

Which spatial characteristics of urban green spaces are beneficial to mental health?

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Reducing harm

Restoring capacities

Building capacities



Reducing harm: air, noise, heat, and light pollution



Restoring capacities



Building capacities: socialisation, exercise.



Nature-based psychotherapies



Place and community attachment, and the historical narrative



Unkempt and un-invigilated

Approach One: Individual up

The spatial characteristics of benefit are those which best facilitate the mechanisms of benefit **1. Reducing Harm: Air, noise, light, heat pollution** Zoning, barrier methods, green walls,

2. Restoring capacities: Stress reduction, attention restoration, psychotherapeutic Qualities of space, natural "untouched" spaces, ensuring safety, psychotherapeutic infrastructure

3. Building capacities: Socialisation, exercise Picnic sites, sports facilities, running tracks, community gardens

4. Esoteric/holistic aspects: Place making,

Community control of their green spaces, place-creating spaces, monuments, preserve historical POIs.



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Urban green space as a public mental health intervention







Available

Does the uGS facilitate the mechanism of benefit? Intentional: Motivation to use the space?

Accessible

Incidental: On the daily commute pattern?

Indirect: Viewable?

Acceptable

Are there barriers to the uses and experiences of uGS?







Nuuk, Greenland



Male, Maldives

Arad, Israel

2000

100 M 100



"No single park, no matter how large and how well designed, would provide the citizens with all the beneficial influences of nature."

- Henry Law Olmsted.

Approach Two: Population down

Review which spatial characteristics have evidenced mental health benefit; do what works

Indirect

Incidental

Intentional

Inclusion criteria

Concerns mental health and a green/ natural aspect of built environment.

Psychiatric outcome measure validated in population it was used in.

Measures exposure at the population level.

Excluded studies of children

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Study characteristics

- 1. Overwhelmingly cross-sectional design
- 2. European and Anglosphere countries
- 3. Massive range in effect sizes
- 4. Distance, density, size and quality

<u>Distance</u>



<u>Density</u>



average NDVI of October 2003





Al-Azar Park, Cairo.

And in case of the local states of the local s

Central Park, New York, NY.



British 'Pocket Parks'











(South et al., 2018)

Greening of small scale lots fosters incidental exposure, and subsequent mental health benefit

A Greening intervention



Before

During

After

B Cleanup intervention



Before

During

After

1. Aspects from both bottom-up and top-down approaches to urban design are needed.

2. Green spaces benefit mental health through a wide range of mechanisms. A correspondingly wide range of spatial characteristics are needed to facilitate these behaviours.

3. The spatial characteristics of mental health benefit are dependant on the geographic/ecological, and social, cultural variations in beneficial mechanisms.

4. Some urban green space is better than no urban green space, for mental health outcomes.

5. A positive perception of one's environment may be as important as objective characteristics.

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