

BIOPHILIA MENTAL HEALTH Research Brief

PARTNERSHIP INITIATIVE
INTEGRATED DESIGN LAB
at the Center for Integrated Design



Figure 1:
Research is growing that supports the positive mental-health effects of exposure to nature for individuals working and living in cities. Ecotherapy is gaining traction as a field of research and is being considered by governments, health professionals, and labor forces around the world.

Source: https://www.vice.com/en_us/article/ppveky/why-is-nature-actually-good-for-your-mental-health

Keywords:

Nature; healing; biophilia; ecotherapy; mental health; self-esteem; dementia; children; mood; cognitive function; therapeutic horticulture.

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BIOPHILIA + MENTAL HEALTH SUMMARY

Mental health is a balance of self-satisfaction, capability and competence, achieving potential, independence, and coping skills. Ability to contribute to society and experience high quality of life are its metrics. The WHO has listed mental health disorders as 13% of global burden disease. Biophilic ecotherapy offers multiscale relief by connection people to their ecosystems and providing them a place to belong among non-human species, or escape into nature.

Connection to nature can increase well-being, social and temporal connection, self-esteem, and mood.

I. Social Inclusion

Many people with mental and physical health considerations face social exclusion due to unequal access to opportunities, including paid employment, housing, education, and leisure. Low-income populations are at particular risk of exclusion. Key to enabling social inclusion is the connection between individuals and their context, to develop personal and collective meaning. STH is an intuitive way to build an inclusive space. (Diamant 2010)

Equity

Social inclusion and connection depends on four major factors: (Wilcock 2006)

- Doing: engaging in a meaningful activity
- Being: having self-regard and esteem
- Becoming: building skills and self-efficacy
- Belonging: having acceptance and interpersonal connection

Conditions for Belonging

These factors are integral to Social and Therapeutic Horticulture (STH) framework for the individual. For that individual to be successfully included, there are a few conditions that must be created: Affirmation, choice, private and communal space, physical and emotional safety. (Diamant 2010)

- Affirmation: Gardening provides instant feedback and a sense of achievement (doing, becoming). Gardening as a group generates affirmation on multiple levels. The individual receives affirmation from the group and the wider community, who are able to share the experience (belonging).
- Choice and self-determination: Flexibility, adaptation. Activities and tools tailored to the ability and needs of the individual, and tasks they can be carried out individually or collaboratively (becoming).
- Private and community space: allows solitude (being), but also allows the opportunity for social interaction (belonging).
- Physically and emotionally safety: Boundaries reinforce a sense of community within in the wider context. Private spaces discussed potentially enhance this safety (belonging).

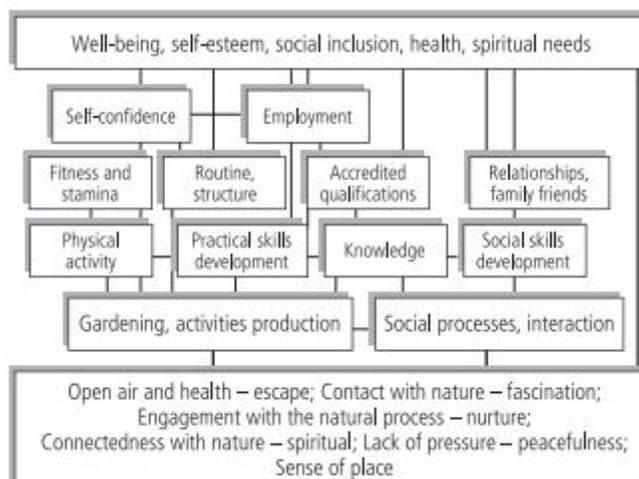


Figure 2: Activities, processes, and outcomes in STH (Diamant 2010)

BIOPHILIA

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Research Brief



II. Ecotherapy

Children

Studies dating back to the 1890s show that access to nature teaches children empathy, engenders a stewardship of nature, increases self-esteem, buffers them against stress, and makes them healthier adults. (Chalquist 2009)

Extensive benefits come to child mental health from connection to animals: inpatient psychiatric children and adolescents show increased vitality, extraversion, and alertness; animals help highly aggressive children, emotionally disturbed, and handicapped children calm down and cooperate more while showing less antagonism and greater social competence; more social interactions and less physiological stress. (Chalquist 2009)



Figure 3: Integrated animal- and plant-assisted ecotherapy programs designed for preschool children with speech disturbances resulted in better positive emotional background; reduced anxiety; higher intensity of cerebrum blood supply; increased observation keenness, self-reliance, and creativity; improved communication skills; improved skills of collective work; vocabulary enrichment; increased speech structure complexity (Kalashnikova 2016)

(A) in the training greenhouse, (B) a plant-based lesson, (C) in the reindeer pen, (D) a horse-riding lesson

Dementia

Sufferers of dementia are often challenged by agitation, aggression, depression, delusions, wandering, sleep disturbance, and hallucinations. Animal-assisted therapy has been used successfully with special care unit (SCU) Alzheimer's patients whose agitation and aggression decreased when a dog came visiting them. Fish in an aquarium are sufficient to produce better nutritional habits and weight management, increased alertness and social interaction, and decreased lethargy and agitation. (Chalquist 2009)

Aromatherapy is a prolific complementary treatment for agitation, with significantly less risk or expense found in neuroleptics. People with dementia experience loss of smell differentiation and many people experience increased sensitivity to smells as they age, lemon balm and lavender are found to be most tolerable. Bright-light therapy, the use of artificial light that mimics bright daylight to regulate our circadian rhythm, is a common treatment for seasonal affective disorder, but is also gaining momentum as a treatment for reducing restlessness and sleep disturbance of dementia sufferers. (Burns 2002)

III. Concentration

Evidence indicates that children with ADHD maintain more continuous attention after spending time in or viewing natural surroundings. The effect of a 20 minute park walk elevated attention performance higher than in a city or neighborhood setting and was roughly equal to the peak effects of two typical ADHD medications. Doses of nature may also assist in greater impulse control and therefore improved school performance. (Taylor 2009)

IV. Self-Esteem and Mood

Self-esteem describes a person's sense of worth or value, which significantly impacts health and performance. There are inverse relationships between self-esteem and mental health (e.g. depression, social anxiety, loneliness, alienation). Higher levels of self esteem are associated with healthy behaviors (e.g. healthy eating, physical activity, not smoking/drinking, lower suicide risks).

Self-esteem

Mood is a factor of daily life that indicates mental health and strongly influences one's feelings, ability to appreciate the moment, coping skills, and quality of life. Mood is also linked with physical health and is known to affect the immune system and the onset of certain diseases.

Mood

Study results show that short-term green exercise improves both self-esteem and mood irrespective of duration, intensity, location, gender, age, and health status. Both urban and rural green environments simultaneously improve self-esteem and mood, the presence of water results in greater improvements. The greatest change to self-esteem was in the youngest group; for mood, middle aged individuals saw the most improvement. The mentally ill had the greatest changes for self-esteem improvements. (Barton 2009)

V. Psychological Hazards

Some individuals are deeply uncomfortable with elements of nature (e.g. grass, soil, insects, birds, water), are unfamiliar with certain plants or animals and may unknowingly mistreat them, find the lifespan and growth of plants frustrating, or cannot garden easily because their medication inhibits their coordination. (Parr 2007)

Trigger of phobias and aversions

Discomfort from exposure to weather can lead individuals to avoid a garden; mood fluctuations may lead users to find the tasks slow, tiring, and boring rather than therapeutic; patients may experience agitation and become complacent or argumentative. Urban greenspaces that lay on brownfields may have poor soil, and without proper boundary conditions face issues with animal waste, litter, and vandalism. (Parr 2007)

Quality of Urban Environment

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