**Bangor University**

**PROFESSIONAL DOCTORATES**

**Recovery Outside of the Box: Examining Adventure Therapy for Mental Health**

Radford, Sholto

*Award date:*
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# Recovery Outside of the Box:
# Examining Adventure Therapy for Mental Health

Sholto Robert Radford

North Wales Clinical Psychology Programme

PRIFYSGOL
BANGOR
UNIVERSITY

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Doctorate in Clinical Psychology

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# Thesis abstract

The environments and contexts in which individuals are embedded have a clear role in triggering and maintaining mental health difficulties. Adventure and wilderness therapies provide a radically different environment and way of experiencing oneself. Such a context may facilitate change and support recovery and growth. This thesis examines the application of such therapies for individuals with mental health difficulties.

The first chapter reviews the evidence regarding sustained outcomes of adventure therapy for individuals with mental health and emotional disorders. Thirteen studies met the inclusion criteria, ten examining adolescents with mixed presentations and three focussing on adults with specific mental health conditions. There was evidence of significant follow-up outcomes (3-18 months) across the majority of clinical, behavioural, self-concept and quality of life measures. The promising findings, but generally 'weak' quality of these studies, call for further exploration of such approaches and more robust research designs.

The second chapter employed ethnography to examine sail-training as an adjunctive intervention for individuals open to Early Intervention for Psychosis Services (EIPS). The voyages presented a radical contextual shift characterised by purpose, structure and routine, an intensive and inescapable social environment, the introduction of challenge and adversity and a novel and changing ocean environment. This context supported several positive processes including active engagement and, through this, the development of skills, finding of roles, growing confidence, social-connection, resilience, and a shift in outlook characterised by aspiration for change. Individuals also experienced challenges, struggles and, at times, resistance. The approach has positive implications for social and functional

recovery, and these are discussed in relation to its unique features. Areas for future research are also explored.

The final chapter discusses the broader implications of this research and introduces a process model developed during the empirical research. It concludes with the researcher's personal reflections on the research process.

# Chapter 1 – Literature Review

# Do adventure therapies have sustained effects for individuals with mental health conditions? A systematic review of the evidence

Sholto Radford[1], Dr Mike Jackson[1] and Dr Marta Eichsteller[2]

1. North Wales Clinical Psychology Programme, School of Psychology, Bangor University UK

2. School of Sociology, University College Dublin, Ireland

**Corresponding Author:** Sholto Radford, North Wales Clinical Psychology Programme, School of Psychology, Bangor University, UK. Email: sepa86@bangor.ac.uk

# Abstract

**Objectives:** Adventure therapies may offer an alternative or supplementary treatment for individuals with mental health conditions, particularly those who may not engage with more routinely offered interventions. This systematic review aimed to establish if there was evidence of sustained outcomes of such therapies in clinical populations. **Methods:** Three databases were systematically searched, and criteria defined for studies to be further considered for inclusion. A quality assessment was then conducted and effect sizes from follow-ups estimated. **Results:** Thirteen of 1,045 studies were selected. Most involved youth and adolescents with mixed mental health and emotion disorders (10), with three studies examining adults with specific mental health conditions. Reported interventions varied in length and therapeutic approach, although 8 were American studies on Outdoor Behavioural Healthcare. Most studies rated weak (10), commonly resulting from a lack of blinding, confounders, and high withdrawal/ dropout rates. This, as well as heterogeneity of interventions and sample characteristics, precluded the meaningful calculation of overall effect sizes. There was nonetheless evidence of statistically significant positive follow-up outcomes across studies, on the majority of clinical, self-concept and behavioural constructs. **Conclusions:** There was a promising indication that outcomes from adventure therapy in mental health populations could be maintained over time. As the quantity and quality of evidence remains weak, further development and research in this area should be given serious consideration in light of the large effect sizes reported and the paucity of applications of such approaches in a UK context.

**Practitioner Points**

*Clinical implications*

- This review provides the first systematic synthesis of evidence of sustained adventure therapy outcomes for individuals with mental health and emotional disorders.

- There is evidence of significant clinical, behavioural and self-concept outcomes being maintained at follow-ups of three to eighteen months.

*Limitations*

- The evidence included in the review is of limited quality

- Adventure therapy may face key difficulties in establishing a gold standard evidence base due to inherent difficulties including randomisation, and blinding.

**Key words**: adventure therapy, wilderness therapy, mental health, long-term outcomes, systematic review

# Introduction

Mental health services in the United Kingdom have a remit to deliver psychological

therapies. However, attrition rates for current evidence-based approaches such as Cognitive

Behavioural Therapy (CBT) are high, averaging 40% (Fernandez et al., 2015). Active

outdoor therapies, which draw on experiential learning, have been used as an alternative and

adjunct to routine treatment options (Bowen & Neill, 2013), often with client groups who are

less responsive to the latter (Lariviere et al., 2012). Nevertheless, they are not routinely

available in most UK services.

Adventure therapy has been used as an umbrella term to describe a variety of related

approaches including wilderness therapy, adventure-based counselling, outdoor behavioural

healthcare, and therapeutic camping, to name a few (Itin & Mitten, 2009). Despite attempts to

unify the field, there is a wide diversity in approaches, conceptualisations, and definitions of

outdoor and adventure-based therapies (Russell, 2001a; Crisp, 1998). A widely used

definition, however, is "the use of traditional therapeutic techniques especially for group

therapy in out-of-doors settings, utilizing outdoor adventure pursuits and other activities to

enhance personal growth" (Davis-Berman & Berman, 1994). Russell (2001) proposes a

theoretical basis with common wilderness and adventure concepts derived from outward

bound programmes, but with an integrated therapeutic model drawing on family systems

perspectives and cognitive behavioural approaches. The contextual shift, away from the home

environment, which is implicated in the maintenance of difficulties, has been highlighted as a

key to this therapeutic modality (Newes & Barndoroff, 2004; Russell, 2001).

The majority of adventure therapy programs to date serve adolescents often with mixed,

comorbid mental health conditions, substance use, mood, anxiety and/or behavioural

difficulties (Bettmann and Tucker, 2011; Russell, 2003). They have also been applied in adult

populations (Voruganti et al., 2006) and youth justice (Wilson & Lipsey, 2000; Bedard,

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Rosen, & Vacha-Haase, 2003). In the UK, there is emerging interest such as the development of an adjunctive adventure therapy programme through the National Early Intervention for Psychosis (EIPS) steering group in Wales.

Evaluating the efficacy and effectiveness of such interventions within clinical populations is an important stage in their wider implementation across UK mental health services. It is also important to understand whether such interventions, characterised by individuals being taken out of routine daily environments and exposed to novel outdoor environments and social group dynamics (Russell & Farnum, 2004; Fernee, Gabrielsen, Andersen, & Mesel, 2017), are context-dependent or can have lasting effects.

To date, of the reviews that have been conducted on the effectiveness of adventure and wilderness therapies, none have specifically reported on follow-up effects in clinical populations. The review by Hattie et al. (1997) found evidence of substantial follow-up effects (Cohen's d= 0.51), for outcomes such as locus of control, self-concept and leadership, but had an educational rather than therapeutic focus and did not represent clinical populations. Bettmann et al. (2016) reviewed wilderness therapy programmes which treated clinical populations exclusively, but, due to a lack of consistency in follow-up data, only reported pre-post intervention effect sizes. Bowen and Neil (2013) conducted the most comprehensive and widely cited meta-analysis to date, including 197 studies, although the majority (119) were unpublished sources. They reported moderate short-term effect sizes across a broad range of outcomes including clinical, self-concept, social development, behaviour, academic , morality/spirituality , family development and physical (Hedges' g ranging from 0.17 to 0.50), with mean effect sizes comparing favourably to alternative treatments (g= 0.14) and no treatment (g= 0.08) groups. They further reported little follow-up change (0.03), which suggested maintenance of effects. Their extensive work provides a broad brushstroke of adventure therapy effects, but several limitations jeopardises the

conclusions that can be drawn regarding sustained effectiveness within clinical presentations. Firstly, the study amalgamated a broad range of population characteristics, with only 30 of the 196 studies focussing specifically on mental health; secondly, it failed to report follow-up periods for the calculated effect sizes; thirdly, a wide variety of outcome measures (30) were grouped together under the "clinical" category. The heavy reliance on non-peer reviewed studies further raises questions regarding data quality.

Hence, there is evidence, albeit scarce, that positive outcomes from immersive outdoor therapies can be maintained (Bowen & Neil 2013) or that those outcomes can continue to improve (Hattie et al., 1997) over a follow-up period. However, these conclusions cannot be generalised to provide a strong evidence base to the potential effectiveness within mental health populations. This is because of the heterogeneity of sample characteristics, amalgamation of outcome measures, lack of detail of follow-up length and paucity of peer-reviewed published material found in these reviews.

The current study aimed specifically at reviewing the evidence for sustained outcomes of immersive outdoor therapies, such as wilderness and adventure therapy, for individuals with clinical mental health presentations. Further, by focussing exclusively on studies reporting longer-term effects, it aimed to report a more in-depth and nuanced picture of clinical characteristics and outcomes than was previously available in the literature. To maximise the reliability of reported findings, it draws exclusively on peer-reviewed studies as well as presents a quality assessment of included papers.

# Methods

## Search strategy

Three databases, ProQuest (APA Psychinfo, PTSDpubs, Social Science Premium Collection), Web of Science core collection and EBSCOhost (Cinahl and Medline), were searched with the search terms given in Table 1. Those search terms were derived from a preliminary literature scoping exercise. Language was restricted to English. Selected articles were published in peer-reviewed journals only. No limit on publication date was specified. The initial search resulted in 1,030 studies (Figure 1). Reference lists of relevant meta-analyses (Bowen & Neill, 2013; Gillis et al., 2016; Bettmann et al., 2016), as well as key papers within the literature, were searched, resulting in 15 additional papers.

**Table 1.** Search terms

Wilderness Therapy* OR Adventure Therapy OR Wilderness Treatment OR "Therapeutic camping" OR "Therapeutic camps" OR Outdoor adventure programming OR Outdoor therapeutic program* OR Outdoor adventure OR Adventure-based counsel* OR Adventure counsel* OR Therapeutic adventure Outdoors OR Outdoor behavioural health* OR Adventure-based therapy OR Adventure-based experiential therapy AND "Mental Health" OR Psychosis OR outpatient OR Psychiatric OR Psychiatry OR Personality disorder OR Bipolar OR Schizo* OR Post-traumatic OR PTSD OR Serious mental illness OR "Mentally Ill" OR Mental illness OR Depression OR Anxiety OR mood disorder OR eating disorder OR Obsessive-compulsive disorder OR OCD.

## Screening

The resulting 774 non-duplicate papers were screened by the first author based on title and abstract (see selection criteria Table 2). Full-text articles of the 67 remaining papers were then reviewed with the same criteria, resulting in 13 publications for inclusion in the study. In

cases where there was ambiguity over inclusion, full-text articles were reviewed by the
second author. The PRISMA flow diagram displays the screening process (Figure 1).

**Table 2.** Selection Criteria

| |
|---|
| *Inclusion Criteria* |
| • The article describes the target population for the intervention as having mental health or emotional disorders. |
| • The intervention involves an immersive environmental shift defined as at least one overnight stay outside of their usual environment. |
| • The intervention includes an element of adventure or challenge-based activity for psychological or behavioural purposes. |
| • The study includes a minimum of three months post-intervention follow-up. |
| *Exclusion criteria* |
| • Data already published in included main study |
| • Studies adopting single-case designs |
| • Studies adopting solely qualitative methodologies |
| • Non-primary research (e.g. systematic reviews) |
| • Where the target population is principally selected based on physical health conditions or disability, criminal and delinquent behaviours or learning disabilities |

**Figure 1.** PRISMA flow of systematic review studies
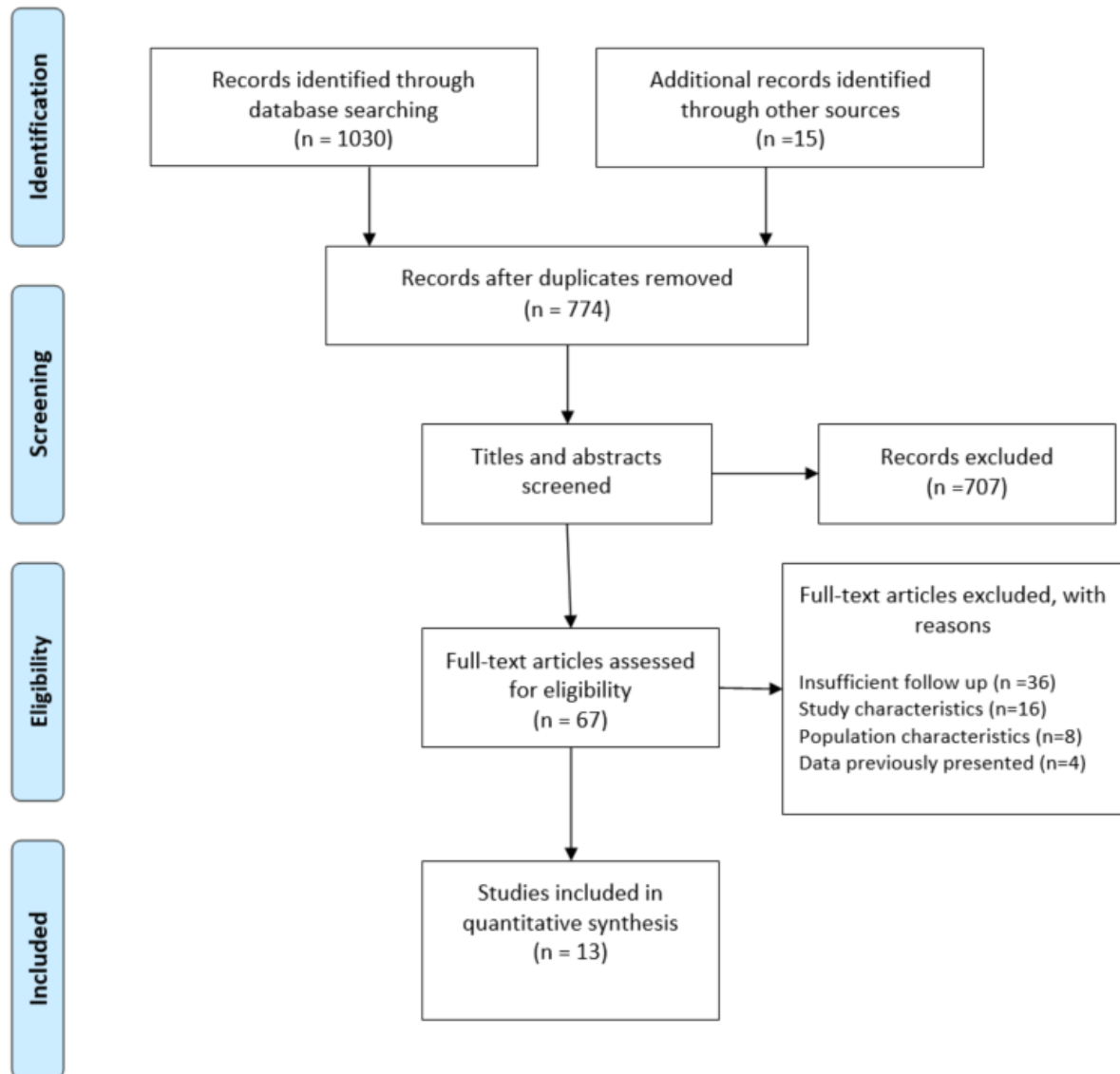


**Quality assessment**

A quality assessment was conducted on the 13 selected papers using the Quality Assessment

Tool for Quantitative Studies (QATQS) (Appendix 1), tool chosen for its quality and

suitability for non-Randomised Clinical Trials (non-RCTs) as recommended by Deeks et al.

(2003). The global quality rating on the QATQS assesses study quality and sources of bias in the following domains: selection bias, study design, confounders, blinding, data collection methods, and withdrawals and drop-outs, each rated *weak*, *moderate* or *strong*. A global rating of *strong* (no *weak* ratings), *moderate* (one *weak* rating) or *weak* (two or more *weak* ratings) is computed from the six domains. All included studies were rated by the first and second authors and, in line with QATQS guidance, any discrepancies discussed.

**Data extraction and synthesis**

Data were systematically extracted from studies and displayed in tables. There was variation in reporting of data and analyses within the studies which had a bearing on presentation of long-term outcome results. Single cohort designs tended to present pre- to post- intervention effects and then post- to follow-up effects, whereas controlled designs conducted an analysis of variance with time point (including follow-up) and intervention condition as independent variables. Statistics of significant effects were included in the results as reported in the studies (including significance thresholds assumed, e.g. Gabrielsen et al., (2019) uses a p-value of 0.1 to assert significance). Some studies presented the effect size value, Cohen's d (Cohen, 1988), of within-group pre-intervention to follow-up change, with its associated p-value. For comparability, Cohen's d estimates were re-calculated here for all studies.

Due to heterogeneity across study interventions, and participant characteristics, as well as weaknesses in studies quality, the calculation of overall effect sizes through meta-analysis would potentially be misleading and was therefore not performed.

**Table 3.** List of peer-reviewed publications included in the review with description of design, samples, intervention and quality ratings.

| Authors *Country* | Sample — Demographics (and sample size n) | Sample — Clinical Characteristics | Intervention | Design / Follow-up (Length and sample size n) | Global Quality rating (QATQS) |
|---|---|---|---|---|---|
| Bowen, Neill, & Crisp (2016) *Australia* | Intervention: <br> - Age range: 12-1; mean= 14.6 <br> - Gender: Female 58% <br> - n= 36 <br> Control: NA | Outpatients of an Adolescent Mental Health Service <br> Presentations: <br> - Conduct/ behaviour (29%) <br> - Depression (21%) <br> - Anxiety (14%) <br> - Identity/ self-esteem (14%) <br> - Relationship problems (14%) <br> - Psychosis (8%) | **Wilderness Adventure Therapy (WAT)** <br> 10-week manualised intervention: <br> - 7 individual days <br> - 2 day overnight training <br> - 5 day expedition <br> <u>Therapy</u>: Multi systemic group therapy | No control <br> Follow-up: 3 months; n=36 | **Weak** |
| Combs, Hoag, Roberts, & Javorski (2016) *USA* | Intervention: <br> - Age range not reported; mean= 16.2 <br> - Gender: Female 32% (of adolescents) <br> - n= 659 (parents of adolescents) <br> Control: NA | Post discharge sample <br> Presentations DSM-IV: <br> - Mood disorders (75%) <br> - Substance-use disorders (63%) <br> - Anxiety disorders (58%) <br> - Behavioural disorders (59 %) <br> - Attachment disorders (5%) <br> - Pervasive developmental disorders PDD (1%) <br> - Learning disorders (5%) | **Outdoor Behavioural Health Care (OBHC)** <br> 10.4 weeks in field (mean length): <br> - Expedition (hiking) in wilderness <br> - Experiential skills (e.g. fire making, shelter building) <br> <u>Therapy</u>: Cognitive Behavioural therapy, Choice therapy, Family systems, Mindfulness | No control <br> Follow-up: <br> random selection of N=200 <br> - 6 months; n = 99 <br> - 18 months; n= 106 | **Weak** |
| DeMille et al. (2018) *USA* | Intervention: <br> - Age range 12-17; mean= 15.7 <br> - Gender: Female 33% <br> - n= 60 <br> Control: TAU <br> - Age range 12-7; mean= 14.98 <br> - Gender: Female 36% <br> - n= 60 | Referred for emotional behavioural and substance use disorders and been unsuccessful with less restrictive treatment modalities <br><br> Control: <br> Matched sample of 60 parents who inquired into OBHC but sought alternative intervention with stratification based on ethnicity age and YOQ scores | **Outdoor Behavioural Health Care (OBHC)** <br> Wilderness expedition mean= 80.5 days <br> <u>Therapy</u>: Integrated model giving intervention for mental health substance use and health; Mental health providers two days a week in field; Individual and group psychotherapy; Weekly family therapy | Non-equivalent control group <br> Follow-up: 12 months; <br> intervention n =60 <br> control n = 60 <br> (Only included completed data sets 27.9% of those who agreed to participate in TAU) | **Weak** |
| Eikenaes, Gude, & Hoffart (2006) *Norway* | Intervention: <br> - Age range not reported; mean= 36 <br> - Gender: Female 56% <br> - n= 16 <br> Control: comparison group <br> - Age range not reported; mean= 37 <br> - Gender: Female 68% <br> - n= 37 | Applicants to psychiatric hospital with diagnosis of avoidant personality disorder according to DSM-IV <br><br> Control: <br> Patients previously treated in psychiatric hospital between 1992 and 1994 | **Integrated Wilderness Therapy (IWT)** <br> 6-day wilderness trip in non-civilized area <br> 3-day canoeing trip <br> <u>Therapy</u>: Daily group therapy sessions in supplement to treatment in hospital (group sessions psychodynamic approaches + art therapy) | Non-equivalent control group <br> Follow-up: 12 months; n=16 | **Moderate** |

| Authors / Country | Sample — Demographics (and sample size n) | Sample — Clinical Characteristics | Intervention | Design / Follow-up (Length and sample size n) | Global Quality rating (QATQS) |
|---|---|---|---|---|---|
| Gabrielsen et al. (2019) *Norway* | Intervention:<br>- Age range 16-18; mean= 16.5<br>- Gender: Female 66%<br>- n= 32<br>Control: NA | Participants were admitted to the specialized mental health care system due to the severity of their mental health (social anxiety depression behaviour disturbance, adjustment disorders and mental fatigue) | **Friluftsterapi (Wilderness Therapy)**<br>8-10 week duration:<br>- 8 single days<br>- 2 overnight trips (each 3-6 days)<br><u>Therapy</u>: Ongoing group and individual therapy | No control<br>Follow-up: 12 months; n=19 | **Weak** |
| Harper, Russell, Cooley, & Cupples (2007) *USA* | Intervention:<br>- Age range 13-18; mean= 15.5<br>- Gender: Female 38 %<br>- n= 252<br>Control: NA | Emotional and behavioural or substance use diagnosis | **Wilderness Therapy Program**<br>21 days expedition backpacking and rafting<br><u>Therapy</u>: Individual and group therapy; Systemic approach with family participation in pre and post trip processes. | No control<br>Follow-up:<br>- 2 months; n= 124<br>- 12 Months; n not specified | **Weak** |
| Lewis (2013) *USA* | Intervention:<br>- Age range 13-17; mean= 15.69<br>- Gender: Female 34 %<br>- n= 190<br>Control: NA | Adolescent's parents sought admission for mental health and substance related treatment | **Outdoor Behavioural Health Care (OBHC)**<br>57.48 days in field (mean)<br><u>Therapy</u>: Individualised treatment plans; Weekly group and individual therapy; Psycho-educational training | No control<br>Follow-up:<br>- 3 months; n= 138<br>- 12 months; n= 120 | **Weak** |
| McLendon, McLendon, Petr, Kapp, & Mooradian (2009) *USA* | Intervention:<br>- Age ranges 6-17 and 27-64; mean= 12.1 and 40.9<br>- Gender not reported<br>- n= 52 children and 41 adults (93 total)<br>Control: comparison group<br>- Age ranges 8-20 and 30-55; mean= 12.9 and 41.3<br>- Gender not reported<br>- n= 31 children and 26 adults (57 total) | Referred from Community Mental Health Centre services<br>Criteria:<br>- Need for family therapy to address behaviour problems of a Seriously Emotionally Disturbed (SED) child or a problematic adult relationship<br>- SED had a diagnosable mental disorder | **Therapeutic wilderness family camp**<br>3 days wilderness camps (3-5 families) adjunct to CMHC engagement<br><u>Therapy</u>: Adults attendee three x 3 hour Family directed Structural Therapy (FDST) groups with concurrent child groups, one of these family groups included an adventure based activity | Non-equivalent control group<br>Follow-up: 6 months; n= 30 | **Moderate** |
| Roberts, Stroud, Hoag, & Massey (2017) *USA* | Intervention:<br>- Age range 18-32; mean= 20.3<br>- Gender: Female 17.7 %<br>- n= 186<br>Control: NA | Primary diagnosis leading to seeking of treatment<br>Presentations:<br>- Mood disorders (38.7%)<br>- Substance use disorders 30.6%<br>- Anxiety disorders 13.4%<br>- Pervasive development<br>- Behaviour and attachment disorders 17.2% | **Outdoor Behavioural Health Care (OBHC)**<br>5-25 weeks in wilderness<br><u>Therapy</u>: Weekly individual and group therapy | No control<br>Follow-up:<br>- 6 months; n= 81<br>- 18 months; n= 79 | **Weak** |

| Authors<br>*Country* | Sample<br>Demographics (and sample size n) | Clinical Characteristics | Intervention | Design / Follow-up (Length and sample size n) | Global Quality rating (QATQS) |
|---|---|---|---|---|---|
| Russell (2003)<br>*USA* | Intervention:<br> - Age range not reported; mean not reported; 75% of participants of age 16-18<br> - Gender: Female 31%<br> - n= 858<br>Control: NA | Diagnosed with Variety of Disorders (DSM-IV) including:<br> - Oppositional defiant disorder (29%)<br> - Substance disorders (26%)<br> - Depressive disorders (15%) | **Outdoor Behavioural Health Care (OBHC)**<br>Programs differed in length 3 weeks to 180 days (only 21 days in wilderness) - Average 45 days<br><u>Therapy</u>: Clinical supervisor and masters level counsellors visiting groups in field (3-6 day intervals) | No Control<br>Follow-up: 12 months;<br>Random sample of Parent n= 144<br>Clients n= 99 | **Weak** |
| Russell (2007)<br>*USA* | Intervention:<br> - Age range not reported; mean= 15.9; 67% of participants of age 16-17<br> - Gender: Female 32%<br> - n= 774<br>Control: NA | > 90% diagnosed DSM-IV<br>Mental health, substance use disorders and combined mental health and substance use | **Outdoor Behavioural Health Care (OBHC)**<br>Median 49 days in wilderness<br>Other details not specified | No control<br>Follow-up: 6 months;<br>n= 260 parents and youth randomly selected | **Weak** |
| Taylor et al. (2017)<br>*Australia* | Intervention:<br> - Age range 26-63; mean= 44.5<br> - Gender: Female 67.8%<br> - n= 28<br>Control: TAU<br> - Age range 21-84; mean= 48.87<br> - Gender: Female 52.2%<br> - n= 23 | Diagnosis of severe mental illness<br>Depression, bipolar, schizophrenia and schizoaffective disorder<br><br>Control:<br>Diagnosis Mental Illness | **Therapeutic Recreation**<br>5 day camp - Variety of both adventurous / recreation as well as more mindful activities: high ropes, rock climbing, giant swing, flying fox daily tai chi evening bush dance art and craft and problem solving and team building pursuits<br><u>Therapy</u>: TAU | Non-randomised comparison group<br>Follow-up: 3 months;<br>    intervention n=26<br>    control n= 20 | **Weak** |
| Voruganti et al. (2006)<br>*Canada* | Intervention:<br> - Age range not specified; mean= 32.04 (SD 7.51)<br> - Gender: Female 17.3%<br> - n= 23<br>Control: TAU<br> - Age range not specified; mean= 40.83 (SD 9.44)<br> - Gender: Female 25.8%<br> - n= 31 | Diagnosis of schizophrenia or schizoaffective disorder but clinical stability of 6 months or longer | **Going Beyond**<br>16 weekly sessions (summer and winter adventurous activities) and camping trips over 3 days<br><u>Therapy</u>: TAU | Waitlist Control<br>Follow-up: 12 months<br>    intervention n= 23<br>    control n= 31 | **Strong** |

## Quality assessment

A summary of each study's sample, intervention type, design, outcome measures, follow-up period and global quality rating, is given in Table 3. The majority of studies (9/13) did not use a control group and no studies employed randomisation. All studies except for three of them had a global rating of *weak*. This was accounted for by consistent ratings of *weak* on the blinding domain as well as ratings of *weak* in either withdrawals and dropout or confounders (Table 4). In all but one study, selection bias was *moderate* and all studies were rated as *moderate* for design. The quality assessment indicated potential biases, and the subsequent results should, therefore, be interpreted with caution.

**Table 4:** Study ratings on the Quality Assessment Tool for Quantitative Studies

| Study | Selection Bias | Study design | confounders | Blinding | Data collection Method | Withdrawals and drop out | Global rating |
|---|---|---|---|---|---|---|---|
| Bowen, Neill, & Crisp (2016) | M | M | W | W | S | W | **Weak** |
| Combs, Hoag, Roberts, & Javorski (2016) | M | M | W | W | S | M | **Weak** |
| DeMille et al. (2018) | M | M | W | W | S | W | **Weak** |
| Eikenaes, Gude, & Hoffart (2006) | M | M | M | W | S | M | **Moderate** |
| Gabrielsen et al. (2018) | M | M | M | W | W | M | **Weak** |
| Harper, Russell, Cooley, & Cupples (2007) | M | M | M | W | W | W | **Weak** |
| Lewis (2013) | M | M | W | W | S | M | **Weak** |
| McLendon, McLendon, Petr, Kapp, & Mooradian (2009) | M | M | M | W | S | S | **Moderate** |
| Roberts, Stroud, Hoag, & Massey (2017) | M | M | W | W | M | W | **Weak** |
| Russell (2003) | M | M | W | W | S | W | **Weak** |
| Russell (2007) | M | M | W | W | S | M | **Weak** |
| Taylor et al., (2017) | W | M | W | W | W | S | **Weak** |
| Voruganti et al., (2006) | M | S | M | M | S | S | **Strong** |
| W = Weak, M= Moderate, S = Strong | | | | | | | |

## Population characteristics

Given the relative distinctness of the participants' characteristics and interventions (Table 3), the current review discusses studies and their outcomes with respect to two categories: (1) youth and adolescents with mixed presentations, (2) adults with specific presentations.

Nine studies primarily targeted youth and adolescents (mean age 17.2) with most studies falling in ranges of 13-18 years. Roberts et al. (2018) reported an older and broader age range (18-32, mean 20.3), but as the clinical presentations and intervention were comparable, it was included in the youth and adolescent category. Individuals in these studies had mixed mental health, emotional and behavioural disorders. The mean gender representation across these studies was 38.8% female (one study did not report the ratio). A further study (McLendon et al., 2009) employed a family therapy model for 'seriously emotionally disturbed children' and included both children (mean age 12.5) and their parents (41.1) but did not report sample age ranges or gender. This study is also included under youth and adolescent despite sharing less commonality with the others. Three studies targeted specific mental health conditions within adult populations (mean age 40.9), including severe mental illness (Taylor et al., 2017), schizophrenia and schizoaffective disorder (Voruganti et al., 2006) and avoidant personality disorder (Eikenaes et al., 2006). Mean gender representation across these studies was 48.8 % female.

## Intervention characteristics

The interventions serving youth and adolescents with mixed presentations were typically longer than those for adult samples, i.e. 14 - 180 versus 5 - 19 treatment days. The majority of studies (8) were conducted in the USA and seven of these utilised a form of wilderness therapy described as Outdoor Behavioural Health Care (OBHC) (Combs et al., 2016; DeMille et al., 2018; Harper et al., 2007; Lewis 2013; Roberts et al., 2017; Russel, 2003; Russell, 2007). They included extended periods of time on wilderness expeditions, and integrated both

individual- and group- based therapy. These studies relied on convenience samples from a range of programmes, so information regarding programme details, treatment fidelity and referral were often absent. From what the wider literature on OBHC suggested, youth are typically referred by parents, and non-consensual transportation to programmes is common practice, although few research studies report this (Tucker, Combs, Bettmann, Chang, et al., 2018). Many also go on to continued residential care or supported transition following the wilderness intervention (DeMille et al., 2018). Two studies were conducted outside of the USA: Wilderness Adventure Therapy (WAT) in Australia (Bowen et al., 2016) and 'Friluftsterapi', a wilderness therapy programme in Norway (Gabrielsen et al., 2019). They were comparable in time and structure, taking place over an 8-10-week period with 7-8 individual days followed by two overnight trips of no longer than 6 days and were thus significantly shorter than their American counterparts. They used individual and group therapy. McLendon et al. (2009) employed a family therapy intervention conducted over a three-day wilderness camp using Family Directed Structural Therapy (FDST) including both parents and children.

The interventions targeting adults with specific mental health conditions were adjunctive and offered fewer contact days (Voruganti et al., 2006; Eikenaes et al., 2006; Taylor t al., 2017). The Going Beyond intervention (Voruganti et al., 2006) took place over a year and included 16 weekly sessions of activities and a three-day camping trip. Integrated Wilderness Therapy (IWT) (Eikenaes et al., 2006) offered a six-day wilderness trip and three-day canoeing trip in supplement to the hospital treatment. Therapeutic Recreation (Taylor et al., 2017) involved a five-day camp introducing both adventurous and more mindful activities.

**Study Design**

Of the thirteen studies reviewed, nine employed single group repeated measures designs. The other four utilized a variety of non-randomised control groups, including a non-equivalent control group (DeMille et al., 2018; McClendon et al., 2009), routine data from previous inpatient intervention (Eikenaes et al., 2006) and waitlist control (Voruganti et al., 2006). There was considerable variation in sample size across studies (n= 16-858), with the largest studies pooling routinely collected data from OBHC programmes (Russell, 2003; Russell, 2007, Lewis 2013; Combs et al 2016; Harper et al 2007, Roberts et al 2017; DeMille et al 2018). Follow-up samples in these large studies were, however, substantially smaller, either due to attrition or the use of a random subsample (Russell, 2003; Russell, 2007; Combs et al., 2016). In attempts to control for bias, several studies compared baseline characteristics of follow-up responders and non-responders, reporting the absence of significant differences (Roberts, Stroud, Hoag, & Massey, 2017; Lewis, 2013; Gabrielsen et al., 2018). DeMille et al. (2018) only included complete data sets and Harper et al. (2007) had significant attrition and used maximum likelihood estimates for missing follow-up data. McLendon et al. (2009) did not report how they dealt with missing data or their attrition rates. Other studies had low attrition rates at follow-up (Bowen et al., 2016; Voruganti et al., 2006), Eikenaes et al. (2006) reporting no attrition and Taylor et al. (2017) reporting five dropouts across intervention and control condition.

**Outcomes**

A summary of statistical outcomes and pre-intervention to follow-up effect sizes are presented in Tables 5 and 6. A range of self-report, or parent-report, rated measures were used across the studies for a variety of psychological and behavioural constructs. For clarity of synthesis, they were characterised under 'Clinical' (e.g. symptoms, depression, anxiety, and emotional distress), 'Self-concept and resilience' (e.g. self-esteem, global outlook, and

resilience) and 'Behavioural' (e.g. global functioning, conduct, and behaviour). Several

measures, including The Youth Outcome Questionnaire (YOQ) and Youth Self-Report

(YSR), comprise subscales which cover a range of outcome categories and were categorised

as clinical outcomes since the greatest proportion of subscales related to this category.

**Table 5.** Long-term adventure therapy outcomes for youth and adolescents with mixed clinical presentations.

| Outcome category | Measure | Within group outcomes | | | Pre-intervention | | | Follow-up | | | Effect size (pre- to follow-up) Cohen's d (within group) | Follow-up (months) | Study | Design |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | pre-post | post-follow-up | pre-follow-up | mean | SD | n | mean | SD | n | | | | |
| ***Clinical*** | | | | | | | | | | | | | | |
| Interpersonal distress, somatic symptoms, interpersonal relationships, social problems, behavioural dysfunction, critical items | YOQ - PR | + | 0 | + | 100.29 | 25.41 | 90 | 38.05 | 35.91 | 106 | -2.00 | 18 | Combs et al., 2016 | No control |
| | | | | + | (T)107.23 | 25.5 | 60 | (T)51.53 | 37.6 | 60 | (T) -1.73 | 12 | DeMille et al., 2018 | Non-equivalent Control |
| | | | | | (C)106.87 | 31.6 | 60 | (C)86.92 | 45.1 | 60 | (C) -0.51 | | | |
| | | + | 0 | + | 97.46 | 28.02 | 144 | 48.67 | 39.63 | 144 | -1.42 | 12 | Russell, 2003 | No Control |
| | YOQ – SR | 0 | + | | 82.3 | 37.8 | 32 | 66.8 | 42.1 | 19 | -0.39 | 12 | Gabrielsen et al., 2018 | No control |
| | | + | 0 | + | 68.3 | 34.14 | 99 | 38.61 | 31.83 | 99 | -0.90 | 12 | Russell, 2003 | No control |
| Depression, anxiety and stress | DASS | | | + | - | - | | - | - | - | - | 6 | Russell, 2007 | No control |
| Symptoms, distress, social role, interpersonal relationships | OQ | + | 0 | + | 71.38 | 26.06 | 159 | 49.15 | 24.99 | 73 | -0.87 | 18 | Roberts et al., 2017 | No control |
| Depression | BDI-II | + | 0 | + | 42.33 | 15.26 | 36 | 48.61 | 11.3 | 36 | 0.47 | 3 | Bowen et al., 2016 | No control |
| | HADS Dep | 0 | + | | 8.5 | 4.3 | 32 | 6.8 | 4.4 | 19 | -0.39 | 12 | Gabrielsen et al., 2018 | No control |
| Anxiety | HADS Anx | 0 | + | | 11.6 | 4.9 | 32 | 8.6 | 5.3 | 19 | -0.59 | 12 | Gabrielsen et al., 2018 | No control |
| Suicidal proneness | LAS-SF | 0 | + | | 15.85 | 3.95 | 36 | 17.52 | 3.77 | 36 | 0.43 | 3 | Bowen et al., 2016 | No control |
| Substance Use | TOP SA | + | + | + | 5.05 | 4.89 | 165 | 1.28 | 2.59 | 117 | -0.96 | 12 | Lewis, 2013 | No control |
| | PICS | | | + | - | - | - | - | - | - | - | 6 | Russell, 2007 | No control |
| Emotional / behavioural function | YSR | 0 | 0 | 0 | 36.51 | 7.92 | 36 | 39.44 | 7.14 | 36 | 0.39 | 3 | Bowen et al., 2016 | No control |
| ***Self-concept, resilience*** | | | | | | | | | | | | | | |
| Global outlook | SOC | 0 | + | | 48.5 | 14.2 | 32 | 53.8 | 15 | 19 | 0.36 | 12 | Gabrielsen et al., 2018 | No control |
| Life satisfaction | SWLS | 0 | 0 | 0 | 16.4 | 6.4 | 32 | 18.4 | 8.5 | 19 | 0.27 | 12 | Gabrielsen et al., 2018 | No control |
| Self-efficacy | GSE | 0 | + | | 24.5 | 6.4 | 32 | 28.4 | 6.6 | 19 | 0.60 | 12 | Gabrielsen et al., 2018 | No control |
| Self-esteem | CSEI | 0 | 0 | 0 | 48.58 | 20.71 | 36 | 54.47 | 15.5 | 36 | 0.32 | 3 | Bowen et al., 2016 | No control |
| Resilience | RQ | + | 0 | + | 33.53 | 12.09 | 36 | 36 | 9.51 | 36 | 0.23 | 3 | Bowen et al., 2016 | No control |
| Mindfulness | FFMQ | 0 | 0 | 0 | 112.7 | 17.7 | 32 | - | - | 19 | - | 12 | Gabrielsen et al., 2018 | No control |
| Health | SRH | 0 | 0 | 0 | 2.5 | 0.8 | 32 | 2.7 | 0.8 | 19 | 0.25 | 12 | Gabrielsen et al., 2018 | No control |

| Outcome category | Measure | Within group outcomes | | | Pre-intervention | | | Follow-up | | | Effect size (pre- to follow-up) Cohen's d (within group) | Follow-up (months) | Study | Design |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | pre-post | post-follow-up | pre-follow-up | mean | SD | n | mean | SD | n | | | | |
| **_Behavioural_** | | | | | | | | | | | | | | |
| Life effectiveness | LEQ | 0 | + | | 4.2 | 1.5 | 32 | 5 | 1 | 19 | 0.63 | 12 | Gabrielsen et al., 2018 | No control |
| Family Functioning | CORE FM | 0 | - | | 13.25 | 4.19 | 36 | 11.48 | 3.85 | 36 | -0.44 | 3 | Bowen et al., 2016 | No control |
| Conduct | TOP conduct | + | + | + | 4.8 | 5.67 | 165 | 0.52 | 2.29 | 120 | -0.99 | 12 | Lewis, 2013 | No control |
| Family functioning - adaptability | FACES II | 0 | 0 | 0 | - | - | - | - | - | - | - | 6 | McLendon et al., 2009 | Non-equivalent control |
| Child behaviour (total competence and Internalising) | CBCL | | | 0 | - | - | - | - | - | - | - | 6 | McLendon et al., 2009 | Non-equivalent control |
| Child behaviour (total problem and externalising) | CBCL | | | + | - | - | - | - | - | - | - | 6 | McLendon et al., 2009 | Non-equivalent control |

+ statistically significant (desirable effect) p ≤ .05 reported in study; - statistically significant (undesirable effect) p ≤ .05 reported in study; 0 statistically non-significant effect p > .05 reported in study
(T) = Intervention condition; (C) = Control condition

**Measures:** Y-OQ-SR = Youth Outcome Questionnaire self-rated 2.0, Y-OQ-PR = Youth Outcome Questionnaire parent-rated = 2.0, YSR = Youth Self-Report, DASS = Depression Anxiety and Stress Scale, OQ = Outcome Questionnaire 45.2, BDI = Beck Depression Inventory-II, HADS = Hospital Anxiety and Depression Scale, LAS-SF = Life Attitudes Schedule – Short Form, TOP = Youth Version of the Treatment Outcome Package (SA Substance Abuse; conduct), PICS = Personal Involvement with Chemicals (Subscale of Personal Experience Inventory), SOC = Sense of Coherence Scale, SWLS = Satisfaction With Life Scale, GSE = General Perceived Self-Efficacy Scale, CSEI = Coopersmith Self-Esteem Inventory, RQ = Resilience Questionnaire, FFMQ = Five Facet Mindfulness Questionnaire, SRH = Self-Rated Health, LEQ = Life Effectiveness Questionnaire, CORE FM = CORE Family Functioning Questionnaire, FACES II = Family Adaptability and Cohesion Scale II, CBCL = Child Behaviour Checklist (parent version).

**Table 6.** Long-term adventure therapy outcomes for adults with specific mental health conditions.

| Outcome category | Measure | Within group outcomes | | | Pre-intervention | | | Follow-up | | | Effect size (pre- to follow-up) Cohen's d (within group) | Follow-up (months) | Study | Design |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | pre-post | post-follow-up | pre-follow-up | mean | SD | n | mean | SD | n | | | | |
| *Clinical* | | | | | | | | | | | | | | |
| Depression | BDI | | | 0 | (T) 19.4 (C) 22.5 | 8 9 | 16 37 | (T) 18.4 (C) 15.9 | 9.4 11.7 | 16 37 | (T) -0.11 (C) -0.63 | 12 | Eikenaes et al., 2006 | Non-randomised active control |
| Social Phobia | PARS | | | 0 | (T) 2.2 - | 1 - | 16 - | (T) 1.8 - | 0.81 - | 16 - | (T) -0.44 - | 12 | Eikenaes et al., 2006 | Non-randomised active control |
| Positive and negative symptoms | PANSS | | | 0 | (T) 71.24 (C) 66.58 | 11.81 8.9 | 23 31 | (T) 67.13 (C) 64.03 | 11.56 8.4 | 23 31 | (T) -0.35 (C) -0.29 | 12 | Voruganti et al., 2006 | Waitlist control |
| Symptoms | GSI index of SCL-90 | | | + | (T) 1.5 (C) 1.6 | 0.58 0.72 | 16 37 | (T) 1.4 (C) 1.2 | 0.54 0.81 | 16 37 | (T) -0.18 (C) -0.52 | 12 | Eikenaes et al., 2006 | Non-randomised active control |
| Interpersonal problems socialisation and personality | IIP | | | + | (T) 2.1 (C) 1.8 | 0.41 0.6 | 16 37 | (T) 1.9 (C) 1.5 | 0.71 0.74 | 16 37 | (T) -0.34 (C) -0.44 | 12 | Eikenaes et al., 2006 | Non-randomised active control |
| Avoidant traits | PDQ 4+ | | | + | (T) 41.8 - | 10.8 - | 16 - | (T) 34 - | 10.9 - | 16 - | (T) -0.72 - | 12 | Eikenaes et al., 2006 | Non-randomised active control |
| *Self-concept, resilience, Quality of Life* | | | | | | | | | | | | | | |
| Self-Image | ASIS | | | + | (T) 14.08 (C) 15.77 | 4.06 5.33 | 23 31 | (T) 19.34 (C) 15.5 | 4.43 4.9 | 23 31 | (T) 1.24 (C) 0.05 | 12 | Voruganti et al., 2006 | Waitlist control |
| Self- determination | SDS Awareness of self | + | 0 | + | (T) 10.81 (C) 14.65 | 8.25 5.76 | 28 23 | (T) 18.58 (C) 15.8 | 5.1 5.6 | 26 20 | (T) 1.13 (C) 0.20 | 3 | Taylor et al., 2017 | Non-equivalent control |
| | SDS perceived choice | + | 0 | + | (T) 11.51 (C) 16.48 | 8.23 5.2 | 28 23 | (T) 17.27 (C) 16.54 | 5.17 5.15 | 26 20 | (T) 0.84 (C) 0.01 | 3 | Taylor et al., 2017 | Non-equivalent control |
| Subjective cognition | SSTICS | | | + | (T) 37.3 (C) 36.8 | 16.6 13.92 | 23 31 | (T) 29.3 (C) 37.48 | 14.8 13.3 | 23 31 | (T) -0.51 (C) 0.07 | 12 | Voruganti et al., 2006 | Waitlist control |
| *Behavioural Functional* | | | | | | | | | | | | | | |
| Global Functioning | GAF | | | + | (T) 53.26 (C) 54.19 | 3.71 4.1 | 23 31 | (T) 58.27 (C) 55.25 | 3.09 4 | 23 31 | (T) 1.47 (C) 0.26 | 12 | Voruganti et al., 2006 | Waitlist control |
| Sickness impact | SIP | | | 0 | (T) 32.13 (C) 34.12 | 14.7 18.03 | 23 31 | (T) 22.95 (C) 34.16 | 12.9 17 | 23 31 | (T) -0.66 (C) 0.00 | 12 | Voruganti et al., 2006 | Waitlist control |

+ statistically significant (desirable effect) p ≤.05 reported in study; - statistically significant (undesirable effect) p ≤.05 reported in study; 0 statistically non-significant effect p > .05 reported in study
(T) = Intervention condition; (C) = Control condition

**Measures:** BDI = Beck Depression Inventory-II, PARS = Phobic Avoidance Rating Scale, PANSS = Positive and Negative Syndromes Scale, GSI index SCL-90 = Global Symptom Index of the Symptom Checklist -90, IIP = Inventory of Interpersonal Problems, PDQ4+ = Personality Diagnostic Questionnaire, ASIS = Adult Self-Image Scale = ASIS, SDS = Self-Determination Scale, SSTICS = Subjective Scale To Investigate Cognition in Schizophrenia, GAF = Global Assessment of Functioning, SIP = Sickness Impact Profile = SIP.

*Youth and adolescents with mixed diagnosis (Table 5)*

*Clinical outcomes*

Across studies, most clinical outcomes showed significant positive follow-up effects. Three studies used the parent-rated YOQ-PR (see measure acronyms in Tables 5 and 6) as a primary outcome. YOQ is a multi-domain measure combining indexes for interpersonal distress, somatic symptoms, relationships and social problems, behavioural dysfunction and critical items. Both Combs et al. (2016) and Russell (2003) demonstrated significant improvements on the YOQ-PR over the intervention period (t(337)= 35.0, p=.001 and t(371)= 24.932, p<.001) respectively). There was then no significant change between discharge and the follow-ups, which indicated maintenance of the significant improvements reported over intervention. The pre-intervention to the respective twelve- and eighteen-month follow-up effect sizes of each study were large (d= -2.0 and -1.42 respectively). Combs et al. reported that the mean scores fell within a clinical range pre-intervention but within the normal range on discharge and follow-up. However, Russell also reported large discrepancies between parent and client ratings, with parents reporting larger improvements than clients. In their study, self-rated outcomes of the YOQ-SR showed similar patterns to the YOQ-PR but with a lower effect of d= 0.9. A different pattern was reported by Gabrielsen et al. (2019), using YOQ-SR, where no change occurred over the intervention but it did in the twelve months follow-up period (p<0.05) (pre-intervention to follow-up d= 0.39).

The only study to use a comparison group demonstrated significant improvements from pre-intervention to twelve-month follow-up on the YOQ-PR in both groups (DeMille et al., 2018). An ANOVA revealed a significant interaction for time and group with improvements in the intervention group 2.75 times greater than TAU. There was a large effect size on the treatment group from pre-intervention to follow-up (d= -1.73), and a medium one on the control group (d= -0.51).

Roberts et al. (2017) reported significant improvements in symptom distress, social role and interpersonal relationships scores noted over intervention on the OQ (at three-time points, all p<.001) that were maintained at eighteen-month follow-up (p= .246), with a large pre-intervention to follow-up effect size (d= 0.87).

Russell (2007) demonstrated a significant effect over time (admission, discharge to six months) for depression anxiety and stress on the DASS ($\lambda$ =0.779, F(2, 207)=25.98, p<.001). They did not report effect sizes or individual scale items, but that across all three subscale scores remained in the mild category at six months follow-up.

Where individual clinical scales were reported, positive follow-up outcomes were also apparent. Significant reduction in self-reported depression on the BDI-II (d= 0.47 p<0.01) over the intervention period was maintained at three months follow-up (Bowen et al., 2016). Gabrielsen et al. (2018), despite not finding significant changes over intervention, reported a significant pre-intervention to twelve-month follow-up effect for depression (d= 0.40, p<0.1) and anxiety (d= 0.59, p<.01) on the HADS. The one study reporting suicidal proneness outside of a multi-domain measure demonstrated no change over the intervention period but a significant improvement from post-intervention to three-month follow-up (d= 0.43) on the LAS-SF (Bowen et al., 2016).

Substance use was reported in two studies. Lewis (2013) demonstrated significant improvements over intervention (t(165)= 7.51, p<.001) and further significant improvements from post-intervention to twelve-month follow-up (t = -2.35, p<.5) (pre-intervention to follow-up d= 0.96) on the TOP. Russell (2007) conducted an analysis based on group category, substance use, mental health and concurrent mental health and substance use, and reported significant increases in the numbers reporting not using alcohol and marijuana

within the substance and concurrent diagnostic groups from pre-intervention to six-month follow-up on the PICS.

The only clinical measure reported on for which there was no intervention change or change from post-intervention to follow-up was emotional and behavioural functioning (YSR) (Bowen et al., 2016).

*Self-concept, Resilience and Quality of Life Outcomes*

Only two studies used measures to tap into self-concept, quality of life or positive psychological traits such as resilience self-esteem and mindfulness (Gabrielsen et al., 2019; and Bowen et al., 2016). No significant changes in global outlook, life satisfaction, self-efficacy, mindfulness, or health were evident over the intervention (Gabrielsen et al., 2019). However, significant pre-intervention to twelve-month follow-up improvements were evident in global outlook (d= 0.36, p<.10) and self-efficacy (d= 0.60, p<.05). Bowen et al. (2016) reported no significant changes in self-esteem, but significant improvements in resilience on the RQ over the intervention (d= 0.49, p<.10) maintained at the three-month follow-up. The pre-intervention to follow-up effect size was small (d=.23).

*Behavioural outcomes*

Several subscales within the YOQ and OQ measure aspects would fall into this category, but as total scores were reported rather than subscales scores, these outcomes were included within the clinical category above. Gabrielsen et al. (2018) demonstrated improvements in participants' Life Effectiveness, on the LEQ, from post-intervention to follow-up (d= 0.63, p<.01), despite not finding significant effects over the intervention period. Lewis et al. (2013) reported significant and favourable differences in pre- to post-intervention scores (t(165) = 6.15, p<.001) and then further decreases in conduct problems from post-intervention to

twelve-month follow-up (t= -2.95, p<.01). Effect sizes for pre-intervention to twelve-month follow-up were large (d= .99).

Measures of family functioning were also reported on in two studies. Bowen et al. (2016) found no significant changes on the CORE FM over the intervention period and a significant worsening from post-intervention to three-month follow-up. Pre-intervention to follow-up effect was medium (d= -0.44). Harper (2007) (not presented in summary Table 3) used a custom measure in areas of family function adolescent behaviour, adolescent mental health, school success and social relations. However, they only reported single items means rather than subscales and also divided by gender making it difficult to summarise their results. There were significant changes in many items relating to adolescent behaviour and two items relating to mental health (emotional problems and drug and alcohol use). Family eating meals together and spending time together had worsened at twelve-month follow-up, but school performance and suicidal thoughts had improved.

McLendon et al. (2009), in their family therapy study, employed the parent-rated Family Adaptability and Cohesion Scale II (FACES-II). Significant improvements in family cohesion were reported from pre-intervention to post-intervention and post-intervention to six-month follow-up but no significant improvements in adaptability. Effect sizes were not reported, nor standard deviations required to compute them, but changes in mean scores of 51.35 to 53.81 are indicative of relatively small effects. Child behaviour as measured on the CBCL demonstrated significant changes from pre-intervention and six-month follow-up on two of four subscales total problem (mean 62.9 to 58.87) and externalizing (64.29 to 60.89) but significant change was not apparent for the total competence or internalising subscales. Again, effect sizes and SD's were not reported. The scores for the comparison group for either FACES-II or CBCL did not reach significance.

*Adults with specific mental health conditions (Table 6)*

*Clinical outcomes*

Two studies addressed long-term clinical outcomes in specific adult groups. For individuals with avoidant personality disorders diagnoses, Eikenaes et al. (2006) repeated measures ANOVA within the intervention arm demonstrated significant improvement over time in participants' symptoms on the GSI ($F_{(3,45)}= 2.88$, $p<.05$), avoidant traits PDQ 4+ ($F_{(1,13)}= 7.22$, $p<.05$) and interpersonal problems socialisation and personality IPP ($F_{(2,41)}= 4.07$, $p<.05$), as well as a trend in depression BDI ($F_{(3,45)}= 2.50$, $p<.07$) and social phobia (PARS) ($F_{(2,14)}=3.43$, $p<.06$). Effect sizes for these outcomes ranged from small ($d= -0.11$) to large ($d= -.72$). No significant differences in outcome were observed compared to a non-equivalent comparison group who had received active treatment in an inpatient psychiatric hospital. The authors suggested that this was evidence that they were able to treat patients in a shorter period of time with comparable outcomes. However, the effect sizes calculated generally indicate smaller effects for the integrated wilderness. For individuals with a diagnosis of schizophrenia or schizoaffective disorder, Voruganti et al. (2006) conducted an analysis of variance with condition and time (baseline, post-intervention, and follow-up) and found no significant effects for positive or negative symptoms as measured on the PANSS.

*Self-concept psychological resilience*

Two of the three studies used self-report measures which fell under this category. Voruganti et al. (2006) found significant effects over time (baseline to twelve-month follow-up) with medium to large effect sizes for self-image ASIS ($F_{(1, 52)}= 8.52$, $p<.05$, $d= 1.24$) and subjective cognition SSTICS ($F_{1, 52}= 4.41$, $p<.04$, $d= -.51$).

Taylor et al. (2017) employed an ANCOVA, controlling for pre-intervention group differences, and demonstrated between-group effects on two subscales of self-determination, awareness of self ($F_{(2, 47)}= 4.112$, $p<.025$) and perceived choice ($F_{(2, 47)}= 5.313$, $p<.025$).

Follow-up Bonferroni analysis confirmed between-group differences at three-month follow-up were significant for awareness of self but not perceived choice. Large effects from pre-intervention to follow-up were computed within the intervention group (d= 1.13 and 0.84 respectively).

*Behavioural and Functional Outcomes*

Voruganti et al. (2006) also demonstrated significant intervention changes in individuals self-reported global function as measured on the GAF ($F(1,52)= 8.94$, $p<.05$) with large pre-intervention to follow-up effect size (d= 1.47). Self-reported sickness impact, however, was not demonstrated to change from pre-intervention to follow-up.

## Discussion

To the authors' knowledge, this is the first systematic review to focus exclusively on follow-up outcomes for adventure therapies in clinical populations. Thirteen studies were identified based on strict criteria, including focus on individuals with mental health and emotional disorders. Although most studies rated as weak on the QATQS and most studies reviewed did not employ a control group, the overall published patterns are encouraging in showing a trend of long-term benefits of outdoor therapies.

Youth and young adults (predominantly adolescent) with mixed clinical presentations were most studied, with just three studies addressing adult populations with specific mental health conditions, including avoidant personality disorder, schizophrenia and schizoaffective disorder, severe depression and bipolar. Interventions varied considerably in time, with wilderness therapy programmes typically lasting longer and being more immersive than interventions for adults.

*Youth and adolescents with mixed presentations*

The majority of research was conducted on OBHC, wilderness therapy carried out in the USA, with two studies reviewing shorter interventions in Norway and Canada. Across these studies, there was evidence of significant follow-up effects ranging from three to eighteen months on all clinical outcomes, except for emotional and behavioural functioning (reported in one study only, Bowen et al. (2016)). Pre-intervention to follow-up effect sizes were predominantly medium to large across the clinical outcomes. One study showed that parent-rated effects on the YOQ were considerably larger than self-rated effects.

Such outcomes show promising potential for outdoor therapies. Similar duration and size of within-subject effects have been reported with CBT for adolescents with anxiety, depression and post-traumatic stress (Rith-Najarian et al., 2019) but response rates to CBT can be low (Laws, Darlington, Kondel, McKenna, & Jauhar, 2018) and many individuals accessing wilderness therapy do so having not benefited from other approaches (DeMille et al., 2018).

Only two studies measured constructs relating to self-concept and resilience (Gabrielsen et al., 2018; Bowen et al., 2016). There were mixed findings, with global outlook, self-efficacy and resilience showing significant follow-up effects but not life satisfaction, self-esteem, mindfulness, or health. Notably, these two studies had considerably smaller sample sizes than other studies within this population, so the difference in significance between clinical and self-concept outcomes could result from a lack of power rather than being a function of the constructs measured.

Behavioural outcomes were also mixed, with evidence for significant follow-up effects with medium to large effect sizes for life effectiveness, conduct and child behaviour (total problem and externalising), but not family function and adaptability or child behaviour (competence

and internalising). In one study, family functioning significantly worsened between post-intervention and follow-up (Bowen et al., 2016).

Although in general these outcomes are encouraging, they need to be interpreted within the light of methodological limitations in study design. Much of the research evidence within this population was from studies of OBHC programmes in the USA which pooled routinely collected data from existing programmes. Only one study employed a control group. This limits the confidence that the outcomes are causally related to the interventions rather than other factors. Also, relatively low response rates at follow-up, even when a random subsample was contacted, introduces bias through potential differences in the responders and original sample. Although some studies tried to control for this by analysing baseline characteristics, this may not account for differences in how they may have responded to the intervention. No studies employed an intention to treat design. A further source of bias was the common lack of blinding for both participants and researchers. The large discrepancies in parent and self-rated outcomes on the same constructs also raise concerns regarding studies which relied solely on parent ratings (Combs et al., 2016; DeMille et al., 2018). Self-selection for OBHC programmes introduces a selection bias as well as limiting the generalisability of findings. Given the likely expense of private pay OBHC programmes, individuals from higher socioeconomic status backgrounds were likely to be over-represented. When interpreting the relatively large effect sizes reported for the outcomes (specifically the clinical effects), it is worth noting that large differences have been demonstrated based on study design with effect sizes tending to be much larger in quasi-experimental designs than RCTs (Cheung & Slavin, 2016) as well as varying based on pre-registration (smaller effects) (Schäfer & Schwarz, 2019).

*Adults with specific mental health conditions*

Three studies included adult samples with specific mental health conditions and, although varied, they were shorter than the typical OBHC programmes offered to youth and offered as additional to usual care. There were mixed findings regarding the follow-up outcomes. For individuals with schizophrenia or schizoaffective disorders, the Going Beyond intervention did not lead to changes in positive or negative symptoms, but lead to significant improvements in self-image, subjective cognition and global functioning in comparison to the control condition, with medium to large effect sizes (twelve-month follow-up) (Voruganti et al., 2006). Individuals with a diagnosis of avoidant personality disorder who were offered wilderness therapy in addition to inpatient treatment showed significant improvements at a twelve-month follow-up, in symptoms, interpersonal problems, socialisation and personality and avoidant traits, but not depression or social phobia. These changes were not significantly different from a control condition (previous inpatients) but they spent on average 81 rather than 96 days in treatment. There were also differences in outcomes based on gender with males benefiting more than females from the wilderness therapy intervention. There was evidence that individuals with serious mental health conditions who attended a therapeutic recreation camp had significantly increased levels of 'awareness of self' and perceived choice at three-month follow-up. Research designs were stronger within this population, all three studies employed a control condition so greater confidence may be placed in the outcomes compared to research with youth and adolescents. In relation to other widely used forms of psychological intervention, these effects seem encouraging despite the limited number of studies and the small sample sizes. For example, data from twenty-seven randomised control trials for Cognitive Behavioural Therapy for psychosis (CBTp) indicated no significant effects on quality of life or reducing distress and only a small effect on functioning that was not retained at follow-up (Laws et al., 2018).

## Clinical implications

Research in the field is not yet well established but early indications suggest that adventure therapies may offer a promising adjunct or alternative intervention within the field of mental health. Given the international nature of this research, issues around cultural context need to be considered. Many of the studies within adolescent samples were taken from the USA with programmes often privately paid for rather than publicly funded. Non-consensual transportation of individuals to these programmes appeared to be a recognised practice (Tucker, Combs, Bettmann, Te-Hsin, et al., 2018). Such a practice is unlikely to be legal or be considered ethical in UK service provision, and programmes as described by Gabrielsen et al. (2018) from Norway and Bowen et al. (2016) from Australia may be more appropriate for adolescent services.

## Limitations

This review included a relatively small sample of studies. Lack of descriptive detail regarding participant characteristics resulted in potentially relevant studies being screened out. This may arise from the widespread use of convenience samples from ongoing wilderness therapy interventions rather than specifically designed trials. Studies were also screened out due to a lack of follow-up data. Quality ratings on the QATQS may give a useful indication of study quality in relation to other fields. However, despite being an instrument specifically recommended for non-RCT designs, it did not fully capture the variation in quality of the studies reviewed. Global ratings were driven by issues with blinding and selection bias and both aspects of design are inherently problematic within such interventions. Further, the QATQS dictionary (Appendix 2) did not provide instructions for scoring the supplementary components for intervention integrity and analyses, meaning these could not be reported. The weak quality of studies and heterogeneity precluded the meaningful estimation of mean effect sizes through meta-analysis which is a further limitation in terms of generalising the

outcomes. Meta-analysis would further have allowed for an estimation of publication bias. The tendency for studies with non-significant findings to remain unpublished (the "filer draw problem") increases the likelihood of an overestimation of outcome effects (Song, Hooper, & Loke, 2013). A further limitation, therefore, is that it not possible to conclude if the outcomes reported in the current study are subject to this potential bias.

**Implications for future research**

Within the current evidence-based practice paradigm in which RCTs are viewed as the 'gold standard', finding ways to more rigorously research adventure therapy programmes may be an important step in their wider implementation. The nature of interventions reviewed in this study pose several challenges in terms of adopting research designs originally developed for medical trials. The first one is the plausibility of blinding individuals or finding credible equivalent control conditions to interventions which use long periods in the field. The second one is that controlling for selection bias would require recruiting large numbers of individuals, fully informing them of the intervention as well as credible control condition before random allocation which may be both practically difficult but also raises a potential blinding issue. Indeed, some authors have raised concerns in relation to pursuing an evidence-based practice paradigm for adventure therapy, questioning whether a positivist stance, experimental designs, random selection and assignment are appropriate, ethical or meaningful for adventure therapies (e.g. Harper, 2010). Treatment fidelity has also been recognised as an issue with poor reporting of intervention (Tucker & Rheingold, 2010). The breath and diversity of approaches also raise challenges in establishing a unified evidence base.

Despite such challenges, the current review identifies several considerations that may improve the quality of future research. Firstly, the notable lack of experimental control, particularly with OBHC interventions, needs to be addressed. Where employing an active

control group or randomisation is not feasible, studies could employ an extended time-series design. For the development of active control groups, a greater empirical understanding of the active ingredients of adventure therapies is required and a step towards this would be more comprehensive reporting of programme elements, linking these to outcomes and the measurement of treatment fidelity. Variable attrition rates seen at follow-up across the reviewed studies indicate that greater emphasis should be placed on retention. Using an intention to treat analysis would be a more methodologically rigorous approach when drop out is a concern. Reporting of matched samples at follow-up would allow for a more meaningful and less biased interpretation of these effects and studies should include means and standard deviations to enable the calculation of effect sizes. Finally, several studies only reported clinical outcomes, and the use of a broader range of measures including those that have been identified as most meaningful to individuals in the recovery process including social domains, resilience and sense of control in their lives should be considered (Jacob, 2015; Collins, 2019; Bonney & Stickley, 2008).

**Conclusion**

Given the state of the research within this field, it is too early to draw firm conclusions about the longer-term outcomes of adventure therapies. However preliminary evidence of long-term outcomes in clinical, self-concept and behavioural measures often with large effect sizes is promising. Developing more rigorous research designs may be a challenging but necessary step in the wider implementation for such approaches. Currently, there is a paucity of adventure therapies in the UK, there is a strong case for exploring their development, particularly within populations where there are known difficulties with service engagement, and limited evidence of efficacy, of routine interventions.

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Chapter 2 – Empirical Paper

# Raising the Anchor: An Ethnographic Study of Adventure Therapy in Early Intervention for Psychosis.

Sholto Radford[1], Dr Marta Eichsteller[2] and Dr Mike Jackson[1]

1. North Wales Clinical Psychology Programme, School of Psychology, Bangor University, UK

2. School of Sociology, University College Dublin, Ireland

**Corresponding Author:** Sholto Radford, North Wales Clinical Psychology Programme, School of Psychology, Bangor University, UK. Email: sepa86@bangor.ac.uk

## Abstract

This ethnographic study explores the distinctive characteristics and processes of change during a novel adventure therapy voyage for individuals open to the Early Intervention for Psychosis Services. Data were collected during the researcher's immersion in two week-long voyages. An inductive qualitative analysis was performed. The voyage provided a radical contextual shift for the young people, characterised by a clear sense of purpose with a structure and routine providing grounds for engagement, an immersive social context, physical and mental challenges, all within a novel and ever-changing environment. Patterns of individuals' responses included engagement in activity, learning of new skills, finding roles with associated shifts in self-esteem, the development of resilience, gaining social confidence and forming relationships, reflection on life and aspiration for change. Such responses have clear relevance to social and functional recovery for individuals with severe mental health difficulties. Challenges faced by individuals within this environment are reported and discussed.

**Keywords:** Sail-training, adventure therapy, early intervention, psychosis, mental health, ethnography

## Introduction

Individuals experiencing psychosis commonly have difficulties with a range of functional outcomes including social skills, independent living, maintaining employment and the ability to adaptively function in the community (Couture, Penn, & Roberts, 2006; Bellack, Morrison, Wixted, & Mueser, 1990). Reductions in social functioning are evident prior to the onset of psychosis (Jang et al., 2011) and have been associated with those at ultra-high risk (UHR) of developing the condition (Ballon, Kaur, Marks, & Cadenhead, 2007). Such patterns of disengagement and social isolation can cause severe disruption to the lives of young people at a critical developmental stage and can have long-term impacts on their achievement and social roles (Kam, Singh, & Upthegrove, 2015).

Even following remission of psychotic symptoms, individuals still experience significant difficulties in social functioning (Menezes, Arenovichm & Zipursky, 2006). Low self-esteem and limited social networks resulting from the experience of psychosis have been proposed as key factors which continue to impact social functioning and quality of life (Gureje, Harvey, & Herrman, 2003). There is the recognition that antipsychotic medications alone are insufficient for recovery of functional and social outcomes and that there is an additional need for psychosocial treatments (Kern, Glynn, Horan, & Marder, 2009). Therapeutic engagement with this client group can, however, be challenging (Doyle et al., 2014), and there is still a need to find ways of engaging young people within this population.

Outdoor and adventure therapy, hereafter referred to as adventure therapy, may be one such approach but there is little evidence of its application for young people with psychosis. There is, however, a growing evidence base of its efficacy within a broader range of populations (Bowen & Neill, 2013) often with adolescents with mental health and substance use disorders who have not engaged or benefited from more standard forms of therapy (DeMille et al., 2018). Adventure therapy covers a range of often group-based interventions which typically

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emphasises learning through experience and challenge, direct participation and responsibility, interaction with nature, peer group socialisation and generalizable skill development (Norton et al., 2014; Harper, Peeter, & Carpenter, 2014). There is evidence of significant positive outcomes relating to self-concept, behaviour, attitude, locus of control, and maintenance of close relationships (Bowen & Neill, 2013).

Over the past three years, Early Intervention for Psychosis Services (EIPS) across Wales have been developing adventure-based therapy programs co-ordinated by the EIPS national steering group. As well as regional activities, a key aspect of this has been providing annual week-long sail-training voyages through the Cirdan Sailing Trust. These voyages offer an immersive experience in which individuals are taken out of their routine environment, live in close social proximity to other young people and crew members and are exposed to novel tasks as well as challenging conditions. Sail-training is a recognised format for experiential learning. A small body of research synthesised in a systematic review indicates relevant outcomes in personal and social domains, including improvements in self-esteem, global self-worth, cultivating friendships and social confidence (Schijf, Allison, & Von Wald, 2017). However, to the authors' knowledge, there is no evidence for this approach being used with young people experiencing significant mental health difficulties. Anecdotally young people appear to have benefited from these voyages, and qualitative research on the broader adventure therapy programme has been indicative of positive outcomes (Benton, Jackson, & Owen, 2019).

Many of the young people open to EIPS experience challenges including social isolation, drug use, lack of occupation, and living environments with a high perceived level of threat. The living environment of individuals is an important consideration in terms of risk and maintenance of mental health difficulties. Such ecological-level social factors are proposed to interact with individual-level factors in the risk of psychosis (Shah, Mizrahi, & McKenzie,

2011). On one hand, the radical shift in the environment provided by the voyage may be helpful in providing a more adaptive context for recovery. The intensive social environment and degree of challenge may on the other hand be difficult for this client group, many experiencing social anxiety, paranoia, low mood as well as autistic spectrum conditions (ASC).

The current research explored how young people from EIPS responded to the sail-training voyages in order to understand the potential benefits and challenges of this intervention.

## Methods

### Setting

The research was conducted during two one-week long voyages aboard Faramir, a 22-meter, 20 berth sailing boat, run by the Cirdan Sailing Trust, in August 2019. These voyages were organised through the national steering group for EIPS in Wales and were occurring independently of the research process. Sailing took place in the Irish Sea and were characterised by periods of challenging conditions with strong winds, rough sea states and long periods under sail. With fourteen people aboard, the quarters felt cramped and did not afford personal space or privacy. At night, the boat was moored on the coastline and half a day was spent on dry land in the middle of each voyage. The young people and group leaders who accompanied them were divided into three watches. They were responsible for activities of sailing including raising, lowering and manning the sails, operating the winches, helming the boat, lowering and raising the anchor, navigating and recording of the ship's log, as well as cooking, washing up and keeping the ship clean.

**Participants**

Participants consisted of 19 young people (18-35 years old) who were open to EIPS across Wales, mental health professionals (three on the first voyage and two on the second) who acted as group leaders, and three Cirdan Sailing Trust ship's crew. The research project was described to the young people at a pre-voyage meeting a month before the first voyage. Information sheets were given out and an opportunity was offered to ask questions or express any concerns. Signed consent for the research was gathered prior to the voyages. The single inclusion criterion was voyage participation. There were no diagnostic requirements and demographics and past clinical records were not gathered. The majority of young people were males (16-3). It emerged through the research that nearly all were out of work or vocation except for one who was studying at university. Social isolation and loss of previous role or occupation was a common theme as well as significant alcohol and street drug use. Some demonstrated significant difficulty with basic tasks and decisions, e.g. putting a tray in the oven or choosing a spoon to eat with, while others displayed significantly higher functioning. A number reported living in social environments characterised by the threat from others. All had experienced psychosis, some volunteered that they were hearing voices, experiencing paranoia, depression and anxiety, obsessive-compulsive disorder, and several appeared to be on the autistic spectrum.

*Ethical considerations*

Ethical approval for the research was granted by the relevant NHS and university panels.

**Design and analysis**

*Rationale*

An ethnographic approach was used to address the research question. This methodology was selected over other approaches for two key reasons. Firstly, there is a scarcity of literature on

the therapeutic mechanisms of sail-based adventure therapy and processes were anticipated to be complex, sensitive and multifaceted. Secondly, to gain knowledge of such a process, the research method had to be reflexive enough to allow for unexpected and novel findings which ruled out quantitative methods that would have required pre-selection of the variables of interest. The use of retrospective interviews was deemed to only capture aspects readily accessible to the memories of participants, as well as relying heavily on their reflective abilities which had proven difficult in a previous study of adventure therapy within this client group (Benton et al., 2019). The ethnographic approach immersed the researcher in the setting. This allowed for first-hand experience of the contextual environment and both direct observation and naturalistic conversations with participants (Patton, 2015).

   *Data collection and Role of researcher*

Field notes taken during the voyage were used to document observations, record informal conversations, personal reflections, and emerging themes. These included both brief notes taken at the time or shortly after a notable observation as well as recollections noted during longer periods throughout the day. Notes were further expanded post-voyage. Within qualitative research, there is a recognised spectrum of observer involvement from onlooker to an active participant (Patton, 2015). In the current study, the researcher was situated between 'active' and 'complete' participation on Spradley's (1980) continuum, or 'active membership' (Adler & Adler, 1987). This involved joining a watch team, engaging in all the daily activities of sailing, cooking, and cleaning, while using free time to record field notes. The researcher role, as well as being expressed, was continually evident due to the confined space and lack of privacy. Despite this, due to the predominance of the 'member role' (Adler & Adler, 1987), both the young people and crew principally related to the researcher as part of the team. This allowed for naturalistic observation, an insider perspective (DeWalt & DeWalt, 2011) and establishing bonds and building trust (Brewer, 2000). At times, however,

participants also expressed wanting to directly share their experience for the research purposes. The active rather than onlooker role also gave rise to a personal lived experience of the voyage, the researcher observed change processes within himself that may be salient to the voyage process (Brewer, 2000). This specific context and role also brought challenges in terms of an almost constant requirement for engagement, no personal space and the inability to withdraw from the field. There were also practical challenges including the significant movement of the boat, lack of sleep and the social demands of the group.

*Data analysis*

An inductive approach to analysis was employed, and themes emerged during and informed the data collection process (Brewer, 2000). In this sense, although an ethnographic design was employed, it aligned with a grounded theory approach (Charmaz, 2006). The researcher's own lived experience was inseparable from the data collection and analytic process giving a richer and more in-depth view than the analysis of the field notes alone. Analysis in Ethnography is informed by the researchers' introspection and auto-observation of "their own experiences, attitude changes and feelings when in the field become data" (Brewer, 2000). Huberman & Miles (1998) describe three sub-processes of analysis: data reduction, data display and conclusion drawing. In order to reduce data and keep a focus on the research aims, salient guiding questions emerged and were held in mind throughout the process.

1) What were the observable characteristics of the voyages that framed or shaped individual and group experiences?

2) What were the range of responses from the young people?

3) What changes were observable over time and what difficulties, barriers or adverse experiences were apparent?

The following steps were carried out to achieve data reduction, display, and the drawing of conclusions (Huberman & Miles, 1998). Firstly, raw field notes were typed up and expanded upon post voyage. Secondly, field notes were coded, and tables and diagrams employed to set out and organise themes. Thirdly, conclusions were drawn from the emergent themes and these were presented according to their salience to the research question.

*Reflexivity*

The researcher in the current study is a trainee clinical psychologist thus acquainted with psychological rather than sociological theory. He has a long-standing personal interest and a professional background in outdoor and adventure activities including a transpacific sailing race. He also worked for several years leading outdoor mindfulness programmes. Within an ethnographic methodology, the researcher's position and background inevitably influence the process of investigation, what is noticed, which findings are prioritised, and how these are communicated (Lincoln, Lynham, & Guba, 2018). Attendance to this process, or 'reflexivity', involved active reflection upon such influences, repeatedly returning to field notes during analysis and questioning alternative explanations.

*Measures to enhance quality*

There were several practical constraints to the study including time, resources, and the availability of access to the research setting. The following considerations, however, were employed to enhance quality (validity and reliability) (Silverman, 2005). Firstly, the immersion in two week-long voyages with different crews and very different sailing conditions allowed for initial or tentative themes and relationships to be reviewed in new situations. The field notes were revisited as themes were developed to ensure they were comprehensively covered. Initial themes were presented and discussed with co-authors who had participated in several separate voyages. Key themes and a resulting process model were presented and discussed in a focus group including service users, carers and other mental

health professionals with experience of adventure activities. Refinements and further developments were made to these themes based on these processes.

## Results

Table 1 outlines the themes which emerged through the analytic process. The voyage experience provided a radical contextual shift. How individuals responded to and engaged within this dramatically different world was varied and idiosyncratic. The themes aim to capture both this variety as well as commonalities. It is beyond the scope of this article to discuss all these themes in depth. It therefore focusses on those that were of particular salience to the recovery process for this population as well as the key challenges given the nature of their difficulties (meta-themes 1-3 and 5 in Table 1).

**Table 1: Summary of key themes**

| Meta-theme | Key Characteristics | Response | Process theme / sub-theme |
|---|---|---|---|
| **1. Purpose, structure and the grounds for engagement** | **Imposition of purpose, structure and routine.** Common purpose (necessity for ship to get from A-B) requiring tasks which set structure and routine | Settling into routines and expectations Sense of the link between individual actions and wider outcomes | **The ground for engagement** <br><br>**Immersive engagement and flow** Attentional shift from internal experiences Deeper sense of meaning and purpose |
| | **Opportunity for engagement learning and skill development.** Numerous new tasks and skills Facilitation of engagement by crew Positive feedback Trust and responsibility fostered by crew members | Engagement in activities Acquisition of skills Increasing ability for focus | **Achievement and personal growth** Development of confidence Finding roles Sense of achievement/ pride Self-concept |
| | **Removal of negative environment influences.** No access to drugs Limited access to technology For some, absence of other negative / threatening social / environmental influences present in home life | Clearer headed and able to engage and focus Effects on symptoms | |
| **2. Interpersonal** | **Social engagement** Inescapable social contact Opportunity for discussion Experiences of praise and giving praise Music / games Numerous shared experiences (adverse, exciting, enjoyable, novel) All in it together (mental health professionals and young people) | Interaction Bonding over shared experience Caring for and being cared for by others Opening up / sharing about mental health experiences Shift in roles, status and professional boundaries | **Social self** Forming of bonds / friendships developing trust developing social confidence Normalising of mental health difficulties Common humanity |
| **3. Challenge and Adversity** | **Extreme physical and environmental challenge** Rough sea states (healthy risk) Sea sickness Inescapable nature of experience Confined living conditions Sleep difficulty | Fear Excitement Frustration Overwhelm | **Engaged coping** Active engagement with challenge Developing resilience Sense of achievement and pride Receiving and giving care and support |
| | **Challenge of engagement** High demands Complex and physical tasks | Self-doubt Difficulty in tolerating frustration Sense of unfairness | **Resistance and struggle** Resistance (felt to be too much) Disengagement Rumination, catastrophic forward thinking |
| | **Social challenge** Lack of personal space Group interactions and dynamics | Paranoia / feeling of exclusion Experiences of lack of trust / "being treated like kids" Feeling unheard | **No escape moving through adversity** Acceptance Learning that adversity passes |

| Meta theme | Key Characteristics | Response | Process theme / sub-theme |
|---|---|---|---|
| **4. The sailing environment** | **Space / natural environment** <br> Natural world and changing conditions (weather, sunsets, stars, landscapes) <br> Wildlife (dolphins, sea birds) <br> Space away from daily life | Appreciation <br> Sharing and discussion <br> Creativity <br> Reflection <br> Excitement <br> Sense of Possibility | **Novel experience** <br> Space for reflection and change in perspective |
| | **Physicality** <br> Physicality of tasks and interaction with constantly moving environment <br> Physicality of elements <br> Physicality of bodily responses | Engagement with immediacy of experience <br> Embodied experience | **Physicality and embodiment** |
| **5. Outlook** | **Cumulative aspects of the voyage** <br> Leading to a shift in sense of self and world based upon cumulative experience and interaction of previous themes | Reflection on experience, sense of possibility – actively interested in moving forward and making changes to life. <br> Able to reflect upon positive aspirations | **Reflection and moving forward** |
| | | Acknowledgment of change / positives but feelings that things will go back to usual when home, lack of aspiration or confidence to make changes | **Little hope for change** |

## Meta-theme 1: Purpose, structure and the grounds for engagement

*The ground for engagement*

A foundational quality of the voyage context was the clear presence of a purpose and a structure and routine to facilitate this. The purpose, or 'bottom line', was that we had a destination to reach not only by the end of the voyage but also to find a safe mooring each day, which given the conditions could be challenging. This common purpose was enabled through a watch system, a clear routine which divided the necessary tasks of sailing, cooking and cleaning, as well as time for rest, and provided a structure to the day. Individual tasks were often explicitly connected to a wider goal providing both a sense of purpose and meaning to actions as well as a clear sense of individual and group responsibility.

On day two, those on breakfast watch were informed that if food was not ready on time then sailing would be delayed and this would affect our ability to get around the headland in time before the tides change, resulting in big seas states and seasickness. This created the necessity for a degree of engagement which was evidently a radical shift from the daily lives of the young people.

The young people responded to novel tasks, often conducted in rough seas and confined space, in wide range of ways. The centrality of individual engagement and responsibility was reflected in the attention to which crew members and the skipper spent supporting this.

> *"It is important that everyone takes on their roles, otherwise by day three everyone will be bickering and arguing. Don't use cigarette breaks or the excuse of feeling sick to get out of jobs. If genuinely sick, stick on task for another five minutes, take a break and then do another five if possible. You need to demonstrate to your watch that you are contributing"*

Individual engagement was thus recognised to have an important role in maintaining group cohesion, predicated on a sense of fairness and requiring a willingness to confront and tolerate personal discomforts, such as feeling sick, which became evident over the voyage process.

The routine of life aboard, and necessity for engagement in the novel and often challenging activities of sailing and living, provided a context of experiential learning and opportunities for skill development. The crew actively worked to encourage autonomy and foster self-confidence through displaying trust in individuals, guiding individuals through working out how to solve problems for themselves, encouraging them to teach others, and allowing them to make mistakes without stepping in. When describing how to support an individual in helming the boat, a daunting task for many, a crew member advised:

> *"Don't step in and take the wheel unless it is vital. If you don't show trust*
> *in them, they will not learn trust in themselves"*

This structure, engagement in purposeful activity, sense of shared purpose and support and opportunity in developing skills and confidence, can be contrasted to daily life. This was particularly true for these young people, many of whom described lives at home without work or vocation and with limited engagement in activities that would necessitate a routine or give a sense of purpose. As well as observed through individual's engagement and growing confidence within this environment, the experience of this led some to reflect and display apparent insights on the contrast to their daily lives.

Towards the end of the voyage, one young person who had been particularly engaged and appeared to thrive off the experience appeared to have the insight that her psychosis was linked to a lack of purpose or meaning in her life, resulting from a move from another area.

Another young man commented when reflecting on his experience of the voyage:

> *"I realised I really like working and getting stuck into things… it reminds*
>
> *me of when I was younger working on my grandmother's farm"*

He appeared to recognise the positive impact of engagement which was facilitated by the 'work' necessitated by the voyage. It also appears that this feeling gave rise to positive memories and connection to an earlier time in this young man's life.

### *Immersive engagement and flow*

This shift into occupation of the daily tasks of sailing and living and removal of the wider influences of daily life was also characterised by a sense of immediacy, of physical and mental focus on the task at hand. This was experienced first-hand by the researcher, the small and engrossing world of the boat and responding to the immediacy of the required activities engendered a sense of focus with parallels to the experience of 'flow' as described by Csikszentmihalyi (2014). This was also observed in the activity of the young people with a shift into more sustained engagement as they became familiar with tasks and the process of daily activities. The cumulative impact of this engagement is exemplified by the clear shift in one young man's apparent experience of psychotic symptoms.

In the early days of the voyage, he had great difficulty engaging in tasks and once started, would quickly stop and say he could not do it right now because of his head (hearing voices). He appeared distracted with facial expressions incongruous to what was happening in his direct environment. Over the voyage he became increasingly more engaged in tasks, able to continue for longer, and was more socially involved, holding conversations, and making eye contact. The process of the voyage appeared to be drawing his awareness out of a more internal focus, to what he was doing and what was going on around him. A crew member also described their own experience of this more present focused attention as a reason she enjoyed

her work. It was a responsive, immediate role which she found more conducive to embodiment and present moment awareness than skippering, which required numerous decisions and planning.

*Achievement and personal growth*

The tangible experience of pride and sense of achievement was evident on both voyages. As we completed the final stretch and pulled into the harbour, there were smiles, lightness of conversation, and congratulations being shared. This seemed proportional to the level of challenge and adversity and was more marked on the second more arduous voyage. Even those who had struggled significantly appeared proud, one young person who had been desperate to get off the boat on the second day saying he would not do it again but was proud and pleased he had stayed on. This theme was also evident on a more micro-level throughout the voyage in relation to task mastery or adoption of roles and was reinforced through positive feedback from the crew members, other young people, and group leaders. Just some of the numerous examples include one young person's ability at helming for long periods at night, steering a straight course in waves; one crafting an intricate leather guitar strap; another mastering and teaching others the charting process; the experience of overcoming fear walking out along the deck and raising the sails and being appreciated by the group for playing music and singing. There were apparent increases in confidence in the young people in their ability to perform tasks and also how they came across, and this was noted by several parents on the final day of the last voyage when we arrived at the harbour.

In summary, the voyage context provided the grounds for meaningful engagement and the development of skills, self-confidence, and a sense or role and purpose. Through this it also facilitated a more immediate awareness of experience and gave rise to feelings of pride and achievement. This was a radical shift from routine life, many individuals home environments lacking such conditions to experience themselves in these more adaptive ways as well as

characterised by additional challenges such as threatening social environments or significant use of drugs and alcohol.

**Meta-theme 2: Interpersonal**

*Social self*

The close proximity and shared social activity were an inescapable feature of the voyage experience. Sleeping, waking, eating and toileting, all within a space often a few feet away from others, meant that isolation and solitude were impossible. Interaction was also a requisite for many of the shared tasks. Where people could, they made efforts to find their own space but there was no escaping the inherently social nature of the whole experience. For individuals experiencing paranoia, social anxiety, obsessive-compulsive disorder (OCD), and ASC such a social setting is even more challenging and juxtaposed to daily life. Over both voyages, there was an evident process of group forming and noticeable improvements in the social confidence of the young people. This was observed in the way they spoke to each other, group leaders, and crew members, as well as behaviours, eye contact and body language. The researcher observed how, at first, he had to initiate many conversations with the young people, but that this changed over the course of the voyage. The researcher experienced a growing sense of closeness to those living on this tiny floating world at a rate and intensity quite different from that of daily life.

As well as the proximity and inescapability of social contact, other features of the voyage appeared to support this process. The first was the shared experience of hardship and adversity. Individuals responded by taking care of each other, fetching a bucket for someone when they were sick, bringing hot drinks for the team on watch. Peak times of social connection often arose in the aftermath of challenging conditions when experiences of these

were shared. Both the activities and tasks of sailing as well as numerous novel experiences in the environment around us, such as pods of dolphins, sunsets and passing landscapes, provided talking points and sharing of stories.

The extent to which the young people went beyond this and talked about more personal topics differed on the voyages. On the first, it happened earlier, around day three. An example was the open discussion of their experience of mental health difficulties: one individual recounting his experience of being in hospital during an acute psychotic episode and able to look back on this with some humour; another, her difficulties in going out of the house, finding it impossible to even go into a shop. The conversation moved on to relationships and thoughts about having children.

A salient observation was the shifting relationship in professional status and boundary between young people and group leaders (mental health professionals). The experience of all being in it together, sharing social time and mutual support, led to more natural, equal relationships, based on common humanity rather than status as professional versus service user.

Individuals were clearly able to recognise the impact of this social environment, captured in one young man's comments to me on the final day:

> "It has been really good for me to spend time with people. At home, I don't really see anyone or talk to anyone. Over the week I began to feel more comfortable being around people almost like a family. Last night was especially good, it felt good speaking to people".

The development of social self is proposed to be a key therapeutic process within group-based adventure and wilderness therapies (Fernee, Gabrielsen, Andersen, & Mesel, 2017b). This was evident for most young people and it appeared that the proximity, a shared sense of

propose and novel experience of the voyage intensified and accelerated this process.

Development of the social self and friendships is of particularly salience within this client

group (Harrop, Ellett, Brand, & Lobban, 2015). People who have experienced psychosis

struggle to develop and maintain social function, and loneliness, poor perceived support, and

absence of a confidant is associated with psychotic and depressive symptoms (Sündermann,

Onwumere, Kane, Morgan, & Kuipers, 2014). The sense of belonging to a group, facilitated

by the voyage experience, and the ability to establish social connections and develop trust is a

particularly salient aspect, with social identification shown to reduce paranoia and depression

(Mcintyre, Wickham, Barr, & Bentall, 2018).


## Meta-theme 3: Challenge and adversity

This theme highlights another significant feature of the voyages: the introduction of

significant physical and mental challenge and adversity. Challenges arose in response to

many of the characteristics of the voyage: the confined space, the inescapable social contact

and the difficult tasks of cooking and sailing. It was however most clearly manifested through

the sailing conditions with rough days early on both voyages resulting in significant

seasickness, and in many cases a good degree of fear. The boat was often heeling over

significantly, with waves at times breaking over the bows and young people having to move

around the cockpit during tacks while manning the winches and the sheets, as well as walking

out on deck to raise and lower the sails. Salient themes emerged in terms of how individuals

responded to challenge and adversity, both in the immediacy of the situation but also its

aftermath, and the impact these had.

### *Engaged coping*

Engagement in tasks appeared to ease the degree of adversity. Young people and group

leaders described and advised each other that keeping active helped when feeling seasickness:

*"It was okay when keeping active but when I stopped it felt like it began to
creep in, you become more aware of it and paying attention seemed to make
it worse. When I stopped being active and sat down a couple of waves and I
was a goner"*

One young person described the fear they experienced on the second day of sailing in rough seas and how being given a task to focus on, using the winch, helped them cope with this.

This approach also appeared to help individuals become accustomed or habituated to the situation, illustrated by a young woman who, on the second day of sailing despite significant fear, had walked back along the bow deck and almost lost her footing, was able to go back out the subsequent day and reported feeling more confident. In contrast, other young people, on both voyages, would sit at the back of the boat refusing to move or get involved with winching or helming as a result of the fear of falling overboard. In both cases, despite easing of conditions and support and encouragement, they did not seem to move through this fear.

In these situations as well as others, it appeared that active engagement with tasks had the effect of helping individuals to cope with experiences of physical adversity such as sickness as well as emotions such as fear, and appeared to allow for habituation to difficulty. This engaged coping has parallels with the construct of resilience (Rutter, 1987).

*Resistance and struggle*

Several young people responded to the degree of challenge and adversity with struggle and resistance. This was most clearly exemplified on both voyages by a good number of individuals expressing that wish to leave the boat following the first two days and rough conditions. Two in particular expressed anger at the situation they found themselves in and anxiety about the days ahead. They appeared to be still caught up in the aftermath of this previous experience and, as such, unable to shift and respond to the new environment they

found themselves in. The impact of group leaders on this process was very evident. This was observed in a case in which a group leader also became very concerned and expressed the need to leave the boat, which had a significant bearing on the responses of the young people.

Struggle did not just show up in terms of fear-inducing tasks or those perceived as unpleasant, but often seemed to arise from individuals lack of confidence, knowledge or perceived ability to carry out a task and the discomfort or uncertainty this presumably gave rise to. One young person appeared to become quickly frustrated, when tying a knot, he gave up and described knowing it was better not to try than to become angry. Another would regularly comment on his own perceived inability with almost all tasks and often his feeling of helplessness. He would also often have outbursts of despair and anger towards the situation or those he felt that had put him in this.

The imposition of structure and routine, although appearing to provide containment and the context for engagement, was also experienced as aversive for some. The expectations placed upon them appeared to be a challenge and some of this was related to difficulties they were experiencing in relation to their mental health and medication.

Some described challenges in being expected to engage with a task or interact with others when feeling like they needed rest or have some personal space, or with sitting around a cramped dinner table for meals or being expected to get up at certain times to start shift. One young person expressed his frustration, saying that he couldn't engage with things for more than an hour or two at home without needing to then go and take time to himself and expressed anger at the expectations that he could somehow manage to fit into the routines and level of activity expected on the boat:

> *'This is taking the piss, doing the washing up and then going straight out on deck and having to do tasks'*

It appeared that for this individual there was some resistance to the degree of engagement required, that this was perhaps too far removed from his daily life and perceived ability to cope. His emotional reactivity to situations varied with an easing over the voyage process.

Two young people on the first voyage notably continued to struggle with the social aspects of the experience and did not appear to develop a sense of connection or trust within the wider group. They tended to talk to each other and described feeling excluded, although this was not apparent through behaviours or interactions of others and from the researcher's perspective appeared linked to experiences of paranoia. They did, however, seem to establish a close bond with each other over this experience.

### *No escape and moving through adversity*

Despite such struggles, over the duration of the voyage, for most, there seemed to be a settling process as they learnt to adjust to the conditions, and despite continued challenge, did not describe wishing to be back on land. By the end of the voyage, even those who struggled significantly reported gratitude that they had stayed on the boat, and a sense of achievement. This ability to get through such difficult conditions and experience the temporal nature of adversity was perhaps particularly salient for these young people. It gave them the evidence that they were more resilient than they had thought, and that even difficult experiences pass.

One young man with OCD described how at home he was obsessively meticulous and could not cope if things were out of place. In the cabin area, people's things were all over the place and this was really challenging for him at first. He learnt however that he could not do anything about this and, despite finding it a challenge, described that he was okay with it.

The inescapable exposure to adversity and challenge that the voyages provided seemed to offer opportunities for learning and developing resilience and insight. In daily life, with more control and with patterns of avoidance that can be central to the maintenance of suffering

(Hayes, Strosahl, & Wilson, 2013) such opportunities may be limited. It was also clear that some young people struggled significantly more, and a core question remains as to what a suitable level of challenge may be.

**Meta-theme 5: Outlook**

*Reflection and moving forward*

In the latter days of both voyages, young people began to reflect on their experience and talk about their lives moving forward. These conversations were often characterised by a sense of possibility and aspiration for change. The voyage appeared to have provided a context to experience themselves differently allowing for this feeling of possibility.

One young person who described a life in which he had been stuck in unhelpful patterns, unable to wake before the afternoon, described feeling unable to cope without smoking significant amounts of cannabis. On the voyage, he would wake on time, went without cannabis and was able to engage with many activities. He described aspirations to move out away from his parents' home and talked about wanting to live in France or to travel. Another who had been very isolated but benefited from the social interaction on the voyage aspired to spend more time in the company of others and extend his social network. Another young person described how she hoped it would help her go back to university. A number who had particularly thrived on the sailing were exploring opportunities to continue sailing, talking about joining a dinghy club and the possibility of returning to volunteer with the Cirdan Sailing Trust.

The voyage provided a context to break out of unhelpful habits which in cases likely exacerbated mental health symptoms. For one young person, this was explicit, using it as an opportunity to give up substances and being able to reflect on the effects of this and set

intentions to keep this up on returning to home. He had found abstaining was relatively easy on the boat as he was constantly engaged and experiencing new things and by the end of the week was discussing how he could take this forward.

*Little hope for change*

It is also important to highlight how such changes in perspective were not generalised across all domains or individuals. In some cases, the aspirations for making life changes were less apparent. Some demonstrated a sense of inevitability in dropping back into old patterns. One young person, who described feeling clearer-headed and better from not using drugs, seemed to have little aspiration or self-belief in keeping this up moving forward. Another described that the food, and eating well, had been a highlight for him but commented that he would probably go back to "*being a skeleton*" when back home. The specific challenges faced also had a bearing on this. One young man at the end of the voyage described that he could think of many benefits but that, one of his voices, would dismiss all of these, so he did not expect it would lead to anything positive.

Despite these cases, it appeared that many of the young people had shifted in their outlook this appeared to have emerged as a result of a lived experience. Such hope for the future has been identified as a key theme in the recovery process (Pitt, Kilbride, Nothard, Welford, & Morrison, 2007).

## Discussion

The current study indicates the potential value of sail-training as an adjunctive intervention for EIPS. The voyages provided a radical contextual shift and the young people's engagement within this environment led to a number of positive outcomes. These changes have relevance to social and functional recovery, which are recognised as areas of key therapeutic

importance within EIPS (Fowler, Hodgekins, & French, 2019) and the goal of specific

interventions (e.g. Fowler et al., 2019; Kern et al., 2009). Sail-training has several unique

characteristics compared to more routine interventions and may add value to the field,

warranting further development and research.

A number of the outcome themes evident in this study are in line with outcomes already

related to the wider field of adventure therapy and sail-training, including development of

self-concept (Capurso & Borsci, 2013), resilience (Hayhurst, Hunter, Kafka, & Boyes, 2015;

Neill & Dias, 2001), and social relations (Russell & Farnum, 2004; Fernee et al., 2017).

Given the additional challenges faced by individuals in EIPS, as well as the intensity of the

voyage experience, these findings are encouraging. They also add weight to the limited

research on the use of adventure therapy approaches within EIPS (Benton, Jackson, & Owen,

2019). Many individuals on the voyage found the experience challenging and, although in

many cases this appeared implicated in positive outcomes, the current study also gives insight

into the struggles and difficulties some individuals faced. Such reporting generally appears

absent within the adventure therapy literature.

## Unique features and clinical implications

User-led research highlights how individuals' experience of recovery is a complex and

idiosyncratic process, involving rebuilding one's life (including developing social

relationships and networks), rebuilding self (including an understanding of self and

empowerment), as well as developing hope for the future (Pitt et al., 2007). There is an

emerging paradigm shift in EIPS with interventions focussing on aspects such as social

recovery rather than focussing on treating symptoms (Fowler et al., 2018). It was apparent

through the current research that the voyages were delivered as an experience or journey. The

focus was the sailing destination and the tasks involved no explicit focus on mental health or

therapy. However, as described in theme one, as well as there being a clear pupose, the

context provided structure, with ample opportunities to learn and develop skills and find a sense of role and purpose. This environment may have marked differences from the enviroments that many young people from EIPS are often living in, and within which services try to support them. Despite their mental health challenges, within the voyage context, these young people were observed to engage with challenging tasks and develop skills and confidence. Given the importance placed on functional recovery in EIPS (Fowler, Hodgekins, & French, 2019), the findings of this study have clear implications by highlighting the importance of context, and revealing feautures which appear to allow indivdals to develop and grow. This shift away from home enviroments implicated in the maintainence of individuals difficulties has been highlight as a potential mechanism within wilderness therapies (Newes & Barndoroff, 2004; Russell, 2001).

There is a growing recognition of the central importance of friendships and peer relations for young people with psychosis (Harrop et al., 2015). The immersive nature of the voyage experience provided a social context radically different from daily life, or other typical forms of group therapy. This, along with numerous novel shared experiences, including facing adversity, caring and being cared for by others, developing trust and having a sense of common purpose, may accelerate social processes. The increases in social confidence and development of relationships evident over the voyage have key clinical relevance for individuals who have experienced psychosis and paranoia (Mcintyre et al., 2018; Sündermann et al., 2014). Negative beliefs about self and others have been identified as predictors of longer-term persistence of paranoia (David Fowler et al., 2012) and to mediate the relationship between insecure attachment and paranoia (Wickham, Sitko, & Bentall, 2015). As well as deepening relationships with the other young people, the voyage naturally led to a shift in the relationships, status and boundaries between young people and mental health professionals. This more open and equal relationship may have ongoing implications

in their work together. It may bring potential benefits, particularly in a field such as EIP where disengagement from services is particularly high (Lal & Malla, 2015) and issues around trust potentially implicated in mental health service engagement (Brown, Calnan, Scrivener, & Szmukler, 2009). The voyage also gave mental health professionals a deeper more rounded understanding of the young people, their strengths and difficulties, as well as the opportunity to support them directly in moments of distress.

The voyage presented a closed environment and, in exception of an emergency or significant adverse event, withdrawal from the experience was not possible. This feature of inescapability has been highlighted in previous sail-training research (McCulloch, 2007). Individuals were therefore faced with several challenging situations which they could not avoid, including the difficult sailing conditions, lack of personal space and demanding tasks. It is perhaps unsurprising that a significant number of individuals expressed a wish to leave the boat by day two. However, despite the degree of challenge and adversity, particularly on the second voyage, there was no evidence of worsening mental health symptoms or psychotic breakdowns and young people unanimously expressed gratitude that they had completed the voyage. Many of the apparent benefits from the voyage, including the development of resilience, a sense of pride and achievement and self-concept, appeared related to these challenges. Experiential avoidance is seen as key maintenance factor in mental health difficulties (Hayes et al., 2013) and high rates of disengagement from service is notable in first-episode psychosis (Lal & Malla, 2015). Sail-training may provide a modality through which disengagement and avoidance of adverse and challenging experience are more difficult and as such provide opportunities for positive change. An important question, however, is what is the right level of challenge? Development of resilience is suggested to emerge through successful engagement with risk and adversity rather than avoidance of it (Rutter, 1987). However, simple exposure to difficulty does not necessarily lead to resilience, and if

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coping mechanisms are overwhelmed it may be detrimental to mental health (Olsson, Bond, Burns, Vella-Brodrick, & Sawyer, 2003). Considerations to the dose as well as possible protective factors, including social support, should be considered. Reservations about risk and the degree of challenge could lead to a toning down of such interventions, potentially undermining some unique benefits. This study highlighted how group leaders' responses were of key importance and influenced those of the young people in terms of perception of risk and ability to cope. Training group leaders so they have familiarity and confidence in such conditions may have an important role. Ways of supporting young people to prepare for the voyage and develop resilience, trust and social support within the group should also be considered. Introducing such an intense experience does raise potential issues around informed consent. Providers may find it difficult to adequately prepare and inform individuals on what they are signing up for and to know that individuals understand what to expect. The current research may help inform such considerations.

The apparent shifts in individuals' outlook evident in the latter days of the voyages, characterised by hope and aspiration for life changes, also have clinical implications. These findings are in concordance with other research on wilderness therapy, including empirical evidence of motivation for change (Russell, 2008) as well as qualitative themes around desire for change, a clear direction in life and behavioural goals (Fernee, Gabrielsen, Andersen, & Mesel, 2017a) and have been viewed by participants as "a fresh start" and a "wake up call" (Russell, 2000). Russell (2005) suggested that such interventions may be better viewed as a potential turning point for individuals rather than a fixing of their problems. Wilderness therapy programmes often have an aftercare plan to support individuals in transitioning back into their daily lives (DeMille et al., 2018). Given the contrast between voyage life and the daily lives of many of these young people, this transitional period could be of key relevance,

with consideration of how to support individuals in finding ways to peruse their aspirations, and find purpose, meaning and ongoing social connection.

## Limitations and future recommendations

Although ethnography allowed for a rich exploration of key processes and outcome patterns across two voyages, the methodology does not allow for broader generalisation of findings. Capturing the apparent processes and outcomes through quantitative methods is an area for future research. Measures of self-concept, social and relational adaptability, resilience, outlook and acceptance versus experiential avoidance may be constructs to consider. Given the variability of voyage and participant characteristics, it is likely that theoretical saturation has not been reached and future qualitative research may discover additional responses and outcomes. The focus on the voyage process did not allow for a wider understanding of whether outcomes were integrated into the lives of participants. Exploration of longer-term outcomes is a key area for future research. Understanding if proposed individual differences in changes of self-concept and outlook relate to longer-term outcomes could shed light on a potential therapeutic mechanism. How to support individuals in the lead up to and following the voyage could be of key therapeutic importance and this is an area for further development and study. Research should also further examine participant characteristics that mediate outcome, to establish who such interventions work best for and how they might be modified for those who may benefit less.

## Summary

Sail-training is a novel and bold intervention within mental health service delivery in the UK, representing a radically different way of working. The current study highlights the relevance of this approach to the processes of recovery and growth for individuals within EIPS. It adds weight to a paradigm shift that acknowledges the importance of supporting individuals

through opportunities to find purpose, meaning and social connection in their lives rather than

narrower a focus on symptom reduction.

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# Chapter 3 – Discussion Paper

## Contribution to theory and practice

This thesis aims to improve our understanding of the application of adventure therapies for individuals with mental health difficulties. It adopted research approaches which explore the field from two different angles. Chapter one systematically reviewed quantitative studies of adventure therapy to assess the longer-term outcomes for individuals with mental health or emotional disorders. The second chapter, a qualitative ethnographic study, explored the context, processes and individual responses of a sail-based adventure therapy intervention for individuals within Early Intervention for Psychosis services (EIPS). This is a novel therapeutic approach within the EIPS field, and this study is the first to examine it in this way. The current chapter discusses the contribution of this research to theory and practice. Within this, it outlines a process model developed during the empirical research. It concludes with personal reflections of the research process.

## Implications for theory and research

To advance the field of adventure and wilderness therapy, research needs to establish both the efficacy of programmes across populations but also how such interventions stimulate change (Magle-Haberek, Tucker, & Gass, 2012). Unlike many other forms of therapeutic intervention, adventure therapies take individuals out of their daily environments, introduce novel activities and challenges, and provide an immersive social context (Newes & Barndoroff, 2004; Russell, 2001). Change processes for the individual are proposed to occur within, and as a result of this milieu (Ferness et al., 2017). Given this, an important question is whether outcomes from adventure therapy are context-dependent or are sustained when individuals return to their home environments. The literature review attempted to address this

question for individuals experiencing mental health and emotional disorders. It indicated that clinical, self-concept and behavioural outcomes were sustained from three months to eighteen months post-intervention, often with large effect sizes. However, it also revealed that the studies were generally of low quality, with few studies adopting controlled designs, and so these results, although promising, should be interpreted with caution.
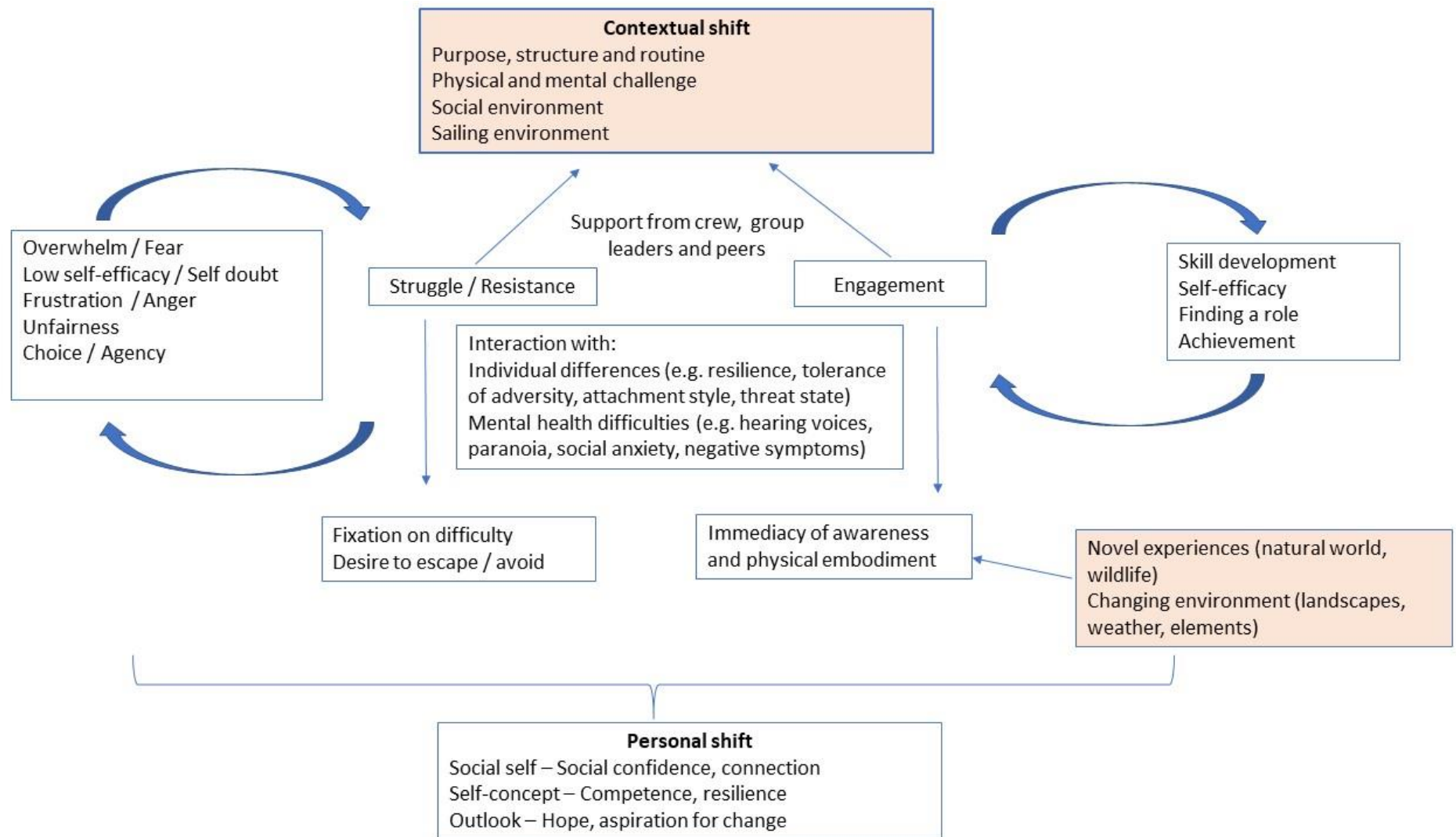
Some authors argue that adventure and wilderness therapies may be best viewed as a turning point in individuals lives (Russell, 2005). The apparent shifts in outlook identified in chapter two might support such a view. It did not however establish the degree to which individuals' aspirations for change were realised. What happens to individuals after an experience which offers so radical a deviation from routine life may be as important, if not more so, than the intervention itself. Chapter one, although it shed light on the longer-term outcomes, offered less in terms of understanding of the mechanisms of post-intervention change. It did establish that there was variation in the patterns of change. In some studies, change occurred over intervention and was sustained or slightly reverted at follow-up (e.g. Russell, 2003). In other studies, change was not apparent over the intervention but significant improvements were apparent between discharge and follow-up (e.g. Gabrielsen et al., 2019). This could have been a function of the marked differences in intervention length but could also reflect what was learnt and generalised, or other events and conditions in individual's post-intervention life. This might be a complex pattern to unpick, especially given the difficulty with the longer-term engagement of individuals in research. However, if adventure therapies do work in a catalytic fashion, further understanding of the mechanisms of this has clear relevance to their use.

A challenge in the literature review process, and the evidence base for such approaches more broadly, is how to align with, integrate and draw conclusions from a literature which appears to have struggled over the years in finding a common language, definitions, or delineation of

what is meant by the many different labels of the approaches used. Questions and debates around definitions and meanings of terms have been ongoing in international adventure therapy conferences, with a recognised difficulty in finding a common description that is not so broad it loses its meaning (Itin & Mitten, 2009). The many different approaches and treatment formats (Newes & Barndoroff, 2004), which vary on a number of axes, including duration, activity, and level of active therapy, raise challenges for advancing the research and understanding of these approaches. To date, much of the research on adventure therapy had focussed on outcomes but understanding the processes and mechanisms of change is an important step in establishing the integral components and enhancing treatment fidelity (Norton et al., 2014). Russell and Farnum (2004) have put forward a process model for wilderness therapy, which is viewed as an approach within the broader field of adventure therapies (Itin, 2001). The model describes three factors salient within the wilderness therapy milieu, the 'wilderness', the 'physical self' and the 'social self'. A summary of these is included in Table 1. They propose that the intensity of these factors vary over the course of intervention, with the 'wilderness' aspect having most impact earlier, and the 'physical self' and 'social self' more salient as therapy progresses. This model has been further adapted by Fernee et al. (2017) through a qualitative synthesis. They identified additional emerging factors including psychological outcomes relating to self-evaluation, self-esteem, and emotional control. They integrated this psychological dimension into the 'social self' to form a 'psychosocial self' factor (Table 2). Several features of these models overlap with the observed processes apparent during the sail-training voyages, specifically increased competence, feelings of accomplishment, changes in self-image, resilience, normalising of difficulties and the development of closer interpersonal relationships. These models were developed from programmes that have several differences to the sail-based training. Namely, they are often significantly longer, carried out on land, and lacked many of the distinctive

features of sail-training such as the confined space, the sailing and ocean environment. The clear common purpose and inescapability may also be more explicit in sail-training (Schijf and Wald, 2017). Chapter two focused on presenting a rich description of a number of key themes that emerged during the ethnographic research. The research however also led to the development of a process model. It was clear that not all individuals responded to the voyage in the same way, and the model attempts to capture the interactive, dynamic nature of the interplay between individual responses and the voyage process. Participants are not passive receivers of a process, but actively involved, and influencing that process both for themselves and the group. How individuals responded is framed within individual differences, personal strengths and challenges, and, importantly within this population, their experience of mental health difficulties and symptoms. Neither of the models presented for wilderness therapy (Russell and Farnum, 2004; Fernee et al., 2017) are explicit in how individual differences, and individual responses may relate to the processes outlined.

**Figure 1.** A clinical process model of sail-training.



**Contextual shift**
Purpose, structure and routine
Physical and mental challenge
Social environment
Sailing environment

Overwhelm / Fear
Low self-efficacy / Self doubt
Frustration / Anger
Unfairness
Choice / Agency

Struggle / Resistance

Support from crew, group leaders and peers

Engagement

Skill development
Self-efficacy
Finding a role
Achievement

Interaction with:
Individual differences (e.g. resilience, tolerance of adversity, attachment style, threat state)
Mental health difficulties (e.g. hearing voices, paranoia, social anxiety, negative symptoms)

Fixation on difficulty
Desire to escape / avoid

Immediacy of awareness and physical embodiment

Novel experiences (natural world, wildlife)
Changing environment (landscapes, weather, elements)

**Personal shift**
Social self – Social confidence, connection
Self-concept – Competence, resilience
Outlook – Hope, aspiration for change

A key observation, and central to the model, is the impact of individual engagement versus avoidance or resistance. Active engagement with tasks and social group dynamics provided a foundation for several further processes, including skill development and finding a sense of role, which in turn led to a sense of achievement and the development of self-efficacy. This appeared to re-enforce further engagement, which was supported by positive feedback and praise from crew members and peers. Active engagement also appeared to foster resilience, allowing individuals to cope more effectively and habituate to challenging experiences such as seasickness or fear. This is in line with psychological theory underlying exposure-based approaches in therapeutic models such as Cognitive-Behavioural Therapy (CBT) (Dobson & Dozois, 2010) and the importance of approach versus experiential avoidance in developing psychological flexibility (Hayes, Wilson, Gifford, Follette, & Strosahl, 1996). A further observation was that continued engagement in the activities of the voyage process appeared to become an attentional focus, drawing individuals' awareness to the immediacy of the tasks at hand. The physical nature of many of the activities and the constant movement of the boat may also have enhanced a more embodied experience, although more evidence may be required from first person accounts to verify this.

At times, individuals also struggled or avoided engaging. Most often in the context of challenging aspects of the voyage, such as difficult sailing conditions, and tasks that were difficult or considered undesirable. Given the observed benefits leading on from active engagement, it is important to understand the challenges individuals faced that made this more difficult for them. Earlier in the voyage a sense of overwhelm was apparent for some individuals who displayed emotional reactions, including fear and frustration. A tendency to fixate on the difficulties and worry about the voyage ahead appeared to prevent engagement with the current process even when the specific challenge had passed. Variation in responses appeared to relate to individual differences including threat state, trust, and ability to tolerate

adversity and discomfort. Given the likelihood of patterns of past trauma and attachment

difficulties in this population (Schäfer & Fisher, 2011), the associated implications for threat

processing (Heleniak, Jenness, Vander Stoep, McCauley, & McLaughlin, 2016), heightened

emotional reactivity (Heleniak et al., 2016) and difficulty with emotional regulation

(Lambert, King, Monahan, & McLaughlin, 2017) may explain such patterns.

Holding back from engaging in tasks also appeared to result from a lack of confidence in

their ability, or a sense of unfairness if they felt they had done more than other team

members. Some individuals would give up quickly if they could not do a task. Appearing less

able to tolerate feelings of frustration, while others seemed able to persist and learn. It is

important to highlight that, although there was clear variation in the extent to which

individuals tended to engage, it was also situationally specific and varied over the course of

the voyage and across activities. An increasing degree of engagement was evident over the

voyage from those who at first struggled. Although such challenges may have impacted on

the development of further processes, they highlighted key response patterns which may be

more general to individuals. As such, it provided group leaders with the opportunity to

support individuals with these. This has been proposed as an important therapeutic aspect of

wilderness therapy (Fernee et al., 2017).

The model also highlights the apparent interactive nature of mental health difficulties and

symptoms with the engagement process. This was a complex bi-directional relationship, in

which mental health symptoms provided an additional challenge to engagement, but active

engagement appeared to have positive impacts on symptoms. For some individuals,

experiences of paranoia and social anxiety appeared to have a bearing on ability to feel

engaged in social aspects of voyage life. However, exposure to the social environment over

the voyage appeared to foster trust and a deepening social connection, and over the voyage

most individuals showed greater social confidence. The experience of hearing voices, and

anxious and ruminative thought patterns, appeared to distract individuals from being engaged in tasks. The process of the voyage, however, facilitated engagement, and as individuals settled into this, there was evidence of a greater capacity for attention and less difficulty with these symptoms. It is also important to highlight that many individuals were taking medication, and this could affect their capacity to engage, some finding it particularly hard in the mornings.

Another feature of the voyage experience highlighted in the model is the impact of exposure to the novel and changing natural environment. Many young people said that experiences such as seeing pods of dolphins, sailing at night under the stars, and the feeling of being on the sea and the movement of the waves, were highlights for them. The natural environment and changing landscapes and conditions were clearly a focal point for attention. As well as creating memories and points for discussion and connection, the natural environment provided an outward focus of attention. This has some parallels with the concept of soft fascination (Kaplan & Kaplan, 1989; Kaplan, 1995). Such experiences capture attention but do not require direct attentional effort, minimising cognitive strain and allowing for reflection. This is included in the 'wilderness' aspect of Russell & Farnum's (2004) process model of wilderness therapy. For individuals who experience challenges with their internal experiences such as hearing voices, anxiety and depressive rumination, this attentional shift may be even more salient, giving them space to reflect upon their lives from a different perspective. This reflective space may also have contributed to the apparent shifts in outlook and aspiration for change.

Outcomes, in terms of the patterns of change evident over the voyage experience, are captured in the model under 'personal shift', including 'social self', 'self-concept' and 'outlook'. The model does not propose a single linear or causal mechanism through which the voyage experience leads to such outcomes, and the variation in patterns of how participants

responded suggests a more idiosyncratic process. These themes are not discrete but interdependent. For example, development of social confidence and connection with others can be implicated in the apparent changes in self-concept and outlook.

This process model is not exhaustive, and given it was generated from data from two voyages, there may be further themes and outcomes which emerge for other individuals or under different conditions. It may, however, be a helpful framework to guide future research on the application of sail-training, specifically for understanding the mechanisms of change and how individual differences and characteristics may moderate outcomes. Such an understanding may clarify who might benefit most or be ready for such therapeutic approaches, how such interventions can be further developed, and how individuals who may have greater difficulties can be prepared or supported.

## Implications for clinical practice

Adventure therapies are not yet routinely available in UK mental health services. The literature review identified that these interventions may have sustained benefits for individuals with mental health difficulties. Although the current quality of the evidence prohibits firm conclusions, the apparent size of outcome effects warrants further exploration of such approaches. Adventure therapy may be particularly relevant for young people who do not engage or benefit from standard forms of therapy, or as an adjunct to usual care. The empirical paper outlined how the contextual shift provided by one such intervention in EIPS appeared to allow individuals to experience themselves in more positive ways leading to changes in outlook and aspiration for change. Whether these are sustained, if the experience provides a catalyst for further change, and how individuals can be best supported in the transition back to their everyday environments remain key questions. However, these initial

results are promising, and given the recognised importance of functional and social recovery within in EIPS (Fowler et al., 2018), adventure therapies such as sail-training may provide valuable options for services to consider.

A unique feature of this intervention in terms of mental health service delivery is the degree of challenge and perceived risk. The introduction of challenge and adversity appeared integral to many of the positive outcomes including social bonding, developing resilience and a sense of competence, pride and achievement. Such findings may be informative to how mental health services and clinical practitioners consider how to support individuals with personal growth.

It was also evident that for several individuals the level of challenge was at times perceived as too much. Withdrawing from taking part, resulting from fear or perceived level of competence, may have diminished learning opportunities, and even lead to patterns of catastrophising and rumination. Research on outward bound programmes indicate that individual differences in dropouts was associated with pre-programme measures of resilience (Neill & Dias, 2001). Such measures may help provide services with an understanding of those likely to engage, but also raises the question of how to get the level of challenge right, so that it is not exclusive.

Mental health professionals, supporting individuals on the voyage, commented on how living with, and being able to observe the challenges and benefits individuals experienced, gave them insights that they did not have from their routine work. This may have positive impacts in how they can go on to support such individuals. A notable change in relational dynamic was highlighted in chapter two and this may have longer term impacts on their relationship and ongoing work together.

A further implication from this research is a questioning of the boundaries of what constitutes therapy. The sail-training voyages provided little in the way of explicit formal therapeutic input, but the experience itself appeared to elicit positive changes within the participants. The fact that the voyages were not conceptually framed as a treatment, which implicitly assumes illness, may have contributed to the young people's ability to experience themselves in a different and more adaptive way.

## Personal reflections

Having previously worked as a researcher exclusively with quantitative methods, ethnography was a novel and, to begin with, alien experience to me. However, I feel this methodology gave a rich perspective on the experience of the voyage. Having been through the process, it is difficult to imagine how either quantitative or interview techniques could have captured this. The project however from the outset, brought several challenges as a researcher. On a practical level there was uncertainty whether the voyages would take place with questions around funding, recruitment, logistics and weather.

Other difficulties arose once sailing had begun in terms of research and data collection.  A key one was my dual role as active participant and a researcher, and how to find a balance within this. This process was hard to anticipate until immersed in the research field which, by its nature, did not afford the dipping in and out and changing of tack. To begin with, there was challenges related to the uncertainty of what to record. At any moment there are numerous actions and interactions on different parts of the boat, what is salient or not may not emerge until later, and the impossibility of observing or recording everything was evident from early on. The process of writing removed the researcher from an awareness of what was

happening, and a balance had to be found between recording observations and being present to the process being observed. It took a while to become more comfortable within the process and to acknowledge that I was essentially the measurement instrument, and my experience and memory, a source of data, as well as the field notes. Other challenges included the confined space and intensive nature of the sailing environment, having to deal with rough seas, sea sickness, lack of sleep and requirements to be responsive to the needs demanded by the situation at hand. Although traditional approaches to ethnography adopting an emic design propose immersion of the researcher in the field of inquiry, they position the researcher as an outsider, as an observer or commentator (Hammersley, 2006). Such an outsider stance would have been challenging to maintain within this research environment, with no possibility for distance in physical space, or in time (not able to dip in and out of the research field). There was also an evident necessity to actively engage, in order to be accepted into the voyage experience and culture and observe these first-hand. Such challenges have been described in Kennedy, Macphail, and Varley's (2019) accounts of expedition ethnography. They advocate the adoption of a broader platform in line with McNess, Arthur, & Crossley (2015), viewing the insider outsider perspectives as a continuum along which the investigator can shift, moving from outsider to insider or indeed as an inbetweener or 'alongsider'.

It was also clear that the analysis process was not going to be a tidy and discreet activity, in which fieldnotes were coded following data collection, but a process which was ongoing and informed the data collection process itself. Becoming comfortable with this process took some time, having a personal background in quantitative methods, questioning aspects such as what can be considered data. On one hand, I had a rich lived experience which was impossible to separate out from the analysis process and looking at field notes alone often felt shallow. The process of elaboration and write up itself became a crucial part, but was this

creating more data? Although it was clear that my first-person experience was vital to a rich account, to what extent could this atrophy with time and what biases could it introduce? Having supervision and guidance from an academic with experience of ethnography was an important part of this learning process for me.

What was also clear was that two weeks spent aboard these voyages had generated a wealth of opportunity to observe and experience, and perhaps the largest challenge was how to consolidate this into a coherent and precise narrative. In the write up, there was a clear tension between breadth and depth. Each time I tried to focus in, I was confronted by the frustration of the important, and often interlinked, themes that would be left out.

I found that running made an important contribution to the post-voyage analysis and write up process, although I have not seen this in a textbook. It provided a context in which insights and connections most readily came to my mind. It helped in the weaving together of themes and a dialogue between what I had recorded in the field notes, and my own first-person experience.

Outside of these experiences of learning and conducting ethnography in this challenging environment, the experience of the time spent on the voyages had an impact on me, relevant to my personal and professional life as well as the research. The immersion in a life where I was living alongside the young service users, and principally relating to them in a manner which often had very little to do with the mental health difficulties they were experiencing, was a striking contrast to my experience of clinical work in routine mental health services. I feel that through this I developed a deeper understanding the lives of these young people than you might achieve in therapy, when so often the focus can be on the challenges and difficulties they are facing in their lives.

Through the participation in the voyage I feel I learnt from my observations of how the crew members of the Cirdan Sailing Trust worked alongside these young people and the ethos they embedded in their work. This was very much based around empowering individuals, giving them guidance but ultimately allowing them to learn through their own initiative. Facilitating this greater sense of ownership and autonomy is something I aspire to work on and develop in my own clinical practice.

These voyages have left a lasting impression on me. There were many moving moments and significant experiences, but one that sticks out in my memory most vividly, perhaps due to its strong emotional impact on me, was the evening of day four of the first voyage. Tired from the day, I retired to my bunk leaving the group of young people, group leaders and crew who were still up in the galley playing music and singing. Realising I was unlikely to sleep, with all this happening just a few feet away, I closed my eyes and listened. As I did so I was moved by the high-spirited atmosphere. Individuals joined in with the songs strummed guitars, played hand drums, laughed, joked and complimented each other on the music. The sense of bonding, connection and openness within the group was tangible. I felt a deep sense of contentment realising how absorbed I had become in this world. The thought of my life outside of the boat, the Doctorate programme with all its demands and the general busyness of life, had barely crossed my mind since beginning the voyage. In that moment I noticed feeling connected to these people and to a purpose, both the activities of sailing and living but also the research and felt fulfilment. I wondered if life on the boat, being surrounded by a small group of people day in, and day out, and working for a collective purpose, was perhaps a little more closely aligned to the social conditions in which we humans evolved. Living in a condition of such inescapable proximity to a group of others meant there was little time to be 'a self' outside of relationship. In relation to this, even a life with close family, friends and a job, seems comparatively isolated. As the laughter and singing continued, it appeared that the

young people were also experiencing something of this social connection, and perhaps even purpose and belonging. I am aware of the research highlighting the relationship between isolation, loneliness and poor mental health. That evening, on day four of the voyage, I felt like I was experiencing and witnessing the other end of this relationship.

**Table 1:** Conceptual framework of the wilderness therapy treatment milieu

| Category | Time of peak intensity | Proposition |
|---|---|---|
| | | Therapeutic factors of the Wilderness Experience |
| Wilderness | Beginning | The wilderness environment, acting alone, can be seen as a restorative environment for at-risk youth who have high levels of anxiety and are stressed from mental fatigue caused by too much direct attention. |
| Physical self | Middle-late | By combining the effects of feeling and looking better physically through consistent physical activity and wilderness activities that are designed to challenge while allowing opportunities for immediate feedback and success, the wilderness works as a therapeutic medium to foster an enhanced image of the self. |
| Social self | Late | Research has shown that wilderness experience programs, through a variety of day-to-day activities while on the program, helping at-risk youth learn more cooperative behaviours. |
| | | Breaking down barriers of stereotypes and preconceived notions allows participants get to know each other better, meeting the needs of youth at risk who have limited capacities to form close interpersonal relationships |

Source adapted from Russell and Farnum (2004, p. 41).

**Table 2.** The Wilderness Therapy Clinical Model

| Therapeutic Factors | Propositions |
|---|---|
| Wilderness | The wilderness environment is believed to be a healing place that for some clients might facilitate change in itself. After having experienced difficulties, turmoil and/or loss in their lives, clients might find peace in the wilderness. Being situated in the wilderness can initially feel as a shock to some individuals. However, this primary sense of despair is believed to be gradually replaced by self-confidence as the clients start to manage the basic tasks of simple outdoor life and the many inherent challenges of this approach to treatment. |
| | Spending time in the wilderness environment is suggested to provide an opportunity for clients to reflect on their lives. Being away from the many pressures of ordinary life, contrasted by the primitive life in nature, are considered to be contributing contextual factors. The opportunity to reflect on life is suggested to be a key change agent that might add new perspectives on the young persons' lives and the struggles they are faced with, in addition to bringing about an increased awareness and personal insight. |
| | Time alone in the wilderness, also called solo, can be a powerful exercise for some clients. However, the use of alone time should as with all other activities, be voluntarily based and both assessed and facilitated individually to ensure physical and emotional safety throughout the experience. It may be contraindicated for some individuals to spend extended periods of time alone. |
| | The wilderness can also be used creatively, for instance, as metaphors in therapeutic work. |
| Physical self | The challenges inherent to the WT treatment are proposed to be a key change factor, that is, at times being uncomfortable, enduring primitive outdoor living and the demands related to various program components, for instance, hiking. |
| | Primary outcomes from physiological processes might be that the clients become physically stronger, more resilient, experience an increase in perceived competence and a sense of accomplishment. Over time such experiences may provide deeper impacts, such as an increase in self-efficacy and/or an enhanced awareness of oneself, others and the environment. Self-efficacy can be explained as having faith in one's ability to overcome both physical and emotional obstacles. These outcomes are hoped to transfer into other domains of life where the accomplishments in the WT program can serve as a reference point later on in life. |
| | On longer hikes or expeditions, layover days can be important not only to rest but also to add perspective or contrast to other more active or strenuous days. |
| Psychosocial self | The WT setting with its small treatment groups and encouragements to rely on the peers and the therapists are likely to challenge the clients' relational patterns and behaviours, in addition to activating the attachment system. The separation from their primary support system can be distressing for some |

| Therapeutic Factors | Propositions |
|---|---|
| | individuals, although it might provide an opportunity for WT to assist the maturation and individuation processes of adolescent clients. |

The social aspects of the group treatment can be challenging for many clients. A number of individuals have experienced abuse, neglect, bullying, highly conflicting relationships and/or lack of support, to where relating to peers and/or therapists is demanding. Opportunities for sincere self-expression, along with cooperative activities and social support, are suggested to facilitate pro-social processes, acceptance of others, closer relationships and foster trust. The individual client's ability to develop relationships is likely to influence the treatment experience and outcome. Both, peer dynamics and a strong alliance with the therapist(s) are suggested to be key change factors in WT treatment. Still, some clients might not value the social aspects of the WT process altogether, but instead conceptualize it primarily as an individual journey.

WT differs from conventional treatment in numerous ways. It is suggested that stigma dissolves and that former resistance toward treatment might decrease. Individual and group psychotherapy in the wilderness context has been reported to be less intimidating and more natural compared with traditional treatment settings. Furthermore, the duration and context of the WT treatment might provide the necessary time and space to both address and process emotional upheaval. WT appears to stimulate personal issues to surface that have not been revealed in previous treatment settings and is suggested to reach other outcomes compared with conventional treatment modalities.

Timing, readiness for change, motivation for WT, and former experiences from mental health treatment, are suggested to be of relevance for the potential impact of the WT treatment and should therefore be assessed early on.

Clinical procedures should at a minimum include an initial thorough psychosocial assessment and the creation of an individual treatment plan. Each client's progress is monitored according to the individualized treatment goals. Individual and group psychotherapy is facilitated regularly. Toward the end of the intervention, the need for aftercare must be assessed and any form of follow-up organized accordingly.

Note. WT = wilderness therapy.

Source adapted from Fernee, Gabrielsen, Andersen, & Mesel (2017, p.125)

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# Appendices

**Appendix 1.** The Quality Assessment Tool for Quantitative Studies

**Appendix 2.** The Quality Assessment Tool for Quantitative Studies Dictionary

**Appendix 3.** Participant consent form

**Appendix 4.** Participant information form

**Appendix 5.** Ethical Approval

**Appendix 6.** The Faramir

**Appendix 7.** Exerts from field notes and coding

**Appendix 1.** Quality Assessment Tool for Quantitative Studies
https://www.ephpp.ca/PDF/Quality%20Assessment%20Tool_2010_2.pdf

**QUALITY ASSESSMENT TOOL FOR
QUANTITATIVE STUDIES**

EPHPP

*Effective Public Health Practice Project*

**COMPONENT RATINGS**

**A) SELECTION BIAS**

**(Q1) Are the individuals selected to participate in the study likely to be representative of the target population?**
    1  Very likely
    2  Somewhat likely
    3  Not likely
    4  Can't tell

**(Q2) What percentage of selected individuals agreed to participate?**
    1  80 - 100% agreement
    2  60 – 79% agreement
    3  less than 60% agreement
    4  Not applicable
    5  Can't tell

| RATE THIS SECTION | STRONG | MODERATE | WEAK |
|---|---|---|---|
| See dictionary | 1 | 2 | 3 |

**B) STUDY DESIGN**

**Indicate the study design**
    1  Randomized controlled trial
    2  Controlled clinical trial
    3  Cohort analytic (two group pre + post)
    4  Case-control
    5  Cohort (one group pre + post (before and after))
    6  Interrupted time series
    7  Other specify _____
    8  Can't tell

**Was the study described as randomized? If NO, go to Component C.**
    No              Yes

**If Yes, was the method of randomization described? (See dictionary)**
    No              Yes

**If Yes, was the method appropriate? (See dictionary)**
    No              Yes

| RATE THIS SECTION | STRONG | MODERATE | WEAK |
|---|---|---|---|
| **See dictionary** | 1 | 2 | 3 |

1

## C)    CONFOUNDERS

**(Q1)    Were there important differences between groups prior to the intervention?**
    1   Yes
    2   No
    3   Can't tell

**The following are examples of confounders:**
    1   Race
    2   Sex
    3   Marital status/family
    4   Age
    5   SES (income or class)
    6   Education
    7   Health status
    8   Pre-intervention score on outcome measure

**(Q2)    If yes, indicate the percentage of relevant confounders that were controlled (either in the design (e.g. stratification, matching) or analysis)?**
    1   80 – 100% (most)
    2   60 – 79% (some)
    3   Less than 60% (few or none)
    4   Can't Tell

| RATE THIS SECTION | STRONG | MODERATE | WEAK |
|---|---|---|---|
| See dictionary | 1 | 2 | 3 |

## D)    BLINDING

**(Q1)    Was (were) the outcome assessor(s) aware of the intervention or exposure status of participants?**
    1   Yes
    2   No
    3   Can't tell

**(Q2)    Were the study participants aware of the research question?**
    1   Yes
    2   No
    3   Can't tell

| RATE THIS SECTION | STRONG | MODERATE | WEAK |
|---|---|---|---|
| See dictionary | 1 | 2 | 3 |

## E)    DATA COLLECTION METHODS

**(Q1)    Were data collection tools shown to be valid?**
    1   Yes
    2   No
    3   Can't tell

**(Q2)    Were data collection tools shown to be reliable?**
    1   Yes
    2   No
    3   Can't tell

| RATE THIS SECTION | STRONG | MODERATE | WEAK |
|---|---|---|---|
| See dictionary | 1 | 2 | 3 |

2

**F)     WITHDRAWALS AND DROP-OUTS**

**(Q1)     Were withdrawals and drop-outs reported in terms of numbers and/or reasons per group?**
    1   Yes
    2   No
    3   Can't tell
    4   Not Applicable (i.e. one time surveys or interviews)

**(Q2)     Indicate the percentage of participants completing the study.  (If the percentage differs by groups, record the lowest).**
    1   80 -100%
    2   60 - 79%
    3   less than 60%
    4   Can't tell
    5   Not Applicable (i.e. Retrospective case-control)

| RATE THIS SECTION | STRONG | MODERATE | WEAK | |
|---|---|---|---|---|
| See dictionary | 1 | 2 | 3 | Not Applicable |

**G)     INTERVENTION INTEGRITY**

**(Q1)     What percentage of participants received the allocated intervention or exposure of interest?**
    1   80 -100%
    2   60 - 79%
    3   less than 60%
    4   Can't tell

**(Q2)     Was the consistency of the intervention measured?**
    1   Yes
    2   No
    3   Can't tell

**(Q3)     Is it likely that subjects received an unintended intervention (contamination or co-intervention) that may influence the results?**
    4   Yes
    5   No
    6   Can't tell

**H)     ANALYSES**

**(Q1)     Indicate the unit of allocation (circle one)**
community   organization/institution      practice/office      individual

**(Q2)     Indicate the unit of analysis (circle one)**
community   organization/institution      practice/office      individual

**(Q3)     Are the statistical methods appropriate for the study design?**
    1   Yes
    2   No
    3   Can't tell

**(Q4)     Is the analysis performed by intervention allocation status (i.e. intention to treat) rather than the actual intervention received?**
    1   Yes
    2   No
    3   Can't tell

3

**GLOBAL RATING**

**COMPONENT RATINGS**
Please transcribe the information from the gray boxes on pages 1-4 onto this page. See dictionary on how to rate this section.

| A | SELECTION BIAS | STRONG | MODERATE | WEAK | |
|---|---|---|---|---|---|
| | | 1 | 2 | 3 | |
| B | STUDY DESIGN | STRONG | MODERATE | WEAK | |
| | | 1 | 2 | 3 | |
| C | CONFOUNDERS | STRONG | MODERATE | WEAK | |
| | | 1 | 2 | 3 | |
| D | BLINDING | STRONG | MODERATE | WEAK | |
| | | 1 | 2 | 3 | |
| E | DATA COLLECTION METHOD | STRONG | MODERATE | WEAK | |
| | | 1 | 2 | 3 | |
| F | WITHDRAWALS AND DROPOUTS | STRONG | MODERATE | WEAK | |
| | | 1 | 2 | 3 | Not Applicable |

**GLOBAL RATING FOR THIS PAPER (circle one):**

| 1 | STRONG | (no WEAK ratings) |
|---|---|---|
| 2 | MODERATE | (one WEAK rating) |
| 3 | WEAK | (two or more WEAK ratings) |

With both reviewers discussing the ratings:

Is there a discrepancy between the two reviewers with respect to the component (A-F) ratings?

No     Yes

If yes, indicate the reason for the discrepancy

| 1 | Oversight |
|---|---|
| 2 | Differences in interpretation of criteria |
| 3 | Differences in interpretation of study |

**Final decision of both reviewers (circle one):**     1     STRONG
                                                        2     MODERATE
                                                        3     WEAK

**Appendix 2.** The Quality Assessment Tool for Quantitative Studies Dictionary

Avaialble by following link: https://www.ephpp.ca/PDF/QADictionary_dec2009.pdf

**Appendix 3.** Participant Information sheet

North Wales Clinical Psychology Programme / Rhaglen Seicoleg
Clinigol Gogledd Cymru
School of Psychology / Ysgol Seicoleg
Bangor University / Prifysgol Bangor
Bangor
Gwynedd
LL57 2DG
**Telephone:** 01248 388059

## Participant Information Sheet

Sail-based Adventure Therapy for Early Intervention Psychosis: An Ethnographic
Study of the Benefits and Challenges.

**Research Team:**
Sholto Radford: Trainee Clinical Psychologist, North Wales Clinical Psychology Programme
Dr Mike Jackson: Consultant Clinical Psychologist, Early Intervention Service
Dr Marta Eichsteller: Lecturer in Sociology. Bangor University.

We would like to invite you to take part in a research study to explore the experiences of Early
Intervention service users engaging in outdoor therapy. This information sheet gives you more
information about the study; please read it carefully before deciding whether you would like to take
part. One of the researchers will be happy to go through this sheet with you and answer any
questions you may have.

**The project has been approved by the Psychology Research Ethics Committee and the NHS
Research Ethics Committee.**

**What is the purpose of the study?**
The adventure therapy sailing voyages are new to the Early Intervention Services and we would like
to find what the benefits and challenges are of this experience and how it can be improved and
developed in the future.

**Who is carrying out the research?**
Sholto Radford is a Trainee Clinical Psychologist on the North Wales Clinical Psychology Programme
and is undertaking this research study as part of his training at Bangor University. Dr Mike Jackson,
Consultant Clinical Psychologist and the Lead for the Early Intervention Service, is supervising this
research alongside Dr Marta Eichsteller Lecturer of Sociology at Bangor University.

**Why have I been invited?**

You have been invited as you are going to be taking part in one of the Cirdan voyages either as a
group member, or a member of the crew or staff.

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**Do I have to take part?**

**No.** Taking part is completely voluntary. We ask that you read this leaflet carefully before you decide. Please ask a member of the research team about anything that you are unsure of. If you decide not to take part, you do not need to give a reason; you will still be able to take part in the voyage, the researcher will simply not take any research notes of your participation and experiences of the voyage.

**What will happen if I do take part?**

If you decide to take part we will ask you to complete a Consent Form which records your agreement to take part. This is for administrative purposes only and your personal information will not be used in the study. You will be given a copy of the Consent Form to keep for your records.

The research will be carried out by Sholto Radford a Trainee Clinical Psychologist who will be taking part in the voyages as a crew member. While on the boat Sholto will be taking part in activities but also taking some time out to make field notes of his observations and conversations with the group members, crew and staff. We want the research to make as little difference as possible to your experience of the voyage so we encourage you to treat Sholto just like another crew member. The field notes gathered will be used to write up an ethnographic research report which will be part of Sholto's doctorate degree. In the future it may also be published. It is important to know that neither your name nor any other information that could identify you will be used in this research report.

When they are not being used, the field notes will be locked away both on the boat and when back on land. They will be typed up and these files will be saved in a secure password protected folder. After a period of 10 years they will be destroyed.

**What is the time commitment?**

After you have read this information leaflet it will take around 10 minutes to complete the consent form depending if you have many questions. Because the research is based on observation we will not ask you to do anything that you will not already be doing as part of the voyage.

**Will my treatment with EIS be affected?**
No, you will continue receiving the same service.

**What are possible benefits of taking part?**
You will be helping the service to develop a new type of therapy experience which you, and many others, may benefit from.

**What are possible disadvantages of taking part?**
This study does not involve any direct risks. You will have to take some time to read this information and fill in the consent form.

**Will my information be kept confidential?**
**Yes – all information will be kept confidential.** The observations will be recorded on paper or a tablet device and will be kept in a locked place during the voyage and back at the research cite. These will be typed up into a Word document, with all identifying information removed. The Word Document will be kept on a password-protected computer. We will identify any information about you by giving it a "study number", known only to the research team.

**What will happen to the results of the study?**
The data will be used to help the Early Intervention Service develop and improve future sailing voyages. The data may also be used for academic research publications, and anonymous quotes may be used (for instance, articles in Clinical Psychology magazines, or conference presentations); you will not be identifiable. If you want to know more about the results of the research we can send you a summary of the main research findings. If you would like this please write down an email address of postal address for us to reach to on the attached form. This address will only be used for this purpose and then be deleted from our records.

**Who will have access to information about me?**
**Your details are confidential.** Your consent form and any notes collected by the researcher will be kept in a locked briefcase while they are not being used on the boat. The researcher will take these back to the research cite and keep them in a locked filing cabinet. The notes will be typed up and any personal information will be removed they will then be stored on password-protected drive. All data will be retained by the research team for a minimum of 10 years, after which they will be safely and securely disposed of, in line with NHS policies.

**What if I want to withdraw from the study?**
You can withdraw from the study at any time, and you do not need to give an explanation. You also have the right to ask that any data that has been collected about you, to that point be withdrawn/destroyed.

**What if something goes wrong?**
If you have any concerns, you can contact any member of the research team, using the contact details at the bottom of the information sheet. If the researcher becomes concerned about your mental wellbeing during the course of the study, he will seek permission to contact your therapist. In the unlikely event that there is a serious concern about an issue of risk, he would have a duty to inform your therapist or care co-ordinator. If you remain unhappy about the research, the response to any concerns you may have raised, and/or wish to raise a complaint about any aspect of the research, please contact **Huw Ellis, Psychology Manager on 01248 38 3229.**

**How do I volunteer to take part in the research study?**
If you would like to take part in the study you will have the opportunity to do so. The researcher will be available to answer questions and collect consent before the voyage.

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**For further information, please contact:**

| Name | Address | Phone | Email |
|---|---|---|---|
| Sholto Radford, Trainee Clinical Psychologist | North Wales Clinical Psychology Programme (NWCPP) School of Psychology, Brigantia Building, Bangor University, Bangor, Gwynedd, North Wales LL57 2DG | 01248 354888 | sepa86@bangor.ac.uk |
| Dr. Mike Jackson, Consultant Clinical Psychologist | Abbey Road Centre 5-9 Abbey Road Bangor Gwynedd North Wales LL57 2EA | 01248 354888 | mike.jackson@bangor.ac.uk; mike.jackson@wales.nhs.uk |
| Dr Marta Eichsteller Lecturer in Sociology | Sociology Department Main Arts Building Bangor University Gwynedd North Wales LL572DG | 01248 388783 | m.j.eichsteller@bangor.ac.uk |

Bangor University is the sponsor for this study based in Wales. We will be using information from you in order to undertake this study and will act as the data controller for this study. This means that we are responsible for looking after your information and using it properly. Bangor will keep identifiable information about you until the study has finished.

Your rights to access, change or move your information are limited, as we need to manage your information in specific ways in order for the research to be reliable and accurate. If you withdraw from the study, we will keep the information about you that we have already obtained. To safeguard your rights, we will use the minimum personally-identifiable information possible.

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You can find out more about how we use your information at URL:

or by contacting: Governance and Compliance, Bangor University, Bangor, Gwynedd, LL57 2DG. Phone: (01248) 382043

Bangor University will collect information from you for this research study in accordance with our instructions.

*Bangor University will keep your name and contact details and any other identifiers such as job role confidential and will not pass this information to the NHS. Bangor University will use this information as needed, to contact you about the research study, and make sure that relevant information about the study is recorded for your care, and to oversee the quality of the study. Certain individuals from Bangor University and regulatory organisations may look at your research records to check the accuracy of the research study. Bangor University will only receive information without any identifying information. The people who analyse the information will not be able to identify you and will not be able to find out your name or contact details.*

*Bangor University will keep identifiable information about you from this study until the study has finished.*

**Thank you for taking the time to read this information sheet.**

## Appendix 4. Participant consent form

### PARTICIPANT CONSENT FORM

**Study Title:** An Ethnographic Study of Sail-Based Adventure Therapy in Early Intervention for Psychosis.

**Please initial box**

1. I confirm that I have read and understood the information sheet for the above study. I have had the opportunity to consider the information, ask questions, and have had these answered to my satisfaction.

2. I understand and agree for the researcher to observe me taking part in the sailing voyage. I agree for him to make notes and I give consent for the researcher's notes to be used within the study write up. I understand that my name will not appear anywhere in the reports, presentations or papers which are based on this research.

3. I understand that my participation is voluntary and that I am free to withdraw at any time without giving a reason, without my medical care or legal rights being affected. If I withdraw no further notes relating to my involvement will be made and those that have been will be removed.

4. I understand that, under the Data Protection Act, I can at any time ask to see the information that the researcher has collected, and I can also request the destruction/ deletion of that information if I wish

5. I agree to take part in this study.

Please tick the box to show how you are involved in the Voyage for Recovery

1) A young person ☐

2) A Leader from the support services ☐

3) A Cirdan Trust crew member ☐

………………………………………    ……………………    ……………………………………
**Name of participant**          **Date**          **Signature**

………………………………………    ……………………    ……………………………………
**Researcher**                   **Date**          **Signature**

Page **1** of **1**

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**Appendix 5.** Ethical Approval

Wales Research Ethics Committee 5
Bangor

Mailing address:
Health and Care Research Wales
Castlebridge 4
15-19 Cowbridge Road East
Cardiff, CF11 9AB

telephone: 07970 422139
email: Wales.REC5@wales.nhs.uk
website: ww.hra.nhs.uk

27 June 2019

Dr Mike Jackson
Consultant Clinical Psychologist
Betsi Cadwaladr University Health Board
Adeilad Brigantia
Penrallt Road
Bangor
LL57 2AS

Dear Dr Jackson

| | |
|---|---|
| **Study title:** | **An Ethnographic Study of Sail-Based Adventure Therapy in Early Intervention for Psychosis.** |
| **REC reference:** | 19/WA/0180 |
| **Protocol number:** | Version 1 |
| **IRAS project ID:** | 260889 |

The Research Ethics Committee reviewed the above application at the meeting held on 20 June 2019.   Thank you for attending to discuss the application.

**Ethical opinion**

The members of the Committee present gave a favourable ethical opinion of the above research on the basis described in the application form, protocol and supporting documentation, subject to the conditions specified below. .

**Conditions of the favourable opinion**

The REC favourable opinion is subject to the following conditions being met prior to the start of the study.

Confirmation of Capacity and Capability (in England, Northern Ireland and Wales) or NHS management permission (in Scotland) should be sought from all NHS organisations involved in the study in accordance with NHS research governance arrangements. Each NHS organisation must confirm through the signing of agreements and/or other documents that it has given permission for the research to proceed (except where explicitly specified otherwise).

Guidance on applying for HRA and HCRW Approval (England and Wales)/ NHS permission for research is available in the Integrated Research Application System.

For non-NHS sites, site management permission should be obtained in accordance with the procedures of the relevant host organisation.

Sponsors are not required to notify the Committee of management permissions from host organisations.

Registration of Clinical Trials

It is a condition of the REC favourable opinion that all clinical trials are registered on a publicly accessible database. For this purpose, clinical trials are defined as the first four project categories in IRAS project filter question 2. For clinical trials of investigational medicinal products (CTIMPs), other than adult phase I trials, registration is a legal requirement.

Registration should take place as early as possible and within six weeks of recruiting the first research participant at the latest. Failure to register is a breach of these approval conditions, unless a deferral has been agreed by or on behalf of the Research Ethics Committee ( see here for more information on requesting a deferral: https://www.hra.nhs.uk/planning-and-improving-research/research-planning/research-registration-research-project-identifiers/

As set out in the UK Policy Framework, research sponsors are responsible for making information about research publicly available before it starts e.g. by registering the research project on a publicly accessible register. Further guidance on registration is available at: https://www.hra.nhs.uk/planning-and-improving-research/research-planning/transparency-responsibilities/

You should notify the REC of the registration details.  We routinely audit applications for compliance with these conditions.

Publication of Your Research Summary

We will publish your research summary for the above study on the research summaries section of our website, together with your contact details, no earlier than three months from the date of this favourable opinion letter.  Should you wish to provide a substitute contact point, make a request to defer, or require further information, please visit: https://www.hra.nhs.uk/planning-and-improving-research/application-summaries/research-summaries/

**It is the responsibility of the sponsor to ensure that all the conditions are complied with before the start of the study or its initiation at a particular site (as applicable).**

**After ethical review: Reporting requirements**

The attached document "After ethical review – guidance for researchers" gives detailed guidance on reporting requirements for studies with a favourable opinion, including:

• Notifying substantial amendments
• Adding new sites and investigators
• Notification of serious breaches of the protocol
• Progress and safety reports
• Notifying the end of the study, including early termination of the study
• Final report

The latest guidance on these topics can be found at https://www.hra.nhs.uk/approvals-amendments/managing-your-approval/.

**Ethical review of research sites**

Non-NHS/HSC sites

I am pleased to confirm that the favourable opinion applies to any non NHS/HSC sites listed in the application, subject to site management permission being obtained prior to the start of the study at the site.

**Approved documents**

The documents reviewed and approved at the meeting were:

| Document | Version | Date |
|---|---|---|
| Covering letter on headed paper [cover letter] | 1 | 20 May 2019 |
| Evidence of Sponsor insurance or indemnity (non NHS Sponsors only) [Sponsor insurance and indemnity ] | 1 | 16 July 2018 |
| Other [Results feedback form] | 1 | 09 March 2019 |
| Participant consent form [Participant consent form ] | 1.1 | 20 May 2019 |
| Participant information sheet (PIS) [Participant information sheet] | 1.1 | 20 May 2019 |
| REC Application Form [REC_Form_21052019] | | 21 May 2019 |
| Research protocol or project proposal [Study Protocol] | V1.1 | 20 May 2019 |
| Summary CV for Chief Investigator (CI) [CV of Chief Investigator ] | 1 | 25 April 2019 |
| Summary CV for student [Summary CV of Student ] | 1 | 25 April 2019 |
| Summary CV for supervisor (student research) [Summary CV of supervisor ] | 1 | 25 April 2019 |

**Membership of the Committee**

The members of the Ethics Committee who were present at the meeting are listed on the attached sheet.

No declarations of interest have been made in relation to this application

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committees and complies fully with the Standard Operating Procedures for Research Ethics Committees in the UK.

**User Feedback**

The Health Research Authority is continually striving to provide a high quality service to all applicants and sponsors. You are invited to give your view of the service you have received and the application procedure. If you wish to make your views known please use the feedback form available on the HRA website: http://www.hra.nhs.uk/about-the-hra/governance/quality-assurance/

**HRA Learning**

We are pleased to welcome researchers and research staff to our HRA Learning Events and online learning opportunities– see details at: https://www.hra.nhs.uk/planning-and-improving-research/learning/

| 19/WA/0180 | Please quote this number on all correspondence |
|---|---|

Yours sincerely

**Dr Philip Wayman White, MBChB, FRSM**
**General Practitioner**
**Chair Wales REC 5**

E-mail: Wales.REC5@wales.nhs.uk

*Enclosures:* *List of names and professions of members who were present at the meeting and those who submitted written comments*

*"After ethical review – guidance for researchers"*

SL-AR2 After ethical
review - research oth

**Appendix 6 –** The Faramir

## **Appendix 7** – Exerts from field notes and coding

**Appendix 5 –** Exert of field notes and coding

**Day two week One**

YP  been expressing the greatest wish to get off the boat despite not experiencing anxiety noted that he had been worrying all day and thinking about not wanting to be 5 more days of this however when making sandwiches he seems to be getting on fine chatting with others taking on responsibility.

**Commented [sr1]:** Code - engagement in tasks sense of immediacy seems to pull individuals out of rumination / catastrophizing

Observations of note

YP (x)  who appeared to be most withdrawn first day looked a little more comfortable socially (ASC)  I had also wondered from his gaze and interaction if he was experiencing some voices be smiling more than any YP when the boat was healing over and we were all in the cockpit (most struggling).

**Commented [sr2]:**

YP (x) seems much more engaged with tasks by the afternoon big changed since the first day and morning.

**Commented [sr3]:** Increasing engagement in activity / also possible effects of medication in the morning may have impact on engagement.

YP (x) took having another YP (x) being sick on him, pretty well laughing at this.

**Commented [sr4]:** Example of resilience and using humour as a coping strategy / response.

 I was impressed by how big the sea felt and considering this was the first time sailing for many, imagine it was very impressive/ scary. CM (x) did make reference to it being bad conditions.

I was struck by how different my own subjective experience was throughout the day from real excitement feeling sick and withdrawn to feeling relaxed and connected.

People seem to really connect over the sickness especially afterwards bonding talking point.

**Commented [sr5]:** Interrelation – adversity as a shared experience and point around which to develop social connection.

GL (x) we've been really sick during the day described as experience "It was like having a head in a centrifuge spinning in all directions he described feeling almost feverish and shaky and that it was the worst feelings he had experienced.

**Commented [sr6]:** Code – adversity and challenge associated with physical response to sea sickness.

 On Deck in the afternoon sun - reflecting on the day.  Much focus on the sickness.  group leader said" you can tell he's not feeling well they would go really into themselves and stop talking"

A number expressed a real concern for GL (x) same I felt so sorry for you I just wanted to get something for you a jumper you looked so cold and shaky. L explained I couldn't even have put a jumper on my head was spinning moving seemed impossible. One YP (x) commented I know everyone was feeling sick but I am totally sold on this he described having an amazing day the same YP earlier I slept really well.  He later said, I had looked at the forecast in the week it had been for rain so wasn't expecting this I think that is why I'm enjoying it so much.

YP (x) sitting on that looked out and commented on how beautiful the Ireland looked with all the cliffs earlier she had been planning to get off the boat.

Guitar appeared on Deck YP (x) was helping CM (x) offering to teach her a song - and appeared to have become more talkative engaged in afternoon group settings.

While a number of YPs and GLs and CMs sat in the cockpit a group of YPs were below deck having a different conversation.

I noticed that during free time the roles (CM, GL, YP) drop away it is hard to tell who was a YP GL CM,   conversation is instigated by all observers to get a better sense of why it feels this way.

**Descriptions of seasickness.**

A number of people mentioned it was okay when doing things / keeping active but when stopped felt like it began to creep in "you become more aware of it an paying attention seemed to make it worse. "When I stopped being active and sat down a couple of waves and I was a goner, reached a point of no return. Felt like my bones were chilled but warm on the outside, couldn't feel like eating couldn't get changed lost sense of balance. "I know what was happening but to switch off and go to sleep". When I went to sleep felt like the best sleep I have had in my life, woke feeling refreshed and got colour back. (GL)"

Framing this experience as part of the journey got to think more about the positive experience described it as being easier to focus and remember the bad experiences so important to help the YP's to also focus on the good bits. Help them to realise that the bad ones won't last hopefully this is something we can help them apply in their life and reflected that this helps bring people together we are all joking and laughing about it now (GL (x).

| Comment | |
|---|---|
| **Commented [sr7]:** Experiences of adversity eliciting expressions of care and support. | |
| **Commented [sr8]:** Variation in experience – This individual had really enjoyed the rough sea states (had not experienced sea sickness). | |
| **Commented [sr9]:** Prior expectations for the voyage framed this individuals experience.  Anticipation poor weather appeared to lead to a greater sense of enjoyment / appreciation. | |
| **Commented [sr10]:** Appreciation of surrounding environment (Novel experience) - Appears to draw individuals awareness out into what is around them and also becomes a talking point to connect over. | |
| **Commented [sr11]:** Further social interaction and connection facilitated through playing music together - | |
| **Commented [sr12]:** Finding Space | |
| **Commented [SR13]:** International – change in dynamics / professional, client roles or status | |
| **Commented [sr14]:** Code – facing challenge and adversity - Theme of approach | |
| **Commented [sr15]:** Code – Support by staff Group leaders reflections on using the voyage experience to help individuals develop perspective – focussing on positive aspects and noticing the temporal nature of challenging experience | |

and getting stuck into things and it reminded him of when he was younger working on his Grandmothers farm in xxxxxx. I asked if he will make any changes when he got home. He said he wanted to spend more time with people. I mention the idea of WOOFING. He seemed to get really interested in this idea saying he liked the sound of it and asked again what it was called so he could look it up when he got home.

At this point. YPs (x + x) came up on deck and were also asking about this with interest and enthusiasm saying it. Sounded great. YP (x) had been particular interested in being able to see new places and felt this could be a good way of doing this.

There seemed to be a big change in the group dynamics since the beginning of -4 week. There were more spontaneous questions and comments between both. Of both YP's of different groups at myself.

It had felt it was quite an effort having to start all conversations at the beginning but things seem freer at this stage.

We all gathered on in the cockpit for the certificate ceremony at a go around where YP's CM's and GL's described their favourite aspect of the week.

YP (x) said that she led really enjoyed the wavy choppy bits which was met with surprise and caused some laughter.

YP (x) said he had loved helming under the stars and seeing shooting stars above, YP (x) chipped in saying how amazing this was both their faces seemed to light us as they described this experience. YP (x) was talking about this in front of the whole group (at the start of the week it was hard to get more than short answers out of him even on a one to one conversations.

**Commented [sr36]:** Code – contextual shift / active engagement / outlook actives.  Voyage allowed young person to experience things that he would not do in daily life and through which he had discovered enjoyment / satisfaction. This was explicit to him, demonstrated through his ability to reflect on it.  His experience had led to a realisation that he "liked working" conveying that he lacked this in his daily life.

**Commented [sr37]:** Aspiration for social contact when home

**Commented [sr38]:** Code – Outlook – aspirations to make positive changes on returning home

**Commented [sr39]:** Receptivity to ideas for moving forward.

**Commented [sr40]:** Receptivity to ideas for moving forward

**Commented [sr41]:** Code – outlook – moving forward. Aspirations for opportunities to see new places

**Commented [sr42]:** Code – interrelation, reflecting underlying changes in self-confidence / self-concept

**Commented [sr43]:** Code – interrelation – shift in social dynamics

**Commented [sr44]:** Code – Purpose structure – a routine aspect of the voyage structure – ceremony at end of voyage to share reflections of favourite aspects of the voyage. Appeared to be set out in a way to encourage sharing of positive experiences.

**Commented [sr45]:** Code –Sailing environment– novelty / excitement

**Commented [sr46]:** Code –Natural world and novelty – Perceived as a peak experience of the voyage

**Commented [sr47]:** Code – interrelation – shared experience becomes a talking point stimulating spontaneous interaction and shared positive affect.

**Commented [sr48]:** Code – interactional / self-concept – evident shift in individuals behaviour from earlier in the week – Speaking in front of group more elaborative.

YP (x) said he had really enjoyed the food and eating and that he didn't eat well at home. He said I will probably go back to a skeleton when I get home. CM (x) spoke up saying how he could take his cooking skills and the importance of getting good food other CM's GL's at YP's joined in this conversation about eating properly and the skills they had learned.

GL (x) said his highlight was lying under the mast after reefing in the mainsail at night and looking up at the stars seeing the mast moving but feeling safe.

GL (x) talked about how she had really enjoyed seeing people coming out of their shells on the week and how everyone seemed like friends and were talking to each other.

CM (x) said on a boat they say spending one week, you get to know people as well as you would over a month on land and people nodded and agreed.

**Commented [sr49]:** Recognition of changes but limited confidence in integrating changes into daily life.

**Commented [sr50]:** Code – staff support – attempts to help YP implement experiences from the voyage

**Commented [sr51]:** Code – Outlook – stimulated conversation and reflection about changes to health behaviour

**Commented [sr52]:**

**Commented [sr53]:**

**Commented [sr54]:** Code – Self-concept, self-confidence, social / interrelation.

**Commented [sr55]:** Code – Interrelation + voyage context – has a faster effect on social processes

Evening group talking around table YP (x) said I love this so much I could carry on for three weeks or longer,,,, I would love to cross the Atlantic I suggested he try to find a boat that needs a crew and this might be possible and to ask CM as they might have contacts they said her could come back and volunteer for the Cirdan "we only take the best ones" I thought YP (x) would be perfect for this, he had been constantly positive and enthusiastic and engaged the whole trip and really easy company.

Later it was our watch turn on pot wash YP (x) was getting actively involved a big change from previous times, he stayed right until the end and even helped with the last bit of washing even though he had finished his job of rinsing. As we worked he asked me about breakfast tomorrow and I suggested that we might do Turkish Menomen with the eggs and he asked how it was made and said he wold like to learn how to make it. There seemed a real change in (x) he had had his hair down all week partly covering his eyes and had often been wearing sunglasses. This evening he wore a beanie and people commented it was good to see his eyes. He seemed to make more eye contact and seemed more confident.

**Day six week two – captures experiences towards the end of the voyage process**

Up on deck after clear up with YP (x).

I asked how the voyage hut been for him and if there was anything he would be taking away.

What he said I found really moving.

"It has been really good for me to spend time with people. At home I don't really see anyone or talk to anyone. Over the week I began to feel more comfortable being around people almost like a family.  Last night was especially good, it felt good speaking to people".

He also said he had walked towards his home and somehow had just felt more confident in himself. He was speaking about this with little in the way of any questions which was a massive change since the beginning of the week.  He was smiling at scent more relaxed.

He went on to say that he had also enjoyed getting to do things that he wouldn't normally do like cooking and cleaning as well as the sailing tasks. He said he realised he liked working

**Commented [sr29]:** Code – Outlook – (reflection and moving forward) positive experiences of the voyage leading to desire for further involvement.

**Commented [sr30]:** Code – Engagement – For this individual there seemed to be an increasing level of engagement facilitated by the voyage process

**Commented [sr31]:** Code – Self-concept (confidence) – apparent developing of confidence and opening up within the group

**Commented [sr32]:** Code- interrelation + reflection – growing social confidence (feeling more comfortable) and connection (feeling like family), noting the difference from daily life and how this was "really good for him"

**Commented [sr33]:** Code – increased confidence.

**Commented [sr34]:** Code interrelation – Change in conversation dynamics – more talkative and open.

**Commented [sr35]:** Code – observational evidence of shift in self-confidence / self-concept.

**Exert from Day two of week one in the evening after challenging sailing conditions. Highlights themes around challenge and adversity.**

Later on deck with CM(x) CM (x)  YP (x) YP (x) YP (x) YP (x) was expressing his feelings about wanting to get off the boat he seemed frustrated / angry and anxious about the situation. He expressed anger that he had not been told of how the boat trip would be by the group organisers and also that GL's and others who had tried to reason with him during the day. He also addressed CM(x) telling him that earlier around the table he should have asked how they felt rather than saying one good thing and one bad thing. Other YP (x) talked to him saying it is "good to get it out" YP (x) Also stated that he did not like not being given choice with tasks (to go up on deck or not) and suggested CM should ask for volunteers he also said that he didn't want to have to be told to wait for other people to eat when some people were allowed to sleep.

One of the CM (x) tried to describe difficulty (after validating his difficulties) in getting all tasks done while also trying to give people choice. YP went on to talk about how he couldn't cope with five days on a boat saying he couldn't hold a job for 3 hours so how did people expect him to be on a boat for 12. He said he was getting irritated by people on the boat and the sailing and wanted to get off he said this would be much better for him and he didn't want other people to say it was going to be alright.

**Day 4 week one after coming back from time on the beach**

We all gathered around the table other than (x) and (x). Moral felt high there was lots of joking and YPs reported having had a great day (x) walked in later and made a joke and described how he had been killed in the game he chatted and joked with GLs and I noticed that contrast from how he was describing his experience when  on the beach.

| Comments |
| --- |
| **Commented [sr16]:** Code – wish to escape |
| **Commented [sr17]:** Code - Struggle and resistance |
| **Commented [sr18]:** |
| **Commented [sr19R18]:** Code – Prior expectations – mismatch with lived experience, appears to play a role in struggle with the situation. |
| **Commented [sr20R18]:** |
| **Commented [sr21]:** Code – Feeling unheard – not given opportunity to express feelings about the situation – now coming out. |
| **Commented [sr22]:** Recognition from other YP that there is a need to express feelings in this way. |
| **Commented [sr23]:** |
| **Commented [sr24R23]:** Code – struggle and resistance against the structure / routine of the voyage |
| **Commented [sr25]:** Perceptions that demands of the voyage were over and above his capacity |
| **Commented [sr26]:** Code - struggle with social elements of voyage and desire to leave the situation (Avoid / escape) |
| **Commented [sr27]:** Contrast to expressions of feeling excluded (noticing how mental state of this individual 9apparent periods of feeling more paranoid) influence his social encounters |
| **Commented [sr28]:** Code – interpretational – apparent growing comfort and rapport more broadly within the group. |