A Dose of Nature
Nature-based Interventions on Referral

The Evidence Base for a Dose of Nature

Dr Dan Bloomfield
WHAT IS ‘EVIDENCE’ AND WHERE DOES IT COME FROM?

THE INEVITABLE FALLBACK POSITION OF THE ACADEMY

STRUCTURAL POWER AND FINANCIAL ENGINES:

who asks what, how often and to what end?
SOME BOLD STATEMENTS:

• a social prescription from a GP results in patient benefits additional to GP care alone (Grant 2000)

• spending time in forests reduces hypertension and improves immune function (Mao 2012, Li 2010)

• group walks in nature are associated with lower depression, before and after controlling for covariates (Marselle 2014)

• exposure to nature improves attention restoration (Berman 2008)

• exposure to nature reduces the experience of pain (Diette 2003)
Natural England Access to Evidence Notes

Notes to improve access to the evidence that Natural England generates and uses.

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<td>Connection to Nature: evidence briefing</td>
<td>FIN015</td>
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THERE IS A CONNECTION TO NATURE THAT IS ASSOCIATED WITH HEALTH AND WELLBEING

THERE IS A POSITIVE ASSOCIATION BETWEEN NATURAL ENVIRONMENTS AND OBESITY

EXPOSURE TO NATURAL ENVIRONMENTS IS ASSOCIATED WITH GOOD PHYSIOLOGICAL HEALTH

RELATIONSHIP BETWEEN NATURAL ENVIRONMENTS AND MENTAL HEALTH OUTCOMES
BASIC QUESTIONS: IS THERE A ‘CONNECTION TO NATURE’? IS IT GOOD FOR HEALTH?

KIND OF.

There is emerging evidence that connection to nature is associated with certain wellbeing, educational outcomes and pro-environmental behaviours.
WHAT ABOUT OBESITY?

A MODERATE QUANTITY OF EVIDENCE. Some RCTs demonstrating a positive (but usually weak) association between natural environments and rates or prevalence of obesity; it is indicative of a relationship. Also some evidence that impacts vary according to socio-economic group.
AND HOW ABOUT MENTAL HEALTH?

Evidence is growing and a positive association between nature exposure and mental health outcomes. Nature-based interventions for mental health promotion or therapy tend to show weak but positive outcomes and are found to be cost effective. Evidence suggests that exposure to nature promotes psychological well-being and may be related to lower rates of depression and anxiety. Benefits are observed across various types of environment (coastal, mountain, woodlands), and better mental health outcomes are associated with higher levels of green space and nature exposure. Age or gender. Nature-based interventions for mental health promotion or therapy tend to show weak but positive outcomes and are found to be cost effective.
PHYSIOLOGICAL HEALTH...

EVIDENCE BASE IS STRONG, BUT AGAIN ESSENTIALLY INDICATIVE OF RELATIONSHIPS.

At a population level, higher levels of exposure to natural environments are associated with: lower all-cause mortality (strong and consistent); rates of T2 diabetes (small number of studies); cardiovascular and respiratory disease, and more positive maternal and pregnancy outcomes (all less, but present and positive). Less is known about cancer, musculoskeletal health, allergies, or of the impact of different types of environment or of variation between different socio-demographic groups.
AND FINALLY PHYSICAL ACTIVITY.

A SUBSTANTIAL BODY OF EVIDENCE:
The use of accessible, better quality natural environments is associated with a higher likelihood and rates of physical activity. Evidence also suggests that physical activity in natural environments is more beneficial to health than that undertaken elsewhere. Some evidence demonstrates the impacts and cost-effectiveness of different intervention options designed to increase physical activity in natural environments.

But we don’t know for sure whether greater amount of natural environments around the home promote higher levels of physical activity.
CAVEAT PETITOR!

- FEW STUDIES
- SMALL STUDIES
- STUDIES THAT DO NOT SHOW DIRECTION OF EFFECT OR CAUSALITY
- LACK OF ADJUSTMENT OF CONFOUNDERS
- A-TYPICAL SAMPLE SIZES
PATIENTS

ENVIRONMENTAL ASSET OWNERS AND MANAGERS

REFERRERS: DOCTORS AND OTHERS

FACILITATORS, PRACTITIONERS
• Eight pilots across Cornwall, Devon & Bristol

• Each involving GPs, environmental partners and intervention practitioners
  • £317 per patient per 12 weeks average
  • WEMWBS average shift from 28 to 47 (+19; average UK is 51; n=39)
  • website, network, Crowdfunder
FIRST PHASE: BUILD CAPACITY...

- NERC KE Fellowship, VNP Placement and Innovation Internship
  - Eight pilot partnerships referral schemes across Cornwall, Devon & Bristol
    - £317 per patient per 12 weeks average
  - WEMWBS average shift from 28 to 47 (+19; average UK is 51; n=39)
    - website, network
A Dose of Nature is all about using outdoor natural environments to improve health and wellbeing. It's a service, a network and a research project.

BLOG.
Anything we think is interesting and relevant, whether from research, practice or the media. If you want to know when something's been added here, then why not sign up to receive email updates? It's free.
EMERGING QUESTIONS:

THE MONEY QUESTION
How can any social prescription service receive money from health?

THE CATEGORY QUESTION
Are nature-based interventions about preventing or treating health problems?

THE DEFINITION QUESTION
How specific should nature-based intervention actually be? What counts?

THE CO-BENEFIT QUESTION
What environmental gains can be made (and measured?)
SECOND PHASE: ENTER THE MAINSTREAM

- Realist Systematic Review on social prescribing referral mechanisms (PenCLAHRC and NIHR)
- Intervention Mapping proposal to NIHR (November)
- Nature and Health Hub: developing a business case for a service offer, with Cornwall Council and health sector partners
Conclusions…

Next steps…