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## **‘Nature Calms Him and it’s Almost Like a Friend he Doesn’t Have to Impress’. The Effects of an Outdoor Nature Classroom on Children’s Wellbeing: A Parent’s Perspective**

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*Increasing evidence has shown the benefits of an outdoor learning environment on children’s wellbeing and development, although there is limited research available from a parent’s perspective or from Aotearoa New Zealand. This honours dissertation study explored the effects of an outdoor-nature classroom on children’s wellbeing from the perspectives of their parents. Data were collected through semi-structured interviews and analysed thematically. Themes highlighted the effects of an outdoor-nature classroom on children’s wellbeing. Parents highlighted their children’s positive experiences that were impacted by nature-play. The study concludes with recommendations to enhance outdoor learning that is widely accessible to the community, to provide holistic learning opportunities for children.*

**Keywords:** outdoor play, children’s well-being, nature play, outdoor classroom

Free play for young children and adolescents is a multidimensional concept focusing on self-directed play. However, the key criteria that govern free play are freedom of choice, engaging in activities without worrying about the outcomes, and personal enjoyment (Hughes, 2003). The benefits of free play are developments in physical, emotional, cognitive, and social wellbeing or skills (Wells, 2000). Faber Taylor and Kuo (2011) focused on children with attention deficit hyperactivity disorder (ADHD) and noted milder symptom severity in children who regularly engaged in nature-play. Nature-play is initiated and directed by children, is conducted in an open, outdoor space (parks), and involves multitudinous nature activities (Erickson & Ernst, 2011).

The theoretical framework for these studies, was based on the theories of ecopsychology, developmental psychology and evolutionary biology. In ecopsychology, Kaplan’s attention restoration theory, proposes that exploration of nature reduces daily stressors, and provides time and opportunity for individuals to reflect on issues they are facing (Ohly et al., 2016). In developmental psychology, Vygotsky’s sociocultural theory, states that children’s social interactions in nature-play (with multicultural individuals and the surrounding environment) may facilitate skill-learning and development. Lastly, in evolution and biology, Wilson’s biophilia hypothesis, explains the importance of the human-nature connection for cognitive development, physical wellbeing, and emotional/mental wellbeing (Dowdell et al., 2011).

The present study focused on a nature-based programme in Aotearoa New Zealand (NZ) and how the programme may benefit children’s wellbeing. Wellbeing refers to the holistic state of an individual’s livelihood; the state of physical, emotional, environmental, spiritual, educational and social relationship development (Crisp, 2001). Cosgriff (2016) examined outdoor education in Aotearoa NZ and noted the importance of making use of local places. The research question examined in the present study was, ‘What are the effects of an outdoor-nature classroom on children’s wellbeing, from the perspective of their parents?’

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## Literature Review

### Connection of Wellbeing and Nature

Howell et al. (2011) examined the connections between nature, wellbeing, and mindfulness, which highlighted a significant association between psychological wellbeing, social wellbeing, and nature immersion. Within the lens of Forest Schools, self-determination theory describes that wellbeing in nature-classrooms is fostered through fulfilling competency, autonomy, and relatedness/connection needs (Barrable & Arvanitis, 2019). Nature impacts concentration, encourages exploration, free-play, using natural resources to solve problems, increased cooperative play and decreased depression, stress and anxiety (Chawla, 2015). Largo-Wight et al. (2018) investigated a nature-classroom intervention for elementary children, from language, arts, and writing classes. The outdoor classroom identified fewer behavioural issues, better focus and attention to study tasks, and moderate increases in wellbeing.

### Physical Wellbeing and Nature-Play

Physical wellbeing refers to performing physical activities, safety management, developing resilience in the physical body and reduced experiences of fatigue (Dodge et al., 2012). Specifically, developing gross and fine motor skills alongside additional physical skills (Sibley & Etnier, 2003). Fjortoft (2004) investigated the effects of nature-play on children's motor development and concluded a significant increase in motor activity (coordination, balance). Dymant and Bell (2008) identified that 'green sites'<sup>1</sup> in schools inspired light-moderate physical activity, and reduced the risk for physical illnesses.

### Emotional Wellbeing and Nature-Play

Emotional wellbeing refers to an individuals' ability to cope with life stressors, contribute to their communities and engage in positive relationships (Gorman, 2010). Specifically, it is increased positive emotions, developing the ability to cope with adversity, self-acceptance, self-esteem, increased independence, and autonomy (Uhlmann et al., 2018). Korpela et al. (2014) identified a strong association between nature-based recreational play, emotional wellbeing and increased positive emotions. McCormick (2017) reviewed improved mental and cognitive wellbeing associated with increased access to nature/green spaces. Specifically, ADHD and depression symptoms moderately improved following nature-play.

### Behavioural Development and Nature-Play

Behaviour development refers to positive behaviour management, learning to communicate and conflict management in relationships (Dankiw et al., 2020). Specifically, it is developing self-confidence, leadership, safety awareness, concentration, active listening, better engagement in tasks and lowered behavioural challenges (Ying et al., 2016). A study which focused on the association between children's ADHD and changes in behaviour in the natural setting; showed increased concentration and creativity in the nature setting, and increased aggression, social isolation, inattention, and hyperactivity in the built setting<sup>2</sup> (van den Berg & Van den Berg, 2011). In addition, Guardino et al. (2019) reported that children with or without special needs displayed less off-task behaviour, less redirections in behaviour and more engagement/focus while in the outdoor-nature classroom. The theoretical framework was based on the constructivist approach theory, which proposes that natural materials and time outdoors promotes learning.

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<sup>1</sup> The term 'green sites' refers to changing the design, use and culture of school playgrounds to promote nature-play and learning experiences (involving natural shelters, trees, rocks, meadows) (Dymant & Bell, 2008).

<sup>2</sup> The term 'built setting' refers to a square and spacious piece of land, in the middle of a neighbourhood, compared with a natural setting, which was a spacious, quiet piece of land, in a wooded area (van den Berg & Van den Berg, 2011).

### **Relationship Development and Nature-Play**

Relationship development refers to promoting connections with others, a sense of belonging within the community, building trust, and managing conflicts. A study based on the social network theory, explored the association between outdoor and free play, increased cooperative play, peer interactions, and social networks (Duque et al., 2016). Based on Vygotsky's sociocultural theory, Pic (2020) investigated conflict management skills among culturally diverse preschool children in an outdoor and free-play setting, and found lower conflicts in the outdoor setting, healthy conflict-resolution, opportunities for social and cognitive development, problem-solving, listening, friendship-building and negotiations.

### **Educational Development and Nature-Play**

Educational development refers to promoting educational teachings, and learning practical skills of communication, writing, reading, listening and problem-solving (Zimmerman, 1995). Bento and Dias (2017) assessed increased learning in the outdoors, connecting with natural elements, learning risk-taking, divergent thinking, problem-solving skills, and creativity. Specifically, outdoor classrooms supported the successful completion of annual literacy and science goals; this was theoretically based on Vygotsky's zone of proximal development, where guidance and encouragement from educators can support children in overcoming educational challenges (Bento & Costa, 2018).

### **Study Rationale**

The present study aimed to assess multiple components of wellbeing (physical, emotional, behavioural, relationships and educational development) in a community nature-based programme. As limited research is available on children's experiences of outdoor spaces, especially in Aotearoa NZ, this study explored children's experiences through their parents' perspectives. In addition, specific to the present study, Nicholson's theory of loose parts was pertinent behind the programme's philosophy (Fjortoft, 2004). For example, building huts with tarpaulin, ropes and tree branches as free play.

## **Method**

### **Study Design**

This study used a qualitative research design. Qualitative interviews were considered the most suitable approach to exploring the research question as these provide an insight into human behaviour, interactions, belief, values and attitudes (Potter & Hepburn, 2005; Queiros et al., 2017). Qualitative research provides a naturalistic setting and increases participants' level of comfort and openness to describe their experiences in detail; thereby facilitating assessment of reoccurring themes in their responses, to make inferences regarding wellbeing and nature-based play (Lord et al., 2009).

### **Measures and Materials**

The measures used in this study were 13 questions that explored changes in wellbeing that parents observed in their children after participating in the Conscious Kids programme. These questions incorporate different types of wellbeing, which are based on Roberts et al.'s (2020) systematic review. The review explored children's connection to nature, developments in physical and emotional wellbeing and positive impacts on behaviour, relationships and skills. Interviews were conducted via Zoom, and interview responses were recorded by the researcher.

### **Procedure and Participants**

Ethical approval was sought and obtained via the relevant Human Ethics Committee. The study advertisement and participation information were emailed to families, and participants were recruited on a first-come-first-served basis (random sampling and voluntary-based). Participants signed a consent form, and completed a 1-hour interview with the researcher. Participants were five parents of children currently engaged in the programme and that had completed at least one school term (10 weeks) of the 1-day programme. This programme is a 7-hour nature-based experience where children develop problem-solving skills and an awareness of the environment. Data were collected over a 7-week period. Upon completion of the interviews, the audio recordings were transcribed for thematic analysis (Clarke & Braun, 2014).

### **Data Analysis**

The approach used for data analysis was thematic analysis, which organises and identifies themes, infers meaning and finds common patterns from people's experiences (Clarke & Braun, 2014). The six phases of thematic analysis are: familiarising with the data and transcripts, generating initial codes, searching for themes, revising or removing potential themes, defining themes, naming these themes and producing a written report. However, there are concerns regarding the accuracy and reliability of coding themes, the researcher/coder's subjectivity, and its impacts on theme and pattern generation (Terry et al., 2017). This study focused on inductive coding (no set codes to begin with and codes were solely generated from the interview data). Similar codes from the interviews were combined, to form a narrative ('story' of the patterns/themes) and excerpts were selected to provide support for the chosen themes.

### **Results**

Participants were anonymised in the order they were interviewed (Participant A, Participant B, Participant C, Participant D and Participant E). The research question answered through the thematic analysis was, 'What are the effects of an outdoor-nature classroom on children's wellbeing from the perspective of their parents?' Following thematic analysis, five themes were created: (1) learning practical skills; (2) learning resilience and coping skills; (3) increasing self-confidence; (4) developing friendships and belonging within a mixed-age group; and (5) increasing connection to nature.

#### **Theme 1: Learning Practical Skills**

The theme explored children learning practical skills from the nature-based classroom (increased gross motor skills, fine motor skills, safety management, hut-building and tree-climbing skills). These skills positively benefitted children's physical wellbeing and educational development.

*They've learned skills about safely using pocketknives, ropes for play and tree climbing. Now, they have a very strong sense of safety. Social science, physical education, dialogue, exposure to books, literacy, lovely practical skills with knives, building, wildlife and they've had a real interest in soil and rocks. (Participant A)*

*[Child] went on kayaks, climbed trees, played football and developed those physical skills. They can develop their fine motor skills, when they're making little natural clay things with their hands, peeling or whittling their sticks. (Participant C)*

#### **Theme 2: Learning Resilience and Coping Skills**

This theme explored children developing resilience and coping skills to overcome challenges, through outdoor, nature play. As a result of learning these skills, children learned to clearly communicate and cope with their emotional needs. These skills positively benefitted children's emotional wellbeing and positive behavioural development.

*The ability to stay outdoors... [Child] didn't like the rain to begin with but now, happy to be outside all day and coping with the wet weather. It's growing the resilience to cope with the physical nature of what they're doing. Emotional resilience is developed when you're outdoors for 7 or 8 hours a day. (Participant E)*

*His emotional wellbeing has gotten stronger. He's learning a lot of emotional language; he will tell you what he's feeling, or when he needs a break. He learned about filling people's cups, so now he will tell you if his cup is full. He can control a little better and takes time for himself. It has helped him become emotionally resilient in terms of other changes in his life. (Participant D)*

### **Theme 3: Increasing Self-Confidence**

The theme explored children's increasing self-confidence as an effect of attending the outdoor-nature classroom. Confidence benefitted children in multiple areas of their lives (persistence to try and willingness to contribute their experiences), and encouraged positive behavioural development.

*It has boosted their confidence, that they can take part in something like this and be okay. Confidence in nature just grows broadly; confidence to push their own boundaries, confidence, and knowledge to listen to their body. They did team work together, having to listen and problem-solve, they grew a lot of confidence within themselves. (Participant E)*

*Being more confidence, more independent. Climbing trees, jumping in a kayak and willing to try. Being less scared to try. [Child's] confidence with hanging out with older kids, not being afraid. The older ones, with the leadership skills. (Participant C)*

### **Theme 4: Developing Friendships and Belonging Within a Mixed-age Group**

The theme explored children developing strong friendships and a greater sense of belonging. They developed meaningful connections, which positively impacted their relationships, social development and emotional wellbeing, while elevating their sense of comfort and security within the programme.

*[Child] experienced the success of having friends and being part of a team. I think it was good for them to have friends within these different age brackets and that probably made them feel good, being friends with the older kids. (Participant C).*

*The space and no age separation mean children are free to figure out who they are alike. They can scaffold those hard conversations when there's problems or conflicts. Being honest, learning about each other and listening, so, their friendships are growing stronger. (Participant E)*

### **Theme 5: Increasing Connection to Nature**

The theme explored children developing an increased connection to nature and nature activities, through outdoor classrooms. Specifically, an interest in natural resources, which creates a positive impact on their emotional wellbeing and educational development (befriending and protecting the nature, recycling).

*Being out in the greenery. He goes into a hollow tree; it's helped with his sensory 'things'. The tree has spider webs, but he loves to sit and climb it. The nature calms him and it's almost*

*like a friend he doesn't have to impress. For mental health and wellbeing, its huge.*  
(Participant D)

*He talks about conservation, recycling, asks where the water goes, how to get water out of a tap, and hates it when he finds rubbish anywhere. The whole sense of loving nature and loving your surrounds. Making friends with the animals because he almost gets to see they have personalities. He talks about birds, like the Pukeko, it's almost like they've made friends. At Churchill Park, he always used to speak about the eels, he'd come home with half the river in his boot.* (Participant D)

## Discussion

The aim of this study was to explore the effects of an outdoor-nature classroom on children's wellbeing and development from their parents' perspectives. Interviewing parents and collaborating with families to deliver nature-play to children was a beneficial approach because there is limited research available in this area (McCormick, 2017). These discussions yielded several important themes: (1) learning practical skills; (2) learning resilience and coping skills; (3) increasing self-confidence; (4) developing friendships and belonging within a mixed-age group; and (5) increasing connection to nature.

Parents highlighted that their children learned practical skills as an effect of the outdoor/nature classroom (Theme 1), and this contributed to their physical wellbeing and educational development. For example, development of gross motor skills, fine motor skills, safety management and increased physical education. This was consistent with Fjortoft's (2004) examination of nature-play that reported increased motor development and physical activity. Specifically, the present study aligns with the dynamic systems theory (Fjortoft, 2004), whereby nature-play enhances motor development and physical wellbeing. Furthermore, children learned practical skills of autonomy, decision-making, risk-taking, social sciences and exposure to books/literacy for educational development. Bento and Dias (2017) identified increased learning and problem-solving skills through nature-play, which supports the present study's findings.

As an effect of nature-play, parents identified the development of resilience and coping skills (Theme 2), which supported children in overcoming challenges and clearly communicating their emotional needs. This was congruent with Korpela et al.'s (2014) findings of a strong association between nature-play and increased positive emotions. Specifically, Shellman and Hill (2017) reported the development of resilience skills from attending an outdoor education programme and learning to communicate through emotional language. The present findings were also supported by Dankiw et al. (2020) who reported increased positive behaviour, improved communication in children and decreased behavioural challenges from attending outdoor-nature classrooms.

Learning self-confidence was a significant effect of the outdoor-nature classroom for children (Theme 3). Self-confidence contributed to positive behavioural development. For example, children became confident to push the boundaries, work together in teams, problem-solve, became independent in their own care and confident to try new things. These findings were consistent with previous studies (Duque et al., 2016; Pic, 2020) that explored nature-play or free-play and its positive impacts on growing confidence, relationship-building and problem-solving skills. Specifically, Vygotsky's sociocultural theory aligns with the present findings, as children's confidence was developed within social interactions.

Furthermore, in the present study, parents discussed the development of friendships and a sense of belonging, especially within a mixed-age group (Theme 4). Specifically, children developed

meaningful interactions and comfort within the programme, which contributed to their relationship development and emotional wellbeing. The present study and that by Peters et al. (2016) collectively report meaningful connections to the outdoor space, a greater sense of belonging and improved social interactions. This study also aligned with Bronfenbrenner's biological systems theory, which posits that children's physical environments develop their social interactions (Pic, 2020). Interestingly, several parents shared that their children learned to interact with mixed-aged children (learned to cooperate, manage conflicts, and scaffold honest conversations with children older or younger than themselves). These findings were consistent with those reported by Peters et al. (2016) and Pic (2020) of improved conflict-management skills in outdoor settings for children.

Finally, parents highlighted their children's increased connection to nature (Theme 5) as an effect of attending outdoor, nature classrooms. In the present study, children developed interests in natural resources, which contributed to their emotional wellbeing and educational development. For example, children befriended and learned to protect nature, learned recycling and befriended animals (eels, birds), which helped calm their heightened sensory needs. This was congruent with Scannell and Gilford's three-dimensional model of place attachment; where the physical space or area of the nature-play is connected to emotional wellbeing. In addition, attention restoration theory (ART) is also aligned with the present study's findings. Stevenson et al., (2018) reported that ART associates nature experiences with lower mental stress, which implies that nature-play promotes improvements in emotional wellbeing. Together, Harvey et al. (2020) and the present study suggest; children's inherent need to connect with nature and forms of life for emotional wellbeing (biophilia hypothesis). The present study's findings contribute a novel perspective of 'befriending the nature and animals' for improvements in emotional wellbeing. Consistent with Sharma-Brymer and Bland (2016), parents discussed that redesigning nature sites in schools reduced physical illnesses, increased self-acceptance and positive emotions. There is a strong literature background for the identified themes of promoting nature-play in school settings.

### **Limitations and Future Research**

A limitation of this study was that although the outdoor, nature programme is open to the wider Auckland community, the experiences and themes discussed were not accessible across culturally- or age-diverse populations; because the five participants were New Zealand European females aged between 36–45 years, and high functioning adults in society. A possible limitation is that participants might have misinterpreted the interview questions, which would impact the identified themes capturing the different types of wellbeing (Doody & Noonan, 2013). Misinterpretations may be likely because of the nature of the Zoom interviews. For further research, collaborative interviews with children and their families or children independently may be beneficial to explore multiple perspectives of outdoor, nature classrooms and wellbeing. Ideally, further research could assess changes in children's wellbeing and types of development in the long-term within the programme.

### **Conclusion**

This study examined the effect of outdoor, nature classrooms on children's wellbeing and development through their parents' perspectives. The research builds on theoretical frameworks of the connection between nature and wellbeing (physical, emotional, behaviour, relationships and education). The effects of the programme included themes of learning practical skills, learning resilience and coping skills, increasing self-confidence, developing friendships, belonging within a mixed-aged group and increasing connection to nature. Exploring the effects of outdoor free-play and nature classrooms on different types of wellbeing, promotes widely accessible nature play programmes for families and promotes change in the educational curriculum to incorporate nature programmes.

## Conflicts of Interest

The authors have no relevant conflicts or competing interests.

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