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The phased model of adventure therapy: trauma-focussed, low arousal, & positive behavioural support

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ABSTRACT

The aim of this paper is to describe the development of the Phased Model of Adventure Therapy. Adventure therapy is the use of adventure experiences to engage clients on cognitive, affective and behavioural levels. Use of adventure therapy has been found to improve psychological wellbeing, self-esteem and behaviour in young people. A UK-based adventure therapy provider, the Creative Outdoors Group, provides care to young people who are currently looked after by the Local Authority and display complex emotional and/or behavioural needs. The Phased Model of Adventure Therapy has been developed in association with the Creative Outdoors Group to promote improvements in psychological and behavioural functioning. The model consists of several theoretical models applied alongside a regime of adventure or outdoor activities. This paper describes the theoretical underpinnings of the Model and how this was applied to an adventure therapy regime.

KEYWORDS

Adventure therapy; low arousal; PBS; trauma recovery model

Introduction

Adventure Therapy (AT) refers to 'the prescriptive use of adventure experiences by mental health professionals, often conducted in natural settings that kinaesthetically engage clients on cognitive, affective, and behavioural levels' (Gass, Gillis, & Russell, 2012, p. 1). AT is an experiential method of psychotherapy which combines adventure-based activities and experiences with traditional models of therapy (Newes & Bandoroff, 2004). Experiential therapy emphasises the importance of subjective experience and sense of agency (Watson, Greenberg, & Lietaer, 1998). The foci are the importance of the therapeutic relationship which enables change in clients, and the client's experience of therapy which includes feelings, perceptions, goals and values (Gendlin, 1964). AT is based on the premise that direct experiences are the most effective form of learning. This experiential approach provides a safe space for change (Everett, 2013). Reflection is a key factor in this experiential learning process (Kraft & Sakofs, 1985).

AT practices are evident throughout the last century. Tent therapy for psychiatric patients began in the early 1900 s, in which patients were placed in tents outside the hospital, with many patients showing significant improvements in their symptoms (Davis-Berman & Berman, 1994). The adventure-based programme Outward Bound, developed by Kurt Hahn in the 1940s, had a significant impact on educational programmes in America and the UK. Outward Bound initially targeted tenacity in sailors through challenging adventure training, and then progressed into schools (James, 1993). Courses were developed for offenders and individuals with substance abuse problems and/or mental health issues. Outward Bound now offers adventure-based education worldwide, targeting several populations including young offenders, children in foster care, students and corporate managers with positive effects reported (Catellano & Soderstrom, 1992; Fischer & Attah, 2001; Witman, 1987).

Bowen and Neill (2013) conducted a meta-analysis of 197 studies of AT programmes published between 1967 and 2012. They found moderate, significant, positive effect sizes for AT when pre-AT and post-AT measures had been taken, indicating a short-term positive change in participants. These were larger and more significant than alternative treatment and no treatment control groups. There was also maintenance of the short-term improvements in the longer-term. This includes improvement in academic, behavioural, clinical, physical and social development outcomes. The only significant moderator was the age of the participants, with older participants experiencing stronger outcomes. The authors conclude that AT programmes elicit positive short-term and long-term change in psychological, behavioural, emotional and interpersonal domains. However, it is stated that the majority of the research included in the analysis was of moderate quality, with only nine studies achieving a high-quality rating. Thus, the need for high-quality empirical research into the effectiveness of AT in eliciting positive change is evident.

Nevertheless, AT has been found to significantly improve psychosocial functioning and elicit strong positive effects on behaviour (Gillis et al., 2016; Russell, Gillis, & Kivlighan, 2017). Significant increases in self-esteem, locus of control and positive behaviour changes following AT have been found (Cross, 2002; Garst, Scheider, & Baker, 2001; Hazelworth & Wilson, 1990). Such positive effects have been found in children and adolescents with a range of difficulties, including challenging behaviour, mental health problems, family problems and substance misuse (Bowen & Neill, 2013).

Garst et al. (2001) quantitatively and qualitatively examined the impact of a short-term adventure-based programme on 'at-risk' adolescents. The results indicated short- and long-term improvements in social acceptance and behavioural conduct. The participants described the novelty of the programme and the opportunity to 'escape' from family and peer influences as enabling positive behavioural change. The authors state that personal, contextual and social factors influenced a change in self-perceptions. Therefore, these factors should be considered in the development and application of an AT programme. The positive long-term effects demonstrate the behavioural changes continue outside the AT environment, for example, once back in the stressful home environment, thus supporting the efficacy of AT regimes with young people.

The use of AT with young people who have a range of behavioural and psychological issues leads to improvement in interpersonal functioning and emotional wellbeing. However, for more complex difficulties, specialised, person-centred therapeutic regimes are required. In the last two years, the Creative Outdoors Group (COG), a UK-based AT company, has received an increased number of referrals for young people with complex difficulties from local authorities across the UK, some of whom have engaged directly in an AT programme. Over time, several common difficulties and psychological needs became evident and a model of AT was subsequently developed by COG in partnership with the Forensic Psychology Practice Ltd to provide appropriate, psychologically informed care. The techniques and approaches found to be appropriate and useful within this setting were combined to create the Phased Model of Adventure Therapy (PMAT). The aim of this paper is to describe the development and application of the PMAT.

COG consistently applies the PMAT and report a positive behavioural change in many young people. Twenty-three young people have been supported using the PMAT thus far. These young people are aged between 8 and 16 years (13.6 years \pm 2.0) and consist of six females and 17 males. Sixteen of these young people have undertaken a residential AT regime for between 2 and 6 weeks. Table 1 describes the common difficulties and behaviours displayed by the young people assessed.

The adventure therapy regime

As demonstrated in Table 1, common difficulties include the breakdown of residential placements, which can be unsettling for young people. This instability has been found to elicit feelings of loss and difficulties building trusting relationships (Unrau, Seita, & Putney, 2008). Thus, stabilisation was paramount for many of the young people starting their AT placement. Stabilisation is achieved as a consequence of a capable and facilitating environment that fosters positive interactions between

Table 1. Common reported histories and difficulties of the young people assessed in the last two years.

Clinical history	Behavioural presentation
Placement in foster care/breakdown of several placements	Deficits in attention
Difficulties in education—special education provisions	Physical violence and aggression
Substance misuse	Previous self-harm behaviour
Offending behaviour	Verbal aggression
Anti-social peer groups	Low self-esteem
High risk of sexual exploitation	Absconding
Absconding	Hyperactivity

the young person and the staff members. The core approach is taken from aspects of Dyadic Developmental Psychotherapy (Casswell, Golding, Grant, Hudson, & Tower, 2014) which focuses upon playfulness, acceptance, curiosity and empathy. Dyadic Developmental Psychotherapy is effective in treating a range of difficulties, including complex trauma (Becker-Weidman & Hughes, 2008). Table 2 outlines each of these components.

This provides a basis for interactions with the young person in which predictable and consistent boundaries and responses to the young person’s behaviours are applied. This occurs within an environment in which triggers resulting in frustration, anger and distress in the young person are minimised. The essence of this approach is to enable the young person to feel safe, increase self-awareness and improve self-esteem.

Additionally, as many young people report difficulties in education, with some displaying intellectual difficulties, Positive Behavioural Support (PBS) was utilised throughout the AT regime. PBS is considered best practice when supporting individuals with intellectual difficulties and complex, challenging behaviour (The British Psychological Society, 2018). It is based upon the principle that if a person can learn a more effective and acceptable behaviour than the challenging one, the challenging behaviour will reduce (PBS Coalition, 2015). Strategies can be proactive (environment, communication and body language, predictable routines and structure, etc.) or reactive (calming, reduce demands, low arousal, etc.). PBS is reported to significantly improve reported quality of life and reduces the frequency of challenging behaviour in young people (Grey, Mesbur, Lydon, Healy, & Thomas, 2017). Thus, this was core to the AT regime. Within this, low arousal techniques were used. Low arousal involves a range of behavioural management strategies that focus on the reduction of stress, fear and frustration and seek to prevent aggression and crisis situations (McDonnell, 2011). Punitive consequences for individuals can be avoided through the early identification and management of challenging behaviours. The focus is not on ‘fixing’ the person or the challenging behaviour itself. Punishment is never used as a strategy for managing challenging behaviours.

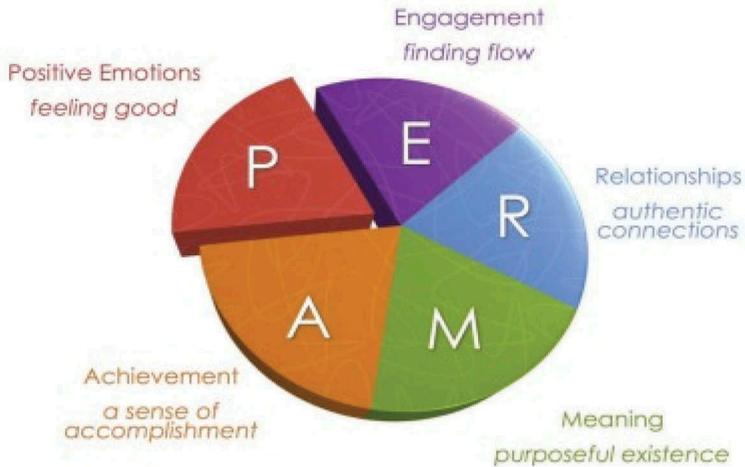
Cognitive Behavioural Therapy (CBT) Techniques are utilised within PBS and low arousal approaches. CBT has been shown to be effective in alleviating a range of difficulties experienced by young people, including depression, anxiety, self-harm and conduct problems (Scott, 2009). CBT techniques require staff to be aware of the young person’s developmental level, be empathic and encourage investigation and self-reflection into the presenting challenging behaviours. The use of CBT techniques during AT enables a young person to understand the antecedents of their behaviour, the behaviour itself and the consequences. Table 3 presents examples of CBT techniques used within the AT regime.

Table 2. Facets of dyadic developmental psychotherapy (Casswell et al., 2014).

DDP facet	Description
Playfulness	Creating an atmosphere of playfulness, lightness and interest when you communicate
Acceptance	Accepting without judgement or evaluation the young person’s inner life so that the person learns that criticism of behaviour is not the same as criticising the child’s self
Curiosity	Considering of meaning of the behaviour for the child
Empathy	The adult communicates strength, love and commitment by staying with the young person, emotionally providing comfort and support and not abandoning the young person during times of distress

Table 3. Cognitive behavioural techniques used within the PMAT model.

Cognitive behavioural techniques	Application
Activity scheduling	A realistic timetable with periodic rewarding activities
Cost-benefit analysis	Compile a list of benefits and costs of doing or not doing something
Challenging distorted thinking	Reframe the thought into a positive one
Socratic dialogue	Identify a person's reasoning for negative thoughts/perceptions. Stimulate the person to challenge and reflect on this reasoning to see if it still holds true
Diary keeping	To help the individual understand the relationship between situations, thoughts and feelings
Flash cards	Write down the challenge to distorted thoughts and keep them close by for future reference.

**Figure 1.** The PERMA model (Pascha, 2017).

These approaches are incorporated into a PERMA Wellbeing Framework (Pascha, 2017) which encourages positive emotion, engagement, relationships, meaning and achievement as a consequence of involving the person in challenging and adventurous activity during which support, care and training/education is provided by skilled leadership instructors. The use of the PERMA model enables a focus on factors which have been found to be significantly related to psychological wellbeing (Kern, Waters, Adler, & White, 2014). The application of positive psychology in educational activities involves using the PERMA framework to enable children to flourish. The PERMA model is presented in Figure 1.

These approaches are applied alongside a regime of outdoor and adventurous activities. Young people reside in tents in the countryside and cook their meals on campfires. They engage in up to three activities per day. This can include climbing, abseiling, water sports, archery and other outdoor activities. Young people are supported to obtain certificates and qualifications in activities they enjoy. Staff model positive behaviour and engagement in activities and support young people to challenge themselves. The aim of the activities is to teach new skills, including relationship and communication skills, build confidence and self-esteem and provide a safe environment for challenging behaviour to be addressed.

The importance of trauma

As many young people referred to COG are cared for by the Local Authority, it is likely that they have experienced trauma: a stressful event or situation which is exceptionally threatening or horrific in

nature and likely to cause pervasive distress (WHO, 2019). Children cared for by welfare systems are reported to often experience abuse and neglect, exposure to violence and substance misuse and breakdowns in foster care placements (see Ko et al., 2008). Additionally, the behavioural presentation of many young people who have been assessed by COG suggests symptoms and clinical histories indicative of complex trauma (World Health Organisation, 2019). This includes histories of abuse, neglect and familial instability. These young people often display low self-esteem, challenging behaviour and self-harm. Therefore, it was pertinent to consider trauma within the AT regime; thus, the Trauma Recovery Model (TRM; Skuse & Matthew, 2015) was considered (see Figure 2).

The TRM brings together psychological and criminological approaches to young people who have committed serious offences with the core belief that young offenders are redeemable and can be supported to desist from offending. At the centre of this layered model is the young person's behavioural presentation, with the different layers identifying the underlying developmental need and the type of intervention best suited to address each need. The lower layers of the model stem from Maslow's hierarchy of needs (Maslow, 1943) which states 'healthy psychological growth can only occur when basic physiological and safety needs have been met' (Skuse & Matthew, 2015, p. 21). At this level, structure and routine are implemented to counteract the disorganised lifestyles that young people are likely to have experienced. Following this, positive relationships and trust with staff/adults can be explored and developed. Strong emotions and maladaptive coping skills are addressed with a focus on interactive repair; a young person learns how to reconnect with a relationship after it has been broken or is interrupted, for example, following disciplinary action. This aims to alter a young person's internal working model regarding relationships and promote the development of healthy positive relationships.

Following navigation through the first two layers, specific therapeutic interventions can be delivered to address trauma, containment, bereavement, etc. The individual will then be ready to progress through the upper layers of the model. Skuse and Matthew (2015) state that, at this point, young people will have developed a greater sense of self-belief and acceptance of their abilities. Research into the effectiveness of the TRM with young offenders is finding positive results (Welsh Government, 2017).

The layered framework of the TRM is incorporated into the Complex Post-Traumatic Stress Disorder (CPTSD) framework (McFetridge et al., 2017). CPTSD is defined as:

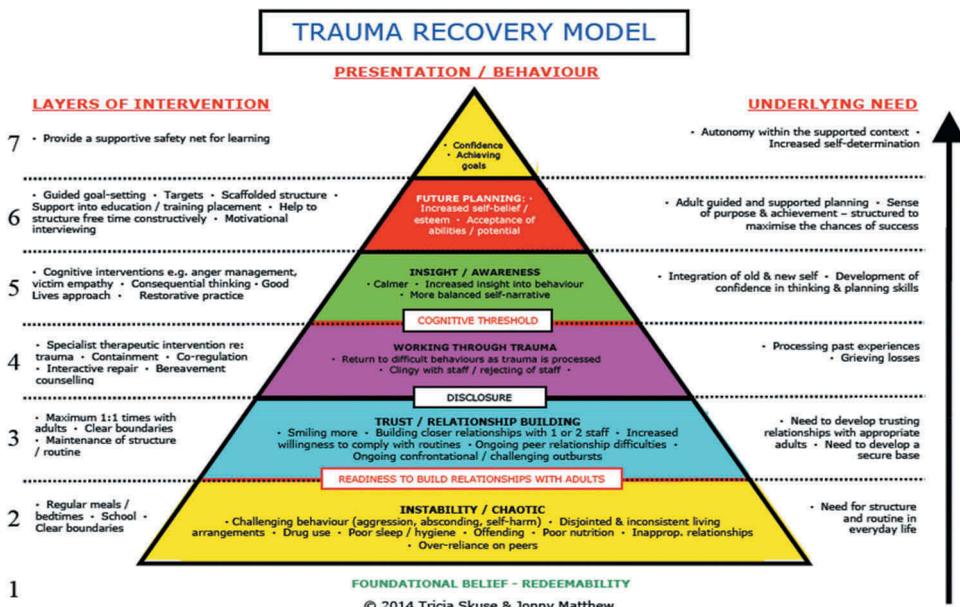


Figure 2. The trauma recovery model (TRM; Figure produced with permission from Skuse & Matthew, 2015).

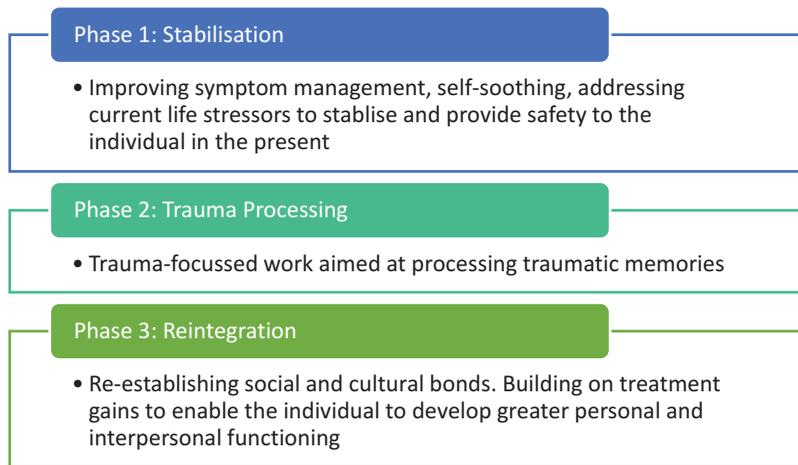


Figure 3. The CPTSD framework (McFetridge et al., 2017, p. 6).

'A disorder which arises after exposure to a stressor typically of an extreme or prolonged nature from which escape is difficult or impossible. The disorder is characterised by the core symptoms of PTSD as well as the development of persistent and pervasive impairments in affective, self and relational functioning, including difficulties in emotion regulation, beliefs about oneself as diminished, defeated, or worthless and difficulties sustaining relationships' (Maercker et al., 2013).

Individuals with CPTSD experience affect dysregulation, negative self-concept and disturbances in relationships alongside the core symptoms of PTSD (Maercker et al., 2013). The UK Psychological Trauma Society developed the CPTSD framework to aid in the clinical interventions and services for individuals with CPTSD (McFetridge et al., 2017). Treatment of complex trauma has been divided into three phases (Herman, 1992): stabilisation, trauma processing and re-integration (Figure 3). This reflects the aims of the AT regime.

The TRM is being used within the Enhanced Case Management approach currently utilised in Wales. Research has found this approach to enable more effective identification of young people's underlying needs and tailored intervention plans (Welsh Government, 2017). This research found the young people involved in Enhanced Case Management felt their lives had improved and reported a number of positive outcomes, including reduced offending behaviour and reductions in the severity of offending behaviour.

The Phased Model of Adventure Therapy

The Phased Model of Adventure Therapy (PMAT) was developed to encapsulate the effective therapeutic techniques used with young people with emotional and behavioural difficulties who are involved in an AT regime and those referred for psychological assessment by several UK Local Authorities. The PMAT is presented in Figure 4. Adventure activities are the primary tool within the model and are facilitated within and alongside the aforementioned therapeutic frameworks. Dyadic Developmental Psychotherapy (Casswell et al., 2014) and the PERMA model (Pascha, 2017) are used to guide interactions and relationships between the young person and staff members. The TRM (Skuse & Matthew, 2015) is applied throughout the PMAT process and utilises the phases of the CPTSD framework (McFetridge et al., 2017): stabilisation, trauma processing and re-integration. Low arousal, positive behavioural support and cognitive behavioural techniques are used to teach, promote and facilitate skills needed for stabilisation. A Behaviour Support Plan is produced for each young person which enables the continuation of stabilisation and explores appropriate therapies a young person may require in order to achieve re-integration and improved psychological wellbeing. Following stabilisation and management of distressing feelings and emotions, the young person will be ready to actively participate in therapy specifically focusing on reducing the psychological consequences of the trauma the young person has experienced (Welsh Government, 2017).

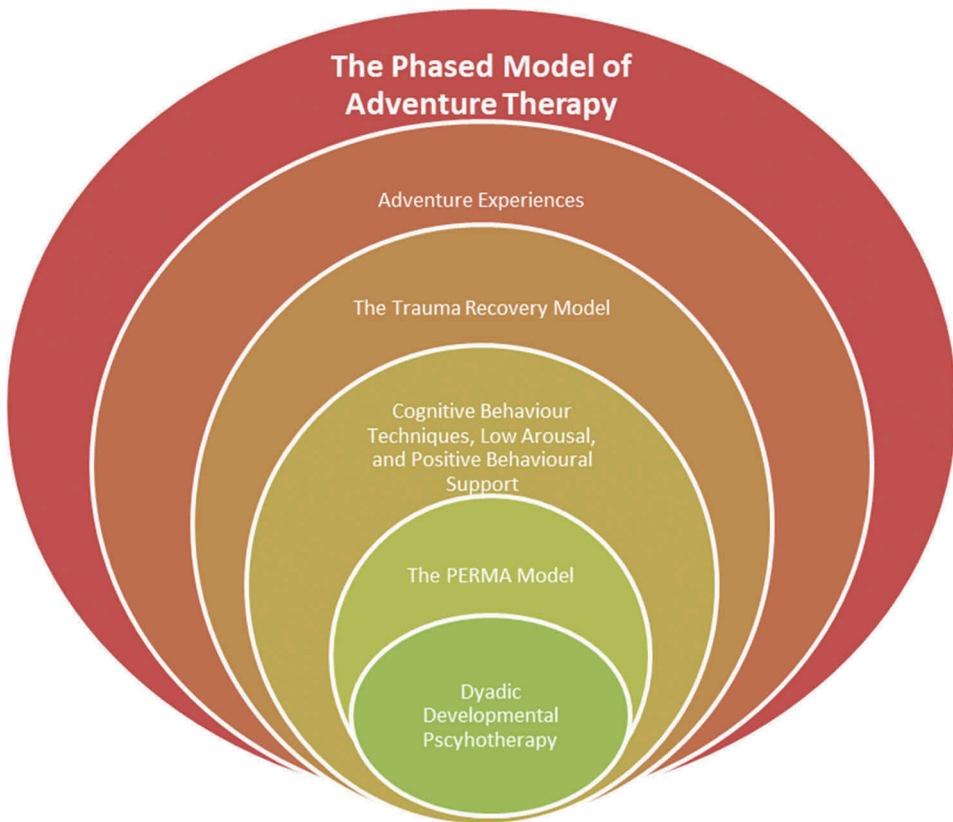


Figure 4. The phased model of adventure therapy (PMAT).

Applying the PMAT

Phase 1

Figure 5 describes the process of applying the PMAT. In Phase 1, the young person learns how multiple traumas affect a person and windows of tolerance are explained (levels of arousal which the client can tolerate). Safety and readiness for symptom-specific therapy are established by addressing risk issues, accommodation, self-care, physical health and substance misuse. Stabilisation in phase one incorporates symptom-specific management approaches for nightmares, panic and anxiety, mood, pain, improving emotion regulation and current stressors. Techniques may include Mindfulness, Focused Breathing, Emotional Surfing, Cognitive Reappraisal, Socratic Questioning, Trauma Narrative, Social Support, and Pleasurable Activity (for more information see Beck, 2011; Brockman, Ciarrochi, Parker, & Kashdan, 2017; Follette, Palm, & Pearson, 2006; Shepherd & Wild, 2014). Sensory discrimination training can help the young person to ground them self if experiencing dissociation and flashbacks by grounding in the present using their senses. These approaches are integrated into a Behavioural Support Plan that evolves to meet the changing needs of the young person.

During Phase 1, a summary report is produced based on informant reports of challenging behaviour, psychometric assessments and brief clinical interviewing of the young people. Assessments include exploration of cognitive and adaptive functioning, psychological wellbeing, self-esteem and neurological disorders such as Attention Deficit Hyperactivity Disorder and Autism Spectrum Disorders. The goal of these assessments is to guide future interventions and approaches to working with each young person. Table 4 provides an overview of the difficulties identified in the young people who have been assessed so far.

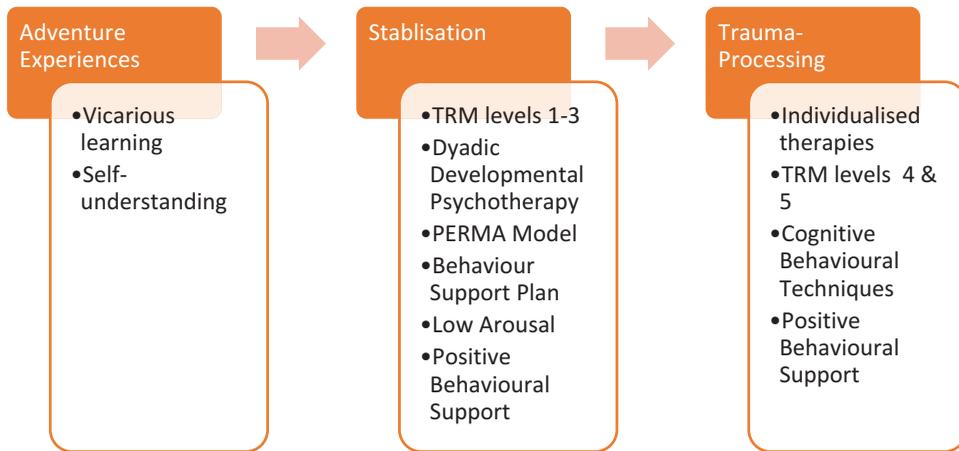


Figure 5. The process of applying the PMAT.

Phase 2

In Phase 2, case formulation, research and evaluation of the effectiveness of each technique with each young person are incorporated into the individualised Behaviour Support Plan. Individual Trauma Processing Therapies (focused processing of traumatic memories) are added to the Behavioural Support Plan. A number of specific talking therapies can be employed such as Dyadic Developmental Psychotherapy, Cognitive Analytic Therapy and Schema Therapy, that will address the trauma that the young person will have experienced as a consequence of abuse, sexual exploitation or disruption of attachment during significant developmental stages that can result in a Reactive Attachment Disorder (Chaffin et al., 2006). Psychoeducation in the form of Short Behavioural Interventions can be provided to address specific risk issues such as alcohol misuse, substance misuse, sexual exploitation, keeping safe, leadership, assertiveness, problem-solving, resilience, etc. NICE (2015) recommends specific cognitive therapies for young people in care or at risk of going into care as a consequence of disrupted attachment relationships. This plan is circulated within the AT staff to utilise within the care they provide and to Local Authorities to guide and inform their intervention planning.

Table 5 provides an example of an initial Behaviour Support Plan used for one of these young people. This young person was aged 15 years and undertook a 6-week AT placement. The young person displayed significant difficulties with absconding, substance misuse, risk-taking behaviours,

Table 4. Diagnostic considerations identified in the young persons through assessment.

Diagnostic consideration	Number of young people
Attention-deficit hyperactivity disorder	16
Depression	12
Conduct disorder	8
Difficulties in adaptive functioning	8
Anxiety	7
Oppositional defiant disorder	6
Reactive attachment disorder	6
Low self-esteem	4
Learning disability	3
Post-traumatic stress disorder (including complex)	3
Dyslexia	2
Foetal alcohol syndrome	2
Autism spectrum disorder	2
Pathological demand avoidance	1
Dyspraxia	1

Table 5. Example behaviour support plan; ‘YP’ = young person.

Behaviour	Absconding	Hyperactivity	Aggressive outbursts
Positive behavioural support	<i>Antecedents:</i> anxiety caused by transitioning <i>Behaviour:</i> running away, walking off from staff <i>Consequences:</i> being reported as ‘missing’, putting self at risk	<i>Antecedents:</i> boredom, lack of stimulation <i>Behaviour:</i> fidgeting, restlessness <i>Consequences:</i> frustration, aggression, stress	<i>Antecedents:</i> boredom, disagreement with peers/staff, anxiety <i>Behaviour:</i> verbal aggression, damaging property, threats of physical aggression <i>Consequences:</i> disengagement from activities/staff, breakdown of relationships, damage to property, harm to self, harm to others
Low arousal	Facilitate effective communication to enable YP to express anxiety. Staff to develop and facilitate effective transition plans and procedures.	Staff to use minimal demands and ensure the environment has minimal sensory clutter. Ensure YP is engaged with an activity if he becomes restless. Reduce staff demands.	Reduce staff demands. Staff to remain non-confrontational unless YP is at risk. Reduce events, situations and experiences that trigger anxiety, stress and stimulation that YP is unable to cope with
Cognitive behavioural techniques	Behavioural experiments of transitioning. Activity scheduling to reduce anxiety. Socratic dialogue	Activity scheduling	Cost-benefit analysis. Challenging distorted thinking. Socratic dialogue

fire-setting, self-harm and aggressive behaviour. Formal assessment revealed that the young person was experiencing significant difficulties within verbal comprehension abilities, adaptive functioning and hyperactivity. The young person displayed aggression and conduct problems. Following the AT regime using the PMAT, this young person displayed improvements in sensation seeking, anger control, mania symptoms and insight into the difficulties that they were experiencing. Given the success of the PMAT within this setting, the model should be explored, evaluated and applied elsewhere to assess its clinical utility and effectiveness as a therapeutic model for young people with emotional and behavioural difficulties.

It is hoped when the young person progresses into new placements or environments, it is possible to maintain or re-establish TRM layer 2 and layer 3 positive outcomes, whilst moving towards providing the young person with phase 2 interventions for specific symptomatic behaviours (grief, loss, dissociation, emotional dysregulation, etc.). When the young person is ‘ready’ for individual therapy to address trauma issues, this should be provided in the later layers (4 and 5) of the TRM and Phase 2.

Implications and future directions

The therapeutic components used within the PMAT model have been found to be effective in improving the psychological and behavioural presentation of young people. Since 2017, 16 young people have been provided with residential AT which utilised the PMAT. Clinical observation of challenging behaviour and psychometric assessments such as the Adaptive Behavior Assessment System (Harrison & Oakland, 2015) and the Behavior Assessment System for Children (Reynolds & Kamphaus, 2015) have revealed improvements in young people’s self-esteem and emotional regulation abilities over the course of the AT placements. Staff report significant improvement in interpersonal relationships and communication skills in the young people. While this is merely observation, the impact of the PMAT model is promising, and the aim is to undertake empirical research into the effectiveness and impact of the PMAT model in the coming year. Structured assessments have been developed for this purpose by researchers in the United States, such as the Adventure Therapy Experience Scale (Russell & Gillis, 2017).

Conclusions

AT has been used for several decades and found to elicit positive change in psychological, behavioural, emotional and interpersonal domains. The PMAT provides a framework for therapeutic components of AT that can be facilitated alongside adventure experiences. It is hoped that the PMAT can be used as an effective intervention for young people with emotional and behavioural difficulties.

Disclosure Statement

No potential conflict of interest was reported by the authors.

Notes on contributors

Grace Trundle is a Trainee Forensic Psychologist, completing her Doctorate in Forensic Psychology at the University of Nottingham. She worked alongside the Forensic Psychology Practice Ltd and the Creative Outdoor Group.

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References

- Beck, J. S. (2011). *Cognitive behavior therapy: Basics and beyond (2nd Edition)*. New York: Guilford Press.
- Becker-Weidman, A., & Hughes, D. (2008). Dyadic developmental psychotherapy: An evidence-based treatment for children with complex trauma and disorders of attachment. *Child & Family Social Work, 13*(3), 329–337.
- Bowen, D., & Neill, J. (2013). A meta-analysis of adventure therapy outcomes and moderators. *The Open Psychology Journal, 6*(1), 28–53.
- British Psychological Society. (2018). *Positive behaviour support (PBS)*. Leicester, UK: Author.
- Brockman, R., Ciarrochi, J., Parker, P., & Kashdan, T. (2017). Emotion regulation strategies in daily life: Mindfulness, cognitive reappraisal and emotion suppression. *Cognitive Behaviour Therapy, 46*(2), 91–113.
- Casswell, G., Golding, K. S., Grant, E., Hudson, J., & Tower, P. (2014). Dyadic developmental practice (DDP): A framework for therapeutic intervention and parenting. *The Child and Family Clinical Psychology Review, 2*, 19–27.
- Catellano, T. C., & Soderstrom, I. R. (1992). Therapeutic wilderness programs and juvenile recidivism. *Journal of Offender Rehabilitation, 17*(3–4), 19–46.
- Chaffin, M., Hanson, R., Saunders, B. E., Nichols, T., Barnett, D., Zeanah, C., ... Miller-Perrin, C. (2006). Report of the APSAC task force on attachment therapy, reactive attachment disorder, and attachment problems. *Child Maltreatment, 11*(1), 76–89.
- Cross, R. (2002). The effects of an adventure education program on perceptions of alienation and personal control among at-risk adolescents. *Journal of Experiential Education, 25*(1), 247–254.
- Davis-Berman, J., & Berman, D. S. (1994). *Wilderness therapy: Foundations, theory and research*. Dubuque, IA: Kendall/Hunt.
- Everett, A. (2013). *What is Experiential Theory and How Does It Help Change to Occur?* Retrieved from <https://www.counselling-directory.org.uk/counsellor-articles/what-is-experiential-therapy-and-how-does-it-help-change-to-occur>
- Fischer, R. L., & Attah, E. B. (2001). City kids in the wilderness: A pilot-test of Outward Bound for foster care group home youth. *The Journal of Experiential Education, 24*(2), 109–117.
- Follette, V., Palm, K. M., & Pearson, A. N. (2006). Mindfulness and trauma: Implications for treatment. *Journal of Rational-Emotive and Cognitive-Behavior Therapy, 24*(1), 45–61.
- Garst, B., Scheider, I., & Baker, D. (2001). Outdoor adventure programme participation impacts on adolescent self-perception. *Journal of Experiential Education, 24*(1), 41–49.
- Gass, M., Gillis, H. L., & Russell, K. C. (2012). *Adventure therapy: Theory, practice and research*. New York, NY: Routledge Mental Health Publishing.
- Gendlin, E. (1964). A theory of personality change. In P. Worchel & D. Byrne (Eds.), pp. 100–148. *Personality change*. New York: Wiley.
- Gillis, H. L., Speelman, E., Linville, N., Bailey, E., Kalle, A., Oglesbee, N., ... Jensen, J. (2016). Meta-analysis of treatment outcomes measured by the Y-OQ and Y-OQ-R comparing wilderness and non-wilderness treatment programs. *Child & Youth Care Forum, 45*(6), 851–863.
- Grey, I., Mesbur, M., Lydon, H., Healy, O., & Thomas, J. (2017). An evaluation of positive behavioural support for children with challenging behaviour in community settings. *Journal of Intellectual Disabilities, 22*(4), 394–411.

- Harrison, P., & Oakland, T. (2015). *Abas-3: adaptive behavior assessment system*. Los Angeles, CA: Western Psychological Services.
- Hazelworth, M. S., & Wilson, B. E. (1990). The effects of an outdoor adventure camp experience on self-concept. *Journal of Environmental Education*, 21(4), 33–37.
- Herman, J. (1992). Complex PTSD: A syndrome in survivors of prolonged and repeated trauma. *Journal of Traumatic Stress*, 5(3), 377–391.
- James, T. (1993). *The Only Mountain Worth Climbing: The Search for Roots*. Unpublished manuscript. Garrison, NY: Outward Bound.
- Kern, M. L., Waters, L. E., Adler, A., & White, M. A. (2014). A multidimensional approach to measuring well-being in students: Application of the PERMA framework. *The Journal of Positive Psychology*, 10(3), 262–271.
- Ko, S. J., Ford, J. D., Kassam-Adams, N., Berkowitz, S. J., Wilson, C., Wong, M., ... Layne, C. M. (2008). Creating trauma-informed systems: Child welfare, education, first responders, health care, juvenile justice. *Professional Psychology: Research and Practice*, 39(4), 396.
- Kraft, R., & Sakofs, M. (1985). *The theory of experiential education*. Boulder, CO: Association of Experiential Education.
- Maercker, A., Brewin, C. R., Bryant, R. A., Cloitre, M., Ommeren, M., Jones, L. M., ... Somasundaram, D. J. (2013). Diagnosis and classification of disorders specifically associated with stress: Proposals for ICD-11. *World Psychiatry: Official Journal of the World Psychiatric Association (WPA)*, 12(3), 198–206.
- Maslow, A. H. (1943). A theory of human motivation. *Psychological Review*, 50(4), 370–396.
- McDonnell, A. A. (2011). *Managing aggressive behaviour in care settings: Understanding and applying low arousal approaches*. West Sussex, UK: John Wiley & Sons Ltd.
- McFetridge, M., Hauenstein Swan, A., Heke, S., Karatzias, T., Greenberg, N., Kitchiner, N., & Morley, R., & Board Members of the UK Psychological Trauma Society. (2017). *Guideline for the Treatment and Planning Services for Complex Post-Traumatic Stress Disorder in Adults*. Retrieved from http://www.ukpts.co.uk/guidance_11_2920929231.pdf
- Newes, S., & Bendoroff, S. (2004). *What is adventure therapy? In coming of age: The evolving field of adventure therapy*. Boulder, CO: Association of Experiential Education.
- NICE. (2015). Children's Attachment: Attachment in children and young people who are adopted from care, in care, or at risk of going into care. *NICE Guideline 26*. National Institute for Health and Care Excellence
- Pascha, M. (2017). *The PERMA wellbeing framework*. Retrieved from <https://positivepsychologyprogram.com/perma-model/#references>
- PBS Coalition. (2015). *Positive behavioural support. A competency framework*. Retrieved from www.pbsacademy.co.uk
- Reynolds, C. R., & Kamphaus, R. W. (2015). *Behaviour Assessment System for Children* (3rd ed.). Bloomington: NCS Pearson, Inc.
- Russell, K. C., & Gillis, H. L. L. (2017). The adventure therapy experience scale: The psychometric properties of a scale to measure the unique factors moderating an adventure therapy experience. *Journal of Experiential Education*, 40(2), 135–152.
- Russell, K. C., Gillis, H. L. L., & Kivlighan, D. M., Jr. (2017). Process factors explaining psycho-social outcomes in adventure therapy. *Psychotherapy*, 54(3), 273–280.
- Scott, A. (2009). Cognitive behavioural therapy and young people: An introduction. *Journal of Family Health*, 19(3), 80–82.
- Shepherd, L., & Wild, J. (2014). Emotion regulation, physiological arousal and PTSD symptoms in trauma-exposed individuals. *Journal of Behavior Therapy and Experimental Psychiatry*, 45(3), 360–367.
- Skuse, T., & Matthew, J. (2015). The trauma recovery model: Sequencing youth justice interventions for young people with complex needs. *Prison Service Journal*, 220, 16–24.
- Unrau, Y. A., Seita, J. R., & Putney, K. S. (2008). Former foster youth remember multiple placement moves: A journey of loss and hope. *Children and Youth Services Review*, 30(11), 1256–1266.
- Watson, J. C., Greenberg, L. S., & Lietaer, G. (1998). The experiential paradigm unfolding: Relationship and experiencing in therapy. In L. S. Greenberg, J. C. Watson, & G. Lietaer (Eds.), pp. 3-27. *Handbook of experiential psychotherapy*. New York: The Guilford Press.
- Welsh Government. (2017). *Evaluation of the enhanced case management approach, final report*. Retrieved from <http://gov.wales/>
- Witman, J. P. (1987). The efficacy of adventure programming in the development of cooperation and trust with adolescents in treatment. *Therapeutic Recreation Journal*, 21(3), 22–29.
- World Health Organisation. (2019). *International statistical classification of diseases and related health problems, 11th revision (ICD-11)*. Geneva: WHO.