



Mental Health & Well-being

Considerations for the built environment



This report elaborates on the research findings and planning principles established in the 'Healthy Built Environment (HBE) Linkages Toolkit, by focusing specifically on mental health and well-being impacts of community planning and design related to the following five features:

- Neighbourhood Design
- Transportation Networks
- Natural Environments
- Food Systems
- Housing

The built environment is defined as “the human-made or modified physical surroundings in which people live, work and play. These places and spaces include our homes, communities, schools, workplaces, parks and recreation areas, business areas and transportation systems, and vary in size from large-scale urban areas to smaller rural developments”.

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- Andrew Tugwell, Director, Health Promotion and Prevention, BC Children’s Hospital
- Charito Gailling, Project Manager, Population & Public Health, BC Centre for Disease Control
- Dianne Oickle, Knowledge Translation Specialist, National Collaborating Centre for Determinants of Health
- Emily Rugel, Ph.D. Candidate, School of Population and Public Health, University of British Columbia
- Lindsay Huddlestan, Master of Community Planning student, Vancouver Island University
- Luke Sales, Director of Planning, Town of Qualicum Beach
- Mark Holland, President, Holland Planning Innovations Inc.
- Naomi Dove, Clinical Prevention Services, BC Centre for Disease Control

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* HBE Linkages Toolkit: <http://www.bccdc.ca/health-professionals/professional-resources/healthy-built-environment-linkages-toolkit>

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Mental Health and Well-Being: Considerations for the Built Environment

Mental Health and Well-being: Considerations for the Built Environment is an evidence-informed document which compiles and describes the strongest research findings that emerged from a semi-systematic literature review. Identified planning solutions are based on academic sources and informed by a panel of professional advisors representing community planning and health perspectives. Mental health and well-being implications are organized around five features of the built environment established in the Healthy Built Environment (HBE) Linkages Toolkit.

- The Neighbourhood Design section considers how population density can support, rather than undermine, mental health and addresses the importance of safety and appropriate land use mix.
- The Transportation Networks section looks at the impact of noise and pollution, and emphasizes the value of diverse commuting options that reduce congestion to improve mental health.
- The Natural Environments section speaks to well-kept green and blue spaces that are close to where people live, encourage involvement and physical activity, and are accessible to all.
- The Food Systems section describes how community gardens and healthy food retail can support a wide range of mental health and social well-being outcomes.
- The Housing section highlights the impact of housing types, stressing the importance of quality infrastructure and design.

Like the HBE Linkages Toolkit, this report calls for more a nuanced understanding of the reciprocity between health and the built environment and the importance of tailored solutions. When using this report in practice, it is helpful to keep in mind that the five features and their principles are mutually reinforcing. Desired health outcomes can often be triggered through more than one aspect of the built environment, which is useful when considering planning options in response to the unique priorities and contexts of local communities. For example, positive mental health impacts related to decreased noise exposure can be supported through transportation and/or housing related interventions.

To help highlight when additional research evidence under each feature is available in the HBE Linkages Toolkit or the “Supporting Equity through the Built Environment Fact Sheet”, cross-referencing icons are inserted throughout this report:



* HBE Linkages Toolkit: <http://www.bccdc.ca/health-professionals/professional-resources/healthy-built-environment-linkages-toolkit>

Mental Health and the Built Environment

We encourage you to also review the Social Well-Being Considerations for Practice section of the Linkages Toolkit (p60) and the Fact Sheet: Supporting Equity through the Built Environment⁴ for further context and supportive information. Planners may find the health evidence provided is helpful to build the case for applying best practices in planning to communities, developers, and City Councils.

Mental health is fundamental to thriving, resilient communities. It can improve coping skills and relationships; enhance educational achievement, employment, housing, and economic potential; reduce physical health problems; decrease healthcare and social care costs; and build social capital.³

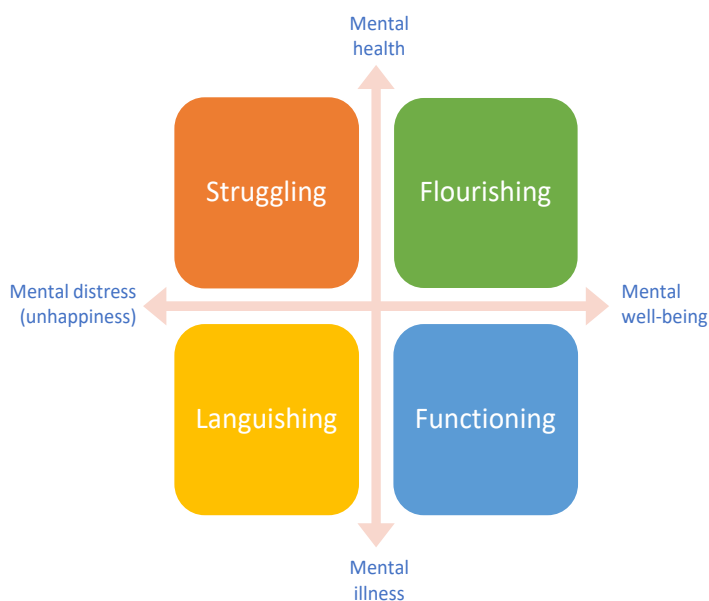
The built environment is the arena in which we live out our day-to-day activities and has a huge impact on our lifestyle choices. How we interact with our built surroundings influences not just our physical health, but our mental health as well.²

Built environments designed to promote mental health and well-being:

- prioritize complete, safe, clean, and welcoming neighbourhood design which balances population density with affordability and liveability;
- minimize traffic noise and emissions and facilitate diverse commuting options that reduce congestion;
- provide opportunities to view, access and physically engage with green and blue spaces;
- include spaces for accessible community gardens and healthy food retail; and
- offer a diverse range of high-quality and affordable housing.

Mental Health vs. Mental Well-being

Keyes' mental health framework describes the interaction of two gradations related to mental health and well-being.⁵⁻⁷ According to Keyes, people experience varying levels of emotional, psychological, social and psychosocial well-being which are distinct from the presence or absence of mental illness (specifically, symptoms of a major depressive episode) and that influence the extent to which they are "flourishing" or "languishing" in life.⁵⁻⁷ Someone who is diagnosed with a mental illness can be high "functioning," while someone without clinical mental illness may be "struggling" in life, depending on their respective levels of emotional, psychological, social and psychosocial well-being. Because this framework acknowledges an interconnection between mental health and well-being that can be influenced by population health approaches, it lends support to the role and capacity of community planning to facilitate positive mental health.⁸

Figure 1: Mental health and well-being, adapted from Keyes 2002;⁵ Westerhof & Keyes 2010⁶

Evidence provided in this document is organized around two broad categories aligned with Keyes' continuum⁵⁻⁷:

- **Mental Health** refers to the presence or absence of mental illnesses and symptoms, including mood disorders and feelings of depression, stress, or generalized anxiety.^{†9}
- **Mental Well-being** reflects psychosocial states of happiness, high self-esteem, hope, and good quality of life.^{‡10}

We also discuss:

- **Social well-being** – positive social contacts, community trust or cohesion, neighbourhood satisfaction, feelings of safety and security, and low levels of crime, aggression, or violence.
- **Mental restoration** – sustained attention, improved working memory, and feelings of peacefulness and tranquility or being 'wakefully relaxed.'
- **Cognitive, developmental, or behavioural outcomes** – dementia, ADHD symptoms, child development, and energy levels.

Mental health promotion targets the whole population and focuses on enabling individuals, communities, and societies to achieve positive mental health.¹¹ In keeping with the World Health Organization's (WHO) approach of conceptualizing mental health in positive rather than in negative terms,¹⁰ we have identified planning solutions that encourage, support, and promote positive mental health and well-being through healthy built environment initiatives.

† The Public Health Agency of Canada defines positive mental health as "the capacity of each and all of us to feel, think, act in ways that enhance our ability to enjoy life and deal with the challenges we face. It is a positive sense of emotional and spiritual well-being that respects the importance of culture, equity, social justice, interconnections and personal dignity."

‡ WHO defines mental well-being as a "dynamic state in which individuals are able to develop their potential, work productively and creatively, build strong and positive relationships with others, and contribute to their communities. The four key dimensions that influence mental well-being include emotional resources, cognitive resources, social skills, and having a meaning and purpose."

Planning and Design for Positive Mental Health and Well-being

1. Neighbourhood Design



Healthy neighbourhoods are complete, compact and connected. These neighbourhoods support optimal mental health and well-being by balancing population density and affordability with the need to support safety, cleanliness, social connection and opportunities for personal space.

Mental health and well-being research related to neighborhood design features has typically focused on negative outcomes associated with crowding, poor design or lack of maintenance. These findings must be considered in balance with research on the potential to positively influence mental health and well-being through careful neighbourhood design and renewal efforts which do not alienate or push out existing residents.^{12,13}

“Population density” and “mixed land use” can have positive or negative influences on mental health and well-being, depending on how they are achieved.

Density



Healthy population density occurs when neighbourhoods are compact, walkable, and offer easy access to services, nature, and open spaces.⁸ However, research findings are mixed due to the diversity of relevant neighbourhood and personal factors. There is some evidence that neighbourhoods which are compact, attractive, well serviced, include natural and open spaces, facilitate positive socialization and active transportation are related to positive mental health and well-being among adults and children.¹⁴⁻¹⁶

On the other hand, crowded inner-city neighbourhoods with few services can negatively impact mental health and well-being. Rapid urbanization and high household density (i.e. crowding in the home), as well as densely populated neighbourhoods characterized by poverty, lack of green space and services, or poor-quality infrastructure, are strongly linked with poorer mental health and well-being.^{12,14-18}

Overall, people living in rural communities have a lower risk of mental health problems than do urban and suburban dwellers.^{12,16,19,20} However, rural communities with declining population bases have been linked with poorer mental health outcomes. Another consideration is that higher-density areas within rural communities are associated with better mental health.¹² These findings reinforce the need to consider local context when making planning decisions that relate to density.

§ See HBE Linkages Toolkit: <http://www.bccdc.ca/health-professionals/professional-resources/healthy-built-environment-linkages-toolkit>

Land use and mix



There is some evidence that living in neighbourhoods with healthy community design are associated with social well-being and, in turn, better mental health.²¹ Spaces that facilitate positive social interaction or have high walkability, diverse food options and health and education services are associated with better mental health.^{14,16} Correspondingly, industrial and retail activity can be associated with poorer mental health.²² Although retail activity is often related to positive outcomes like walkability and social interaction, there is some evidence that suggests a relationship to poorer mental health among older men, possibly due to the negative impact of parking lots on sense of community.²³

There is strong evidence that higher levels of outdoor air pollution (ambient measures of sulphur dioxide, nitrogen dioxide, carbon monoxide, and particulate matter, primarily from traffic-related sources) are associated with poorer mental health.^{16,24,25} There is also limited evidence for a link between cognitive decline and exposure to particulate matter, though more research is needed to explain this relationship.²⁶

Maintenance and security



Safety and security (measured or perceived) of neighbourhoods are important for positive mental health and well-being. Experience with or fear of violence and property crime—as well as vandalism, graffiti, and unsafe spaces (areas with dark corners, dead ends, abandoned buildings, poor lighting, thoroughfares and ‘permeable boundaries’ that attract potentially unsafe activity, or lack of ‘eyes on the street’[¶])—are associated with poorer mental health and well-being.^{12,20,27} It is worth noting that high population density can either increase or decrease people’s sense of security, depending on whether it contributes to a sense of community or feelings of overcrowding.²⁸

There is strong evidence that mental health and well-being tend to be worse in neighbourhoods with social disorder or where buildings and infrastructure are deteriorating.^{12,15,16,20} Neighbourhood improvements or regeneration, on the other hand, are associated with improved mental health and well-being,¹³ particularly among adults.¹²

¶ The phrase “eyes on the street” was used by Jane Jacobs in her seminal 1961 book, *The Life and Death of Great American Cities*, to describe the safety brought to communities by residents who see what is going on in their neighbourhoods and act as “natural proprietors” (<https://www.citylab.com/equity/2013/07/new-way-understanding-eyes-street/6276/>)

Planning solutions that relate to neighbourhood design:

- Promote compact neighborhood designs in which services and amenities including employment, education, recreation, shopping and health care are in close proximity. (Toolkit p12)
 - Increase the availability of amenities close to housing.
 - Ensure that increases in [population] density correspond with increases in park space and other amenities. (Toolkit p12)
- Design land use, retail services, and transportation infrastructure in ways that support positive social interaction and a sense of community (rather than busy-ness and anonymity).
 - Consider integrating principles of Crime Prevention through Environmental Design (CPTED)** to optimize a sense of community in the design of places.
 - Balance the need for privacy and personal space while encouraging social interaction among neighbours.
 - Streets characterized by friendly activity, neighborliness and residents who care about the community and share common concerns (e.g. “eyes on the street”) are associated with feelings of safety and positive sense of place.
- Incorporate infrastructure and design elements which promote a sense of safety:
 - Install adequate lighting and avoid dark corners and dead ends.
 - Revitalize abandoned buildings, repair vandalism, and remove graffiti.
- Carefully consider equity implications of neighbourhood redesign and renewal efforts, and potential impacts on existing residents particularly when increasing density is rapid. Involve community members in densification and revitalization planning in order to minimize the potential that residents feel pushed out for social or economic reasons.
 - Ensure that lower-income residents, who have fewer choices about where to live, are not socially or economically excluded by new amenities and upgrades.
 - Recognize that older adults, who spend more time in and near their homes, may be distressed by rapid changes.
- Minimize sources of air pollution, particularly near areas where people live. This includes industrial point sources and coal-fired power generation, residential wood burning, and major transportation routes.
- Minimize neighbourhood noise and noise pollution associated with air and vehicle transportation, particularly near schools, housing, and parks.



** See <http://www.cpted.net/>

2. Transportation Networks



Healthy transportation networks support multiple modes of transportation with an emphasis on active and public transportation, safety, accessibility and aesthetics. Active transportation has the potential to improve mental health and well-being through increased physical activity, a pathway that is described in the following section on [Natural Environments](#) (see box).



Most of the available research linking transportation design with mental health and well-being relates to noise and congestion. The negative mental health impacts of traffic-related air pollution were described in the previous section on [Neighbourhood Design](#).

Noise



There is strong evidence that excessive noise, specifically traffic and airport noise, is associated with poorer mental health among adults and children.^{15,16,29,30} The impact of traffic noise on mental health relates in part to the chronic nature of traffic noise.¹² Research suggests that individual perceptions of noise annoyance, socioeconomic status, and the degree to which individuals have a perceived sense of control may influence noise-related mental health outcomes.^{14,15,29} It is therefore important to consider traffic and airport noise in relation to other factors.

Congestion



There is some evidence to suggest that commuter traffic congestion is associated with mental health problems.²² Workplace tardiness due to traffic congestion can further affect mental well-being.³⁰

Although we can reasonably assume that transportation infrastructure would affect noise exposure and congestion, specific research on the impacts of transportation infrastructure on mental health and well-being is lacking. However, evidence of a link between greater walkability and positive mental health is emerging, suggesting that a shift toward active transportation is a promising approach to lessen the mental health impacts of congestion.¹⁶

Planning solutions that relate to transportation networks:

- Minimize exposure to noise from airports and major roadways:
 - Site residential areas away from major highways and airports as much as possible.
 - Incorporate noise-blocking elements in residential areas and around schools.
 - Use building materials and construction design to minimize noise infiltration.
 - Consider noise mitigation features in the design of buildings, particularly schools and residences.
- Minimize congestion by facilitating diverse transportation options:
 - “Increase the availability and quality of public transit.” (Toolkit p21)
 - “Consider road pricing, high priced parking, and gas taxes.” (Toolkit p21)
 - Consider “road diets and volume diversion.” (Toolkit p21)
 - “Develop dedicated rail lines and bus lanes” to minimize congestion. (Toolkit p21)
- Design connected communities with multiple options for mixed-mode and active transportation.
 - Recognize that some people walk or cycle out of necessity rather than choice. Strive to minimize commuting stress by incorporating safe, connected active transportation (cycling and walking) routes in all neighbourhoods and particularly around schools.



3. Natural Environments



A healthy natural environment is one in which natural elements such as green and blue^{††} spaces³¹ are protected, connected, and incorporated into the built surroundings. Well-kept green and blue spaces can have significant benefits for mental health and well-being when they are close to where people live, encourage involvement and physical activity, and are accessible to all.

Although walkable green space seems to have the most impact on mental health, the overall greenness of neighbourhoods is also associated with positive mental health and well-being. People need consistent, regular exposure to nature (green and blue).^{2,32-34}

Availability of natural open or green/blue space environments



There is strong evidence that availability of natural spaces supports mental health and well-being.^{16,30,41,42} The simple presence of natural spaces is important—individuals do not necessarily have to be physically active within those natural spaces to experience mental health benefits.

Green space needs to exist close to where people live.² Both proximity to, and quantity of, green space are associated with mental health and well-being.^{12,43-45} Natural spaces that provide quiet, stillness, and solitude in nature are also important,¹⁴ especially where there is high residential density. Such spaces need to be clean, attractive, accessible, and safe in order to provide the largest benefits.

Individuals, especially children, exposed to safe green or blue space often experience positive cognitive and behavioural effects^{18,28,43,44,46} as a result of reduced stress (based on the Stress Reduction Theory³⁸) and mental fatigue (also known as the Attention Restoration Theory^{12,36,46}).

Access to green or blue space is also associated with a myriad of social well-being benefits,^{41,47} likely due to opportunities for positive social contact that in turn enhances residents' sense of safety, increases trust, and supports overall community cohesion.^{36,41,48}

Pathways Linking Green Space to Mental Health


There is a large body of evidence dedicated to understanding how green space might improve mental health.^{2,35-37} The main pathways are that green space:

- Promotes exercise, which is associated with multiple health impacts such as improved mood, reduced stress, improved sleep, and feelings of purpose and accomplishment.
- Provides a setting for social interaction and building social networks.
- Creates distance from everyday demands and allows opportunity for appreciation of beauty and space [Stress Reduction Theory].³⁸
- Facilitates attention without concentration [Attention Restoration Theory].³⁹
- Facilitates humans' biological need to be in contact with other species [Biophilia Theory].⁴⁰
- Reduces harmful exposures to air pollution, noise, and heat.

†† Complementing research on healthy green space, blue space is defined as: 'health-enabling places and spaces, where water is at the centre of a range of environments with identifiable potential for the promotion of human well-being'.

People who live farther from green space experience poorer mental health and well-being.^{19,22} Absence of green space is linked with higher temperatures and lower air quality, which in turn are linked to poorer mental health and behavioural outcomes.²⁵

Opportunity for social or physical engagement with green space

 There is strong evidence of a positive relationship between social and/or physical engagement with green space and improved mental health and well-being.^{14,36,41,44,45,49-53} This relationship is only partially explained by the positive effects of physical activity. When opportunities for social participation are available, involvement with others and engagement with the community can also lead to improved mental and social well-being.^{14,54} Gardening in particular contributes to mental health and well-being as well as to mental restoration and positive cognitive outcomes.⁴⁵

Viewing natural scenes (green or blue)

The benefits of visual encounters with natural environments are only partly related to their aesthetic properties. Proximity, exposure, and visibility of both blue and green natural scenes may also support mental health and well-being and social well-being through increased neighbourhood satisfaction.^{45,55}

Presence of vegetation near the home

There is some evidence that nearby vegetation can buffer life stresses in adults and children and may be associated with better mental health and well-being. Nearness to vegetation is also linked to certain cognitive and behavioural benefits, which may be a function of the restorative effects of greenery.⁵⁴

Planning solutions that relate to natural environments:

- Ensure people have consistent, regular exposure to nature in their daily routines.
 - “Incorporate and expand natural elements across the landscape as much as possible.” (Toolkit p34):
 - Insert pocket parks by using small parcels of land or adding such elements into multi-unit residential project designs.
 - Re-allocate some existing street areas to be used as greenways or park-like environments.
 - Include more natural elements such as landscaped traffic circles or green roofs and walls.
 - “Increase the number of trees, vegetation, [blue spaces] and landscape architecture across the built environment including in developments, neighbourhoods and transit hubs.” (Toolkit p35)
 - Incorporate features such as street trees and flowers into commuting routes.
- Provide easy and safe access to natural green and blue environments, particularly ones that encourage involvement with nature and provide opportunities for people to be physically active.
 - “Ensure communal green and blue spaces are designed for the needs of all ages, physical abilities and cultural groups, with features such as adaptive playground equipment, wheelchair-accessible paths, and places for individuals or groups to comfortably sit and talk.” (Toolkit p35)
- Design green spaces that provide and encourage both social and physical involvement:
 - Create dedicated spaces for exercise such as football pitches, tennis courts, running routes, walking loops, trails, or outdoor gyms in parks.
 - Create “meetings spaces in parks, gardens and other communal areas, including private and semi-private spaces.” (Toolkit p61)
 - “Keep parks safe and well-maintained and include attractive recreational facilities.” (Toolkit p35 & 61)
- Provide opportunities for people to view natural scenes from their homes and workplaces:
 - Provide views of nature from home and office windows.
 - Make gardens available for lunches and breaks.
 - Provide opportunities for people to easily access vegetation, including floral or non-edible plants, near their homes.
 - In private and communal settings such as hospitals and care homes, place vegetation inside lobbies, yards, and common areas, or create shared gardens. (The mental health benefits of community gardens are discussed in the [Food Systems](#) section.)



4. Food Systems



Healthy food systems support accessibility and affordability of healthy foods, as well as opportunities to socialize around food, through land use planning and design. The links between mental health and community food security have not been fully explored here, but this is an emerging and rapidly growing area of research.

Community gardens

There is some evidence that access to community gardens is related to positive mental health and well-being. Enhanced social well-being and cognitive and behavioural benefits have been observed among community garden members, particularly older adults. These effects may be related to resilience and ability to buffer life stresses, as well as development of social networks.⁵⁴

Food retail

There is limited evidence for a relationship between access to healthy food retail options and mental health.¹⁶ In a few studies, lack of access to Indigenous foodlands and increased reliance on unhealthy food retail was associated with poorer mental health and well-being, particularly among male community members.^{56,57}

Planning solutions that relate to food systems:

- Provide opportunities for people to access private and/or community gardens near their homes by incorporating garden space into private and public landscape design and parks planning:
 - Make yard space, planters, balconies, and window boxes available in private settings.
 - Incorporate community and shared gardens in communal environments such as hospitals and care homes.
 - Support these activities by including amenities such as “water sources and tool storage sheds.” (Toolkit p44)
 - Ensure garden spaces are clean, safe, and accessible to all so that community-building benefits are not in jeopardy due to exclusion or discriminatory tendencies that can occur where garden access is limited by restrictive devices such as fences and locks or if adaptive options are not available.^{##}
- Work with Indigenous communities to help preserve traditional foodlands and provide opportunities for access to traditional foods and food collection methods.
- Incentivize food retail services that offer fresher, healthier food options.

^{##} Working in a yard or garden bed requires moving around, bending over and doing repetitive tasks, which can be a challenge for older individuals, people who are disabled, or individuals with injuries. Adaptive gardening refers to the practice of “adapting” gardening tasks so they can be performed by anyone, even people with limited mobility. Adaptive gardening combines thoughtfully designed gardens or raised garden beds with tools that make it easier for people with a limited range of motion to perform necessary tasks.

- Consider the need to have a range of healthy food retail options (convenience stores, mid- to large-sized grocery stores, eat-in and take out restaurants) close to home as part of land use planning decisions.
- Explore opportunities to establish cafes and coffee shops that serve as hubs for congregation and social interaction.



5. Housing



Healthy communities include a range of good quality and affordable housing options. Both housing type and quality can influence mental health and well-being.

Although the design of indoor spaces is important to consider, this report is focused on the external environment. Thermal comfort and indoor space are discussed only in relation to the design and infrastructure of housing developments.

Housing mix



There is some evidence to suggest that living in high-rises, particularly on the higher floors, is associated with poorer mental health. These effects appear to be more prevalent among low-income residents and may also relate to noise, crowding, restricted outdoor play areas for children, limited opportunities for social interaction, or lack of influence over one's residential domain.^{15,17,22}

Housing quality



Poor quality construction can result in decreased thermal comfort and efficiency, dampness, drafts, mold, and disrepair, which are all associated with poorer mental health.^{12,16,20,21} Evidence suggests a link between housing quality and social well-being, which are connected via the ability to use one's home for social and family interactions.¹³

Initiatives to improve housing in tandem with neighbourhood revitalization efforts have shown mental health benefits. Neighbourhood regeneration efforts (including housing repairs, school and park improvements, and removing graffiti or signs of vandalism) have been associated with improved mental well-being.^{12,13} Moreover, emerging evidence suggests that high quality neighbourhood design may moderate the negative mental health impacts of living in poor quality housing.⁵⁸ Low-income housing is more likely to be crowded, cold, in disrepair, or have limited outdoor space—conditions which are also associated with poorer mental health and well-being.^{13,15,20,58} It is therefore important to involve residents in neighbourhood redevelopment in order to reduce the risk that they will be pushed out of the neighbourhood by redevelopment that leads to gentrification.

Planning solutions that relate to housing:

- Support a diversity of housing unit types, sizes, and costs to accommodate a broad range of accessibility and age-friendly features, preferences, and family structures (including opportunities to age in place with family).
 - Support secondary housing suites and alternative ownership options (e.g., co-housing, co-operatives) as part of efforts to increase housing affordability, encourage social capital, and diversify the social profile of neighbourhoods.
 - Include improvements to public housing developments as part of neighbourhood revitalization efforts.
- Strive to create more-affordable energy efficiency features to help people live more comfortably in their homes and make full use of their living space for social interaction.
 - Ensure appropriate ventilation and building details to minimize draughts and mold. Offer incentives, such as grants or rebates for housing maintenance, upkeep, and graffiti removal.
- Balance the affordability benefits of densification with opportunities for social interaction, spaces for play, access to green space, and noise control.
 - Incorporate common areas that encourage social interaction and provide opportunities for children to play.
 - Design hallways and access routes in high-rise buildings to foster a sense of personal security and space.
 - Use principles of crime prevention through environmental design (CPTED)^{§§} to inform the decisions on the design of places in ways that optimize safety while meeting other programmatic and design objectives.



§§ See <http://www.cpted.net/>

Conclusion

Mental Health and Wellbeing: considerations for the built environment identifies planning solutions across five features of the built environment that are supported by mental health research. These planning solutions are not intended to be prescriptive, but are offered as additional considerations for health professionals, design professionals, and local governments who are striving to create built environments that enable positive mental health and well-being.

The planning solutions described in this resource should not be pursued in isolation of each other or without considering the unique context of particular communities such as local demographics, geography, history, health priorities and community preferences. It is important to strike a balance where two concepts contradict or compete. A thoughtful, comprehensive plan of action can help ensure that the most positive mental health and well-being outcomes are achieved while minimizing the likelihood of unintended negative consequences.

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