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Does a nurturing approach that uses an outdoor play environment build resilience in children from a challenging background?

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Does a nurturing approach that uses an outdoor play environment build resilience in children from a challenging background?

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Children from challenging backgrounds were brought to a woodland for a programme that sought to promote resilience at Camphill School. This qualitative study of one programme uses an ethnographic approach to research the effectiveness of this type of intervention. Case studies of three of the children are used to illustrate the ways in which resilience has been stimulated using the PERIK observation scale. The nurturing and outdoor dimensions of the project are considered instrumental in promoting resilience in early years children from a challenging background.

Keywords: *Resilience; Outdoor learning; Play; Early years*

Introduction: the Camphill context

This paper concerns a project called Nature Nurture undertaken at Camphill School in Aberdeen, Scotland, in which children from challenging backgrounds were brought to Camphill's Murtle Estate, where there is a dedicated stretch of woodland resourced for exploratory play and sensory experiences. Camphill is an organisation providing support for vulnerable children and adults with additional support needs. Camphill adopts a holistic and multidisciplinary approach incorporating care, therapy and education based on Rudolf Steiner's philosophy known as Anthroposophy. This approach is person centred and aims to facilitate cognitive, emotional and volitional development, or what are termed the soul qualities of 'thinking, feeling and willing'. The recognition and respect for human potential and lifelong development guides all work in Camphill. Of particular significance to this paper are the emphases in the care of

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children on attention to small details and to rhythms and rituals (Costa & Walter, 2006). Attention to small details manifests itself in Nature Nurture in attention, thought and care given to each aspect of the children's experience, as we shall outline in our description of the Nature Nurture experience for the children. Rhythm and routine provide a sense of security, certainty and predictability.

Nurturing, nature and free play are considered at Camphill to be a powerful combination in the promotion of resilience. In the Nature Nurture project, Camphill's social pedagogical discipline is translated into work with some of Aberdeen's most vulnerable children. Children who have had disruptions in attachment and nurturing relationships during the first three years of their life can be disadvantaged for the rest of their lives. Nurturing may be defined as responding to the feelings of the child—good, bad or indifferent—and a concentration in a focus of care on the individual (General Teaching Council Scotland, 2012). According to Perry (2010) a child's healthy brain development is dependent on responsive, nurturing attention. Without this the child can experience delays in and impairment to their language, cognitive, self-regulation, empathetic and even physical development. Without sufficient nurturing, a child can become vulnerable to continued generational cycles of substance misuse, abuse or mental health problems. However, if children are given the opportunities to be with adults who are attuned, responsive and available, then there can be positive growth in the child's neurological make-up, their personal, emotional and social development and their coping strategies when faced with adversity. The Nature Nurture project has shown, as we shall discuss later, how small the input of nurturing needs to be before significant change is apparent.

Introduction: the research project

The research project on Nature Nurture developed from a relationship between Camphill nursery managers and staff and the University of Aberdeen. The University of Aberdeen has offered a degree programme in social pedagogy over many years with Camphill, and this relationship led to discussions about how to identify whether Nature Nurture does indeed promote resilience in early years. The Camphill staff were convinced that it does, indeed, promote resilience from their evaluations but wanted this to be studied with a rigorous approach by someone who did not have an investment in the programme. Accordingly, it was agreed that McArdle, who has a research interest in resilience, would be approached to undertake this study. McArdle's interest in this project lay in an interest in the absence of literature linked to early years and resilience in an educational context in particular. The authors of this paper are the researcher and two of the teachers in the Nature Nurture nursery context. The research was conducted by the University of Aberdeen researcher and the Camphill socio-cultural context was interpreted and elucidated by the teachers. The voice of the authors is represented in this paper to bring together the research and the socio-cultural context of the research.

McArdle also has an interest in anthroposophical writing in so far as it concerns research methods and approaches. Through discussion, an approach to the research

was agreed that was admittedly inconsistent with Steiner's philosophies of research, which are of their time and primarily derived from and a response to positivism, but the approach was consistent with the anthroposophical educational underpinnings of Nature Nurture. It was agreed that participant observation would be used to avoid the research interfering with the experience of the children, and the sessions that were the subject of this research were managed and facilitated by the Camphill authors of this paper.

Central to the aims of the Nature Nurture project was the intention to promote resilience. Promoting resilience is core to the educational philosophy of Camphill, where work is often undertaken with the most disadvantaged children. Ethically, the purpose of Nature Nurture is beneficent and is based on an assumption that resilience will contribute to the well-being of these children. It is intended to enhance the well-being of the individual child who may find himself/herself in challenging family circumstances. In the case of the Nature Nurture programme this was a programme chosen by the referring social workers in Aberdeen. Programmes on resilience for young people are well documented, particularly for young people from challenging backgrounds, and so the use of this kind of programme for early years is well founded on this experience.

Seventy children from disadvantaged areas of the city experienced this programme between January 2009 and June 2010. Typically, the programme included 8 to 10 children at a time from a range of backgrounds including, for example, experience of homelessness, domestic abuse, alcohol and drug use in the family. This paper outlines research undertaken to explore the effectiveness of the programme in promoting resilience through outdoor play and draws on an ethnographic study as an example of one of the 10-week-long programmes.

Ten children aged between four and five years participated in this programme from a primary school in a disadvantaged area of the city. There were four girls and six boys. Guidance was provided by the Camphill staff to teachers about how to identify children who might benefit from the programme, including children with attachment problems, those who have experienced substantial trauma and those with behavioural difficulties. The 10-week programme held sessions one afternoon a week. Two or three members of school staff attended the session and Camphill provided a further three or four staff for each session. Typically, the child/staff ratio was two to one.

Resilience

Resilience comes from the Latin *resilire*, to spring back. Understandings of resilience are cultural (Martin & Ho, 2009), it is not a fixed quality; but, in our Scottish culture, dictionary definitions refer to resuming original shape after bending, stretching and compression. Resilience is not simply a matter of survival or even of 'toughness', but is one of flexibility (Kraemer, 2009). A clinical definition of resilience is cited by Newmann and Blackburn (2002): 'the maintenance of competent functioning despite an interfering emotionality' (p. 2). Luthar (2005) suggests that resilience

is either a process or phenomenon reflecting relatively positive adaptation despite experience of significant risk or trauma. Luthar also points out that it is never measured but rather is inferred based on knowledge of two conditions: that a person is doing reasonably well and that this has happened in spite of significant adversity. The importance of resilience is summarised by Bowen, Korny, and Steer (2008). Children who are resilient have significantly fewer peer problems, higher IQ and self-esteem, greater school enjoyment and lower levels of family adversity. Kraemer expresses how resilience is acquired in early infancy:

Resilience is the capacity to get back in balance after being pushed out of it, to tolerate greater challenges without breaking down. Clearly this is most easily acquired in early infancy (and probably even before birth) but not everyone has such a lucky start . . . (2009, p. 6).

Newman and Blackburn (2002) argue that resilience factors operate in three dimensions:

- The Child.
- The Family.
- The Environment.

They go on to describe protective factors in resilience; namely, personality (cognitive skill and styles), social milieu (social roles) and family structure (high warmth/low criticism). They assert that the key quality to triggering resilience and recovery is to promote the view that the child is not a 'powerless actor in a drama written by others' (Newman & Blackburn, 2002, p. 6). In the programme to be discussed here we would add to the Environment dimension the notion of the peace that may be derived from being in the outdoors. For the children who are the subject of this paper, the Family was frequently missing. The Child is central to our process and the concept of locus of control is important, we shall propose in seeking resilience in children where family and environment are not ideal.

Newman and Blackburn (2002, p. 7) provide a helpful summary of the key concepts linked to possession of childhood resilience in the literature:

- strong social support networks;
- the presence of at least one unconditionally supportive parent or parent substitute;
- a committed mentor or other person from outside the family;
- positive social experience;
- a sense of mastery and belief that one's own efforts can make a difference;
- participation in a range of extra-curricular activities that promote self-esteem;
- the capacity to reframe adversities so that the beneficial as well as damaging effects are recognised;
- the ability or opportunity to 'make a difference' by helping others and through part time work; and
- not to be excessively sheltered from challenging situations which provide opportunities to develop coping skills.

This list implies that the child is from a background in which these are possibilities or likelihoods, which was not the case for the children in the programme we are discussing here. For example, for these children participation in extra-curricular activities might not fit with family priorities. Overall, the literature focuses predominantly on young people and resilience, not on early years in general or early years in children from challenging backgrounds in particular. Howard, Dryden, and Johnson (1999) in a review of literature on childhood resilience conclude that further work in this area should have an applied focus and should take account of an ecological framework, should be mindful of the social context in which the work is carried out and should take account of children's understandings.

Wilderness and the outdoors

The literature on wilderness therapy has bearing on our use of a woodland resource, which to early years children, we suggest, is on such a scale that it is a wilderness. Wilderness therapy literature characteristically focuses on young people aged 14–17, who are out of control or in immediate crisis (Russell, 2006). There is a 'boot camp' perception of wilderness therapy for young people, he suggests, whereas it should be viewed more as a cleansing process. The naturalness and solitude that wilderness offers restore and renew our spirit, offering evidence that wilderness is in itself therapeutic (Russell & Farnum, 2004). Kaplan and Kaplan (1989) propose that three factors are operating in wilderness therapy:

The Wilderness: elements of the natural world that create change.

Physical Self: activities or processes that facilitate learning.

Social Self: social interaction.

Kaplan and Kaplan examine the psychological benefits of experiencing nature. They argue that it can reduce stress and mental fatigue as the physical distance from stress allows us to recover from mental overload. They discuss the concept of 'soft fascination' that we experience when seeing clouds or a river; involuntary attention is engaged, the opposite of stressful directed attention. This is a phenomenon we have observed in Camphill children. The impact of life stress is lower among children with high levels of nearby nature than among those with little nearby nature (Wells & Evans, 2003).

Maynard and Waters (2007) discuss the recent resurgence of interest in the United Kingdom in the potential of the outdoor environment for supporting children's learning. Ouvry (2003) discusses the ability of children to move more easily from confrontation when outside and so they are less likely to show signs of frustration and lack of cooperation. In the Camphill context, the 'open environment' consists of treed woodland. It covers 100 acres, which is substantial, but its size is immaterial; it is rather the wildness and freedom that it provides for the young child that matters. It allows for imaginative and unbounded play in an area where, if the child walks far enough into it, the boundaries cannot be seen, so the child is immersed

in an environment suitable for open-ended play. Open-ended play allows children to express themselves in play freely and in ways that are not bound by preset limitations. Playing with open-ended materials with multiple uses and limitless possibilities, such as sticks, wet earth, plants and trees, allows for imaginative play. There are no rules to follow, no expectations and no specific problems to solve, and there is no pressure to produce a finished product when engaging freely in open-ended play. We believe the benefits of open-ended play and an open environment to be interlinked. The culture of Camphill values the open living environment and the play environment highly. There are particular preferences and conventions that govern the built environment at Camphill, for example, and these value blending the built environment with nature. So the Camphill culture values living, not just playing, in an open environment, and open play is consistent with the culture of exploration of self that Steiner's writings promote.

The environment stimulates play without boundaries that paradoxically enables the exploration of the child's own self-imposed boundaries or, indeed, the boundaries imposed by others:

There are many benefits to open-ended play. Imagination is enhanced, and the ability to think symbolically and abstractly builds creativity and intelligence. Social and emotional abilities are developed as children role-play with 'what-if' possibilities that strengthen their understanding of the world around them and consequences to actions. They also learn empathy, cooperation, problem solving, and leadership skills through make-believe play. The creative nature of open-ended play also enhances cognitive skills, such as working memory, cognitive flexibility, and self-regulation. Self-regulation is the ability to control emotions and behaviour, resist impulses, and exert self-control and discipline. Open-ended play activities have been found to be related to ideational fluency which allows children to be able to have more divergent reasoning and a greater variety of ideas when interacting with materials and others.¹

This quotation expresses the range of learning that open play can facilitate and we would add to this that open learning through safe risk-taking can contribute to the development of resilience. The quotation talks about self-regulation; we would argue that liberation from regulation is important in open-ended play and this can be facilitated by the use of the open environment with its perceived to be limitless boundaries.

Play

Play is a debated concept and is relevant to the approach to resilience adopted at Camphill. One common characteristic is that, 'play is an activity that serves no apparent purpose, the activity being more important than its ends' (Sandseter, 2009, p. 3). In this lies the notion that it is an inner directed activity not motivated by pursuing outcome goals. Sutton-Smith (1997) argues that it is an optimal experience of arousal, excitement, fun, merriment, joy and lightheartedness. Play is the method used in the Camphill programme; it eschewed therapy and educational approaches, preferring instead the developmental dimensions of play. Play is a natural medium

for making sense of and digesting experiences (Ehlen, 2006). Burdette and Whitaker (2005) describe the benefits of free play on children's social, emotional and cognitive development looking to attention, affiliation and affect. Risk-taking as part of play is important in building resilience, we suggest, particularly for children from challenging backgrounds as it allows children to encounter challenges in a safe setting; they learn possibilities and boundaries (Sutton-Smith, 1997). Children frequently seek out and enjoy risk-taking (Stephenson, 2003), and risk-taking is an integral part of extending physical prowess and therefore independence. They also learn risk assessment and how to monitor risk situations, all of which are important in the development of resilience.

Missing from the literature is a consideration of early years and resilience for children from challenging backgrounds in an outdoor play environment. The literature in the domains of therapy, wilderness theory and resilience development focuses very much on young people in this context. We found Joyce (2012) refreshing in a discussion of play through the years and the importance of the outdoors in teaching simple lessons. She gives the example of learning 'readiness' from the natural world from, for example, 'readiness to flower', and she concludes that children need to be seen as being part of and not separate from nature.

Methodology

This research was undertaken by the authors, of whom T. Harrison from Camphill led the resilience programme and conducted internal evaluative activities. McArdle managed the ethnographic research process described here, where ethnographic research is defined as a portrayal and explanation of social groups and situations (Cohen, Manion, & Morrison, 2011). Ethnography allows the researcher to be the 'human instrument'. The advantage of the human instrument is her adaptiveness, responsiveness, ability to see the whole picture, ability to clarify and summarise and to explore, to analyse and to examine atypical or idiosyncratic responses (Cohen et al., 2011). The disadvantages, of course, are also linked to being the human instrument, and reflexivity was an important dimension of the research. A reflexive diary was kept by the researcher to challenge assumptions and to monitor whether participation had indeed influenced the practice being observed.

The context for this research is a study of one of the eight programmes run by Camphill. It was selected because it was about to start at the time the research was considered to be essential for developmental and validation reasons and would enable a series of observation opportunities over the 10-week period. It also came at a time when the programme had matured past initial implementation issues and had achieved a certain maturity. We chose to undertake a qualitative study as the issues we were exploring were in depth and required, we posited, an unintrusive approach to avoid causing distress to the children or interference to the programme. We hoped to adopt a socio-cultural analysis of the programme to explore what the impact was on early years children of Camphill's Nature Nurture programme and whether characteristics of resilience were developed during the programme.

Baseline assessments were conducted of each child using a confidential questionnaire, which included scales from one to six where six is highly able and one is not able, developed at Camphill and completed by parents or in their absence or unwillingness to do so by teachers or carers. The questionnaire was useful for the overall picture it provided of the child as perceived by those who completed them. The individual questions were less useful as they tended to be either mostly positive or mostly negative. Baseline assessments were negative for all the children in this study as they clearly presented a challenge to parents and teachers. Parents and carers gave written consent for participation of their children in the programme and the research and the option to withdraw the child was always present and constantly monitored through discussion. It was clear to parents and carers that the programme focused on resilience through the Nature Nurture process. Children could also participate in the programme but not in the research if they or their parents wished. Feedback was given to parents after every session and no concerns were expressed by parents about the research process dimension. Care was taken to ensure that the researcher's presence was unintrusive and to monitor continuously that the children were comfortable with the researcher's presence. Discussions after the sessions on the bus and willingness to keep participating were monitored to check the children's well-being after the programme. Ethical issues with children, particularly children who are vulnerable, are always complex and care was taken to ensure that the experience of the children was a pleasurable one and that they were comfortable with both the outdoor learning and the linked research experience. This was possible with a ratio of two-to-one staff and constant checking that everything was still fine. The baseline assessment covered physical, emotional, behavioural and social skills on a poor to excellent one-point to six-point rating, where one is low and six is high. The baseline assessment was conducted again for comparative purposes at the conclusion of the 10-week programme. These assessments have been used for comparative purposes with the observation reports described below. A limitation of the baseline assessments is that they rely on the perceptions of the people who complete them and are not standardised. They did, however, give an indication of perceived changes in children's behaviour post intervention.

Three observations were undertaken by the researcher; one at the first session, two during the remainder of the programme. A participant observer role was adopted to avoid causing children discomfort and affecting their behaviour. Field notes were taken to describe behaviours linked to resilience using the PERIK model described below. These were taken at the time of the observation, and then written in narrative form a short time after the observations. Analysis involved thematically analysing the field-note narratives according to occurrence of behaviours that could be subsumed under the PERIK model. Observation sheets were completed about each child following each session of the programme by Camphill staff, and these have been accessed by the researcher who analysed these again according to the PERIK model. The voice of the children about the programme was heard during these observations, as the researcher took the opportunity to ask at the end of the sessions what the children had enjoyed and what they had not enjoyed, in a natural conversation during the walk

from the woodland back to the minibus, and these conversations were recorded in field notes.

A focus group was held with the staff of Camphill by the researcher to discuss the underpinning resilience theory behind the programme, motivations for running the programme and to discuss impressions of the children's progress at the end of the programme and how they could tell that there was resilience developing. This was tape recorded, transcribed and thematically analysed.

In the context of an ethnographic study, where the researcher is the instrument, the use of a reflexive diary was an important tool to assist with the synthesis of data and to check for researcher bias; this diary was shared with a critical friend to assist with data analysis. The analysis of the different datasets was managed by transcribed discussion within the research team according to the PERIK model, considering each individual child's pre-interview and post-interview baseline assessments; observation sheets from Camphill staff; the researcher's observation field notes; and the impressions of staff who had been running the programme. There was a considerable wealth of data that we chose to integrate through adherence to interpretation using the PERIK model.

PERIK: an empirically based observation scale for practitioners

Mayr and Ulich (2009) developed an instrument called PERIK for observing and assessing the well-being of children in early childhood centres. This is a model that seeks to avoid the deficit perspective and to favour competence and positive development. We have adopted this model as the background for discussing our own observations in this study and this formed the basis of field notes concerning the children's behaviour. The dimensions of PERIK include the following:

- Making contact/social performance.
- Self-control/thoughtfulness.
- Self-assertiveness.
- Emotional stability/coping with stress.
- Task orientation.
- Pleasure in exploring.

The researcher chose PERIK for its positive orientation and interpretability for observation. It may be argued, however, that it oversimplifies resilience and focuses too much on cognition rather than behaviour. The researcher felt it was translatable into visible actions on the part of the child, and this indeed proved to be the case. For example, self-control and thoughtfulness was apparent in a child saying 'your turn' when faced with a desirable activity that others wanted to do too. It was selected also for its simplicity and suitability for the child. Other models (e.g., Grotberg, 1999) would have relied too much on interaction with the child rather than observation and were relevant for adults not early years children.

The Nature Nurture programme

The Nature Nurture sessions that are the subject of this paper began with greeting the children from the bus. Such a simple act already affirmed for the child that he/she was valued. The children went to the kindergarten building to change from their own coats and shoes into waterproof suits or snowsuits and wellingtons. The intention was that the children felt snug and protected by these clothes and knew that there was no restriction to their play because they could get as wet or as dirty as they liked. Putting on the suits was done with a deeply caring attitude; the nurturing had already begun. Adults took their time, supported the child's independence but also engaged in playful responsiveness, noticing when the child needed care even when they did not need help. Social support has been identified as one of the best predictors of psychological resilience (Blum, 1998).

Transitions, such as moving between locations or activity, were bridged by song. Ritual and rhythm are important dimensions of the nurturing approach; for anxious children, change can be a source of fear and insecurity. Having the same song each week indicated a particular transition, provided a warning, a familiar and playful association to hold on to, and gave rhythm that created security. The Nature Nurture songs formed familiar landmarks that were consistent and reliable in contrast to the children's frequently chaotic lives. There were getting-ready songs, following and calling-together songs, music to flag up snack time, a song to mark the beginning of snack time, a song for getting ready to go home and, finally, a 'goodbye' song with a promise of return. Brymer and Gray (2009), discussing extreme sports for adults, refer to the metaphor of dance to describe the dynamic, rhythmical, harmonious and fluid interplay between the participant and nature. Nature Nurture seeks to provide this rhythm in a consistent framework for the children to provide security. Yes, the adults framed the play for the children, but free play is permitted within this frame so that the children can explore boundaries and capabilities.

Once the children were ready to leave, they set off for the woods. It was a short walk from the kindergarten to the woods but it was an opportunity for the children to take small, willow baskets and collect 'treasures' as they talked and walked with an interested and engaged adult. Neill and Dias (2007) in discussing resilience in adventure education programmes hypothesised and demonstrated that perceived social support is positively related to psychological resilience, through unconditional positive regard. This was the time when the children were observed to relax, when language was developed and when the awe and wonder of the child began to grow through adult modelling. The children began to engage in an active way, transforming passive hearing and seeing observed at the beginning of the session into listening and looking. The greenness of nature appeared to soothe the children's stress, helped them breathe deeply and the outdoor space stimulated social interaction. Brymer and Gray (2009) once again in discussing adults refer to the fact that, by experientially realising we are part of nature, we 'open ourselves to lasting positive life enhancements' and furthermore in the context of challenge the 'natural world and humanity may be experienced as one' (p. 149).

Once in the woods the adventurous aspect of the session began. The woods have 'stations' along the way that, through the use of natural resources, stimulated and challenged physical activity and sensory processing. Tree stumps to climb on and jump across, a hill that is exhilarating to run down, a hidden area within the bushes where there is a secret mirror and a mysterious pile of stones, an area for outside musical instruments, a little hammock that waits invitingly, planks of wood, logs cut ready to play with and even an outdoor chalkboard can be found if searched for. Children were observed to test themselves and learn to cooperate and collaborate, to problem-solve and to find creative solutions through having the freedom to play together.

The journey to the wood was an adventure. Once in the centre there was opportunity to be involved in a structured activity, a craft project. Adults modelled the activity and then introduced the children to the activity in small, achievable steps. New skills were taught through scaffolding, effort was celebrated and the children were given achievable challenges that appeared to boost self-esteem and independence.

Snack time came towards the end of each session, after all the busy activity. An important part of nurturing is eating together. Many of the children had eating difficulties related to their anxieties, but food tastes especially good, we suggest, in the outdoors and sitting together in a circle under the trees was a very warm, secure social event. After snack time, they played 'treasure bag' together. The children took it in turns to feel inside the treasure bag and find a wooden animal. The children waited with anticipation as each member of the group had a turn and then they all joined in with the song or action rhyme that was associated with that animal.

Once snack time and treasure bag were finished and the snack area was tidied up, they all set off back through the woods to the kindergarten where the children got changed, ready to go home. They took hands and made a circle for the goodbye song, promising to see each other soon. We accompanied the children to the bus and waved goodbye. The 'goodbyes' and waves are just as important as the greetings when they arrive; helping the children to feel valued and loved.

We propose that taking a few hours of nurturing every week and placing it in a peaceful natural environment offers challenge yet security, stimulation yet restful and restorative opportunity, and the child is motivated to play. In these environments even the saddest, most anxious child in our cohort, we have found, could discover joy.

Findings

Our findings are presented in three case studies of children observed in the programme. These case studies are drawn from observations at the three Nature Nurture sessions attended by the researcher and scrutiny of the files on each child prepared as a result of the observations of the children by the team running the programme. These have been selected as they were typical and representative of the programme's impact on children. Presenting case studies allows us to give rich understanding of the situation, but case studies are not unproblematic in that they can emphasise uniqueness. Case studies are valuable where learning can be transferred to other

situations (Newby, 2010), and in this case we seek to present discussion of children's experiences that were typical and characteristic of the programme.

Ramesh

Ramesh² was a four-year-old child whose baseline assessment score indicated problems across a wide spectrum, including concentration, listening confidence, social skills with peers and adults, perseverance and behaviour—scoring one for each of these on the scale of one to six. He was reported to be restless, disruptive and did not communicate well. He did not respond to his name, talked only to himself and there had been concern about his hearing.

At first on the Nature Nurture programme he was observed as liking running and jumping with joy at the freedom it produced but not recognising safe boundaries, such as running off into the distance. He disliked messy play and did not respond to social contact. He did not respond to verbal cues and chose not to pass items to other children during snack time.

It was discovered during the course of the programme that his name was not Ramesh and he had been given a new anglicised name by his parents, which would be easier, it was thought, for people to understand. This explained the lack of response to his name. Over the course of the programme speech improved, with three-word phrases being expressed; he learnt to use some language in English that helped him to engage with others. Seeing a mirror, he wanted to be lifted up to see in it and used the phrase 'my turn'. At the end of three weeks he was holding onto the play wagon with other children and became part of a group with three other boys. He had needed the freedom of the natural environment, we observed, to explore rules and social norms of turn-taking on the hammock swing and delaying gratification at snack time.

Ramesh was hyperactive but a bright child with an enormous amount of potential who needed assistance with his language. We saw improvements in social communication with other children and adults and in emotional stability as evidenced by preparedness to wait his turn; in control and thoughtfulness using the term 'your turn'; and pleasure in exploring the environment evidenced by the energy with which he approached the physical challenges, such as walking on slippery planks. Confidence to face up to new and challenging situations is a condition that, we suggest, encourages resilience (Craig, 2007). Ramesh would be a difficult child to manage in a classroom, we suggest, but the context of the Nature Nurture programme provided a safe environment in which learning linked to resilience could take place.

Diane

In her baseline assessment, Diane was described as having poor concentration and did not appear willing to face challenges. There was concern about her listening skills, her social skills with peers and adults, her stamina and her perseverance. Diane was

described as an outgoing girl who was restless and could be aggressive at times. She was also described as being easily upset and distractible.

From the outset Diane seemed enthusiastic but could get over-excited. She sought and initiated interactions with peers and adults. Maintaining friendships was a challenge for her at times, as she could be very competitive with the activities. Through giving Diane opportunities to practise her positive qualities and giving her positive feedback when she showed concern and kindness, Diane gradually learned better self-control and empathy. Resilient children are more responsive than non-resilient children and social empathy is absent in older children with drug, alcohol and crime issues (Craig, 2007). As the weeks went by, Diane gradually learnt to respect and care for living creatures and the natural environment of the woods. She appreciated the opportunity to build on what she had done the previous week and liked to return to activities to refine her skills or develop her understanding. She needed opportunities to share her learning with others and for them to acknowledge her effort. She responded well to this kind of encouragement, and when this was consistent she became more motivated to persevere.

Diane showed a clear development in her focus and perseverance. Although she was very active, she showed an increasing ability to control herself and direct her energies towards constructive activity. The experience of being outdoors in a natural environment appeared to stimulate her problem-solving skills. We did not receive a form from Diane's parents.

Andrew

Andrew's baseline assessment indicated that he had problems with concentration, listening, behaviour and perseverance. His social skills were described as poor and he had low self-esteem and confidence. His communication skills with peers and adults were described as weak. He did not cope well with change and was often unwilling to accept challenges. He was described as having poor stamina. Staff at the nursery said that Andrew was often sad, tearful and easily upset.

Initially Andrew engaged in mainly solitary play. The other children, however, appeared very drawn to him and liked to watch or imitate what he was doing. He provided a running commentary of his thoughts as he played and, because of this, adults and children were able to accompany him in his imaginative play. Gradually he started to include others in his play, and by week four was engaging in collaborative play. Andrew was good at communication but not at social communication. These social skills developed as the weeks progressed, as evidenced by engaging peers in his imaginative play.

Andrew displayed strong imaginative skills from the beginning. He could transform any object he found in the woods into props for his imaginative play. His imaginative world was often large and expansive and he imagined journeys across big landscapes. The outdoor space provided perfect opportunities and triggers for his play.

Andrew's mother returned a questionnaire stating that she had seen small positive changes in his listening, behaviour, sleep, fitness levels and ability to cope with

change. She noted larger changes in his finer movement and coordination, his confidence and his ability to play positively with others. Andrew's mother attended one of the sessions and was impressed with the balance between structure and freedom the session allowed him and the other children.

Discussion

This paper is founded on the beliefs that nurturing and the outdoor dimension promote resilience. This belief is fundamental to the Camphill educational philosophy but was not a fundamental belief for the researcher, who observed the relationship in the research between nurturing behaviours and the behaviour of the children and was convinced by it. Resilience is a complex matter, especially in early years. We have based our case studies on the Mayr and Ulich (2009) model of dimensions mentioned earlier, which draws on critical developmental personality factors of resilient children (Mayr & Ulich, 2003). That children from homes where there is alcohol and drug misuse or domestic abuse need resilience is an assumption but is well grounded in common-sense. The changes in the children may be argued by the sceptic to be attributable to natural growth and development over time. We would dispute this strongly. The children came from very challenging backgrounds. One child had never walked up a small hill before, as he had spent his time indoors in a room. The child chose to run up and down the hill joyously. Some of the children came from a home and nursery context where they were perceived to be just difficult and few positive attributes were seen. Some children had little experience of play. These children were seen to engage in collaborative and imaginative play in the outdoors woodland environment. The children themselves referred to the enjoyment they gained from the sessions—not wanting to leave and sharing their woodland discoveries on the minibus, chatting freely.

Of the six dimensions of the PERIK model for observing and assessing the well-being of children, we observed all of them in our case studies for each child described here—with the datasets showing a strong relationship between the PERIK model and the children's behaviour. All of the other children in the programme also were observed to be growing on a number of dimensions of the PERIK model. We need, however, to make the link from well-being to resilience. The relationship between outdoor play with slippery logs, risk-taking behaviour walking on those logs and resilience is an assumption that was supported positively by our evidence from post-activity assessments. The woodland area was a safe environment but with challenges in it such as slippery logs to walk on the ground, a hammock suspended low down in the trees to swing in and ropes to climb. The children were able and encouraged to push boundaries of behaviour and to take small risks with a positive outcome in the form of affirmation and praise. This contributed to the Mayr and Ulich (2003) resilient personality factors of: ability to elicit positive attention; autonomy and independence; proactive approaches to problem-solving; pleasure in novel experiences, curiosity and exploratory drives; optimism, vitality and energy; having hobbies and interests; and ability to recover after distressful experiences.

The nurturing and positive approach to the programme contributes to the development of resilient personality factors of easy temperament and friendliness, positive self-concept and self-esteem; persistence and concentration; empathy and pro-social orientation; positive social relationships; and being calm and relaxed. The social dimension of the programme with a high two-to-one ratio of staff to children and the company of peers in modelled behaviours contributes to easy temperament and friendliness, ability to elicit positive attention from adults and peers, control of affect, and adequate expression of feelings and demands. The group size of 10 is optimal in the experience of the Nature Nurture staff. The balance between boys and girls does not affect the pre-school Nature Nurture groups but it is reported to make a difference to the primary age groups regarding the mood, type of play and interactions. The outdoor dimension is considered very important to the programme as it provided an open environment for safe, collaborative, imaginative and challenging play. Rhian, another child whose mother had mental health problems, pushed a long stem of grass to the ground; it was 'lying down like Mummy'. She was delighted when it sprang back up. She then wanted to know whether trees would lie down, exploring the permanence and predictability of things in her environment.

A number of threads have been important to this paper and to the programme—these being conceptions of resilience, impact of wilderness, nurture, risk-taking and open play. The research itself had threads of evidence linked to observations, baseline assessments, case notes on the children, staff focus groups and informal chatter with the children. Weaving these threads of complexity together, it is our contention that Nature Nurture programmes like the programme of outdoor play at Camphill can contribute to the development of resilience in early years children from challenging backgrounds. The features of the programme that contribute to this resilience most strongly are those of nature and nurture. The external environment was important in providing challenge to the children so they could test their own boundaries and engage in imaginative, creative and slightly risky play in a safe environment. Underpinning this was the importance of nurture, which created this safety through a consistent attention to the well-being of each child through care, affirmation and praise in engagement with play in the outdoor learning environment. The PERIK model of well-being was progressively met over the course of the 10-week block observed. The interrelationship of the nature and nurture dimensions is considered important to resilience where adventurous play is supported and affirmed, allowing children to develop a sense of well-being, self-efficacy and safety.

Craig (2007) cites Reivich's seven learnable skills of resilience that overlap with the PERIK model. These were intended for older children but apply to the Nature Nurture programme to a greater or lesser extent. These are Emotion Awareness and Regulation—the ability to control feelings—and the case studies saw this occurring with each of the children. Impulse control was observed with the examples of children saying 'your turn'. Empathy was apparent through peer interaction as time progressed, particularly for Andrew. Self-efficacy or the ability to solve problems was apparent with the children's play with the hammock to learn to swing each other in it. Reaching out is about taking appropriate risk, and each of the children chose

eventually to walk on slippery logs. Less apparent and arguably less likely for this group of children of this age and background in the Reivich model were optimism and causal analysis, where causal analysis was about looking at problems from many perspectives.

Finally, it is important to assert that, whilst development in resilience was apparent over the 10-week programme, the most traumatised or neglected children, as reported by the organisers, clearly need longer than this to overcome prolonged experience of neglect or repeated trauma.

Notes

1. Retrieved December 11, 2012, from www.pgmedia.co/o/open-play
2. Not his real name.

Author biographies

Karen McArdle is Director of Research and Knowledge Exchange at the University of Aberdeen. She has research interests in resilience of both adults and children. Her professional background is in Community Learning and Development and she has a particular interest in rural and remote areas and lifestyles, well-being and opportunities in these areas.

Terri Harrison has worked as a teacher and part of the management team of Camphill School, Aberdeen for 28 years. Together with Daniel Harrison she developed the Nature Nurture project and is now Project Co-ordinator. Nature Nurture became a charity in 2010. She and Daniel currently run programmes for children from 16 months to 13 years and are developing a Postgraduate Certificate in Nature Nurture. Terri's research interests include the long-term benefits of nature, nurture and play on the sustained resilience of individuals. She is also researching the impact of neglect and trauma on child development.

Daniel Harrison together with Terri Harrison developed the Nature Nurture project. Nature Nurture became a charity in 2010. He and Terri currently run programmes for children from 16 months to 13 years and are developing a Postgraduate Certificate in Nature Nurture.

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