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**Article:**

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<https://doi.org/10.1080/01490400.2021.1897715>

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This is an Accepted Manuscript of an article published by Taylor & Francis in *Leisure Sciences* on 14th April 2021, available online:

<http://www.tandfonline.com/10.1080/01490400.2021.1897715>

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# 1 **Gardens with kerb appeal - A framework to understand the** 2 **relationship between Britain in Bloom gardeners and their front** 3 **gardens**

4 Britain in Bloom is a UK national campaign to help people improve their local  
5 environment through gardening, a popular and accessible pastime. This research  
6 presents a framework to understand the relationships between gardeners and their  
7 front gardens (yards). Interpretative Phenomenological Analysis of focus group  
8 data with 20 Britain in Bloom gardeners in Greater London explores: why people  
9 garden in front gardens; how social cohesion may emerge from front gardening  
10 activities; and the health benefits of the presence of front gardens for residents  
11 and passers-by. Front gardens played a key role in supporting participants'  
12 personal identity and self-expression. Maintaining a front garden was seen as  
13 making a positive and satisfying contribution to their local area and to others'  
14 pleasure. Social cohesion in the street or neighbourhood occurred through  
15 informal verbal communication and knowledge-sharing. These findings are  
16 relevant to the impacts of front gardens and community greening initiatives in  
17 private spaces.

18 Keywords: community cohesion; front gardens; fulfilment; gardening; Royal  
19 Horticultural Society Britain in Bloom

## 20 **Introduction**

21 Who needs a front garden? Why do many properties have these spaces? What are they  
22 used for and what societal value do they provide? This research seeks to understand  
23 how dedicated gardeners relate to their front gardens (also known as front yards) and  
24 how these places provide opportunities for social engagement and wellbeing. Front  
25 gardens are an example of semi-private space, where design and management are under  
26 the owner's full autonomy, but where features and activities are also open to public  
27 view and comment

28 Gardening is a common leisure activity around the world and thus can have  
29 multiple roles, meanings, and experiences for gardeners. The provision and extent of

30 domestic gardens has been studied in various national contexts including Romania  
31 (Badiu et al., 2019), Germany (Wellmann et al., 2020), India (Balooni et al., 2014),  
32 Ecuador (Finerman & Sackett, 2003), Chile (Reyes-Paecke & Meza, 2011), South  
33 Africa (King & Shackleton, 2020), Belgium (Notteboom, 2018), and Spain (Garcia-  
34 Garcia et al., 2020). While leisure activities have an inherent sense of positivity (Cheng  
35 & Pegg, 2016; Perkins & Nakamura, 2013), this research presents the intimate  
36 relationships specifically relevant between UK gardeners and their front gardens,  
37 whether they are planting ornamental plants or produce for home consumption.

38         The UK has a long history of private gardening (Amherst, 2013), including the  
39 ‘moral’ cultivation of plants and development of specialist growing societies, which  
40 acted as a salutogenic response to hard working life in Victorian Britain (Hickman,  
41 2013; Lawrence, 2020). The extent of private gardens rose with the advent of suburbs  
42 (1830 onwards) and the greater provision of space around these new residences (Harris  
43 & Larkham, 1999). The increasing popularity of gardening meant that it became an  
44 iconic and ordinary part of the British landscape (Bhatti et al., 2014; Ginn, 2012).

45         Gardens are the most readily accessible green spaces for residents, with an  
46 estimated 88% of households in Great Britain having access to a private or shared  
47 garden (Office for National Statistics, 2020). Although small in size, the 24 million  
48 residential gardens in Great Britain make up a combined area equivalent to  
49 approximately 30% of the total urban built-up area (Office for National Statistics,  
50 2018). In England, an estimated 49.2% of the adult (16+) population partakes in  
51 gardening (Department for Culture Media and Sport, 2017).

## 52 ***Motivations to Garden***

53         Gross (2018) reviewed the personal meanings of residential gardens to cover  
54 themes of creativity, ownership, identity, retreat, sense of place, and social networks.

55 Studies on motivations for gardening as a leisure activity in cultures similar to the UK,  
56 viz. USA, Norway, and New Zealand (Ashton-Shaeffer & Constant, 2006; Beard &  
57 Ragheb, 1983; Francis & Hester, 1990; Gross & Lane, 2007) suggest that key  
58 motivations include: seeking an intellectual challenge, the freedom of self-expression,  
59 an escape from negative stimuli, and facilitating social relationships.

60 Beyond these attempts at formal categorisation, literature focussing on  
61 gardeners' relationships with their gardens has been mostly ethnographic (Taylor,  
62 2008). Analysing autobiographical narratives, Bhatti and colleagues (Bhatti, 2014;  
63 Bhatti et al., 2014; Bhatti & Church, 2004) demonstrate that the domestic garden is an  
64 important part of everyday life for ordinary people. For many, gardening is an enduring  
65 engagement and serious leisure pursuit (Cheng et al., 2017). Ashton-Shaeffer &  
66 Constant (2006) called for more research on the nuanced and emotive roles that gardens  
67 and gardening play in contributing to life satisfaction.

68 There is a notable gap in the literature regarding why people garden specifically  
69 in their front gardens. The above studies are either about back (rear) gardens - places  
70 hidden from public view and associated with private lives - or do not distinguish  
71 between all types of domestic gardens. One exception indicates that USA residents care  
72 for front lawns as a sign of respect for their neighbourhood (Robbins et al., 2001).

### 73 *Community engagement through gardening*

74 Hassen & Kaufman (2016) define community engagement as 'the ability of a group or  
75 network of people, bound either by interest or by geography, to interact with one  
76 another for support, to promote inclusivity and to organise social activities' (page 120).  
77 The literature on the community-building effects of gardening is extensive, though  
78 focused on shared gardens (Jensen & Sørensen, 2020; Okvat & Zautra, 2011; Shinew et  
79 al., 2004). This includes gardens shared in numerous configurations - collections of

80 private plots such as allotments (Veen et al., 2015) or larger parcels everyone tends to  
81 together (Spilková & Rypáčková, 2019), rehabilitation gardens (Marsh et al., 2017) and  
82 other public green spaces (Harris et al., 2014). We have a strong understanding of how  
83 community gardens work to (re)build and nurture a sense of community (Armitage et  
84 al., 2008; Plummer & FitzGibbon, 2007; Veen et al., 2015). Such studies tend to look  
85 for evidence of bonding, high community engagement, and increased social capital  
86 (Firth et al., 2011). The perceived aesthetics and upkeep of a street do influence  
87 community engagement (Hassen & Kaufman, 2016).

88         The history of urban communal gardens is well-documented and serves as  
89 evidence for the social benefits of shared gardening spaces. Community gardens have  
90 been linked to citizens' capacity to cope during times of socio-economic hardship (Chan  
91 et al., 2015; Glover, 2004) and can help empower marginalised groups, such as severely  
92 economically-disadvantaged people and minority ethnic groups (Crossan et al., 2016;  
93 Cumbers et al., 2018; Metcalf et al., 2012). Nonetheless, though publically visible,  
94 front gardens are not public green spaces or community gardens as they are privately  
95 owned. There is very limited literature on the community benefits and social cohesion  
96 that may result from gardening activities in private front gardens (Gehl, 1986).

### 97 ***Wellbeing through gardening***

98 There is increasing evidence relating to the health and therapeutic benefits of gardening  
99 (Buck, 2016; Chalmin-Pui et al., 2021; De Bell et al., 2020; Soga et al., 2017), including  
100 research that links tighter community cohesion with health and wellbeing (de Vries et  
101 al., 2013). Kaplan & Kaplan (1989) found neighbourhood satisfaction to be correlated  
102 with the view of a garden even if it belonged to someone else. Housing and  
103 neighbourhood conditions are a significant factor in people's physical health, mental  
104 health, quality of life, and self-development (Balestra & Sultan, 2013). A sense of

105 privacy, security, stability, and control associated with the home and neighbourhood are  
106 likely to have an impact on wellbeing. For example, the degree of trust and feelings of  
107 connectedness has an impact on how neighbours work together to achieve common  
108 goals (cleaner and safe public spaces), exchange information, and maintain informal  
109 social controls (such as discouraging anti-social behaviour in the neighbourhood)  
110 (Putnam, 1993).

111 This research aims to create a thematic framework of the relationships between  
112 keen gardeners and their front gardens to:

- 113 (1) Understand the psychology of why people garden in front gardens;
- 114 (2) Explore how community and social cohesion may emerge from gardening  
115 activities in front gardens;
- 116 (3) Gain an insight into the health benefits of front gardens and of gardening in front  
117 gardens.

118 Constructing a theoretical framework aims to better understand socio-cultural  
119 mechanisms through which front gardens impact wellbeing outcomes (Chalmin-Pui et  
120 al., 2019, 2021). This aims to provide new evidence to inform policy in tackling the  
121 decline of domestic green spaces in new and existing urban developments (World  
122 Health Organization, 2016).

### 123 **Research Context and Methodology**

124 Britain in Bloom (BiB) is a national campaign now run by the Royal Horticultural  
125 Society (RHS) in the UK to provide a platform for people to improve their local  
126 environment through gardening. The campaign brings together over 1,600 communities  
127 in an annual competition with criteria of horticultural excellence, environmental  
128 responsibility, and community participation. Each group runs independently, though the

129 national judging process is led by the RHS.

130           BiB was founded in 1963 to promote tourism and civic pride. BiB founder Roy  
131 Hay, a horticultural journalist and broadcaster, was inspired by the new competition  
132 “Fleurissement de France” which saw French towns competing for the best floral  
133 displays and enjoying a boost in local tourism (Elliott, 2014). Hay garnered support  
134 from the British Travel and Holidays Association to run BiB as a pilot. It officially  
135 started the following year with a tiered regional and national judging process. BiB has  
136 evolved through decades of leadership changes and funding difficulties. The RHS  
137 became the organising body of BiB in 2002. Today, the focus has moved away from  
138 municipal bedding plants, with awards presented for landscape sustainability,  
139 biodiversity, edible gardening, and tree planting, for example (Elliott, 2014). BiB is the  
140 UK’s longest-running gardening competition.

141           Doing research through BiB provides access to people who have some of the  
142 greenest and most colourful front gardens. They may perhaps hold more developed  
143 opinions on their (health) impacts. The authors acknowledge that the formal competitive  
144 aspect is not a common experience for the vast majority of domestic gardeners.  
145 Therefore, the analysis aims to gain an insight into whether the competition alters the  
146 effects of greening front gardens beyond providing a stronger motivation to take part.  
147 This is the first empirical study surrounding BiB.

148           Three separate focus group sessions were held with a total of 20 BiB  
149 participants. The focus group format, as opposed to one-to-one interviews, better  
150 uncovers aspects of community cohesion (Hennink & Leavy, 2013). Focus groups  
151 afford the analysis of interactions between participants and the degree of agreements  
152 and disagreements on given topics (Morgan & Krueger, 1993).

153 ***Recruitment***

154 Participants were recruited via the RHS Head of Communities who identified five  
155 potential BiB communities based on criteria of 1) front gardens categories, 2) urban  
156 locations, 3) accessibility by public transport for the researchers, and 4) a spread of  
157 socio-economic demographics.

158 Four groups in Greater London were sent an information sheet and consent  
159 form. Three groups provided a sufficient number of positive responses (5-8 people) and  
160 the researcher arranged dates, times, and room bookings.

161 ***Running the focus groups***

162 For each BiB group, one focus group was organised in accessible, indoor communal  
163 spaces that the participants were likely to be familiar with. Two moderators ran each  
164 focus group.

165 The focus groups were based on a prepared list of questions (see supplementary  
166 material), which was loosely followed depending on the direction and flow of  
167 discussions. The moderator encouraged participants to respond to each other. Long  
168 periods of time could pass without any intervention from the moderator. Participants  
169 talked freely, listened actively, and responded to each other throughout. They were also  
170 receptive to moderation and prompts. In all focus groups, there was clear rapport and  
171 constructive interactions between the participants. Each focus group lasted  
172 approximately one hour.

173 ***Analysis***

174 Interpretative Phenomenological Analysis of the focus groups was used to extract the  
175 subjective and idiosyncratic perceptions and motivations of individual participants  
176 (Stewart et al., 2007). This approach was used to understand individual experiences and



177 meaning-making rather than consensus or points of contention. The strengths of a  
178 phenomenological understanding of the data are a focus on an individual's perspective  
179 on their lives and the decisions they make. This kind of social inquiry is a reflexive  
180 process that affords creative linkages between specific lived experiences (McWilliam,  
181 2010) and responds to the call for leisure research to explore different voices and  
182 practices of gardening with multiplicity in mind (Dubnewick et al., 2013).

183         Following Smith et al. (2009), after transcribing from audio recordings,  
184 abbreviated transcripts were coded thematically and textual analysis was complemented  
185 by analysis of tone and other observational notes. Iterative thematic notes were taken  
186 for each participant. Analytical notes included issue order, the frequency with which a  
187 concept was mentioned, how many different people mentioned the concept, emotional  
188 intensity, level of detail, time spent on the issue, and individual consistency. If  
189 responses provided more detail, held stronger emotion and if other participants voiced  
190 agreement, the comment was given more weight. All analysis was conducted in a  
191 reiterative process, with thematic mindmaps and linkages between themes created and  
192 continually reworked to structure the data and reach a saturation of ideas.

## 193 **Results**

194 In Summer 2016, three focus groups in three boroughs of Greater London (unnamed to  
195 ensure anonymity) were conducted with a total of 20 people (5, 13, and 2 people in each  
196 group). The mean age of respondents was 66 years old. Respondents were more likely  
197 to be female, retired, educated to high school or undergraduate level, and white British.  
198 The demographics of the respondents are fully summarised in table 1. Table 2  
199 highlights the urban typologies associated with the groups.

200 Table 3 reports the frequency of topics from the focus groups. Thematic  
201 discussion and conceptualisation of the theoretical framework of gardeners'  
202 relationships with their gardens developed through the iterative process.

203 Some of the responses evoked gardening spaces other than front gardens such as  
204 back gardens or allotments. Outside of discussions about physical activity, the focus on  
205 front gardens was maintained in the analysis.

## 206 **Thematic analysis**

207 The thematic framework derived from the results provides insights on front gardens  
208 with respect to the psychology of why people garden in the front garden, the community  
209 and social cohesion that may emerge from front gardening activities, and the perceived  
210 health benefits of front gardening. The following discussion is structured around four  
211 key themes that were found from the focus groups: self-identity, community, fulfilment,  
212 and health.

213 Using quotes from the participants brings their ideas alive alongside the existing  
214 literature. Following an exploration of the four themes, a conceptual diagram illustrates  
215 how the four themes are inextricably linked.

## 216 ***Self-identity***

217 Cultivating a strong sense of self was a deeply-rooted concept for the majority of  
218 gardeners. Their self-identity was linked to both the front garden itself but also the act  
219 of gardening there. As Freeman et al. (2012) and Gross (2018) summarised, gardens are  
220 expressions of their owners' identities. For the participants, this was manifest in several  
221 different ways, which are discussed in turn: a) familial and intergenerational identities,  
222 b) self-expression and creativity, c) a sense of being and coping.

223            Firstly, there was a link to childhood and a measured nostalgia for days gone by.  
224    Childhood memories arguably form the oldest and firmest sense of self that cannot be  
225    shaken by events later in the life-course (Cherrie et al., 2018; Gross & Lane, 2007).  
226    When describing their own identities as gardeners, participants quickly alluded to their  
227    earliest memories:

228            My first recollection as a small child is digging a hole in the earth in the bottom of  
229            the garden and making myself a flower shop

230    One participant simply explained that his parents and family all loved to garden.  
231    Attachments to parents or grandparents sometimes determined what was planted today.  
232    For example, even though they don't grow well in her garden, one participant always  
233    plants lupins (*Lupinus* spp.) and dahlias (*Dahlias* spp.) to remember her late father's  
234    garden. She always has 'the most wonderful feeling' when she sees the dahlias  
235    blooming.

236            These vivid recollections are manifestations of the psychological role that  
237    gardens can play and are an example of gardens providing the opportunity for 'being  
238    away' - a key component of Attention Restoration Theory (Kaplan & Kaplan, 1989).  
239    This theory posits that exposure to natural environments restores the ability to  
240    concentrate on a task that requires effort and directed attention.

241            A sense of family identity was evident as three participants explained that  
242    divisions of labour between husband and wife were an immutable part of their  
243    household as 'the front garden is a central part of your living'. For example, the  
244    husband gardens in the front and the wife in the back, together forming a team.

245            Secondly, the importance of the garden for participants' sense of identity is in  
246    the merit they attributed to themselves and the control they had on their immediate  
247    environment. It was their means of self-expression and creativity. Bhatti (2014)

248 understood that domestic gardens provide the context for a sense of self both as a  
249 creative being and as a social actor. One participant took pride in her individual power  
250 to shape her garden:

251           at least I know that if anything goes wrong, it's my fault and if it's all lovely, it's  
252           my fault

253 Finally, participants' identities could be wholly tied with the garden. One man claimed  
254 'I'm known as Mr Front Garden now' and a lady said that, even without any particular  
255 technical knowledge, '[gardening] gave me time to just be me'. More poignantly,  
256 another stated: 'I'd never be without a garden, [...] it's my support', i.e. a coping  
257 mechanism.

## 258 ***Community***

259 Gardening in front gardens created several layers of community amongst gardeners and  
260 within the local area. Knowledge sharing between gardeners, but also with non-  
261 gardeners builds a community based on joint learning, advice-giving, and having the  
262 space to experiment. Synchronously, a sense of community consists of the  
263 beautification of the neighbourhood, and the pleasure that greening front gardens brings  
264 to other residents and passers-by.

265           Emotions were shared in response to fellow gardeners' tales: encouragement,  
266 consolation, commiseration, and astonishment. As a community, they were battling  
267 similar challenges (slugs, cats, etc.) and aiming for similar goals. All of the participants  
268 said that they notice and take inspiration from what they see others doing in their front  
269 gardens. Gardeners also come together as a community outside of their gardens. A  
270 charity plant swap raised over £6,000 by bringing together the enthusiasm of both keen  
271 and fledgling gardeners.

272 Gardening is a broad skill to acquire. Individual learning is supported by  
273 intentional experimentation in the garden (Armitage et al., 2008). One participant  
274 provided an analogy that several women agreed with:

275 I do it like I do my cooking, I make it up as I go along

276 Both within the community of gardeners and with passers-by, there is a camaraderie  
277 formed between the front garden and the pavement. For example, passers-by often  
278 compliment or pose a question to the gardener – a form of social engagement they may  
279 be reluctant to initiate elsewhere. There were many mentions of this phenomenon:

280 They all stop and talk. ‘What’s the name of that’, ‘What did you do with your  
281 lavender?’

282 This attitude gives people the confidence to improvise, to learn from mistakes, and to  
283 take on new challenges. Knowledge-sharing inherent to the learning processes of  
284 gardening include: trial and error, exchanging information from television shows,  
285 magazines, catalogues, advice passed down from generation to generation and over the  
286 hedge neighbour to neighbour. Indeed, social development occurs when these skills are  
287 shared and developed based on deliberation and discussion within a group (Chan et al.,  
288 2015; Plummer & FitzGibbon, 2007).

289 Gardening in front gardens was also motivated by a strong sense of bettering the  
290 local community through beautifying the area and creating pleasure for others. One  
291 respondent involved in the judging process explained that he favours ‘gardens with kerb  
292 appeal and lots of colour’. The concept of kerb appeal refers to the attractiveness of  
293 house exteriors being an aesthetic experience to be viewed from the street. There is an  
294 added sense of responsibility to make an effort in the front garden because of its public  
295 nature:

296           We concentrate on front gardens and residential frontages because it isn't just for  
297           our own pleasure, it's also for the community

298   One participant stressed the importance of his own privacy from the road. When  
299   indoors, he appreciates the 'defensible space' created by the front garden plants by  
300   blocking the vista from the road to his bay window. He can see the plants from inside,  
301   and more importantly, passers-by cannot see into his living room. Instead, they enjoy  
302   the 'intervening' floral display. Alexander (2002) dismissed front gardens as merely  
303   distancing the road and pavement from the house with what he assumes are blocking  
304   walls, fences, and hedges. This participant adds complexity to Alexander's view. The  
305   front garden does buffer the home from the street but the barrier is visually permeable  
306   and it does not preclude the owner's intimate relationship with the front garden or  
307   positive impacts for passers-by.

308           Moreover, the pleasure of front gardens is accessible to all - 'you don't have to  
309   know which flower it is to think it's a pretty flower'. For everybody, a greener area is  
310   nicer to walk around. One participant hypothesised that

311           If you suddenly took away all the plants tomorrow, it would suddenly look pretty  
312           grim and grey. This area is very hard and intimidating. The plants make it look  
313           softer

314   This idea of softening the hard edges of urban landscapes by adding window boxes and  
315   container plantings was proposed by many participants, noting that even in small areas  
316   where there is only space for bins,

317           People are making an effort to detract from the wheelie bins in the front yard. You  
318           walk past and you see the wheelie bins and the flowers - but the flowers detract  
319           from the wheelie bins

320   Humans prefer curved vegetation over angular visual stimuli in an urban environment

321 (Hareli et al., 2016). Softer shapes are associated with peacefulness while angular  
322 shapes have been related to anger, aggression, and antagonism. This attractiveness  
323 associated with front gardens was repeatedly said to be making the roads more beautiful  
324 and raising the status of the borough:

325           It attracts people and it brings in tourism [...] it's bringing in business as well, and  
326           so your garden has a real knock-on effect

327 Green and colourful front gardens become a 'positive sell' for the area. Residents in one  
328 focus group had noticed real estate agents deliberately passing by greener front gardens  
329 when showing prospective clients a property. Crompton and Nicholls (2019) estimate  
330 premiums of 17-24% on property values for views of residential gardens. Local  
331 businesses in one of the areas perceived an economic benefit too. In addition to taxes,  
332 they are willing to pay for the greening of private buildings' front facades. Local  
333 councils are said to also be encouraged to invest in the area as local residents are more  
334 involved in upkeep.

335           The importance of perception in residents' evaluation of neighbourhoods should  
336 not be underestimated. According to the US Census (2004), neighbourhood appearance  
337 is an important reason homeowners choose where to live. It affects individual  
338 preferences and has an influence on actions residents are likely to take in their own front  
339 gardens (Nassauer et al., 2009).

340           A consequence of a greener urban environment is the respect it instils in the  
341 local area. Applicable to both residents and visitors, 'the more you do, the more people  
342 respect it so it doesn't get trashed'. This was echoed by another participant:

343           'greening an environment is just amazing, especially when it's shared, everybody  
344           cares together about their street and their area'.

345 Cooper (2006) also found that a cultivation of care arose when a garden was visibly  
346 valorised and shared with the local community.

347 Perceived neighbourhood upkeep by others has led to actual upkeep, lower fears  
348 of crime, and improved neighbourhood satisfaction (Hur & Nasar, 2014). Participants in  
349 one area noticed that while they used to encounter anti-social behaviour and dog-  
350 fouling, the situation improved once those involved understood the area was well cared  
351 for. Nonetheless, there are still cases of unhelpful behaviour such as smokers leaving  
352 cigarette butts in compost and littering in green spaces.

353 Chatting in a friendly and informal manner to other people was a major topic of  
354 conversation in all three groups. Open-ended, non-transactional verbal communication  
355 to get to know others in their vicinity was a strong reason for gardening in the front  
356 garden. Participants love chatting to neighbours and people they have never met before,  
357 noting that this is especially relevant for people living in isolated situations. There was a  
358 strong recognition that this generated a lot of pleasure for the other party in the  
359 conversation as well as for themselves. Greener front gardens led to more socialisation  
360 in the community, as they become an icebreaker for people who might not otherwise  
361 talk to each other. For example, areas frequented by students, local residents, and  
362 workers on lunch breaks mean that daily patterns of use are established and spontaneous  
363 chats make the area friendlier.

364 As further evidence that people other than themselves enjoy vegetated front  
365 gardens, participants said that they often witnessed a knock-on effect in their local area.  
366 Following their efforts, all participants gradually noticed more window troughs,  
367 hanging baskets, balconies fitted with flower pots at the homes of neighbours who had  
368 previously never shown any interest. One BiB campaign leader acknowledged that  
369 although it was often harder to motivate tenants than homeowners, it was feasible for



370 tenants to take pride in their front gardens as neighbours generally wanted to ‘keep up  
371 with once another’:

372           If people see nice gardens in their field of visions, they’ll try to copy

373 This speaks to the existence of a spatial contagion effect of garden styles and practices  
374 between adjacent front gardens and the potential power of garden role-models at a street  
375 or neighbourhood scale (Kirkpatrick et al., 2009; Zmyslony & Gagnon, 1998).

### 376 ***Fulfilment***

377 Fulfilment - a deep feeling of pleasure when achieving a goal, desire, or meaning in life  
378 – is treated as a standalone theme that was independent of a growing community, self-  
379 identity or good health and purely stemming from the front garden itself. In horticultural  
380 therapy, it is widely known that a sense of belonging is a key factor in enabling social  
381 inclusion through meaningful occupations fostering affirmation, feedback, a sense of  
382 achievement, and the possibility for self-determination (Diamant & Waterhouse, 2010).

383           Feelings of fulfilment were expressed in several ways such as: ‘it’s good to see  
384 things grow’. Given that many gardeners are often trialling plants and methods for the  
385 first time, learning as they go along, additional satisfaction comes from this process and  
386 potential successes. The front garden was described as ‘an ongoing project’  
387 accompanied by ‘contentment that varies through the year’ and that the whole  
388 endeavour is ‘immensely satisfying’. Sometimes the enjoyment was associated with  
389 specific activities, such as ‘weeding, which I find to be a very very fulfilling thing to  
390 do’ or linked to a particular plant or sensory stimulus: ‘when the lavender was out, it’s  
391 just brilliant to walk past it, the scent!’. Participants see gardening as a worthwhile  
392 activity in itself that culminated in ‘always feel[ing] much better afterwards’.

393 It makes you feel happy, blissful. It detracts from the urban landscape, [...] all the  
394 concrete. That helps my wellbeing

395 In addition to the innate satisfaction from gardening, participants also  
396 experienced rewarding feelings from contributing to their local community. When  
397 winning a prize or receiving a heartfelt comment about their garden, the fulfilment felt  
398 when congratulated by fellow gardeners was highly valued. Moreover, knowing that  
399 they were contributing to others' enjoyment was relished. One introverted participant  
400 recognised that the front garden is his only outlet of

401 Exhibitionism, it's important to be seen and I can justify it because I know it's  
402 lovely and it inspires people. I get a lot of positive reinforcement from it

403 All the participants shared uplifting anecdotes of people coming by: 'it is satisfying for  
404 me because people do come up and chat'. One participant living near a school sees the  
405 joy children are getting from the flowers in her front garden. Another particularly  
406 evocative story that enchanted the rest of the participants involved

407 Two Japanese young ladies [...] knocked on the door and said 'Excuse me, do you  
408 mind if we take a photo of your front garden because we think it's so beautiful'. I  
409 said 'My goodness please do!' and it made my day

410 Participants had many such stories of the satisfaction they felt when people expressed  
411 happiness at seeing beautiful front gardens.

#### 412 ***Health***

413 A significant part of the wellbeing benefits of front gardens and gardening was via a  
414 fulfilled self-identity and a sense of belonging in a community (Pitas et al., 2020). In  
415 addition, participants also specified therapeutic benefits, with some experiencing and  
416 overcoming depression and other physical illnesses.

417 Most participants cited moderate physical exercise as the first and most obvious  
418 health benefit of front gardening. Regular front gardening results in many of the health  
419 benefits associated with a physically active life, though muscle strains and overused  
420 joints may limit the benefits (Franke et al., 2013). One participant told the story of an  
421 overweight BiB gardener (not present) who achieved a healthy weight after being much  
422 more active through gardening. Any type of exercise was beneficial and even ten  
423 minutes outdoors was felt to be therapeutic. Indeed, a study on gardeners found that  
424 gardening preserves physical function in older adults (Park & Shoemaker, 2009).

425 Gardeners have a high level of control over what they can and cannot do. This  
426 contributes to injury prevention. One participant, who is finding herself gradually  
427 restricted in her gardening activities as she ages, beamed that

428 It is wonderful for you to get out in the fresh air and to get some exercise, do a bit  
429 of bending and stretching and maybe settle down on the patio with your cocktail.  
430 Life could not be more perfect.

431 Everybody agreed that the uniqueness of gardening as a physical activity was that it is  
432 adaptable to physical (dis)ability, injury, and fitness levels. Even when there were  
433 struggles or health obstacles that limited gardening activities, participants are advising  
434 each other: 'don't overdo it, do what you can do'. Similarly, Scott et al. (2014) found  
435 that the majority of respondents over the age of 60 reported that they had made physical  
436 adjustments to their gardening activities to cope with their declining abilities.

437 Other aspects of physical health included easier access to more fruit and  
438 vegetables. One participant proposed that air quality in the garden improved with more  
439 dense planting. Another participant noticed healthier sleep patterns after gardening.

440 Regarding mental health, participants were mostly coming back to the  
441 aforementioned themes of fulfilment, self-confidence, and a sense of belonging in their

442 community. More specifically about mental ill health, one participant explained that she  
443 continues to garden despite several back-related problems and depression. Although she  
444 finds the exertion exhausting, she feels better when she is active and takes managed  
445 risks. A different participant made a poignant statement that led to a contemplative  
446 silence in the room and murmurs of agreement:

447           If you can learn to grow something which is beautiful in front of you I think you  
448           can grow a garden in your heart. And I think people who can grow a garden in their  
449           heart, are the people who can overcome all sorts of terrible personal pain, grief, all  
450           sorts of things.

451 The line between the physical and mental impacts of gardens is not clearly demarcated  
452 (Gendle, 2016) nor did it seem to be a relevant distinction for the participants. Taken  
453 together, the presence of green front gardens and gardening in the front gardens does  
454 have a role to play in the health of BiB members.

#### 455 *Competition*

456 The competitive aspect of BiB plays a role in participants' involvement and continued  
457 enthusiasm, but it is not an all-consuming factor in their interest. As one participant  
458 summarised,

459           I've always said I'm not competitive and I honestly don't believe I am but it sort of  
460           pushes you to do a bit more and a bit more and as best you can.

461 Having said this, one participant who took the competition seriously strives to win and  
462 is disappointed when he does not. He had even cancelled a holiday to ensure his front  
463 garden was ready for judging. He takes this attitude because he enjoys it and winning  
464 has become a part of his identity just as much as his garden has. Barring this exception,  
465 all other focus group participants insisted that the main consequence of the competitive

466 element was increased encouragement between neighbours to beautify and green house  
467 frontages. These impacts strengthen the three themes of self-identity, fulfilment, and  
468 community. Therefore, the competitive aspect of participants' relationship with their  
469 front gardens was more important than hypothesised.

#### 470 *Theoretical framework*

471 In qualitative work, the focus is not on providing causal explanations but on deepening  
472 understanding of phenomena under study (Patton, 2002). The conceptual diagram in  
473 figure 1 brings together the topics and themes from the focus groups. This becomes the  
474 theoretical framework to answer the key research questions, as linkages between themes  
475 are more readily drawn diagrammatically than in linear text. The diagram is best read  
476 from the top down, following the arrows for sequence. The four themes of self-identity,  
477 community, fulfilment, and health in the centre row are developed into their constituent  
478 parts. The theoretical framework follows criteria outlined by McMillan & Schumacher  
479 (2001) for theories useful to the further development of knowledge: it provides a simple  
480 narrative of the observed phenomenon, is consistent with observations, provides means  
481 for verification and revision, and stimulates further research. This could provide  
482 scientific underpinnings for social and health impact assessments in planning decisions  
483 (Bond et al., 2013).

#### 484 **Limitations**

485 This study faced some key limitations. Firstly, nearly all participants identified as white  
486 British. This is not representative of the UK population in general nor of UK leisure  
487 gardeners. While this fact guided our choice of phenomenological analysis to  
488 understand the individual lived experiences of our respondents, future research would  
489 benefit from sampling a more diverse group (in terms of age and ethnicity, for

490 example). This would help reflect the balance between alternative and dominant  
491 narratives of gardening as a leisure activity (Dubnewick et al., 2013). It is also  
492 acknowledged that BiB gardeners, who are by definition part of a gardening  
493 community, are likely to be more convinced and vocal about the benefits of gardening.  
494 These community groups may be presenting an idealised picture of an inclusive  
495 ‘community’ (Neo & Chua, 2017; Yuen & Johnson, 2017) and it is important to be  
496 critical about how social exclusion or processes of marginalisation may be operating  
497 within such leisure groups (Christensen et al., 2019).

498         Nonetheless, the framework presented here reflects data from a largely non-  
499 gardening population who were not organised as a community had improved health  
500 outcomes following the addition of plants in their front gardens (Chalmin-Pui et al.,  
501 2021). There are also alternative, less formalised actors of the urban greening agenda  
502 including guerrilla gardeners (Certomà & Tornaghi, 2015) and permaculture approaches  
503 (Kirkpatrick & Davison, 2018) for example. BiB gardeners might represent a sub-  
504 section of UK gardeners but do not fully represent all the socio-cultural factors around  
505 front gardens. If an individual owns a front garden, there are no imposed practices or  
506 expectations of social capital from the ‘community’ (Blackshaw & Long, 2005) as there  
507 might be in community gardens or allotments (Beilin & Hunter, 2011; Ghose &  
508 Pettygrove, 2014; Tan & Neo, 2009). While gardening can be a form of gentrification  
509 (Cole et al., 2017), it can also be an expression of independence and radical thought  
510 (Longhurst, 2006). Gardening in front gardens can be the needed bridge to  
511 “communicate across those cultural boundaries that divide communities in a way that is  
512 at the same time respectful of the differences that separate them” (Blackshaw & Long,  
513 2005, page 255).

514 **Conclusion**

515 This study identified the benefits of front gardens and gardening in front gardens to  
516 individual health and wellbeing alongside other social health gains to the wider  
517 community. Using focus groups with members of three BiB communities in Greater  
518 London, this study has identified new relationships between enthusiastic gardeners and  
519 their front gardens. Previous research work of this nature was limited to back gardens or  
520 community gardens only. Four key themes emerged: self-identity, community,  
521 fulfilment and health. Participants perceive that front gardens and/or gardening therein:  
522 are a strong part of their personal identity and self-expression; provide the gardener with  
523 individual benefits, including feelings of satisfaction, fulfilment, and other mental  
524 health benefits; contribute to the local area and provide pleasure to neighbours and  
525 passers-by. Gardening in front gardens was suggested to be a means of building a  
526 community in a neighbourhood or street, and social cohesion has emerged in this way.  
527 Mechanisms through which this occurred includes informal dialogue, knowledge-  
528 sharing, and making the area more attractive for residents, passers-by, and businesses.  
529 The health benefits of front gardens come from gardening as a physical activity as well  
530 as from the fulfilment and positive affect derived from the presence of these highly  
531 visible green spaces. These socio-cultural mechanisms through which front gardens lead  
532 to wellbeing outcomes have been brought together and can be used in further research  
533 on the impact of front gardens and community greening initiatives in private spaces.

534 Implications of this study can also contribute to effective communication of the  
535 impacts of front gardens with the general public, local authorities, planners, and  
536 developers. The impact that private green spaces can have on communities is often  
537 ignored by land-use planners and policy-makers (Garcia-Garcia et al., 2020; Kotsila et  
538 al., 2020; Notteboom, 2018) but both public and private green spaces do play a critical

539 role in promoting wellbeing. Front gardens can be understood as unique buffer zones  
540 that connect the home to the outside world while simultaneously separating the private  
541 from the public realms. The ideas of self-expression, belonging in a community,  
542 fulfilment, and health can quickly convey expected impacts of greening front gardens  
543 that are currently paved over. Encouraging people to explore and use their front  
544 gardens, to take pride in them and engage with the natural world, is likely to lead to a  
545 range of social and health benefits (as well as environmental ones).

546 Finally, we turn to broader themes of urban green infrastructure. Although the  
547 more dominant rationales for urban greening are linked to climate change and  
548 environmental ecosystem services (see Galluzzi et al., 2010; Tratalos et al., 2007), only  
549 two participants mentioned that front gardens might create more sustainable drainage,  
550 without any details or emotion. When not in an explicitly ecological context, narratives  
551 based on flooding or permeability are not a common motivation for gardening for this  
552 demographic. This is despite the fact that Greater London is the largest urban built-up  
553 area in the UK and has the highest concentration of paved-over front gardens (Greater  
554 London Authority, 2005; Royal Horticultural Society, 2015; Smith et al., 2011).

555 On the other hand, people can be reached in emotional terms on issues of the  
556 self and of the community. This observation thus provides a rationale for shifting the  
557 focus from flooding (Kelly, 2018; Murata & Kawai, 2018) to community and wellbeing  
558 when trying to encourage people to garden or when promoting green spaces to  
559 developers, planners and policy-makers. This provides a mechanism through which to  
560 battle the ‘tyranny of small [poor] gardening decisions’ (Dewaelheyns et al., 2016)  
561 where actions taken by individual residents, for example using excess fertilisers and  
562 pesticides or paving over their front gardens, lead to a collective detrimental effect on  
563 ecosystem services and people’s wellbeing.



564 **References**

- 565 Alexander, C. (2002). The Garden as Occasional Domestic Space. *Signs: Journal of*  
566 *Women in Culture and Society*, 27(3), 857–871.
- 567 Amherst, A. (2013). *A History of Gardening in England*. Cambridge University Press.
- 568 Armitage, D., Marschke, M., & Plummer, R. (2008). Adaptive co-management and the  
569 paradox of learning. *Global Environmental Change*, 18, 86–98.
- 570 Ashton-Shaeffer, C., & Constant, A. (2006). Why do Older Adults Garden? *Activities,*  
571 *Adaptation & Aging*, 30(2), 1–18.
- 572 Badiu, D. L., Onose, D. A., Niță, M. R., & Laforteza, R. (2019). From “red” to green?  
573 A look into the evolution of green spaces in a post-socialist city. *Landscape and*  
574 *Urban Planning*, 187, 156–164.
- 575 Balestra, C., & Sultan, J. (2013). Home Sweet Home: The Determinants of Residential  
576 Satisfaction and its Relation with Well-being. *OECD Statistics Working Papers*.
- 577 Balooni, K., Gangopadhyay, K., & Kumar, B. M. (2014). Governance for private green  
578 spaces in a growing Indian city. *Landscape and Urban Planning*, 123, 21–29.
- 579 Beard, J. G., & Ragheb, M. G. (1983). Measuring Leisure Motivation. *Journal of*  
580 *Leisure Research*, 15(3), 219–228.
- 581 Beilin, R., & Hunter, A. (2011). Co-constructing the sustainable city: How indicators  
582 help us “grow” more than just food in community gardens. *Local Environment,*  
583 *16(6)*, 523–538.
- 584 Bhatti, M. (2014). Garden Stories: Auto/biography, Gender and Gardening.  
585 *Sociological Research Online*, 19(3).
- 586 Bhatti, M., & Church, A. (2004). Home, the culture of nature and meanings of gardens  
587 in late modernity. *Housing Studies*, 19(1), 37–51.
- 588 Bhatti, M., Church, A., & Claremont, A. (2014). Peaceful, Pleasant and Private: The  
589 British Domestic Garden as an Ordinary Landscape. *Landscape Research*, 39(1),  
590 40–52.
- 591 Blackshaw, T., & Long, J. (2005). What’s the big idea? A critical exploration of the  
592 concept of social capital and its incorporation into leisure policy discourse. *Leisure*  
593 *Studies*, 24(3), 239–258.

- 594 Bond, A., Cave, B., & Ballantyne, R. (2013). Who plans for health improvement? SEA,  
595 HIA and the separation of spatial planning and health planning. *Environmental*  
596 *Impact Assessment Review*, 42, 67–73.
- 597 Buck, D. (2016). Gardens and health: Implications for policy and practice. In *The*  
598 *King's Fund and National Gardens Scheme*.
- 599 Certomà, C., & Tornaghi, C. (2015). *Political gardening . Transforming cities and*  
600 *political agency*. 9839(September).
- 601 Chalmin-Pui, L. S., Griffiths, A., Roe, J. J., & Cameron, R. W. F. (2019). Bringing  
602 Fronts Back: A Research Agenda to Investigate the Health and Well-Being  
603 Impacts of Front Gardens. *Challenges*, 10(37).
- 604 Chalmin-Pui, L. S., Roe, J., Griffiths, A., Smyth, N., Heaton, T., Clayden, A., &  
605 Cameron, R. (2021). “It made me feel brighter in myself”- The health and well-  
606 being impacts of a residential front garden horticultural intervention. *Landscape*  
607 *and Urban Planning*, 205.
- 608 Chan, J., DuBois, B., & Tidball, K. G. (2015). Refuges of local resilience: Community  
609 gardens in post-Sandy New York City. *Urban Forestry & Urban Greening*, 14(3),  
610 625–635.
- 611 Cheng, E. H. P., & Pegg, S. (2016). “If I’m not gardening, I’m not at my happiest”:  
612 exploring the positive subjective experiences derived from serious leisure  
613 gardening by older adults. *World Leisure Journal*, 58(4), 285–297.
- 614 Cheng, E. H. P., Stebbins, R., & Packer, J. (2017). Serious leisure among older  
615 gardeners in Australia. *Leisure Studies*, 36(4), 505–518.
- 616 Cherrie, M. P. C., Shortt, N. K., Mitchell, R. J., Taylor, A. M., Redmond, P., Ward  
617 Thompson, C., Starr, J. M., Deary, I. J., & Pearce, J. R. (2018). Green space and  
618 cognitive ageing: A retrospective life course analysis in the Lothian Birth Cohort  
619 1936. *Social Science & Medicine*, 196, 56–65.
- 620 Christensen, S., Malberg Dyg, P., & Allenberg, K. (2019). Urban community gardening,  
621 social capital, and “integration”—a mixed method exploration of urban “integration-  
622 gardening” in Copenhagen, Denmark. *Local Environment*, 24(3), 231–248.
- 623 Cole, H. V. S., Garcia Lamarca, M., Connolly, J. J. T., & Anguelovski, I. (2017). Are  
624 green cities healthy and equitable? Unpacking the relationship between health,

625 green space and gentrification. *Journal of Epidemiology & Community Health*, 0,  
626 1–4.

627 Cooper, D. E. (2006). *A Philosophy of Gardens*. Oxford University Press.

628 Crompton, J. L., & Nicholls, S. (2019). The Impact of Park Views on Property Values.  
629 *Leisure Sciences*, 1–13.

630 Crossan, J., Cumbers, A., McMaster, R., & Shaw, D. (2016). Contesting Neoliberal  
631 Urbanism in Glasgow’s Community Gardens: The Practice of DIY Citizenship.  
632 *Antipode*, 48(4), 937–955.

633 Cumbers, A., Shaw, D., Crossan, J., & McMaster, R. (2018). The Work of Community  
634 Gardens: Reclaiming Place for Community in the City. *Work, Employment and*  
635 *Society*, 32(1), 133–149.

636 De Bell, S., White, M., Griffiths, A., Darlow, A., Taylor, T., Wheeler, B., & Lovell, R.  
637 (2020). Spending time in the garden is positively associated with health and  
638 wellbeing: Results from a national survey in England. *Landscape and Urban*  
639 *Planning*.

640 de Vries, S., van Dillen, S. M. E., Groenewegen, P. P., & Spreeuwenberg, P. (2013).  
641 Streetscape greenery and health: Stress, social cohesion and physical activity as  
642 mediators. *Social Science & Medicine*, 94, 26–33.

643 Department for Culture Media and Sport. (2017). *Adult (16+) participation in*  
644 *gardening, 2015/16*.

645 Dewaelheyns, V., Kerselaers, E., & Rogge, E. (2016). A toolbox for garden governance.  
646 *Land Use Policy*, 51, 191–205.

647 Diamant, E., & Waterhouse, A. (2010). Gardening and belonging: Reflections on how  
648 social and therapeutic horticulture may facilitate health, wellbeing and inclusion.  
649 *British Journal of Occupational Therapy*, 73(2), 84–88.

650 Dubnewick, M. J., Fox, K. M., & Clandinin, D. J. (2013). Tending to the soil:  
651 autobiographical narrative inquiry of gardening. *Leisure/ Loisir*, 37(4), 415–431.

652 Elliott, B. (2014, April). Still in full Bloom. *The Garden*, 73–76.

653 Finerman, R., & Sackett, R. (2003). Using home gardens to decipher health and healing  
654 in the Andes. *Medical Anthropology Quarterly*, 17(4), 459–482.

- 655 Firth, C., Maye, D., & Pearson, D. (2011). Developing 'community' in community  
656 gardens. *Local Environment*, 16(6), 555–568.
- 657 Francis, M., & Hester, R. T. J. (1990). *The Meaning of Gardens*. MIT Press.
- 658 Franke, T., Tong, C., Ashe, M. C., McKay, H., & Sims-Gould, J. (2013). The secrets of  
659 highly active older adults. *Journal of Aging Studies*, 27(4), 398–409.
- 660 Freeman, C., Dickinson, K. J. M., Porter, S., & van Heezik, Y. M. (2012). 'My garden  
661 is an expression of me': Exploring householders' relationships with their gardens.  
662 *Journal of Environmental Psychology*, 32(2), 135–143.
- 663 Galluzzi, G., Eyzaguirre, P., & Negri, V. (2010). Home gardens: neglected hotspots of  
664 agro-biodiversity and cultural diversity. *Biodiversity and Conservation*, 19(13),  
665 3635–3654.
- 666 Garcia-Garcia, M. J., Christien, L., García-Escalona, E., & González-García, C. (2020).  
667 Sensitivity of green spaces to the process of urban planning. Three case studies of  
668 Madrid (Spain). *Cities*, 100.
- 669 Gehl, J. (1986). 'Soft edges' in residential streets. *Scandinavian Housing and Planning  
670 Research*, 3(2), 89–102.
- 671 Gendle, M. H. (2016). The Problem of Dualism in Modern Western Medicine. *Mens  
672 Sana Monographs*, 14(1), 141–151.
- 673 Ghose, R., & Pettygrove, M. (2014). Urban Community Gardens as Spaces of  
674 Citizenship. *Antipode*, 46(4), 1092–1112.
- 675 Ginn, F. (2012). Dig for Victory! New histories of wartime gardening in Britain.  
676 *Journal of Historical Geography*, 38(3), 294–305.
- 677 Glover, T. D. (2004). Social capital in the lived experiences of community gardeners.  
678 *Leisure Sciences*, 26(2), 143–162.
- 679 Greater London Authority. (2005). Crazy-paving: The environmental importance of  
680 London's front gardens. *London Assembly Environment Committee*.
- 681 Gross, H. (2018). *The Psychology of Gardening*. Routledge.
- 682 Gross, H., & Lane, N. (2007). Landscapes of the lifespan: Exploring accounts of own  
683 gardens and gardening. *Journal of Environmental Psychology*, 27(3), 225–241.
- 684 Hareli, S., David, S., Lev-Yadun, S., & Katzir, G. (2016). Money in your palm: Sharp

- 685       shaped vegetation in the surroundings increase the subjective value of houses.  
686       *Journal of Environmental Psychology*, 46, 176–187.
- 687   Harris, N., Minniss, F. R., & Somerset, S. (2014). Refugees Connecting with a New  
688       Country through Community Food Gardening. *International Journal of*  
689       *Environmental Research and Public Health*, 11, 9202–9216.
- 690   Harris, R., & Larkham, P. (Eds.). (1999). *Changing Suburbs: Foundation, Form and*  
691       *Function*. Taylor & Francis Group.
- 692   Hassen, N., & Kaufman, P. (2016). Examining the role of urban street design in  
693       enhancing community engagement: A literature review. *Health and Place*, 41,  
694       119–132.
- 695   Hennink, M. M., & Leavy, P. (2013). *Focus Group Discussions : Focus Group*  
696       *Discussions*. Oxford University Press.
- 697   Hickman, C. (2013). “To brighten the aspect of our streets and increase the health and  
698       enjoyment of our city”: The National Health Society and urban green space in late-  
699       nineteenth century London. *Landscape and Urban Planning*, 118, 112–119.
- 700   Hur, M., & Nasar, J. L. (2014). Physical upkeep, perceived upkeep, fear of crime and  
701       neighborhood satisfaction. *Journal of Environmental Psychology*, 38, 186–194.
- 702   Jensen, J. L., & Sørensen, E. B. (2020). Recreation, cultivation and environmental  
703       concerns: exploring the materiality and leisure experience of contemporary  
704       allotment gardening. *Leisure Studies*, 00(00), 1–19.
- 705   Kaplan, R., & Kaplan, S. (1989). *The experience of nature: a psychological perspective*.  
706       Cambridge University Press.
- 707   Kelly, D. A. (2018). Impact of paved front gardens on current and future urban  
708       flooding. *Journal of Flood Risk Management*, 11, S434–S443.
- 709   King, A., & Shackleton, C. M. (2020). Maintenance of public and private urban green  
710       infrastructure provides significant employment in Eastern Cape towns, South  
711       Africa. *Urban Forestry and Urban Greening*, 54, 126740.
- 712   Kirkpatrick, J. B., Daniels, G., & Davison, A. (2009). An antipodean test of spatial  
713       contagion in front garden character. *Landscape and Urban Planning*, 93(2), 103–  
714       110.

- 715 Kirkpatrick, Jamie B., & Davison, A. (2018). Home-grown : Gardens, practices and  
716 motivations in urban domestic vegetable production. *Landscape and Urban*  
717 *Planning, 170*, 24–33.
- 718 Kotsila, P., Hörschelmann, K., Anguelovski, I., Sekulova, F., & Lazova, Y. (2020).  
719 Clashing temporalities of care and support as key determinants of transformatory  
720 and justice potentials in urban gardens. *Cities, 106*.
- 721 Lawrence, A. M. (2020). Morals and mignonette; or, the use of flowers in the moral  
722 regulation of the working classes in high Victorian London. *Journal of Historical*  
723 *Geography, 70*, 24–35.
- 724 Longhurst, R. (2006). Plots, plants and paradoxes: contemporary domestic gardens in  
725 Aotearoa/New Zealand. *Social & Cultural Geography, 7*(4), 581–593.
- 726 Marsh, P., Gartrell, G., Egg, G., Nolan, A., & Cross, M. (2017). End-of-Life care in a  
727 community garden : Findings from a Participatory Action Research project in  
728 regional Australia. *Health & Place, 45*, 110–116.
- 729 McMillan, J. H., & Schumacher, S. (2001). *Research in Education - A Conceptual*  
730 *Introduction* (5th ed.). Longman.
- 731 McWilliam, C. L. (2010). Phenomenology. In I. Bourgeault, R. Dingwall, & R. De  
732 Vries (Eds.), *The SAGE Handbook Qualitative Methods Health Research* (pp. 229–  
733 249). SAGE Publications Ltd.
- 734 Metcalf, K., Minnear, J., Kleinert, T., & Tedder, V. (2012). Community food growing  
735 and the role of women in the alternative economy in Tower Hamlets. *Local*  
736 *Economy, 27*(8), 877–882.
- 737 Ministry of Housing Communities & Local Government. (2015). *English indices of*  
738 *deprivation 2015*.
- 739 Morgan, D. L., & Krueger, R. A. (1993). *Successful Focus Groups: Advancing the State*  
740 *of the Art*. SAGE Publications, Inc.
- 741 Murata, T., & Kawai, N. (2018). Degradation of the urban ecosystem function due to  
742 soil sealing: involvement in the heat island phenomenon and hydrologic cycle in  
743 the Tokyo metropolitan area. *Soil Science and Plant Nutrition, 64*(2), 145–155.
- 744 Nassauer, J. I., Wang, Z., & Dayrell, E. (2009). What will the neighbors think? Cultural

745 norms and ecological design. *Landscape and Urban Planning*, 92(3–4), 282–292.

746 Neo, H., & Chua, C. Y. (2017). Beyond Inclusion and Exclusion: Community Gardens  
747 as Spaces of Responsibility. *Annals of the American Association of Geographers*,  
748 107(3), 666–681.

749 Notteboom, B. (2018). Residential landscapes—Garden design, urban planning and  
750 social formation in Belgium. *Urban Forestry and Urban Greening*, 30, 220–238.

751 Office for National Statistics. (2018). *UK natural capital: ecosystem accounts for urban*  
752 *areas*.

753 Office for National Statistics. (2020). *One in eight British households has no garden*.

754 Okvat, H. A., & Zautra, A. J. (2011). Community Gardening: A Parsimonious Path to  
755 Individual, Community, and Environmental Resilience. *American Journal of*  
756 *Community Psychology*, 47(3–4), 374–387.

757 Park, S.-A., & Shoemaker, C. A. (2009). Observing Body Position of Older Adults  
758 While Gardening for Health Benefits and Risks. *Activities, Adaptation & Aging*,  
759 33, 31–38.

760 Patton, M. Q. (2002). *Qualitative research and evaluation methods* (3rd ed.). Sage.

761 Perkins, K., & Nakamura, J. (2013). Flow and Leisure. In T. Freire (Ed.), *Positive*  
762 *Leisure Science* (1st ed., pp. 141–157). Springer Netherlands.

763 Pitas, N. A. D., Mowen, A. J., & Powers, S. L. (2020). Person-place relationships,  
764 social capital, and health outcomes at a nonprofit community wellness center.  
765 *Journal of Leisure Research*.

766 Plummer, R., & FitzGibbon, J. (2007). Connecting adaptive co-management, social  
767 learning, and social capital through theory and practice. In D. Armitage, F. Berkes,  
768 & N. N. Doubleday (Eds.), *Adaptive Co-Management: Collaboration, Learning,*  
769 *and Multi-level Governance* (pp. 38–61). UBC Press.

770 Putnam, R. D. (1993). The prosperous community: Social capital and public life. *The*  
771 *American Prospect*, 4(13), 35–42.

772 Reyes-Paecke, S., & Meza, L. (2011). Jardines residenciales en Santiago de Chile:  
773 Extensión, distribución y cobertura vegetal. *Revista Chilena de Historia Natural*,  
774 84(4), 581–592.

- 775 Robbins, P., Polderman, A., & Birkenholtz, T. (2001). Lawns and toxins: An ecology of  
776 the city. *Cities*, 18(6), 369–380.
- 777 Royal Horticultural Society. (2015). *Why we all need Greening Grey Britain*.
- 778 Scott, T. L., Masser, B. M., & Pachana, N. A. (2014). Exploring the health and  
779 wellbeing benefits of gardening for older adults. *Ageing and Society*, 1–25.
- 780 Shinew, K. J., Glover, T. D., & Parry, D. C. (2004). Leisure spaces as potential sites for  
781 interracial interaction: Community gardens in urban areas. *Journal of Leisure*  
782 *Research*, 36(3), 336–355.
- 783 Smith, C., Dawson, D., Archer, J., Davies, M., Frith, M., Hughes, E., & Massini, P.  
784 (2011). From green to grey; observed changes in garden vegetation structure in  
785 London, 1998-2008. *London Wildlife Trust, Greenspace Information for Greater*  
786 *London, and Greater London Authority*.
- 787 Smith, J., Flowers, P., & Larkin, M. (2009). *Interpretative phenomenological analysis:*  
788 *Theory, method and research*. SAGE.
- 789 Soga, M., Gaston, K. J., & Yamaura, Y. (2017). Gardening is beneficial for health: A  
790 meta-analysis. *Preventive Medicine Reports*, 5, 92–99.
- 791 Spilková, J., & Rypáčková, P. (2019). Prague’s community gardening in liquid times:  
792 challenges in the creation of spaces for social connection. *Leisure Studies*, 38(4),  
793 468–479.
- 794 Stewart, D. W., Shamdasani, P. N., & Rook, D. W. (2007). Analyzing Focus Group  
795 Data. In *Focus Groups* (2nd ed., pp. 109–134). SAGE Publications Ltd.
- 796 Tan, L. H. H., & Neo, H. (2009). “Community in Bloom”: local participation of  
797 community gardens in urban Singapore. *Local Environment*, 14(6), 529–539.
- 798 Taylor, L. (2008). *A Taste for Gardening: Classed and Gendered Practices*. Routledge.
- 799 Tratalos, J. A., Fuller, R. A., Warren, P. H., Davies, R. G., & Gaston, K. J. (2007).  
800 Urban form, biodiversity potential and ecosystem services. *Landscape and Urban*  
801 *Planning*, 83(4), 308–317.
- 802 US Census Bureau. (2004). *American Housing Survey for the United States*.
- 803 Veen, E. J., Bock, B. B., Van den Berg, W., Visser, A. J., & Wiskerke, J. S. C. (2015).  
804 Community gardening and social cohesion: different designs, different



805 motivations. *Local Environment*, 9839, 1–17.

806 Wellmann, T., Schug, F., Haase, D., Pflugmacher, D., & van der Linden, S. (2020).  
807 Green growth? On the relation between population density, land use and vegetation  
808 cover fractions in a city using a 30-years Landsat time series. *Landscape and*  
809 *Urban Planning*, 202.

810 World Health Organization. (2016). *Urban green spaces and health - A review of*  
811 *evidence*. WHO Regional Office for Europe.

812 Yuen, F., & Johnson, A. J. (2017). Leisure Spaces, Community, and Third Places.  
813 *Leisure Sciences*, 39(3), 295–303.

814 Zmyslony, J., & Gagnon, D. (1998). Residential management of urban front-yard  
815 landscape: A random process? *Landscape and Urban Planning*, 40, 295–307.

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818 **Supplementary material: Focus group questions**

819 • Did you garden before participating in the BiB campaign and what convinced  
820 you to get involved in the campaign?

821 • What gardening support did you receive and how crucial was this?

822 • Talking specifically about front gardens, what were the positive and negative  
823 aspects of BiB engagement in your community? Other impacts?

824 • Has the campaign had any therapeutic benefits for you or your community?

825 • How might it have been improved for better engagement?

826 • Is there anything else that you would have changed about your gardening  
827 experience?

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830 Table 1: Demographics of the 20 research participants

<b>Gender</b>	13 women
	7 men
<b>Age</b>	27-85 years old (mean age 66)
<b>Occupation</b>	12 retirees
	3 self-employed
	5 employed full-time
<b>Education</b>	3 GCSE or equivalent
	6 A-Levels or equivalent
	7 Bachelors/Undergraduate University degree or equivalent
	1 Masters/Postgraduate University degree or equivalent
	1 Doctorate University degree or equivalent
	2 Other recognised academic or vocational qualification
<b>Ethnicity</b>	19 White British
	1 Black British
<b>BiB Involvement</b>	26 years to 1 year. Mean length of involvement: 8.5 years
<b>Gardening spaces</b>	17 have a front garden
	17 have a back garden
	5 have a shared garden
	3 have an allotment

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833 Table 2: Description of areas of the three focus groups

<b>Group</b>	<b>Greater London</b>	<b>Urban typology</b>	<b>Level of deprivation IMD * (2015)</b>
<b>A</b>	Outer London, South West	Suburban, residential	30% least deprived
<b>B</b>	Outer London, North East	Urban, residential, small businesses	30% most deprived
<b>C</b>	Inner London, Central	Dense urban, mix of business workers, local residents, university students, homeless people	40% most deprived

834 \* The English Index of Multiple Deprivation (IMD) measure is based on LSOA (Lower  
835 Super Output Areas i.e. neighbourhoods), which are ranked out of 32,844 LSOAs in  
836 England; where 1 is the most deprived LSOA. Deciles are calculated from rankings.  
837 Data from the Ministry of Housing, Communities & Local Government (2015).

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840 Table 3. Frequency counts of topics emerging from the focus groups

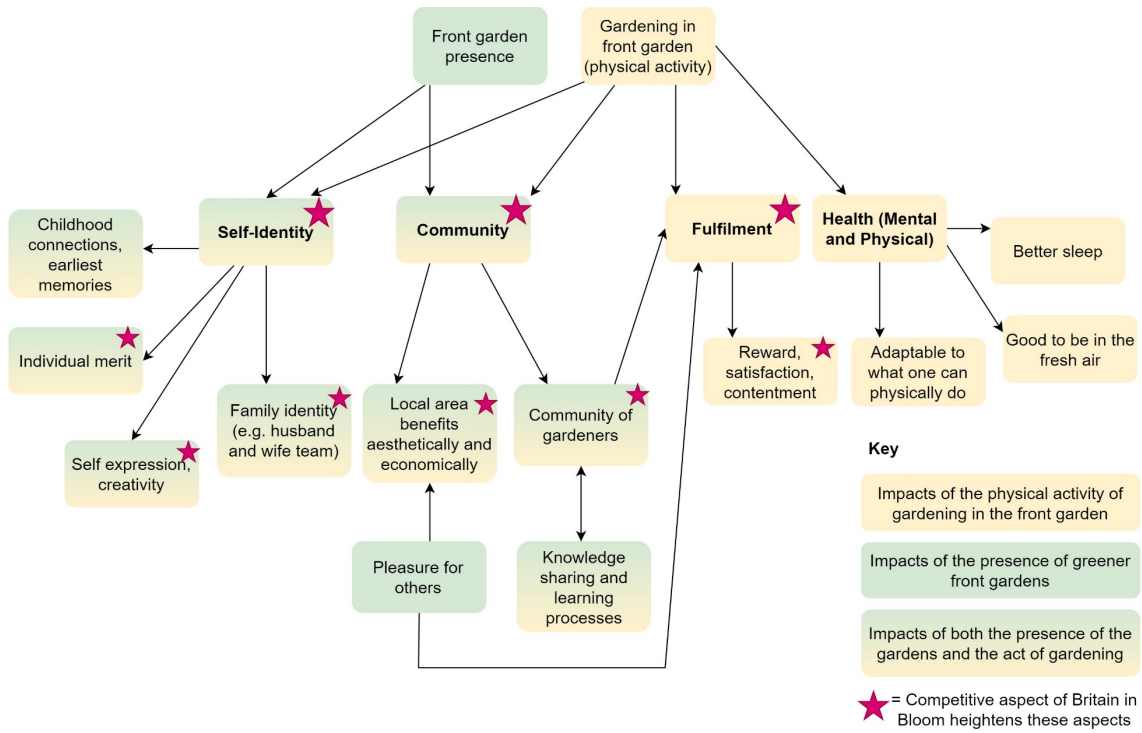
<b>Topic</b>	<b>Instances</b>
Knowledge-sharing	17
Confidence	13
Exercise	12
Pleasure for others	10
Breaks ice between strangers, getting to know others	10
Attracts people, tourism, business to area	8
Knock-on effects	8
Satisfaction	7
Happiness	7
Chatting to others	7
Sensory enjoyment	6
Passers-by commenting	6
Respect shown by others	5
Fresh air	5
Help from council to green up area	4
Charity days and volunteering	4
Rewarding	3
Time to be me	3
Eating fresh fruit/vegetables	3
Life support	3
Relaxation	3
Bees	2
Sustainable drainage	2
Privacy	1

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843 Figure 1. Conceptual diagram

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