

**Can Sail Training aid the recovery from drug and alcohol addiction?
An evaluation of the Tectona, 2012 “Voyage of Recovery”**



Final Report 1: Quantitative Evaluation

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The aim of this report

This report describes a quantitative evaluation of the Voyage to Recovery programme undertaken in 2013. A subsequent report will describe a complimentary qualitative evaluation of the voyage.

About the Voyage of Recovery

The 'Voyage of Recovery' (VoR) was conceived by the Tectona Trust, who run sail training voyages, and the Phoenix Trust, a major UK provider of services for people with drug and alcohol problems. The central idea was to offer individuals who were already working with the Phoenix Trust to address their drug and alcohol issues (henceforth: "Voyagers" or "sail trainees"), the opportunity to take part in up to a week's off shore sail training aboard the Tectona. This is a 65 ton, 80 foot sailing vessel originally built in India as a leisure yacht in 1929, which has operated out of Plymouth as a sail training vessel for many years and has recently undergone a refurbishment to prepare her for the VoR.

The entire VoR involved a 12 week trip around the British Isles in a clockwise fashion, starting in Portsmouth on August 1st 2012. The trip had 12 legs in total with those sailing rotating weekly at designated ports. On all but two legs 10 people recovering from alcohol or drug dependency, and currently abstinent, spent 5 days aboard Tectona alongside a professional crew of 2 people capable of sailing Tectona to ensure the safety of participants. The first leg was for Phoenix staff and former client "graduates" of a pilot sail training expedition and the seventh leg for former "graduates" only.

The Evaluation

The main aim of the trip was to augment personal development among trainees to facilitate continuing substance abstinence. The Tectona Trust commissioned a team of researchers in the Psychology Applied to Health group, headed by Professor Charles Abraham to conduct an evaluation of the project using both quantitative and qualitative methods and data analyses. The results of the quantitative evaluation, based on pre- and post-voyage

questionnaires are presented here. The results of the qualitative evaluation, based on interviews are presented in a second report.

About the authors

The evaluation team, and authors of the current report, were led by Charles Abraham, a Professor of Psychology Applied to Health (PAth) at the University of Exeter Medical School (UEMS). Other UEMS team members included Dr. Jane Smith and Dr. Mathew White, both research psychologists in PAth. A fourth member of the team, Robert White is a retired Consultant Clinical Psychologist.

All authors are wholly independent from both the Tectona Trust and Phoenix Trust. CA and MW designed the evaluation questionnaire. JS coordinated transcription of interviews and questionnaire data collation, cleaning and entry and conducted preliminary analysis of the questionnaire data. CA and RW designed, conducted and analysed interviews. All authors contributed to the writing of this report.

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Executive Summary

What was the Voyage of Recovery?

The Voyage of Recovery was a 12 week sail training intervention for individuals working with the Phoenix trust to address drug and alcohol issues. Sail “trainees” worked a 5 day passage in groups of 10, plus 2 experienced crew, aboard the sail training vessel Tectona. The aim of the trip was to see whether sail training could help them in their “Voyage of Recovery” (VoR) from their substance use.

Why are we evaluating this programme?

Building on our previous pilot evaluation of a sail training expedition aboard Tectona, the Phoenix Trust wanted to see whether the benefits we reported there might be extended to their service users. Our qualitative and quantitative evaluation of the subsequent VoR programme was designed to better understand what benefits such a trip might confer on trainees and how it might help them in their personal life voyages.

What did we measure?

A questionnaire designed specifically for this study was administered to sail trainees before and after VoR. In addition, questionnaires were completed before and after the VoR by similar clients engaged in other Phoenix recovery programmes during the same period. This design facilitated examination of changes over time. Inclusion of non-sailing ‘controls’ allowed us to consider the relative benefits of sail training compared to “standard support” – or “usual care”.

In order to aid comparability with previous research the questionnaire consisted of standardised items widely used in previous research. These included items to measure:

- a) *Substance use & cravings (AUDIT)*
- b) *Psychological distress (GHQ-12)*
- c) *Quality of Life (ICECAP)*
- d) *Subjective well-being*
- e) *Self-esteem & self- & social-efficacy*
- f) *Coping strategies (COPE)*

What did we find?

- Responses to the survey items were correlated as predicted, suggesting the measures worked well. For example, respondents with more intense cravings reported lower coping and more mental distress.

- Overall, we found no significant mean improvement in any of the indicators among sail trainees either pre-post, compared to controls.

- Scrutiny of response distributions suggested that some trainees improved substantially, some became worse while many were relatively unchanged.

- Significant reductions in craving frequency/intensity and mental distress, and significant improvements in satisfaction with relationships and daily activities were, however, found for controls. In part, this seems due to significantly worse baseline ratings among controls.

Limitations

The small sample, the baseline differences and differential attrition between sail trainees and controls, the single programme delivery team, and lack of longitudinal follow-up all limit the conclusions we can draw from these quantitative findings.

Conclusions & Recommendations

Despite an apparently robust questionnaire, the predicted improvements in substance use and cravings as well as broader mental health and well-being benefits did not, on average, materialise among the sail trainees who completed pre and post-voyage questionnaires. As might be expected in this population, some individuals showed positive, and others negative, changes from time 1 to time 2. However, these data do not allow us to attribute such changes to participation in the voyage.

The significant improvements observed amongst controls may reflect the benefits of ‘standard’ Phoenix Trust support and highlights the need for better comparability between intervention and control groups at baseline in any future research.

1. INTRODUCTION

1.1 Background – Nature Therapies

There is growing interest in the extent to which “nature therapies” can support people facing a range of physical and mental health challenges.⁽¹⁻⁴⁾ In the main, such interventions involve terrestrial activities such as community gardening/farming⁽⁵⁾, supported ‘nature walks’^(6,7) and Shinrin Yoku, or ‘forest bathing’⁽⁸⁾, a Japanese tradition that is similar to undertaking mindfulness training in woodland settings.⁽⁹⁾ Such interventions are generally aimed to support people with mental health issues such as anxiety or depression⁽¹⁰⁾ or those with attentional and cognitive issues such as older adults with dementia⁽¹¹⁾ or children with Attention Deficit Hyperactivity Disorder.⁽¹²⁾

Importantly, evidence suggests that such interventions can play an important part in supporting individuals with identified health and well-being challenges, at least in the short-term.⁽¹⁾ Although longitudinal follow-up studies are currently rare in this field, it is now widely documented that mental health problems, at the population level, are less frequent in urban areas with greater access to natural settings⁽¹³⁾ and thus it is conceivable that the short-term gains offered by these interventions may support longer lasting changes and may even affect mortality.⁽¹⁴⁾ This growing evidence base was part of the reason why the mental health charity MIND, sponsored a series of nature based intervention programmes under the banner “EcoMINDS”, funded by the National Lottery. Reports on the progress of these projects are now available.⁽¹⁵⁾

In many respects these interventions are similar to the more familiar “outward-bound” initiatives which predominantly involve groups of young people engaging in various challenging activities in natural environments over the course of several days in order to build positive outcomes

such as self-esteem, confidence and leadership skills.⁽¹⁶⁾ Reviews of these courses tend to report improvements in these and related outcomes but while there is evidence that some of the benefits may be sustainable,⁽¹⁷⁾ there are few “rigorous” studies which compare, for instance, those on a course with those engaged in another activity.

Several reasons are offered as to why nature-based interventions might work including: a) distraction from everyday worries/concerns; b) offering novel challenges in a supportive environment; c) providing a relaxing/restorative environment to think and reflect; d) providing a non-judgmental environment to develop and build positive social relationships; and e) helping people get back in touch with their innate ‘biophilia’ or connectedness to nature.

What all of these accounts have in common is the belief that humans did not evolve in the highly urbanized, stress inducing environments most of us now live in and that spending time in the kinds of natural environments that are more similar to those we evolved in, and are thus more adapted to, will help counter the stresses aroused by modern living. Of course, the “nature” discussed in these programmes tends to be of the well-managed kind such as local or national parks and woodlands, rather than the perhaps equally stressful kinds of nature that threaten daily survival.

1.2 The Sea as a Therapeutic Context

Recent work by our team is beginning to suggest that similar mental health and well-being benefits are gained from spending time in and around the, often challenging environment, of the sea. For instance, analysis of large UK data sets suggests that a) people are more likely to be in good health if they live within walking distance of the coast,⁽¹⁸⁾ b) people’s mental health is better in years when they live closer to the coast,⁽¹⁹⁾ and c) visits to

the coast are particularly relaxing and stress reducing.⁽²⁰⁾ In short, there seems to be something about the sea which might be particularly good for mental health and a growing number of interventions are starting to explore this possibility.

For instance, we have been involved in a number of evaluations of marine based interventions. These include the EcoMINDs supported Surf for Success programme with young people excluded from mainstream school⁽²¹⁾ and an earlier qualitative pilot assessment of the effect a 5-day Sail training trip aboard Tectona had on the confidence, self-esteem and empathic awareness of a group of 11 challenging Year 9 school students.⁽²²⁾

Statements made by these young people about their experiences aboard Tectona not only supported the idea that they had benefitted from the experience in the desired ways, but also that the experience had more general benefits which could potentially apply to other individuals and groups. For instance, representative quotes about the experience included:

Opening the mind to new opportunities:

- "a once in a lifetime opportunity",
- "it's a lot better than sitting home and watching TV, way better."
- "I thought it would be really boring...but yeah it was really fun."

Relaxation and distraction from problems:

- "It's calmer out there."
- "you sort of forget about everything else, when you're sailing and putting up all the sails and things."

Forming friendships:

- "I'm walking away with all these friends."
- "I gained a lot more confidence talking to people."

Building positive memories:

- "lots of memories to take away from it."
- "one of those trips which like you'll

remember forever."

- "the entire trip's just been amazing",

Would such benefits of sail training extend to other groups in challenging situations such as those with drug and alcohol issues? Could being aboard a sailing boat several miles out to sea for several days distract their thoughts from substance use, and the factors influencing their use? Could the close proximity and need to work together to achieve sailing success enhance friendships and promote self-confidence and self-esteem? Could the experience highlight the range of positive experiences available beyond substance use and help create lasting positive memories about what can be undertaken and achieved? The aim of the current evaluation was to address questions such as these in relation to the Voyage of Recovery (VoR) project.

1.3 Sail Training – A Brief Overview

Building on the ideas of Hahn in 1957,⁽²³⁾ sail training refers to a variety of on-board, educational programmes which, while developing sailing competence, are designed primarily to foster personal and social change. Such voyages, run by a variety of organisations, present participants with physical and emotional challenges which demand, to a greater or lesser extent, adoption of new daily routines, co-operative working, acceptance of novel rules and authority figures, management of physical danger and development of psychological and physical stamina.^(24,25)

It is claimed that sail training can enhance participants' self-confidence, their sense of personal responsibility and their perceived and actual social skills, among other benefits. However, much research remains unpublished^(26,27) in part because the studies tend to be poorly funded and thus subject to methodological challenges. Consequently, "Sail Training International"

note on their website, *“There is considerable anecdotal evidence to support the value of sail training. .. Sail Training International and... national member organisations are keen to develop academic research in this area.”*

Nonetheless, like our own pilot evaluation with year 9 school students, the studies that have been conducted suggest a range of positive outcomes. For instance, perhaps the most rigorous study in this area by Norris & Weinman ⁽²⁶⁾ measured psychological distress (GHQ-12), satisfaction with life, coping strategies, generalised self-efficacy, self-esteem and optimism both before and after a 3-month sail across the Atlantic among 43 twenty-year-olds and 60 comparable controls. The study found that immediately after the voyage intervention participants had higher self-esteem (than controls) and that this was especially evident among women.

Given the relatively high quality of this study we aimed to use several of the same or similar outcome measures to ensure comparability with our own findings. Moreover, there are also national norms for several of these measures which meant we were able to contextualise responses with national averages.

1.4 Evaluation Studies

An evaluation of the VoR was undertaken involving two distinct studies: a small matched-controlled trial and a qualitative interview-based study. Reports of these evaluations are available from Professor Charles Abraham, University of Exeter Medical School, University of Exeter. Unfortunately, the matched-controlled trial was methodologically flawed because, despite best efforts, the control and intervention groups were poorly matched at baseline. Consequently, this study was inconclusive.

References

1. Maller, C., Townsend, M., Pryor, A., Brown, P., & St Leger, L. (2006). Healthy nature healthy people: 'contact with nature' as an upstream health promotion intervention for populations. *Health promotion international*, 21(1), 45-54.
2. Frumkin, H. (2001). Beyond toxicity: human health and the natural environment. *American journal of preventive medicine*, 20(3), 234-240.
3. Burls, A. (2007). People and green spaces: promoting public health and mental well-being through ecotherapy. *Journal of Public Mental Health*, 6(3), 24-39.
4. Groenewegen, P. P., Van den Berg, A. E., De Vries, S., & Verheij, R. A. (2006). Vitamin G: effects of green space on health, well-being, and social safety. *BMC public health*, 6(1), 149.
5. Hassink, J., & Van Dijk, M. (Eds.). (2006). *Farming for Health: Green-care farming across Europe and the United States of America* (Vol. 13). Springer.
6. Roe, J., & Aspinall, P. (2011). The restorative benefits of walking in urban and rural settings in adults with good and poor mental health. *Health & place*, 17(1), 103-113.
7. Barton, J., Griffin, M., & Pretty, J. (2012). Exercise-, nature-and socially interactive-based initiatives improve mood and self-esteem in the clinical population. *Perspectives in public health*, 132(2), 89-96.
8. Park, B. J., Tsunetsugu, Y., Kasetani, T., Kagawa, T., & Miyazaki, Y. (2010). The physiological effects of Shinrin-yoku (taking in the forest atmosphere or forest bathing): evidence from field experiments in 24 forests across Japan. *Environmental health and preventive medicine*, 15(1), 18-26.
9. Ambrose-Oji, B., 2013. *Mindfulness Practice in Woods and Forests: An Evidence Review*. Research Report for The Mersey Forest, Forest Research. Alice Holt Lodge Farnham, Surrey.
10. Berman, M. G., Kross, E., Krpan, K. M., Askren, M. K., Burson, A., Deldin, P. J., ... & Jonides, J. (2012). Interacting with nature improves cognition and affect for individuals with depression. *Journal of affective disorders*, 140(3), 300-305.
11. Chalfont, G. (2007). *Design for nature in dementia care*. Jessica Kingsley Publishers.
12. Faber Taylor, A., & Kuo, F. E. M. (2011). Could exposure to everyday green spaces help treat ADHD? Evidence from children's play settings. *Applied Psychology: Health and Well-Being*, 3(3), 281-303.
13. White, M. P., Alcock, I., Wheeler, B. W., & Depledge, M. H. (2013). Would You Be Happier Living in a Greener Urban Area? A Fixed-Effects Analysis of Panel Data. *Psychological science*, 24(6), 920-928.
14. Mitchell, R., & Popham, F. (2008). Effect of exposure to natural environment on health inequalities: an observational population study. *The Lancet*, 372(9650), 1655-1660.
15. Ecominds: <http://www.mind.org.uk/ecominds/>
16. Cason, D., & Gillis, H. L. (1994). A meta-analysis of outdoor adventure programming with adolescents. *The Journal of Experiential Education*, 17, 40-47.
17. Hattie, J. et al (1997). Adventure Education and Outward Bound: Out of class Experiences That Make a Lasting Difference *Review of Educational Research* 67, 43-87.
18. Wheeler, B. W., White, M., Stahl-Timmins, W., & Depledge, M. H. (2012). Does living by the coast improve health and wellbeing?. *Health & Place*.
19. White, M. P., Alcock, I., Wheeler, B. W., & Depledge, M. H. (2013). Coastal proximity, health and well-being: Results from a longitudinal panel survey. *Health & Place*.
20. White, M. P., Pahl, S., Ashbullby, K., Herbert, S., & Depledge, M. H. (2013). Feelings of restoration from recent nature visits. *Journal of Environmental Psychology*.
21. White, M.P., Hignett, A. & Pahl, S. (2012). *Surf to Success Outcomes: Can Learning to Surf Promote Individual and Environmental Well-Being?* Project Report for Ecominds
22. Ashbullby, K., Abigail Corcoran, A. & White M.P. (2011). Young people, sailing and wellbeing: A preliminary qualitative study with TECTONA trust. Unpublished report, University of Plymouth.
23. Hahn, K. (1957). *Outward bound*. New York: World Books.
24. McCulloch, K. (2007) Living at sea: learning from communal life aboard sail training vessels. *Ethnography and Education*, 2, 289-303.

25. Growcott, A. C. & Hunter, J. A. (2009),
Increases In Global and Domain Specific
Esteem Following a 10 day Developmen
Voyage. *Social Psychology of Educatior*
443-459.–
26. Finkelstein, J. (2005). *Final report on
ARC Linkage research project 2002-
2005 between Young Endeavour
Youth Scheme and the University of
Sydney*. Sydney: University of Sydney.
27. McCulloch K., Allison, P., McLaughlin, P.,
Edwards, V. & Tett, L. (2007). *The
Characteristics and Value of the Sail
Training Experience*, Edinburgh,
University of Edinburgh.

