urban planners to integrate health considerations fully into their work, both in policy and practical terms, and for all sectors in the cities to work together to improve health, wellbeing and quality of life as the means for improving health through urban design (Duhl & Sanchez, 1999). Cosgrove (2008) stated that the 20th century, designers' and urbanists iconic visions have created places to integrate the benefit of rural life. These kinds of developments lead to the decline in environmental crisis, global environmental change: they encourage continuities in image making and presentation and the evolving roles of physical nature itself in shaping their composition and meanings.

In 2019, the world faced many challenges from outbreaks of vaccine-preventable diseases like measles and diphtheria, which in turn, led to an increased in reports of drug-resistant pathogens, as well as the growth in obesity rates and physical inactivity as the health impacts of environmental pollution and climate change and multiple humanitarian crises (World Health Organization: WHO, 2019). To overcome the acute diseases and other threats, WHO (2019) has introduced 5 years strategic plan the 13th General Programme of Work. This programme is focused on a triple billion target to ensure 1 billion more people benefit from access to universal health coverage, 1 billion more people are protected from health emergencies and 1 billion more people are enjoying better health and well-being. Through reach the targets, countries need to address health threats from a variety of angles. This paper will provide an overview on the theoretical framework from previous researchers to produce the conceptual framework for healthy neighbourhood.

Literature Review*Purposes of Healthy Neighbourhood*

The purpose of healthy neighbourhood is to increase surrounding wellness for healthy living (Bassett & Howerton, 2014). The neighbourhood will become healthy and successful when the program development can prevent disease, improve health and also the environment (Institute of Local Government, 2015). Community's health, as mentioned by Ashby and Pharr (2012) is dependent not only upon the genetics of its residents, but also on the environment within which those individuals live. In other words, a person's health is a product of his environment. A healthy community is one in which all residents have access to a quality education, safe and healthy homes, adequate employment, transportation, physical activity,

and nutrition, in addition to quality health care (Falk & Carley, 2012). When all important criteria of a healthy community are met, people become culturally productive and financially sustainable: the latter refers to the financial bottom-line under the consideration and efficient use of resources and the productive capacity of organizations (Miska et al., 2018).

Principles of Healthy Neighbourhood

The discussion on the principle of healthy neighbourhood will be presented in terms of 8 principles from various researchers regarding healthy neighbourhood debate. These include location, integrate nature, mix uses, mix it up, circulation alternatives, pride of place, lifelong learning, and sustainable development.

1. Location

For neighbourhood amenities, the location of the local park is very important for a neighbourhood's healthy element especially one that is located in town centre (Plane & Klodawsky, 2013). One of the factors to consider is that different location of neighbourhood amenities or public facilities based on the functions, uses and services provided to the population in an area make housing near to amenities are more desirable (Yinger, 2015). The idea that location is important in the pursuit of subjective well-being is a key element in urban happiness debate (Musa, et al., 2019). While it is generally recognised that high-quality neighbourhood facilities may boost social trust, the duration of stay also plays a significant impact. It is critical that any extensive development should not include the displacement of present residents since the longer people live in a specific region, the more socially integrated they are (Lim et al., 2017). A neighbourhood's location and internal features might impact how individuals travel and how pleased they are with their daily commute (Mouratidis, 2020). Basically, the location of neighbourhood amenities and public facilities will lead to the accomplishment of a healthy and liveable neighbourhood.

2. Integrate Nature

The majority of the anticipated urban population growth will be of the informal variety in nature. Many will be housed on the outskirts and in the interstices of small and medium-sized cities in middle- and low-income nations. Smart urban design may integrate characteristics that enhance health, such as improved food and food growing conditions, urban greening, flood risk reduction, microclimate improvement, and activity-supporting greenways (Grant et al., 2017). In terms of social value, most individuals believe that the social benefit of a neighbourhood unit is exaggerated when compared to the modern city's natural lifestyle (Asfour & Zourob, 2017). For index development in urban health, the criteria are the need of including stakeholders; the contentious nature of composite indicators and weighting techniques; the validity of worldwide comparisons of urban health; and the challenge in getting suitable open data across global cities (Pineo et al., 2018). Urban nature also means that many social functions and psychological requirements of people are met by urban environment, making it a valuable municipal resource and a crucial element in city sustainability. The design concepts for maximising green infrastructure for physical activity is that, green areas must be provided within a 2.5-kilometer radius of the demand (houses, workplaces, etc.). The motivations for individuals to visit green infrastructure must be considered while designing green infrastructure. These motivations include enjoyment, relaxation, nature commitment, and physical difficulties. Mostly, efforts in integration of

nature will contribute to conservation of the natural habitat within and around the community (Gehrels et al., 2016).

3. *Mix Uses*

Each neighbourhood offers a diverse mix of land uses and densities, providing opportunities to live, learn, work, and play. More intensive land uses are linked and centred on transit and alternative mobility. Every resident has easy access to everyday shopping and services. Regardless of transportation mode, residents' recreational requirements in their neighbourhood are met (City Council Red Deer, 2013). For mix uses, land use within a relatively compact area with attached homes may offer a competitively high yet appealing density. This covers tiny dwelling apartments as well (Asfour & Zourob, 2017) as they are also known as the high-quality compact urban form with a defined limit. The shifting spatial role of inhabitants' liveability expectations must also be recognised and provided for if increased liveability at increasing densities is to be attained (Allen et al., 2018). The revised design guidelines encourage the creation of a mixed-use neighbourhood node that incorporates either (or both) commercial development and community amenity or facility (City Council Red Deer, 2013). In promoting health city, the combination with other elements such as pavements, mixed land uses, street connectivity, etc., results in higher levels of physical activity (Pineo et al., 2018). A mixed land use is a measure of residential, commercial, and industrial uses, with scores of one when land use is maximum mixed or heterogeneous (e.g., similar proportions of different land uses) and zero when land use is maximally homogenous (e.g., all residential) (Wineman et al., 2014).

4. *Mix It Up*

The mix up in healthy neighbourhood is related to participants that put a higher value on inclusive (free) social events and the chance to connect with people in the park than on its beauty. Supporting free community events in public places is essential to instil sentiments of belonging. Inclusion of marginalised populations in the community (Plane & Klodawsky, 2013). Housing quality or satisfaction should be included along with other neighbourhood facilities and characteristics, to offer a more inclusive picture of factors influencing social trust in healthy neighbourhood (Lim et al., 2017). A socially inclusive community is one that is safe, attractive, cohesive, and environmentally sustainable, with affordable and diverse housing that is linked to employment, education, local shops and community services, leisure and cultural opportunities, and public open space via convenient public transportation, walking and cycling infrastructure (Davern et al., 2017). We cannot overlook the inequalities that exist - what happens in even the most remote location has an impact on the entire system. The neighbourhood, the city, and the globe are all parts of one complex organism that must be addressed as a whole. Healthy Cities, as a form of community government, provide an inclusive method of functioning (Duhl & Sanchez, 1999).

5. *Circulation Alternatives*

Design of commercial nodes and multi-family properties must come with pedestrian pathways, medians, and landscaping to divide parking into smaller sections and allow for more pedestrian traffic. Areas for pedestrian circulation within commercial nodes must be clearly designated with distinct paving, concrete curbs, and planting, and pedestrian-scale lighting as well as higher parking lot lighting must be supplied (City Council Red Deer, 2013).

The functionalist of circulation also played a part in this stage of zoning functions while connecting them through a network of circulation routes to promote cleanliness, social development, and efficiency (Duhl & Sanchez, 1999). These various circulation techniques allow residential areas to remain mostly car-free while also lowering walking distances from parking to front doors. In all situations, the roadways are suitably short, with small-turning-radius bends, tiny entrances, and restricted visibility. As a result, automobile speeds are decreased, and integration with the surrounding scenery and plants is appropriate (Gulati, 2019). Instead of just considering road circulation, consider air circulation as well. It is critical to ensure that green components are strategically placed in areas where people live and play in order to enhance air circulation. As a result, the usage and design of green infrastructure should always take into account the unique features of a given location (Gehrels et al., 2016). The circulation is to an extent refers to which street is linked within its immediate or local neighbourhood (Wineman et al., 2014). The most consistent evidence for effective environmentally oriented, place-based violence interventions comes from enhancing street connections, adding street lighting in public housing, and providing green living settings to prevent violent crime (Hohl et al., 2019).

6. *Pride of Place*

The ability of building trust through social relationships is increased by offering venues for congregation and meet-ups. Furthermore, contentment with services and amenities enhances overall pleasure with the people's neighbourhood, cultivating a sense of pride and commitment to it. This sense of connection offers cognitive incentive for social investment, such as participating in trust-building social activities (Lim et al., 2017). Each neighbourhood has its own character, which fosters community pride and a sense of belonging. Arrival features, focus spots, natural elements, public art, and other community emblems are interwoven at key crossroads and other areas around the neighbourhood. Architecture and site design convey innovation and a particular "look and feel" for each neighbourhood, including connections between buildings and public space, house size, street widths, block size, material choice, and architectural character (City Council Red Deer, 2013). Furthermore, the loss of specified small-scale neighbourhood areas has reduced the sense of belonging and even privacy, resulting in a further loss of orientation and territoriality. In such undefined regions, most citizens remain impersonal and lack a sense of belonging, resulting in a lack of care of open areas and a loss of related pride among residents (Gulati, 2019). This situation emphasises the need of developing neighbourhoods that inspire pride, respect, and friendship, as well as ensuring service accessibility. It demonstrates the significance of liveable urban areas in the heart of the city or neighbourhood that represent the character of the community (Duhl & Sanchez, 1999).

7. *Lifelong Learning*

Education service for lifelong learning is inclusive of Kindergartens, Playgroups, Primary and Secondary Schools, Universities, Vocational and Technical Tertiary Education, University of the 3rd Age, Libraries (Davern et al., 2017). The ideal learning community might be envisioned as a continuous continuum of learning and production in which the quest of knowledge is a lifelong experience and education is closely linked to the living and working environment (Duhl & Sanchez, 1999). Education facilities are essential assets for neighbourhood facilities, as well as business establishments, health care, and transportation facilities. These facilities

should be modernised in order to handle the rising population for lifelong learning facilities (Lim et al., 2017). Educational institutions are part of the neighbourhood facilities for a liveable and healthy neighbourhood. Residents have various degrees of satisfaction with their everyday living requirements and neighbourhood contentment. They considered the spatial link between their homes and the facilities they desired to be close to (Allen et al., 2018). Some stakeholders with extensive expertise in creating and planning healthy urban environments framework, generated discussion among participants from both the public and private sectors about who was accountable for certain urban environment exposures. They identified a number of other issues for urban health policy and delivery, including the need for education and community outreach among professionals and the general public (Pineo et al., 2018). Education is one of the basic prerequisites and resources for good health. Health improvement necessitates essential necessities such as peace, housing, food, money, a stable ecology, sustainable resources, social justice, and equity (Duhl & Sanchez, 1999).

8. Sustainable Development

Sustainable development is to encourage high urban density to reduce urban sprawl, promote social equality and economic prosperity, encourage walkability, and reduce car dependency, optimise land use, and provide interconnected streets, foster local employment and production, and provide a mix of housing types to meet diverse housing needs (Asfour & Zourob, 2017). Sustainable development encompasses all metrics based on the most significant social, economic, environmental, and urban governance variables for measuring and monitoring community subjective well-being in urban environments (Musa, et al., 2019). The global economic system's sustainable growth began to be translated into worldwide worries about the loss of rainforest, pollution of rivers and seas, ocean acidification, ozone depletion, desertification, species extinctions, and, of course, climate change (Grant et al., 2017). Healthy cities have the potential to save substantial amounts of money on services, increase local productivity, and contribute to broader sustainable development goals (Pineo et al., 2018). The globalisation age has changed the demands for the supply of sustainable development in order to meet the need for better living circumstances while conserving the environment and natural resources and continuing growth (Wahi et al., 2018). The process of healthy urban planning will support organic growth, resulting in areas that promote health for all and sustainable development (Duhl & Sanchez, 1999). To promote the potential for place-based interventions to generate far-reaching and lasting changes in the health and safety of communities that face substantial disadvantage, sustainable development must be supported (Hohl et al., 2019).

Method

An online data base search was conducted utilising the science direct search engine to determine how many frameworks or models are relevant to healthy neighbourhoods that may be used in conjunction with the StaRI guideline. The databases were chosen based on the fact that social science subjects dominate the platform coverage. The rigour and quality of the literature search were ensured by using the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA). To gather only relevant models or frameworks in general, a search was conducted from 1999 to the present, with the inclusion criteria of no timeframe, global, and English language. By using the keyword healthy neighbourhood, liveable neighbourhood, and sustainable neighbourhood, there were 51 papers or journals found. All titles and abstracts were screened to get the purposes, elements and principles of

healthy neighbourhood related with the sustainable development and social well-being. After the screening process of all the relevant key words, only 28 papers were relevant and closely related in developing the conceptual framework for this paper. This paper used a snowball technique to get the appropriate papers based on thorough selection of the key words which were set.

Results and Discussion

Based on the literature review discussion earlier, there are a few concepts and models that have been used to determine the healthy neighbourhood elements. Model used by Plane and Klodawsky (2013) at Ottawa, Ontario, is a person-centred, community-based strategy for providing affordable, permanent housing. Individual renters are assisted by housing support workers in achieving their optimal quality of life, and healthy communities are encouraged to form. In addition, Yinger (2015) used econometric model at Cleveland, Ohio area which is a hedonic regression using property value as the dependent variable: it is frequently used to investigate public services and neighbourhood amenities. This method, which takes into account household heterogeneity and numerous facilities, gives estimates of the price elasticity of amenity demand straight from the hedonic model which will lead to healthy neighbourhood with fully provided neighbourhood amenities. Asfour and Zourob (2017) studied housing development in Gaza based on the neighbourhood unit concept using the social-oriented planning model. This is critical in preventing the model's total rejection or adoption on the one hand, and in guaranteeing a subjective process of reinventing rather than simply borrowing on the other to make sure the housing unit is adequate for the people.

Lim et al (2017) used structural equation modelling to identify satisfaction with neighbourhood facilities as a significant predictor of social trust in order to improve perception and satisfaction of residents with neighbourhood facilities, particularly commercial and educational facilities in Kuala Lumpur's new villages. This also will principally lead to healthy neighbourhood environment. Another structural equation modelling by Mouratidis (2020), investigated the relationships between commute satisfaction, neighbourhood contentment, housing satisfaction, and satisfaction with other aspects of life as well as subjective well-being components such as life satisfaction, emotion, and eudaimonia for reliable indicator of liveability neighbourhood at city region of Oslo, Norway.

Davern et al (2017) used multilevel modelling application which has been used over the last decades. This model has assisted in a better understanding of the significance of area level deprivation and socioeconomic status on health. Wineman et al. (2014) applied three-level models by using hierarchical linear modelling, interrelationships between built environment features and walking behaviour were researched in Detroit, Michigan, USA, to better understand the design components of healthy neighbourhoods. Both cities have effective and innovative models for place-based leadership and neighbourhood level, as well as better understanding the drivers and conditions for leadership in healthier place-making (Grant et al., 2017). The multiple analytic models is the basic lot stability intervention that was linked with the most consistent reductions in burglaries, whereas the communal land reuse intervention demonstrated more consistent decreases in assaults (Hohl et al., 2019). Binet et al. (2019) used preliminary structural equation modelling and factor analysis outputs based on resident researchers' interpretations. Multilevel models presented associations between neighbourhood deprivation and perceived neighbourhood characteristics and linear

regression models presented associations between neighbourhood deprivation and well-being measures (Mouratidis, 2020).

Based on theoretical and modelling framework discussed above, most frameworks have the element of physical, social, economic for healthy neighbourhood. All three elements are basically related with eight principles of healthy neighbourhood discussed earlier. Each of the elements is related with the sustainable development and social well-being. Each principle also has a relationship with the sustainable development and social well-being in establishment of healthy neighbourhood for the development of comprehensive conceptual framework for this paper. The conceptual framework can be summarised as in figure 1 below by adapting Duhl and Sanchez (1999) with multi-dimensional and Davern et al. (2017) social infrastructure framework.

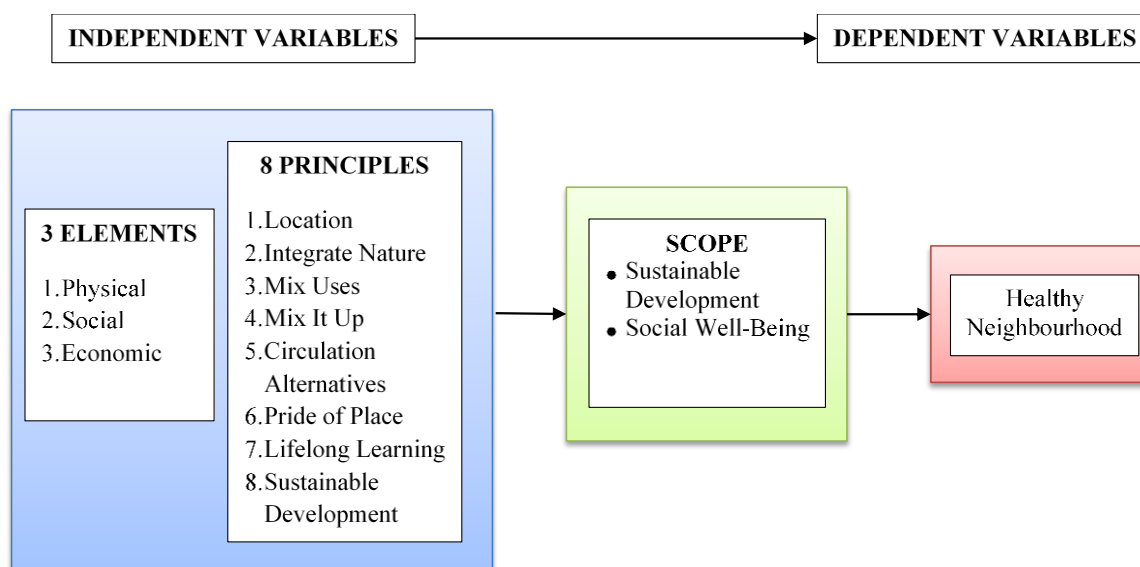


Figure 1: Comprehensive Conceptual Framework for healthy neighbourhood by adapting (Duhl & Sanchez, 1999; Davern et al., 2017)

Conclusion

The Green, sustainable, liveable, quality, new urbanism, safe and compact neighbourhoods are just a few of the modern neighbourhood concepts that have been created and implemented. Recent advances in the concept of neighbourhood have emphasised the need of establishing a healthy environment. The major finding for comprehensive healthy neighbourhood must have three main elements which are physical, social and economic aspect. Furthermore, the additional independent variables must have eight principles. The eight principles are location, integrate nature, mix uses, mix it up, circulation alternatives, pride of places, lifelong learning and sustainable development. This paper has suggested a comprehensive conceptual framework for healthy neighbourhood by entering the relevant scope on sustainable development and social well-being. To establish an ideal and comprehensive healthy neighbourhood, all three elements with eight principles discussed earlier must be applied and implemented. Generally, it is difficult to apply them all especially when it comes to land development and human development. Therefore, if a neighbourhood only adopts or adapts some of the following the 8 principles, it has succeeded towards the

development of a healthy neighbourhood. The conceptual framework will be utilised and evaluated in the future for a holistic healthy neighbourhood.

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