

# It's good to go outside: A review of Nature-Based Child-Centered Play Therapy

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This paper provides an overview of the evidence-base for Child-Centered Play Therapy (CCPT) and nature-based therapies with children. In particular, it explores the theoretical roots of Nature-Based Child-Centered Play Therapy (NBCCPT), examines the current literature on its treatment efficacy, followed by a critical analysis of two contemporary studies of this approach. This paper concludes by reviewing some of the limitations of research in the field, and discusses possible future directions for research, ethical considerations, and implications for practice.

## It's good to go outside: A review of Nature-Based Child-Centered Play Therapy

Identifying effective therapeutic supports for children who suffer from emotional and behavioural problems is a growing concern in Australia. Play therapy is an established approach for working with young children with a growing evidence-base for its treatment efficacy (e.g., Baggerly, Ray, & Bratton, 2010; Blanco & Ray, 2011; Lin & Bratton, 2015; Ray, Armstrong, Balkin, & Jayne, 2015). Play therapy allows children to express themselves non-verbally, can be modified to suit the developmental stages, and can be conducted individually or in groups. Play is a natural activity providing children with opportunities to learn about themselves and their relationships in the world around them.

Research into the benefits of time in nature for children with behavioural and emotional concerns has emerged as an area of interest (Berger, 2006, 2008; Davis & Atkins, 2004; Etherington, 2012; Maller & Townsend, 2006; Peterson & Boswell, 2015; Stigsdotter et al., 2010). The use of nature in counselling has been influenced by ideas from ecology, environmental studies and environmental psychology (Greenleaf, Bryant & Pollack, 2014; Jordon, 2018; McLeod, 2013). It is widely acknowledged that outdoor play (compared to indoor play) provides unique opportunities and positive experiences, and is considered an essential component of childhood development (Louv, 2010; Wilson, 2008). However, with the rising availability of technology, young children are engaging in less and less

free outdoor play (Slutsky & DeShetler, 2017). Therefore, some children may welcome the opportunity to spend time outside during a counselling session. According to Gardner's theory of multiple intelligences (Gardner 2006, 2011), some children will have an innate affiliation with nature and a greater appreciation of their environmental surroundings (Wilson, 2008); resulting in a naturalist intelligence which should be embraced in a holistic approach for counselling children (Booth & O'Brien, 2008). Recently, an innovative approach to therapeutically working with young children in an outdoor setting has emerged: nature-based child-centered play therapy (NBCCPT) (Swank, Cheung, Prikhidko, & Su, 2017; Swank & Shin, 2015).

The purpose of this paper is to explore the theoretical roots of NBCCPT and examine the current literature on its treatment efficacy. An overview of the evidence-base for child-centered play therapy (CCPT) and nature-based therapies with children are presented, followed by a critical analysis of two contemporary studies which utilised NBCCPT. This paper concludes by looking at some of the limitations of research in the field thus far, discusses possible future directions for research, ethical considerations, and implications for practice.

## Child-Centered Play Therapy and evidence for its effectiveness

Psychoanalytical therapists such as Anna Freud (1928) and Melanie Klein (1932) were pioneers in developing play theories and techniques for working with children in therapy. Margaret Lowenfeld (1950/2010) went on to develop ground-breaking therapeutic play techniques, for the first-time incorporating possibilities for non-verbal spontaneous play with miniatures and sand trays. Virginia Axline's (1947) use of play to facilitate nondirective therapeutic principles in her work with children heralded the next, and perhaps most significant, development in the field of play therapy (Bratton, Ray, Rhine, & Jones, 2005; Kranz & Lund, 1993). Axline established

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eight principles of nondirective play therapy emphasising the importance of a practitioner being able to follow the child's lead and respect the child's ability to solve his or her problems; much of current play therapy practice still encompasses these basic principles (Play Therapy United Kingdom, 2018). Contemporary scholars include Cochran, Nordling, and Cochran (2010), Louise Guerney (2001), and Garry Landreth (2012), who have all contributed significantly to the growing body of evidence in support of what is now commonly referred to as child-centered play therapy (CCPT).

Although many approaches to play therapy have emerged over time, CCPT appears to be the most frequently used approach in Australia (Play Therapy Australia, 2018), it has gained a strong international reputation (West, 1996; Wilson, Kendrick, & Ryan, 1992), and is also the most common approach used in the United States (Lambert et al., 2005). The basic tenets and structure of CCPT have been well documented in several works (i.e. Axline, 1989; Landreth, 2012; Ray, 2011; VanFleet, Sywulak, & Sniscak, 2010). In addition, there is extensive evidence supporting the efficacy of CCPT interventions for children with emotional, behavioural, and relational concerns (Baggerly et al., 2010; Blanco & Ray, 2011; Lin & Bratton, 2015; Ray, Armstrong, Balkin, & Jayne, 2015).

A number of randomised controlled trials (RCTs) demonstrated that children using CCPT showed statistically significant decreases in disruptive behaviours (Bratton et al., 2013; Garza & Bratton, 2005), social problems (Fall, Nevelski, & Welch, 2002), teacher/child relationship stress (Ray, Henson, Schottelkorb, Brown, & Muro, 2008; Ray, Schottelkorb, & Tsai, 2007), and increases in academic progress (Blanco, Muro, Holliman, Stickley, & Carter, 2015; Blanco & Ray, 2011) and language acquisition (Danger & Landreth, 2005). Controlled trials have also been utilised to test the efficacy of CCPT interventions for children with more serious mental health concerns such as anxiety (Ray et al., 2007; Stulmaker & Ray, 2015), depression (Tyndall-Lind, Landreth, & Giordano, 2001), and trauma (Schottelkorb, Doumas & Garcia, 2012; Shen, 2002).

Historically, RCTs have been regarded as the most reliable source of evidence in respect of therapy outcome (McLeod, 2015). However, the large volume of play therapy research that has been conducted in the past 80 years also includes many examples of case reports, qualitative, and observational studies in support of CCPT. Reviewing the strengths and limitations of the various research methodologies is beyond the scope of this article, however interested readers can refer to the following meta-analyses for more information regarding outcome effects of the various types of play therapy research (Bratton et al., 2005; LeBlanc & Ritchie, 2001; Lin & Bratton, 2015; Ray et al., 2015).

### **Nature-based therapies for children**

Nature provides calming and restorative impacts which are beneficial for physical and emotional well-being (Bermen, Jonides & Kaplan, 2008; Kaplan, 1995). When integrated into counselling, time in nature provides unique opportunities for healing (Greenleaf, Bryant & Pollack, 2014; Revell & McLeod, 2017). In terms of practical applications, one of the earliest approaches to use the outdoor environment for therapeutic

purposes was adventure therapy (McLeod, 2013). Adventure therapy emphasises the use of physical and psychological challenge to expose people to new experiences that invite them to view themselves in a new light (Ray, 2005; Richards & Smith, 2003). From this, new behaviours and strengths can emerge, all within the context of a challenging, yet supportive environment. Meta-analysis of participant outcomes by Bowen and Neill (2013) found that adventure therapy results in positive changes for a range of behavioural and mental health problems, particularly in older children. A recent outcome study into the sustained benefits of adventure therapy also showed improvements were retained over time (Bowen, Neill & Crisp, 2016). In addition, qualitative studies in adventure therapy, show time in nature can reduce stress, increase self-efficacy, and improve the subjective well-being of participants (Mutz & Müller, 2016).

Today, there exists a range of strategies for conducting counselling with children in outdoor settings. There is a growing body of evidence suggesting that outdoor play and time spent in nature for children help to increase creativity, social engagements, cognitive development, and emotional regulation (Gill, 2014; Kemple, Oh, Kenney & Smith-Bonahue, 2016; Townsend & Weerasuryia, 2010). Increasing student involvement in outdoor learning activities also correlates with improved academic performance (Quibell, Charlton, & Law, 2017). Qualitative studies show children's play becomes more active, engaged, and imaginative in more naturalised settings (Morrissey, Scott & Rahimi, 2017), leading to improvements in problem-solving, focus, creativity, and self-confidence (Brussoni, Ishikawa, Brunelle & Herrington, 2017; Maynard, Waters & Clement 2013). Exposure to nature during preschool has also been correlated with improved cognitive and self-regulatory functioning later in school (Ulset, Vitaro, Brendgen, Bekkhus & Borge, 2017). Based on the longitudinal data they obtained, these researchers also claimed that time in nature may be particularly important for children with inattention hyperactivity symptoms; which supports findings from previous research (i.e. Faber-Taylor & Kuo, 2011). Furthermore, in an investigation into patterns of intelligence in children with attention deficit hyperactivity disorder (ADHD), Schirduan and Case (2004) found that over half the students identified the naturalistic and spatial intelligences as their predominant or preferred intelligences.

Combining expressive art-based theories with an ecological philosophy also has potential for helping children at risk. A fully developed framework for the use of nature in therapy is the nature therapy approach created by Israeli therapist Ronen Berger (Berger 2004, 2005; Berger & McLeod, 2006). This manualised form of nature therapy uses healing metaphors, rituals, and drama techniques, and has supported thousands of young children with their resilience and recovery from trauma and loss due to war (Berger, 2016; Berger & Lahad, 2010).

There are several other creative approaches to using nature in therapies that have been developed in recent years. For example, Stewart and Echterling (2017) present a client-led play therapy case example where splashing water was used as a metaphor symbolising power and resilience which provided a breakthrough in the trauma recovery of a young child following a natural disaster. Further phenomenological case study research

has shown how outdoor drama therapy added value to therapy sessions with children by enhancing the clients' connection back to self and heightening experiences of metaphor and symbolism (Bassingthwaite, 2017). Similarly, the experience of making art in an outdoor studio following a natural disaster was believed to assist children in their recovery by helping them regain control and reconnect with their place of home (Linton, 2017).

### **Nature-Based Child-Centered Counselling: A contemporary counselling approach**

NBCCPT is a contemporary counselling approach that expands upon CCPT by emphasising the child's relationship with nature in addition to the therapeutic relationship with their counsellor. NBCCPT sessions take place within the natural environment and utilise natural materials instead of human-made toys. Swank and Shin (2015) were the first to introduce the idea of NBCCPT in a paper outlining the characteristics of this innovative therapeutic modality. The authors also presented three case reports providing initial observational evidence in support of using NBCCPT with children with behavioural problems. So far, there have been two published studies utilising NBCCPT with children. These studies and their outcomes are described in more detail below, and a review of the limitations, recommendations for future research, and implications for practice are included in the following sections.

Swank, Shin, Cabrita, Cheung, and Rivers (2015) implemented an A-B-A single-case research design to examine treatment effects for a NBCCPT intervention with four early elementary school children. The intervention was a seven-week program consisting of biweekly 30-minute individual NBCCPT sessions. Results from the study showed that two participants exhibited positive behavioural change during the 7-week intervention and maintained the change during follow-up, as measured by classroom observations. It is worth noting that the two participants who showed behavioural improvements during the intervention both had a formal diagnosis of ADHD prior to beginning the study. While these results are promising, they are not surprising given that previous researchers have found improvements among children with ADHD symptoms both when spending time in nature (Faber-Taylor & Kuo, 2009; Faber-Taylor, Kuo, & Sullivan, 2001) and when participating in traditional CCPT interventions (Ray et al., 2007).

Swank, Cheung, Prikhidko, and Su (2017) also used a single-case design to examine the effectiveness of nature-based, child-centered group play therapy (NBCCGPT) with five early elementary schoolchildren identified as having behavioural concerns. Children were randomly assigned to either a treatment ( $n = 3$ ) or waitlist ( $n = 2$ ) group. The treatment group participated in a six-week intervention that consisted of biweekly 30-minute sessions of NBCCGPT. Between group results indicated the treatment group were 2.03 times more likely to improve on-task behaviours, and 1.86 times more likely to decrease in total problem behaviours across the 6-week period compared to the waitlist group. The study also included a follow-up phase to track the behavioural changes of participants over time. Data from the follow-up phase revealed that children who participated in the NBCCGPT intervention were 2.59 times more likely to maintain

improved on-task behaviours, and .88 times more likely to maintain a decrease in total problems during the three weeks following the intervention.

### **Limitations and recommendations for future research**

Results from preliminary NBCCPT studies provide initial support for using this approach to address behavioural concerns in early primary schoolchildren. Although single-case design methodologies are well suited for counselling practitioners to document their work and provide evidence of the effectiveness of interventions, they are not without their limitations. For example, in both of the NBCCPT studies described above, there was a small sample size and the participant demographics were restricted to lower socioeconomic, African-American children. Consequently, ability to generalise findings to larger populations should not be assumed. Variability in participant data during the baseline phase was also a concern in both studies. When scores in the baseline differ, it becomes difficult to determine whether there is any pattern prior to beginning the intervention (Engel & Schutt, 2005).

Another potential limitation of the studies is that participant selection was largely at the discretion of teachers, who provided the only source of data about the children's behaviour prior to beginning the study. Positively, both studies utilised the Direct Observation Form (DOF; McConaughy & Achenbach, 2009) to measure behaviour before and after treatment. The DOF provides an objective measurement (as opposed to anecdotal reports) with high interrater reliability ranging from .71 to .97 (McConaughy & Achenbach, 2009). Future studies may consider obtaining additional data about potential participants from other sources such as counsellors and parents. In doing so, future researchers could also examine whether gains in behavioural improvements generalise to settings outside the classroom.

Given the improvements noted for the children in the studies with pre-existing ADHD diagnoses, researchers might also like to examine treatment effects with this and other more specific mental health population groups. Because NBCCPT is a new approach to working with children, any inquiries into this therapeutic modality will provide a valuable foundation to further testing of its treatment efficacy. Scholars interested in this area might consider replicating the existing studies, comparing their interventions to other group or play therapy interventions, or helping to further document and manualise the specific procedures involved. With a degree of standardisation of procedures, future researchers can focus on identifying what aspects of NBCCPT are most important to the therapeutic process and which process techniques are most effective at eliciting positive behavioural and emotional changes in children.

### **Ethical considerations, implications for practice, and concluding remarks**

The natural setting presents new opportunities and challenges that counsellors would need to consider when providing a safe, therapeutic environment. Therapy outdoors requires a strong therapeutic alliance, sound knowledge of the location, consideration of appropriate safety measures, and a

high degree of competence on behalf of the therapist, to cope with the unpredictability of being in nature (Berger, 2009; Revell & McLeod, 2016). Other issues raised by commentators include identifying appropriate training and supervision, revisions to discussions of informed consent, maintaining boundaries and protecting client confidentiality in an open counselling atmosphere, considerations for appropriate documentation of outdoor sessions, and how counsellors can best respect diversity and honour their clients' worldviews on nature (Hooley, 2016; Reese, 2016).

Despite its limitations and ethical complexities, NBCCPT provides counsellors with an innovative approach that addresses many of the barriers to offering traditional play therapy such as limited space for an indoor playroom, and problems associated with lack of funding for materials (Ebrahim, Steen, & Paradise, 2012; Swank & Shin, 2015). There is also evidence to suggest that because of the non-traditional approach of NBCCPT, counsellors may have an opportunity to reach children and families who are otherwise reluctant to seek counselling (Swank et al., 2015). However, as with any counselling approach, NBCCPT may not be appropriate for every child. For example, children with obsessive-compulsive tendencies, severe allergies, or those who are in need of visible boundaries may struggle in a natural environment (Swank & Shin, 2015).

It is not known how many counsellors currently incorporate nature-based therapies in practice and to what extent those that do so consider the ethical complexities of the approach (Reese, 2016); this in itself could be an area of future enquiry. Before implementing NBCCPT it is crucial for the counsellor to have experience with the approach and to be comfortable within the natural environment. Although there is initial support for going outside and using NBCCPT with children to address behavioural concerns, the approach is still developing, and a stronger evidence base is needed.

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