Migrant gardeners, health and wellbeing: exploring complexity and ambivalence from a UK perspective

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ABSTRACT

There has been increasing interest in how green spaces and gardening contribute to people's physical, mental and social wellbeing, and this interest has increased due to COVID-19. This article explores the particular experiences of migrant gardeners and the implications for their health and wellbeing. It draws on a qualitative research project that involved conducting semi-structured interviews with participants with migration heritage in and around a city in the north of England. The participants were recruited through purposive and snowball sampling; of the twenty-five participants, some were allotment holders, whilst the rest cultivated crops in their gardens or even on their balcony. Thematic analysis of the interview transcripts generated themes that reflect current definitions of health, encompassing physical, mental and social wellbeing. However, whilst the findings confirm many positive effects of gardening, they also point to some ambivalence in relation to cultivation, outdoor practices and health, with evidence of neutral or even negative effects at times. The article explores the implications of these findings for initiatives to encourage gardening, such as social prescribing, and to address 'green poverty'. An additional finding is that for gardeners with migration heritage, gardening can be understood in terms of cultural wellbeing. Consequently there is a need to broaden the concept of wellbeing to include this cultural dimension.

CONTRIBUTION TO HEALTH PROMOTION

- describes not only the positive but also ambiguous or even negative effects of gardening on the wellbeing of those with migration heritage
- explores the implications of this complexity for social prescribing and 'green poverty'
- identifies cultural wellbeing as a further dimension of health and wellbeing for those with migration heritage

Keywords: food cultivation, therapeutic landscapes, cultural wellbeing, social prescribing, green spaces

INTRODUCTION

With more than half of the world's population living in cities (World Bank, 2020), the role of green space as a social determinant of health has been highlighted (Collins *et al*., 2020). The dramatic restrictions experienced by many people with regards to their use of such space because of COVID-19, has increased this interest (see, for example: Poortinga *et al*., 2021). As well as exploring people's experiences of parks and the countryside, there is growing attention to the role of gardens, allotments and community gardens in relation to health and wellbeing (Dobson *et al*., 2020).

Given the evidence emerging from these studies that food cultivation and gardening are salutogenic, their role in the wellbeing of migrants, refugees and asylum seekers has become a recent focus, Whilst the emphasis is again on the health enhancing aspects of gardening and green spaces, there are some indications that gardening is not always good for health (Biglin, 2020: Rishbeth *et al*., 2019). Therefore, this article aims to explore the food production and consumption practices, and gardening experiences, of first and second-generation migrants and the complex and ambivalent ways that these relate to health and wellbeing. We begin by setting out a framework for considering health and wellbeing as they relate to gardening, and to migrants in particular, before describing the qualitative methodology used in the study on which the article is based, and discussing its main findings.

Gardening, health and wellbeing

Several major reviews have been published in recent years that explore the health benefits of gardening. Whilst there are continuing debates about definitions of health and wellbeing (see for example the recent work of Atkinson, 2020), the WHO definition of health as 'complete physical, mental and social well-being" (WHO, 2023) frames the findings of many studies. For instance, a report for the Kings Fund on public and private gardens, allotments and health (Buck, 2015, p.6) found evidence of 'a wide range of health impacts across mental and physical health'. Systematic reviews assessing the health benefits of allotment gardening conclude that the benefits of allotment gardening can be seen in terms of increased social connections, reduction of stress, healthier lifestyles, emotional responses to contact with nature and a sense of personal development and enhanced personal skills (Genter *et al*., 2015), and suggest there is thus clear evidence of the positive impact of community gardens on physical, social and psychological health (Gregis *et al*., 2021). A

meta-analysis covering a range of countries also concludes that '[a] regular dose of gardening can improve public health' (Soga *et al.*, 2017b, p.92)[1].

The links between gardening, health and wellbeing are shown to occur through various processes. In terms of physical health, self-reported benefits from gardeners' increased consumption of organic vegetables and fruit are noted (see, for example, Nova *et al*., 2020). Such food self- provisioning is thought to lead to healthier (household) diets in times of economic hardship (Djokić *et al*., 2018), although others argue that, increasingly, it is the middle classes who turn to urban cultivation (Ančić *et al*., 2019; White, 2015). The activity of gardening itself is also highlighted, with the suggestion that those with gardens report more physical activity and better health (de Bell *et al*., 2020) and fewer health complaints (Soga *et al*., 2017a). A positive link is also suggested between community gardening and BMI reduction (Kunpeuk *et al*., 2020), although interpretation of BMI has been argued to need more sensitivity to ethnicity (Adab, Pallan and Whidcup, 2018).

Research also emphasises the link between gardening as an activity, the experience of the surrounding environment, and mental health, such as improved self-esteem and mood (Wood *et al*., 2015), 'psychological restoration' (Young *et al*., 2020), mental wellbeing (Scott *et al*., 2015), emotional wellbeing (EWB)(Ambrose *et al*., 2020) and eudaimonic wellbeing, which comprises self-actualisation and meaning rather than hedonistic wellbeing or happiness (de Bell *et al*., 2020).

The final aspect of health and wellbeing often explored is social wellbeing, which is evidenced by experiences of social connectedness and increased social capital (Ong *et al*., 2019; Gray *et al*., 2022). The focus of such studies has been primarily on community gardens and allotments as places where interaction with others occurs. A particular example of this is the Incredible Edible Todmorden (IET) movement in the UK, which is known for its community food growing in public spaces; a study of IET concluded that it strengthened community cohesion (Farrier *et al*., 2019). However, private gardens can also have an impact on social wellbeing through, for example, sharing the produce of such gardens with others, and Symes *et al*. (2023) found that even belonging to a garden appreciation group can increase social connectedness.

Are gardening spaces always healthy?

The evidence for the benefits of gardens and allotments has led to the concept of 'therapeutic landscapes' (Kearns and Milligan, 2020; Taheri *et al*., 2021), as well as less biomedical terms such

[1] Interestingly, at least one language, Wolof (in Senegal), explicitly links wellbeing to green space as the root *natt* in *nattangue',* the word for well-being, means 'a verdant garden' or cultivated field (White, 2015).

as ‘enabling places’, and ‘healthy’ or ‘restorative’ spaces, which offer routes to health promotion (Bell *et al*., 2018). However, all the terms evoke the idea of the intrinsic properties of particular spaces yet, as in other work on landscapes, the suggestion is rather that what is important is how people *relate* to such landscapes; this relationality is critical (Kearns and Milligan, 2020) as their experiences are a ‘contingent outcome of situated person-place interactions’ (McGuire *et al*., 2022, p.2). Socio-spatial processes are also highlighted by Pitt (2014), who notes that the rhythmic activities of gardening are not experienced as therapeutic ‘flow’ in those community gardens that are stressful, due to problems with management and social relationships. Such work contributes to our understanding that gardens and allotments may produce not only restorative effects, but also challenging and therefore ambiguous effects, and this is not restricted to communal places; for instance, private gardens may be experienced as more stressful than allotments, possibly due to social norms (Young *et al*., 2020)

Thus, whilst most studies emphasise the salutogenic effects of gardening, there is emerging evidence of ambivalent experiences and potentially pathogenic effects on health. For gardeners with migration heritage these aspects can be further amplified, and it is to this growing research literature we now turn. Whilst there is reference to the physical health benefits of gardening and access to fresh produce (Filkobski, Hartwig and Mason, 2016; Dyg *et al*., 2020; Biglin, 2020), the prominent themes in these studies relate to the role of place, emotional and psychological health, and social wellbeing.

Migrants, gardening and wellbeing: cultural practices and the role of place

Australasian research highlights backyard gardens as important for migrants’ engagement with place (Head *et al*., 2004), where they can forge ‘a new sense of self and place in their adoptive country’ (Li *et al*., 2010, p.786). Migrants can use their gardens to link their past and present lives in hybrid forms (Morgan *et al*., 2005; Graham and Connell, 2006), although differences in the gardening practices of first- and second-generation migrants have been noted (Head *et al*., 2004). In our own UK study of migrant gardeners, we conclude that ‘memories and traditions, hybrid practices and adaptation and collective identity … were woven into their landscaping practices’ (Gerodetti and Foster, 2016, p.13).

From these studies, the connections that migrant gardeners make between their gardening practices and their identities are clear, as are the links that can be made with eudaimonic wellbeing referred to earlier (de Bell *et al*., 2020). Migration involves a whole range of experiences shaped by different reasons for, and pathways of, migration. Thus the role of gardening in recovery for those who have

experienced trauma can be particularly pertinent for refugees (Abramovic *et al*., 2019; Taylor and Lovell, 2015), but what all migrants share is a disconnection (voluntary or involuntary) from their place, soil and growing spaces, a yearning for which might be addressed through cultivating traditional crops and using traditional practices (Gerodetti and Foster, 2016).

Closely linked to the effects of gardening on mental and emotional wellbeing are the implications for the social wellbeing of migrants. Gardening not only connects migrants with their home country, 'transferring cultural practices across generations' (Strunk and Richardson, 2019, p.844), it can also strengthen community self-reliance (Taylor and Lovell, 2015) and increase social connectedness (Harris *et al*., 2014). Community gardening has a role in linking migrants to their new homes and providing a safe space for 'needed socialization, self-actualization and thereby place-attachment' (Egerer *et al*., 2019, p.10); it also functions as a community anchor, where different groups can meet (Filkobski *et al*., 2016).

The range of research explored here suggests very similar issues across many different countries and migrant populations. Drawing together these threads, there is clearly evidence of the positive and therapeutic effects of gardening on all dimensions of the health of migrants and refugees (Hartwig and Mason, 2016; Dyg *et al*., 2020; Charles Rodriguez *et al*., 2022). A recent qualitative study by Biglin (2020 explores the role of allotment gardening in the UK in improving not only social inclusion and physical health, but also the autonomy of refugee allotment holders, and offers an explanation for *why* this may be so, suggesting that 'sensory, embodied and re-territorialized ways of place-making were *how* the allotment acted therapeutically' (Biglin, 2020, p.7).

What receive less attention however are the indications of more nuanced or even harmful effects. Dyg *et al*. (2020) comment on possible food safety issues through soil contamination, whilst Abramovic *et al*. (2019, p.700) conclude that migrants' sense of loss can be reinforced 'when traditional practices cannot be employed and culturally important foods are challenging to grow'. Biglin (2020) also suggests gardening may evoke homesickness for such groups. In addition, Rishbeth *et al*. (2019) point out that allotments and community gardens may feel unwelcoming to refugees and asylum seekers. Abramovic *et al*. (2019, p.699) suggest that community gardens can be 'exclusionary spaces' and Lapina (2017, p.633) also points out that integration gardens in Denmark may segregate 'in order to 'integrate''. Conflicts, resentment and jealousy among gardeners in intercultural gardens are commented on by Moulin-Doos (2014) and Charles Rodriquez *et al*., (2022), providing a useful reminder that gardening and its effects may be more complex than suggested by a view of landscapes as having intrinsic therapeutic qualities. Thus, a focus on people's

interactions with the landscape puts more emphasis on experience and the relational, and whilst this suggests that 'participants actively construct enabling places' (Kearns and Milligan, 2020, p.3) it also follows that *disabling* places may be constructed too.

The above review has outlined the ways in which gardening is thought to bring benefits for social, physical and mental wellbeing, with specific attention to how this affects people who have experienced dislocation. However, as some studies identify negative or ambivalent aspects, it seems important to further explore the complexity of questions about migrants, gardening and health. A more nuanced understanding of therapeutic landscapes (Anderson and Tolia-Kelly, 2004) already recognises this complexity and Bell *et al*. (2018) have commented on the limited research on migrant groups and therapeutic or enabling places. This article therefore aims to investigate the particular experiences of migrant gardeners in the context of a relational understanding of place and ways of place-making, and the dimensions of health and wellbeing. To do this it draws on the findings of a research project, which explored the place of gardening, food production and consumption in relation to migrant identities.

METHODOLOGY

The research project on which this article is based used qualitative methods to explore the experiences and practices of gardeners with migration heritage[2]. To date there have been two rounds of data collection in the project (the most recent prior to Covid-19).

Recruitment

Using allotment secretaries and community groups as gatekeepers, information about the study was passed to gardeners and allotment holders in a northern English city and surrounding areas. The information sheet explained that we wished to recruit participants, who self-identified as first or second-generation migrants. Through this purposive sampling, across the two stages of the research sixteen participants were recruited for individual interviews; one further participant was the partner of a migrant, and he joined the interview as they shared the gardening. Eleven of these participants were men and six were women. In addition, a focus group discussion (FGD) was conducted with

[2] We use this term to describe first or second generation migrants from a variety of countries of origin who presently live in the UK. For a useful critique on terminology around migration see Will (2019).

eight Bangladeshi women who asked to be interviewed together. The women were members of a women's community group, which runs a gardening project.

The participants ranged in age from their 30s to their 70s, and they came from a variety of backgrounds; whilst four were from North America and Europe, the majority were first generation migrants from India, Bangladesh, Thailand, China, Jamaica, Zimbabwe and Iran. Along with the three second-generation migrants, most had spent all of their adult lives in the UK. Finally, of the participants in the individual interviews, half were allotment holders; the rest of the participants, including the FGD members, cultivated crops in their gardens or even, in one case, on their balcony.

Data collection

Drawing on qualitative methodology, a semi-structured interview schedule was devised for the first round of interviews, with a focus on exploring migrants' experiences of gardening. There were broad questions about what fruit and vegetables participants grew, how they felt about growing food, how they cooked and ate it, and what links (if any) there were with their migration heritage. In talking about their gardening practices and experiences, participants frequently mentioned the health effects and links to wellbeing; therefore in the second round of interviews an additional aim was added, to explore how much participants felt that growing food was important to their wellbeing.

Both rounds of interviews took place during the growing season, and were conducted in English, although sometimes a partner or friend interpreted where necessary, and there was an interpreter for the FGD. The interviews (and the FGD) were usually an hour in length. For practical reasons the FGD took place in a community setting, and some individual interviews also took place in community centres or participants' homes, due to poor weather or particular circumstances However, most of the individual interviews were 'walking interviews', conducted in gardens and allotments, allowing 'interaction with the respondent while moving together and interacting with the social and physical environment' (Kowalewski and Bartlomiejski, 2020, p.60). In recognition of the centrality of 'place', interviews began with a 'grand-tour question' for participants to 'show me the garden' (Jensen and Sørensen, 2020, p.326). In conducting this research, both authors made clear to the participants that they too were allotment gardeners (and one author is herself a migrant), and this facilitated an exploration of the issues.

Ethical issues

Ethical clearance for both stages of the project was provided by the authors' institution. All participants were given an information sheet and signed a consent form; all the interviews were recorded (with the participants' permission) and transcribed using pseudonyms in order to ensure anonymity.

Analysis

The process of analysis for this article involved reading the transcripts from the second round of interviews and manual thematic coding (Mason, 2002). At the same time, the transcripts from the first round of interviews were also re-read; in such qualitative secondary analysis (QSA) 'researchers may re-use their own self-collected data in order to investigate new or additional questions to those explored in the primary research' (Heaton, 2008, pp. 35-36) The researchers coded the transcripts separately and then conferred, and the themes that were identified are explored in the next section.

FINDINGS AND DISCUSSION

Three of the themes that emerged from the interviews reflect the dimensions of health and wellbeing explored earlier (physical, mental and social wellbeing), but they offer a nuanced understanding of these dimensions, with not only beneficial but also problematic implications. The final theme, however, relates to the key issue of participants' migration heritage, and to food and its production as part of their social and cultural identity. After manual coding, words such as place making, belonging, sharing, family, home and country were subsumed under the theme of 'cultural wellbeing', which we identify as a further dimension of wellbeing.

Fitness and nourishment - physical wellbeing

Gardening and cultivating are often credited with contributing to a healthier lifestyle and our participants unsurprisingly testify to these positive aspects gained from gardening, such as exposure to fresh air, exercise and testing one's physical limits:

> *'I think it keep me fit. I'm here every day and I get my exercise and so forth.*
>
> (Paul)

In addition to exercise, the broader physical benefits from eating homegrown produce were often referred to by male participants, as in this wide-ranging list by Maulik:

> *I get all the vitamins, minerals, roughage, the exercise, the antioxidant. Everything is there.*

The ability to control pesticides and herbicides on homegrown food was also highlighted:

> *When you go in Chinese supermarket, quite expensive and you don't know what they put in – pesticides and toxins – and this your home grown, you know, you never have any ...'* (Pamina)

The comparison with shop-bought produce is a recurring theme, with homegrown produce also being seen as tastier:

> *The one I am very proud of is cucumber … it tastes better than the one I buy* (Mylene)

These benefits are not unique to migrant gardeners, but Hartwig and Mason (2016, p.1155) comment on the emphasis that refugee and migrant gardeners in their study put on 'chemically-free' produce and Biglin (2020, p.6) notes that growing one's own food is a way for migrants 'to 'know' what they were putting in their mouth, thus potentially relieving gustatory anxiety'. In addition, taste, whilst being intrinsic to the produce, is also linked to extrinsic factors, in that the taste evokes family memories and/or cultural traditions from the past, which we explore later.

However, narrations of physical benefits are at times also accompanied by indications that gardening, or just being in 'spaces', is not without its physical challenges, and gardeners also tell of the difficulties of having to adjust to declining or fluctuating health, as described here by Dmitri:

> *My wife is unable to do any kind of gardening now and I had to take it a little easier. It change the feeling of gardening from enjoyment to hard labour.*

Importantly, this not only affects older gardeners, but anybody with chronic health issues (both physical and mental), as both women and men of varying ages recount not always being able to work their plots due to flare ups in their condition and/or having to change their patterns of gardening to adjust to the limitations of their bodies. Again, such issues are not unique to gardeners with a migration heritage[3], but another issue is - that of fear for one's physical safety, in this case arising from racist threats. Paul, a Windrush generation allotment holder who has been tending his plot for over 30 years, described more than one occasion when people (passers-by, not plot holders) started to threaten and verbally abuse him. However, his resilience in the face of such threats is clear here:

[3] Evidence about the health of those with migration heritage in the UK is complex. Whilst first generation migrants are in better health generally than the UK born population, those who have lived here for some time and are in low-skilled jobs have worse health (Reino, 2020). Overall, ethnic minority groups are more likely than White British people to report limiting long-term illness and poor health (Raleigh and Holmes, 2021).

As far as my allotment, nobody is going to chase me from it. I enjoy it and I will stay. I must come, do my allotment and cut the grass and do what I have to do …

Thus, although food growing contributes to a healthier lifestyle, it can present challenges to those who are less healthy. When racism is added to this it is clear that a more nuanced understanding of the health consequences of gardening is needed.

'It just grounds you' - mental and emotional wellbeing

Gardens and plots as spaces to cultivate not just vegetables, but also mental and emotional wellbeing, are recognised dimensions in the literature. Genter *et al*.'s principles (2015) cast them as stress-relieving refuges, providing valued contact with nature as well as enabling self-development and restoration. In our group of diverse participants, many referred to these aspects as illustrated by just two quotes here:

I love gardening. It is the most important for me is gardening, and when is growing, I'm relieved. (Amjad)

'It just grounds you... it just is a good friend, the plot. It's a peaceful, hardworking place as well. It's a healthy place, especially that for me. (Mylene)

The idea of gardens and plots as places to relieve stress and achieve balance in life was a common theme in our findings. Plot holders in particular emphasised the opportunity to create a space of difference, in contrast to everyday life and its demands and exigencies – a place where work-life balance can be pursued and which provides a 'contrasting sense of duty' (Jensen and Sørensen, 2020, p.1).

You're away from the wife and kids or not, but all the stresses, yeah. You're away from it, and you just contemplate. (Maulik)

Like I work a shift pattern myself. I start at 7am and finish at 3pm and when I come back home, Oh I say, and if it's a good day I come out here and you find really working here – it helps me relax. It does, it does. The stress and all that. Yeah, work is stressful, but you find it really helps remove stress. (Philip)

And even for those who are now retired, gardening offers a balance to their lives:

It's the pleasure of doing it, doing something different from what you work for … For me it's enjoyment, relaxing, doing something different to what you're doing all day, or working day. And even now that we're retired, we're doing something different to what we're doing at home, see different people. (Dmitri)

The plot also affords, in some cases, freedoms not had at home; Dimitri notes *'it's not a place where you keep things tidy';* however, this contrasts with other research which attests to strong social expectations around the upkeep of plots, which we explore later.

For some the links between mental and physical health were also clear:

What you're doing is you're losing a bit of fat and you're changing it to muscle. Exercise [is important] and with the gardening and fresh air, it turns to positive thinking. (Maulik)

Mylene talks about this in relation to her son who has a chronic health problem:

... It has helped him as well. Sometimes he was feeling really poorly, really so tired, and I would just push him to go and he would be complaining. And then he would just be there, and he would say 'thanks Mum. It's just lovely to be here' and he would just sit and do nothing, but enjoy…

Despite these very positive effects of allotment gardening, there can be a downside to this investment in gardening practices, and Casey notes both effects here:

When I'm having a rough week, being up there for a couple of hours means things are actually going well. Right now, it's actually really hard to be there because everything is just ppfft. So, it's a problem in the reverse, like when we're having a bad year like now, it's just so hard to go up! [laughs] it's so depressing.

And Dimitri expresses the frustration and stress of a gardener battling predators and pests:

Over the years […] I realised: 1/3 for the slugs, 1/3 for the birds and, if I'm lucky, I will have a 1/3! It's true!

Thus, the emotional investment in both space and vegetables grown can be challenged by such damage done to plot and harvests and it takes some resilience to keep going at times.

These findings are not unique to, but may have additional significance for, gardeners with a migration heritage. Other dimensions of emotional wellbeing, such as the self-actualisation encompassed by the term eudaimonic wellbeing, are explored in the section on cultural wellbeing.

‘A giving community’- social wellbeing

The next theme discussed here is social wellbeing. Sociability on the plot, with garden neighbours, or even through WhatsApp gardening groups, is one way in which social wellbeing is enhanced:

> *Well, a group of us, so we have a WhatsApp group ... and we kind of help each other out ... So, it’s a bit of a, almost feels like a group effort as well sometimes. Which is quite nice.* (Jaswinder)

Allotment practices also include various practices of receiving and giving of seeds, plants and advice, along with labour, not only on the site itself, but also off-site. Pottinger (2018: 108) calls this ‘generous exchange’, which she describes as ‘a practice and discourse that draws together and renders legible a range of interwoven practical concerns, enthusiasms, and material and interpersonal relationships’.

> *The more you pick, the more they grow ... so that is why we give all this to friends ... and everyone’s so happy ...* (Pamina)

> *... and it’s very generous, it’s very kind of giving, like a giving community.* (Minh)

> *You get advice, you give advice – it’s like that all the time.* (Dmitri)

> *When we do our garden, we do separate things, but when it comes to crops sharing, we share.* (FGD)

Whilst such sharing is common to many gardeners, Abtin makes explicit reference to his cultural heritage here:

> *Food is one of the things you can be connected with the peoples ... when you offer your food to somebody that means you respect her or him. And this is part of our culture.*

Participants also talked about the importance of sharing 'foods from home', which maintains connectedness and a belonging to the communities that people identify with, and thus contributes to

social wellbeing. Finally, Mylene commented on how the social aspects of allotment gardening overcome her sense of being an outsider –

> *I like sharing conversation with people over there. So, it's social, socialising as well in a very different way. And a way as well to integrate myself … accepted as being me and not being seen maybe as a foreigner … you feel like you belong because you have your plot, and everyone else is asking you things and you are sharing information, sharing veg. or whatever. So, it's kind of a community.*

We will be returning to these aspects of social wellbeing as they relate closely to cultural identity in the next theme.

However, this focus on socialising and sharing is not without its problems. For Dmitri the social time on the site has implications for his gardening philosophy, which is to spend half an hour each day working on the plot:

> *You open the gate and then there's usually someone there that starts talking and then you move a little bit on and then there's somebody else and by the time I get to my allotment there's two hours gone!* (Dmitri)

Thus whilst spending time with others is often rewarding, at times it can be disruptive and distracting. Security, and vandalism are also issues that some of our participants had to grapple with and Maulik commented on the theft of his plums for the second time, and thought he might invest in a camera "*that adjust to day and night"* to combat the problem. Allotments are also sites where people with different views and ways of doing things come together and this can create strain through the politics of the site and the need for constant mediation and negotiation, as alluded to by Jan:

> *We seem to have calmed the situation anyway. With me being on the committee … it takes a bit of time to sort out.*

Pitt (2014) notes that the social relations of community gardens and the limits on individuals' sense of control may reduce the therapeutic effects of gardening. It is also possible that such spaces, depending on the nature of their governance and place in the community, might not always be welcoming to those that are read as different. In fact one allotment site, when contacted about displaying the information sheet to recruit participants, declared decidedly that 'we don't have any of

these here!' This highlights the particular issues for ethnic minorities and those whose difference is visible. Biglin (2021) draws attention to the exclusionary practices encountered by refugees and asylum seekers in terms of access to allotments and Rishbeth *et al*.'s (2019) study of how asylum seekers and refugees experience urban green space importantly concludes that 'tensions between different user groups come to the fore as the use and appropriation of parks and greenspace by some can appear to exclude others, often reflecting embedded hierarchies informed by race, class and gender' (p.132).

If such excluded groups do succeed in accessing space to cultivate, Strunk and Richardson (2019, p. 844) note in their study of refugees and urban gardens in the USA that 'while gardens can allow for connections across difference, they are also a source of tension between gardeners, neighbours, and city officials'. The extreme manifestation of this is Paul's experience of threats from passers-by. Whilst he was the only one to report the experience of overt racism (we did not explicitly ask about it in the interviews), it is possible that people deal with such negative encounters by not making an issue about it and instead emphasise (to themselves and to us as interviewers) the positive aspects. So, whilst positive gains in relation to social wellbeing are forged through food cultivation, it is also important to recognise the potential for negative aspects too.

'It's a relation with my country'- cultural identity and wellbeing

Whilst the themes so far reflect a growing body of research evidence about the ways in which gardening affects health, a new theme was identified which links emotional and social wellbeing to the effects of growing foods 'from home' and the connection to the past/community (Bishop and Purcell, 2013). Two quotes illustrate this:

> *The more I talk to you, the more I realise how it connects me with France. It's terrible I didn't realise that before … And it's like a platform that will lead me to memories, family, things I'm planning ahead, and a link with England as well ... Countryside, the soil, touching it, having a contact with the soil is massively important to us. It just grounds you initially …* (Mylene)

> *Thai friends come, they come down, they say 'Ah, I feel like at home!' They see stuff from your hometown, and you feel like you've been home*. (Pamina)

Gardening is therefore a place to both disconnect and connect:

It's a peaceful place. It's a place where you just disconnect from everything, and for me it's a – that's why I am doing it, because it's a relation with my country. There is something there that makes me doing it … (Mylene)

Such cultural and familial connections, and memories that growing food affords, not only feed into social wellbeing but also indicate the importance of cultural identity for wellbeing. Pearsall *et al*. (2017, p.491) comment that 'cultural heritage is important to immigrant gardeners because they can express their cultural identity, their relationship to the environment, and their preferences through gardening practices', and Charles Rodriquez *et al*.'s (2022) term for this is 'cultural continuation'. Mazumdar and Mazumdar (2014, p.258) further suggest that gardens 'enable immigrants to engage with, personalize, and experience their new environment in deeply meaningful ways'. Similarly, Li *et al*. (2010, p. 794) note that 'gardening provides new growth at the same time as rooting one in the past … culture and history are literally sown into new ground', and the new connections to people and space build 'ontological security' (Mossabir *et al*., 2021: 8).

However, although imagined gardens[4] (Strunk & Richardson, 2019) may be therapeutic places contributing to both identity and health, as we have seen with other dimensions of wellbeing, this is not always straightforward. Several of our participants commented on the frustration of not being able to grow certain foods 'from home', usually because the weather was not hot enough. This challenge of growing culturally important foods was noted by Abramovic *et al*. (2019) and was a particular theme in the focus group discussion with the Bangladeshi women in the community group:

We get the seeds from our country and we try and grow them, [but] because our country's so hot, we need hot weather here ... Every year, every year I try to grow the white pumpkin. I couldn't, I couldn't. (FGD)

Thus, even when gardening contributes to cultural wellbeing, there can be problems too.

CONCLUSION

As noted earlier, the concept of wellbeing has become a contested one, both within and between disciplines, and yet it remains central to debates about health as seen in the recent Geneva Charter for Wellbeing, which focuses on 'wellbeing societies' (WHO, 2021). In exploring the relationship

[4] Strunk and Richardson (2019, p.830) distinguish the material garden from the imagined garden, which is 'constructed through social, economic and cultural interactions'.

between gardening, health and wellbeing, the restorative effects of green spaces and therapeutic gardening have received a lot of attention due to the 'spectrum of benefits aside from food production that allotment gardening can provide: peace, health, social interaction, nature connectedness, commensality, recycling and a feeling of autonomy, pride and ownership of one's allotment plot' (Dobson *et al.*, 2020, p.10). However, as we have noted, the potentially negative effects of gardening are rarely considered, yet our evidence supports previous studies (Young *et al*., 2020; Gross and Lane, 2007; Milligan *et al*., 2004; Rishbeth *et al*., 2019; Biglin, 2020), which suggest that gardens can be a source of stress as well as restoration.

It is particularly important to go beyond measuring the effects of gardening and cultivation as one-off interventions, and to recognise the cumulative as well as multifaceted effects of cultivation and the contextual effects of human-spatial encounters (von Lindern *et al*., 2017). Recognising this ambivalence and nuanced complexity, our research suggests that cultivation might also include aspects which could compromise the positive effects gained, such as the loss of physical fitness and/or the exacerbation of physical injuries, (suspicions of) retribution, disappointment in terms of yield versus effort, theft and anti-social behaviour, vandalism, problems with neighbours and general allotment politics and, in the case of migrant gardeners, the possibility of racism. Acknowledging that the very environments which are deemed to be restorative may also produce neutral or negative effects is necessary to avoid the pitfalls that the simple 'gardening is good for you' slogan might encounter, and especially when there are suggestions that gardens should be part of social prescribing (see Egli *et al*., 2016; Thompson, 2018). Taken together with the continued structural inequalities experienced by migrant gardeners, we suggest that initiatives and campaigns acknowledge these potentially negative effects and suggest ways of tackling them. If gardening is going to be used as a health promotion strategy there are also important questions to be asked about relatedness and social connections (Sachs *et al*., 2022) and the role of community garden organisers in green social prescribing may be key 'in making these spaces appealing, and adapting practices to differing needs' (McGuire *et al*., 2022: p.6).

In terms of further research, there are some interesting questions. For instance, there may be issues here about the causal links being made between gardening and health (might the 'healthy' choose to garden, for example?), and this might be explored. We also suggest that an important group to recruit in studies on gardening and health are those who have given up gardening, as it seems likely that research with participants who are active gardeners may be biased, as they are more likely to be the ones for whom the benefits outweigh any disadvantages or negative effects. Also of importance are

the possible gendered aspects of migrants' gardening practices and experiences. Finally longitudinal research might also be very useful in following participants over time (Charles Rodriguez *et al*., 2022).

As noted earlier, many of our participants' comments and experiences in relation to the different dimensions of wellbeing mirror those of participants in other studies, whether migrants or not. However, such experiences of gardening are likely to be accentuated by our participants' migration heritage and the cultural climate in which, for instance, those with visible markers of migration (language, accents, skin colour) have to negotiate these differences in everyday life. In fact, the backgrounds of our participants in this study suggest that the social determinants of people's lives do not just influence their experiences of cultivation, and thus outcomes in terms of wellbeing, but may fundamentally shape their access to cultivable land. We noted earlier the comment from one allotment secretary that there were no migrants on their site. We therefore suggest that further research might explore this question of access and opportunities available to migrants to grow food in order to allow 'the generation of more nuanced insights into when and why different people do or do not use green spaces and how' (Bell *et al*., 2014, p.287). A recent report in the UK concluded that 'people from minority ethnic groups are less likely to have a private garden (ONS, 2020) and it has also been noted that refugees can feel excluded from private allotments (Biglin, 2021), and that 'integration gardening' approaches fail to reflect the diversity of the neighbourhood (Christensen *et al*., 2019). COVID-19 has generally highlighted the 'green poverty' experienced by some groups (McNeil *et al*., 2020) and a recent global systematic review concludes that better policies to increase access to green space could reduce health inequalities (Rigolon *et al*., 2021).

Our study also suggests that the specific experiences of those with migration heritage relate to the ways in which cultivation contributes to family and cultural memories and traditions, and that gardening is important to participants' sense of self and identity. In terms of health, this is not to deny 'the visceral, affective force of matter encountered in the embodied act of gardening', which Abramovic *et al*. (2019, p.296) stress in their study of refugee gardeners, but rather highlights the importance of the cultural context of this act and what Biglin (2020) calls 'sensory nostalgia'. The importance of this cultural aspect of gardening for migrants leads us to suggest that cultural wellbeing might be seen as a further dimension of emotional and social wellbeing for this group.

ETHICAL APPROVAL

The research on which this article is based was given ethical approval by the authors' institution.

REFERENCES

Abramovic, J., Turner, B. and Hope, C. (2019) Entangled recovery: refugee encounters in community gardens. *Local Environment, 24*(8), 696-711 https://doi.org/10.1080/13549839.2019.1637832

Adab, P., Pallan, M., Whincup, P. H. (2018) Is BMI the best measure of obesity? *British Medical Journal,* 360: k1274 doi:10.1136/bmj.k1274

Ambrose, G., Das, K., Fan Y. and Ramaswami, A. (2020) Is gardening associated with greater happiness of urban residents? A multi-activity, dynamic assessment in the Twin-Cities regions, USA. *Landscape and Urban Planning, 198,* 103776 https://doi.org/10.1016/j.landurbplan.2020.103776

Ančić, B., Domazet, M. and Župarić-Iljić, D. (2019) "For my health and for my friends": Exploring motivation, sharing, environmentalism, resilience and class structure of food self-provisioning**.** *Geoforum, 106,* 68–77 https://doi.org/10.1016/j.geoforum.2019.07.018

Anderson, B. & Tolia-Kelly, D. (2004) Matter(s) in social and cultural geography. *Geoforum, 35,* 669-674

Atkinson, S. (2020) The toxic effects of subjective wellbeing and potential tonics. *Social Science and Medicine* https://doi.org/10.1016/j.socscimed.2020.113098

Bell, C., Phoenix, C., Lovell, R. and Wheeler, B. (2014) Greenspace, health and wellbeing: making space for individual agency. *Health and Place, 30,* 287–292 https://doi.org/10.1016/j.healthplace.2014.10.005

Bell, S., Foley, R., Houghton., Maddrell, A. and Williams, A. (2018) From therapeutic landscapes to healthy spaces, places and practices: A scoping review. *Social Science and Medicine, 196,* 123–130 https://doi.org/10.1016/j.socscimed.2017.11.035

Biglin, J. (2020) Embodied and sensory experiences of therapeutic space: Refugee place-making within an urban allotment. *Health and Place, 62,* 102309 https://doi.org/10.1016/j.healthplace.2020.102309

Biglin, J. (2021) Photovoice accounts of third places: Refugee and asylum seeker populations' experiences of therapeutic space. *Health and Place,* 71, 102663 https://doi.org/10.1016/j.healthplace.2021.102663

Bishop, R. and Purcell, E. (2013). The Value of an Allotment Group for Refugees. *British Journal of Occupational Therapy*, *76*(6), 264 – 269 https://doi.org/10.4276/030802213X13706169932824

Buck, D. (2016) Gardens and health; implications for policy and practice. King's Fund. www.kingsfund.org.uk/publications/gardens-and-health.

Charles Rodriguez, U.,Venegas de la Torre, U. M.D.L.P., Hecker, V., Laing, R.A. and Larouche, R. (2022) The Relationship Between Nature and Immigrants' Integration, Wellbeing and Physical Activity: A Scoping Review. *Journal of Immigrant and Minority Health*. https://doi.org/10.1007/s10903-022-01339-3

Christensen, S., Dyg, P.M. and Allenberg, K. (2019) Urban community gardening, social capital, and "integration" – a mixed method exploration of urban "integration-gardening" in Copenhagen, Denmark. *Local Environment*, 24(3), 231-248, DOI: 10.1080/13549839.2018.1561655

Collins, R., Spake, R., Brown, K., Ogutu, B., Smith, D. and Eigenbrod, F. (2020) A systematic map of research exploring the effect of greenspace on mental health. *Landscape and Urban Planning, 201*, 103823. https://doi.org/10.1016/j.landurbplan.2020.103823

de Bell, S., White, M., Griffiths, A., Darlow, A., Taylor, T., Wheeler, B. *et al.* (2020) Spending time in the garden is positively associated with health and *wellbeing*: Results from a national survey in England. *Landscape and Urban Planning, 200*, 103836 https://doi.org/10.1016/j.landurbplan.2020.103836

Djokić, V., Trajković, J., Furundžić, D., Krstić, V. and Stojiljković, D (2018) Urban garden as lived space: Informal gardening practices and dwelling culture in socialist and post-socialist Belgrade. *Urban Forestry and Urban Greening, 30*, 247–259. https://doi.org/10.1016/j.ufug.2017.05.014

Dobson, M., Reynolds, C., Warren, P. and Edmondson, J. (2020) "My little bit of the planet": the multiplicity of well-being benefits from allotment gardening. *British Food Journal* https://www.emerald.com/insight/content/doi/10.1108/BFJ-07-2020-0593/full/html

Dyg, P., Christensen,S. and Peterson, C. (2020) Community gardens and wellbeing amongst vulnerable populations: a thematic review. *Health Promotion International, 35*, 790–803

Egerer, M., Ordóñez, C., Lin, B. and Kendal, D. (2019) Multicultural gardeners and park users benefit from and attach diverse values to urban nature spaces. *Urban Forestry and Urban Greening, 46*, 1-14**.** https://doi.org/10.1016/j.ufug.2019.126445

Egli, V., Oliver, M. and El-Shadan, T. (2016) The development of a model of community garden benefits to wellbeing. *Preventive Medicine Reports, 3*, 348–352. https://doi.org/10.1016/j.pmedr.2016.04.005

Farrier, A., Dooris, M. and Morley, A. (2019) Catalysing change? A critical exploration of a community food initiative on people, place and prosperity. *Landscape and Urban Planning, 192*, 103663. https://doi.org/10.1016/j.landurbplan.2019.103663

Filkobski, I., Rofè, Y. and Tal, A. (2016) Community Gardens in Israel: Characteristics and perceived functions. *Urban Forestry and Urban Greening, 17,* 148 –157. https://doi.org/10.1016/j.ufug.2016.03.014

Genter, C., Roberts, A., Richardson, J. and Sheaff, M. (2015) The contribution of allotment gardening to health and wellbeing: A systematic review of the literature. *British Journal of Occupational Therapy, 78* (10), 593–605. https://doi.org/10.1177/0308022615599408

Gerodetti, N. and Foster, S. (2016) "Growing foods from home": food production, migrants and the changing cultural landscapes of gardens and allotments**.** *Landscape Research, 41* (7), 808 - 819. DOI: https://doi.org/10.1080/01426397.2015.1074169

Graham, S. and Connell, J. (2006) Nurturing Relationships: The Gardens of Greek and Vietnamese Migrants in Marrickville, Sydney. *Australian Geographer, 37(3)*, 375-393

Gray, T., Tracey, D., Truong, S. and Ward, K. (2022) Community gardens as local learning environments in social housing contexts: participant perceptions of enhanced wellbeing and community connection. *Local Environment,* 27 (5), 570-585, DOI: 10.1080/13549839.2022.2048255

Gregis, A., Ghisalberti, C., Sciascia, S., Sottile, F., & Peano, C. (2021). Community Garden Initiatives Addressing Health and Well-Being Outcomes: A Systematic Review of Infodemiology Aspects, Outcomes, and Target Populations. *International journal of environmental research and public health*, *18*(4), 1943. https://doi.org/10.3390/ijerph18041943

Gross, H. and Lane, N. (2007) Landscapes of the lifespan: Exploring accounts of own gardens and gardening. *Journal of Environmental Psychology, 27* (3), 225 – 241 https://doi.org/10.1016/j.jenvp.2007.04.003

Harris N., Minniss F.R. and Somerset S. (2014) Refugees connecting with a new country through community food gardening. *International Journal of Environmental Research and Public Health*, *11*(9), 9202-16. https://doi.org/10.3390/ijerph110909202

Hartwig, K. and Mason, M. (2016) Community Gardens for Refugee and Immigrant Communities as a Means of Health Promotion. *Journal of Community Health, 41,* 1153–1159 DOI 10.1007/s10900-016-0195-5

Head, L., Muir, P. and Hampel, E. (2004) Australian Backyard Gardens and the Journey of Migration. *Geographical Review, 94(3),* 326-347 https://doi.org/10.1111/j.1931-0846.2004.tb00176.x

Heaton, J. (2008). Secondary analysis of qualitative data: an overview. Historical Social Research, 33(3), 33-45. https://doi.org/10.12759/hsr.33.2008.3.33-45

Jensen, J.L. and Sørensen, E.B. (2020) Recreation, cultivation and environmental concerns: exploring the materiality and leisure experience of contemporary allotment gardening, *Leisure Studies, 39* (3), 322-340 https://doi.org/10.1080/02614367.2020.1731841

Kearns, R. and Milligan, C. (2020) Placing therapeutic landscape as theoretical development. *Health and Place 61*, 102224 https://doi.org/10.1016/j.healthplace.2019.102224

Kowalewski, M. and Bartlomiejski, R. (2020). Is it research or just walking? Framing walking research methods as "non-scientific". *Geoforum, 114*, 59-65 https://doi.org/10.1016/j.geoforum.2020.06.002

Kunpeuk, W., Spence, W., Phulkerd, S., Suphanchaimat, R. and Pitayarangsarit, S. (2020) The impact of gardening on nutrition and physical health outcomes: a systematic review and meta-analysis, *Health Promotion International*, 35 (2), 397–408, https://doi.org/10.1093/heapro/daz027

Lapina, L. (2017). 'Cultivating Integration'? Migrant Space-making in Urban Gardens, *Journal of Intercultural Studies, 38(6),* 621-636. https://doi.org/10.1080/07256868.2017.1386630

Li, W. W., Hodgetts, D. and Ho, E. (2010). Gardens, transitions and identity reconstruction among older Chinese immigrants to New Zealand. *Journal of Health Psychology, 15*, 786–796.

Mason, J. (2002) *Qualitative Researching*. London: Sage.

Mazumdar, S. and Mazumdar, S. (2014) Immigrant home gardens: places of religion, culture, ecology and family. *Landscape and Urban Planning, 105*, 258-65. https://doi.org/10.1016/j.landurbplan.2011.12.020

McGuire, L., Morris, S. L., & Pollard, T. M. (2022). Community gardening and wellbeing: The understandings of organisers and their implications for gardening for health. *Health & place*, *75*, 102773. https://doi.org/10.1016/j.healthplace.2022.102773

McNeil, C., Parkes, H., Statham, R., Hochlaf, D. and Jung C. (2020) Children of the pandemic. Institute of Public Policy Research. London March 2020 https://www.ippr.org/files/2020-03/1585586431_children-of-the-pandemic.pdf

Milligan, C., Gatrell, A. and Bingley, A. (2004). "Cultivating health": therapeutic landscapes and older people in northern England. *Social Science and Medicine, 58* (9), 1781–1793. https://doi.org/10.1016/S0277-9536(03)00397-6

Morgan, G., Rocha, C. and Poynting, S. (2005). Grafting Cultures: Longing and Belonging in Immigrants' Gardens and Backyards in Fairfield. *Journal of Intercultural Studies,* 26:1-2, 93-105 http:/ / dx.doi.org/ 10.1080/ 07256860500074094

Mossabir, R., Milligan, C. and Froggatt, K. (2021). Therapeutic landscape experiences of everyday geographies within the wider community: A scoping review. *Social Science and Medicine, 279*, 113980. https://doi.org/10.1016/j.socscimed.2021.113980

Moulin-Doos, C. (2014). Intercultural gardens: the use of space by migrants and the practice of respect. *Journal of Urban Affairs, 36(2*), 197-206

Nova, P., Pinto, E., Chaves, B. and Silva, M. (2020) Urban organic community gardening to promote environmental sustainability practices and increase fruit, vegetables and organic food consumption. *Gaceta Sanitaria, 34*(1), 4–9. https://doi.org/10.1016/j.gaceta.2018.09.001

Office for National Statistics (ONS) (2020) One in eight British households has no garden. https://www.ons.gov.uk/economy/environmentalaccounts/articles/oneineightbritishhouseholdshasnogarden/2020-05-14 Accessed: 26/02/22

Ong, M., Baker, A., Aguilar, A. and Stanley, M. (2019) The meanings attributed to community gardening: A qualitative study. *Health and Place, 59*, 102190 https://doi.org/10.1016/j.healthplace.2019.102190

Pearsall, H., Gachuz, S., Sosa, M.R., Schmook, B., Van der Wal, H. and Gracia, M.A. (2017) Urban community garden agrodiversity and cultural identity in Philadelphia, Pennsylvania, U.S. *Geographical Review,* 107(3), 476 - 495

Pitt, H. (2014) Therapeutic experiences of community gardens: putting flow in its place. *Health and Place, 27*, 84 – 91 https://doi.org/10.1016/j.healthplace.2014.02.006

Pottinger, L. (2018) Growing, guarding and generous exchange in an analogue sharing economy. *Geoforum, 96*, 108-118. https://doi.org/10.1016/j.geoforum.2018.07.007

Poortinga, W., Bird,N., Hallingberg, B., Phillips,R. and Williams, D.(2021) The role of perceived public and private green space in subjective health and wellbeing during and after the first peak of the COVID-19 outbreak. *Landscape and Urban Planning, 211*, 104092 https://doi.org/10.1016/j.landurbplan.2021.104092

Raleigh, V. and Holmes, J. (2021). *The health of people from ethnic minority groups in England* [online]. www.kingsfund.org.uk/publications/health-people-ethnic-minority-groups-england Accessed 28/2/23

Reino, M.F. (2020) *The health of migrants in the UK.* The Migration Observatory https://migrationobservatory.ox.ac.uk/resources/briefings/the-health-of-migrants-in-the-uk/ Accessed 28/2/23

Rigolon, A., Browning, M., McAnirlin, O. and Yoon, H. (2021) Green space and health equity: a systematic review on the potential of green space to reduce health disparities. *International Journal of Environmental Research and Public Health,18*(5), 2563. https://doi.org/10.3390/ijerph18052563

Rishbeth, C., Blachnicka-Ciacek, D. and Darling, J. (2019) Participation and wellbeing in urban greenspace: 'curating sociability' for refugees and asylum seekers. *Geoforum, 106*: 125–134 https://doi.org/10.1016/j.geoforum.2019.07.014

Sachs, A., Tharrey, M., Darmon, N., Alaimo, K., Boshara, A., Beavers, A. *et al*. (2002) "To me, it's just natural to be in the garden": A multi-site investigation of new community gardener motivation

using Self-Determination Theory. *Wellbeing Space and Society, 3,* 100088. https://doi.org/10.1016/j.wss.2022.100088

Scott, T., Masser, B. and Pachana, N. (2015) Exploring the health and wellbeing benefits of gardening for older adults. *Ageing and Society, 35* (10), 2176-2200. https://doi.org/10.1017/S0144686X14000865

Soga, M., Cox, D., Yamaura, Y., Gaston, K., Kurisu, K. and Hanaki, K. (2017a) Health Benefits of Urban Allotment Gardening: Improved Physical and Psychological Well-Being and Social Integration. *International Journal of Environmental Research and Public Health, 14*(1), 71 doi:10.3390/ijerph14010071

Soga, M., Gaston, K. and Yamaura, Y. (2017b) Gardening is beneficial for health: A meta-analysis. *Preventive Medicine Report*s, *5,* 92 - 99.

Strunk, C. and Richardson, M. (2019) Cultivating belonging: refugees, urban gardens, and placemaking in the Midwest, U.S.A. *Social and Cultural Geography, 20*(6), 826-848 DOI: 10.1080/14649365.2017.1386323

Symes, l., Hadgraft, N., Marsh, P., Nuttman, S and Kingsley, J. (2023) 'Surrounding yourself with beauty': exploring the health promotion potential of a rural garden appreciation group. *Health Promotion International*, 38 (2), daad010, https://doi.org/10.1093/heapro/daad010

Taheri,S., Sichani, M. and Shabani, A. (2021) Evaluating the literature of therapeutic landscapes with an emphasis on the search for the dimensions of health: A systematic review. *Social Science and Medicine, 275,* 113820 https://doi.org/10.1016/j.socscimed.2021.113820

Taylor, J. and Lovell, S. (2015) Urban home gardens in the Global North: A mixed methods study of ethnic and migrant home gardens in Chicago, IL. *Renewable Agriculture and Food Systems, 30*(1), 22-32. doi:10.1017/S1742170514000180

Thompson, R. (2018) Gardening for health: a regular dose of gardening. *Clinical Medicine, 18* (3), 201-5. 10.7861/clinmedicine.18-3-201

Von Lindern, E., Lymeus, F. and Hartig, T. (2017) The Restorative Environment: A Complementary Concept for Salutogenesis Studies. In M. Mittelmark *et al*. (eds) *The Handbook of Salutogenesis* Springer: Open Access (pp.181-196). DOI 10.1007/978-3-319-04600-6

White, S. (2015) A gendered practice of urban cultivation: performing power and well-being in M'Bour, Senegal. *Gender Place and Culture, 22* (4), 544–560, http://dx.doi.org/10.1080/0966369X.2014.885887

Will, A.K. (2019) The German statistical category "migration background"; Historical roots, revisions and shortcomings. *Ethnicities, 19*(3), 535-557. DOI: 10.1177/1468796819833437

Wood, J., Pretty, J. and Griffin, M. (2015) A case-control study of the health and well-being benefits of allotment gardening. *Journal of Public Health, 38* (3), e336–e344. https://doi.org/10.1093/pubmed/fdv146

Wood, N. and Martin, D. (2020) "I'm a foreigner there": Landscape, wellbeing and the geographies of home. *Health and Place, 62,* 102274 https://doi.org/10.1016/j.healthplace.2019.102274

World Bank (2020) *Urban population (% of total population)* https://data.worldbank.org/indicator/SP.URB.TOTL.IN.ZS (last accessed July 19, 2020)

World Health Organisation (WHO) (2020) *Social determinants of health.* https://www.who.int/social_determinants/en/ Accessed 19/08/20

World Health Organisation (WHO) (2018) *Report on the health of refugees and migrants in the WHO European Region. No PUBLIC HEALTH without REFUGEE and MIGRANT HEALTH.* WHO Regional Office for Europe.

World Health Organisation (WHO) (2021) The Geneva Charter for Wellbeing. https://cdn.who.int/media/docs/default-source/health-promotion/geneva-charter-4-march-2022.pdf?sfvrsn=f55dec7_12&download=true Accessed 30/5/22

World Health Organisation (WHO) (2023) Constitution of the World Health Organisation https://www.who.int/about/governance/constitution. Accessed 7/1/23th

Young, C., Hofmann, M., Frey, B., Marco Moretti, M. and Bauer, N. (2020) Psychological restoration in urban gardens related to garden type, biodiversity and garden-related stress. *Landscape and Urban Planning, 198,* 1 - 12. https://doi.org/10.1016/j.landurbplan.2020.103777