

Re-imagining healthcare – in partnership with nature

How can nature be used to reform mental healthcare in the UK?

Long corridors with strip lighting, bare white walls and laminate flooring. Rooms with small windows, plastic sheets, feeble wooden beds and views of the carpark. This is what typically you may be confronted with when entering a modern inner city mental health ward in the UK. One word neatly summarizes these places, sterile. Visitors often leave with a sense of unease, not only because they have visited a friend who is unwell but because this sterility, through no fault of their own, is now their friend's entire world. Secluded from nature in an alien environment in which plants and wildlife have no place. The neglect of nature in these facilities is indicative of the UK's current mental health services.

Mental health policy in the UK has recently come under heavy scrutiny in the press. This reaction has arisen in response to the alarming mental health trends emerging from NHS data. In recent years there has been a significant increase in common mental health disorders with now around 1 in 4 people affected by mental illness.^{1,2} In addition, suicide is currently the leading cause of death in people aged 20-34 and in men under 50.³ Traditional treatment options appear stretched, anti-depressant prescription are at a record level, cognitive behaviour therapy courses are oversubscribed with long waiting times and many mental health wards are constantly at full capacity. The system is clearly not working.

Until now, nature based treatments have remained on the distant periphery of mainstream care. Given the recent upsurge in evidence for the use of nature in mental health is it time the UK changed its strategy? This essay will present an argument for the inclusion of nature into mental health policy specifically regarding public health, treatments and facilities.

The importance of nature in mental health

In the 1980s three theories catalyzed growth in the understanding of the beneficial impact of nature on mental health. In 1981 Ulrich's Psycho-Evolutionary Theory suggested nature's capacity to reduce stress.⁴ In 1986 Wilson's seminal work on the Biophilia Hypothesis, propounded the concept that humans have an innate urge to connect to nature.⁵ In 1989 Kaplan and Kaplan developed the Attention Restorative Theory asserting that an individual's ability to concentrate is restored by exposure to nature.⁶ Since these publications, there has been a groundswell of research on the benefits of nature in many different states of mental ill-health.

A number of meta-analyses have found strong associations between interactions with natural environments and happiness,⁷ improved self-esteem,⁸ higher energy levels and lower levels of anxiety.⁹ Although most studies state a need for more research, the findings support the concept of a nature based strategy for addressing mental health.

Practical ways to partner with nature

There are three areas in which a nature based mental health strategy can be targeted; public health, treatments and facilities.

Public Mental Health

The national incidence of mental illness has steadily risen since the early 1990s.¹ Amongst other postulated reasons for this rise, increasing urbanization and the increased usage of certain technologies specifically social media have been shown to have a detrimental effect on populations' mental health.^{10,11} There are a number of simple strategies which could be implemented to re-introduce nature into urban settings and in-part reduce the associated negative effects.

One such strategy is simply planting more trees in urban areas, which is both relatively cheap and simple to execute. A number of studies have found that there is a clear relationship between urban tree density and anxiety, stress and depression levels.^{12,13} Although more research is required, these results suggest planting trees may in part address mental health issues related to increasing urbanization.

A more complex strategy would be to increase the development of urban parks, these have the potential to generate significant impact on wellbeing. Urban parks can provide much needed respite from crowded, noisy and polluted areas. They also provide a free space where people can exercise and socialize, both of which are recognised to improve mental wellbeing.¹³ Indeed, proximity to urban parks has been shown to significantly influence individuals' activity levels, physical well-being and also mental health. With one study showing that a nearby urban park is associated with the equivalent community mental health benefits of reducing local unemployment by 2%.¹⁵ In addition, communities with green spaces have been shown to have lower levels health inequality.¹⁶ Although more evidence may be required to confirm and quantify these associations, making it a requirement for large property developers to provide public green space with any major developments could prove a cost effective public health tool for the UK.

In addition to adding nature to urban surroundings, encouraging the population to embrace the natural environment may work to ameliorate the recent trends in mental illness associated with new technologies. The introduction of education on horticulture and wildlife conservation could yield

significant long term benefits at little cost to the UK government. Providing children with skills and an appreciation of nature may provide an alternative to the use of technology in childhood entertainment and socializing which has been linked with depression.¹⁷ This approach would likely carry co-benefits associated with lower childhood inactivity and obesity.

Nature Based Treatments

Nature based therapies have emerged as a response to the mounting evidence of the beneficial impact of nature on individuals suffering from mental ill-health. These therapies are now well established particularly in Sweden and Denmark.¹⁸ Whilst in the UK anti-depressant prescriptions are at an all-time high and cost the NHS £284 million in 2016.¹⁹ It is perhaps time for doctors to consider alternative prescriptions.

Nature based therapies were developed through the concept that by providing patients with facilitated sessions based in a natural environment, patients will experience a mental health benefit. These are relatively low cost interventions that can be run in the community and in residential centers. The main branches of nature based therapies include horticulture therapy, care farming and environmental conservation.¹⁰

The most researched amongst these is horticulture therapy where groups of patients undertake facilitated horticulture activities. The hypothesis being that not only does gardening bring patients closer to nature but the very act of engaging with the activities reduces rumination and provides purpose for individuals. There is an increasing evidence base for such therapies with studies showing that gardening can have an instantaneous and long term positive effect in terms of patients' anxiety and depression.²¹

Similar to horticulture therapy, care farming is the therapeutic use of farming practices often involving animals. This has been shown to be particularly beneficial in occupational rehabilitation for patients with chronic mental illness by providing a setting where patients can take on real responsibilities and interact with others.²² Environmental conservation as treatment has also been used for mental health patients, however little data has been collected on such therapies.

Mental Health Facilities

In the year 2014/15 there were 58,399 detentions under the mental health act with more than half of these patients staying in for over 117 days.²³ The common disregard for physical surroundings in medical care has been the subject of a number of published opinion pieces as well as the distinct lack

exposure of patients' to any natural environment.²⁴ Given the proved benefits the natural environment brings to mental health, introducing nature into these settings should be considered.

Mental health wards are often associated with a sense of sterility and lack of sensory stimulation. Patients have reported boredom and a lack purpose when in these facilities which is perhaps unsurprising given their surroundings. Small changes such as the simple introduction of plants and greenery to wards and rooms have been shown to improve patient's feelings of meaningfulness and relaxation.²⁵ In addition, where possible, using hospital grounds and gardens for horticulture therapy could provide an efficient use of space.

Larger scale and more expensive changes could be to re-locate mental health facilities from urban to rural areas. This would carry with it a number of benefits. In urban settings patients have access to drugs and alcohol whilst on leave. For some mentally ill patients dealing with busy streets can be distressing and prevent them leaving the hospital, which may ultimately postpone their discharge. In rural areas, these are not such implicit problems. An additional benefit is that of space, rural facilities will more likely be able to provide natural space for nature based therapies. Finally, the therapeutic effect of simply being in the countryside may be very beneficial to patients' wellbeing.

Conclusion

The mental healthcare system in the UK is currently struggling, rising population, rates of mental illness and urbanization are bound to further increase the already overloaded burden. A three pronged nature based mental health reform addressing public health, treatments and facilities, would prove beneficial, when used in conjunction with traditional treatments.

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