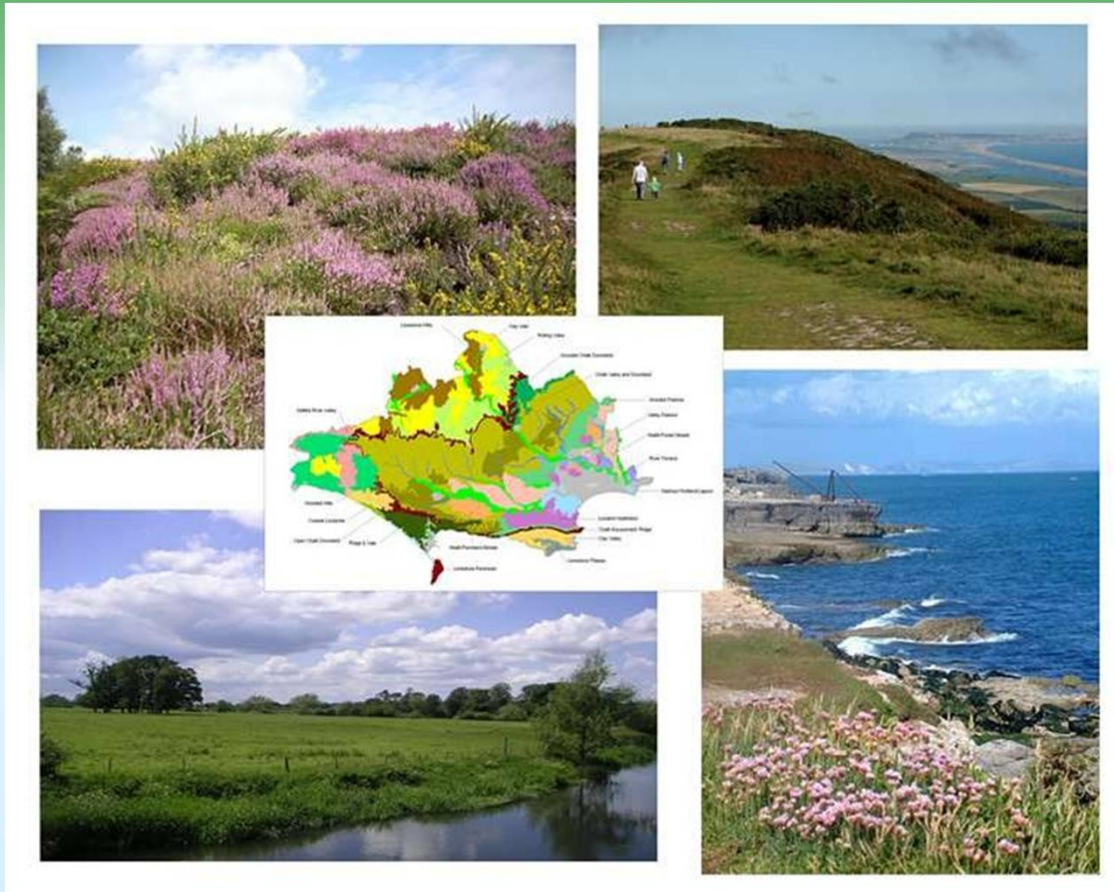
A Dose of Nature

The Importance of the Ecosystem Approach for Health



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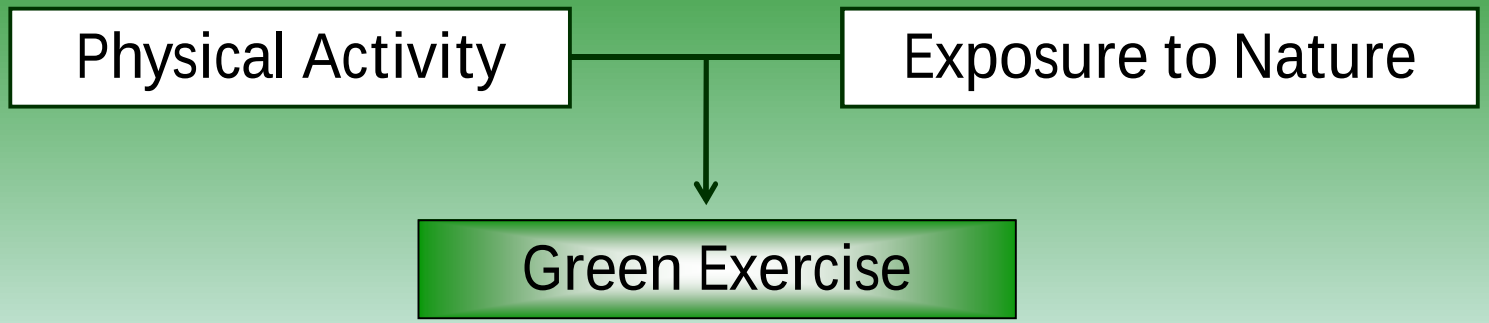
The Natural Environment Facilitates 'Green Exercise'



1. Laboratory studies - Demonstrating the principle in a controlled setting

2. Field studies – Easy to reach groups, participants choosing to engage

3. Therapeutic interventions – Using GE as a lever for change, working with vulnerable groups

4. Future direction of research – What is still unknown?

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Study 1: Rural and Urban Views

- University of Essex study comparing 4 types of views of differing biodiversity while exercising on a treadmill for 20 mins





Pretty *et al.*, 2005, IJEHR, 15(5): 319-337

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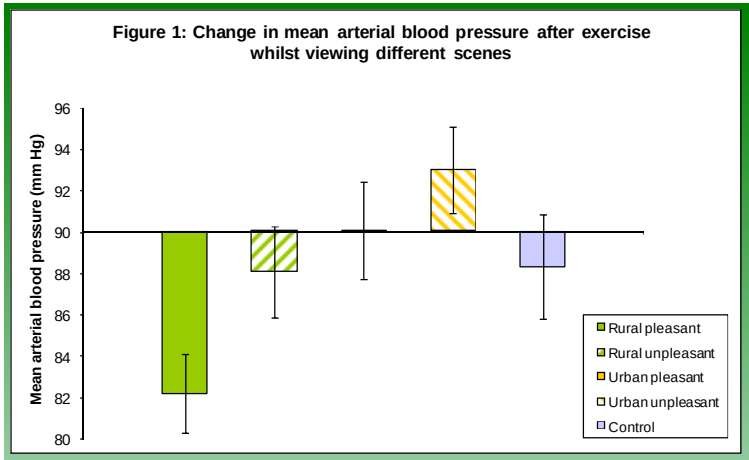

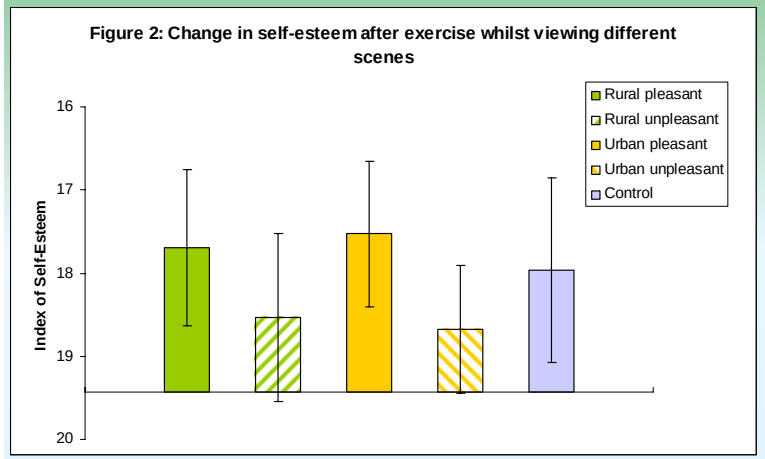

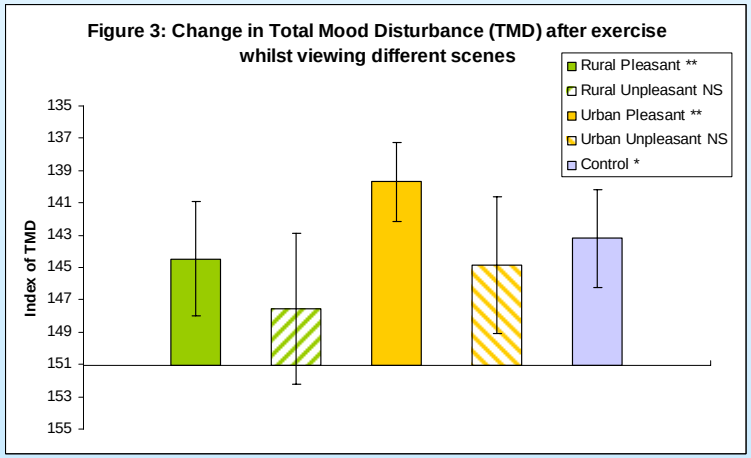

- Blood pressure
  - Decline greatest in RP
  - Increased with UU views relative to control
- Self-esteem
  - All improvements, RP and UP greatest
  - Unpleasant scenes lacking biodiversity made self-esteem worse relative to control
- Overall mood
  - All improvements, biggest improvements seen in pleasant conditions

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Study 2: Green Exercise Activities

- 10 case studies ; 263 participants
- Composite questionnaire - Before and after activity
- Different types of activity, intensity and duration
- Different types of habitat
- A geographical spread
- Group and individual activities
- Organised or informal sessions

Pretty, Peacock et al, 2007, JEPM 50(2): 211-231
Pretty, Hine & Peacock, 2006, *The Biologist* 53(3): 143-148

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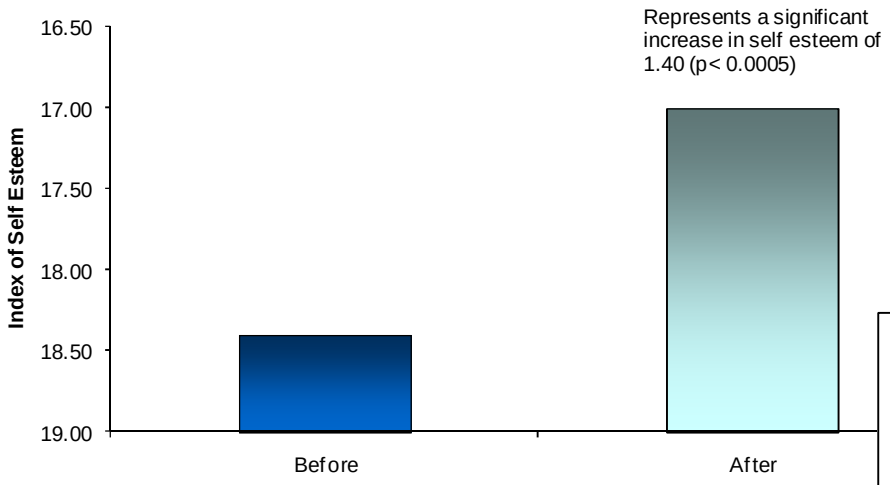
Change in Self-Esteem and Mood

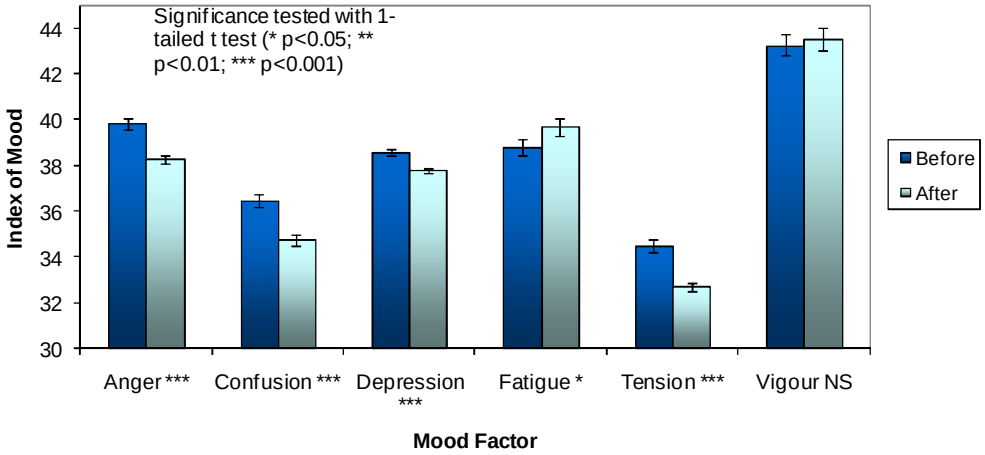
Figure 4: The amalgamated change in self esteem for all subjects following the activity



- Significant increase in self-esteem

- Significant reduction in anger, tension, depression and confusion

Figure 5: The overall mean change in the 6 mood factors of the 10 case studies



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Study 3: Wilderness Foundation ‘TurnAround Project’

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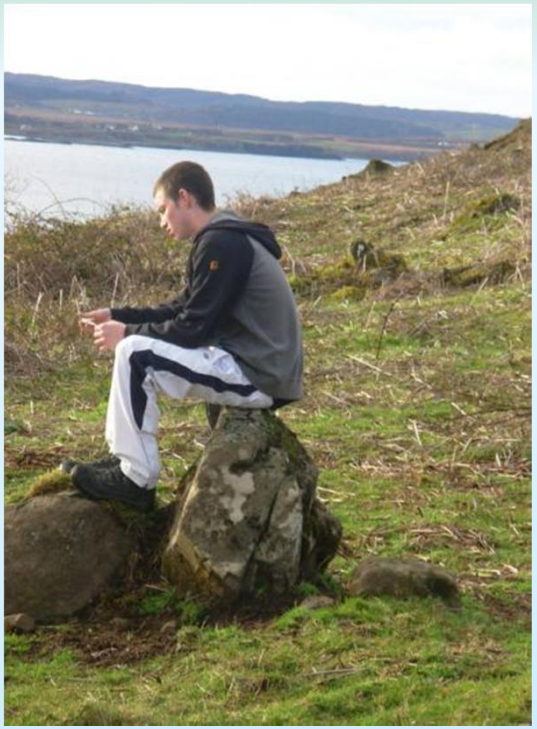
9 Month Personal Development Project



- Aim – to encourage disaffected young people to make long term positive changes
- Uses power of nature as catalyst for change
- Combines use of wilderness trails, monthly personal development workshops and one to mentoring sessions
- Primary goal – to build self-esteem

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Young people are referred to the programme by Youth Offending Teams, Connexions and school exclusion units in Mid Essex.
www.greenexercise.org


Referral histories of young participants include theft, shop lifting, common assault and violent behaviour, criminal damage, substance abuse, school exclusion, poor family relationships and lack of anger management.
Ages varied between 14 and 17 years of age
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Building connections – with each other – and the outdoors
www.greenexercise.org

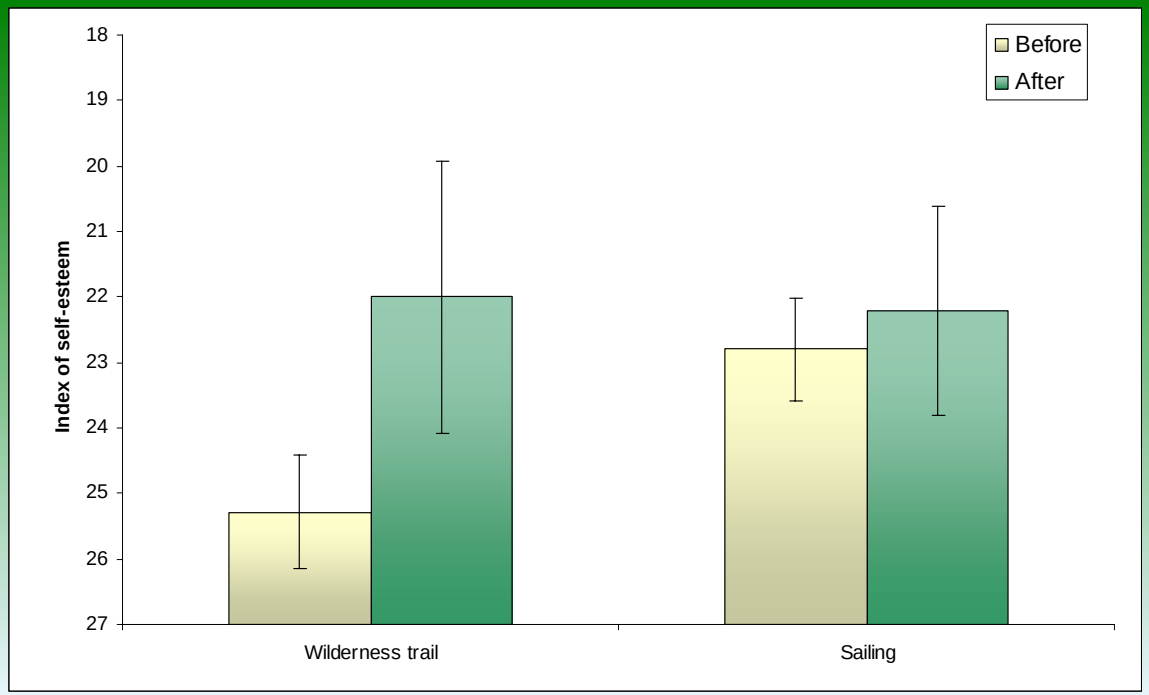


Figure 6: Change in self-esteem after participating in the wilderness trails

Figure 7: Change in self-esteem scores during project

News

www.thisistotalessex.co.uk

Tearaway teen back on the straight and narrow

'How I turned my life around'

Maxine Dalziel
editorial@gazetteernews.co.uk

A CHARITY has helped an off-the-rails teenager turn her life around - from young offender to budding writer.

After numerous run-ins with police, resulting in a court appearance and a 12-month youth offending order, Toni Baker, 16, first walked into the Wilderness Foundation office last September after a recommendation by her Brentwood Connexions worker.

And now, after getting back on the straight and narrow, it's an entirely different story for Toni, who eloquently tells her story on The Wilderness Foundation website.

She has just completed work experience at the Brentwood Gazette and is volunteering at the charity, having graduated as a "shining star" of its first year-long TurnAround programme.

In fact, she is the first member of the countywide TurnAround programme to secure a professional work placement.

Sue MacFarlane, the foundation's project co-ordinator for TurnAround, said: "One of the strengths of our programme is the involvement of the local community in helping to change these young people's lives - from our volunteer coaches through to local businesses providing sponsorship and work experience opportunities.

"The foundation was delighted that Toni was the first person on TurnAround to benefit from this and immensely grateful to the Gazette for offering her a placement.

"She has written several articles in the paper and is brimming with pride over her achievements."

The charity is dedicated to helping the county's vulnerable young people break negative behaviour patterns and realise their full potential.

At the heart of The Wilderness Foundation is a passionate belief that spending time in wild places can have a dramatic effect on personal awareness.

And with this in mind the charity takes young people on a 10-day wilderness trail in Scotland with a team of trained and dedicated volunteer coaches.

Speaking of her experience on the Isle of Mull, Toni said: "It was emotionally and physically hard for all the participants and there were a few arguments, but we all found strengths we didn't know we had.

"I feel this experience pushed us to our boundaries and made us realise that life has no limits, life is what you make it.

"My life coach Ali has been such a great help giving me advice and just as someone to talk to. In our sessions we looked at ways to manage anger and set realistic goals to achieve."

Monthly workshops focus on progress and exciting new experiences such as canoeing or rock climbing before the final stage of the programme – a second wilderness trail.

Toni also spent five days as a crew member on The Morning Star tall ship. She said: "The atmosphere on the boat was that of peace and everyone had to pull together to keep us moving. Being in such confined living quarters helped me to become more tolerant of people and less aggressive."

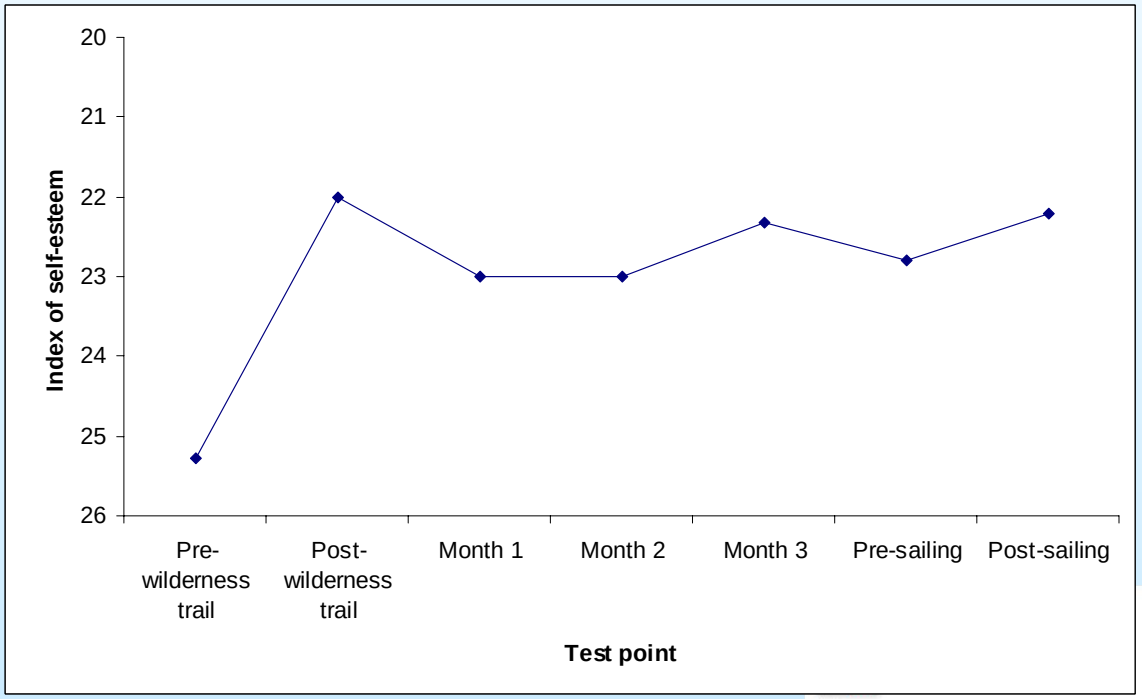
The programme's success is evident – every single July graduate is keen to return as a volunteer helper.

Toni added: "The project has given me the confidence to face my fears and get on in life, leaving the old me well behind."

The second phase of TurnAround will begin in November. If you want to take part or are 25 or over and would like to volunteer call 01245 444973 or visit www.wilderness foundation.org.uk

"The project has given me the confidence to face my fears and get on in life"

Toni, right, with volunteer coach Ali Morgan, left, and project co-ordinator Sue MacFarlane. Below left, Toni is seen on board the tall ship The Morning Star and below right, on her wilderness expedition in Scotland.



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Study 4: Role of Environment and Social Contact in Enhancing Human Health

1. Green Exercise group (exercise x outdoor environment - greenspaces)
2. Swimming group (exercise x indoor environment)
3. Somebody Cares Club (indoor environment x no exercise)

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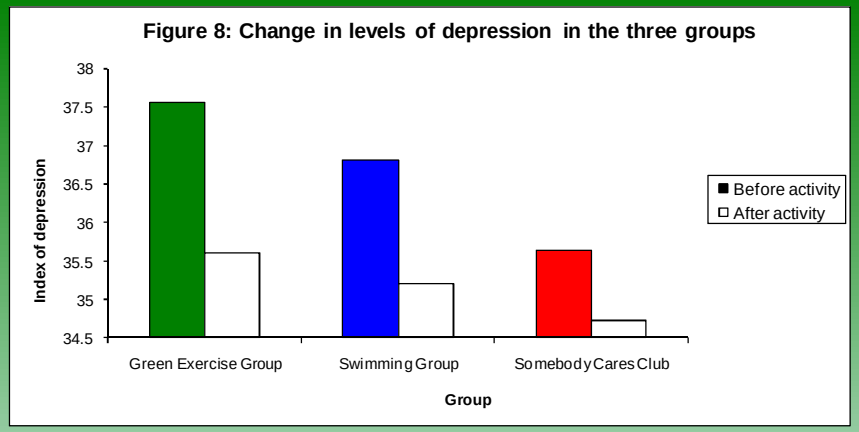

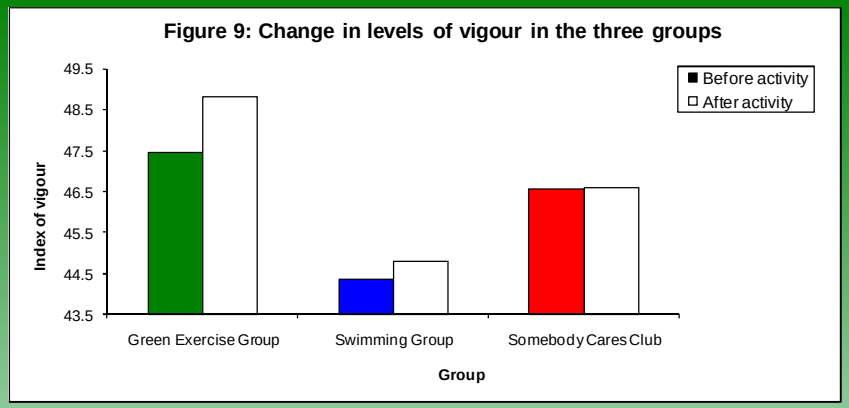

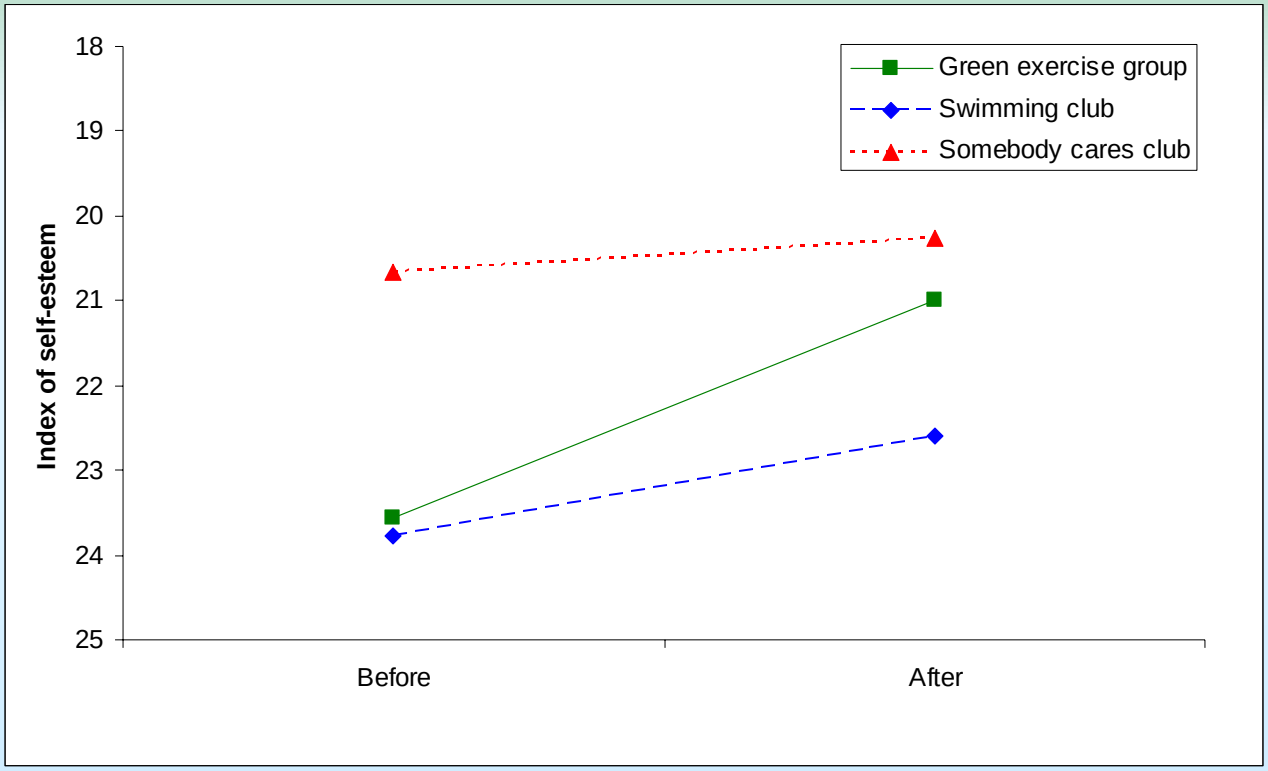

Figure 10: Changes in Self-Esteem in the Three Groups

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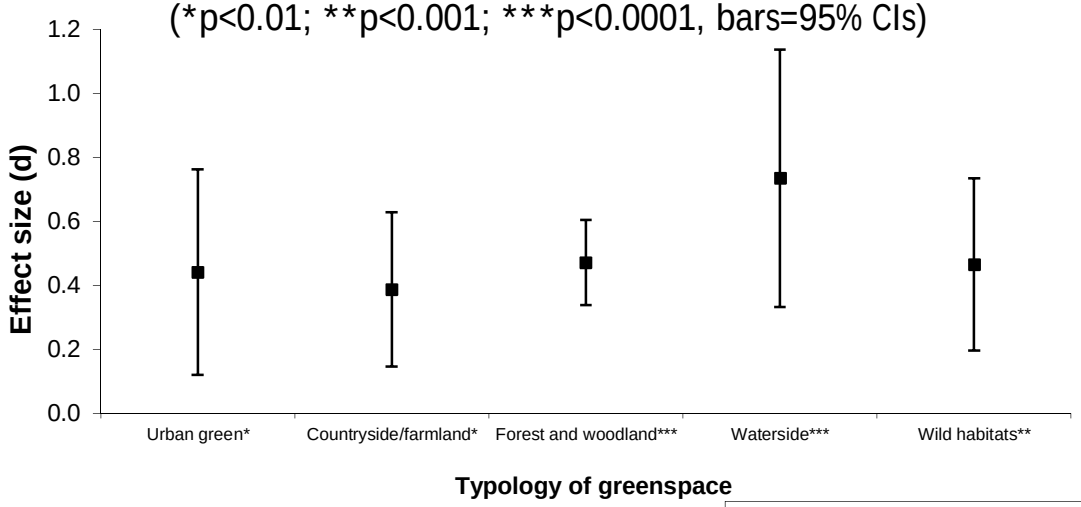
Figure 11: The effect of typology of greenspace on self-esteem
(*p<0.01; **p<0.001; ***p<0.0001, bars=95% CIs)



Study 5: A Dose of Nature?

Figure 12: The effect of typology of greenspace on TMD
(*p<0.01; **p<0.001; ***p<0.0001, bars=95% CIs)

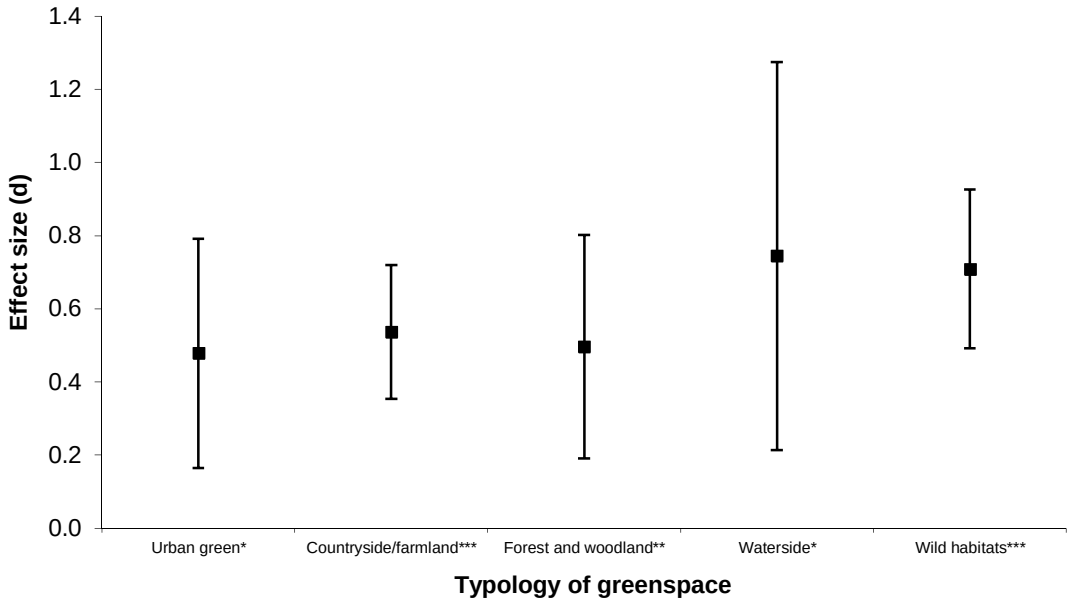


Figure 13: Dose response data for the effect of exposure duration on self-esteem
(*p<0.01; **p<0.001; ***p<0.0001)

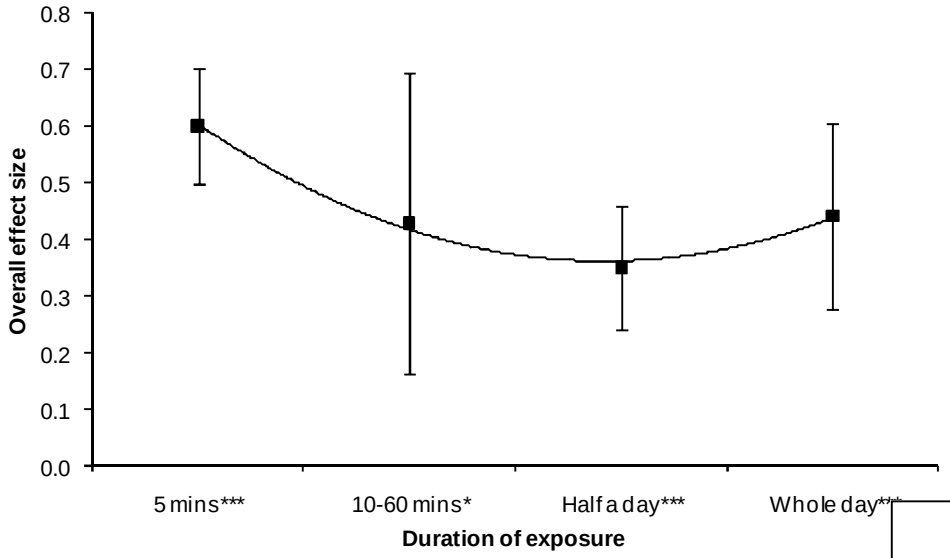


Figure 14: Dose response data for the effect of exposure duration on TMD
(*p<0.01; **p<0.001; ***p<0.0001)

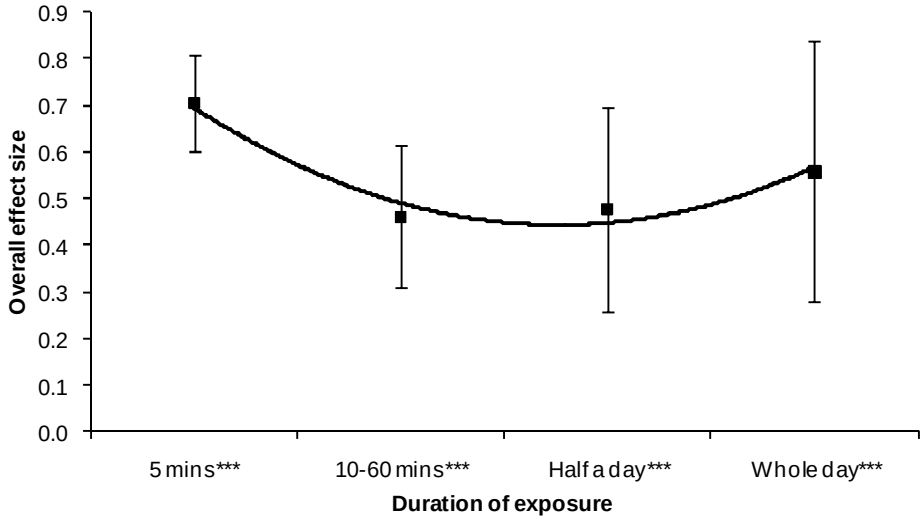


Figure 15: Dose response data for the effect of exercise intensity on self-esteem
(*p<0.01; **p<0.001; ***p<0.0001)

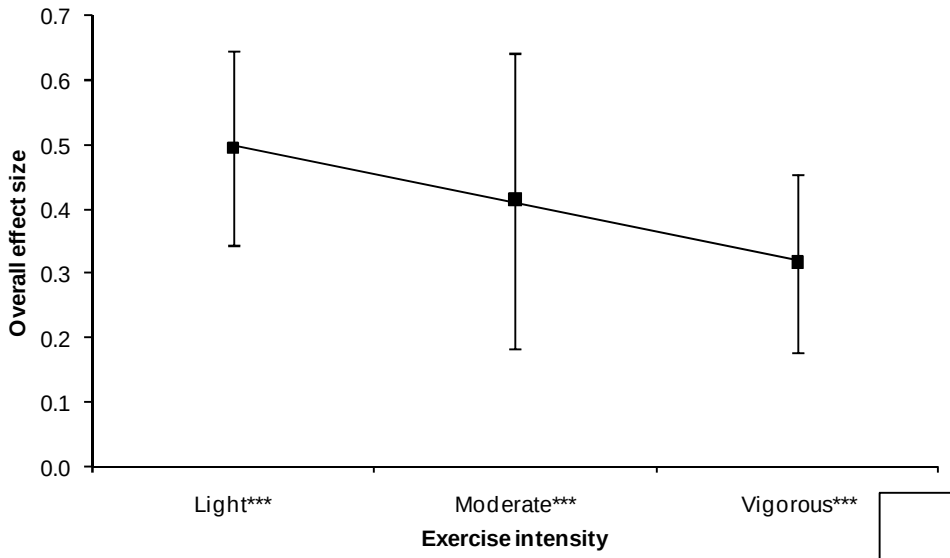
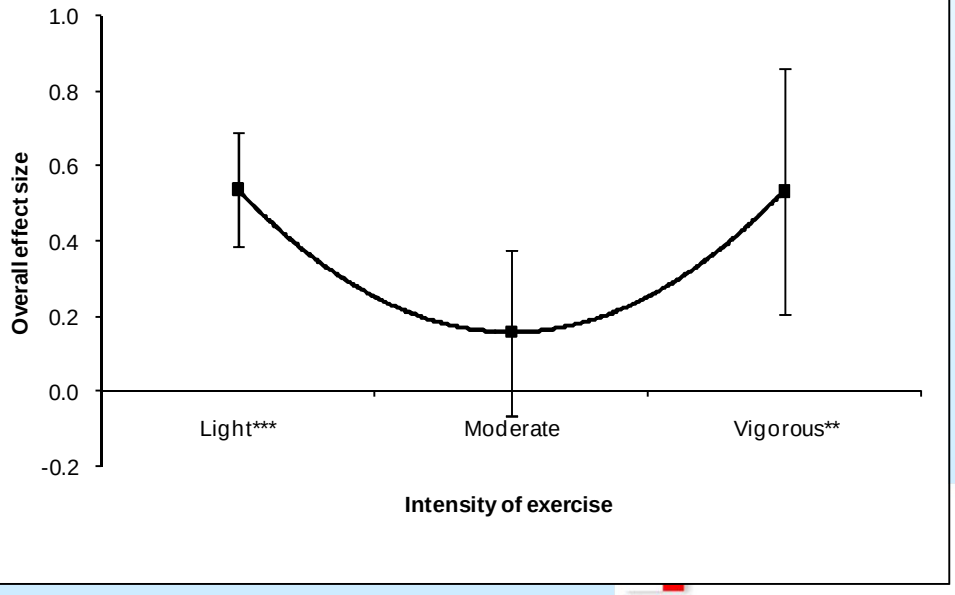


Figure 16: Dose response data for the effect of exercise intensity on TMD
(*p<0.01; **p<0.001; ***p<0.0001)



Barton J and Pretty J (2010) What is the Best Dose of Nature and Green Exercise for Improving Mental Health? A Multi-Study Analysis. *Environmental Science and Technology* 44, 3947–3955

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Ongoing Research

WILDERNESS FOUNDATION UK
www.wildernessfoundation.org.uk

Suffolk Wildlife Trust

Ecominds

heartresearch | uk

Essex County Council

E·S·R·C ECONOMIC & SOCIAL RESEARCH COUNCIL

Discovery Quest

dementia adventure

www.greenexercise.org

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What we know and what we don't?

- All natural places facilitate Green Exercise and bring mental health benefits
  - From nearby nature to countrysides to wildlands
- Green places can be therapeutic - All types of people (age, gender, social groups) benefit,
  - But vulnerable, ill, disaffected and disadvantaged seem to benefit more
- Green Exercise suggests role for Green Care and Green Design
- BUT..... What are the impacts on

  i) Long term health?
  ii) Social capital?
  Iii) Behaviour?

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"I can go into the hills and enjoy peace and quiet, the exercise and relax. My troubles take a back seat on a day like today"

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