

Supplementary Material

**Home Food Gardening: Benefits and Barriers during the COVID-19
Pandemic in Santiago, Chile**

Constanza Cerda¹, Solène Guenat¹, Monika Egerer², Leonie K. Fischer^{1*}

¹ Institute of Landscape Planning and Ecology, University of Stuttgart, Stuttgart, Germany

² Department of Life Science Systems, TUM School of Life Sciences, Technical University of Munich, Freising, Germany

*** Correspondence:**

Leonie K. Fischer

leonie.fischer@ilpoe.uni-stuttgart.de

Supplementary Tables

Supplementary Table A1: Original questions used in the questionnaire.

First, we are interested in your first steps in practicing home gardening, the main barriers you have faced and also the benefits you gained by practicing it during the pandemic. Please read the following questions and check the most appropriate answer.

Question 1:

I first experienced practicing home gardening...

- In my childhood
- When I was grown up

Question 2:

I started to practice home gardening during the COVID-19 pandemic

- Yes
- No, I started before the pandemic

Question 3:

The main difficulties I face while practicing home gardening during the COVID-19 pandemic are:

- I have lack or inadequate space for gardening
- I haven't enough time to spend in gardening
- I haven't enough access to resources. e.g. seeds, water, soil...
- I have limited knowledge of food gardening
- I experienced disagreements with neighbors or family members in any part of the gardening process (e.g. what or where to plant)
- Other: _____

Question 4:

Home food gardening allowed me socializing and interacting with other persons –either online or in person–, being this relevant for me during the pandemic

- Totally agree
- Neither
- Disagree
- Totally disagree
- Agree
- I don't know

Question 5:

Home food gardening allowed me to feel less stressed and more relaxed, being this relevant for me during the pandemic

- Totally agree
- Neither
- Disagree
- Totally disagree
- Agree
- I don't know

Question 6:

Home food gardening allowed me to be in touch with nature, being this relevant for me during the pandemic

- Totally agree
- Agree
- Neither
- Disagree
- Totally disagree
- I don't know

Question 7:

Home food gardening allowed me to harvest vegetables, herbs or fruits that contribute to my diet in a significant way, being this relevant for me during the pandemic

- Totally agree
- Agree
- Neither
- Disagree
- Totally disagree
- I don't know

Question 8:

Home food gardening allowed me to save money or have an extra income – by selling seeds, vegetables or any product related to the garden–, being this relevant for me during the pandemic

- Totally agree
- Agree
- Neither
- Disagree
- Totally disagree
- I don't know

Question 9:

Home food gardening allowed me to spend time and maintain me occupied, being this relevant for me during the pandemic

- Totally agree
- Agree
- Neither
- Disagree
- Totally disagree
- I don't know

Question 10:

Is there anything else I would like to share regarding my experience in practicing home gardening during the pandemic?

Optional open entry: _____

We would also like to know about the place in where you have been gardening during the COVID-19 pandemic and some general characteristics of your garden. Please read the following statements and check the most appropriate answer.

Question 11:

I practice home food gardening in:

- Single-family house
- House in community
- Apartment
- Other: _____

Question 12:

I garden in:

- Front or backyard
- Balcony
- Wall
- Roof
- Window sill
- Sidewalk
- Median strip
- Green area
- Other: _____

Question 13:

The space I use to garden is mainly:

- Private: only me and my family have access
- Shared: only people from my building, neighborhood or condo have access
- Public: everyone has access to it

Question 14:

Approximately, the size of my garden is:

- Small: e.g. a few pots or planter boxes
- Medium: e.g. one or two raised beds or a garden plot
- Large: e.g. a large section of land planted

Now, we would like to know your willingness in continue practicing home gardening.

Question 15:

I am planning to continue practicing home gardening in the future

- Yes
- No

Finally, we would like to ask you about some details concerning yourself.

We are interested in how population groups with different social and cultural backgrounds relate to nature in the city. Your answers are treated anonymously and answering these questions is optional. For the quality of our study, we would appreciate complete answers.

Question 16:

Under normal circumstances, I generally visit public green spaces such as parks, green areas, playgrounds, forest or mountains ...

- Several times a week
- Once a week
- Less than once a week
- Never

Question 17:

- Gender
- Female
- Male
- Other

Question 18:

Age group

- 18-25 years old
- 26-35 years old
- 36-45 years old
- 46-65 years old
- 65+ years old

Question 19:

Number of people living with me (including myself)

- 1
- 2
- 3
- 4+

Question 20:

I live in:

- Cerrillos
- Cerro Navia
- Conchalí
- El Bosque
- Estación Central
- Huechuraba
- Independencia
- La Cisterna
- La Florida
- La Granja
- La Pintana
- La Reina
- Las Condes
- Lo Barnechea
- Lo Espejo
- Lo Prado
- Macul
- Maipú
- Ñuñoa
- Pedro Aguirre Cerda
- Peñalolén
- Providencia
- Pudahuel
- Quilicura
- Quinta Normal
- Recoleta
- Renca
- San Joaquín
- San Miguel
- San Ramón
- Santiago Vitacura

Supplementary Table A2: Distribution of the data differentiated by respondents who started gardening pre- or during the pandemic, that is according to the time of gardening uptake.

Survey questions subject	Variables	Time of gardening uptake			
		Pre-pandemic		During the pandemic	
		(n=159)	52.13%	(n=146)	47.87%
<i>Perceived barriers</i>					
Number of perceived barriers	Average	1.987		2.007	
Lack of or inadequate space	Yes	71	44.65%	81	55.48%
	No	88	55.35%	65	44.52%
Lack of time	Yes	58	36.48%	37	25.34%
	No	101	63.52%	109	74.66%
Lack of access to resources	Yes	38	23.90%	31	21.23%
	No	121	76.10%	115	78.77%
Limited knowledge	Yes	39	24.53%	83	56.85%
	No	120	75.47%	63	43.15%
Experience of disagreements	Yes	15	9.43%	10	6.85%
	No	144	90.57%	136	93.15%
Other barriers	Yes	24	15.09%	10	6.85%
	No	135	84.91%	136	93.15%
<i>Perceived benefits</i>					
Socializing	Totally agree	60	37.74%	64	43.84%
	Agree	37	23.27%	40	27.40%
	Neither	21	13.21%	17	11.64%
	Disagree	12	7.55%	8	5.48%
	Totally disagree	17	10.69%	11	7.53%
	No answer	12	7.55%	6	4.11%
Feeling less stressed	Totally agree	96	60.38%	96	65.75%
	Agree	38	23.90%	29	19.86%
	Neither	12	7.55%	9	6.16%
	Disagree	3	1.89%	8	5.48%
	Totally disagree	6	3.77%	1	0.68%
	No answer	4	2.52%	3	2.05%
More contact with nature	Totally agree	124	77.99%	105	71.92%
	Agree	22	13.84%	36	24.66%
	Neither	8	5.03%	2	1.37%
	Disagree	1	0.63%	2	1.37%
	Totally disagree	3	1.89%	0	0.00%
	No answer	1	0.63%	1	0.68%
Contribution to the diet	Totally agree	63	39.62%	64	43.84%
	Agree	46	28.93%	36	24.66%
	Neither	29	18.24%	32	21.92%
	Disagree	14	8.81%	12	8.22%
	Totally disagree	4	2.52%	1	0.68%
	No answer	3	1.89%	1	0.68%
Contribution to income	Totally agree	36	22.64%	25	17.12%
	Agree	37	23.27%	21	14.38%
	Neither	40	25.16%	30	20.55%
	Disagree	16	10.06%	38	26.03%
	Totally disagree	22	13.84%	24	16.44%
	No answer	8	5.03%	8	5.48%
Being occupied	Totally agree	64	40.25%	65	44.52%
	Agree	50	31.45%	39	26.71%

	Neither	31	19.50%	28	19.18%
	Disagree	7	4.40%	10	6.85%
	Totally disagree	6	3.77%	2	1.37%
	No answer	1	0.63%	2	1.37%
<i>Gardening experience</i>					
First experience in home food gardening	Childhood	70	44.03%	46	31.51%
	Adulthood	89	55.97%	100	68.49%
<i>Pre-pandemic relationship with public green spaces</i>					
Frequency of visiting public green spaces	Several times a week	66	41.51%	47	32.19%
	Once a week	39	24.53%	47	32.19%
	Less than once a week	47	29.56%	47	32.19%
	Never	7	4.40%	5	3.42%
<i>Sociodemographic background</i>					
Gender	Female	117	73.58%	124	84.93%
	Male	39	24.53%	22	15.07%
	No answer	3	1.89%	0	0.00%
Age	18-25	29	18.24%	27	18.49%
	26-35	43	27.04%	49	33.56%
	36-45	37	23.27%	46	31.51%
	46-65	47	29.56%	24	16.44%
	65+	3	1.89%	0	0.00%
Household size	1 person	9	5.66%	12	8.22%
	2 people	34	21.38%	34	23.29%
	3 people	29	18.24%	30	20.55%
	4+ people	87	54.72%	70	47.95%
District development level	Low	21	13.21%	24	16.44%
	Medium	59	37.11%	61	41.78%
	High	79	49.69%	61	41.78%
<i>Where people garden</i>					
Place	Apartment	37	23.27%	45	30.82%
	House	118	74.21%	98	67.12%
	Other	4	2.52%	3	2.05%
Location	Balcony	29	18.24%	36	24.66%
	Front-/back-yard	89	55.97%	79	54.11%
	Other	10	6.29%	9	6.16%
	Various	31	19.50%	22	15.07%
<i>Physical characteristics of gardens</i>					
Accessibility	Private	144	90.57%	136	93.15%
	Shared	15	9.43%	10	6.85%
Size	Small	45	28.30%	60	41.10%
	Medium	97	61.01%	75	51.37%
	Large	17	10.69%	11	7.53%
<i>Willingness to continue gardening in the future</i>					
Plan to continue gardening in the future	Yes	159	100.00%	144	98.63%
	No	0	0.00%	2	1.37%

Supplementary Table A3: Comparisons statistics for respondents who started gardening pre- or during the pandemic, that is according to the time of gardening uptake.

Survey questions subject	Test	Test statistic (t or chi-2)	Degree of freedom	P-value	Bonferroni-adjusted p-value
<i>Perceived barriers</i>					
Number of perceived barriers	t-test	0.167	302.09	0.868	1
Lack of or inadequate space	Chi-square	3.568	1	0.059	1
Lack of time	Chi-square	4.401	1	0.036	0.826
Lack of access to resources	Chi-square	0.309	1	0.578	1
Limited knowledge	Chi-square	33.129	1	<0.001	<0.001 ***
Experience of disagreements with others	Chi-square	0.676	1	0.411	1
Other barriers	Chi-square	5.224	1	0.022	0.512
<i>Perceived benefits</i>					
Socializing	t-test	1.501	284.2	0.135	1
Feeling less stressed	t-test	0.810	295.88	0.419	1
More contact with nature	t-test	0.234	289	0.815	1
Contribution to the diet	t-test	0.591	298.9	0.551	1
Contribution to income	t-test	1.357	283.84	0.176	1
Being occupied	t-test	0.583	299.01	0.560	1
<i>Gardening experience</i>					
First experience in home food gardening	Chi-square	5.061	1	0.025	0.563
<i>Pre-pandemic relationship with public green spaces</i>					
Frequency of visiting public green spaces	t-test	-0.955	302.88	0.341	1
<i>Sociodemographic background</i>					
Gender	Chi-square	4.615	1	0.032	0.729
Age	t-test	-1.978	301.75	0.049	1
Household size	t-test	-1.206	297.65	0.229	1
Social priority (based on district)	t-test	1.359	299.53	0.175	1
<i>Where people garden</i>					
Place	Chi-square	2.153	1	0.142	1
Location	Chi-square	3.552	4	0.470	1
<i>Physical characteristics of gardens</i>					
Accessibility	Chi-square	0.676	1	0.411	1
Size	t-test	-2.291	229.64	0.023	0.521
<i>Willingness to continue gardening in the future</i>					
Plan to continue gardening in the future	<i>Not enough "no" answer to conduct a test, with 2 respondents stating "no" as opposed to 303 stating "yes"</i>				