Routledge
Taylor & Francis Group

Journal of Adventure Education and Outdoor Learning

ISSN: (Print) (Online) Journal homepage: www.tandfonline.com/journals/raol20

# Building resilience and well-being for post-covid adolescents through outdoor adventure

John Francis Allan, Adele Doran, Ruan Jones & Sarah Farrell

**To cite this article:** John Francis Allan, Adele Doran, Ruan Jones & Sarah Farrell (20 Feb 2024): Building resilience and well-being for post-covid adolescents through outdoor adventure, Journal of Adventure Education and Outdoor Learning, DOI: 10.1080/14729679.2024.2312920

**To link to this article:** https://doi.org/10.1080/14729679.2024.2312920

© 2024 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group.

Published online: 20 Feb 2024.

Submit your article to this journal

Article views: 1716

View related articles

View Crossmark data

Citing articles: 1 View citing articles

Full Terms & Conditions of access and use can be found at
https://www.tandfonline.com/action/journalInformation?journalCode=raol20

JOURNAL OF ADVENTURE EDUCATION AND OUTDOOR LEARNING
https://doi.org/10.1080/14729679.2024.2312920

Routledge
Taylor & Francis Group

OPEN ACCESS Check for updates

# Building resilience and well-being for post-covid adolescents through outdoor adventure

John Francis Allan[a], Adele Doran[b], Ruan Jones[c] and Sarah Farrell[d]

[a]Institute of Education, Sheffield Hallam University, Sheffield, UK; [b]Research & Innovation Lead for the Department of Finance, Accounting & Business Systems, Sheffield Business School, College of Business, Technology & Engineering, Sheffield, UK; [c]Sport, PE & Health, Cardiff Metropolitan University School of Sport & Health; [d]MCIM, Marketing Consultant and Fractional CMO, Founder Lead Out Train, Strategic Marketing Consultancy

**ABSTRACT**

21st Century Skills encompass life capabilities for individuals to work and prosper in complex environments. Resilience encapsulates positive behavioural adaptations acquired through optimised exposure to outdoor adventure education (OAE). This study examined the efficacy of one-week OAE residentials upon young people's resilience, psychological well-being, and vocational skill development. Importantly, it identified OAE components which best cultivated their learning. Significant gains were reported in the resilience and well-being of 622 diverse adolescents across three timepoints. From below average baseline scores, resilience and well-being increased by 36% and 23% respectively. These increases were largely retained one month later. Camp-based experiences including mastering new skills, solving problems, and being inspired by nature predicted heightened resilience and well-being. These results supported the positive development of 21st Century Skills which promote individual and collective functioning and are protective of stress. Embodied challenges in real-world contexts enable vulnerable young people to re-adjust, grow, and persevere.

**ARTICLE HISTORY**
Received 21 August 2023
Accepted 24 January 2024

**KEYWORDS**
Resilience; mental health problems; outdoor adventure; quantitative analyses; active components of positive change, 21st Century skills

## Introduction

More than ever before an enormous amount of unmitigated information is at young people's fingertips. Therefore, the measure of a young person's knowledge is not the amount of this information they can retain (cognitive skills), but their ability to curate (filter and process) material coupled with an understanding of how, when, and why they should or should not use it (Collado-Soler et al., 2023). Within an emerging creative economy, a core of highly prized skills, collectively known as *21st Century Skills*, is recognised by international agencies, academics, non-governmental and private sector organisations as essential for generating solutions to some of society's most critical problems in a global marketplace. Collectively, these bodies provide empirical evidence illustrating the importance of these non-cognitive skills for successful youth development and post-secondary education (Cipriano, 2021; Heckman & Rubenstein, 2001; Lleras, 2008; Park, 2004). Although scholars disagree in how to define them best, and measure their impact (Care et al., 2012; Lai & Veiring, 2012), 21st Century Skills invariably encompass life and career skills necessary for young

**CONTACT** John Francis Allan john.allan@inspiring-learning.com Institute of Education, Sheffield Hallam University, Charles Street Building, Charles Street, College of Social Sciences and Arts City Campus, Sheffield S1 2NH, UK

This article has been republished with minor changes. These changes do not impact the academic content of the article.

© 2024 The Author(s). Published by Informa UK Limited, trading as Taylor & Francis Group.
This is an Open Access article distributed under the terms of the Creative Commons Attribution License (http://creativecommons.org/licenses/by/4.0/), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited. The terms on which this article has been published allow the posting of the Accepted Manuscript in a repository by the author(s) or with their consent.

people to live and work in diverse, complex environments, and include attributes such as curiosity, empathy, resilience, imagination, open-mindedness, and out-of-the-box thinking (Ball et al., 2016). An impetus for youngsters to acquire these skills takes on greater significance in a post-covid society where a generation of de-conditioned young people are struggling with their physical and mental well-being which impacts their future career prospects.

The immersion of young people into outdoor natural settings has been shown to result in positive psychological outcomes, mental health-related benefits, and wider skill development akin to 21st Century Skills. Examples of outcomes, some of which seem to be retained over time, include independence, resilience, confidence, emotional well-being, creativity, self-esteem, locus of control, self-efficacy, coping strategies and interpersonal skills, improvements in long-term memory and problem-solving capacity (e.g. J. F. Allan & McKenna, 2020; Barton & Pretty, 2010; Rugel et al., 2019; Ungar et al., 2005; Van den Bosch & Sang, 2017). Importantly, this is not just the case for able and motivated youngsters; under-achievers and learners from disadvantaged backgrounds may also perform better in a natural environment, especially when exposed to high-quality, stimulating activities (e.g. Slee & Allan, 2019; Ungar, 2015).

Resilience may encapsulate many positive adaptations or 21st Century Skill sets that can arise from building psychosocial strengths through optimised exposure to outdoor adventure and nature (Ewert & Yoshino, 2008; Passarelli et al., 2010). Psychological resilience constitutes a range of positive adaptive behaviours which may enable young people to combat stress, bounce-back from adversity and follow a trajectory of growth (bounce-beyond ability). Young people's resilience has largely improved in the short term and to a lesser extent has endured, representing a healthy trajectory of functioning particularly from outdoor adventure education (OAE) residential exposure (e.g. J. F. Allan & McKenna, 2022; Beightol et al., 2012; Ewert & Yoshino, 2011; Outward Bound, 2012, 2014).

Several studies suggest that being in green spaces significantly contributes to improvements in young people's mental health, well-being and coping with stress (Brymer et al., 2021; Engemann et al., 2019; Greenwood & Gatersleben, 2016; Marselle et al., 2015; Mutz & Maller, 2016; Van Dijk-Wesselius et al., 2020; Ward et al., 2016). This may be especially beneficial for young people with mental health problems and learning disabilities. In 2019, the UK government published a 25 Year Environmental Plan setting out six key priorities, one of which was to connect people with natural environments to increase their health and well-being. Given programmed OAE residentials with youngsters are mostly underpinned by experiential learning within nature, OAE has the potential to impact health, well-being and 21st Century competencies.

While educational benefits and improvements in personal and social development have been associated with OAE programming, there are existing barriers to participation for youngsters from disadvantaged households (British Mountaineering Council, 2023, Friedman et al., 2022; Dillon & Lovell, 2022). Furthermore, many studies have not designed programmes with intended outcomes in mind, lacked methodological rigour or been linked to wider aspects of participants' attainment. To address these issues, OAE researchers have requested more accessible validated quantitative research protocols to evidence the formative processes of change (i.e. how the components of programmes and participant qualities are linked to outcomes, the influence of leaders, setting and teaching methodologies) and to track the sustained impacts of OAE experiences upon participants emotional well-being and perceived competencies (Bowen & Neill, 2013; Kendall & Rodger, 2015; Parker & Al-Maiyah, 2022). Such design considerations and evaluations with large subject numbers may enhance the fidelity (consistency and quality) of OAE programmes and legitimise OAE as a primary form of evidence-based practice that promotes adolescent resilience, well-being, and wider skill development.

The aim and objectives of this study were formulated in line with a UK government-backed initiative, called the National Citizens Scheme (NCS) that brings together young people from different backgrounds, aged 16–17, to engage in a programme of activities which drive social mobility, social engagement, and social cohesion (https://wearencs.com) Addressing the requirements for more inclusive, robust empirical research, this quantitative investigation evaluated the

impact of bespoke OAE programmes referred to as *Skills4Life* (http://kingswood.co.uk/programmes/ncs-skills4life) upon the psychological resilience, well-being and 21st Century Skill development of over 600 diverse young people across 10 OAE residential centres in the Winter of 2023.

## Nurturing 21st century skills for life in childhood and adolescence

While the power of acquired knowledge is unquestionable, cultivating a young person's sense of purpose and passion alongside traditional cognitive skill development creates more powerful learning experiences in tune with a digital world of constant change (Trilling & Fadel, 2009). Nurturing an optimum blend of physical, social, cognitive, and emotional intelligence (EI) in childhood will help young people to adapt to change (Collado-Soler et al., 2023). Adolescence is where brain growth is most prolific, and *four* of the most important 21st Century Skill set (critical thinking, creativity, collaboration, and communication) can be fostered to help young people to respond positively to the challenges of today and embolden them to face the demands of tomorrow (Menon, 2013). To put the rapid pace of change young people face into perspective, it is estimated that 65% of them will end up in jobs yet to be invented (Jana, 2017). Therefore, learning by a range of means and experiences enables young people to 'zoom in'– perceiving the world at a granular, personalised level (how I make sense of information and what it means to me) and 'zoom out' acquiring a global perspective (how I impact others and systems through my actions).

Youngsters who score high on such psychosocial capability at an early age, as opposed to pure academic skills training, report better adult outcomes in education, employment, and mental health (Gray et al., 2019; Kautz et al., 2014). Emotionally intelligent people report more life success, can understand rules, evaluate situations, express their feelings in an appropriate way, and respect beliefs (Collado-Soler et al., 2023). They also tend to be happier, productive, and healthier (Petrides et al., 2016). Schools, positive youth development programs, and workforce development initiatives are therefore turning to 21st Century Skills to inform programme development and guide interventions designed to improve youth outcomes (Tooley & Bornfreund, 2014).

## Post-covid de-conditioned young people

This drive for youngsters to acquire 21st Century Skills is gaining momentum in a post-covid UK society where a generation of de-conditioned young people failed to meet recommended physical activity levels or undertook no exercise at all during the pandemic. This had led to reports of increasing levels of physical and mental health problems which inhibits their development (Mental Health Foundation & London School of Economics, 2023). During the pandemic, individuals under 20 years of age reported worsening mental health and an inability to cope with stress than their older counterparts. The Youth Sports Trust (2023) (www.youthsporttrust.org) impact report highlights the scale of young people's physical inactivity (2.2 million youngsters are active for less than 30 minutes a day), poor mental health (18% of children aged 7 to 16 years of age have a probable mental health disorder), and social disconnection (1 in 4 children do not feel they belong at school).

These problems are exacerbated by the cost-of-living crisis and social disadvantage. Children living in the most deprived areas are more than twice as likely to be living with obesity than those in the least deprived areas. Fewer than half of disadvantaged children reach expected levels of attainment at the end of primary school, compared with nearly 70% of their better-off peers. Of those who do achieve the expected level, just 40% of disadvantaged pupils go on to receive good secondary education grades in English and Maths, compared with 60% of better-off students. Young people from disadvantaged backgrounds are twice as likely to not be in education, employment, or training (NEET) as their more affluent peers with the same level of qualifications (Teach First, 2023). The attainment gap remains the biggest barrier to young people with Special Educational Needs (SEND), who make up over 15% of the population, yet were somewhat overlooked during the pandemic compared to pupils in mainstream schools.

In financial terms, the cost of mental health problems across the UK is approximately £118 billion a year; providing a sound economic case for an investment in preventative measures which would both improve mental well-being while reducing the financial cost of poor mental health (Mental Health Foundation & London School of Economics, 2023). Arguably, these preventative measures are of greatest importance for young people, who provide the workforce and economic driving force of tomorrow. Further, as over half of all lifetime mental disorders have been diagnosed by mid-teens, without treatment, such incapacity is likely to lead to permanently sick or disabled middle-aged adults. Urgent action is therefore required to 'build back healthy, happier and more resilient young people and level the playing field for those most disadvantaged' (Youth Sport Trust, 2023).

## Resilience and 21st century skills

Notwithstanding the detrimental impact of structural inequality on the health and well-being of young people, not all adolescents, it seems succumb to their circumstances, so they suffer developmental problems. Many adolescents may avoid the negative trajectories associated with multiple risks (e.g. Masten, 2011; Rutter, 2006) and display healthy psychosocial development better than objective circumstances suggest they should or than that of other individuals who suffered the same experiences. The avoidance of and maintenance of normative development in the context of adversity has led to the development of *psychological resilience* as a compelling area for understanding and ameliorating negative trajectories and for structuring models of positive youth development.

Resilience has been referred to a person's capacity to modify behaviour in response to environmental hazards, thrive and self-fulfil despite or even because of stressors (Leipold & Grieve, 2009). From this perspective, individuals and communities use a repertoire of acquired skill sets to adapt and recover quickly from prevailing stressors (denoting bounce-back ability) and may see problems as opportunities for dynamic self-renewal (bounce-beyond ability). Resilience is related to emotional intelligence, which together are positively associated with improved academic performance, well-being, and self-motivation in young people (Plante et al., 2009). Although there may be significant differences in how young people respond to disadvantage and risk, demonstrating competent functioning across difficult circumstances and domains provides evidence of the enduring functionality of resilience. Indeed, resilient people tend to experience less stress and pain over their lifetime (Delhom et al., 2020; Kong et al., 2019).

Figure 1 highlights that conceptually, resilience represents a reasonably rapid return to homeostasis, or 'bounce-back ability' once an individual's equilibrium is displaced through adversity. Time 1 represents the point prior to a challenging event requiring a resilient response. Building capacity

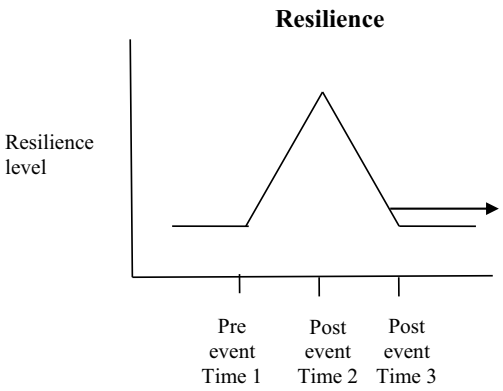


**Figure 1.** Hypothesised trajectory of resilience (F. H. Norris et al., 2009).

for dealing with threats to individual well-being (resilience) involves being able to estimate vulnerabilities to defend against harm while also drawing upon strengths to create forward momentum. The biological paradigm of 'stress and recovery' facilitates a learned shift along the resilience continuum from momentary instability and overcoming threats towards sustained well-being. Resilience may result from individuals tolerating immediate emotional distress which can be instrumental in generating adaptive changes (or a 'steeling effect') that can be deployed to overcome later adversity (Rutter, 2006). Nevertheless, it may seem appropriate that for participants to adapt, they need to experience activities which are scaled according to capacity. This scaling of challenge combined with support is what facilitates successful negotiation of risk exposure and meaningful learning. Time 2 is the period immediately following a challenging event and denotes the extent of the resilient response (Bodin & Wiman, 2004; Vanderpool, 2002). The transient perturbation requiring resilience may last weeks (Bonanno, 2004). A return to a higher homeostasis level depicted at Time 3 by the arrow may occur months later and suggests a sustained positive impact of the challenge upon resilient functioning or 'bounce-beyond' ability (personal growth). This pictorial representation of resilience has been referred to as a 'Witches Hat' profile.

Given current psychosocial problems, poor mental health, limited coping abilities and school drop-out are among the most common chronic health disorders of youth, using positive adaptive functioning is now acknowledged as a vital sign of life (Taylor et al., 2000). Yet, confusion remains regarding whether resilience provides sustainable protective resources for young people in 'real world' scenarios. For example, resilience factors that promote positive psychosocial functioning in one context, a time-point, or a cohort may be ineffective in another (e.g. Ungar, 2013). It is also suggested there are gender-specific forms of resilience. Females may prefer adaptive behaviour which involves mutual support, termed *relational resilience* (Hartling, 2003). Males may project external confidence and use more instrumental, problem-focused strategies (Pollack, 2006).

While resilience does not ensure positive mental health (e.g. Layne et al., 2007; F. Norris et al., 2009), resilient behaviours akin to 21st Century Skills help individuals to solve problems, deal with setbacks, manage work conscientiously, communicate with people from a variety of backgrounds, and adapt rapidly to changing conditions. Resilience has an underpinning reciprocal relationship with factors, such as the four C's (critical thinking, creativity, collaboration, and communication) (Menon, 2013) which promote cognitive and affective functioning and protect against risks. These *promotive* and *protective* factors appear at the individual level such as self-regulation and self-esteem within family and secure attachments, e.g. sociability and empathy, role model emulation and through broader social and community values (education) (Strayhorn, 2011; Zolkoski & Bullock, 2012).

The similarity of risk and protective factors across the domains of the home, health, education, and wider society provides resilience with the potential to be an organising concept for interventions across society. The purposeful development of character attributes of young people is high on the agenda for UK education and health care strategists and practitioners. An established body of evidence suggests that character attributes, such as resilience and 21st Century Skills help to reinforce academic performance, enable success in the labour market and promote mental health (Birdwell et al., 2015; National Youth Agency, 2015; The; Lexmond & Grist, 2011; Resilience Consortium, 2022; Youth Sport Trust, 2023). Nonetheless, there are still significant gaps in relation to understanding and protecting young people from risk factors and providing a range of skills they need to become successful and resourceful adults.

## Outdoor Adventure Education (OAE) resilience, and 21st century skills

Exposing young people to authentic challenges in natural settings is recognised as important to the development of a range of measurable socio-emotional skill sets, health benefits essential for their normative growth and education (Bowler et al., 2010; Gill, 2010; van den Berg et al., 2015). For the most part, research has established that natural environments (i) enhance the impact of physical

activity by increasing motivation, enabling emotional regulation, brain growth, recovery capability and protection from disease, and (ii) possess unique qualities unrelated to physical activity, such as restorative capabilities and stress-reduction (J. Allan et al., 2020; Brymer et al., 2021; Nejade et al., 2022; Stevenson et al., 2018). Although few studies have examined the explicit impact of OAE experiences on adolescent resilience, research suggests an apparent fit between the stated goals of OAE and experiences that may build resilience in young people.

Resilience has long been recognised in school-based education as an effective policy for developing students' well-being and academic success (e.g. Bryan, 2005; Esquivel et al., 2011). Following the pandemic, returning to school offered youngsters a safe place to mend, move and meet people. However, only so much re-conditioning can be achieved in the context of the classroom where routines and consistency may be rigorously applied. OAE provides meaningful, thriving-related experiences where learners are challenged to build a repertoire of transferable behaviours through facing uncertainty. These include physical skills, social competencies, and wider attentional focus which can be called upon when difficult situations demand it. Young people's resilience has largely improved in the short term and to a lesser extent has endured, representing a healthy trajectory of functioning particularly because of OAE residential exposure [e.g. J. F. Allan and McKenna (2022)].

Learning immersed in nature takes place outside, in real, often unpredictable situations which require speedy reaction and comprehension, dialogue amongst peers, reflection and solution orientation (Gill, 2010). It is claimed outdoor learning generates 'social and cultural capital' by boosting self-confidence and creativity (Barton et al., 2016), fostering pride and a sense of belonging (Dillon & Dickie, 2012), and improving cooperation, honesty, trust, and compassion (Waite et al., 2017). Critics of outdoor learning argue that positive outcomes arising from such experiences are largely based upon untested assumptions that the outdoors works. They contest that exposure to OAE may be exclusive and does not automatically build positive characteristics in young people but provide situations whereby individuals only experience short-term novelty or feel compelled to take part. Consequently, any developmental outcomes of young people in OA do not readily transfer to everyday settings (e.g. Brookes, 2003).

Outdoor adventure learning is not a silver bullet to fix young people. Like any educational practice or pedagogical tool, it requires practice to implement effectively to acquire the desired outcomes. However, research shows, if appropriately delivered to meet the diverse needs of young people, OAE does generate meaningful educational outcomes in exciting natural settings which builds strengths in young people. This adaptive quality allows people who learn in environments which require use of multiple senses and where situations are not uniform and predictable, to perform better across a range of physical and cognitive tasks than those in uni-sensory settings (J. F. Allan et al., 2012). Further, those outdoor residential programmes which report the most impactful and long-lasting benefits, are those which have been tailored to meet the needs of the learners (J. Allan et al., 2014). The following features have been reported as key for generating a wide range of beneficial outcomes for young people in OAE residential settings (Kendall & Rodger, 2015):

- The *time, space* and *intensity* of the residential experience enables participants to be immersed in learning.
- Residential programmes are a *leveller*, participants are equal and existing barriers and hierarchies can be broken down.
- Relationships are developed through a *sense of community*/living together.
- Challenging activities enable participants to experience *success.*
- Residential learning provides the context for *new ways of learning*/ownership of, and engagement with learning.

Nevertheless, substantial numbers of youngsters, particularly those from disadvantaged households have restricted access to outdoor spaces (British Mountaineering Council, 2023). This makes it important barriers to nature and outdoor learning begin to be dismantled, with targeted provision

for marginalised groups undertaken with an appropriate design and measurement of impact. Through robust efficacious programming and evaluation, compelling evidence can be provided which answers the critics; demonstrating that outdoor learning is a not only a good financial return on investment in terms of public health and educational impact, but more importantly, it is a force for growth in unlocking potential in young people.

With this in mind, a free to access OAE residential programme called *Skills4Life* was commissioned by the NCS for a diverse range of 16-to 17-year-olds who may be experiencing challenges to their mental health and well-being, while adjusting to the rigours of a post-covid climate. Many of these young people had not attended an OAE residential programme previously. This bespoke programme was designed, delivered, and evaluated by Inspiring Learning (IL) a renowned UK outdoor education provider partnered with Sheffield Hallam University (SHU). The programme aimed to generate a core of highly prized skills, collectively known as the four C's of 21st Century Skills, (critical thinking, creativity, collaboration, and communication), underpinned by the adaptive functioning of young people (psychological resilience and subjective psychological well-being).

## Research aims and objectives

The research aim and objectives were formulated in line with the NCS Vision and Mission to develop connected, confident, and caring citizens through shared experiences that grow their skills and bridge social division. The core ambitions and values of the NCS are to deliver inclusive, bold, innovative programmes of activities which drive social mobility, social engagement, and social cohesion; implicit to IL's programme design and evaluation. From this understanding, reliable strategies which empower young people with skills to navigate their way through the rigors of 21st Century life could be formulated.

### *Aim*

To report the immediate and enduring impact of a bespoke five-day OAE residential programme upon the psychological resilience, well-being, and wider skill development of young people.

### *Objectives*

(1) To measure and to evaluate participants' psychological resilience and well-being prior to and following the residential programme through their completion of age-appropriate validated questionnaires on three separate occasions (pre, post and 1 month following the programme).
(2) To measure and to evaluate participants' camp-based immersive experiences and provide evidence for the perceived development of 21$^{st}$ Century Skills.
(3) To consider the implications of these findings for future research and evidence-based practices.

## Methods

### *Participants*

Over 2500 participants from over 40 organisations were recruited to OAE residential programmes which ran from 1$^{st}$ February to 31$^{st}$ March 2023. This study targeted a purposive sample of 1000 young people across all 10 OAE residential centres ranging from North Wales to Devon in the UK. Following data screening for incomplete questionnaires at Time 1 (pre-residential) and Time 2 (post-residential), the main OAE intervention group included 622 participants. This represented a response rate of 62%. At Time 3 (1 month following the residential), the number of respondents was 301.

Participants were aged 16 years (38%) or 17 years (62%). In total, 361 (58%) were female and 249 (40%) males. The remaining 12 (2%) of participants chose not to state their gender or were non-binary. Ethnic breakdown comprised UK White (53.3%), UK Black/African/Caribbean (16.5%), UK Asian (14.6%), UK Mixed ethnic group (5.5%), UK Arab/others (8.6%), prefer not to say (1.5%). Special Education Needs and Disabilities (SEND) attendees accounted for 15.92% of the population which equates to the percentage of SEND learners within the UK population. Given the targeted, inclusive nature of the programme with no cost being incurred by participant groups, the socio-demographic and cultural breakdown of attendees was non-traditional compared to usual groups accessing IL residential programmes.

## *Design and facilitation of programme*

The principal design of the study was three repeated measures of the psychological resilience and well-being of participants, prior to and following involvement in a five-day OAE residential programme. Measures concerning 21st Century Skill development were also administered post-programme.

At pre-programme (Time 1, T1), participants were asked to complete baseline measures immediately on arrival at the residential centre. On the last day (Time 2, T2), participants completed questionnaires prior to departure. One month later, (Time 3, T3), follow-up data were captured within their own organisation. All data was collected digitally using the online Qualtrics (n.d.) Survey Platform (https://www.qualtrics.com/uk) and quick response (OR) codes to convey information with the scan of a mobile device.

High quality, inclusive programmes of activities aimed to generate significant impact on an individual's world and work ready skills. Each element of the programme supported one (or more) of the 'Four Cs' of 21st Century Skills. Due to the number and range of different centres delivering the programme, there was regional variability in the specific content. However, all programmes adhered to a core curriculum and the same phased structure of activities set out in Figure 2 (Appendix 1).

The facilitation of the programme was informed through a draft Theory of Change model (TOC). This was developed through (i) discussions/familiarisation of practices with delivery staff to bring about desired changes, (ii) reference to academic literature, and pilot data collection. Feedback and feedforward practices within daily activities involved young people (i) learning the core of what they needed to learn—personalised content and approaches, (ii) applying this understanding to real

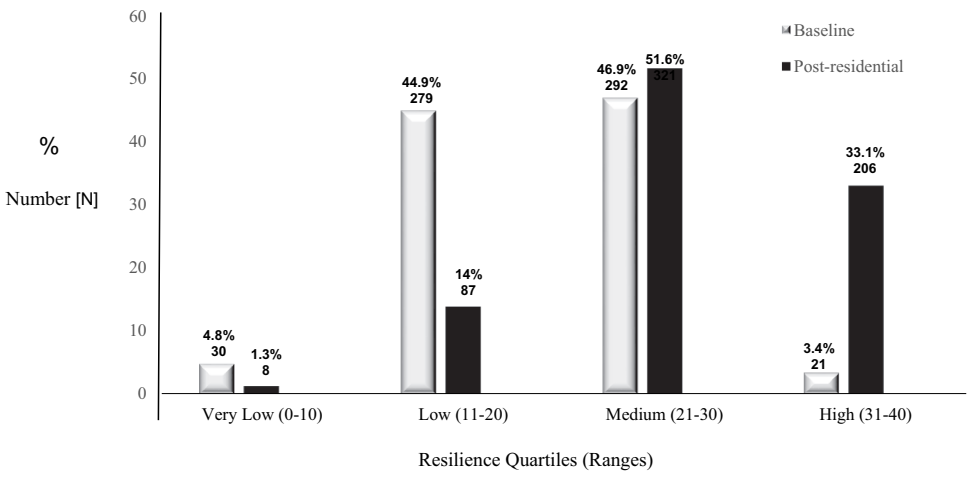


**Figure 2.** Baseline and Post-residential quartiles of resilience scores.

world situations, (iii) receiving immediate feedback, activating peer learning, providing on-going support and (iv) refining this understanding and repeating the cycle.

To illustrate this cycle of delivery, preparatory work with young people included outlining the framework of sought behaviours such as resilience as a practical way of naming problems such as those encountered within the school and home context, giving problems perspective, and then accessing solutions to these problems. Strength-based learning for the well-being of learners was based upon 'want to' rather than 'have to' goal setting. This involved building students' self-determined behaviours, such as autonomy, which have a sense of purpose and are owned by the individual. Perspective-taking activities focused on 'Me at my Best' and the 'Ideal Me'. This realisation was then used as a springboard for skill development that increased motivation, aspiration, and confidence. Through hard work and effort young people were encouraged to find solutions through asking solution-seeking questions—Where can I get help in school/work? What have I learned? How do I learn best/better? How much does this matter to me now and in future? Rather than emphasising racing to the line of academic achievement, young people were encouraged to judge their success in maintaining well-being and being proud of a range of new accomplishments and skills acquired during their time on residential.

A comparison group of young people who were not participating in the *Skills4Life* programme, but had expressed an interest in attending, were invited to complete baseline and follow-up measures. However, the limited completion of questionnaires was not sufficient to deliver a meaningful comparison sample. Despite not having a formal comparison condition, significant participant involvement ensured the power of the study was high for detecting change across each of the three time points. Procedural controls were provided by the stability of responses at T1 and from T2 to T3. Lack of differences between T2 and T3 May have suggested that any effects between T1 and T2 were due to the OA residential. For enduring impact, T2 and T3 resilience scores should have been similar. Mean scores for participants' psychological resilience and well-being at each point of measurement were also compared to age-matched population norms for the respective validated instrumentation used in the study.

Full institutional ethical approval for the research project was acquired from Sheffield Hallam University (SHU) using the Converis system. This ensured objective, rigorous data capture and evaluation and protection of participants and researchers. Independent reviewers at SHU are experienced researchers from a range of disciplines and are trained to ensure consistent and high-quality ethical reviews. The *Skills4life* application was passed on its first submission. All analyses were conducted using Microsoft Excel and the Statistics Package for the Social Sciences (SPSS) Version 28 (SPSS Statistics, 2022).

## Data measures and analyses

### *Surveys*

All three surveys requested participants' biographical details (age, gender, ethnicity, and postcode) and included two validated age-appropriate psychometric scales measuring participants psychological resilience and well-being.

The Connor—Davidson Resilience scale (Connor & Davidson, 2003) was used to measure young people's psychological resilience. This scale is suitable for use with older adolescents in educational contexts (Singh & Yu, 2010) and within OAE residential interventions (e.g. J. F. Allan & McKenna, 2022). For ease of completion, an abbreviated 10-item version of the scale (CD-RISC 10) was used, providing a score ranging between 0 and 40; where higher scores reflect greater resilience. In a community survey of 764 United States young adults, a normative mean score of 31.78 (SD = 5.41; range = 9–40) was obtained for the CD-RISC 10 (Campbell-Sills et al., 2009). Internal consistency (Cronbach's α) of the full 25 item (CD-RISC 25) scale was 0.92, Test—retest reliability demonstrated a high level of agreement with an intra-class correlation coefficient of 0.87. A construct validity was

confirmed within the original validation of the scale. The full 25-item version of the scale has demonstrated clinical properties in the profile and treatment of mental health.

Psychological well-being was evaluated using the Shortened Warwick—Edinburgh Mental Wellbeing Scale (SWEMWBS). The full WEMWBS was developed to enable the monitoring of mental wellbeing in the general population and the evaluation of projects, programmes and policies which aim to improve mental well-being. The SWEMWBS uses seven of the WEMWBS's 14 statements about thoughts and feelings, which relate more to functioning. The seven statements are positively worded with five response categories from 'none of the time' to 'all of the time.' Scores range from 7 to 35 and higher scores indicate higher positive mental well-being. The SWEMWBS has been validated for populations of young people aged 15–21 (McKay & Andretta, 2017; Ringdal et al., 2018) and the general population (Ug Fat et al., 2016). SWEMWBS has a mean of 23.5 and a standard deviation of 3.9 in UK general population samples (Vaingankar et al., 2017). The top 15% of scores range from 27.5 – 35 and the bottom 15% from 7 – 19.5.

In addition to the above measures, two surveys contained their own specific questions. The **post-residential survey** used a 16-item Camp Rating Scale (CRS) which measured the extent of participants' immersion within key aspects of the programme. This scale has been used in previous peer-reviewed research (J. F. Allan & McKenna, 2020) and has acceptable reliability ($\alpha = 0.72$). A graduated five-point Likert scale enabled responses ranging from 'Never' (= 1), indicating no engagement in camp-related activities, to the highest rating of 'Through most days' (= 5). Further questions, inspired by previous NCS programme evaluations, concerned vocational skills acquired by the young people. The **follow-up -month survey** asked participants to express the extent to which they thought about the residential since returning. It also requested their level of agreement with statements concerning the impact of the residential on behaviours such as confidence, feelings towards others, coping skills, and perceived work/career opportunities.

### *Qualitative data*

A variety of qualitative data was captured and evaluated in addition to these surveys to enable a mixed methods evaluation of *Skills4Life* programme efficacy within and beyond the residential setting. This included open questioning, personal testimonies, and leaders' responses to set questions. However, the restriction of this paper was such that this data will be included in future outputs.

### *Data analysis*

Progressive stages of quantitative data analysis were undertaken including evaluations of (i) participants baseline resilience and well-being and any immediate significant changes following the programme, (ii) associations between participants' resilience and psychological well-being, (iii) shifts of participants' resilience and psychological well-being from baseline to post-residential, (iv) gender difference analyses, (v) participants' level of immersion within camp activities, (vi) the most powerful residential activities for predicting differences in participants' resilience and well-being, (vii) differences in resilience and well-being across three time-points for all participants, (viii) immediate and sustained impact of the residential upon participants' 21$^{st}$ Century Skills including confidence, vocational skills, coping strategies.

## Results

### *Baseline profile of participants' resilience and well-being*

On entry to the *Skills4Life* programme young people reported lower resilience (Mean 20.64, Standard Deviation 5.71) than a community sample of young USA adults using the same measurement (Mean 31.8, Standard Deviation 5.4, Number = 764). Similar low baseline profiles of psychological well-

being were reported for participants compared to UK population norms. This mean score of 20.76 (standard deviation 4.15) was just above a range of scores (7–19.5) representing the bottom 15% of the UK population.

## *Immediate impact of Skills4Life on participants' resilience and well-being*

Paired t tests revealed significant positive gains in psychological resilience and well-being for participants attending *Skills4Life* (Table 1). Effect sizes (ES) were 'moderate' and constituted percentage increases of 36.33% and 23.12% respectively. An ES of 0.3 is considered educationally significant. Effect sizes of 0.50 have therapeutic value.

Large positive correlations were found between baseline resilience and well-being, r (620) = .583, $p < .001$, and post-residential resilience and well-being. This confirmed the conceptual alignment between the capability of individuals to adapt and their perceived wellness. It also provided validation for the dual use of the chosen psychometric instrumentation.

To illustrate shifts in participants' resilience and well-being from baseline to post-residential, four categories of their scores (quartiles) ranging from 'very low' to 'high' resilience and well-being were created to show where participants' scores on these measures were situated before and immediately following the residential.

Figure 2 shows there was only 30 (4.8%) of participants classified as possessing 'very low' resilience at baseline which decreased further to 8 (1.3%) post residential. There was a significant shift of 279 (44.9%) individuals at baseline within the 'low' resilience category to only 87 (14%) post-residential. The largest difference from baseline to post-residential concerned the 'High' resilience category. Here, 21 (3.4%) of participants at baseline expanded to include 206 (33.1%) of the population.

Figure 3 depicts a similar profile for changes in participants' well-being. The numbers of participants in the 'low' well-being group at baseline 318 (51.1%) halved following the residential to 148 (23.8%) of participants. 9 'high' well-being individuals at baseline representing 1.9% of the population saw a dramatic increase post-residential to 177 (28.5%). Well-being Quartiles (Ranges).

## *Gender differences*

Following a non-significant Leven's test for quality of variance, independent t tests (resilience t (620) = 4.373, $p < .001$, well-being t (620) = 2.813, $p < .005$), highlighted that male participants' increases in resilience (Mean 8.98, SD 8.19) and psychological well-being (Mean 5.63, SD 7.28), were significantly higher than females increase in resilience (Mean 6.28, SD 8.19) and well-being (Mean 3.88, SD 6.81). This is despite males possessing higher baselines in both resilience and well-being.

**Table 1.** Participants mean baseline and post-residential resilience and well-being.

| Means (Standard Deviation) [Number] | | | | | |
|---|---|---|---|---|---|
| Variable (range) | Baseline | Post | Differences ($p < 0.01$) | Cohen's d Effect size (ES) | % Difference (±) |
| Resilience CD-RISC 10 (0–40) | 20.64 (5.71) [622] | 28.14 (7.16) [622] | t(621) = 21.15 | ES = 0.58 | 36.33% |
| Psychological Well-being SWEMWBS (0–35) | 20.76 (4.15) [622] | 25.56 (5.89) {622] | t(621) = 16.70 | ES = 0.48 | 23.12% |

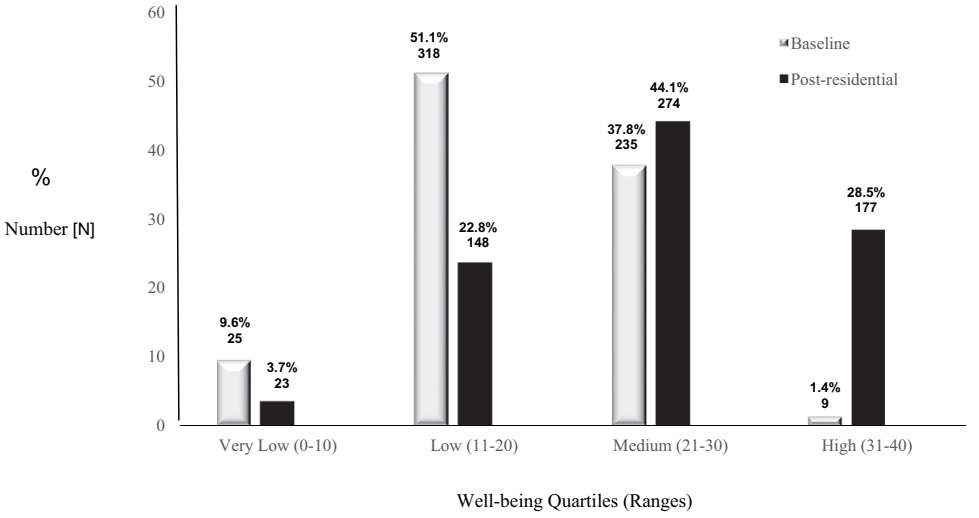


**Figure 3.** Baseline and Post-residential quartiles of psychological well-being scores.

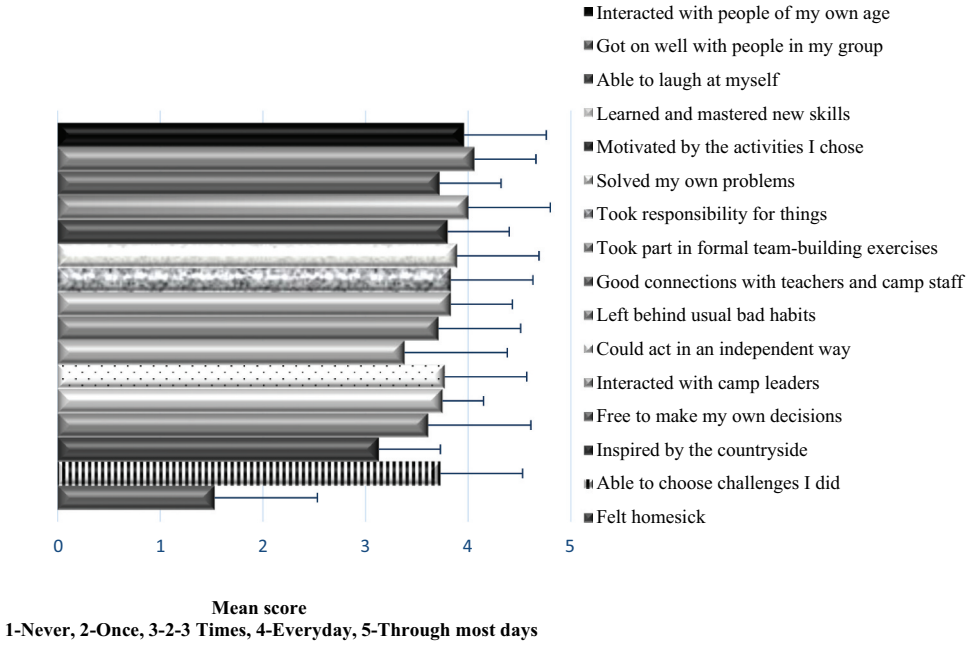


**Figure 4.** Camp rating Scale.

## *Immersion of participants in residential camp activities*

Figure 4 depicts inductees' average level of engagement within 16 OAE residential experiences from *Skills4Life*. Ratings indicated that individuals were actively immersed 'Every day' within the various activities. Students were able to consistently engage with peers and significant others, become self-reliant and skilled in a broad range of areas. Homesickness, on average, was experienced between never and once.

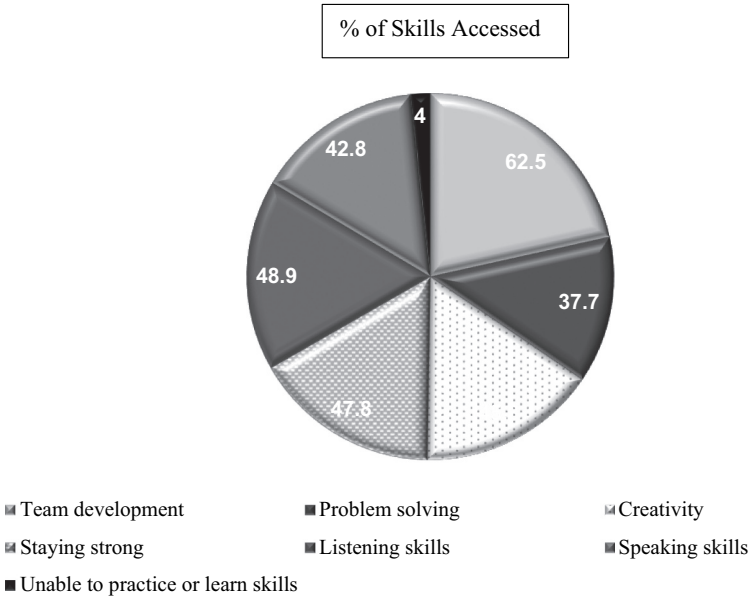


**Figure 5.** 21st Century skills able to be practiced and developed during *Skills4Life*.

## *21st Century skills developed from Skills4Life*

At the end of the programme participants were asked to select from a list of options which 21st Century skills (4 C's) they were able to practice and develop during *Skills4Life*. Figure 5 shows the percentage of participants selecting skills which were able to be developed. From the pie chart, a broad, consistent, well distributed array of skills was developed with less than 5 in every hundred participants suggesting they were unable to learn new skill.

## *Powerful ingredients of change*

Multiple stepwise linear regressions were performed to establish which experiences within the residential were the most influential for predicting changes in participants' resilience and well-being. In other words, the more participants engaged in these residential activities, the more likely they were to build resilience and psychological well-being. Three items on the Camp Rating Scale were revealed as the most powerful for impacting positive, statistically significant differences in participants' resilience, therefore, should be at the forefront of future design discussions.

- 'I was inspired by the countryside' (*βeta = .249, t = 5.75, p = <0.01*)'
- I solved my own problems' (*βeta = .122, t = 2.48, p = <0.05*)
- 'I was able to choose the activities' I did' *(βeta = .115, t = 2.30, p = <0.05)*

These items accounted for 9.3% of variance in resilience difference, R2 = 0.93, $F$ (3, 619) = 17.09, $p < 0.01$.

The most powerful experiences on the Camp Rating Scale which predicted positive changes in well-being were:

- 'I was inspired by the countryside' *(βeta = .172, t = 3.51, p = <0.01)*
- 'I solved my own problems' (*βeta = .113, t = 2.27, p = <0.05*)
- I was free to make my own decisions' *(βeta = .119, t = 2.38, p = <0.05)*

- 'I learned and mastered new skills' *(βeta = .115, t = 2.21, p = <0.05)*

The item on the Camp Rating Scale 'I was homesick' (*βeta = –.123. t = 3.01, p = <0.05)* had a statistically significant negative effect on the well-being of participants—meaning the more homesick those attending felt, the less well-being they were likely to experience. These items accounted for 1.75% of variance in resilience difference, R2 = 0.175, *F* (3, 617) = 17.09, p < 0.01. Both predictive models of resilience and well-being improvement satisfied tests for independence of variance between items (tolerance) and multi-collinearity.

## *Sustainability/one-month follow-up measures*

Although there was less data captured at T3, Repeated Measures Analysis of Variance (ANOVA-test) revealed that there were significant differences in participants resilience at the three-time points *F* (2, 510) = 119.96, *p* < .001, suggesting participants' resilience endured following the programme (effectively their baseline had increased). Effect sizes and percentage differences between time points are included in Figures 6 and Figure 7.

Repeated Measures Analysis of Variance (ANOVA-test) revealed that there were significant differences in participants well-being at the three-time points *F* (2, 508) = 75.047, *p* < .001. Well-being improved following the residential programme and was retained in comparison to initial pre-residential scores.

Large positive correlations were found between follow-up resilience and well-being, r (299) = .629 *p* < .001. This confirmed the conceptual alignment between the capability of individuals to adapt and their perceived wellness across all time points. The similar trajectories for participants' resilience and well-being in Figure 6 and Figure 8 illustrate this positive relationship.

Several questions were posed to participants 1 month following the programme to assess the ongoing impact of *Skills4Life* (Figures 8,9,10,11,12).

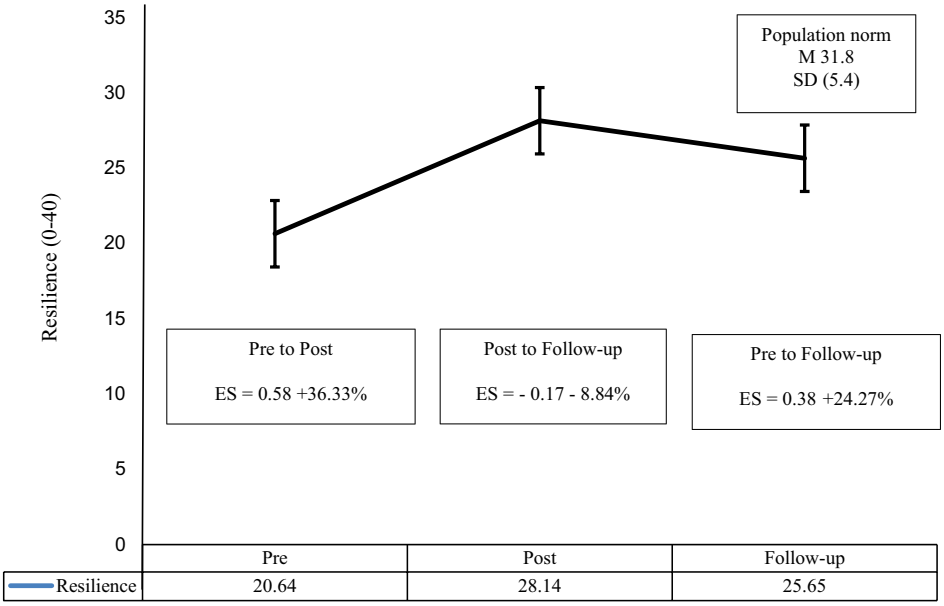


**Figure 6.** Participants mean resilience across three time-points.

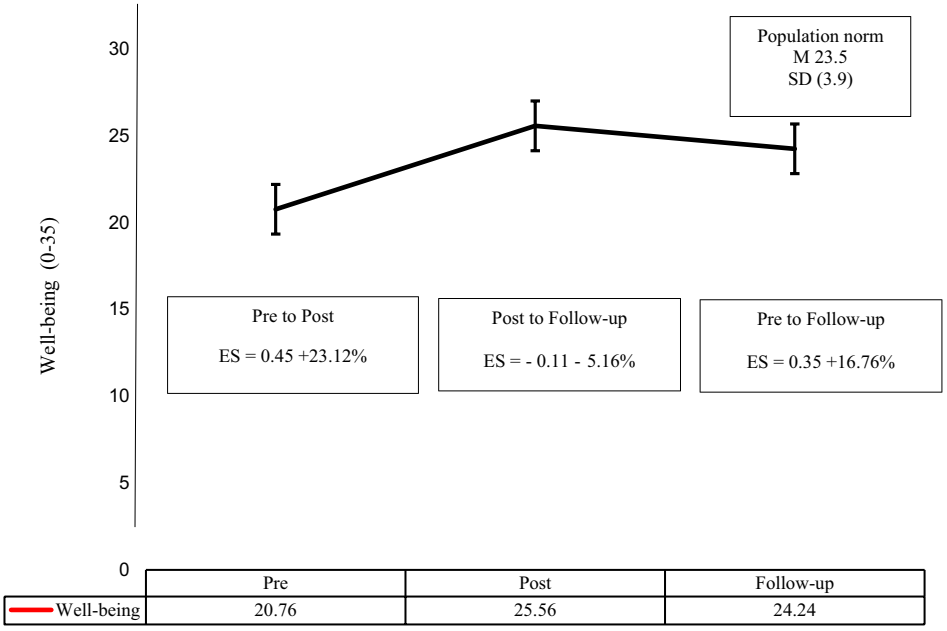


**Figure 7.** Participants mean well-being across three time-points.

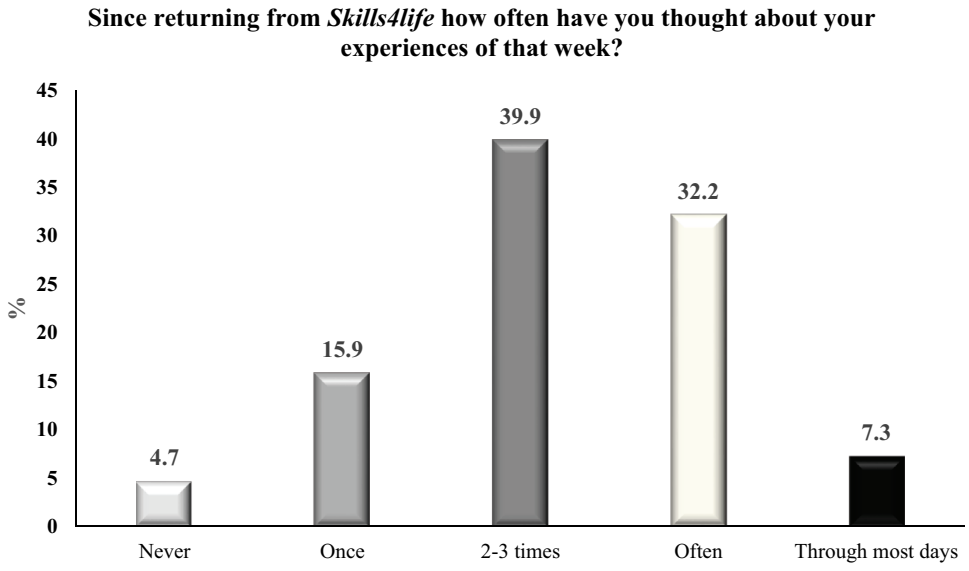


**Figure 8.** Participants enduring memory of residential experiences.

This follow-up data suggests there was an enduring impact of *Skills4Life* upon young people's perceptions of their strengths-based functioning. In total, 80% of participants thought about their residential experiences at least 2 to 3 times or more often, during the month following *Skills4Life*. 70% agreed they were more confident about their education or prospects about getting a job following the residential. Four in every five students reported

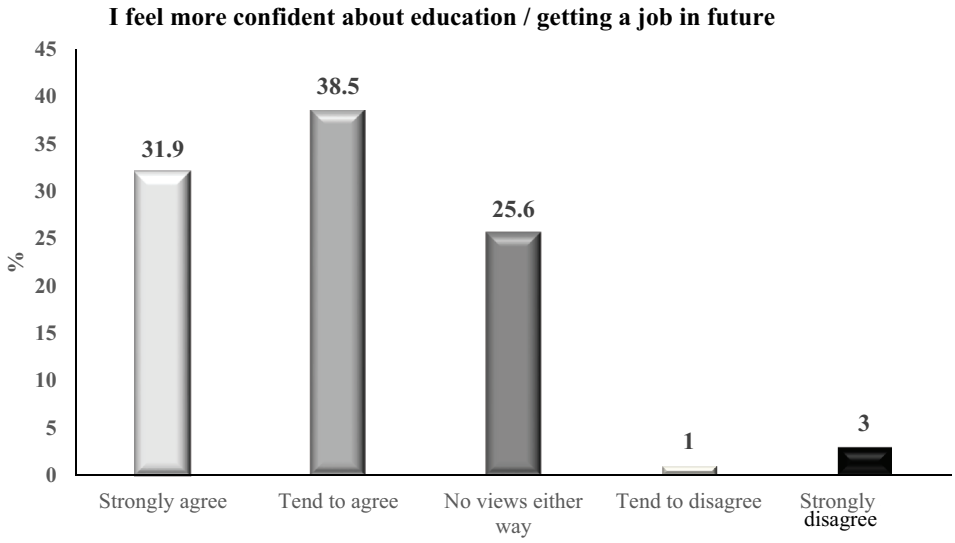


**Figure 9.** Confidence of participants regarding their education/employment.

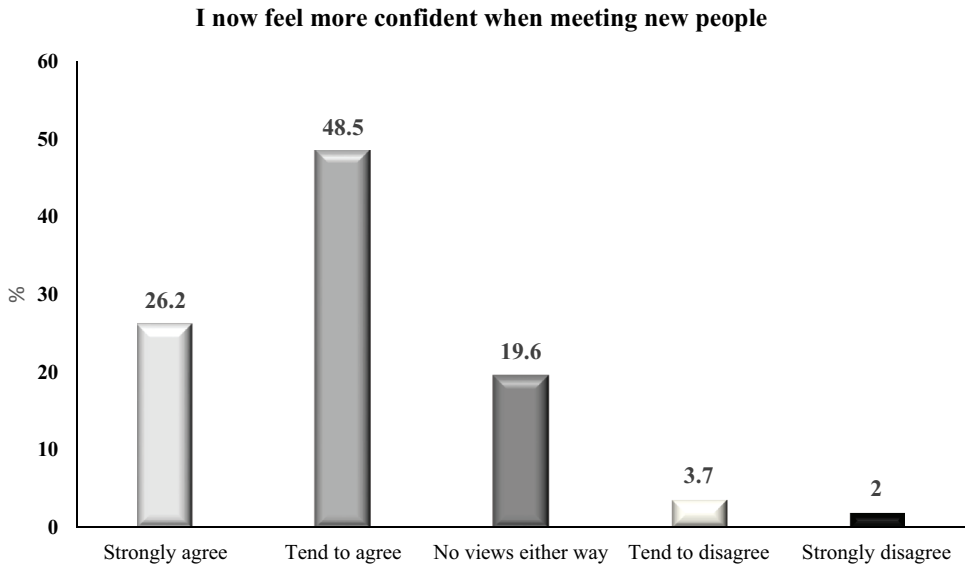


**Figure 10.** Confidence of participants meeting others following *Skills4Life*.

being more confident in meeting new people and feeling more positive towards people from different backgrounds to themselves. To substantiate the earlier findings of increases in participants' resilience, over 70% felt more capable to cope with whatever life was now to throw at them. However, 3% strongly disagreed that the vocational skills programme had not sufficiently tested their stress coping capabilities and expected more personally challenging activities.

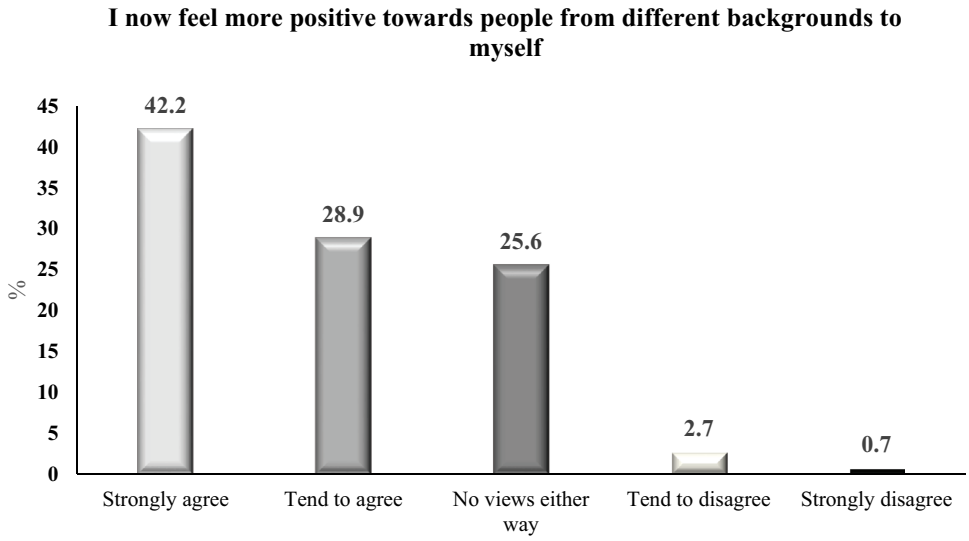


Figure 11. Attitude of participants towards others from different backgrounds.

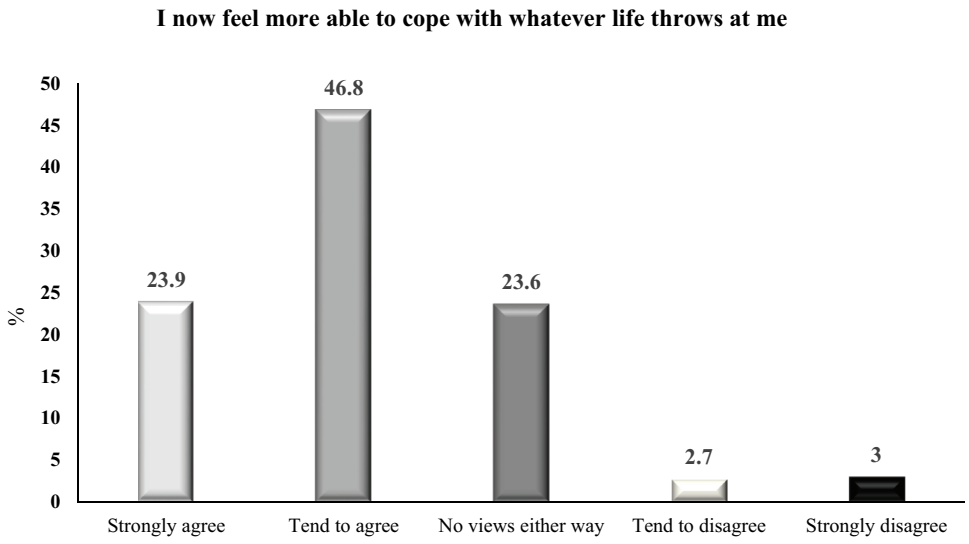


Figure 12. Coping of participants to stress.

## Discussion

This large empirical study investigated the impact of the *Skills4Life* programme upon the self-reported resilience, well-being and vocational skill sets of young people from diverse backgrounds. Conceptually, purposefully designed OAE may promote adaptive functioning and protective resistance against stress to enable young people to build confidence in their ability across a range of 21st Century skills. This investigation established significant positive findings in respect to each of the project's objectives. These findings respond to contemporary issues concerning young people identified in the review of literature (mental and physical ill-health, social disconnection, inequality, cost of living crisis and inclusion) and support the Vision, Mission, and Key Values of the NCS. Despite

methodological limitations particularly concerning an available comparison sample, these findings have implications for policy and evidence-based practices in relation to youngsters' preparation for adulthood and wider adaptive functioning.

### *Resilience and psychological well-being responses*

Young people reported lower resilience on entry to the *Skills4Life* programme compared to a community sample of young American adults using the same measurement scale (Campbell-Sills et al., 2009). Although resilience is impacted by culture, time, and place, this may indicate the present difficulties facing a post-pandemic population of young people. From this low starting point, on average, the residential programmes initiated significant heightened resilience for over 600 young people. The magnitude and direction of changes (ES) exceeded the ESs of previous OAE programming which were educationally significant (0.31 and 0.50) and represented therapeutic value for young people (ranged from 0.30 to 0.50) (J. F. Allan & McKenna, 2022; Bowen & Neill, 2013; McMahan & Estes, 2015). Despite these significant increases, for comparison purposes, their mean score was still below that of the population norm for the resilience measurement scale used in this study.

Nonetheless, over 35% more participants were situated in the two highest quartiles of resilience scores following the residentials compared to before they started. Significant positive gains were reported within and across all residential centres indicating a consistency of programme delivery designed to meet the projects aim and objectives. Interestingly, the dynamic nature of the *Skills4Life* programme seemed to have been more suited to boost males' adaptive capabilities. However, this observation fails to recognise the complexity of resilience and gender without recognition of environmental factors which influence masculine or feminine traits.

Similar low baseline profiles of psychological well-being were reported for participants compared to UK population norms. In fact, the young people's mean score was just above a range of scores (7–19.5) representing the bottom 15% of the UK population (Vaingankar et al., 2017). Again, from a low baseline, at the end of the programme, significant positive impacts were reported for the psychological well-being of participants representing a 23.12% increase. This increase meant their mean score following the programme was above the mean population score for young people in the UK population using the same measurement tool. Taking account of the diverse nature of the population sample in terms of ethnicity and demography, these findings have implications for immediately addressing the needs of a plurality of adolescents finding their way in a post-covid society.

Our evidence confirms that participants' resilience and psychological well-being was highly receptive to positive change across three time points of measurement. Although there were less than half of participants completing surveys at Time 3, enduring gains one month following the start of the programmes represented increases in resilience (ES 0.38, 24.27%), and psychological well-being (E.S. 0.35, 16.76%) which exceeded those reported by previous similar studies (e.g. Overholt & Ewert, 2015; J. F. Allan & McKenna, 2022). From a theoretical standpoint (F. H. Norris et al., 2009), a return to a higher pre-residential residential score at Time 3 (Figure 6) also suggested a sustained impact upon resilient functioning or 'bounce-beyond' ability (personal growth). These encouraging findings were substantiated by additional Likert scale questions measuring the extent to which the residential experience had resonated with participants in their everyday life (Figures 8–12). Here, overwhelming numbers of young people reported frequent recollections of their experiences which had impacted their capacity to cope with uncertainty and increased their confidence for meeting individuals from different backgrounds and in the context of their education and employment prospects. Such behaviours are hallmarks of healthy resilient functioning in youngsters which promote adaptability and protect from stress (Strayhorn, 2011; Zolkoski & Bullock, 2012). They also adhered to the mission of the NCS—shared experiences that grow the skills of a plurality of young

people to bridge social divides. These findings provide a powerful justification for using this form of OAE residential programming for generating sustained impact.

The concepts of resilience and psychological well-being are closely related but not synonymous (F. Norris et al., 2009]). In other words, resilient individuals can be adaptable to change, overcome adversity, yet suffer mental health problems. The questionnaires chosen to measure resilience and well-being in this study possessed clinical properties and are associated with detecting and promoting mental health. The positive correlations between participants scores on resilience and well-being at each of the three time-points validated their use to profile and report changes in young people in the present (and future) such studies. They also confirmed the positive lasting impacts of the *Skills4Life* programme upon both aspects of the young people's behaviour.

### *Camp-based immersive experiences*

Young people reported they were actively engaged in 16 camp-based activities 'every day'. This included laughing at themselves, taking personal responsibility, and leaving behind unhelpful habits. Although, homesickness was a relatively rare occurrence (on average, young people reported feeling homesick between never and once), when it was present, this feeling, as one might expect, was negatively associated with psychological well-being. This may have been due to the diverse, somewhat fragile nature of some young people, many of which had not experienced a residential programme previously. It could also have represented a programme that required more sensitive approaches to accommodate these young people from feeling vulnerable and/or so disappointed that they did not want to be involved at present or in the future. Therefore, in line with resilience theory, organisers need to ensure that strength-based learning activities are scaled accordingly to accommodate insecurities and potential negative impacts on the psychological well-being of young people. The most powerful experiences within the programme (active ingredients of change) which predicted increases in participants' resilience and well-being included learning new skills, freedom of choice, solving personal problems, and being immersed in nature. Given the main endeavour in this programme was for participants to transfer any newly acquired skills into everyday life, our findings highlight teachable behaviours, pedagogies and practices which build both adaptability and vocational skills. They also support the importance of intense, authentic, residential-based experiences to enable participants to interconnect with nature and take ownership for their learning (e.g. Brymer et al., 2021; Kendall & Rodger, 2015; Nejade et al., 2022).

Interestingly, the most powerful predictor of change in the participants' resilience was 'Being inspired by the Countryside'. For young people from a range of backgrounds who may not have accessibility to green and blue spaces, this unfamiliarity in bringing about changes in perceptions of their adaptability and personal growth is not uncommon (Greenwood & Gatersleben, 2016; Beyer et al., 2014) and is to be welcomed. In terms of learning new skills, environments that are perceived as exciting and which provide multiple cues for different senses have a greater potential for positive learning than do environments seen as dull and hard to manage (J. F. Allan et al., 2012).

### *Perceived acquisition of 21st century skills, links to resilience and well-being*

An array of 21st Century skills were acquired by participants during and resulting from the programme (Figure 6). This included creativity, problem-solving, listening and speaking skills. There is a developing body of evidence highlighting how outdoor educational experiences provide an ideal climate for fostering creative outcomes (Rugel et al., 2019). In particular, over two thirds of participants perceived they were able to interact and learn through collaborating with others. Developing interpersonal qualities within groups has become a central tenet of adventure programming,

whereby participants take care of each other in hazardous situations, undertaking a variety of roles, working together to find solutions to complex problems and reflecting upon their actions.

Evidence from *Skills4Life* suggests heightened resilience and well-being were accompanied by positive development of the four C's of 21st Century learning. These personal assets and resources were perceived as both promotive of individual and collective functioning and protective of stress. This adds to the body of evidence which suggests that character attributes, such as resilience enable success in the labour market and promote mental health (e.g. Lexmond & Grist, 2011; Birdwell et al., 2015). Given the low starting point of resilience and well-being scores at the outset of the programme, such cumulative increases in resilience combined with vocational skills were reassuring as to the efficacy of the programme delivery and design in purposefully addressing the needs of attendees.

## *Strengths and limitations*

This research responded directly to contemporary problems concerning the physical and mental health of young people, especially those from disenfranchised and socially disadvantaged backgrounds. The research protocol was based on clear chains of reasoning supported by rigorous, objective practices. Valid and reliable measures were sensitive to participants' outcomes following their exposure to a high-quality blend of vocational skills training and stimulating adventure activities. Unlike much OAE research, measures predicted the direction and magnitude of change and identified the most powerful ingredients of the programme underpinning this impact.

Nonetheless, methodological caveats affected the findings. Firstly, due to logistical issues a suitable comparison group was unable to be recruited. This would have enabled assessment of the impact of the programme participation on the change in scores for *Skills4Life* participants to the variation observed for non-participants over the same timeframe. Secondly, the Camp Rating Scale is a little tested questionnaire; accordingly, it requires further examination of its psychometric properties to measure the immersive nature of a given outdoor programme. Thirdly, compared to the number of young people participating in the programme, the response rate at each point of measurement was lower than expected. This may have been affected by the diverse, non-traditional nature of the cohort freely accessing *Skills4Life*. For example, some participants did not have access to mobile devices to complete surveys. For others completion of questionnaires were hampered by learning disabilities or religious affiliation.

As with any questionnaires requiring self-evaluation, establishing differences between pre-test and post-test scores may have been affected by the timing of measurement. Pre-group measures could reflect participants' anticipation of confronting something new, making them lower-than normal estimates of personal capability. Equally, measures captured immediately following the programme may detect 'post-group' euphoria. Remedied, these issues may reduce the magnitude of overall programme effects.

## *Summary and recommendations*

In a post-covid society, change may be happening faster than can be understood or managed by young people. To survive and prosper in such potentially destructive times, young people need the flexibility and self-awareness that resilience and a flexible tool kit of 21st century skills can provide. Even where individuals appear to suffer no apparent ill-effects in the face of stress, they may be adopting coping strategies that only repress the true impact which will re-emerge later.

*Skills4Life* was a targeted, free to access residential programme for 16-to 17-year-olds who may be experiencing challenges to their mental health and well-being while adjusting to the rigours of a post-covid climate. OAE residential programmes may act a springboard for young people to develop a sense of belonging and to instil positive habitual behaviours. However, it must be noted that outdoor experiences do not automatically generate uniform positive responses. Some participants

reported homesickness during the programme which may have been due to limited assimilation practices for a diverse range of young people unfamiliar with outdoor residential settings and expectations. Therefore, such outdoor programming needs to be highly inclusive and scaled accordingly with transferability of behaviours in mind to enable optimal functioning whilst providing opportunities for personal growth. Exposure to OAE, which by nature and design is uncertain, must include feelings of personal control and predictability for people to make positive attributions about their experiences. This is most important for youngsters who may be new to outdoor settings and find them threatening to their well-being. Nevertheless, the unique blend of adventure and vocational real-life learning from this research provided creative, innovative learning opportunities to allow a diverse range of young people to begin to understand themselves and choices they can make in their development. In short, our findings legitimise the OAE *Skills4Life* programme as a highly receptive, efficacious form of evidence-based practice that promotes adolescent resilience, well-being, and specific vocational skills development immediately and beyond the end of the programme.

Addressing the third research objective of the paper, several recommendations are made from the findings which have implications for future research and evidence-based practices. These recommendations include (i) refinement of the strengths of the current programme and addressing each of the methodological limitations e.g. acquire suitable, age-matched comparison groups of young people (such as standard residential programme, attendees, and non-participants) and undertake comparisons to other forms of interventions, (ii) Continuous Professional Development (CPD) for practitioners to build evidence-based teachable practices into school provision, youth work practices, therefore maximising opportunities for the transferability of participants' short-term behaviours into long-term habits, (iii) extend provision across an even wider demographic intake of young people to increase access to outdoor activities/spaces, (iv) link participants profiles to other measures of mental health/wider aspects of achievement (academic, vocational), (v) continued research collaborations with the NCS, addressing gaps in understanding and protecting young people from societal risk factors, providing a range of enduring skills needed to become successful and resourceful adults, (vi) influence programme design and policy directives of key national drivers of change (government, governing bodies).

## Disclosure statement

No potential conflict of interest was reported by the author(s).

## Notes on contributors

***John Francis Allan*** PhD is an established academic and outdoor practitioner. He is Head of Learning and Impact at Inspiring Learning one of the UK's foremost providers of adventure education for young people which includes Kingswood and Skern Lodge. He is also a Visiting Fellow at Sheffield Hallam University and a Senior Fellow of the Higher Education Academy. John's area of expertise centres on positive psychology, strength-based learning, and resilience building. His research outputs have included international and national journal publications, book chapters, keynote addresses, conference symposiums, presentations and on-line teaching and learning packages.

***Adele Doran*** PhD is a researcher and consultant of adventure tourism and outdoor recreation. Her research focuses on the experiences of outdoor adventure participants, including their motivations, barriers, and well-being; equality, diversity, and inclusivity in outdoor adventure; responsible behaviour in and custodianship of the outdoors; adventure media and marketing; and decent work within the outdoor sector. She has worked with both private and public organisations to collaborate on research and consult on projects. Adele employs a range of methodologies, including survey research, interviews, focus groups, ethnography, social media research, and systematic literature reviews.

***Ruan Jones*** PhD is an experienced Senior Lecturer in Physical Education with a demonstrated history of working in the higher education (HE) industry. Skilled in Communication, Academic Writing, Widening Participation. Doctor of Philosophy explores the lived meaning of young people in physical education (PE) from a hermeneutic phenomenological research perspective. Research interests in the history of PE and Models-based Practice.

*Sarah Farrell* MCIM is a commercially focused marketing consultant and fractional Chief Marketing Officer, specialising in exhibitions and events. Twenty year track record of building high performing teams delivering award-winning campaigns across multi-brand, multi-territory businesses in a broad range of sectors.

## ORCID

John Francis Allan http://orcid.org/0000-0001-5314-5076

## References

Allan, J., Hardwell, A., Kay, C., Peacock, S., Hart, M., Dillon, M., & Brymer, E. (2020). Health and wellbeing in an outdoor and adventure sports context. *Sports*, *8*(4), 50. https://doi.org/10.3390/sports8040050

Allan, J. F., & McKenna, J. (2020). Outdoor adventure builds resilient learners for higher education: A quantitative analysis of the active components of positive change. *Sports*, *7*(5), 122. https://doi.org/10.3390/sports7050122

Allan, J. F., & McKenna, J. (2022). Trajectories of resilience in university inductees following Outdoor Adventure (OA) residential programmes. *Psychiatry International*, *3*(1), 67–90. https://doi.org/10.3390/psychiatryint3010007

Allan, J., McKenna, J., Buckland, H., & Bell, R. (2014). Getting the right fit, tailoring outdoor adventure experiences for the transition of schoolchildren. *Physical Education Matters, Spring Edition*, 37–42.

Allan, J. F., McKenna, J., & Hind, K. (2012). Brain resilience: Shedding light into the black box of adventure processes. *Journal of Outdoor & Environmental Education*, *16*(1), 3–14. ISSN 1324-1486. https://doi.org/10.1007/BF03400934

Ball, A., Joyce, H. D., & Anderson-Butcher, D. (2016). Exploring 21st century skills and learning environments for middle school youth. *International Journal of School Social Work*, *1*(1). https://doi.org/10.4148/2161-4148.1012

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), 3947–3955. https://doi.org/10.1021/es903183r

Barton, J., Pretty, J., Barton, J., Bragg, R., Wood, C., & Pretty, J. (2016). *Green exercise, linking nature, health and well-being*. Routledge.

Beightol, J., Jevertson, J., Carter, S., Gray, S., & Gass, M. (2012). Adventure education and resilience enhancement. *The Journal of Experiential Education*, *35*(2), 307–325. https://doi.org/10.1177/105382591203500203

Beyer, K. M., Kaltenbach, A., Szabo, A., Bogar, S., Nieto, F. J., & Malecki, K. M. (2014). Exposure to neighborhood green space and mental health: evidence from the survey of the health of Wisconsin. *International Journal of Environmental Research and Public Health*, *11*(3), 3453–3472. https://doi.org/10.3390/ijerph110303453

Birdwell, J., Scott, R., & Reynolds, L. (2015). *Character nation*. DEMOS.

Bodin, P., & Wiman, B. (2004). Resilience and other stability concepts in ecology: Notes on their origin, validity and usefulness. *ESS Bulletin*, *2*(2), 33–43.

Bonanno, G. (2004). Loss, trauma, and human resilience: Have we underestimated the human capacity to thrive after extremely aversive events? *American Psychologist*, *59*(1), 20–28. https://doi.org/10.1037/0003-066X.59.1.20

Bowen, D., & Neill, J. (2013). A meta-analysis of adventure therapy outcomes and moderators. *The Open Psychology Journal*, *6*(1), 28–53. https://doi.org/10.2174/1874350120130802001

Bowler, D., Buyung-Ali, L. M., Knight, T. M., & Pullin, A. S. (2010). A systematic review of evidence for the added benefits to health of exposure to natural environments. *British Medical Council Public Health*, *10*(1), 456. https://doi.org/10.1186/1471-2458-10-456

British Mountaineering Council. (2023). *Outdoors for all report*.

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), 49–62. https://doi.org/10.1080/14729670385200241

Bryan, J. (2005). Fostering educational resilience and achievement in urban schools through family-community partnerships. *Professional School Counselling*, *8*(3), 219–228.

Brymer, E., Rogerson, M., & Barton, J. (Eds.). (2021). *Nature and health: Physical activity in nature*. Routledge.

Campbell-Sills, L., Forde, D. R., & Stein, M. B. (2009). Demographic and childhood environmental predictors of resilience in a community sample. *Journal of Psychiatric Research*, *43*(12), 1007–1012. https://doi.org/10.1016/j.jpsychires.2009.01.013

Care, E., Griffin, P., & McGaw, B. (2012). *Assessment, and teaching of 21st century skills*. Springer.

Cipriano, C. (2021). *The state of evidence for social and emotional learning: A contemporary meta-analysis of universal school-based SEL interventions*. Child Development.

Collado-Soler, R., Trigueros, R., Aguilar-Parra, J. M., & Navarro, N. (2023). Emotional intelligence and resilience outcomes in adolescent period, is knowledge really strength? *Psychology Research and Behaviour Management*, *16*, 1365–1378. https://doi.org/10.2147/PRBM.S383296

Connor, K. M., & Davidson, J. (2003). Development of a new resilience scale: The Connor-Davidson Resilience Scale (CD-RISC). *Depression and Anxiety*, *18*(2), 76–82. https://doi.org/10.1002/da.10113

Delhom, I., Satorres, E., & Meléndez, J. C. (2020). Can we improve emotional skills in older adults? Emotional intelligence, life satisfaction, and resilience. *Psychosocial Intervention*, *29*(3), 133–139. https://doi.org/10.5093/pi2020a8

Dillon, J., & Dickie, I. (2012) Learning in the natural environment: Review of social and economic benefits and barriers. *Natural England Commissioned Reports, Number 092*.

Dillon, J., & Lovell, R. (2022) Links between natural environments, learning and health: Evidence briefing. *Natural England Evidence Information Note, EIN063*.

Engemann, K., Pedersen, C. B., Arge, L., Tsirogiannis, C., Mortensen, P. B., & Svenning, J. C. (2019). Residential green space in childhood is associated with lower risk of psychiatric disorders from adolescence into adulthood. *Proceedings of the National Academy of Sciences*, *116*(11), 5188–5193. https://doi.org/10.1073/pnas.1807504116

Esquivel, G. B., Doll, B., & Oades-Sese, G. V. (2011). Introduction to the special issue: Resilience in schools. *Psychology in the Schools*, *48*(7), 649–651. https://doi.org/10.1002/pits.20585

Ewert, A., & Yoshino, A. (2008). A preliminary exploration of the influence of short-term ad-venture-based expeditions on levels of resilience. *The Journal of Experiential Education*, *30*(3), 262–266. https://doi.org/10.1177/105382590703000308

Ewert, A., & Yoshino, A. (2011). The influence of short-term adventure-based experiences on levels of resilience. *Journal of Adventure Education & Outdoor Learning*, *11*(1), 35–50. https://doi.org/10.1080/14729679.2010.532986

Friedman, S., Gibson, J., Jones, C., & Hughes, C. (2022). A new adventure': A case study of autistic children at Forest School. *Journal of Adventure Education & Outdoor Learning*. https://doi.org/10.1080/14729679.2022.2115522

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

Gray, S., Treacy, J., & Hall, E. T. (2019). Re-engaging disengaged pupils in physical education: An appreciative inquiry perspective. *Sport, Education & Society*, *24*(3), 241–255. https://doi.org/10.1080/13573322.2017.1374942

Greenwood, A., & Gatersleben, B. (2016). Let's go outside! Environmental restoration amongst adolescents and the impact of friends and phones. *Journal of Environmental Psychology*, *48*, 131–139. https://doi.org/10.1016/j.jenvp.2016.09.007

Hartling, L. (2003). Strengthening resilience in a risky world, it's all about relationships. Women in therapy. *The Howarth Press*, *31*(2–4), 51–70. https://doi.org/10.1080/02703140802145870

Heckman, J. J., & Rubenstein, Y. (2001). The importance of noncognitive skills: Lessons from the GED testing program. *The American Economic Review*, *91*(2), 145–149. https://doi.org/10.1257/aer.91.2.145

Jana, L. (2017). *Toddler brain: Nuture the skills today that will shape your child's tomorrow*. DeCapo Lifelong.

Kautz, T., Heckman, J. J., Diris, R., Ter Weel, B., & Borghans, L. (2014) Fostering and measuring skills: Improving cognitive and non-cognitive skills to promote lifetime success. *OECD Education Working Papers 110*, OECD https://doi.org/10.1787/5jxsr7vr78f7-en

Kendall, S., & Rodger, J. (2015). *Paul Hamlyn foundation evaluation of learning away: Final report*. Paul Hamlyn Foundation.

Kong, F., Gong, X., Sajjad, S., Yang, K., & Zhao, J. (2019). How is emotional intelligence linked to life satisfaction? The mediating role of social support, positive affect and negative affect. *Journal of Happiness Studies*, *20*(8), 2733–2745. https://doi.org/10.1007/s10902-018-00069-4

Lai, E., & Veiring, M., (2012) Assessing 21st century skills: Integrating research findings, Pearson. *Paper Presented at The National Council on Measurement in Education*. ERIC.

Layne, C. M., Warren, J. S., Watson, P. J., & Shalev, A. Y. (2007). Risk, vulnerability, resistance, and resilience: Toward an integrative conceptualisation of posttraumatic adaptation. In T. K. M. Friedman & P. Resnick (Eds.), *Handbook of PTSD: Science and practice* (pp. 497–520). Guildford Press.

Leipold, B., & Greve, W. (2009). Resilience. *European Psychologist*, *14*(1), 40–50.

Lexmond, J., & Grist, M. (2011). *The character inquiry*. DEMOS.

Lleras, C. (2008). Do skills and behaviours in high school matter? The contribution of noncognitive factors in explaining differences in educational attainment and earnings. *Social Science Research*, *37*(3), 888–902. https://doi.org/10.1016/j.ssresearch.2008.03.004

Marselle, M. R., Irvine, K. N., Lorenzo-Arribas, A., & Warber, S. L. (2015). Moving beyond green: Exploring the relationship of environment type and indicators of perceived environmental quality on emotional well-being following group walks. *International Journal of Environmental Research and Public Health*, *12*(1), 106–130. https://doi.org/10.3390/ijerph120100106

Masten, A. S. (2011). Resilience in children threatened by extreme adversity: Frameworks for research, practice, and translational synergy. *Development and Psychopathology*, *23*(2), 493–506. https://doi.org/10.1017/S0954579411000198

McKay, M. T., & Andretta, J. R. (2017). Evidence for the psychometric validity, internal consistency, and measurement invariance of Warwick Edinburgh mental well-being scale scores in Scottish and Irish adolescents. *Psychiatry Research*, *255*, 382–386. https://doi.org/10.1016/j.psychres.2017.06.071

McMahan, E., & Estes, D. (2015). The effect of contact with natural environments on positive and negative affect: A meta-analysis. *The Journal of Positive Psychology*, *10*(6), 507–519. https://doi.org/10.1080/17439760.2014.994224

Menon, V. (2013). Developmental pathways to functional brain networks: Emerging principles. *Trends in Cognitive Sciences*, *17*(12), 627–640. https://doi.org/10.1016/j.tics.2013.09.015

Mental Health Foundation & London School of Economics. (2023, March). https://www.mentalhealth.org.uk/explore-mental-health/publications/economic-case-investing-prevention-mental-health-conditions-UK

Mutz, M., & Maller, J. (2016). Mental health benefits of outdoor adventures: Results from two pilot studies. *Journal of Adolescence*, *49*(1), 105–114. https://doi.org/10.1016/j.adolescence.2016.03.009

National Youth Agency. (2015). *Annual monitoring of youth and community work programmes*. National Youth Agency.

Nejade, R. M., Grace, D., & Bowman, L. R. B. (2022). What is the impact of nature on human health? A scoping review of the literature. *Journal of Global Health*, *12*, 04099. https://doi.org/10.7189/jogh.12.04099

Norris, F., Stevens, S., Pfefferbaum, B., Wyce, K., & Pfefferbaum, R. (2009). Community resilience as a metaphor, theory set of capacities, and strategy for disaster readiness. *American Journal of Community Psychology*, *41*(1–2), 127–150. https://doi.org/10.1007/s10464-007-9156-6

Norris, F. H., Tracy, M., & Galea, S. (2009). Looking for resilience: Understanding the longitudinal trajectories of responses to stress. *Social Science & Medicine*, *68*(12), 2190–2198. https://doi.org/10.1016/j.socscimed.2009.03.043

Outward Bound. (2012). *Outward Bound Impact Report, 2012*.

Outward Bound. (2014). *Outward Bound Impact Report, 2014*.

Overholt, J., & Ewert, A. (2015). Gender Matters: Exploring the Process of Developing Resilience through Outdoor Adventure. *Journal of Experiential Learning*, *38*(1), 41–55.

Park, N. (2004). Character strengths and positive youth development. *The Annals of the American Academy of Political and Social Science*, *591*(1), 40–54. https://doi.org/10.1177/0002716203260079

Parker, R., & Al-Maiyah, S. (2022). Developing an integrated approach to the evaluation of outdoor play settings: Rethinking the position of play value. *Children's Geographies*, *20*(1), 1–23. https://doi.org/10.1080/14733285.2021.1912294

Passarelli, A., Hall, E., & Anderson, M. (2010). A strengths-based approach to outdoor and adventure education: Possibilities for personal growth. *The Journal of Experiential Education*, *33*(2), 120–135. https://doi.org/10.1177/105382591003300203

Petrides, K. V., Mikolajczak, M., Mavroveli, S., Sanchez-Ruiz, M. J., Furnham, A., & Pérez-González, J. C. (2016). Developments in trait emotional intelligence research. *Emotion Review*, *8*(4), 335–341. https://doi.org/10.1177/1754073916650493

Plante, T., Lackey, K., & Hwang, J. (2009). The impact of immersion trips on development of compassion among college students. *The Journal of Experiential Education*, *32*(1), 28–43. https://doi.org/10.1177/105382590903200104

Pollack, W. S. (2006). Sustaining and reframing vulnerability & connection, creating genuine resilience in boys and young males. In S. Goldstein & R. B. Brookes (Eds.), *Handbook of resilience in children* (pp. 65–77). Springer Science and Business Media.

Qualtrics. (n.d.). https://www.qualtrics.com/uk

Resilience Consortium. (2022). *World economic forum, financing resilient economies and societies*. Retrieved April , 2023. https://www.weforum.org/projects/resilience-consortium

Ringdal, R., Bradley Eilertsen, M. E., Bjørnsen, H. N., Espnes, G. A., & Moksnes, U. K. (2018). Validation of two versions of the Warwick-Edinburgh mental well-being scale among Norwegian adolescents. *Scandinavian Journal of Public Health*, *46*(7), 718–725. https://doi.org/10.1177/1403494817735391

Rugel, E. J., Carpiano, R. M., Henderson, S. B., & Brauer, M. (2019). Exposure to natural space, sense of community belonging, and adverse mental health outcomes across an urban region. *Environmental Research*, *171*, 365–377. https://doi.org/10.1016/j.envres.2019.01.034

Rutter, M. (2006). *Implications for resilience concepts for scientific understanding*. Annals of Academic Science. 1094, pp.1-12.

Singh, K., & Yu, X. (2010). Psychometric evaluation of the connor-davidson resilience scale (CD-RISC) in a sample of Indian students. *Journal of Psychology*, *1*(1), 23–30. https://doi.org/10.1080/09764224.2010.11885442

Slee, V., & Allan, J. F. (2019). Outdoor learning empowers children to deal with school transitions. *Sports*, *7*(6), 134. ISSN 2075-4663. https://doi.org/10.3390/sports7060134

SPSS Statistics. (2022). *IBM SPSS Inc*.

Stevenson, M. P., Schilhab, T., & Bentsen, P. (2018). Attention restoration theory II: A systematic review to clarify attention processes affected by exposure to natural environments. *Journal of Toxicology and Environmental Health, Part B*, *21*(4), 227–268. https://doi.org/10.1080/10937404.2018.1505571

Strayhorn, T. L. (2011). Bridging the pipeline: Increasing underrepresented students' preparation for college through a summer bridge program. *American Behavioural Scientist*, *55*(2), 142–159. https://doi.org/10.1177/0002764210381871

Taylor, S. E., Klein, L. C., Lewis, B. P., Greuenwarld, T. C., Gurney, R. A., & Upfdegraff, J. A. (2000). Biobehavioral responses to stress in females: Tend-and-befriend, not fight-or-flight. *Psychological Review*, *107*(3), 411–429. https://doi.org/10.1037/0033-295X.107.3.411

Teach First. (2023, March). https://www.teachfirst.org.uk/press-release/destination-gap

Tooley, M., & Bornfreund, L. (2014). *Time to improve*. Policy.

Trilling, B., & Fadel, C. (2009). *21st century skills: Learning for life in our times*. John Wiley & Sons.

Ug Fat, L., Mindell, J., Boniface, P., & Stewart-Brown, S. (2016). Evaluating and establishing national norms for mental wellbeing using the Short Warwick–Edinburgh Mental Well-Being Scale (SWEMWBS): Findings from the health survey for England. *Quality of Life Research*, *26*(5), 1129–1144. https://doi.org/10.1007/s11136-016-1454-8

Ungar, M. (2013). Resilience, trauma, context, and culture. *Trauma, Violence & Abuse*, *14*(3), 255–266. https://doi.org/10.1177/1524838013487805

Ungar, M. (2015). Practitioner review: Diagnosing childhood resilience–a systemic approach to the diagnosis of adaptation in adverse social and physical ecologies. *Journal of Child Psychology and Psychiatry*, *56*(1), 4–17. https://doi.org/10.1111/jcpp.12306

Ungar, M., Dumond, C., & McDonald, W. (2005). Risk, resilience and outdoor programmes for at-risk children. *Journal of Social Work*, *5*(3), 319–338. https://doi.org/10.1177/1468017305058938

Vaingankar, J. A., Abdin, E., Chong, S. A., Sambasivam, R., Seow, E., Jeyagurunathan, A., Picco, L., Stewart-Brown, S., & Subramaniam, M. (2017). Psychometric properties of the short Warwick Edinburgh mental well-being scale (SWEMWBS) in service users with schizophrenia, depression and anxiety spectrum disorders. *Health and Quality of Life Outcomes*, *15*(1), 153. https://doi.org/10.1186/s12955-017-0728-3

van den Berg, M., Wendel-Vos, W., van Poppel, M., Kemper, H., van Mechelen, W., & Maas, J. (2015). Health benefits of green spaces in the living environment: A systematic review of epidemiological studies. *Urban Forestry & Urban Greening*, *14*(4), 806–816. https://doi.org/10.1016/j.ufug.2015.07.008

Van den Bosch, M., & Sang, Å. O. (2017). Urban natural environments as nature-based solutions for improved public health–A systematic review of reviews. *Environmental Research*, *158*, 373–384. https://doi.org/10.1016/j.envres.2017.05.040

Vanderpool, M. (2002). Resilience: A missing link in our understanding of survival. *Harvard Review of Psychiatry*, *10*(5), 302–306. https://doi.org/10.1080/10673220216282

Van Dijk-Wesselius, J. E., Van den Berg, A. E., Maas, J., & Hovinga, D. (2020). Green schoolyards as outdoor learning environments: Barriers and solutions as experienced by primary school teachers. *Frontiers in Psychology*, *10*. https://doi.org/10.3389/fpsyg.2019.02919

Waite, S., Rutter, O., & Fowle, A. (2017). Methods of assessment and evaluation for learning outside the classroom. In S. Waite (Ed.), *Children learning outside the classroom: From birth to eleven* (2nd ed.). SAGE Publications.

Ward, J. S., Duncan, J. S., Jarden, A., & Stewart, T. (2016). The impact of children's exposure to greenspace on physical activity, cognitive development, emotional wellbeing, and ability to appraise risk. *Health & Place*, *40*, 44–50. https://doi.org/10.1016/j.healthplace.2016.04.015

Youth Sport Trust. (2023). *Youth sport trust impact report, 2022*.

Youth Sport Trust 'Well schools movement'. (2023, March). https://www.youthsporttrust.org/join-us/networks/well-schools

Zolkoski, S., & Bullock, L. (2012). Resilience in children and youth: A review. *Children and Youth Services Review*, *34*(12), 2295–2303. https://doi.org/10.1016/j.childyouth.2012.08.009

## Appendix 1

| | 8am | 9:15 - 10:45 | 10:50 - 12:20 | 12:20 - 13:30 | 13:30 - 14:30 | 14:30 - 16:00 | 16:05 - 17:30 | 17:30 - 19:45 | 18:30 - 19:45 | 19:45 - 21:00 |
|---|---|---|---|---|---|---|---|---|---|---|
| MONDAY | Breakfast | Arrival | | | | Group Contracting & Planning | Team Development | Dinner | Adventurous Activites | Scrapheap Challenge |
| | 8am | 9:15 - 10:45 | 10:50 - 12:20 | 12:20 - 13:30 | 13:30 - 14:30 | 14:30 - 16:00 | 16:05 - 17:30 | 17:30 - 19:45 | 18:30 - 19:45 | 19:45 - 21:00 |
| TUESDAY | Breakfast | For Love or Money | | Lunch | Reflection | For Love or Money | | Dinner | Adventurous Activites | Campfire |
| | 8am | 9:15 - 10:45 | 10:50 - 12:20 | 12:20 - 13:30 | 13:30 - 14:30 | 14:30 - 16:00 | 16:05 - 17:30 | 17:30 - 19:45 | 18:30 - 19:45 | 19:45 - 21:00 |
| WEDNESDAY | Breakfast | Food For Thought | | Lunch | Reflection | Adventurous Activites | | Dinner | Adventurous Activites | Adventurous Activites |
| | 8am | 9:15 - 10:45 | 10:50 - 12:20 | 12:20 - 13:30 | 13:30 - 14:30 | 14:30 - 16:00 | 16:05 - 17:30 | 17:30 - 19:45 | 18:30 - 19:45 | 19:45 - 21:00 |
| THURSDAY | Breakfast | Epic Challenge | | Lunch | Reflection | Epic Challenge | | Dinner | Evening Entertainment | |
| | 8am | 9:15 - 10:45 | 10:50 - 12:20 | 12:20 - 13:30 | TRAVEL | | | | | |
| FRIDAY | Breakfast | Adventurous Activites | Wrap up and reflection | Packed Lunch | | | | | | |

**Figure A1.** Skills4Life programme.

Throughout the programme, young people were encouraged to move beyond their pre-conceived ideas of their capability by immersing themselves with others within a progressive range of challenging modules delivered across 5 days.

Day one

Following arrival at the residential centre, individuals were able to outline expectations and set goals for the week ahead. Groups were helped to set out a contract for their agreed behaviours and introduced to the importance of planning. An interactive team building session set the tone for the days ahead prior to a jungle climb (simulated wilderness ascent task) and zipwire (clipped-on high tower) descent. The day culminated in a scrapheap challenge (design of a transportation devise which can out-manoeuvre and destroy competitors' machines) which highlighted the importance of creativity and collaboration.

Day two

The first vocational task of the programme was an activity called 'For Love or Money'. Inspiring Learning aimed at young people to be passionate about using their voices for two key reasons. Firstly, the youngsters learned to speak about the things they are passionate about and to use their speaking ability to affect positive change in their local communities and their own lives - 'For Love'. Secondly, they learned to use their voice as a key tool to progress along their professional journeys, whether that be interviews, sales, meetings, networking, or setting up their own businesses or social enterprises - 'For Money'.

The first section of the day involved young people understanding the importance of speaking with passion including key tips for maximising their voice impact. Putting those skills together, participants engaged in 'The Great Debate' - a chance for all learners to practice healthy debate and speak up about their thoughts on real-world issues. The second part of the day built upon the first by going through the basics of body language in public speaking. Young people then worked as teams and used newly learned skills, to pitch their very own entrepreneurial solution to a business problem posed to them. This was followed by a series of energising adventure activities with reflective practice to consolidate their learning. To finish the day, some rewarding social and relaxation time was enjoyed by the campfire.

Day three

Using a range of resilience-building bushcraft skills, "Food for Thought" brought the young people together, challenging them to prepare and share a meal together.

Each team was given a budget and a selection of resources. Using these, they were able to:

- Purchase food from a menu, ensuring they bought enough for each person to eat.
- Gather resources and light a fire.
- Make a shelter so that the team had somewhere to sit and eat comfortably.
- Cook the meal and serve it to each member of the team.

- Enjoy their meal together in their shelter.

Designed to challenge a broad range of skills, Food for Thought brought teams together away from the distractions of 21st century life to focus on human needs and connections, working together towards a valuable shared goal. The programme supported the young people to recognise their contribution to various parts of the challenge and foster a true sense of independence. They were also given the opportunity to develop creativity, resilience (staying positive), leadership and teamwork skills in a truly interactive session with a tasty outcome.

Day four

On the final full day of outdoor adventure, 'Epic Challenge' saw the learners competing in teams to complete a set of tasks and win points in their bid to become the ultimate champions. A series of outdoor challenges were set out across the centre, allowing teams to communicate and collaborate as they tackled and harnessed the skills they had built throughout their trip. Each Challenge was designed to help learners achieve different elements of their Level 3 Skill Builder Framework. Each team needed to:

- Plan how they intended to complete the tasks and organise the team to get the most from different people's strengths and weaknesses.
- Implement their plan for each challenge and acquire points based on their implementation.
- Review themselves as a team and discuss the impact of their decisions.

Day five

A celebration of everyone's achievements and personal wins was undertaken coupled with a final outdoor activity and reflection session to fully embed their learning.