



Nature Play & Grow Report

October 2022



“

It was fantastic.
Every aspect was
amazing.

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It was an amazing
program and I wish
we could do it
all again!

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Background

Nature Play & Grow is a collaboration between Nature Play WA, The ORIGINS Project (with Telethon Kids Institute and Joondalup Health Campus) and Minderoo Foundation, with a focus on the health and wellbeing of children.

<https://www.natureplaywa.org.au/>

Nature Play WA is a Western Australian not for profit organisation, in partnership with the Department of Local Government, Sport, and Cultural Industries, with a mission to support children's mental and physical health through unstructured outdoor play and connection to nature.

The ORIGINS Project (ORIGINS) is a longitudinal study following 10,000 pregnant women, their partners, and babies for the first five years of life. ORIGINS is a collaboration between the Telethon Kids Institute and Joondalup Health Campus and is funded from the Paul Ramsay Foundation and the Commonwealth Government through Telethon. By collecting biological samples and data over this time, they are looking to uncover the causes of chronic conditions such as obesity, asthma, allergies, mental health challenges and autism.

<https://originsproject.telethonkids.org.au/>

The Nature Play & Grow early intervention has been designed to encourage a family-based healthy lifestyle. There is strong evidence that time in nature is associated with better child health, including physical activity, eating behaviours, sleep, and all aspects of physical and mental wellbeing.

This program is aimed at promoting connectedness to nature, healthy eating, physical activity, emotional wellbeing, and child development in pre-school aged children. The program provides families with ideas and choices for how they spend time together and encourages families to choose play and interactive experiences outdoors in nature.

This report provides a summary of the pilot program, qualitative and quantitative data collected as part of the program evaluation, and recommendations for future applications and rollout. The report consists of the following sections:

- Overview of the program
- Program content: Outdoor group sessions
- Program content: Online modules for parents
- Pilot trial and goals
- Evaluation data
 - Impact of the program
 - Goals of the program
 - Outdoor group sessions - Feedback
 - Online modules for parents – Feedback
- Limitations
- Facilitator Reflections
- Summary
- Recommendations
- Appendices

Overview of the program

The program consists of two main components:

- Eight 60-minute outdoor group sessions held in parks in the City of Wanneroo and the City of Joondalup. Each session was facilitated by a member of the project team.
- Eight 20-minute online modules for parents delivered via the Thinkific eLearning platform - <https://natureplaywa.thinkific.com/pages/nature-play-grow>. The online modules provide parents with resources and information to increase their knowledge and motivation around the core themes of outdoor play, healthy eating, physical activity, and child development. Parents were encouraged to complete the online learning module prior to attending the corresponding face-to-face session.

Program content: Outdoor group sessions

Each of the eight weekly sessions were designed with three key activities or experiences as a focus. For example, open-ended play, such as sand and mud play; creative experiences, such as making boats and potions from natural elements; food preparation, such as making fruit kebabs, salad pita pockets and damper; and group experiences, such as dramatising a story and going on a scavenger hunt. See Appendix B for a full outline of the program schedule and activities.

The sessions were held in six parks in the City of Joondalup and the City of Wanneroo, specifically selected because of their features such as streams, trees or sand. Two of the parks were revisited due to these features, which also showed families the benefits of revisiting familiar parks for different experiences.

Families were asked to bring a picnic rug and morning tea for their children to enjoy after the one-hour session. In support of sustainable practices, morning tea which did not have too much wrapping or potential rubbish was encouraged. For some of the sessions, families were asked to bring along some of the own resources such as recycled and second-hand materials to use for sand, water and mud play. A video 'Pack for play' was created to show parents examples of these items. The children were encouraged to dress in clothes that can get dirty or wet. Event Safety (risk mitigation) and Wet Weather plans were developed and implemented.

View online learning
modules



Program content: Online modules for parents

Parents were supported with eight 20-minute online learning modules, released weekly, designed to be completed before attending each outdoor group session. These modules included a 10–15 minute podcast covering an aspect of three-year-old growth and development, such as the importance of physical activity, developmental milestones, or the stages of play. Topics also included the benefits of outdoor nature-based activities, play themes, executive function, and hazard versus risk.

Most of the podcasts included a five-minute Q & A style conversation with an expert, including:

- Associate Professor Hayley Christian (Physical activity)
- Professor Desiree Silva (Importance of dirt for a healthy gut)
- Dr Fiona Boylan (Growth mindset)
- Dr Amelia Harray (Healthy and sustainable eating)
- Griffin Longley (Imagination and visualising the childhood we want for our children)

See Appendix C for more information about the guests.

Listen to all podcast episodes at <https://anchor.fm/natureplaywa>

Parents were encouraged to watch Minderoo's TED Talk Thrive by Five by Molly Wright in the first week, to set the stage for responsive and playful interactions during the outdoor sessions and throughout the week at home.

The online content also included a short (one-minute) video showcasing one aspect of the outdoor group experience for that week. This gave parents insight into the types of activities they could expect to take part in, and to set the tone for responsive and playful interactions. Downloadable resources and all the information required to support the outdoor group sessions, including maps and lists of what to bring, were provided to support the parents in planning for the sessions. See Appendix D for a full overview of the online content.

Prior to commencing the pilot program, the online content was reviewed by four community members (three parents of young children and one early childhood educator). These community members provided feedback on the suitability and usefulness of the materials and resources, as well as general feedback on whether the content was clear and understandable to the audience. All were financially reimbursed in acknowledgement of their time and contribution to the project.

"Looking at the whole set up of your lessons, it's perfect. Just the way a busy mum would want her info, concise and easy to consume."

Emily, member of the community review group.

View all Nature Play & Grow videos at -

<https://youtube.com/playlist?list=PLrthSkPBc6yZeMcnngg8sDEpi-lBrckCsl>

Listen to all
podcast episodes



View all
Nature Play & Grow videos



Program Pilot

Participants

Families enrolled in The ORIGINS Project with a child between the ages of 3 and 3.5 years were invited to participate in the Nature Play & Grow pilot. In total, 24 families consented to participate in the program, with 20 families commencing the program and attending at least one session. There were no costs to families to participate in the program.

The average (mean) age of the children enrolled in the program was 3 years 3 months, with children ranging in age from 2 years 9 months to 3 years 8 months. Of those who enrolled in the program, 71% of the families heard about the project via an email invitation from ORIGINS, while the remaining 29% heard about the program via the ORIGINS Facebook group.

When asked their reasons for enrolling in the program, the parent responses centred around wanting to spend more time outdoors, engaging in new experiences in a group setting with other children, learning about child development, and experiencing different activities outdoors.

"We spend too much time indoors and I would like to change that."

"To get the kids out in nature and to learn new stuff."

"Learn about child development."

"Thought it would be nice for Jarvis to interact with other children and to have some new experiences."

When asked what they hoped to get out of the experience, parents frequently mentioned they would like to have more and new ideas about activities to do outdoors in local parks, as well as increasing their knowledge around the importance of outdoor play.

"A better understanding of why outdoor play is so important and its effects on development and learning."

"I also hope it helps them appreciate nature and what's available around where we live."

"Ideas for age-appropriate outdoor activities."

Program delivery

The program was delivered between May and August 2022. There were two groups with 10 families in each group. These sessions were run for an hour on a Tuesday or Wednesday morning, commencing at 9:30am. Each session was facilitated by a member of the project team with support from a member of the ORIGINS Team.

Email reminders were sent out to all families on the Monday prior to the group outdoor sessions, with information about the location and any additional resources to bring along. Parents were also emailed the weekly link to the online parent modules on the Thursday for the following week's content.

A total of three sessions were rescheduled. One due to the facilitator testing positive for COVID-19, and the other two due to forecast gale force winds which was identified as a risk in the Event Safety Plan.

Attendance and retention

The median number of sessions attended was six out of eight. One family attended all eight sessions, and four families attended seven out of the eight sessions. The main reasons families missed the sessions was due to child and/or parent illness (including COVID), family holidays and other family commitments (e.g. medical appointments, siblings sport carnival). There were three families who attended the first few sessions and then withdrew from the program. For two of these families, the reasons related to caring for younger siblings and the birth of a second child.

“

We spend too much time indoors and I would like to change that

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Program goals

The pilot program was designed to assess the feasibility and acceptability of delivering a family-based healthy lifestyle intervention to promote healthy eating, physical activity, emotional wellbeing, and connectedness to nature in preschool children. The outdoor group sessions were designed to also develop:

- A sense of community (participate, engage, and communicate)
- A connectedness to nature (awareness of, responsibility toward, enjoyment of nature and connection to place)
- Healthy ways of living and sustainable practices (reduce, reuse, recycle)
- A playful mindset (be conscious of responses e.g., what to say instead of “be careful”)

In addition, the outdoor group sessions were created to engage the children with exploring and enjoying nature and an awareness of their senses (sight, sound, touch, taste, smell). They were designed for the children to develop:

- Positive habits or dispositions (creativity, curiosity, confidence, enthusiasm, endurance, independence, persistence, resilience, imagination, problem-solving)
- Social, emotional, physical, cognitive, and language skills
- Risk assessment skills and safety sense (what is safe to explore)

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A better understanding of why outdoor play is so important and its effects on development and learning

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Evaluation data

The evaluation of the Nature Play & Grow program focused on the following key areas:

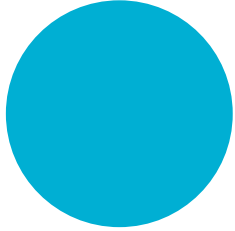
1. Impact of the program
2. Outdoor group sessions
3. Online modules
4. Goals of Nature Play & Grow

Evaluation feedback was obtained following the completion of the outdoor group sessions via an online feedback survey completed by 16 of the 20 families enrolled in the program.



Impact of the program

Meeting expectations



Did the program meet your expectations?

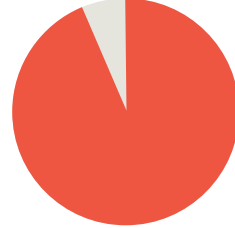
All survey respondents (**100%**) reported that the program met their expectations. Parents reported valuing the social interaction for their child, activities to do outdoors, as well as the knowledge and education gained from the outdoor sessions and online modules.

"After doing this I am now equipped to actually get stuck into specifically nature activities for our outings, which is great!"

"Being in nature always increases our sense of health, well-being and makes us happy. And we are now even more equipped with excellent ideas and tips to get us out in nature even more!"

"We have become happier and always have plan what we will do next."

Increasing sense of health and wellbeing

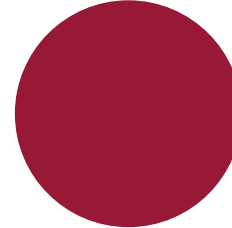


As a result of the program, do you feel that you and your child increased your sense of health and wellbeing (feeling positive, happy and comfortable, in the moment, connected with people)?

93.8% of respondents reported that they themselves and their child felt an increased sense of health and wellbeing as a result of the program. The one parent who responded 'no' clarified their response by saying "I don't think there was enough consistency for us to notice a real difference" and cited the fact that they missed some sessions and others were rescheduled so there wasn't sufficient consistency to notice a difference. One mum thought that one of the most valuable outcomes was being conscious to not limit her children's adventures because of her own worries.

"Being in nature always increases our sense of health, wellbeing and makes us happy."

Recommending the Nature Play & Grow program to other families



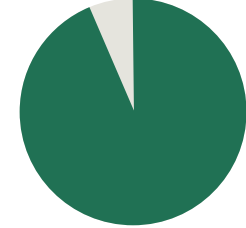
Would you recommend this program to other families?

All respondents (**100%**) answered that they would recommend the Nature Play & Grow program to other families.

"Outdoor play is so important for children, and we would love other future families to experience the great time that we had."

"Thank you for running the pilot, I hope it gets picked up and in particular can support parents with little experience of outdoor play learn how to incorporate into their families' lives."

Spending more time outside and in nature



As a result of the program, do you plan to spend more time outside and in nature?

When asked whether they plan to spend more time outside and in nature, the feedback from parents was overwhelmingly positive, with the majority (**93.8%**) indicating that the program encouraged them to do more activities outside with their children. Even the parent who responded 'no' said "We are outside a lot: however, we do more risky play."

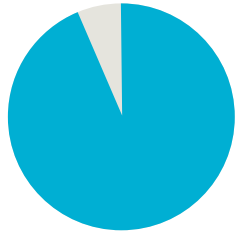
"I'm saying yes to more things rather than questioning whether we should do an activity or just saying no."

"My son now asks to make forts and go on treasure hunts when we go to the park. He didn't do this before."

"The course taught me and my daughter about maximising the value of our time outdoors and encouraged us to spend more time in nature."

"My daughter now actively asks to go play outside."

Repeating activities and experiences from the program



Have you or your child repeated any of the activities/experiences from the program?

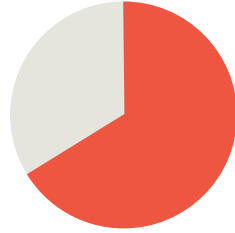
93.8% of respondents indicated that they would repeat an activity or experience to which they were introduced in the outdoor group sessions.

"We have made several potions with my children and neighbours; we have made wands and we are going to be making boats at the nearby waterway next week."

"We have incorporated treasure hunts on our morning dog walks."

"Lots of making dams and little boat-like structures."

Returning to the parks



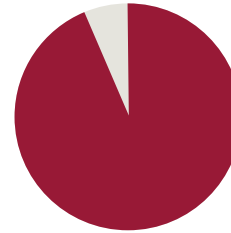
Have you returned to play at any of the parks visited as part of the program?

Two-thirds of the families reported that they have returned to play at a park or parks used in the program. The pilot trial was designed to highlight multiple options for nature engagement in the participants' local area. One parent clarified her response by saying "I am based in a slightly different area but we are visiting more parks in our local area".

"The discovery of Picnic Cove in Edgewater though, was a hidden gem to us, and we have been back to this park three times since!"

"We went back to the same park with the stream to make boats with his older sisters..."

Revisiting the online resources



Will you revisit the Thinkific content of podcasts, videos, downloadable resources and written information in the future?

93.8% of respondents indicated that they would revisit the online content of podcasts, videos, downloadable resources, and written information in the future.

"Yes, I am sure I will, especially in relation to the activities and developmental milestones."

"The tips on how to easily support and encourage child led play in a variety of ways."

"It's great to understand why kids learn the way they do, and that deliberate, outdoor play is actively growing them into healthy kids."

Continuing to see other families

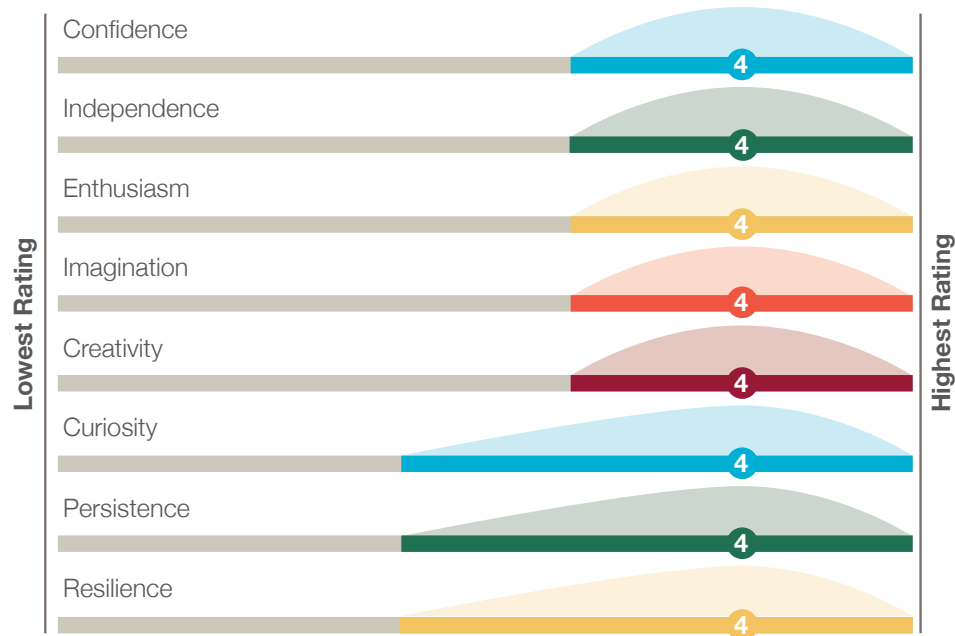
When asked whether they would continue to see any of the other families from the program, 12.5% responded Yes, while 50% responded No and 37.5% were Unsure. While a sense of community for the duration of the pilot was a goal, for parents to continue a relationship beyond the pilot is a bonus. In the final session, for example, two of the mums were chatting about their plans to meet up in future as they had discovered they lived in the same suburb.

Impacting positive habits and dispositions

Parents were asked to rate the extent to which each of the following positive habits or dispositions were developed in the children as a result of participation in the program. On a rating scale from 1-5, (with 5 the highest rating), the median score for all dispositions was 4. The dispositions which scored most strongly were confidence, independence, enthusiasm, imagination, and creativity. See Table 1 below.

Table 1. Ratings of positive habits and dispositions

To what extent do you think your child developed the following positive habits/dispositions as a result of participation in the program?

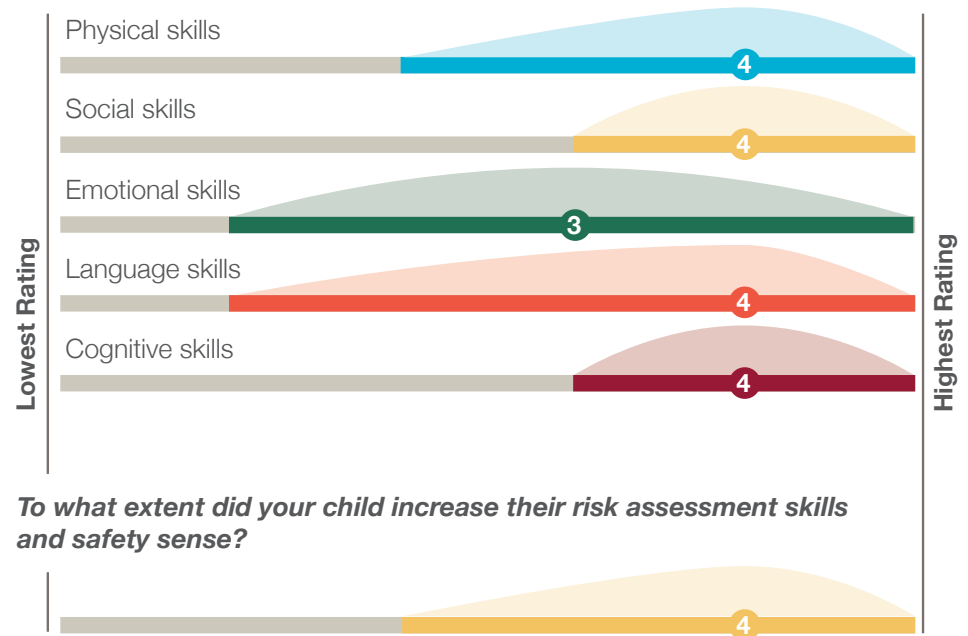


Impacting skill development

When asked about the impact of the program on their child's development of skills, parents scored the development of social and cognitive skills most strongly followed by physical and language skills. On a rating scale from 1-5, (with 5 the highest rating), the median score for skills was mostly 4. See Table 2 below.

Table 2. Ratings of skill development

To what extent do you think your child developed the following skills as a result of participation in the program?





Social skills

This includes greeting others, confidence, cooperation and playing near or with others. It was observed that the social connections began to strengthen over the weeks and some children began to actively seek out others for interaction. One of the parents who has children with autism referred to the booklets for the process of making damper and hot chocolate as “social stories” as that is a familiar term in their family.

Cognitive skills

This includes following instructions, engaging in symbolic and pretend play, and curiosity. The parents recognised value in play.

“We use the words adventure a lot in real and imaginary play.”

“Makayla is getting more curious in nature.”

“Seeing the wonder in my son’s eyes.”

Physical skills

This includes coordination, balance, fitness, and fundamental movement skills, and enhanced independence and enjoyment of activities. For example, at Covent Park adventure playground the children challenged themselves physically and developed their confidence. At Rotary Park, one of the children practised going down the long slide again and again, asking her mum to put her arm out at various heights to slow her on the descent and increasing the length of her slide each time. She displayed enthusiasm, increasing confidence and a growth mindset.

Informal feedback from parents at the outdoor sessions included one of the mums noticing her daughter’s strong hand-eye coordination in the session when we played with balls, and another parent taking note of her daughter’s skills, as her son had just been diagnosed with motor-planning issues by an occupational therapist.

“I’d like to spend more time bushwalking and doing more gross motor skills outside to improve his coordination and balance.”

“She always ate more as a result of the exercise.”

Language skills

This includes communicating with others, talking about what they are doing and answering questions. A mother asked the facilitator if she could understand her daughter’s speech, as she was concerned about her articulation compared with other children of a similar age. This conversation was followed up at subsequent sessions. As a direct result of this interaction, a resource from Telethon Speech and Hearing about language milestones and ‘red flags’ was added to the downloadable resources. The mother planned some early intervention through a speech therapist, and by Week 5, more parents were asking about their child’s articulation.

Emotional skills

This includes self-regulation, resilience, persistence, naming emotions and being aware of others’ feelings. Parents made the following comments:

“I was hoping it would get my daughter enthusiastic about being outdoors and it has.”

“I think it gave her a sense of freedom which I know she loves.”

Risk assessment skills

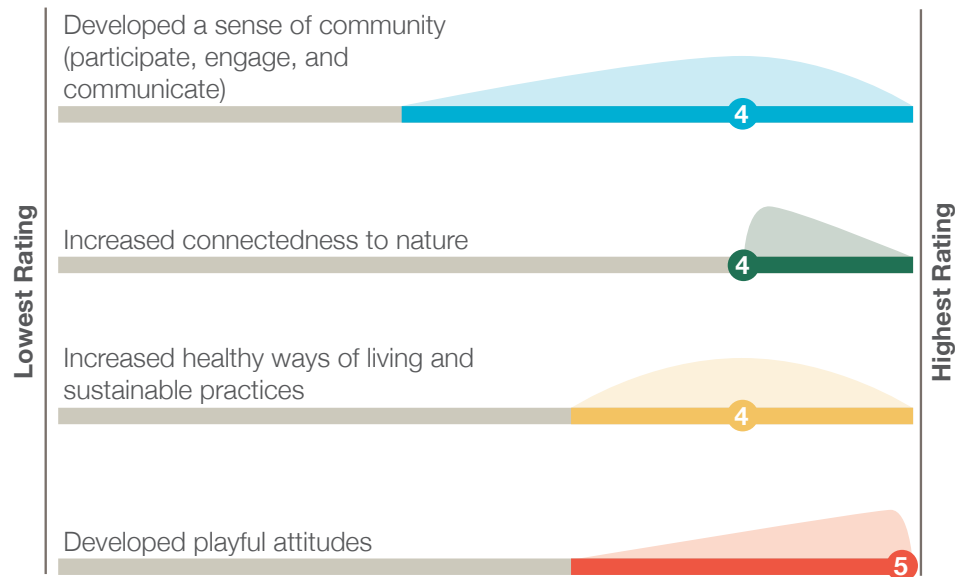
Parents rated an increase of their child’s risk assessment skills and safety sense at a median of 4 on a scale of 1-5, with 5 being the highest. Some parents observed their children pausing and evaluating before rushing to use some new play equipment.

“It showed me to trust my son more in risky play.”

Goals of Nature Play & Grow

Feedback via the online survey was used to ascertain to what degree the pilot program goals were achieved. Parents rated the level of achievement of various goals on a scale of 1-5, with 5 the highest rating. See Table 3 below.

Table 3. Ratings of achievement of the outdoor group sessions
To what extent do you feel that you achieved the following program goals?



The playfulness and responsiveness of the parents towards their children demonstrated positive participation and engagement. The children enthusiastically joined in all activities with only one or two children reticent to join in singing or dancing.





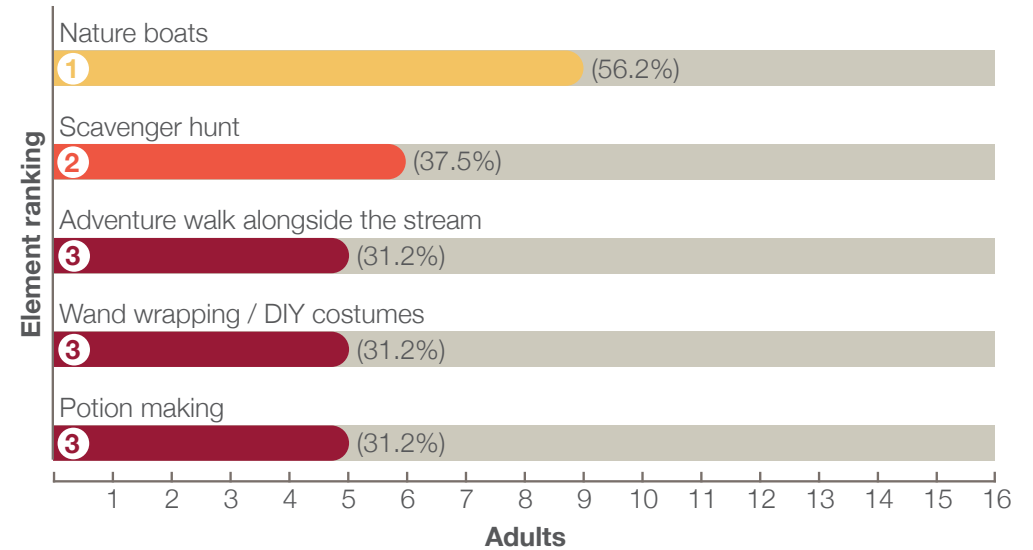
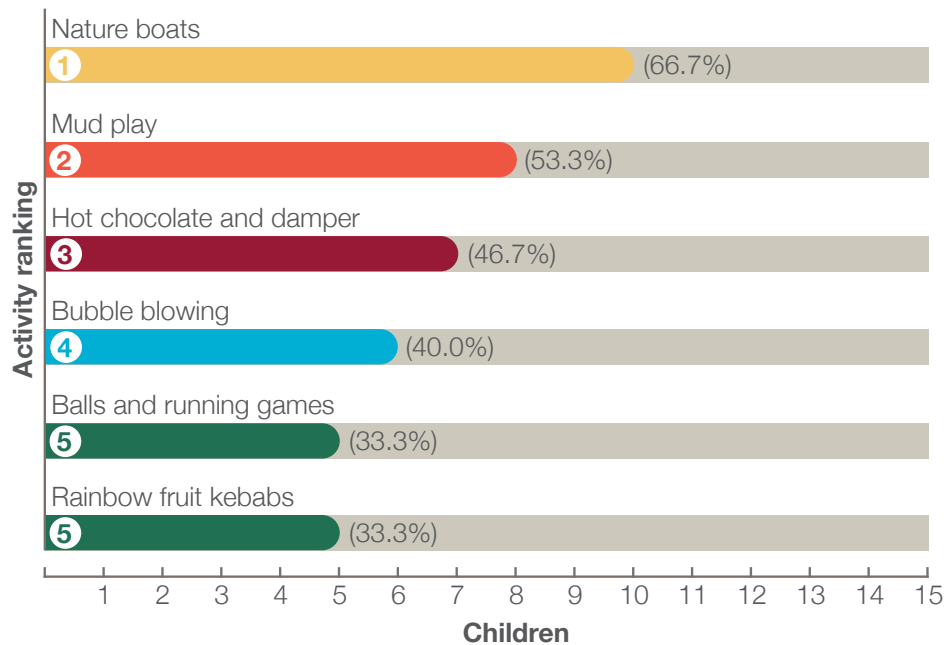
Outdoor group sessions - Feedback

Ranking favourite activities/experiences

Parents and children were asked about their favourite experiences of the outdoor group sessions. Week One's nature boats activity (where families created and floated nature boats down the stream at Central Park) was reported as the favourite experience for both children and their parents. Many children rated mud play as a favourite with the parents choosing activities and experiences that were done together. While fewer parents chose the food experiences, two of these featured in the top 5 list for the children.

See Graph 1 below for a list of the top five outdoor activities reported by children and parents.

Graph 1: Top 5 Outdoor Activities



“ I feel better about supporting my child in outdoor play. ”

“ What I liked the most was that the activities could be so easily replicated, and we have repeated a few already. ”

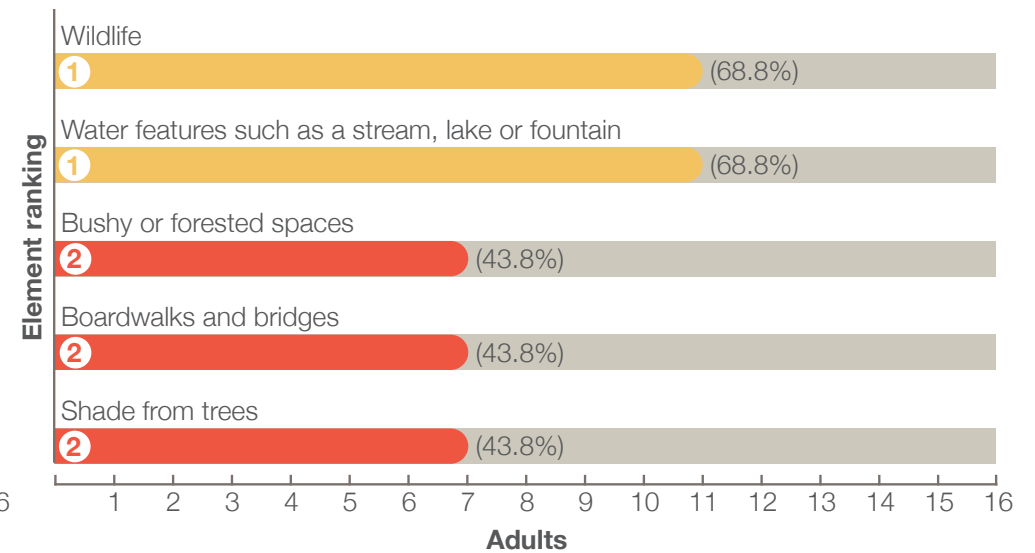
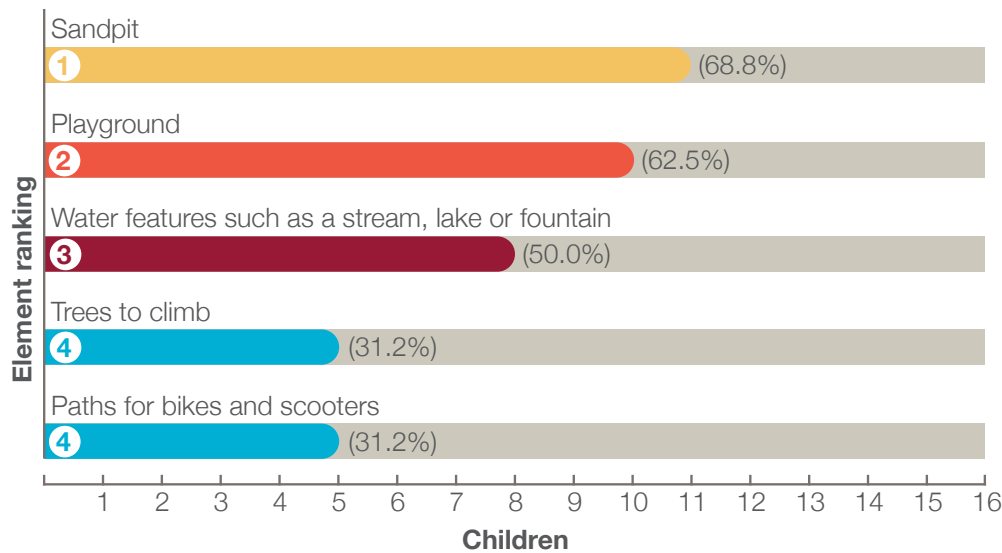
“ And, most importantly, this program was excellent to just switch off, be in the now with my child and others, with nothing else to do but enjoy nature and PLAY. Thank you. ”

Ranking favourite park elements

When asked about their favourite park elements, the children chose sandpits and playgrounds, while parents picked wildlife. Both groups chose water features such as a stream, lake or fountain.

See Graph 2 below for a list of the top five elements of a park reported by children and parents.

Graph 2: Top five park elements



“

We came away with new play ideas and new favourite parks to explore.
Thank you for having us along.

”

Online modules for parents – Feedback

Usefulness of the videos

Parents were asked to rate how useful the videos. On a scale of 1-5, with 5 being the highest rating, the median rating for this was 4. One parent mentioned during an outdoor session that the videos gave her an idea of what to expect, as she hadn't made nature boats before and wasn't sure what to expect.

“
The education piece was valuable, but the practical tips are what have stayed with me the most.
”

“
I quite enjoyed the information in the podcasts. It wasn't something I would have necessarily sought out for myself.
”

Informativeness of the podcasts

Parents were asked to rate how informative they found the podcasts. On a scale of 1-5, with 5 being the highest rating, the median rating was 4. Several parents reported informally that they listened to the podcasts while doing household tasks or in the car.

“I enjoyed the podcasts; it made me understand the development and interests from my son more.”

“I especially want to revisit the one about the different styles of play.”

“Podcasts teaching us why these aspects of play are beneficial.”

Table 4: Ranking of podcast episodes by the number of plays

| Rank | Episode | Title | Plays |
|------|---------|---|-------|
| 1 | EP01 | Nature Play & Grow - Nature and Nurture | 22 |
| 2 | EP02 | Nature Play & Grow - Get Moving! (Featuring Associate Professor Hayley Christian) | 15 |
| 3 | EP04 | Nature Play & Grow - Mind Matters (Featuring Dr Fiona Boylan) | 14 |
| 4 | EP06 | Nature Play & Grow - Imagine if... (Featuring Nature Play WA CEO Griffin Longley) | 10 |
| 5 | EP03 | Nature Play & Grow - Dirt is Good (Featuring Professor Desiree Silva) | 10 |
| 6 | EP08 | Nature Play & Grow - Wishes for Childhood (Featuring Nature Play WA CEO Griffin Longley) | 9 |
| 7 | EP07 | Nature Play & Grow - Play and Learning | 9 |
| 8 | EP05 | Nature Play & Grow - Eat Well (Featuring Dr Amelia Harray) | 5 |

Supporting resources

Of the supporting resources provided online, the TED Talk by Molly Wright *Thrive by Five* (week 1) and *Promoting outdoor learning and play opportunities* (a downloadable resource from Nature Play WA – week 4), were the most accessed, with 75% of parents utilising these resources.

One mother shared that she found the *Pack for Play* resource (created by Nature Play WA) important, as she realised that she generally packed to “mitigate problems” or to provide entertainment, rather than proactively pack for play. See Table 5 opposite with a full list of resources accessed via the online platform.

“The resources in particular were very useful, like the pack for play and risky behaviour information.”

“Yes, I am sure I will (access the resources), especially in relation to the activities and developmental milestones.”

“Great informative experience for both parents and children. Especially valuable for people that do not understand the importance of nature/outside play.”

Table 5: Top supporting resources accessed by parents

| Which of the supporting resources listed on the online platform did you access? | 16 n (%) |
|---|------------|
| TED Talk Thrive by Five Molly Wright | 12 (75.0%) |
| Promoting outdoor learning and play opportunities (NPWA resource) | 12 (75.0%) |
| Guidelines for Healthy Growth and Development for your Child - fact sheet | 11 (68.8%) |
| Pack for Play – ideas to get you started (NPWA resource) | 10 (62.5%) |
| Two Mindsets | 10 (62.5%) |
| Developmental Milestones | 9 (56.2%) |
| Guidelines for Healthy Growth and Development for your Child - brochure | 7 (43.8%) |
| Being and Becoming: The Early Years Learning Framework | 7 (43.8%) |
| Make your move – sit less (family guide) | 7 (43.8%) |
| Risky Play Parent Newsletter | 7 (43.8%) |
| Wet weather ideas | 5 (31.2%) |

Reasons for not accessing the online modules

When asked about the reasons for not accessing the online materials and resources, parents reported that illness or holidays had impacted on their ability to find the time to view them, but no parents cited a lack of interest as a reason. Six parents reported accessing all the online materials.

Limitations

The sessions were delivered during the COVID-19 pandemic which meant that many families missed sessions due to being infected with COVID or due to close contact rules. Despite the impact of COVID, the overall attendance was good with the majority of families attending six sessions.

80% of parents completed the online surveys and the information that was obtained was rich and informative. However, the collection of feedback data from parents in this way was challenging and required follow up. Future programs should consider obtaining information from parents directly at the final group session to maximise completion of the feedback surveys.



Facilitator reflections

Feedback from the facilitator of the outdoor group sessions is that an hour for activities and experiences followed by morning tea is an appropriate length of time for this type of program. Generally, there was sufficient time for the children to be involved in the planned activities. Eight weeks allowed for a wide variety of experiences and for the participants to develop some connection as a community. The Wednesday group's experiences were interrupted due to extreme weather and COVID and this did impact the continuity for the group.

There was a strong sense of wellbeing during the outdoor group sessions, with children running towards the meeting place in excitement for the start of the sessions and wanting to linger afterwards. The parents interacted with their children in a responsive and playful manner, devoting themselves to playing with their children and being in the moment. As the weeks passed, there was more interaction between the families and a sense of comfort and interest in getting to know one another. The wellbeing was palpable in expressions and body language of the children and the demonstration of positive emotions and interactions.

The parents often expressed their pleasure at being involved in the pilot as they recognised the benefit to their child and how being outdoors impacted their wellbeing.

“

Great for getting outdoors, connecting with new people, brilliant new play ideas, great resources and discovering the power of nature on our mental and physical health.

”

“

I found great value in the program; I enjoyed spending the time with my son outside in a semi structured environment. I think it was really beneficial for the both of us.

”



Summary

Without question, the Nature Play & Grow pilot was successful in achieving the planned goals and viewed as a positive program by parents of pre-school aged children.

Overall, the impact on families was extremely worthwhile with all the parents endorsing it as having met their expectations and all commending it to other families with young children. An increased sense of wellbeing and connectedness to nature scored very strongly and were supported with extremely positive comments. Parents reported that they planned to repeat activities and experiences, spend more time outside, and revisit the online resources as a result of their involvement in the program. Positive ratings were given for the content and delivery of the program, and all program goals were rated as being achieved by the parents.

The Nature Play & Grow pilot demonstrated the feasibility of the program through good recruitment and attendance rates, suggesting this is a relevant and sustainable program for families with young children. The pilot provided important feedback information to inform future work in this area.

The Nature Play & Grow pilot identified that a family-based healthy lifestyle intervention is valuable and desirable in promoting health and wellbeing outcomes. Based on the success of the pilot, further development, testing, and expansion of the Nature Play & Grow program is warranted.

"Being outside and the fantastic new ideas of things to do in nature. It was also great having (facilitator) on hand for inspiration and questions."

"Watching my child get enthusiastic about being outdoors and trying new things. Also spending special time with her."

"We spent a lot of time in nature, exploring and learning different activities and experiences to do with our children."

"I felt well supported, the communication was clear and detailed. My child enjoyed the sessions, and the experience has enhanced the way my child plays outdoors."

"I wasn't sure what to expect but it was very well considered and deliberately planned."

Recommendations

The pilot program clearly demonstrated effectiveness and value in connecting families to nature, healthy eating, physical activity, emotional wellbeing, and child development in pre-school aged children for the participants in the Joondalup – Wanneroo area. The participating families were already participating in the ORIGINS study and were very engaged in their children's development.

With funding, this program could be rolled out in other similar demographic communities with a strong degree of certainty of its effectiveness and value.

It is however, recommended that the pilot be extended to communities with more diverse demographics to assess its effectiveness and value in a broader sense. The program would need to be adapted and trialled with consideration given to cultural, social, linguistic, and economic diversity (at a minimum). It is anticipated that many of the resources developed for the initial pilot would be useful, but their applicability should be tested with other communities as a next step.



Appendix A

Project Team:

Denise Ansingh
 Dr Lisa Gibson
 Professor Desiree Silva
 Dr Kelsie Prabawa-Sear
 Katherine Healy

Appendix B

Weekly outdoor session locations and activities/experiences

| Date | Park | Topic | Outdoor group experiences |
|-------------------------|--------------------------|---|--|
| Week 1 Winter/Makuru | Central Park | <i>Every child can thrive by five</i> | Welcome and establish community Nature boats Adventure walk |
| Week 2 Winter/Makuru | Neil Hawkins Park | Importance of children being active for overall health and wellbeing | Bubble blowing Balls and running games Boardwalk sensory walk |
| Week 3 Winter/Makuru | Picnic Cove Park | Importance of healthy eating and building immunity and good gut health by playing outside | Mud play Water and nature play Rainbow fruit kebabs |
| Week 4 Winter/Makuru | Sir James McCusker Park | Developing a growth mindset and other positive dispositions for learning | Wand-wrapping/DIY costumes Scavenger hunt Cubby building |
| Week 5 Winter/Makuru | Covent Park | Healthy eating and developing an adventurous attitude towards play and movement | Playground adventure play Movement challenges Salad pita pockets |
| Week 6 Winter/Makuru | Central Park | Outdoor environments as settings for imaginative play and managing self | Potion making <i>Going on a Bear Hunt</i> dramatisation Teddybear picnic singalong |
| Week 7 Winter/Makuru | Picnic Cove Park | Play as a vehicle for children to develop their own strengths, interests and social skills | Bikes, scooters, and balance bikes Sand play Hot chocolate and damper |
| Week 8 Winter/Makuru | Rotary Park Scenic Drive | The benefits of outdoor play for strengthening health and wellbeing. What sort of childhood do you want for your child? | Group singing and dancing Playground exploration Herb salt dough nests |

Appendix C

Podcast guests:

Associate Professor Hayley Christian (Physical activity): leader of the PLAY Spaces and Environment for Children's Physical Activity, Health and Development program and researcher at Telethon Kids Institute.

Professor Desiree Silva (Importance of dirt for a healthy gut): co-director of the ORIGINS project and a professor of Paediatrics at the University of Western Australia and Joondalup Health Campus.

Dr Fiona Boylan (Growth mindset): lecturer in Early Childhood Studies at Edith Cowan University who has researched growth mindset in the early years.

Dr Amelia Harray (Healthy eating): accredited Practising Dietician and Nutritionist and a Senior Research Fellow at the Children's Diabetes Centre at the Telethon Kids Institute.

Griffin Longley (Imagination and thinking about the type of family parents would like and the type of childhood they visualise for their children): former Chief Executive Office of Nature Play WA and advocate for children's unstructured play in nature.

Appendix D

Overview of weekly online content

| | | |
|--|--|---|
| Module 1 The importance of the early years | | |
| Podcast | <i>Nature and nurture</i> | <ul style="list-style-type: none"> • Benefits of outdoor nature-based activities • Physical growth patterns and the importance of being active and Guidelines for Healthy Growth and Development (24 hour movement guidelines) • Sobel's play themes (Adventure; Maps and pathways; Small worlds) <p>TED Talk Molly Wright</p> |
| Video | <i>Creating and floating boats</i> | |
| Module 2 Strengthening health and wellbeing through active outdoor play | | |
| Podcast | <i>Get moving!</i> | <ul style="list-style-type: none"> • Zamani's research about what children like to do in outdoor play • Movement through play and in nature • Physical development and developmental milestones • Introduce safety sense and hazard vs risk <p>Associate Professor Hayley Christian, leader of the PLAY Spaces and Environment for Children's Physical Activity, Health and Development program, researcher at Telethon Kids Institute</p> |
| Video | <i>Blowing and chasing bubbles</i> | |
| Module 3 Healthy eating and how playing outside is good for immunity and gut health | | |
| Podcast | <i>Dirt is good</i> | <ul style="list-style-type: none"> • Benefits of open-ended sensory and messy play opportunities – e.g., sand • Gradual release of responsibility • Norodahl & Einarsdottir's research about what children like in outdoor play • Risk assessment and safety sense <p>Professor Desiree Silva, co-director of the ORIGINS project and a professor of Paediatrics at the University of Western Australia and Joondalup Health Campus.</p> |
| Video | <i>Playing with mud</i> | |
| Module 4 Developing a growth mindset and other positive dispositions for learning | | |
| Podcast | <i>Mind matters</i> | <ul style="list-style-type: none"> • Growth vs Fixed mindset • Sobel's play themes (Hunting and gathering; Special places; Fantasy and imagination) • Aminpour's research about landscape variety for play opportunities <p>Dr. Fiona Boylan, lecturer in Early Childhood Studies at Edith Cowan University</p> |
| Video | <i>Wand-wrapping and cubby building</i> | |

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|---|-----------------------------|---|
| Module 5 Healthy eating and developing an adventurous attitude towards play and movement | | |
| Podcast | <i>Eat well</i> | <ul style="list-style-type: none"> • Movement challenges • Sandseter’s research about the six categories of risky play • Risk assessment and Safety sense <p>Dr Amelia Harray, Accredited Practising Dietician and Nutritionist and Senior Research Fellow at the Children’s Diabetes Centre at Telethon Kids Institute</p> |
| Video | <i>Movement challenges</i> | |
| Module 6 Outdoor environments as settings for imaginative play | | |
| Podcast | <i>Imagine if...</i> | <ul style="list-style-type: none"> • Sobel’s play themes (Animal Allies) • Imaginative play in nature • Positive dispositions for learning • Executive function – self-control, mental flexibility, working memory <p>Griffin Longley, CEO of Nature Play WA</p> |
| Video | <i>Potion making</i> | |
| Module 7 Developing strengths, interests and social skills through play | | |
| Podcast | <i>Play and learning</i> | <ul style="list-style-type: none"> • Parten’s Stages of play - solitary, onlooker, parallel, associative, and cooperative play • Play Schema – transporting, trajectory and rotating • Gardner’s Theory of Multiple Intelligences - nature, body, picture, music, word, logic, people, self |
| Video | <i>Playing with sand</i> | |
| Module 8 What sort of childhood and family would you like? | | |
| Podcast | <i>Wishes for childhood</i> | <ul style="list-style-type: none"> • Being three years old • UN Rights of the Child (unstructured child-led play) • What to say instead of “Be careful!” • Reviewing key themes <p>Griffin Longley, CEO of Nature Play WA</p> |
| Video | <i>Making nests</i> | |



THE
ORIGINS
PROJECT



TELETHON
KIDS
INSTITUTE
Discover. Present. Cure.



Joondalup
Health Campus
Part of Ramsay Health Care

