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ARTICLE



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Bringing nature into CAMHS inpatient services: reflections for the implementation and integration of training into practice

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ABSTRACT

Poor mental health is a global concern and is exacerbated by recent challenges concerning COVID-19 and the climate emergency, with significant consequences to individuals and to society. Increasing evidence demonstrates that nature-based approaches (NBAs) have numerous benefits to mental health services and the people they support with mental health needs. Despite these benefits, understanding how to integrate these approaches into practice is challenging. In this paper, we report our findings from a recent qualitative study with staff from a CAMHS inpatient unit who had recently undergone NatureWell Facilitator training. This is a particular approach to working with people in nature developed by The Natural Academy. Participants identified the importance of implementation of discreet, novel NBAs, as well as integrating nature into current practice, the benefits when fostering psychologically safe and therapeutic relationships with staff, and the clinical and operational factors when carrying out NBAs in these settings.

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Mental health; CAMHS; nature; ecopsychology; implementation

Introduction

Poor mental health is a global concern, causing personal suffering, social problems, affecting families, and creating a significant economic burden on society (Edwards, Goldie, & Elliott, 2016; Vos et al., 2015). In the first year of the COVID-19 pandemic, global prevalence of anxiety and depression increased by 25% (World Health Organisation, 2022). The climate crisis has been recognized as the biggest global health threat of the 21st century (Costello et al., 2009), with predicted huge and far-reaching negative impacts on mental health (Royal College of Psychiatrists, 2021). Many young people report the emotional toll of living in a climate emergency (referred to by some as eco-anxiety) and are fearful of the future (Hickman et al., 2021).

There is a growing evidence base for the role of nature to enhance health and wellbeing (Frumkin et al., 2017; Ten Brink et al., 2016; World Health Regional Office for Europe, 2016). Evidence demonstrates various benefits from engaging with nature, including psychological restoration, reduced depression, anxiety, sadness, fatigue, and stress-related symptoms (Bowler, Buyung-Ali, Knight, & Pullin, 2010; Cipriani et al., 2017; Murray et al., 2019; Thompson Coon et al., 2011). Furthermore, NBAs also promote recovery-oriented practices (Davidson, Rowe, Tondora, O'Connell, & Lawless, 2008; New South Wales Government, 2020), such as social cohesion, wellbeing, and empowerment (Coldwell & Evans, 2018; Cooley, Jones, Kurtz, & Robertson, 2020; Jennings & Bamkole, 2019; Lovell, Husk, Cooper, Stahl-Timmins, & Garside, 2015; Westphal, 2003).

As well as enhancing health and wellbeing, there is an increasing focus and evidence base for the role of NBAs to support those with mental health needs, particularly those accessing mental health services (Bragg & Atkins, 2016). In a wider context, preliminary evidence supports the role of green social prescribing (GSP) for promoting longer term physical and mental health (Leavell et al., 2019). Added to these potential benefits, at a time of climate and ecological crisis, and when services are increasingly stretched, these approaches also benefit from being scalable, low

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carbon interventions that enhance pro-nature behaviors (Lumber, Richardson, & Sheffield, 2017).

Despite the numerous benefits, meaningfully integrating NBAs into existing services can be challenging and staff often feel unable to lead on introducing such changes. This paper explores the factors associated with integrating NBAs into practice with child and adolescent mental health service (CAMHS) inpatient staff who had recently undergone naturebased facilitator training (The Natural Academy, 2018). Details of the Natural Academy and the NatureWell Facilitator training are contained in the Supplementary Materials.

Methods

Our approach was informed by a social constructivists paradigm to explore how knowledge is translated into social-mediated settings and used thematic analysis to explore and gather insights for implementing and integrating NBAs into current practice (Clarke, Braun, & Hayfield, 2015; Thomas, Menon, Boruff, Rodriguez, & Ahmed, 2014). Box 1 contains the interview schedule. Formal ethical approval was not required as this was a part of a service evaluation, but the project did follow the principles laid out in the Declaration of Helsinki.

Box 1. Interview Schedule

- 1. What are the current nature-based activities delivered by your service?
- 2. How do you see the NatureWell training and nature-based activities, more broadly, fitting into current healthcare delivery?
- 3. How did you find implementing nature-based approach into practice?
- 4. What impact do these approaches have on therapeutic relationships with the young people at the unit?
- 5. How do you see young people using these approaches in aiding their recovery during their time in your service and after discharge?

Results

Two researchers (DFH & MM) conducted a focus group and semi-structured interviews using Microsoft Teams with eight participants who underwent the training (see Table 1 for the participant demographics). The open-ended questions were designed to elicit participant experiences and insights concerning integration into practice. The interviews were recorded and transcribed verbatim. Both researchers independently read and coded two transcripts using NVivo 12

Table 1. Participant demographics.

Participant number	Gender	Occupation
Participant 1	М	Matron
Participant 2	F	Psychiatrist
Participant 3	F	Staff Nurse
Participant 4	F	Family Therapist
Participant 5	F	Staff Nurse
Participant 6	F	Charge Nurse
Participant 7	F	Teacher
Participant 8	F	Occupational Therapist

Pro and agreed on the coding framework. The rest of the interviews were compared-and-contrasted against this agreed framework.

We presented the themes to participants to member check our findings. We identified four themes: (i) activities and approaches used; (ii) benefits; (iii) practicalities; and (iv) training. Below, we describe each identified theme and relevant subthemes. Finally, we have included some initial patient feedback.

Activities and approaches used

The service implements NBAs in two ways. Firstly, by performing novel, distinct NBAs and, secondly, by integrating approaches into the unit's existing practice.

Distinct activities

Regular activities integrated into the ward timetable included gardening groups (in partnership with a local gardening group) and crafts. Most activities started/finished with a grounding exercise to engage the five senses, which participants had been trained to deliver. Participants encouraged patients to use the garden as a safe and peaceful space away from the ward environment. Patients undertook walks in local areas (e.g., the local park) and 'wild walks' to experience rural settings. Participants introduced walks themselves during their lunch periods.

Integrated activities

Participants discussed a range of ways they integrated nature into current activities. For example, when conducting formulations, assessments, educational, and therapeutic sessions. This was particularly useful for patients who struggled with engaging in more formal settings. Participants also discussed simple interventions such as bringing natural objects inside or drawing attention to the view through a window, methods that were particularly important during the more restrictive periods within the pandemic.

Benefits

Our findings identified a range of benefits to patients, staff, and staff/patient relationships. These are described in the subthemes below.

Emotional regulation

Engaging in NBAs and simply being present in nature helped patients regulate and respond to their emotions:

Even in terms of young people who are on the unit who are experiencing severe distress, quite often staff will open the door to the garden and take people out and it just seems calming. [Participant 4]

... use nature to manage their high arousal and emotion and maybe it's spending time outside doing some exercise ... [Participant 8]

Participants also found that engaging patients in nature through their five senses helped manage distress:

... being more aware of the colours and sort of the flowers and everything they are seeing just makes it a bit more of a mindful, distracting walk ... distracting them from what's on their mind and drawing them into other beauties elsewhere really. [Participant 5]

Relational security and engagement

Participants recognized how incorporating nature enhanced the therapeutic relationship. They described how being out in nature created a less restrictive environment that offered both physical and psychological 'space':

There is a lot of space for things, you don't feel ... the four walls thing, you don't feel like you are hemmed in ... [Participant 2]

... just going out with someone and you can ask the same questions and get the same information ... because people relax more, they kind of open up a bit more as well. [Participant 8]

Participants also reflected on how incorporating nature helped equalize the power dynamics when supporting patients and, consequently, patients were able to discuss their current situation and their recovery more candidly:

... you're kind of you're both in nature together so your kind of barriers are down ... it's just like you're two people out in nature rather than ... therapist and this ... person that needs help. [Participant 8]

... not necessarily sitting looking at somebody and making eye contact, which can be quite

confrontational in a therapeutic session, but just being side by side and having an informal chat ... less threatening, more relaxing, lots of stuff comes out ... being in a natural environment helps that process. [Participant 7]

Sustainable and recovery-oriented approach

Participants discussed how making links with a patient between nature and their mental health provided patients with the opportunity to take an active role in their own recovery and connected them with community-based services and activities that could help beyond discharge:

... it's only two minutes and that's possibly a skill now that they have got that they can use whenever they are outside ... if they go on home leave, they've got that little mindfulness experience. [Participant 8]

... somebody has found that really useful actually helping them tune into what is available locally once they are discharged. [Participant 2]

In fact, his last words to me on discharge were ... I said to him keep up all this gardening stuff ... keep up the mindfulness won't you he says yeah I am going to be doing gardening. [Participant 7]

Participants highlighted the importance of family involvement. NBAs offered opportunities for positive family experiences and family engagement that supported the continuation of such activities:

... for weekend activities I talk about going out into the countryside, being out in the fresh air and it's not expensive so it's something that I think I'm encouraging families to do all the time. [Participant 4]

Staff benefits

Participants reflected on the benefits of taking time during their lunch break to go outside for a walk when they may not have considered this before the NatureWell training:

... I always come back thinking I'm so glad I got out, you just feel refreshed ... a different kind of fresher approach when you're coming back to your work. [Participant 8]

... being out of this building was really beneficial for us, it helped with burnout. [Participant 3]

NBAs such as the staff walks, as well as the training itself, provided opportunities for participants to form strong peer-to-peer relationships: You can have a bit of an offload with your colleagues which I wouldn't normally do on the unit or in the office so much, so I think we've kind of got a slightly deeper understanding of the colleagues on the ward, our relationships are better because of it. [Participant 8]

Practicalities

Our findings highlighted some practical considerations for integrating NBAs. These include patient, operational, and cultural factors. The subthemes for each are described below:

Patient factors

Participants discussed several key considerations concerning engagement when carrying out activities. One participant reflected on the difficulty in conducting group activities when not all patients are engaged:

... you get a couple of young people, who are just wanting to be silly and set others off and um the whole group thing can be quite difficult. [Participant 7]

Other participants reflected on the importance of discussing and co-designing activities that may enhance engagement and uptake:

... you would always have a conversation with them about what it is they wanted to do. [Participant 7]

... informing young people on what's going to happen, so they are on board and engaged, otherwise it won't be successful. [Participant 4]

NBAs presented specific challenges for patients with certain clinical presentations:

... we get a lot of young people with OCD type issues who think that they can't touch anything dirty. [Participant 7]

Participants discussed different aspects of risk management that had to be considered for specific patient groups, for example, those with eating disorders such as anorexia nervosa:

... dependent on their activity level dictates how far we can go. When we have people that have all been a decent weight, where we have been able to take snack with us and walk a lot further ... [Participant 3]

Non-patient factors

Participants highlighted the amount of time required for planning NBAs and the challenges of fitting them into a busy day full of multiple responsibilities:

It really takes a lot of organization just to get out and do it on time. [Participant 2]

... the nurses' time gets eaten into like oh there is a phone call for you here or this parent needs speaking to ... you suddenly realize you have got 20 minutes left. [Participant 5]

Other participants reflected on the difficulties associated with having enough staff in place to carry out outdoor activities:

... if you are going outside there's generally more risks so you need more staff ... there's equipment so sometimes you can't get the staff to support you. [Participant 8]

Staff and culture

Participants discussed the importance of a team-wide approach and shifting the ward culture and ethos towards understanding the value of nature and NBAs:

If we just talk about it with the wider team and in business meetings so it's not this serious thing, but that everyone can get behind it. [Participant 1]

... we are very wary here of looking after our natural environment. Doing things like monitoring our energy use, making sure we recycle. [Participant 7]

Participants noted the impact of their own attitude when introducing NBAs to patients:

... I think it is important because you are then enthusiastic about what you are doing. If you weren't enthusiastic, you're not gonna win are you with them. [Participant 7]

Importance of training

Participants reflected on how the NatureWell training provided them with the confidence and passion to integrate NBAs into their current practice:

I think experiencing it myself on the course made me open my eyes to the benefits of it ... it gave me confidence to be able to use it more with my work. [Participant 8]

Participants discussed how having a core group who underwent the training created a cohort of motivated multi-disciplinary team members with a consistent approach to carrying out NBAs:

I think one of the benefits of the training has been there is now a bigger group of us who are think about this which has been really helpful. [Participant 2]

Initial patient feedback

We have already received initial positive feedback from patients regarding the integration of NBAs in

their treatment. Patients described the freedom felt during wild walks and how it helped reduce their anxiety and tension felt on the ward. Families who attended the Families in the Wild ecotherapy woodland day described a sense of connectedness and a rare opportunity for them to come together as a unit.

Discussion

Our findings highlight several insights into the therapeutic and practical considerations associated with integrating NBAs into practice. First, the importance of creating and supporting a team-wide approach to building the ethos of NBAs by enacting sustainable behaviors and by involvement of multiple MDT members. Second, the co-benefit of introducing a focus on staff wellbeing in nature with possible burnout prevention impacts. Third, the importance of training and support to provide the consistency and structure for integrating NBAs into practice. Finally, mental health services can undertake distinct NBAs, but there are also many benefits to incorporating them into existing practice. Indeed, NBAs do not have to be resource-heavy activities and can be as simple as sharing a view of the sky, encouraging patients to spend time outside noticing the beauty of nature or taking regular green walks.

Our findings align with the principles of recoveryoriented practices, which form the important facets of individualized mental healthcare (Davidson et al., 2008; New South Wales Government, 2020). Engaging in nature can enhance psychological safety, helping patients to candidly discuss their situation and recovery, which is an important underpinning of personcentred care (Hunt, Bailey, Lennox, Crofts, & Vincent, 2021). Opportunities for patients to speak up and understanding the role of the environment can create meaningful therapeutic relationships with patients and positively impact their experiences and outcomes (Flückiger, Del Re, Wampold, & Horvath, 2018; Ryan, Berry, & Hartley, 2021; Ryan, Berry, Law, & Hartley, 2021).

Exploring NBAs also provides sustainable opportunities for patients that they can utilize beyond discharge. Involving community partnerships and GSP provides a possible solution to identified resourcing issues and provides additional expertise that will boost the quality of NBAs delivered.

Our findings also illuminate some of the challenges of tailoring NBAs that are fit-for-purpose for clinical populations. Our findings further highlight the importance of experience-based co-design when considering the quality of healthcare delivered by tailoring NBAs offered to meet the needs and interests of the patients (Robert, 2013). This keeps patients at the centre of NBAs and further promotes the chances of them carrying on these activities in the longer-term.

The main limitation of our paper is the small sample size, determined by the number of people who attended the training. This will impact the generalizability of the insights we received from the participants. However, this paper is intended as an initial exploratory discussion to stimulate further research in this area.

The climate crisis and COVID-19 pandemic press the importance of engaging with nature for health. Fostering an appreciation and connection to nature provides wide-ranging health and well-being benefits alongside an increased sense of stewardship of our natural environment. Weaving NBA into our work is a sustainable healthcare option that mental health services should explore into the future.

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Author contributions

DFH led the concept and design of the evaluation, co-led the interpretation of data and led the drafting of the article. MM co-led the interpretation of data and revising the article. CM and MC supported the interpretation of data and revising the article.

Disclosure statement

DFH and MM report no conflicts of interest. MC is the Director of Natural Academy Community Interest Company which offers the NatureWell training. CM reports that they were a participant in the training and took part in the evaluation described and are now being trained by Natural Academy to be paid to deliver sessions.

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References

Bowler, D. E., Buyung-Ali, L. M., Knight, T. M., & Pullin, A. S. (2010). A systematic review of evidence for the added benefits to health of exposure to natural environments. *BMC Public Health*, 10(1), 456–465. https://doi.org/10.1186/1471-2458-10-456

- Bragg, R. A., & Atkins, G. (2016). A review of nature-based interventions for mental health care. Natural England.
- Cipriani, J., Benz, A., Holmgren, A., Kinter, D., McGarry, J., & Rufino, G. (2017). A systematic review of the effects of horticultural therapy on persons with mental health conditions. *Occupational Therapy in Mental Health*, 33(1), 47–69. https://doi.org/10.1080/0164212X.2016. 1231602
- Clarke, V., Braun, V., & Hayfield, N. (2015). Thematic analysis. In A. J. Smith (Ed.), *Qualitative psychology: A practical guide to research methods*. (3rd ed. pp. 222–248). Sage Publications.
- Coldwell, D. F., & Evans, K. L. (2018). Visits to urban green-space and the countryside associate with different components of mental well-being and are better predictors than perceived or actual local urbanisation intensity. *Landscape and Urban Planning*, 175, 114–122. https:// doi.org/10.1016/j.landurbplan.2018.02.007
- Cooley, S. J., Jones, C. R., Kurtz, A., & Robertson, N. (2020). 'Into the Wild': A meta-synthesis of talking therapy in natural outdoor spaces. *Clinical Psychology Review*, 77, 101841. https://doi.org/10.1016/j.cpr.2020. 101841
- Costello, A., Abbas, M., Allen, A., Ball, S., Bell, S., Bellamy, R., Friel, S., Groce, N., Johnson, A., Kett, M., Lee, M., Levy, C., Maslin, M., McCoy, D., McGuire, B., Montgomery, H., Napier, D., Pagel, C., Patel, J., ... Patterson, C. (2009). May 16 Managing the health effects of climate change: Lancet and University College London Institute for Global Health Commission. *The Lancet*, 373(9676), 1693–1733. https://doi.org/10.1016/S0140-6736(09)60935-1
- Davidson, L., Rowe, M., Tondora, J., O'Connell, M. J., & Lawless, M. S. (2008). A practical guide to recovery-oriented practice: Tools for transforming mental health care. Oxford University Press.
- Edwards, J., Goldie, I., & Elliott, I. (2016). Fundamental facts about mental health. Mental Health Foundation.
- Flückiger, C., Del Re, A. C., Wampold, B. E., & Horvath, A. O. (2018). The alliance in adult psychotherapy: A meta-analytic synthesis. *Psychotherapy*, 55(4), 316–340. https://doi.org/10.1037/pst0000172
- Frumkin, H., Bratman, G. N., Breslow, S. J., Cochran, B., Kahn, P. H., Lawler, J. J., Levin, P. S., Tandon, P. S., Varanasi, U., Wolf, K. L., & Wood, S. A. (2017). Nature contact and human health: a research agenda. *Environmental Health Perspectives*, 125(7), 075001. https://doi.org/10.1289/EHP1663
- Hickman, C., Marks, E., Pihkala, P., Clayton, S., Lewandowski, R. E., Mayall, E. E., Wray, B., Mellor, C., & van Susteren, L. (2021). Climate anxiety in children and young people and their beliefs about government responses to climate change: a global survey. *The Lancet Planetary Health*, 5(12), e863-73-e873. https://doi.org/10. 1016/S2542-5196(21)00278-3
- Hunt, D. F., Bailey, J., Lennox, B. R., Crofts, M., & Vincent, C. (2021). Enhancing psychological safety in mental health services. *International Journal of Mental Health Systems*, 15(1), 33–38. https://doi.org/10.1186/ s13033-021-00439-1

- Jennings, V., & Bamkole, O. (2019). The relationship between social cohesion and urban green space: An avenue for health promotion. *International Journal of Environmental Research and Public Health*, 16(3), 452. https://doi.org/10.3390/ijerph16030452
- Leavell, M. A., Leiferman, J. A., Gascon, M., Braddick, F., Gonzalez, J. C., & Litt, J. S. (2019). Nature-based social prescribing in urban settings to improve social connectedness and mental well-being: a review. *Current Environmental Health Reports*, 6(4), 297–308. https://doi. org/10.1007/s40572-019-00251-7
- Lovell, R., Husk, K., Cooper, C., Stahl-Timmins, W., & Garside, R. (2015). Understanding how environmental enhancement and conservation activities may benefit health and wellbeing: A Systematic Review. *BMC Public Health*, *15*(1), 1–8. https://doi.org/10.1186/s12889-015-2214-3
- Lumber, R., Richardson, M., & Sheffield, D. (2017). Beyond knowing nature: Contact, emotion, compassion, meaning, and beauty are pathways to nature connection. *PloS One*, *12*(5), e0177186. https://doi.org/10.1371/journal.pone. 0177186
- Murray, J., Wickramasekera, N., Elings, M., Bragg, R., Brennan, C., Richardson, Z., Wright, J., Llorente, M. G., Cade, J., Shickle, D., Tubeuf, S., & Elsey, H. (2019). The impact of care farms on quality of life, depression and anxiety among different population groups: A systematic review. *Campbell Systematic Reviews*, 15(4), e1061. https://doi.org/10.1002/cl2.1061
- New South Wales Government (2020). What is recovery oriented approach? [Internet]. [updated 2020 January 20; cited 2022 March 20]. Available from: What is a recovery oriented approach? - Principles for effective support (nsw.gov.au)
- Robert, G. (2013). Participatory action research: using experience-based co-design to improve the quality of healthcare services. In S. Ziebland, A. Coulter, J. D. Calabrese, L. Locock, (Eds.), Understanding and Using Health Experiences-improving patient care. (pp. 138–150). Oxford Scholarship Online.
- Royal College of Psychiatrists (2021). Position statement PS03/21: Our planet's climate and ecological emergency. [Internet]. [cited 2022 March 21]. Available from: https://www.rcpsych.ac.uk/docs/default-source/improving-care/better-mh-policy/position-statements/positionstatement-ps03-21-climate-and-ecological-emergencies-2021.pdf?sfvrsn=281fb719_8
- Ryan, R., Berry, K., & Hartley, S. (2021). Therapist factors and their impact on therapeutic alliance and outcomes in child and adolescent mental health-a systematic review. *Child and Adolescent Mental Health*, https://doi.org/10. 1111/camh.12518
- Ryan, R., Berry, K., Law, H., & Hartley, S. (2021). Therapeutic relationships in child and adolescent mental health services: A Delphi study with young people, carers and clinicians. *International Journal of Mental Health Nursing*, *30*(4), 1010–1021. https://doi.org/10.1111/inm. 12857
- Ten Brink, P. M., Schweitzer, J. P., Kettunen, M., Twigger-Ross, C., Baker, J., & Kuipers, Y. (2016). The Health and Social Benefits of Nature and Biodiversity Protection: Annex 1: 20 Cases, A Report for the European

Commission, ENV.B.3/ETU/2014/0039. [Internet]. [cited 2022, March 19]. Available from: https://ec.europa.eu/environment/nature/knowledge/pdf/Health%20and% 20Social%20Benefits%20of%20Nature%20-%20case% 20studies.pdf

- The Natural Academy (2018). NatureWell. [cited 2022 March 18]. Available from: https://www.naturalacademy. org/naturewell
- Thomas, A., Menon, A., Boruff, J., Rodriguez, A. M., & Ahmed, S. (2014). Applications of social constructivist learning theories in knowledge translation for healthcare professionals: a scoping review. *Implementation Science*, *9*(1), 54–20. https://doi.org/10.1186/1748-5908-9-54
- Thompson Coon, J., Boddy, K., Stein, K., Whear, R., Barton, J., & Depledge, M. H. (2011). Does participating in physical activity in outdoor natural environments have a greater effect on physical and mental wellbeing than physical activity indoors? A systematic review. *Environmental Science & Technology*, 45(5), 1761–1772. https://doi.org/10.1021/es102947t
- Vos, T., Barber, R. M., Bell, B., Bertozzi-Villa, A., Biryukov, S., Bolliger, I., Charlson, F., Davis, A., Degenhardt, L., Dicker, D., Duan, L., Erskine, H., Feigin, V. L., Ferrari, A. J., Fitzmaurice, C., Fleming, T., Graetz, N., Guinovart, C., Haagsma, J., ... Murray, C. J. (2015). Global, regional, and national incidence, prevalence, and years lived with disability for 301 acute and chronic diseases and injuries in 188 countries, 1990–2013: a systematic analysis for the Global Burden of Disease Study 2013. *The Lancet*, 386(9995), 743–800. https://doi.org/10.1016/S0140-6736(15)60692-4
- Westphal, L. M. (2003). Social aspects of urban forestry: Urban greening and social benefits: A study of empowerment outcomes. *Journal of Arboriculture*, 29(3), 137–147.
- World Health Organisation (2022). Mental Health and COVID-19: Early evidence of the pandemic's impact. World Health Organisation.
- World Health Regional Office for Europe. (2016). Urban Green Spaces and Health; A review of evidence. [cited 2022 March 18]. Available from: https://www.euro.who. int/__data/assets/pdf_file/0005/321971/Urban-green-spacesand-health-review-evidence.pdf