In partnership with Appleton Institute

SA NATURE PRESCRIPTION TRIAL

2021

Final Technical Report

Executive Summary

Green Adelaide in partnership with Appleton Institute ran a Nature Prescription trial in 2021 to study how connecting with nature in Adelaide's green spaces can improve a person's health and wellbeing. The trial involved health professionals providing suitable patients with written advice, or a 'nature prescription' for activities in nature. The objectives of the trial were to:

i) reduce barriers to nature contact such as cost, access, time poverty and skill, and to connect participants with the environment to improve their health/wellbeing and environmental stewardship;

ii) demonstrate the feasibility of how a nature prescription program could be delivered in South Australia and thereby assist in future communications;

iii) demonstrate a consortium of partners across a wide range of sectors willing and able to actively support a nature prescription program in South Australia

iv) raise the awareness of the role of nature in the promotion and prevention of mental health and wellbeing (Healthy Parks Healthy People Framework 2016-2021)

v) provide information that can subsequently be evaluated to identify barriers for participation and make recommendations on how a much larger program could be delivered in South Australia.

International research has shown that nature prescriptions have the potential to supplement orthodox medical treatments and contact with nature has been shown to enhance health and wellbeing, as well as cultivate social connections and environmental stewardship. Additionally, the psychological and wellbeing benefits of a nature prescription during the COVID-19 pandemic has highlighted the need for this program to be accessible for people who experience barriers to nature contact. Nature prescriptions are widely used by health professionals in the northern hemisphere and in New Zealand, however only one known trial of the program has occurred in Australia in 2011, in south-west Victoria.

In May-June 2021, health professionals across Adelaide referred suitable patients to the 8-week facilitated Nature Prescription trial, which included four online zoom and four face-to-face classroom sessions of two hrs duration. The sessions were designed to equip participants with the skills and motivation to connect to nature in their local area and included topics such as; how to locate your local green space on google maps, how to find nature based activities in your local area, benefits of connecting to nature and some of the ways you can increase your nature dose through nature journalling, forest bathing, sitting in your garden. Information was provided on overcoming barriers to nature contact e.g. time poverty and access. Suitable patients were those diagnosed with mild to moderate (not severe) diabetes, pre-diabetes, obesity, anxiety, depression or low mood. Health professionals included GPs and allied health who had a Medicare provider number. Participants were surveyed at the start and end of the trial and their wellbeing and connectedness to nature measured to assess changes.

Key findings:

1. **The trial generated a lot of interest with a range of organisations wanting to assist but few participants registered for the trial.**

   Despite minimal media coverage (1 Facebook post, flyers and 1 run in South Australia's key newspaper the Sunday Mail), more than 15 GPs (including 1 Tasmanian GP) and >15 nature connection agencies/groups contacted Green Adelaide expressing interest in being involved. While there was no shortage of nature connection groups/agencies keen to be involved, few health agencies/groups responded highlighting the need for health agencies to be actively involved in the coordination and leadership of the health aspects.

While the two participating GPs prescribed (or recommended) the trial to >30 suitable patients, and 17 people emailed expressions of interest in participating in the trial, only 6 people registered for the trial. Reasons given for not pursuing the trial included: difficulties meeting the suitability criteria, obtaining a referral from their GP, commitment fatigue, time poverty, and concern regarding not knowing what the trial involved and that it sounded strange. The low participation in this trial was also probably due to nature prescriptions being rarely used in Australia and their unfamiliarity to the general community. As well, targeting specific groups that needed to meet a number of conditions was useful for the research component of the trial but restricted suitability for participation. Anxiety/depression is also often associated with low motivation and confidence which may have further restricted participation and confirmed the challenges associated with the target cohort. Similar high dropout rates between referral and registration were reported initially in the United Kingdom and New Zealand Green Prescription Programs.

2. **Although the sample size was small, participants reported benefits in wellbeing, social connections and nature connectedness as measured by a range of scales.**

General wellbeing improved from the start (mean 37.3 ± 3.53 n= 3) compared to the end (56.3 ± 8.41 n= 3) in those participants that completed both start and end surveys. Similarly, nature connectedness improved from mean 3.5 (± 0.29 n= 4) at start to 4.8 (±0.75 n=4) at end.

Comments from participants at the end of the trial on what they gained were:

> *"A better understanding of how connecting with nature is great for our health"*
>
> *"If you can't get out for a "day in nature" for instance, Small things count - houseplants, mindfulness in nature, earthing, journalling, watching the stars/moon, hugging actress (sic) etc to keep you connected to nature".*
>
> *"Being inspired by new ideas and activities was great, but one of the greatest impacts was having a group of peers to share nature experiences with. This inspired me to continue, to notice more in nature and take part in more activities, because I had a group to report back to".*

Trial objectives and outcomes:

Objective	**Outcome**
Objective 1: *To reduce barriers to nature contact such as cost, access, time poverty and skill, and to connect participants with the environment to improve their health/ wellbeing and environmental stewardship;*	Participants received weekly sessions designed to increase motivation and skill to connect to nature in their local area. Discussions on overcoming time poverty and increasing their nature dose were provided. The Facebook site and google calendar provided up to date information on nature based activities available. All participants reported a number of benefits such as improvements in wellbeing, social connections, connectedness to nature and motivation.
Objective 2: *To demonstrate the feasibility of how a nature prescription program could be delivered in South Australia and thereby assist in future communications;*	The feasibility was demonstrated and all requests from potential partners regarding the trial design (initial October 2020 meeting) were incorporated where possible. Information relevant to the trial has been collated in this technical report and video and will be available to groups/organisations considering designing nature prescription programs in the future. The trial provided a working example of one way a nature prescription program could be rolled

	out cost effectively and using existing resources to assist in future communications and evaluations.
Objective 3: *To demonstrate a consortium of partners across a wide range of sectors that are willing and able to support a nature prescription program being delivered in South Australia;*	Much interest and enthusiasm in the trial was received, especially from environmental agencies and research institutions across Australia and from other prescription programs operating overseas (list in 'Partners and supporters'). However, few health organisations/groups participated and it is recommended that in future trials, health agencies need to take a lead role in coordinating participation by health professionals and facilitating integration of prescriptions into the health care system.
Objective 4: *To raise the awareness of the role of nature in the promotion and prevention of mental health and wellbeing (SA Healthy Parks Healthy People Framework 2016-2021)*	The trial succeeded in raising awareness of the value of the environment for human health and wellbeing in South Australia through media, social media channels and presentations including national (Outdoor Health Symposium) and international (IUCN WCPA Health and Well-being Specialist Group) forums.
Objective 5: *To provide information that can subsequently be evaluated (i.e. stage 2) to identify barriers for participation and make recommendations on how a much larger program could be delivered in South Australia.*	Despite low participation in the trial, valuable information was collated in this Technical Report that will be useful for subsequent evaluations and progression of nature prescription programs in Australia. The stage 2 appreciative enquiry approach has not been undertaken, (led by Appleton Institute) however, barriers for participants in this trial were evaluated by Symons in her Honours thesis (2021).

Key Recommendations for future programs:

1. Future programs will need a significant marketing and education campaign to demystify nature prescriptions in the Australian community.
2. A co-design approach which identifies the preferences of the target group will assist in optimising the design along with a range of options being provided e.g. face to face or one off sessions or website resources only or less intense programs e.g. meet monthly and linking in with existing programs e.g. park run and park of the month with coordination through environment centres and community centres could also be considered.
3. Future programs will need to have more involvement and leadership/coordination from health agencies in particular to coordinate the health aspects of a program. A nature prescription program is dependent on a functioning transdisciplinary approach and involvement of Primary Health Networks.

Conclusion

Despite low numbers, the trial succeeded in providing a working demonstration of a nature prescription program to facilitate future discussions; demonstrated a consortium of partners, demonstrated benefits for participants and provided valuable information on what worked and did not work for subsequent evaluations. This information will be useful for other groups/organisations that are seeking to deliver nature prescriptions in Australia and in determining the systems that would need to be in place to scale up and

embed within GP practices. Integrating nature prescriptions into the health care system in Australia has the potential to improve health and wellbeing in the community, reduce health care costs, foster environmental stewardship and reduce barriers to nature contact, especially in low socioeconomic groups.

This project supports Green Adelaide's Nature Education priority of connecting people to nature, highlights the importance of urban greening and the National Park City movement and demonstrates a commitment to supporting the MOU (Public Health Partner Authority) between the Department for Health and the Department for Environment and Water in implementing the SA Healthy Parks Healthy People Framework 2016-2021.

Acknowledgements: Green Adelaide thanks all the agencies/groups/individuals that contributed to this trial. Professor Drew Dawson (Appleton Institute) was instrumental in the initial consultation with key partners and assisted in the design and delivery of the trial. Gabrielle Kelly facilitated the initial consultation with key partners and later provided mentoring support to the Green Adelaide project manager. Dr Keri Hopeward (DARED) capably facilitated the sessions as the coordinator and assisted in delivery of the trial. We particularly thank the six brave participants that agreed to take part in the trial and provide valuable information in the pre and post surveys. Katya Glogovska and Josie Dawson actively prescribed patients to the trial as general practitioners and assisted in design. Madison Bennett (City of Adelaide trainee) and Michael Crane and Callum Frost (University of SA social work placement students) provided ongoing support for the google calendar and teaching of zoom use to participants. Kayla Jordan and Jan Burney (Deakin University) provided research information and a literature review to assist in the planning of the trial. The AASW SA Green Social Work Practice Group provided ongoing support and connections to the health industry. Dr Robert Zarr and Dr Martin Breed assisted with information resources and technical advice. The Green Adelaide Board supported and funded the Trial.

Many of the images in this report were provided by Keri Hopeward

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More information

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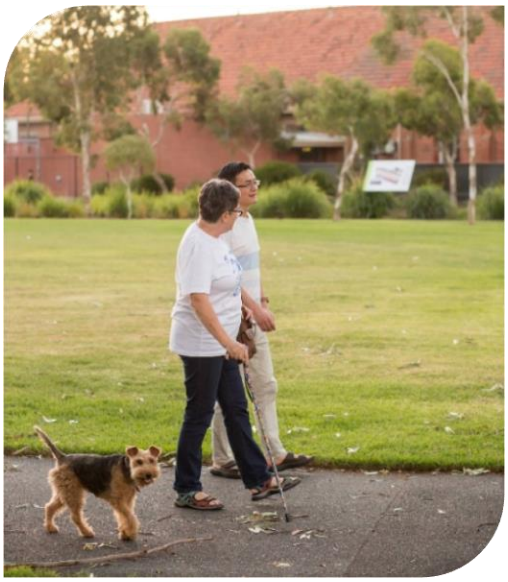
Green Adelaide formed in July 2020, and was established by the South Australian Government to help manage the urban densification and climate change impacts on metropolitan Adelaide. Green Adelaide is working to create a cooler, greener, wilder and climate-resilient city by partnering, funding and supporting aligned organisations and communities, as well as delivering on-ground iconic projects.



Partners and supporters

Partners: Green Adelaide, Appleton Institute (University of Central Queensland), Gabrielle Kelly, City of Adelaide, AASW SA Green Social Work Practice Group and University of SA

Participating organisations:

Adelaide City General Practice

Adelaide Sustainability Centre

City of Marion

Deakin University (Health Nature Sustainability Research Group)

Department for Environment and Water

Park Rx America

Flinders University

Friends of Sturt River Landcare Group Inc

Hindmarsh Bowden Health Clinic

Dream Awake: Research Education and Design [DARED]

Nature and Wellbeing Australia

Trees for Life

WellCity Adelaide

TABLE OF CONTENTS

INTRODUCTION

The importance of nature contact for human health and wellbeing, particularly in western societies, is widely accepted across disciplines from city planning to medicine (Maller et al. 2008, Keniger et al. 2013, Molsher and Townsend 2016, Shanahan et al. 2019). Benefits of nature contact include physical health e.g. lower prevalence of high blood pressure and allergies (Shanahan et al. 2016), regulation of the human immune system (Roslund et al 2020), mental health (e.g., lower prevalence of depression and anxiety) (Cox et al. 2017) and psychological and social wellbeing outcomes (Shanahan et al. 2016). Moreover, there is evidence that the magnitude of such benefits can increase with the dose of nature (Cohen-Cline et al. 2015). Despite this, urbanisation, challenges of modern life and environmental degradation are leading to a reduction in both the quantity and the quality of nature experiences (Heaviside et al 2016, Shanahan et al. 2019, Wang et al. 2021). With the increasing incidence of non-communicable diseases, such as obesity, diabetes, anxiety and depression, throughout the world coupled with declining ecosystems it is paramount that innovative strategies, like nature prescriptions, are developed that promote environmental stewardship and improved ecosystem function, while improving public health and wellbeing.

A nature prescription is a health professional's written advice for activities involving exposure to nature to improve a patient's health. Demonstrated benefits of nature prescriptions include: stress reduction, reduced blood pressure, improved healing times, reduced depression, increased resilience and other mental health benefits (see reviews in Swinburn et al. 1998 and Fuller et al. 2007). The terms nature, green and social prescriptions are often used interchangeably, however, green and nature prescriptions, are specifically nature-based interventions to promote health and well-being and occur in nature (natural or developed green space). These prescriptions can include community-based outdoor activities such as wilderness and adventure therapies, therapeutic horticulture, biodiversity conservation, care farming, nature walks and social activities in green spaces (review in Robinson et al. 2020). In contrast, social prescriptions provide services that specifically address psychosocial, mental, and socioeconomic issues. Social prescribing directs people to activities such as education programs, exercise classes, social and support groups, counselling services, and welfare support and when it is conducted outside in nature they are often considered green, green/social or nature prescriptions.

New Zealand was one of the first countries to use nature/green prescriptions when *Sport and Recreation New Zealand* launched its Green Prescription (GreenRx) initiative in 1998, where health professionals provided written advice encouraging physical activity and healthy eating (Ministry of Health NZ 2017). Initial research found that Green Prescriptions were more successful than verbal advice only, in encouraging participation in physical exercise (Swinburn et al. 1998). More recent studies have also had similar findings (Razani et al. 2018, Bloomfield 2017). Since these early beginnings, nature prescriptions have increased organically, albeit siloed throughout the world (Robinson and Breed 2019, Howarth et al. 2020) and their form varies between programs. For example, in the US Park Rx program the general practitioner works out with the patient the best local park to access and uses an app to monitor compliance. In Canada recently, >1000 GPs subscribed to a park prescription program where they prescribed free park passes to suitable patients.

Today, nature prescriptions are used world-wide in at least nine countries, except Australia (e.g. Anderson et al. 2017, Bloomfield 2017, Razani et al. 2018, Zarr 2020). In Australia, there has been only one known trial of nature prescriptions i.e. Green Referrals in Victoria in2011. Reasons there has been little uptake of nature prescriptions in Australia are unclear and may be related to a lack

of transdisciplinary collaborative pathways (Robinson et al. 2020). In the United Kingdom, where nature prescribing is active and widespread, a recent review found that the most common constraint for GPs to nature prescribing was the perceived lack of services or organisations to support the nature-based interventions, while for nature based organisations it was the difficulty engaging with GPs and other primary health care professionals (Robinson et al. 2020). The review highlighted the need for establishing transdisciplinary collaborative pathways that are time efficient and speak a common language and the need to improve infrastructure around referral mechanisms and monitoring. Robinson et al. (2020) concluded by indicating that nature prescribing has the potential to make an important contribution to personal and planetary health which has prompted recent calls to integrate nature-based and social prescribing into public health strategies in the United Kingdom (Robinson et al. 2020). While there has been little uptake of nature prescriptions in Australia, a Social Prescribing Roundtable event held in 2019 hosted by the Royal Australian College of General practitioners, recommended that social prescribing also has a place in mainstream health and community care (RACGP and CHF 2019 as cited by O'Dea 2020).

Evidence for the benefits of nature prescriptions is sometimes criticised for small sample sizes and an absence of robust measures. This has prompted a call for more robust and experimental randomised controlled studies. Elley et al. (2003) used a randomised controlled design to explore the long term effectiveness of the Green Prescription program in New Zealand for inactive older adults (40-79yrs). Significant improvement in health and quality of life was recorded for the 750 participants using indicators of levels of physical activity, cardiovascular risk, blood pressure and self- reported quality of life over a 12 month period. There is also mounting evidence from a wide range of studies for the potential co-benefits that span areas of health, environment and socioeconomics. Studies show enriched social, spiritual, and financial outcomes (reviewed in Keniger et al. 2013) as well as environmental benefits, such as additional food production due to increased gardening activities and the creation of public gardens (Jennings et al. 2016). Participation in nature prescription activities can also improve nature affinity and promote environmental stewardship (Raymond et al. 2017, Razani et al. 2018). Although more evidence would help to broaden our already robust understanding of the mechanisms linking nature to health, the improvement and maintenance of green spaces in urban areas, particularly with high levels of biodiversity could potentially provide significant health and environment benefits e.g. through microbiomes rewilding (Robinson and Breed 2019).

Nature prescriptions have the potential to supplement orthodox medical treatments and lead to improved health and wellbeing outcomes as well as bring about significant environmental, economic and social co-benefits (Robinson and Breed 2019). Health improvements from nature exposure can also potentially lower the demand for health care services and reduce health care costs (Pretty and Barton 2020). While used elsewhere in the world, nature prescriptions have had little uptake in Australia, perhaps due to the lack of governing bodies that link environment, health and other key agencies as occurs in the United Kingdom. This Trial seeks to demonstrate how a nature prescription program could be rolled out in the state in a cost effective manner using existing environmental activities and to demonstrate a consortium of partners across agencies and disciplines that are willing to actively contribute. It is expected that this Trial will assist in future discussions of nature prescriptions in Australia and facilitate a transdisciplinary approach.

Background to the Trial

In October 2020, Green Adelaide and Appleton Institute invited key stakeholders/partners (including Wellbeing SA, councils, NGOs and research institutions) to discuss interest/capacity to be

involved in developing a nature prescription program in South Australia. At the meeting, support was obtained for the following approach:

> **Stage 1**- **(led by Green Adelaide)** Conduct a nature/green prescription trial where an "intervention" is developed to provide participants with motivation and skills to connect with nature. It was emphasised that activities should connect participants to their own local green space and that the use of fossil fuels to transport participants to parks etc outside their local area would be avoided so as to ensure benefits continued beyond the length of the trial. Suitable participants would be referred by health care professionals (GP's, social workers etc). The group recommended that the Trial should seek to determine (a) the feasibility of such a service and (b) the benefits for participants and c) demonstrate a consortium of partners. The trial needed to be as cost effective as possible accessing existing activities so that it can easily be scaled up to a larger area. *(this report)*
>
> **Stage 2**- (**led by Appleton Institute but subject to funding)** The "intervention" would be followed by an appreciative enquiry approach where the lived experience of participants and health professionals informs a broader stakeholder engagement process to determine how best to enable the government and health care providers to integrate nature prescription services within the health care system. (*while funding for stage 2 was not obtained, an evaluation of the trial was conducted by Sally Symons with her Honours thesis due in late 2021*)
>
> **Stage 3**- **(led by Appleton Institute but subject to funding)** If the first two stages are successful and a consortium of partners are established, the next stage is to invite the CRC for Wellbeing and Productivity to develop a large scale project to integrate Green/Nature/Social Prescription services within the larger health care system in both SA and nationally. *(this stage not progressed)*

This Trial (ie stage 1) connects health/wellbeing, environment, community and research partners in a collaborative project and contributes to improving health and well-being by increasing our engagement and appreciation of the natural world.

The objectives of the SA Nature Prescription trial are to:

1. *reduce barriers to nature contact such as cost, access, time poverty and skill, and to connect participants with the environment to improve their health and wellbeing;*
2. *demonstrate the feasibility of how a nature prescription program could be delivered in South Australia and thereby assist in future communications;*
3. *demonstrate a consortium of partners across a wide range of sectors willing and able to actively support a nature prescription program in South Australia*
4. *raise the awareness of the role of nature in the promotion of mental health and wellbeing (Healthy Parks Healthy People Framework 2016-2021)*
5. *provide information that can subsequently be evaluated to identify barriers for participation and make recommendations on how a much larger program could be delivered in South Australia.*

The trial supports Green Adelaide's Nature Education priority of connecting people to nature and facilitating environmental stewardship, highlights the importance of urban greening not only for its intrinsic value (e.g. biodiversity, urban heat) but for human health. Key partners/contributing

agencies include: Green Adelaide, Appleton Institute and The University of Central Queensland, DARED, AASW SA Green Social Work Practice Group, City of Adelaide, Deakin University, University of SA and Flinders University (see “Partners and supporters” pg 5 for the full list)

METHODS

Overview

An eight week facilitated program was provided that equipped participants with the skills and motivation to connect to nature in their local area. Topics included: how to locate your local green space on Google maps, how to find nature based activities in your local area, benefits of connecting to nature and some of the ways you can increase your nature dose through nature journalling, forest bathing, sitting in your garden (sit spots), overcoming time poverty and changing habits. Participant's wellbeing and connectedness to nature was measured at the start and end of the trial to assess changes. Qualitative interviews were also conducted.

i) Trial design

The trial comprised 2 hr-weekly sessions (4 face to face and 4 zoom sessions) over an eight week period. Concurrent sessions were held Tuesday afternoons and Wednesday evenings from May-June 2021 to maximise opportunities for participants.

The following key elements that were requested during the consultation meeting in October 2020 were incorporated into the trial design where appropriate:

1. be as cost effective as possible so can scale up easily
2. involve a range of partners that actively participate
3. links in to existing environmental activities rather than creating new activities that require additional resources
4. aim to connect people to their own local green spaces and communities rather than bonding in the group so that the gains can be maintained beyond the length of the trial
5. target a specific region/suburb- preferably low socioeconomic
6. assess benefits to participants as well as optimal program design and barriers for GPs
7. be followed by an appreciative enquiry approach (stage 2) including recommendations on scaling up in future programs
8. be as environmentally sustainable as possible and not involve burning fossil fuels to transport people long distances but encourage people to find nature activities in their own local area
9. acknowledge that each person will have an individual relationship to nature and therefore encourage participation in a wide variety of activities
10. provide participants with skills and motivation to connect to nature
11. include a range of health providers in prescribing e.g. GPs, Social workers, Occupational therapists so as to identify barriers for different health specialists.
12. address current known barriers to nature contact including insufficient time, money, access (e.g. transport), motivation, skills and knowledge.

ii) Target area and focus group

The trial initially targeted the city and inner west of Adelaide where the two participating GP clinics were located (i.e. Brompton and Adelaide city). However, due to low participation, the target area was subsequently widened to include the entire Adelaide region.

iii) Target group

People identified by a health professional as having:

1. Mild to moderate (not severe) diabetes, pre-diabetes, or obesity
2. Mild to moderate (not severe) anxiety or depression or low mood

Prerequisites of participants: must be able to use (or have ability to learn to use) social media- zoom, Facebook, webpage and have access to a computer/phone. Must be able to access a green space independently or with a carer. All participants were required to have a medical condition and be a customer of the Health Service so they would qualify for health rebates should the health system integrate prescriptions in the future.

Exclusions: People with special needs or severe mental conditions or a lack of social awareness (as this would require facilitator skills beyond the scope of the Trial and potentially impact on group function)

iv) Advertisement and recruitment of participants

An information sheet on the trial for health professionals (Appendix A) and participants (Appendix B) was distributed to medical clinics, health care centres, community centres and through various networks. In addition to the promotions that took place through the Green Adelaide website and social media, Green Adelaide's Nature Prescription Trial was also featured in an article in *The Sunday Mail* on 11th April (Appendix C). Three information sessions were held in April (online and face to face) for interested participants and health professionals. The trial facilitator also discussed course content one on one with any interested participants to check their suitability and expectations (Appendix D).

v) GP referrals

All participants were required to provide a written letter from their treating GP or allied health professional confirming their suitability to participate in the trial, according to the criteria outlined in the information sheets (mild to moderate anxiety or depression and low to moderate pre-diabetes, diabetes or obesity, within the first few weeks of commencing the trial. As an additional check, participants also were required to complete the Beyond Blue Anxiety and Depression Checklist – K10 and provide their score to ensure they met the criteria of mild to moderate (not severe) anxiety and depression outlined in the information sheets.

vi) Course Content (see Appendix P for images describing course content)

Week 1 (face to face): Introduction to Nature Connection- Outline of program, surveys, overview of benefits of nature contact, SMART goal setting, art exercise- relationship to nature, feedback on course content and skill sharing in group and plant breathing exercise (mindfulness) in the community garden. Homework was to get to know a plant in their garden and engage in a breathing exercise or exchange with the plant.

Week 2 (face to face): Nature connection and forest bathing- guided walk in Botanic Gardens and forest bathing taster and introduction to "sit spots".

Week 3 (zoom): Nature connection and your local green space- session by Dr Helen Barrie (UniSA) on the benefits of nature contact and urban green spaces and how to use google maps to find your local green space. Participants were also introduced to the Nature Prescription Trial Facebook Group and Google Calendar as additional tools to assist them locate nature connection activities, along with a series of relevant websites, newsletters and other resources.

Week 4 (zoom): Nature connection in your everyday- guest speakers covered topics such as 'grounding', meditation and mindfulness in nature, and City of Marion 'Sustainability' and 'Nature

Connection in your Everyday Life' initiatives.

Week 5 (zoom): Nature connection in your home and backyard- topics by guest speakers included Green Adelaide initiatives and resources for nature connection with a focus on sustainability; 'Wildlife Friendly Homes and Backyards' resources; nature journalling resources (see Appendix M, N and O) and 'Our Big Backyards' program. Participants continued to post in the Facebook group e.g. their nature journalling images and shared events and activities of interest, as well as reporting on progress with their goals.

Week 6 (face to face): Connecting to country- guest speaker was a Kaurna Elder who shared information on the importance of connecting to country for First Nations people and the nearby cultural burn, as well as how it was carried out and some of the issues associated with 'connecting to country'.

Week 7 (zoom): Nature connection through environmental volunteering

Guest speakers included Friends of Sturt River Landcare and Trees for Life who provided an overview of their organisations and the opportunities to connect with nature through volunteering and other activities. Green Adelaide volunteering opportunities were also discussed along with other useful websites.

Week 8 (face to face): Reflections and way forward (last session)

Participants completed the post-course survey (see Appendix L), art exercise, nature connectedness diagram exercise, and LAB-A1 General Wellbeing survey. Presentations were provided on 'The Gut Microbiome and Nature Connection' and 'Nature Prescriptions Elsewhere and Future Recommendations'. One of the participating GP's gave her perspective on nature prescriptions and the participants and Social Work students discussed what worked and didn't work in the trial and recommendations for the future. Sally Symons from Central Queensland University also presented about her Honours research project on nature prescriptions. This was followed by a celebration of food and farewells.

vii) Pre and post course surveys

Participants completed a pre-course survey (Appendix K) prior to the program commencing. This information assisted in the trial design and described the needs and interests of the participants. A topic harvest was also undertaken in the first week of the program, with the aim of enabling participants to share what they would be interested in learning about for each of the program topics and what knowledge they could share back with the group for each topic as well. An after-course survey (Appendix L) was completed by each participant at the last session to capture and understand key learnings, outcomes for individuals, and suggestions for improvement for delivery of future programs.

A full list of the forms and surveys are as follows:

Completed in the first week:

- DEW volunteer safety procedure form (Appendix E)
- media consent form(Appendix F)
- Nature prescription Trial consent form (Appendix G)
- Nature connectedness diagram exercise (Appendix H)

- Beyond Blue Anxiety and Depression Checklist – K10 (Appendix I)
- LAB-A1 General Wellbeing Survey (Appendix J)
- Pre-Course Survey (Appendix K)

- Art exercise- draw your relationship to nature

Completed in the last week to allow comparisons:

- Nature connectedness diagram exercise (Appendix H)
- LAB-A1 General Wellbeing Survey (Appendix J)
- Art exercise- draw your relationship to nature
- Post-Course Survey (Appendix L).

viii) Adaptations due to low numbers of participants

Given the low participation numbers, an adaptive and flexible approach was adopted where participants were offered a range of different options depending on their availability/needs. This included: the full 8-week trial, 5- week option or a one off session with the coordinator. All participants however chose the 8-week trial and those that expressed interest after the trial did not want to join a program that had "already started" and the group formed.

ix) Other

1 **Coordinator**- was employed (2-3 days per week) February-June 2021 to coordinate activities, sessions, social media, and liaise with participants.

2 **Google calendar**- was created to showcase nature connection activities in the Adelaide region.

3 **Facebook-** A closed Facebook page was created so that participants could share information and upload events/activities of interest to the group.

4 **Assistants and Research students**-

a. An Adelaide City Council trainee staff member assisted with uploading events to the google calendar, researching relevant council activities and learnt about project management.
b. Two University of SA social work placement students also assisted in uploading events to the google calendar, provided training in zoom for participants and assisted with the final session.
c. A University of Central Queensland Honours student evaluated the trial (thesis to be submitted in late 2021)
d. Two Deakin University Social work masters students provided preparatory information and a literature review prior to commencement of the trial.
e. The AASW SA Green Social Work Practice Group provided mentoring and connections to health professionals

RESULTS

1. Sample size

Following the information sessions, 18 people expressed interest in joining the trial of which a total of 6 participants commenced on the trial. Of these, two withdrew prior to trial completion. One was diagnosed as severely depressed at the start of the program so was deemed unsuitable for the trial and another participant withdrew half way through due to competing priorities.

2. Demographics

Of the five participants who completed the pre-course survey, four indicated they belonged to the mild to moderate low mood, depression or anxiety referral group, and one indicated they belonged to the mild to moderate pre-diabetes, diabetes or obesity group.

The participants varied in age from 21 to 71, with the average age being 50 years. All participants were female, born in Australia and their main language spoken at home was English. Three were single, one indicated they were in a couple, and one identified as having a family with children. Two participants lived in City of Norwood, Payneham and St Peters, one from the City of Charles Sturt, one from the City of Port Adelaide Enfield, and one from The City of Prospect. One participant relocated to Victoria for the duration of the trial, but continued to participate via Zoom. Two participants were retired and three were employed (comprising a teacher, educator and administrator).

All participants provided a written letter from their treating GP or allied health professional confirming their suitability to participate in the trial.

3. Pre-course survey

In the pre-course survey, participants were asked how they had heard about the trial. Some of the responses were:

> "Friend."
>
> "Saw it in a Seniors Document."
>
> "My sister mentioned it (not sure how she heard about it) and so I googled for it/green Adelaide".

Interestingly, despite having two GPs who were engaged in the development of the trial and had clinics informing patients about it, not one of the participants in the trial came to us through these clinics. Most participants had heard about it from a friend, with one of those friends being one of the GPs involved in the trial.

Participants were also asked why they were interested in the trial. Some of the responses included:

> "Love this idea and feels much aligned with my beliefs and values."
>
> "Interested because I have not been very active and outgoing. I need to meet some people, get out in the environment and learn more about it."
>
> "Access Health benefits nature provides".

When asked what they were hoping to get out of the program, they responded as follows:

> "Better health and wellbeing, and advice to pass on to others."

"Be part of a ground-breaking trial that I am excited about. Personally, I want to develop better skills and a more intentional/regular nature connection practice."

"More motivation and happiness in my life, meeting people, being outside in the environment and learning more about it."

"Better connection with nature/new ideas/new enthusiasm for incorporating into my daily life".

"Health benefits from connecting with nature and other people"

4. Survey results

i) Nature connectedness diagram exercise (Appendix H)

Nature connectedness (self-assessed) improved from mean 3.5 (± 0.29 n= 4) at start to 4.8 (±0.75 n=4) at end for the 4 participants that completed both surveys.

Please circle the picture below which best describes your relationship with the natural environment.
How interconnected are you with nature?

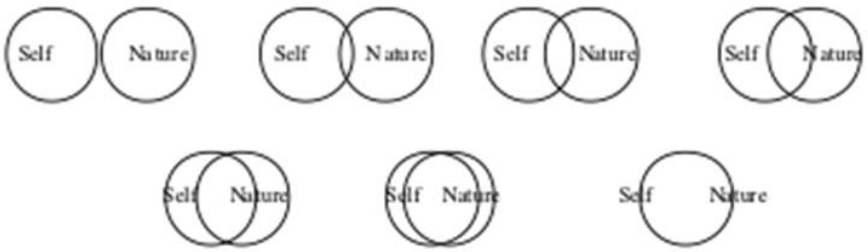


Figure 1: Nature connectedness diagram- L to R where top left no.1 (disconnected) to bottom right (connected)

ii) LAB-A1 General Wellbeing Survey (Appendix J) (Figure 2)

General wellbeing improved from the start (mean 37.3 ± 3.53 n= 3) compared to the end (56.3 ± 8.41 n= 3) in those participants that completed both start and end surveys. One participant was also excluded from the analysis as experienced a significant health issue during the trial and she reported that it was significantly influencing her wellbeing. On average, wellbeing for these participants shifted positively from distress/serious to marginal/distress (figure 2).

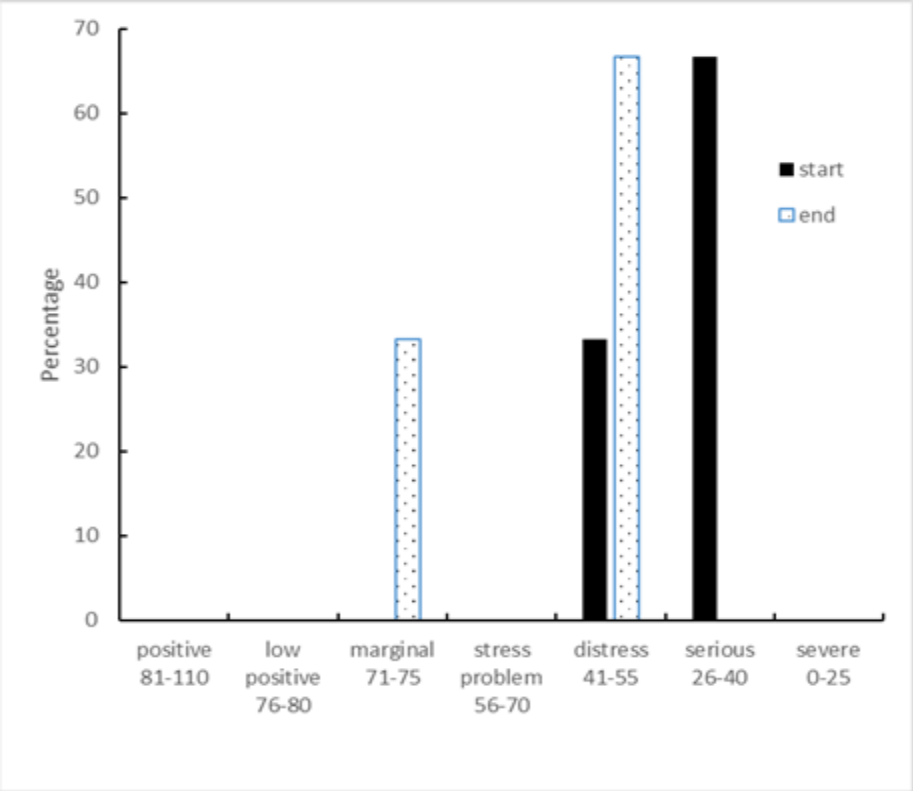


Figure 2: General wellbeing of participants that completed start and end surveys (n=3)

iii) Art exercise "Draw your relationship to nature"

Comparison not made in drawings at start and end but was intended for self-reflection by participants.

iv) Post-Course Survey (Appendix L)

Wellbeing and nature connectedness improved for most participants between the start and end of the trial (Tables 1 and 2). Small sample sizes precluded statistical comparisons. All participants in the trial thought that conserving the environment was important at the start as well as at the end suggesting a bias in participation.

Table 1: Comparison of responses pre and post-trial when asked "How connected to nature do you feel in your current life?"

Person	Pre-course survey	Post-course survey
1	"It's calling to me, but I haven't been listening. It's like a really healthy	"Fairly connected. I walk out in nature and breathe it in about every second day. I have brought plants inside my

	relationship that I'm mostly neglecting."	house and am planting and taking care of succulents in my backyard too."
2	"Moderately	"Moderately connected."
3	"Not very. Used to be more, but rather a hermit these days!"	Survey not completed
4	Less connected than I'd like to be".	"Very connected"
5	"Alot" (sic).	"Alot" (sic).

Table 2: Comparison of responses pre and post-trial for a range of questions using a 5-point Likert scale

Question	Pre-course survey	Post-course survey
How important do you think nature connection is for health and wellbeing on a scale of 1-5 where 1 is not at all and 5 is very important?	Person 1: 5 Person 2: 5 Person 3: 5 Person 4: 5 Person 5: 5 **Average rating=5**	Person 1: 4 Person 2: 5 Person 3: withdrew Person 4: 5 Person 5: 5 **Average rating=4.8**
How often do you currently connect with nature on a scale of 1-5 where 1 is never and 5 daily or more?	Person 1: 3 Person 2: 5 Person 3: 2 Person 4: 2 Person 5: 5 **Average rating=3.4**	Person 1: 4 Person 2: 5 Person 3: withdrew Person 4: 4 Person 5: 5 **Average rating=4.5**
How would you rate your current level of wellbeing on a scale of 1-5 where 1 is poor and 5 is excellent?	Person 1: 1 Person 2: 2 Person 3: 3 Person 4: 1 Person 5: 3 **Average rating=2.0**	Person 1: 3 Person 2: 3 Person 3: withdrew Person 4: 4 Person 5: 1 **Average rating=2.75**
How would you rate your awareness of the natural environment on a scale of 1-5 where 1 is poor knowledge and 5 is excellent?	Person 1: 4 Person 2: 3 Person 3: 2 Person 4: 5 Person 5: 3 **Average rating=3.4**	Person 1: 4 Person 2: 4 Person 3: withdrew Person 4: 5 Person 5: 3 **Average rating=4.0**

How important do you think conserving the environment is on a scale of 1-5 where 1 is not important and 5 is very important?	Person 1: 5 Person 2: 5 Person 3: 5 Person 4: 5 Person 5: 5 **Average rating=5**	Person 1: 5 Person 2: 5 Person 3: withdrew Person 4: 5 Person 5: 5 **Average rating=5**

Table 3: Trial Benefits

Potential Benefits	**Benefits participants anticipated- pre-course survey (n=5)**	**Benefit participants actually gained- post course survey (n=4)**
A new opportunity for physical activity	Person 1: 3 Person 2: 3 Person 3: 4 Person 4: 4 Person 5: 3 **Average rating=3.4**	Person 1: 4 Person 2: 2 Person 3: withdrew Person 4: 3 Person 5: 3 **Average rating=3**
A new opportunity to learn about and/or value the local environment	Person 1: 3 Person 2: 3 Person 3: 4 Person 4: 4 Person 5: 3 **Average rating=3.4**	Person 1: 4 Person 2: 4 Person 3: withdrew Person 4: 4 Person 5: 3 **Average rating=3.75**
A new opportunity to meet people and make friends	Person 1: 2 Person 2: 2 Person 3: 4 Person 4: 3 Person 5: 3 **Average rating=2.8**	Person 1: 4 Person 2: 3 Person 3: withdrew Person 4: 3 Person 5: 3 **Average rating=3.25**
Improvement in overall feeling of wellness	Person 1: 4 Person 2: 3	Person 1: 4 Person 2: 3

	Person 3: 4 Person 4: 4 Person 5: 3 **Average rating=3.6**	Person 3: withdrew Person 4: 4 Person 5: 3 **Average rating=3.5**
Motivation to engage in outdoor activities more often	Person 1: 4 Person 2: 3 Person 3: 4 Person 4: 4 Person 5: 3 **Average rating=3.6**	Person 1: 4 Person 2: 4 Person 3: withdrew Person 4: 4 Person 5: 3 **Average rating=3.75**

Participants were asked to indicate what level of benefit they anticipated (pre-course) and the benefits actually experienced (post-course) from a list of potential benefits, where 1=None, 2=Low, 3=Medium, 4=High (Table 3).

At the start of the trial, the participants anticipated that the greatest benefits would be improvements in wellbeing and motivation to engage in outdoor activities more often (Table 3). However, at the end of the trial, the greatest actual benefits for participants were an opportunity to learn about and/or value the environment and motivation to engage in outdoor activities more often. The greatest increase between anticipated benefit and actual benefit (and therefore the unexpected benefit) was the opportunity to make new friends. The trial did not meet their expectations in terms of providing a new opportunity for physical activity. However, it does seem to have provided participants with motivation to engage in outdoor activities more often. This is consistent with verbal feedback which suggested participants were expecting, or would have preferred the sessions to mostly consist of outdoor group activities, rather than the information sessions (half of which took place via Zoom). However, the information sessions were perhaps more helpful than expected in terms of motivating participants to engage in their own outdoor activities, and activities of nature connection, in their own time and local areas, which was the intention of the trial.

When participants were asked if they had any other comments regarding what they gained from the program they responded as follows:

> *'A better understanding of how connecting with nature is great for our health and how changing society is pulling us away from this and what we can do to get back to nature."*
>
> *"Diverse locations and subjects that provided eco stimulation".*
>
> *"If you can't get out for a "day in nature" for instance, Small things count - houseplants, mindfulness in nature, earthing, journaling, watching the stars/moon, hugging actress (sic) etc to keep you connected to nature".*
>
> *"Being inspired by new ideas and activities was great, but one of the greatest impacts was having a group of peers to share nature experiences with. This inspired me to continue, to notice more in nature and take part in more activities, because I had a group to report back to (sic) and people who were interested in hearing my experiences. Without this, motivation*

wanes somewhat."

When asked what new nature connection activities they had participated in outside the session of the program, participants commented:

> *"Plants inside my house. Planted more in pots in backyard. Breathing with trees. Organising hikes and barefoot time."*
>
> *"Forest bathing Eco Volunteering".*
>
> *'Houseplant collection, earthing, paying more attention to nature in general on an almost daily basis".*
>
> *"Nature drawing, mindfulness in nature, researching what I have come across in nature."*

COURSE SATISFACTION

100% of participants indicated that participation in the trial had made them 'very much' want to participate in similar programs/activities in the future. Three out of four indicated that participation made them 'very much' likely to recommend the nature prescriptions program to their friends and/or family, with one selecting that they were 'somewhat' likely to do so. All participants indicated they found the Nature Prescriptions Facebook group and Google calendar useful, although the calendar wasn't geographically relevant for the participant who ended up residing in Victoria for the duration of the trial.

SUGGESTIONS FOR IMPROVEMENT

When asked which session or aspect of the program they liked least, one responded *"none"*, and another commented,

> ***"****There was nothing I didn't like- I would have preferred face to face but it was also convenient to use zoom (less time and travel) and the content was interesting****."***

However, another participant indicated they did not enjoy the Zoom sessions due to some issues they were having with the technology,

> *"Listening to videos over zoom which has previously been recorded on zoom, because they were indistinct/not clear and therefore I couldn't understand a lot of it and had to concentrate very hard."*

And another stated,

> "*Being on Zoom a lot. It felt rushed, fitting in so much in the Zoom calls. So few participants in the course."*

When asked if there were any aspects that they would recommend changes to or any suggestions on how to improve the program, only three of the four participants responded. Responses were as follows:

> *"Create an official public website with all of this information we've learnt, so that people can have access without a prescription, and can access this info at their own pace. Also important to have an open form of access, as not everyone has various social media accounts."*
>
> *"More practical sessions- i.e. actually connecting with nature with the group, not just learning about it."*

"More groundedness and embodiment in facilitation style/holding the space. I felt leads were under stress and pressure. Maybe less activities and more spaciousness in the program. Especially as this is in part to help with anxiety! A social engagement officer."

FAVOURITE ASPECTS

The face-to-face sessions, forest bathing week and shared experiences were clear highlights for participants, with one participant also highlighting the emphasis on acknowledging country and learning about Aboriginal culture throughout the course. When asked which session or aspect of the program they liked the best, participants responded as follows:

"When we went out into nature and did the mindfulness activity, focusing on our senses and movement through nature."

"Getting together to explore and learn new stuff".

"Face to face, especially the forest bathing and the nature festival day"

"Botanic Gardens tour. Weekly check-ins to hear and share what each other had discovered and experienced during the week. I liked that Indigenous respect and language was valued and included."

THE FUTURE

Participants all considered it important for South Australia to have a Nature Prescriptions Program stating:

"Yes. South Australians need to know why and how connecting with nature can help them."

"Yes I think it's really important. Once you know the things you can do to connect more with nature (and WHY), there are so many small things you can do on a daily basis. Doing this can improve your mental and physical health, mostly for free!"

"Absolutely. SA is ground-breaking in many ways and this would be another great initiative. Mental health issues are growing, the system is under pressure and not solving problems sufficiently. Nature Prescriptions have been shown to be of great benefit overseas; lets offer this great resource in SA too!"

"Yes it provides an extension to wellbeing programs through participation and learning on a regular basis - fortnightly gatherings could be good."

Participants were asked to select what style of nature prescription program they think would be most attractive to participants in the future from a list of the following:

- *Individual one-on-one support from a coordinator*
- *A ten week group program with weekly sessions*
- *A four week program with weekly sessions*
- *One group session a month ongoing*
- *A website or social media platform with information and resources only*
- *Other (please specify)*

Interestingly, only one participant selected a specified format from the list, selecting the ten-week program with weekly sessions. All other participants selected other, and suggested multiple approaches were required, with one responding *"All of the above"*, and the others commenting:

"A website with information and resources, but also option of a group session once a month or even just a few times. The website should have at the forefront a short video explaining that anxiety, physical health, etc. are being impacted by our surroundings and both how much and the ways that we interact with nature are very important for improving our health and wellbeing."

"Group sessions PLUS website and social media info, weekly emails with a video and resources. At the monthly catch up we could discuss the learnings snd (sic) then DO an activity".

PARTICIPANT REFLECTIONS

Participants responded extremely positively to the trial providing the following testimonials:

"The nature prescriptions trial was a great resource for me to learn why connecting with nature is so important and the particular ways in which I can benefit from nature connection. In our current society most people are so disconnected from nature, cosied and comfortable in houses and buildings, some people don't see the sun at all on a work day. Learning how to work nature into our busy schedules, bring it into our spaces, and how to prioritise our health, could give us strategies that end up giving us more time, and would benefit most South Australians struggling with their health and stress." – Melissa (course participant)

"Explored new and interesting topics around the nature prescription idea while visiting and experiencing new locations from a well being perspective." – Jen (course participant)

"Nature Prescriptions are very beneficial. Once you know the things you can do to connect more with nature (and WHY), there are so many small things you can do on a daily basis. Doing this can improve your mental and physical health, mostly for free!" – Sara (course participant)

"I was so pleased to take part in this wonderful, innovative program. The ideas and experiences offered inspired and motivated me to try new ways to connect with nature. Having a weekly group of like-minded peers and passionate facilitators to connect and share our findings with was further motivating and engaging. My passion for nature connection was re-ignited and expanded. I would highly recommend this to feel more alive, grounded, inspired, connected, calm and appreciative of the wonder of the green world around us. Its beauty is right there, waiting for us to enjoy and be nourished by!"- Sarah (course participant)

"Thank you for all the efforts you put into providing this ground breaking program".

5. Budget

Categories	$	Detail
Coordinator/facilitator	18232	280.5 hrs @$65/hr Feb-June
consumables	435	catering and stationery
videos	3053	for presentations and social media
consultant	550	Connecting to country session

Total	**$22,270**	

Total budget spent was $22,270 (primarily coordinator costs for February –June 280.5 hrs). Considerable in-kind was also provided by the Green Adelaide project manager, Professor Drew Dawson and City of Adelaide trainee and University of SA students. In-kind was also provided by utilising existing resources and activities and from guest speakers.

DISCUSSION

Key findings were:

1. **The trial generated a lot of interest with a range of organisations wanting to assist but few participants registered for the trial.**

   Despite minimal media coverage (1 Facebook post, flyers and 1 Sunday Mail article), more than 15 GPs (including 1 Tasmanian GP) and >15 nature connection agencies/groups contacted Green Adelaide expressing interest in being involved. While there was no shortage of nature connection groups/agencies keen to be involved, few health agencies/groups responded highlighting the need for health agencies to be actively involved in the coordination and leadership of the health aspects.

   While the two participating GPs prescribed (or recommended) the trial to >30 suitable patients, and 17 people emailed expressions of interest in participating in the trial, only 6 people registered for the trial. Reasons given for not pursuing the trial included: difficulties meeting the suitability criteria, obtaining a referral from their GP, commitment fatigue, time poverty, and concern regarding not knowing what the trial involved and that it sounded strange. The low participation in this trial was also probably due to nature prescriptions being rarely used in Australia and their unfamiliarity to the general community. As well, targeting specific groups that needed to meet a number of conditions was useful for the research component of the trial but restricted suitability for participation. Anxiety/depression is also often associated with low motivation and confidence which may have further restricted participation and confirmed the challenges associated with the target cohort. Similar high dropout rates between referral and registration of 68% were reported initially in the New Zealand Green Prescription Programs (Foley et al. 2011 as cited in Symons 2021). As well, prescription programs in the United Kingdom faced similar obstacles when first introduced with 60% uptake rates but low compliance rates (Lord and Green 1995 as cited by Symons).

   Symons (2021) investigated perceived barriers to participation in nature prescription programs for 15 people (including this trial's 6 participants) and found that the main barriers were lack of time, motivation, and hesitancy to interact with large groups of unfamiliar people. To address these barriers, participants recommended that future nature prescription programs should include activities that are engaging and physical, outside work hours, with groups of < 15 participants. Symons (2021) recommends that future research should investigate individual's attitudes and long held beliefs around nature interactions and establish a standardised definition of a nature interaction.

2. **Although the sample size was small, participants reported benefits in wellbeing, social connections and nature connectedness as measured by a range of scales.**

   General wellbeing improved from the start (mean 37.3 ± 3.53 n= 3) compared to the end (56.3 ± 8.41 n= 3) in those participants that completed both start and end surveys. Similarly, nature connectedness improved from mean 3.5 (± 0.29 n= 4) at start to 4.8 (±0.75 n=4) at end.

   Comments from participants at the end of the trial on what they gained were:

   "*A better understanding of how connecting with nature is great for our health"*

   "If you can't get out for a "day in nature" for instance, Small things count - houseplants, mindfulness in nature, earthing, journalling, watching the stars/moon, hugging a tree etc to keep you connected to nature".

"Being inspired by new ideas and activities was great, but one of the greatest impacts was having a group of peers to share nature experiences with. This inspired me to continue, to notice more in nature and take part in more activities, because I had a group to report back to".

Trial objectives and outcomes were:

Objective	**Outcome**
Objective 1: *To reduce barriers to nature contact such as cost, access, time poverty and skill, and to connect participants with the environment to improve their health/ wellbeing and environmental stewardship;*	Participants received weekly sessions designed to increase motivation and skill to connect to nature in their local area. Discussions on overcoming time poverty and increasing their nature dose were provided. The Facebook site and google calendar provided up to date information on nature based activities available. All participants reported a number of benefits such as improvements in wellbeing, social connections, connectedness to nature and motivation.
Objective 2: *To demonstrate the feasibility of how a nature prescription program could be delivered in South Australia and thereby assist in future communications;*	The feasibility was demonstrated and all requests from potential partners regarding the trial design (initial October 2020 meeting) were incorporated where possible. Information relevant to the trial has been collated in this technical report and video and will be available to groups/organisations considering designing nature prescription programs in the future. The trial provided a working example of one way a nature prescription program could be rolled out cost effectively and using existing resources to assist in future communications and evaluations.
Objective 3: *To demonstrate a consortium of partners across a wide range of sectors that are willing and able to support a nature prescription program being delivered in South Australia;*	Much interest and enthusiasm in the trial was received, especially from environmental agencies and research institutions across Australia and from other prescription programs operating overseas (list in 'Partners and supporters'). However, few health organisations/groups participated and it is recommended that in future trials, health agencies need to take a lead role in coordinating participation by health professionals and facilitating

	integration of prescriptions into the health care system.
Objective 4: *To raise the awareness of the role of nature in the promotion and prevention of mental health and wellbeing (SA Healthy Parks Healthy People Framework 2016-2021)*	The trial succeeded in raising awareness of the value of the environment for human health and wellbeing in South Australia through media, social media channels and presentations including national (Outdoor Health Symposium) and international (IUCN) forums.
Objective 5: *To provide information that can subsequently be evaluated to identify barriers for participation and make recommendations on how a much larger program could be delivered in South Australia.*	Despite low participation in the trial, valuable information was collated in this Technical Report that will be useful for subsequent evaluations and progression of nature prescription programs in Australia. The stage 2 appreciative enquiry approach has not been undertaken, (led by Appleton Institute) however, barriers for participants in this trial were evaluated by Symons in her Honours thesis (2021).

Key recommendations for future programs are:

1. Future programs will need a significant marketing and education campaign to demystify nature prescriptions in the Australian community.
2. A co-design approach which identifies the preferences of the target group will assist in optimising the design along with a range of options being provided e.g. face to face or one off sessions or website resources only or less intense programs e.g. meet monthly and linking in with existing programs e.g. park run and park of the month with coordination through environment centres and community centres could also be considered.
3. Future programs will need to have more involvement and leadership/coordination from health agencies in particular to coordinate the health aspects of a program. A nature prescription program is dependent on a functioning transdisciplinary approach and involvement of Primary Health Networks.

Conclusion

Despite low numbers, the trial succeeded in providing a working demonstration of a nature prescription program to facilitate future discussions; demonstrated a consortium of partners, demonstrated benefits for participants and provided valuable information on what worked and did not work for subsequent evaluations. This information will be useful for other groups/organisations that are seeking to deliver nature prescriptions in Australia and in determining the systems that would need to be in place to scale up and embed within GP practices. Integrating nature

prescriptions into the health care system in Australia has the potential to improve health and wellbeing in the community, reduce health care costs, foster environmental stewardship and reduce barriers to nature contact, especially in low socioeconomic groups.

This Trial supports Green Adelaide's Nature Education priority of connecting people to nature, highlights the importance of urban greening and the National Park City movement and demonstrates a commitment to supporting the MOU (Public Health Partner Authority) between the Department for Health and the Department for Environment and Water in implementing the SA Healthy Parks Healthy People Framework 2016-2021.

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APPENDICES

APPENDIX A – INFORMATION SHEET FOR GPS AND ALLIED HEALTH PROFESSIONALS

https://drive.google.com/file/d/1hs4vPliui2bEnJddti0nx0uq3_7UeYry/view?usp=sharing

APPENDIX B – INFORMATION SHEET FOR PARTICIPANTS

https://drive.google.com/file/d/140tniPECAxqFrOf2cHX_NoGP-P0RjoM4/view?usp=sharing

APPENDIX C – ETHERIDGE, M. 2021, 'GOING OUTSIDE THE BOX: GPS TRIAL BENEFITS OF NATURE', *THE SUNDAY MAIL*, 11TH APRIL.

https://drive.google.com/file/d/18V7uZdmTPIuUeUcEuoLwuBJiEt8L8m37/view?usp=sharing

APPENDIX D – NATURE PRESCRIPTION TRIAL PARTICIPANT TALKING POINTS

https://drive.google.com/file/d/1wfg_PMyV7XHqp7RVDbE4V6pEACtUBwJB/view?usp=sharing

APPENDIX E – DEW VOLUNTEER SAFETY PROCEDURE FORM

https://drive.google.com/file/d/1Xqx2KavBpEyGhJDU9W4rhSGCUVoFfOKa/view?usp=sharing

APPENDIX F – DEW ADULT TALENT RELEASE CONSENT FORM

https://docs.google.com/document/d/1lD0RSLtbTBMUFuZTVPj8gGsJlJH_ynEIe7bXr8qQYMQ/edit?usp=sharing

APPENDIX G – GREEN ADELAIDE NATURE PRESCRIPTION TRIAL CONSENT FORM

https://drive.google.com/file/d/1Vif02AhGHabbBsra3Bc4d2j7JNeYetwZ/view?usp=sharing

APPENDIX H – NATURE CONNECTEDNESS DIAGRAM EXERCISE

https://drive.google.com/file/d/16sPfLEj9-xemRBPtW8lQEF53U0SSE_79/view?usp=sharing

APPENDIX I – BEYOND BLUE – ANXIETY AND DEPRESSION CHECKLIST (K10)

https://www.beyondblue.org.au/the-facts/anxiety-and-depression-checklist-k10

APPENDIX J – LAB AI-I - GENERAL WELL-BEING SCALE

https://drive.google.com/file/d/1CmjIhUJ3Oc-45KxyP5roTZeY-shCVi9Y/view?usp=sharing

APPENDIX K – PRE-COURSE SURVEY (SURVEY MONKEY)

https://drive.google.com/file/d/18JohHI_6vg8yE4wQK-PmCfTDmsUplBf8/view?usp=sharing

APPENDIX L – POST-COURSE SURVEY (SURVEY MONKEY)

https://drive.google.com/file/d/1kLHj8JCv90SwTYwyw4QT9dxUFHEKYMko/view?usp=sharing

APPENDIX M – NATURE JOURNALLING FACT SHEET

https://drive.google.com/file/d/17ZVcXHPzFdmKp-Zw0S_tqZWVEgYOrdsw/view?usp=sharing

APPENDIX N – NATURE JOURNALLING RESOURCES

https://drive.google.com/file/d/1pgsPg9ANcIYIBPk7qnBYunIOpURFZ13G/view?usp=sharing

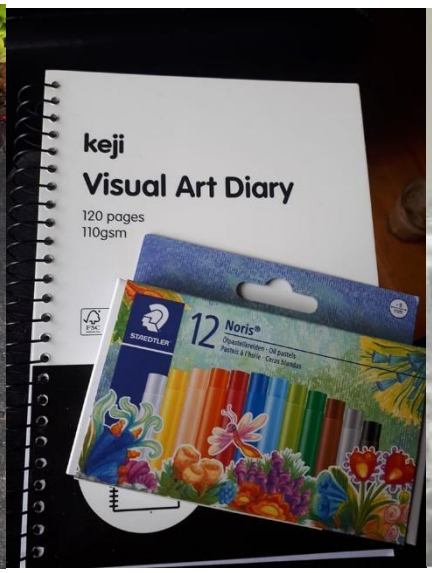
APPENDIX O – NATURE JOURNALLING IDEAS SHEET

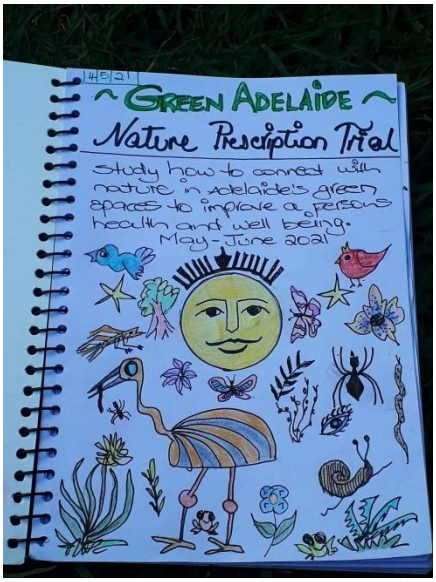
https://drive.google.com/file/d/1jj0ku_r7FV2DMnK8egct07PlP_tAXqMx/view?usp=sharing

APPENDIX P – IMAGES OF COURSE CONTENT

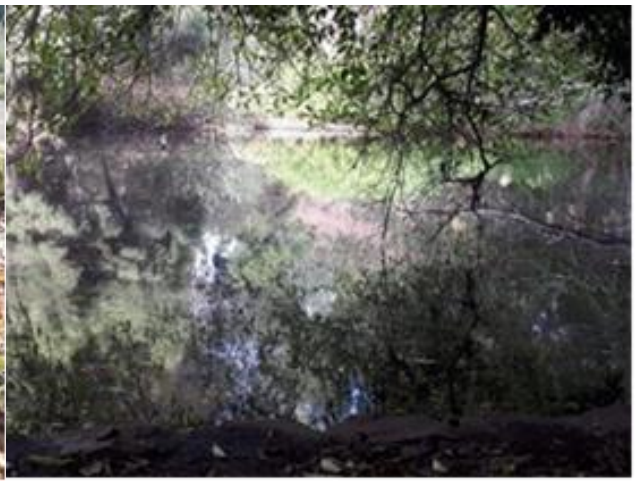
(Images from Keri Hopeward)

Week 1 (face to face): Introduction to Nature Connection-

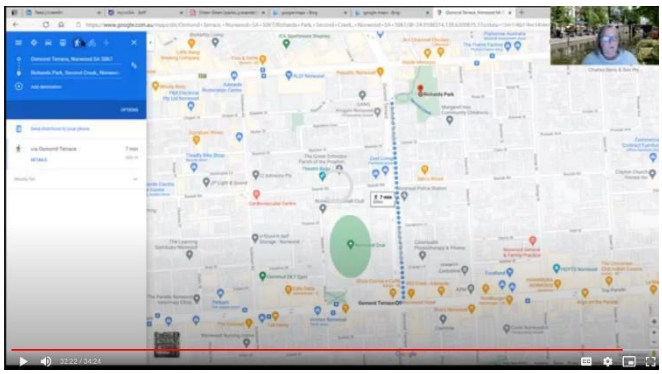




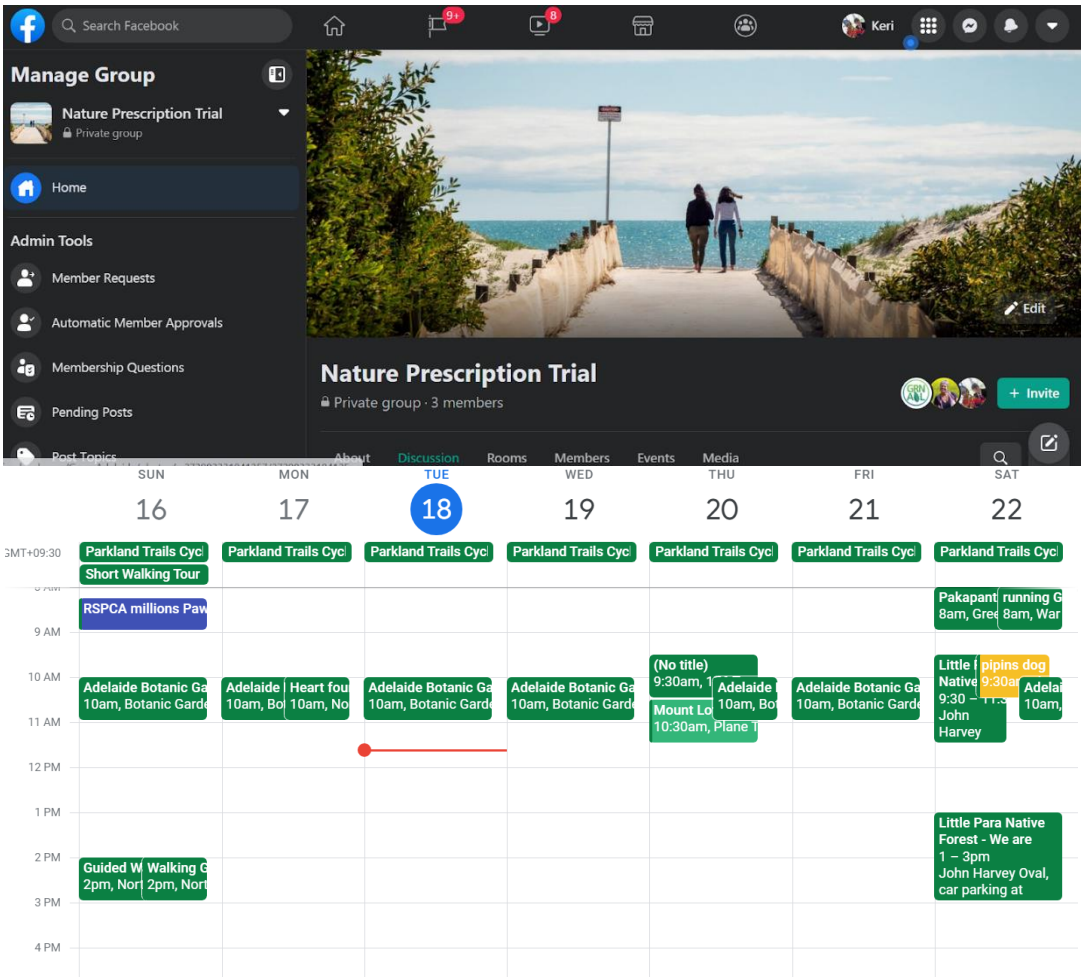
Week 2 (face to face): Nature connection and forest bathing-

Week 3 (zoom): Nature connection and your local green space-



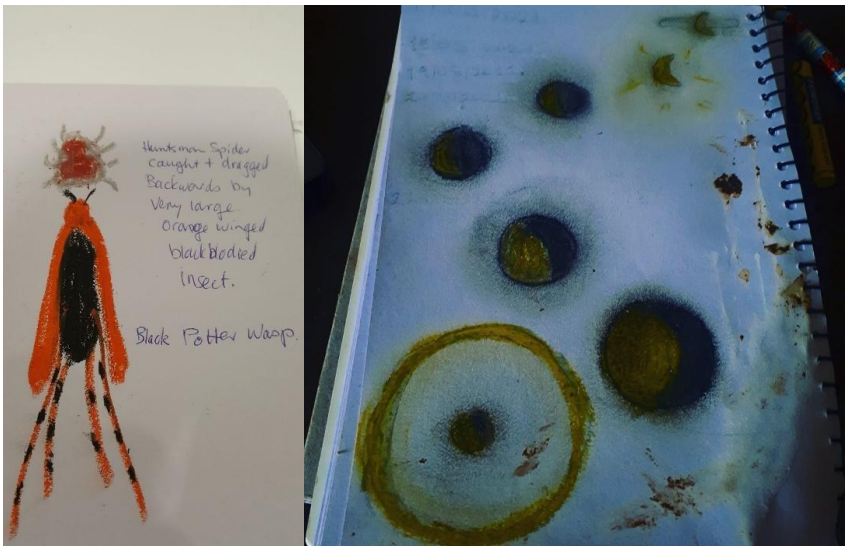
The Nature Prescription Trial Facebook Group (top) and Google Calendar (bottom).



Week 4 (zoom): Nature connection in your everyday-

Images: After observing the patterns in leaves outside their home, one participant created a leaf mandala, followed by some 'wall art' surrounding their workspace, with a leaf mural that encouraged them to take time out and observe nature through the natural course of their day. Source: Shared by participant via the Nature Prescriptions Trial Facebook Group.

Week 5 (zoom): Nature connection in your home and backyard-



Images: A 'Black Potter Wasp' from one participant's journal (left) and the moon challenge (right). **Source:** Shared by participant via the Nature Prescriptions Trial Facebook Group (left) and Keri Hopeward (right).

Week 6 (face to face): Connecting to country-