

DESIGNING CITIES FOR MENTAL WELLBEING

A universal design tool for visually assessing the urban landscape in relation to mental health in cities



Introduction

Mental health has for a long time had a lower priority than physical health in many countries (1). In recent years, however, there has been an increasing understanding that mental health is also important: according to the World Health Organization, there is “no health without mental health” (2).

Urban mental health is important, as there is evidence that people living in cities have a higher risk of various mental health problems and stress, compared to people living outside cities (4) (5). One aspect of it is the cityscape itself and its effect on the wellbeing of citizens. It is therefore important for local authorities to be able to assess the impact of the urban landscape on mental health and to be able to identify areas in which improvements could be made.

The aim of this briefing paper is to sketch out a simple transferable method by which city officials can do a pilot study of how comfortable their city is regarding urban mental health, as a complement to the earlier methodology. This method intends to be an eye-opener for policymakers. It is easy to undertake and understand and focus on a few important points. After doing this initial assessment, further analysis of their town/cities can be initiated. This initial visual registration of the city space can then be complemented with in-depth observations of the spaces, working with experts, focus groups or local activists (4).

The paper begins by outlining the aspects of the cityscape that are studied and the methodology of the city walk, then uses a prominent case study from Denmark as an example to illustrate how it can be applied in practice. The lessons learned from the case study, and how they can be generalized, are assessed in a final discussion.

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Introduction	2
Methodology	4
Elements supporting mental health	4
Mapping	5
Case study - Copenhagen	6
Walk part 1	7
Walk part 2	8
Walk part 3	9
Discussion	10
Potential for improvement	11
Conclusion	12
References	14

Methodology

The objective was to develop a simple tool based on universal design, which municipal officials can use as a quick overview of factors promoting mental health in an area, when looking only at the physical environment. It was chosen to focus only on the physical elements, which could be observed when walking through the area, and creating a map of these elements.

Elements supporting mental health:

The 5 following physical elements were identified as well-established promoters for mental health.

Green spaces

The existence of natural environments such as green plants/greenery has a beneficial effect on our mental health. Green spaces can be any green element from large forests to singular plant elements in planters or on facades. (4) (7) (8) (9) (10) (11).

Blue spaces

Water is an important element. It has a calming and contemplative effect on us, beneficial for mental health. Blue spaces can be lakes, oceans, shore fronts, fountains or any other water features (12) (13) (14).

Social spaces

Social interaction is important for our mental health. Therefore, it is important for mental health in the city that the city space provides a framework which promotes social interaction (15).

Quiet spaces/spaces for retreat

Sometime noise and visual overload can be a problem in the city. To avoid mental overload, it is important to have quiet spaces or spaces for retreating. (16) (17).

Landmarks for orientation,

The need to use landmarks for guidance is especially important for people who do not know the area well. Landmarks are also important for people with certain types of mental functional variation. (18) (19) (20).

Mapping

Mapping was chosen because a map gives a visual understanding. The process itself of walking through a street and observing certain elements, furthermore, gives the observer an intimate understanding that the map alone does not convey. (21) (18).

The location of the above-mentioned indicators was plotted on a map of the study area. On this map it is possible to see whether certain parts of the study area are lacking in any of the studied elements – or whether certain areas are well supplied with mental wellness-prompters. This allows us to identify possibilities for improvement in the studied area.

Case study – Copenhagen

For the case study, the city of Copenhagen was chosen as an example. It is the capital of Denmark and most Danes come to Copenhagen once in a while (22) (23). Because it is a place that most of the population use to a greater or lesser extent, it is important that the city center be accessible and inclusive for all.

Case study area

The central pedestrianized area of Copenhagen was chosen, as this is the most frequented pedestrianized area in the country (24). In figure 1 is indicated the path of our walk and how it is divided into three parts for the purpose of this analysis.

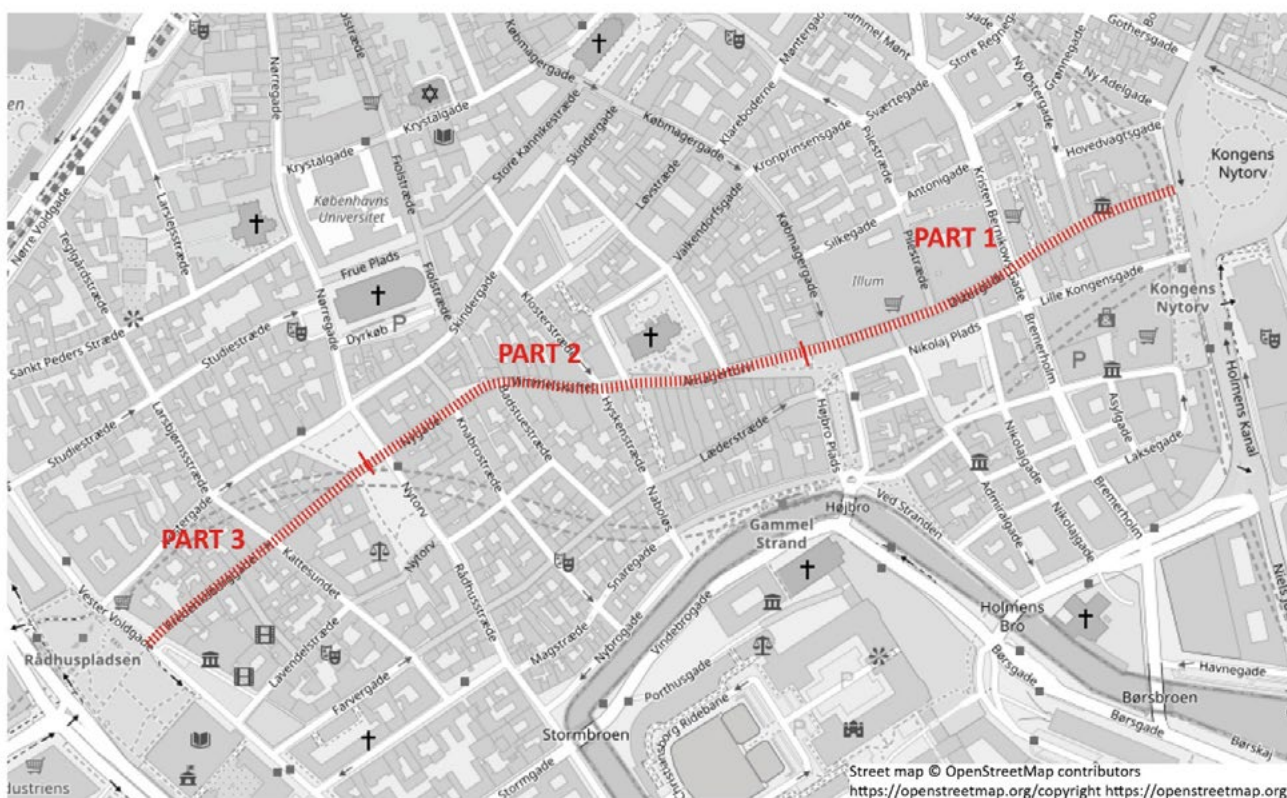


Figure 1

Walk part 1:

Green spaces (see green dots on map). There were not many green spaces along the walk. Most of the green spaces observed consisted of planters at the intersections (25).

Blue spaces (blue dots). In this part of the walk there was one water-feature: a fountain in the Amagertorv square.

Social spaces (pink dots). It was observed that the social spaces in the street were generally commercial spaces in the form of cafés/restaurants with tables in the street.

Quiet spaces/spaces for retreat (purple dots). This part of the street had several quiet streets or shop galleries, which could be easily accessed from the street to provide a quiet space away from the buzz of the street.

Landmarks for orientation. Orientation along this street is easy at the time, because there was a long yellow line down the middle of the street, creating a two-way system for pedestrians.

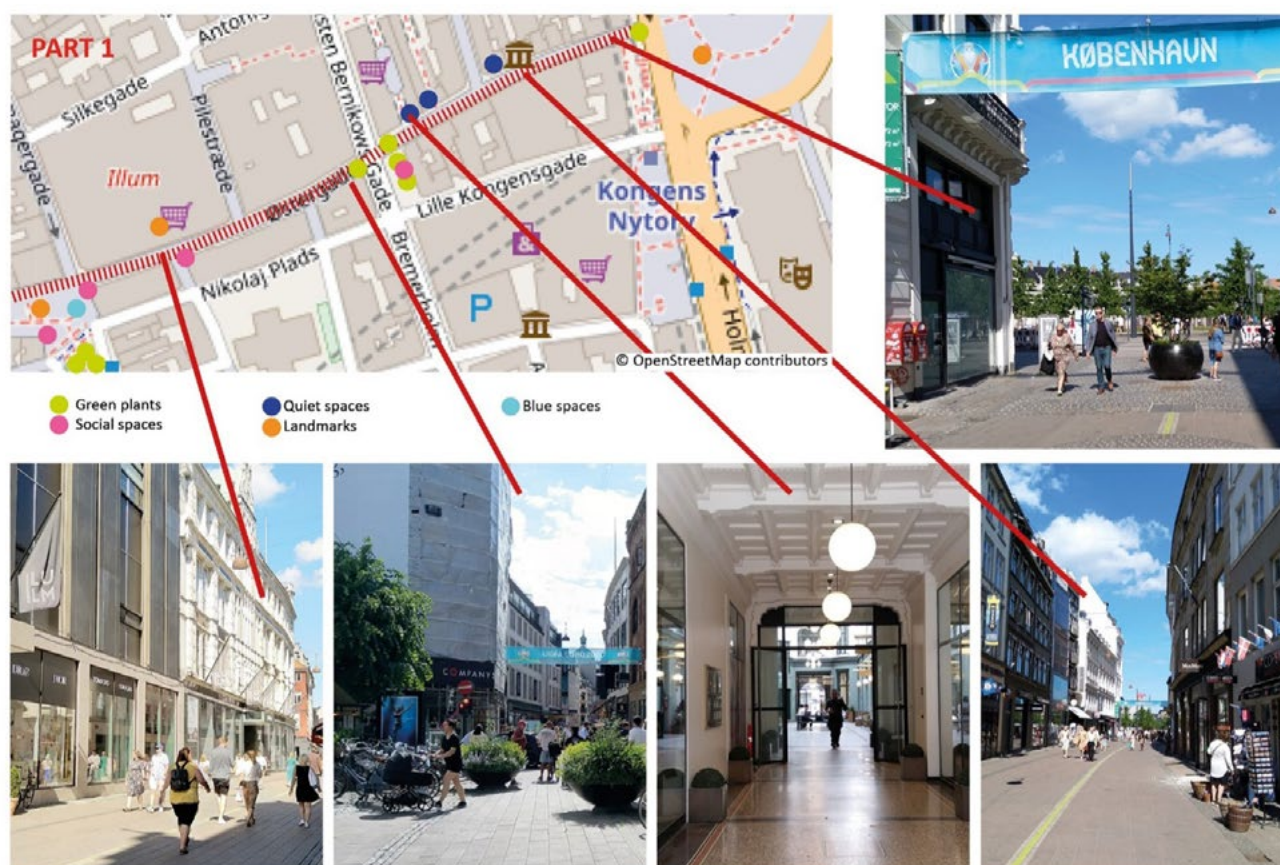


Figure 2

Walk part 2:

Green spaces (green dots) were mainly observed at the squares. Especially a square in front of a church was very abundant with large trees. But other kinds of greenery were also observed, such as leaf-decorations on a shop front.

Blue spaces (blue dots). There is one big fountain, which is a central part of the large square.

Social spaces (pink dots). In this part of the street there was quite a lot of free seating, as there were benches in each square. In the street itself all the social spaces were paying-spaces, such as cafes or take-away shops.

Quiet spaces/spaces for retreat (purple dots). This part of the street had several quiet streets or shop galleries, which could be easily accessed from the street to provide a quiet space away from the buzz of the street.

Landmarks for orientation (orange dots). In this part of the walk there is a church and two significant squares which makes way-finding relatively easy.



Figure 3

Walk part 3:

Green spaces (green dots). This part of the street is not as green as the previous part. The only green elements observed were trees in the squares.

Blue spaces (blue dots). There were no water features in this part of the walk.

Social spaces (pink dots). Social spaces in this part of the walk consisted mainly of various take-away restaurants with seating attached and a few cafes.

Quiet spaces/spaces for retreat (purple dots). In this end of the street there were no quiet places to retreat into.

Landmarks for orientation (orange dots). The main landmarks are the two squares at either end of this part of the street. Along the street itself there were no significant landmarks.

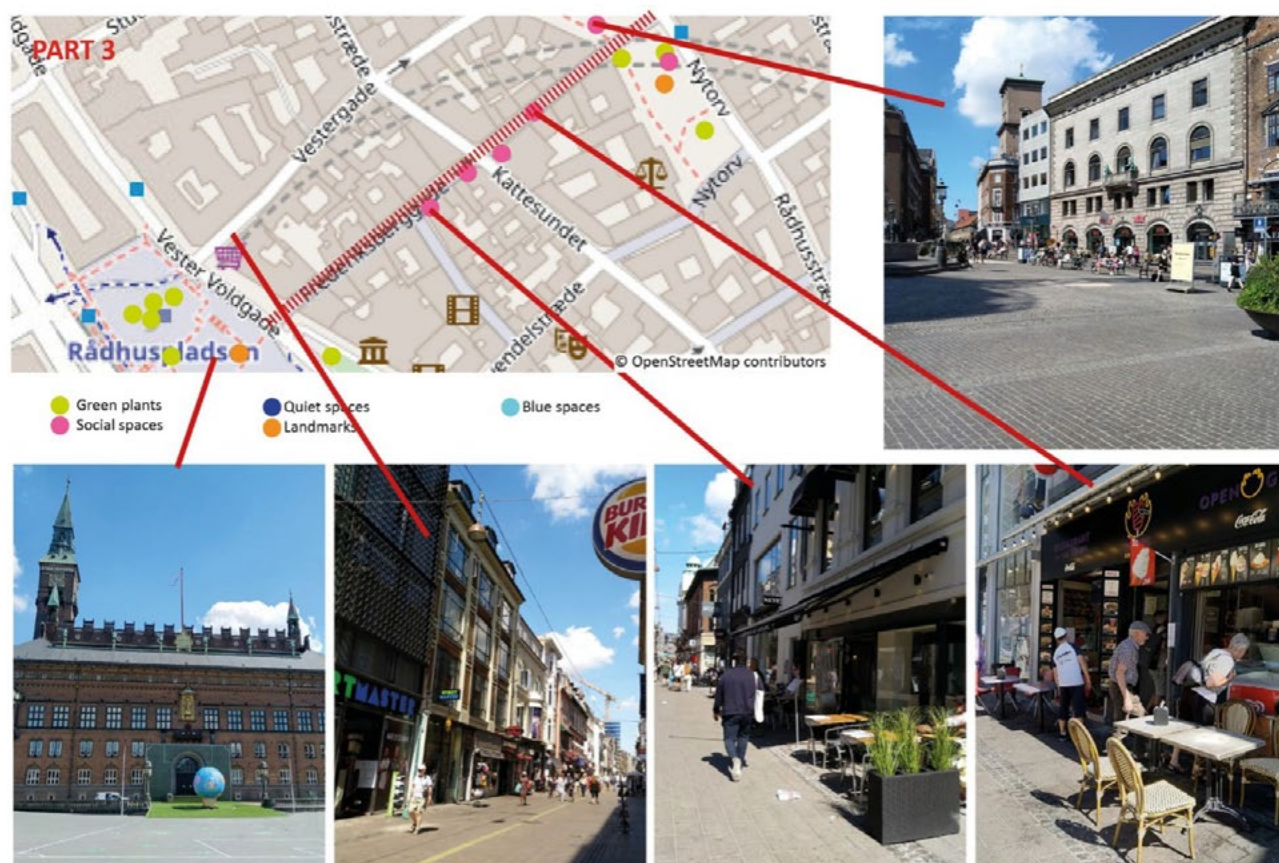


Figure 4

Discussion

The indicators used in the method are only some of the factors which affect mental health. There are of course many other factors which influence mental wellbeing, such as financial status, noise, safety, gender and racial equity, and access to public services such as health services, education etc. (26). Many of these factors cannot be estimated through direct observation but must be studied through other means, e.g., in statistics or surveys. The aim of the current study was to outline a relatively simple method by which the public streetscape be assessed for its effects on mental health, as a complement to other studies of the underlying structural factors that contribute to mental wellbeing.

In the case of green spaces, there is a difference between the quality of a quiet space fully covered with green plants and a single planter. The climate context of the city/town is also important. A blue space with a water feature creates a more comfortable micro-environment in a hot-climate, while in a cold climate, the cold-water spray from a fountain carried on a breeze can be experienced as uncomfortable. When looking at social spaces, it becomes even more difficult to assess the real social promotion impact. If it is a commercial space access will be determined by who can afford to sit there. But commercial spaces can also be felt as protected spaces where certain persons would be more likely to socialize.

Returning to the case study of Copenhagen, it can be concluded that there are mental health promoters present, but that the street could be further improved.

Potential for improvement:

Green spaces. By adding more greenery along the streets, e.g., as parts of shopfronts or cafés, a greener environment could be created. This would not only improve the visual appeal of the street, but could also contribute to improving the air quality (27), enhancing the acoustic qualities of the street (28) and making the street more inclusive for the elderly (29). Green spaces can also help relieve stress (30), which is a major issue in cities (31).

Blue spaces. It was observed that water features are only present in squares. There are canal and harbor spaces very close to the pedestrianized area, so whether adding more water features to the main pedestrianized street would improve the mental health of the streetscape would require further analysis.

Social spaces. There is a reasonable spread of social spaces along the street, but further analysis is needed in order to assess whether the spread is sufficient to promote social mental health in the area. Increasing the number of places to sit down is important for persons with reduced mobility for whom good facilities for sitting down and taking a break is very important (29).

Quiet spaces/spaces for retreat. There is a good spread of quiet spaces along most of the area, but the area could be improved by adding more quiet spaces in Part 3 of the walk. The quiet spaces could also benefit from being signposted, as most of them are somewhat hidden. Quiet spaces are of particular importance for persons with mental functional variation and older persons (16) (32).

Landmarks for orientation Wayfinding along the street is very easy, due to the yellow-line dividing the street (a legacy of the Covid epidemic). It could be considered whether a similar feature should be permanently retained or introduced in other parts of the city.

Conclusion

By directly observing city spaces by looking for promoters of mental health, it is possible to gain insight into how comfortable our cities are for persons with mental functional variation. The method indicated here is intended as a help for city officials or other interested parties to gain insight into a town environment and to serve as an eye-opener for seeing elements which promote mental health in a town. As such, it can be a useful first step or complement to more comprehensive studies.

Our case study of Copenhagen gave us insight into which of the promoters of mental health are present in the main pedestrianized area of Copenhagen. It was observed that generally there is a good presence of promoting elements, but that there is also room for improvement. When analyzing how comfortable our cities are for persons with mental functional variation, it is important to remember that what is good for persons affected by mental functional variation is generally also good for everyone else. Also, our mental health conditions change over life. If we are experiencing life difficulties, we need a more supportive mental environment and as we grow older many persons experience one or other form of dementia. As such, promoting mental health in our cities is of crucial importance to attain a sustainable society.

Acknowledgement

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References

1. Time to make neglected area of mental health ‘a global priority’, urges Guterres. UN News. [Online] October 10, 2022 . <https://news.un.org/en/story/2022/10/1129377>
2. WHO. *WHO Comprehensive mental health action plan 2013–2030*. Geneva : World Health Organization, 2021.
3. WHO. <https://www.euro.who.int/>. [Online] <https://www.euro.who.int/en/health-topics/noncommunicable-diseases/mental-health/publications/2016/fact-sheets-on-sustainable-development-goals-sdgs-health-targets-mental-health-sdg-target-3.4>.
4. Clark, Charlotte, et al. A systematic review of the evidence on the effect of the built and physical environment on mental health. *Journal of public mental health*. 2007, Vol. 6, (2).
5. Pauleit, Stephan, Kellmann, Michael and Beckmann, Jürgen. *Creating urban and workplace environments for recovery and well-being*. Oxon : Routledge, 2025.
6. Faurskov, Anne, et al. Engagement of people with functional variation in the urban planning processes in Russia and Sweden. *ICLD policy briefs*. 2019.
7. Bowler, Diana E , et al. A systematic review of evidence for the added benefits to health of exposure to natural environments. *BMC Public Health*. 2010, Vol. 10, 456.
8. Ojalaa, Ann, et al. Restorative effects of urban green environments and the role of urban-nature orientedness and noise sensitivity: A field experiment. *Health and Place*. 2019, Vol. 55, pp. 59–70.
9. Manohar, Lakshmi and Kurukkanari, Chithra . Emotive cities: understanding human perception of urban spaces – a pilot study. *Frontiers in built environment*. 2026.
10. Delgado-Serrano, María Mar, et al. Perception of green spaces’ role in enhancing mental health and mental. *Land Use Policy*. 2025, Vol. 139, 107087.
11. Beute, F. , et al. How do different types and characteristics of green space impact mental health? A scoping review. *People and Nature*. 2023, Vol. 5, pp. 1839–1876.
12. Völker, Sebastian and Kistemann, Thomas. Developing the urban blue: Comparative health responses to blue and green urban open spacens in Germany. *Health & Place*. 2015, Vol. 35, pp. 196–205.
13. Foley, Ronan. Swimming in Ireland: Immersions in therapeutic blue space. *Health & Place*. 2015, Vol. 35, pp. 218–225.
14. Wang, Yuan , Jiang, Sabrina Yanan and Li, Yu . The protective role of blue space in mental health outcomes: A systematic review. *Cities*. 2026, Vol. 172, 106867.
15. urbandesignmentalhealth. <https://www.urbandesignmentalhealth.com>. [Online] [Cited:] https://www.urbandesignmentalhealth.com/uploads/1/1/4/0/1140302/urban_design_and_mental_health_policy_brief.pdf.
16. Booi, Hester and van den Berg, Frits . Quiet areas and the need for quietness in Amsterdam. *Int. J. Environ. Res. Public Health*. 2012, Vol. 9, pp. 1030-1050.
17. Yu, Hang. Landscapes of silence: designing quiet art spaces for inner peace in urban chaos. *Arts & Health*. 2025, DOI: 10.1080/17533015.2025.2593865.
18. Lynch, Kevin. *The image of the City*. Cambridge, Mass. : MIT Press, 1960.
19. O’Malley, Mary , Innes, Anthea and Wiener, Jan M. (Dis)orientation and design preferences within an unfamiliar care environment: A content analysis of older adults’ qualitative reports after route learning. *Environment and Behavior*. 2022, Vol. 54(1), pp. 116–142.
20. Biglieri, Samantha and Dean, Jennifer. Fostering mobility for people living with dementia in suburban neighborhoods through land use, urban design and wayfinding. *Journal of Planning Education and Research*. 2024, Vol. 44(3), pp. 1704-1718.
21. Schoonderbeek, Marc . A theory of “Design by research”; Mapping experimentation in architecture and architectural design. *Architectural Design Theory*. 1, 2017, pp. 63-79.
22. [Online] <https://www.visitdenmark.dk/sites/visitdenmark.com/files/2019-05/Storbyturister%20i%20K%C3%B8benhavn%202018%20updated.pdf>.
23. [Online] https://www.kk.dk/sites/default/files/status_paa_koebenhavn_2020.pdf.
24. [Online] <https://www.kbh.dk/nyheder/stroegtet-faar-flot-placering-en-af-de-meste-besoegte-handelsgader-i-europa>.
25. [Online] <https://www.kbh.dk/nyheder/tersikring-i-koebenhavn-forskoennes-52-millioner-potter-med-traer-skal-erstatte>.
26. Roe, Jenny and McCay, Layla. *Restorative cities*. London : Bloomsbury visual arts, 2021.

References

27. Diener, Arnt and Mudu, Pierpaolo. How can vegetation protect us from air pollution? A critical review on green space's mitigation abilities for air-borne particles from a public health perspective - with implications for urban planning. *Science of the Total Environment*. 2021, 796.
28. Fan , Yang, et al. The investigation of noise attenuation by plants and the corresponding noise-reducing spectrum. *Journal of Environmental Health*. 2010, Vol. 72, 8.
29. WHO. *Global age-friendly cities: A Guide*. Geneva : World Health Organization, 2007.
30. Grahna, Patrik and Stigsdotter, Ulrika K. The relation between perceived sensory dimensions of urban green space and stress restoration. *Landscape and Urban Planning*. 2010, Vol. 94, pp. 264–275.
31. Adil, Mazda. *Stress and the City: Why Cities Make Us Ill. And Why They Are Still Good for Us*. München : C. Bertelsmann, 2017.
32. *The role of the urban landscape in restoring mental health in Sheffield, UK: service user perspectives*. Evered, Elizabeth . 6, 2016, Landscape Research, Vol. 41, pp. 678-694.
33. [Online] <https://www.un.org/development/desa/disabilities/convention-on-the-rights-of-persons-with-disabilities.html>.

Further reading:

[How urban design can impact mental health - Centre for Urban Design and Mental Health](http://urbandesignmentalhealth.com)
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