

Citation:

Allan, J and Slee, V and Bell, R (2017) Schools Transition Outdoor Project Report of schools transition research project including One in a Million Free School, Bradford, Leeds Beckett University, Nell Bank Adventure Education Centre and Bradford Adventure Development Unit, Bradford Metropolitan District Council. Report to Bradford Partnership group.

Link to Leeds Beckett Repository record: https://eprints.leedsbeckett.ac.uk/id/eprint/3933/

Document Version: Article (Accepted Version)

The aim of the Leeds Beckett Repository is to provide open access to our research, as required by funder policies and permitted by publishers and copyright law.

The Leeds Beckett repository holds a wide range of publications, each of which has been checked for copyright and the relevant embargo period has been applied by the Research Services team.

We operate on a standard take-down policy. If you are the author or publisher of an output and you would like it removed from the repository, please contact us and we will investigate on a case-by-case basis.

Each thesis in the repository has been cleared where necessary by the author for third party copyright. If you would like a thesis to be removed from the repository or believe there is an issue with copyright, please contact us on openaccess@leedsbeckett.ac.uk and we will investigate on a case-by-case basis.







Research Report Schools Transition Outdoor Project

Vikki Slee, John Allan, Robert Bell





City of Bradford MDC

Background	Page no
1.1 Transitions into Secondary school1.2 Outdoor Adventure (OA) programming1.3 Research endeavours	3 3 4
1.4 Research aim and objectives	6
Method	
2.1 Study overview 2.2 Study design	6 6
2.3 Transition Programmes 2.4 Data capture	7 9
2.5 Data analyses	11
Findings	
Figure 1 Baseline & follow-up WEMWEBS Figure 2 Baseline & follow-up BPNS	11 12
Discussion	
4.1 The psychological well-being of school-children4.2 The self-determination of school-children4.3 Processes associated with school-children's learning4.4 The sustainability of the tailored OA programme	13 14 15 16
4.5 Limitations and future considerations	17
Acknowledgements	18
Authors	18
References	19
Appendix	
The 14 item Warwick-Edinburgh Mental Well-being Scale (WEMWBS) The 21 item Basic Psychological Needs Satisfaction in Life Scale (BPNS)	23-25

1. Background

1.1 Transitions into Secondary school

The transition between Primary and Secondary school represents a significant adjustment for young people both socially and academically. Moving from a small school where lessons take place in a single room with one teacher, to navigating a complex timetable with multiple subjects, locations and teachers, provides a challenging proposition. Although many children make successful transitions, this process can challenge some individuals to such an extent that their level of motivation, psychological well-being and subsequent academic attainment is impaired (Benner & Graham, 2009; West, Sweeting & Young, 2010; Rutten et al., 2015; Hopwood et al., 2016). Moreover, the potential harm initiated by school-based educational transitions may be experienced most acutely by children already considered vulnerable to life changes - namely those from lower socio-economic (SES) households and ethnic minority groups (Rodda, Hallgarten & Freeman, 2013; Scrutton, 2015).

Given the extent of challenges presented by these educational transitions, a number of studies have aimed to understand requisites for the smooth passage of children into Secondary school (e.g. Vitaro & Tremblay, 2008; National Foundation for Educational Research, 2013). This research has revealed that schools who report successful transitions focus on helping children to develop new friendships, familiarising them with new routines and promoting curriculum interest and continuity (Evangelous et al., 2008; Rice, 2015). Specifically, these practices equate with youngsters becoming more self-determined in how they overcome problems (Galton et al, 2000). This includes feeling more independent, getting along with others, and possessing a sense of achievement.

1.2 Outdoor Adventure (OA) programming

There has been extensive research implicating Outdoor Adventure (OA) residential programming for promoting positive behavioural adaptations pertinent for educational transitions. These include short-term and lasting improvements in self-efficacy, social connectedness, problem solving, resilience and academic performance (Rickinson, et al., 2004; Gill, 2010; The Outward Bound Trust, 2011; Bowen et al., 2016, National Connections Demonstration Project, 2016). It is claimed outdoor learning generates 'social capital'; boosting self-confidence and creativity (Barton et al 2016); fostering pride and a sense of belonging(Dillon & Dickie; 2012; Su et al., 2016); and improving cooperation, honesty, trust and compassion (Waite et al., 2016). Accordingly, schools have deployed a range of OA providers to deliver residential programmes which aim to boost children's capacity to avoid any transition-related

problems (Bloyce & Frederickson, 2012; Hawman, 2012; Gray et al 2017). Despite the perceived success and continued use of these programmes, there is evidence that personal and social skills which may contribute to the effective transition of school children may be best optimised through a tailored residential OA programme. This includes purposeful, concentrated exposure of children to OA; whereby teachers collaborate with experienced OA providers to shape programming to meet the specific aims of schools (Allan et al., 2014).

OA relies upon the process of experiential learning within a dynamic, natural setting to generate adaptive skill sets for young people. Experiential learning represents a progressively staged mechanism whereby participants learn through direct immersion and reflection of experiences (Burdette & Whitaker, 2005; Charles, 2009). The OA residential setting may provide unfamiliar and exciting experiences which compel individuals to engage with risk and uncertainty (Edwards Waite & Passey, 2016). This helps to create an authentic sense of capability initiated through a supported, controlled disruption and re-alignment of behaviours (Daniel et al., 2014; Beames & Brown, 2016).

Additionally, a growing number of studies suggest just being in close proximity to 'green' spaces significantly contribute to children's improved mental wellbeing, reduced anxiety and behavioural issues (Warber et al., 2015; Mutz & Maller, 2016; Ward et al., 2016). Indeed, even short-term doses of nature can make a marked impact upon mental health in natural settings – just five minutes of exercise undertaken in an urban green space may be sufficient to boost physical and mental wellbeing through 'biophilia' (Wilson, 1984), described as an innate connection to nature, especially in the young and those suffering from mental illness (Barton & Pretty, 2010; Annerstedt & Wahrborg; 2011). This has particular significance given a growing number of children - particularly from poorer households and ethnic minority groups - have less opportunity to learn in natural environments (Lovell, 2016; Natural England, 2016).

1.3 Research endeavours

Despite claims made for the purposeful use of OA for the development of youngsters, there is little empirical research to show how OA may be deployed to develop school-children in educational transitions. Further, it is argued beneficial outcomes emanating from OA may be largely based on intuitive belief systems (rather than an informed understanding of the dynamic nature of processes and outcomes) and remain context-specific (Howden, 2012). Therefore, any observable benefits arising from OA residential programming may not readily transfer into everyday behaviours useful for assisting with transitions in schools (Brookes, 2003; Sheard & Golby, 2006; Sibthorp et al., 2015).

Without evidence of the processes within OA programming which influence changes to young people (i.e. facilitation techniques, group dynamics) OA practitioners and schools are unlikely to make judgements about the validity of school-based OA programmes to meet school aims. Addressing this shortcoming may ensure that provision meets the needs of particular groups, such as pupils newly transiting into secondary school.

In the present study, a three-day OA residential programme was specifically designed to promote skills recognised as important for children's school-based transition into Secondary school (i.e. psychological well-being, independence, self-determination, getting along with others). There is evidence that attributes associated with school-children's self-determination (autonomy, competence and relatedness) can be enhanced during school transition through purposeful exposure to OA residential programming (Allan et al., 2014). For example, taking responsibility and control for one's own comfort, safety and learning provides authentic consequences which are linked with higher levels of decision making (Lagatolla, 2012). Shared mastery of tasks can create more divergent thinking and these effort driven processes help to provide intrinsically driven pride in achievement.

School-children and teachers were measured using a mixed methods protocol of data capture (questionnaires and interviews) to ascertain perceptions associated with immersion within the OA residential process. Measures were taken at varying time points to detail immediate and lasting changes of behaviours. To provide a direct comparison, quantitative data was also gathered from similar children attending two other induction programmes into Secondary school (OA and school-based).

1.4 Research aim and objectives

The aim of this study was to investigate the efficacy of a tailored OA programme for facilitating immediate and sustainable benefits in school-children's psychological well-being and self-determination in comparison to a generic OA residential programme and a school-based induction programme.

Objectives:

- (i) Evaluate the *psychological well-being* of school-children making transitions into Secondary school pre and post induction programmes in three conditions: Tailored OA, School-based induction and Generic OA programmes.
- (ii) Evaluate the *self-determination* of school-children making transitions into Secondary school pre and post induction programmes in three conditions Tailored OA, School Based and Generic OA programmes.
- (iii) Investigate the processes associated with school-children's learning within a tailored OA programme.
- (iv) Evaluate the sustainability of the tailored OA programme four months later.

2. Method

2.1 Study overview

This study was funded by the Bradford Partnership Group to gain insight into inclusive strategies which can aid school-children's transitions from Primary to Secondary school. It was a collaborative project including One in a Million Free School, Bradford, Leeds Beckett University, Nell Bank Adventure Education Centre and Bradford Adventure Development Unit, Bradford Metropolitan District Council. One in a Million Free school is situated within the city centre of Bradford and is comprised of higher than normal numbers of ethnic minority pupils.

2.2 Study design

Following ethical approval, completion of validated questionnaires, focussed discussion, semistructured interviews, and pupil and teacher reflections comprised a mixed method approach to capture data across three time-points. These were Time 1 – immediately prior to the delivery of programmes, Time 2 – on completion of the programmes, Time 3 – four months following the OA tailored programme. This approach enabled qualitative data to strengthen inferences contained in quantitative findings. The design of the programme is detailed in Table 1.

Table 1: Research Design: Schools Transition OA Project

Quantitative measures 1. Warwick-Edinburgh Mental Well-being Scale (WEMWEBS) 2. Basic Psychological Needs Scale (BPNS) (Self-Determination measure) Qualitative measures 1. Warwick-Edinburgh Mental Well-being Scale (WEMWEBS) 2. Basic Psychological Needs Scale (BPNS) (Self-Determination measure) Qualitative data capture • Focus group discussions • Video and audio footage • Semi-structured interviews with teachers (Tailored OA programme only)	discussion ired with teachers

2.3 Transition Programmes

Tailored OA programme

The Tailor-made group of new Year 7 children participated in a three-day, two-night residential in the Nell Bank centre. Emphasis was continually placed on the school's ideology to develop self-determined learners and promote the core values of honesty, integrity, compassion and excellence, (http://oiam.org accessed 2/6/2017). These principles equate with recognised qualities needed for transition and are associated with underpinning components of the self-determination theory (SDT) (Ryan and Deci, 2000). These components include *Relatedness* (how well a person can connect with others), *Competence* (the ability to complete tasks) and *Autonomy* (the capacity to self-direct learning). To consolidate learning from the challenges, pupils were empowered to solve their own problems working together, and invited to reflect upon their experiences. Although qualified OA

practitioners delivered the technical elements of the programme (Archery, Raft Building, Sky Walk Activity) undergraduate student volunteers facilitated all other collaborative activities such as a group-planned journey, housekeeping duties, meal preparation, children's reflections. Most importantly these university students acted as an interface between school teachers and the children. School-children also presented reflections of the experience at the end of the programme to their teachers and peers.

Comparison programmes

To provide suitable comparisons for this programme, two induction programmes aimed at supporting children in their transition were evaluated. The first comparison group experienced a one-week induction programme delivered in school. Activities focussed on integrating pupils into their new environment, familiarising them with subject areas, and helping them to form friendships. A second comparison group involved children from a neighbouring school who attended a three-day commercial OA residential. This comprised of team building challenges, land and water based pursuits. There was no attempt to tailor this programme to the School's educational objectives or aspects of self-determination and general well-being. All activities were delivered by experienced qualified personnel. The characteristics of all programmes are featured in Table 2.

Table 2: Programme Characteristics

Characteristics	Tailored OA	School-based	Generic OA
Participants Sample size School location	Year 7 60 Urban Bradford	Year 7 20 Urban Bradford	Year 7 20 Urban Bradford
Duration	3 days, 2 nights	5 days	3 days, 2 nights
Programme	Bespoke OA Residential programme	Non-residential school programme	Commercial OA Residential programme
Activities	A carousel of activities. Team building challenges, land and water based activities. Programme strongly linked to the schools core values of honesty, integrity, compassion and excellence. Particular emphasis was on helping children to become self-determined in their learning. Pupil presentations	Class-based activities subject-specific lessons including ice-breakers, team building challenges and practical activities both inside and in the playground area	Team building challenges, and land and water based pursuits. There was no attempt to tailor this programme to the School's educational objectives or aspects of self-determination
Delivery/Staff	OA activities delivered by qualified instructors fully supported by teachers. University students fully immersed in all activities as mentors	Whole programme delivered by teachers	All activities delivered by qualified instructors. Teachers provided pastoral care and evening supervision

2.4 Data capture

Quantitative data

Two validated age-appropriate self-report questionnaires were completed by children across all programmes immediately before and on completion of the programme. The 14 item Warwick-Edinburgh Mental Well-being Scale (WEMWBS) (Tennant et al, 2007) provides a single graduated score reflecting pupils' positive thoughts and feelings. The 21 item Basic Psychological Needs Satisfaction in Life Scale (BPNS) (Ryan & Deci, 2000) depicts pupils' self-determination through three separate subscale scores of autonomy (freedom to express ideas), competence (ability to learn

interesting new skills) and relatedness (amount of care received from others). Both the WEMWBS and the BPNS have positive links to increased psychosocial and academic functioning of pupils in schools (Anderson, 2002; Clarke, et al 2011). Copies of these scales are contained in Appendix 1.

Qualitative data

Qualitative data was captured to illuminate elements on the tailored OA programme which may have underpinned any changes in school-children's behaviour. Semi structured interviews and informal discussion took place in groups of five/six children during and following the OA residential. Children were encouraged to express their thoughts and opinions through open questioning and discussion which allowed clarification and exploration of ideas (Lloyd et al, 2016). Questions were guided by elements which underpin psychological well-being and components of self-determination (Table 3). Six teachers took part in open interviews to share their perceptions of the value of the intervention programme for the school-children's general well-being and their ability to respond to the expectations of the school.

Table 3: Sample of themed focussed discussion questions

Key: Psychological well-being & Self-Determination Theory (SDT) subscales of Competence Autonomy & Relatedness

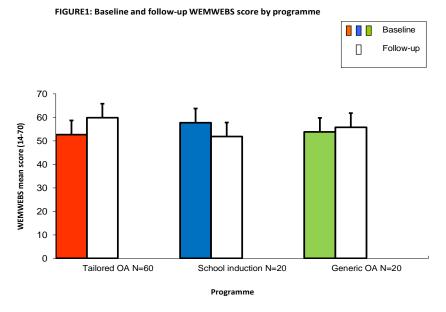
Can you talk about some of the new friends you have made this week	Can you explain how you feel about yourself generally, do you feel valued, and close to other people	How competent do you think you'll be looking after yourself at school? How will you cope with the timetable and homework?	Can you explain how you feel in terms of your energy, and how cheerful, relaxed and positive you are feeling
Can you tell me what you have learned this week – (tell me a story)	Please indicate your levels of confidence and how interested you are in new things	If you have a problem at school can you tell us who you would go to for help?	Do you feel like you can take on the challenge of being at a new school? Please explain your answer
How confident are you that you can cope with new subjects you are studying at school?	How do you think you will relate to your teachers as a result of this induction program?	Can you rate yourself on how clear your thinking is and your ability to solve problems	How do you think you will you cope with the changes you face in your school schedule?
What are your main sources of support (who can you talk to) at school, at home, outside?	How independent do you feel as a result of your experiences on this programme?	Can you talk about something from this week that has challenged you / made you very proud of yourself?	Can you explain if and how being on residential has helped you to get along with people more effectively?

2.5 Data analyses

Quantitative data analyses investigated the magnitude and direction of change to pre-programme measures of psychological well-being and self-determination immediately following all three induction programmes. Similarities and differences within and between group (mean) scores for WEMWBS and BPNS were identified using descriptive and parametric statistical analyses (percentage differences, independent t tests, one-way between participants analysis of variance). In-programme and follow-up qualitative data analyses of the tailor-made programme involved transcription and thematic analysis (a coding technique allowing information to be sorted into distinct frameworks that related back to the research aims and objectives).

3. Findings

These findings are based on responses to validated questionnaires from 100 Year Seven mixed gender pupils (Females 46 per cent) of diverse ethnicity. Qualitative data captured from children and teachers attending the OA tailored programme and follow-up discussions are contained in the Discussion section. Figure 1 shows the average psychological well-being scores of children before (baseline scores) and following the respective programmes.



One way Anova F(30,69) = 1.97 < 0.05 (Tailored OA v School induction and Generic OA)

T bar lines on each block depicts the standard deviation of mean scores for each programme

A significant difference was observed between the three programmes (Tailored OA, School-based induction, Generic OA) on pre and post programme differences in psychological well-being. The tailored OA programme achieved the greatest improvement in psychological well-being compared to the school-based induction which reported a reduction and the generic programme which registered a small improvement.

Figure 2 highlights the degree of differences in the mean BPNS subscale scores of autonomy, competence and relatedness for each programme. Beneficial increases in each subscale were most evident for the tailored OA residential programme. In contrast, the school-induction and generic OA programmes recorded decreases in Autonomy and Competence. The tailored OA programme recorded a 6.6 per cent increase in Autonomy compared to decreases in the other programmes, illuminating a significant statistical difference. Although all programmes recorded increases in Relatedness, the tailored OA programme increased Relatedness more significantly than the school-based induction and generic OA programmes.

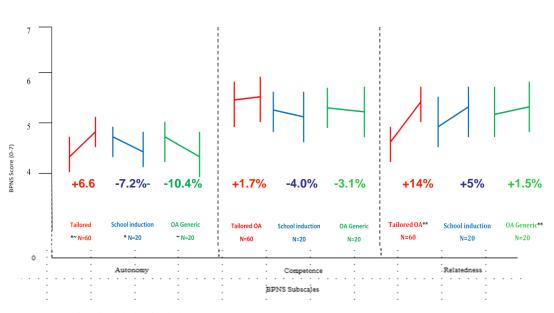


FIGURE 2 : Baseline and follow-up mean difference scores on Basic Needs Satisfaction in Life Scale (BPNS) for Autonomy, Competence and Relatedness by programme

BPNS 0-7 (low-high) standardised scale for each subscale mean score

Independent t tests * Nell Bank v School induction t(78) = 3.04,p=0.05; ~Nell Bank v Commercial t(78) = 3.42, p=0.05; ** Nell Bank v Commercial t (78) = 2.84, p=0.05 Lines depict Standard Deviation

4. Discussion

This study investigated the efficacy of a tailored OA programme for facilitating benefits in children's psychological well-being and self-determination during and following their transition into Secondary school. Investigations suggested a tailored OA programme compared to a school-based induction programme and generic OA intervention achieved the strongest scale of change in psychological well-being (Figure 1) and in all three SDT subscales of autonomy, competence and relatedness (Figure 2). Increases in the perceived ability of school-children to connect with others during transition were reported across all three induction programmes. Qualitative testimonies included in this discussion section corroborate quantitative findings of the tailored OA programme highlighting personal experiences and processes underpinning these changes.

Although limited to a modest population sample, these findings shed light onto the benefits of purposefully developing focused strength-based functioning within an OA residential for school children. More importantly, the nature of this change suggest that interventions can be devised that, potentially, support effective transition for children from inner-city areas and of diverse ethnicity who may not be able to access effective learning in green spaces. OA residential exposure which helps pupils to (i) feel proud and content (well-being) (ii) become independent (autonomy), (iii) be good at something (competence) and (iv) feel valued as a group member (relatedness) can produce a range of adaptive capabilities that help transition to Secondary school. To discuss the implications of these major findings, each of the study's objectives is considered separately.

4.1 The psychological well-being of school-children across programme conditions

Both OA programmes delivered short-term increases in the children's psychological well-being compared to induction practices undertaken in a school setting. Items contained on the WEMWEBS scale include the extent to which children 'feel optimistic', are' interested in others and new things', can 'deal with problems', and 'feel loved'. In this regard, our findings confirm the value of the exposure of young people to novel, shared activities in a natural residential OA for providing immediate psychosocial benefits ('social capital', creativity, a sense of belonging) (e.g. Dillon et al, 2006; Dillon & Dickie, 2012; Warber et al., 2015., Barton et al., 2016; Waite et al, 2016; Waite, 2017) that may transmit into school life and beyond. Findings also suggest that natural settings advocating shared expectations, freedom of expression and promotion of teacher /pupil relationships may be preferable for embedding new pupils in transition than more uniform environments.

Qualitative responses of children attending the tailored OA programme confirmed findings from the WEBWEMS measure. Children portrayed confidence in their abilities, contentment and appreciation for others during a programme which emphasised active immersion within nature.

'I was proud of raft building, I kept falling off but learnt how to climb back on'

'I didn't think I was a good leader until leading orienteering'

'I learned that you can show compassion without even realizing it! I know that I can show it my friends now. I feel more happier'

'I couldn't believe I was outside so late. I love being outside'

'I enjoyed learning outside because I didn't even think I was learning... it's boring in the classroom."

4.2 The self-determination of school-children across programme conditions

The tailored OA programme was foremost in enabling changes to more school-children's self-determination. This aligns with findings from a recent similar study of children transiting into Secondary school (Allan et al., 2014). The predominance of change across all subscales reported by children exposed to this programme provides justification for deploying focused, collaborative approaches in OA for addressing school children's transitional needs. Appropriately planned and executed programming involving schools and wider partners may help to inform teachers and create confidence in formulating OA. This practice may take the form of distinctive residential programming or curriculum-based outdoor learning which is delivered in and around school premises.

In respect to the development of the subscale of *Autonomy*, compared to significant decreases in the other programmes, children recognised opportunities for self-reliance through authentic challenges and freedom to explore.

'In map reading we found our way back from the lido without help from the grown-ups!'
'I felt independent when we had to clean our rooms and make our own sandwiches'
'It didn't matter that we got wet when our raft collapsed, we just re-built it'

Intense challenges in OA which emphasise the need for self-reliance may create real senses of capability through individual's overcoming dissonance (Daniel et al., 2014). Children reflected upon improvements in the subscale of *Competence* following successful negotiation of the tasks presented through their perseverance and effort.

'In archery I came first but I didn't think I would, and made me more confident in my ability'
'Having done the residential I think I can cope with this [Secondary School] responsibility because I know I am capable of it'

'My favourite thing was doing a presentation this made me feel excited to do it again at school and be not so scared'

'Sky-walking was really scary but I did it with help from my new friends'

The subscale of *Relatedness* increased across all conditions which could represent the overarching emphases placed upon social skills needed for transition within each of these programmes. The sharpest increase was reported within the tailored OA programme where the importance of collaborative effort and support for others was continuously reinforced and equated to future challenges children would face in school.

'I found working together meant it were easier - If I was on my own I wouldn't have done it".

'I think that I have lots of people to talk to now and I can go to my teachers'

'We have more friends because we slept in the same room and did activities together so we helped and supported all the time'

'I loved being with the students, it made me feel more grown up'

4.3 Processes associated with school-children's learning within the tailored OA programme

To prepare incoming school-children for the reality of secondary education, schools have been encouraged to develop approaches for pupils to become more self-determined (Galton et al 2000). The characteristics of the tailored OA programme placed emphasis on allowing the children the freedom to plan and explore, undertake supported risk taking with older student mentors and review naturally emerging experiences. To consolidate learning, children were encouraged to move from describing outcomes and applying basic problem-solving (Primary learning) to selecting, appraising and presenting an understanding of skills needed to achieve in school. Although these skills aligned with the school's philosophy (i.e honesty, integrity), they were more practically understood as making friends, knowing staff, asking for help and being responsible for oneself and others.

Teachers' perspectives helped to illuminate these building blocks for success.

'There are no right or wrong answers, just a process, with multiple solutions. In working though these, children are able develop creativity, collaborative learning and decision making skills so early in coming to school'

'If the trust and relationship is not there the pupils do not have much confidence in the classroom (or in you) which links into lower academic attainment'

'Usually we see pupils only twice a week for an hour and so it takes longer to form relationships...gaining trust and understanding of how they learn may take till Christmas- this is a way to get them on track before then'

'Unfamiliar activities act as a leveller, whereby some children who traditionally are more dominant in school may be stretched out of their comfort zones outside, those quiet kids get a chance to shine'

4.4 The sustainability of the tailored OA programme

It is contested that exposure to OA experiences does not implicitly build positive characteristics in young people which transfer across contexts but provide situations whereby individuals experience novelty and / or feel compelled to conform (Brookes, 2003). Although the transferability of OA continues to be questioned, there continues to be a dearth of evidence which advocates the use of OA for the holistic development of young people (e.g. National Connections Demonstration Project, 2016). In the present study, personal attributes akin to personality traits were not targeted for change through enforced participation. Rather, self-directed habitual behaviours in children were introduced and encouraged throughout all aspects of programming which could be replicated in local green spaces and school settings. Relationship building with teachers and university students (which could represent elder peers who have successfully transited) were emphasised as necessary for the long haul. Four months following the programme, children were able to self-reflect on the importance of these behaviours.

'When I started this school I was really shy but now my confidence has grown because I got to know people better than if we didn't go on residential'

'I think being with the students helped, they were super fun and it made teachers seem less scary

'Yeah, I remember the time we had at Nell Bank, and when I start to feel nervous I remember how well I got on and how you have to try something even if it is scary'

'Practice makes perfect as I learn in archery that's because I saw improvements in me, so I practice much more now with other things'

Behaviours regarded as important for transition were observed by teachers during school time.

'Pupils were drafting and re-drafting and they weren't happy or content with it being mediocre.....sometimes it took six or seven attempts......not by the teacher saying it isn't good enough, it was the students taking responsibility over their work and being proud of what they had done and achieved'

'They don't [pupils from the intervention group] seem to have the [academic] dip as much, they are more confident. They ask for help much more and seem a lot happier around school - and attendance is better'

'The impact that the student mentors had on the children was enormous, they set the standards of behaviour and work ethic'

4.5 Limitations and future considerations

This study provides valuable insights into the comparability of programme effectiveness for enacting changes to well-being and self-determination of children during and beyond school transition. However, there are limitations to these findings. A limited number of pupils were recruited from similar schools, and therefore findings do not generalise across the sector. Neither does our data reflect the on-going demands of a full academic cycle. Furthermore, we can only confirm the programme content for the tailored programme. However, our measures of well-being and self-determination were responsive in determining differences in pupils' functioning and could be used to evaluate further impacts of targeted OA interventions upon school children in transition.

Our evidence suggests that providing early opportunities for children to take control for their own safety and learning through tailored OA programming is linked to improvements in their well-being and personal adaptability. This was ensured by channelling workable ratios of children towards supported then self-directed tasks; allowing them the freedom to succeed and fail in a neutral testing ground for challenges akin to those faced in Secondary school. This provides encouragement for providing active programmes aiming to smooth the transition of school children, particularly those targeted at more vulnerable pupils. These experiences are optimised when teachers collaborate with experienced OA providers and use older influential young people (i.e. elder peers who 'know the ropes') to shape programming to meet the specific aims of schools.

Acknowledgements

Academic staff and undergraduate students were from the Carnegie School of Sport, Leeds Beckett University.

Outdoor practitioners were provided by Bradford Adventure Development Unit, Bradford Metropolitan District Council

The school at the forefront of the study was One-in-Million school, Bradford

The authors would like to thank teachers and students for their participation and Nell Bank Adventure Education Centre for hosting the residential

Permission was granted by the authors of WEMWEBS for its use in this study.

Authors

Vikki Slee is an Associate Lecturer and Educational Consultant

John Allan is a Senior Lecturer in Psychology and Adventure Education and an outdoor practitioner

Rob Bell is a Physical Education teacher and an outdoor practitioner

References

Allan J., McKenna J., Buckland H., & Bell, R.(2014). Getting the right fit: Tailoring Outdoor Adventure Residential Experiences for the Transition of Schoolchildren, **Physical Education Matters**, Spring, 2014

Anderson, E.M. (2002). School effects on psychological outcomes during adolescence. **Journal of Educational Psychology**, 94(4), pp 795-809

Annerstedt, M. & Wahrborg, P. (2011) Nature-assisted therapy: Systematic review of controlled and observational studies. **Scandinavian Journal of Public Health**, 39(4) pp 371-388

Barton, J., Bragg. R., Wood, C., Pretty, J. (2016) **Green Exercise, Linking Nature, Health and Wellbeing**, Routledge

Barton, J. & Pretty, J. (2010) what is the Best Dose of Nature and Green Exercise for Improving Mental Health? A Multi-Study Analysis **Environmental Science and Technology**, 44 (10), pp 3947-3955

Beames, S.& Brown, M.(2016) **Adventurous learning: A pedagogy for a changing world**. New York: Routledge

Beames, S., Higgins, P. & Nicol, R. (2012) Learning outside the classroom: theory and guidelines for practice. Oxon: Routledge.

Benner, A.D., &, Graham, s. (2009). The transition to high school as a developmental process among multi-ethnic urban youth. **Child Development**, 80, pp. 356–376

Bloyce, J., & Frederickson, N. (2012).Intervening to improve the transfer to secondary school, Educational Psychology in Practice: **Theory, research and practice in educational psychology**.28(1) 1-18

Bowen, D., Neill, J., Williams, I., Mak, A., Allen, N., & Olson, C. (2016) A profile of outdoor adventure interventions for young people in Australia. **Journal of Outdoor Recreation, Education and Leadership**, 8 (1), 26-40

Brookes, A. (2003) A critique of neo-Hahnian outdoor education theory, part one: challenges to the concept of 'character building' **Journal of Adventure Education and Outdoor Learning**, 3(1), pp49-62

Charles, C. (2009) The ecology of hope: Natural guides to building a children and nature movement, **Journal of Science Education and Technology**. 18 pp 467-475

Clarke, A., Friede, T., Putz, R., Ashdown, J., Martin, S., Blake, A., Adi, A., Parkinson, J., Flynn, P., Platt, S., & Stewart-Brown., S. (2011). Warwick-Edinburgh Mental Well-being Scale: Validated for teenage school students in England and Scotland. A mixed methods assessment. **BMC Public Health**, 11, p 487

Daniel, B., Bobliya, A., Kalisch, K., & McAvoy, L. (2014) Autonomous Student Experiences in Outdoor and Adventure Education, Journal of Experiential Education, 31(1) pp 4-17

Dillon, J., and Dickie, I.,(2012) Learning in the Natural Environment: Review of Social and Economic benefits and barriers. **Natural England Commissioned Reports**, 2012 (092)

Dillon, J., Rickinson, M., Teamey, K., Morris, M., Choi, M., Sanders D. &Benefield, P. (2006) The value of outdoor learning: evidence from research in the UK and elsewhere, **School Science Review**. 87 (320) March, pp 107-111

Edwards-Jones, A., Waite, S. & Passy, R. (2016) Falling into LINE: school strategies for overcoming challenges associated with learning in natural environments (LINE), International Journal of Primary, Elementary and Early Years Education pp 1-15

Evangelou, M. Taggart, B. Sylva, K. Melhuish, E. Sammons, P. and Siraj-Blatchford, I. (2008) What Makes a Successful Transition from Primary to Secondary School? **Department for children, schools and families**

Galton, M., Morrison, I. & Pell, T. (2000) Transfer and transition in English schools: reviewing the evidence, **International Journal of Educational Research** 33(4), 341–363

Gill, T. (2010). Nothing Ventured... Balancing risks and benefits in the outdoors, **English Outdoor Council**

Gray, T., Tracy, D., Truong, D., Ward, K. (2017) Fostering the wellbeing of students with challenging behaviour and/or emotional needs through Acceptance Commitment Therapy and Outdoor Learning: **Research Report.** Sydney, New South Wales: Centre for Educational Research, School of Education, Western Sydney University

Hawman, C. (2012). OAA Matters, Physical Education Matters, Summer 2012, 8-10

Hopwood, B., Hay, I., & Dyment, J. (2016), 'The transition from primary to secondary school: Teachers' perspectives', **Australian Educational Researcher** (Springer Science & Business Media B.V.), 43, (3), p. 289

Howden, E. (2012) Outdoor experiential education: Learning through the body. **New Directions for Adult and Continuing Education** (134) pp 43-51

Lagattolla, C. (2012), 'Self-Determination Theory in Adventure Programs', **Association Of Outdoor Recreation & Education Conference Proceedings**, pp. 79-83

Lloyd, M. Watmough, S.D. O'Brien, S.V. Furlong, N. and Hardy, K. (2016) 'Exploring attitudes and opinions of pharmacists toward delivering prescribing error feedback: A qualitative case study using focus group interviews'. **Research in Social and Administrative Pharmacy**, 12(3), pp 461–474

Louv, R. (2005) Last Child in the Woods: **Saving Our Children from Nature-deficit Disorder**. USA: Algonquin Books

Lovell, R. (2016) Connection to Nature: evidence briefing. **Natural England Commissioned Reports.** England: Natural England http://publications.naturalengland.org.uk/publication/4792791243161600 [Accessed: 22/05/2017]

Mutz, M., & Maller, J. (2016) Mental health benefits of outdoor adventures: Results from two pilot studies. **Journal of Adolescence**, 49 pp 105-114

Myers, O.(2012) **Children and Nature**. In: Clayton, S. (eds) The Oxford Handbook of Environmental and Conversation Psychology. New York: Oxford University Press

National Foundation for Educational Research (2013) Summer Schools Programme for Disadvantaged Pupils: Key findings for schools, **Research Report DFE-RR271B**, Department for Education

Natural England (2016) The National Connections Demonstration Project, 2012-2016 **Final Report** (NECR215), Natural England

Ofsted (2008). Learning outside the classroom: how far should you go? London: Ofsted http://www.oiam.org.uk/ [accessed 2/6/17]

Rice, F. Frederickson, N. McManus, C. and Shelton, K. (2015) **Predicting successful transitions to Secondary School.** Nuffield Foundation

Rickinson, M., Dillion, J., Teamey, K., Morris, M., Mee Young, C., Sanders, D., & Benefield, P. (2004). **Review of Research on Outdoor Learning**, London: National Foundation for Educational Research

Rickinson, M., Hunt, A., Rogers, J. & Dillon, J. (2012) **School Leader and Teacher Insights into Learning Outside the Classroom in Natural Environments**. Natural England Commissioned Reports, Number 097. Natural England

Rodda, M., Hallgarten, J., & Freeman, J. (2013). Between the cracks. Exploring in-year admissions in schools in England, **RSA Active and Research Centre**

Rutten, C., Boen, F., Vissers, N. and Seghers, J. (2015) Changes in children's autonomous motivation toward physical education during transition from elementary to secondary school: A self-determination perspective, **Journal of Teaching in Physical Education**, 34(3), pp. 442–460

Ryan, R.M., &Deci, E.L. (2000). Self-determination theory and the facilitation of intrinsic motivation, social development and well-being. **American Psychologist**, 55, 68-78

Scrutton, R. A., (2015) Outdoor Adventure Education for children in Scotland: quantifying the benefits. **Journal of Adventure Education and Outdoor Learning** (201) 1 (2) 123-137

Sheard, M., Golby, J (2006) The efficacy of an Outdoor Adventure Education Curriculum on selected aspects of positive psychological development. **Journal of Experiential Education**, 29 (2) pp 187-209

Sibthorp, J., Collins, R., Rathude, K., Paisley, K., Schummann, S., Pohja, M., Gookin, J., & Baynes, S. (2015) Fostering Experiential Self-Regulation through Outdoor Adventure Education. **Journal of Experiential Education**, 38(1) pp 26-40

Su, X., Xiang, P., McBride, R., Liu, J. & Thornton, M. (2016) At-Risk Boys' Social Self-Efficacy and Physical Activity Self-Efficacy in a Summer Sports Camp. **Journal of Teaching in Physical Education**, 35 (2), pp.159-168

Tennant, R., Hiller, L., Fishwick, R., Platt, S., Joseph, S., Weich, S., Parkinson, J., Secker, J., & Stewart-Brown, S. (2007). The Warwick-Edinburgh Mental Well-being Scale (WEMWBS): development and UK validation, Health and Quality of Life Outcomes, 63(5), 1-13

The Outward Bound Trust (2011). Social Impact Report, The Outward Bound Trust

Vitaro, F and Tremblay R.E. (2008). Clarifying and maximizing the usefulness of targeted preventive interventions, Rutter's child and adolescent psychiatry. 5th ed. Oxford: Blackwell

Waite, S. (2017) Making a difference: learning on a grand scale. In: Waite, S. (eds) **Children Learning Outside the Classroom: From birth to eleven. 2nd Ed**. London: SAGE Publications

Waite. S., Passey, R., Gilchrist, M., Hunt, A. & Blackwell. I (2016) **Natural Connections Demonstration Project, 2012-2016 Final Report** Natural England Commissioned Reports, 2 (15)

Waite, S., Rutter, O. &Fowle, A. (2017) Methods of Assessment and Evaluation for Learning Outside the Classroom. In: Waite, S. (eds) **Children Learning Outside the Classroom: From birth to eleven.2**nd **Ed.** London: SAGE Publications

Warber, S. L., DeHudy, A.A. Bialko, M. F. Marselle, M. R. Irvine, K.N. (2015) Addressing 'Nature Deficit Disorder' A mixed method pilot study of young adults attending a wilderness camp **Evidence based Complementary and Alternative Medicine (ECAM)** pp 1-13

Ward, J.S., Duncan, J.S., Jarden, A., Steward, T. (2016) The impact of children's exposure to greenspace on physical activity, cognitive development, emotional wellbeing, and ability to appraise risk, **Health and Place**, 40 pp 44-50

West, P., Sweeting, H., & Young, R. (2010). Transition matters: pupils' experiences of the primary-secondary school transition in the West of Scotland and consequences for well-being and attainment, **Research Papers in Education**, 25 (1) 21-50

Wilson, E. O. (1984) Biophillia. Cambridge: Harvard University Press

APPENDIX (1) Warwick-Edinburgh Mental Well-being Scale (WEMWBS)

Date:	Name:
-------	-------

Below are some statements about feelings and thoughts.

Please circle the box which best describes your experience of each over the last 2 weeks.

	None of the time	Rarely	Some of the time	Often	All of the time
I've been feeling optimistic/positive about the future	1	2	3	4	5
I've been feeling useful	1	2	3	4	5
I've been feeling relaxed	1	2	3	4	5
I've been feeling interested in other people	1	2	3	4	5
I've had energy to spare	1	2	3	4	5
I've been dealing with problems well	1	2	3	4	5
I've been thinking clearly	1	2	3	4	5
I've been feeling good about myself	1	2	3	4	5
I've been feeling close to other people	1	2	3	4	5
I've been feeling confident	1	2	3	4	5
I've been able to make up my own mind about things	1	2	3	4	5
I've been feeling loved	1	2	3	4	5
I've been interested in new things	1	2	3	4	5
I've been feeling cheerful	1	2	3	4	5

Basic Psychological Needs Satisfaction in Life Scale (BPNS)

Please read each of the following statements, thinking about how it relates to your life, and then circle how true it is for you.

	Not at all true		Somewhat true		Very true		
I feel like I am free to decide for myself how to live my life	1	2	3	4	5	6	7
I really like the people I interact with	1	2	3	4	5	6	7
Often, I do not feel very competent	1	2	3	4	5	6	7
I feel pressured in my life.	1	2	3	4	5	6	7
People I know tell me I am good at what I do	1	2	3	4	5	6	7
I get along with people I come into contact with	1	2	3	4	5	6	7
I pretty much keep to myself and don't have a lot of social contacts	1	2	3	4	5	6	7
I generally feel free to express my ideas and opinions	1	2	3	4	5	6	7
I consider the people I regularly interact with to be my friends	1	2	3	4	5	6	7
I have been able to learn interesting new skills recently	1	2	3	4	5	6	7
In my daily life, I frequently have to do what I am told	1	2	3	4	5	6	7
People in my life care about me	1	2	3	4	5	6	7
Most days I feel a sense of accomplishment from what I do.	1	2	3	4	5	6	7
People I interact with on a daily basis tend to take my feelings into consideration	1	2	3	4	5	6	7

	Not at all true		Somewhat true		Very true		
In my life I do not get much of a chance to show how capable I am	1	2	3	4	5	6	7
There are not many people that I am close to	1	2	3	4	5	6	7
I feel like I can pretty much be myself in my daily situations	1	2	3	4	5	6	7
The people I interact with regularly do not seem to like me much	1	2	3	4	5	6	7
I often do not feel very capable	1	2	3	4	5	6	7
There is not much opportunity for me to decide for myself how to do things in my daily life	1	2	3	4	5	6	7
People are generally pretty friendly towards me	1	2	3	4	5	6	7