



Contribution for wellbeing of people working in urban organic allotment gardens

Isabel Mourão¹, Marisa C. Moreira², Telma C. Almeida³, **L. Miguel Brito***¹

¹ Mountain Research Centre (CIMO)/Polytechnic Institute of Viana do Castelo/Higher School of Agriculture, 4990-706 Ponte de Lima, Portugal,

² Município de Vila Nova de Famalicão, Praça Álvaro Marques, 4764-502 V. N. de Famalicão, Portugal

³ Instituto Superior de Ciências da Saúde Egas Moniz, Campus Universitário, Quinta da Granja, 2829-511 Caparica, Portugal

*miguelbrito@esa.ipv.pt

Introduction

- Urban allotment gardens (AG) in Portugal have increased in recent years, as in many other European countries and worldwide. The contribution of these gardens to the happiness and well-being of urban populations has been recognized, but evaluations of their benefits are still very scarce.
- The objective of this study was to evaluate this contribution, based on the urban organic AG of the Devesa Park in Vila Nova de Famalicão, Portugal.

Methodology

- The sample included 65 gardeners that completed the self-administered *Bem-Estar Pessoal* (personal well-being) (Pais-Ribeiro and Cummins 2008), *Felicidade Subjetiva* (subjective happiness) (Pais-Ribeiro 2012) and sociodemographic characteristics questionnaires.

Table 1. Gardeners perception of the impact in their lives through gardening in the urban organic allotment gardens in Devesa Park (n=65).

Gardeners perception	Frequency	Percentage (%)
Healthy food produced by myself	31	23.7
Occupation that fills and relaxes	32	24.4
Practice of physical exercise	11	8.4
Increased care with healthy eating	12	9.2
Increased interaction with children/grandchildren	5	3.8
Fewer medical appointments	3	2.3
Increased environmental awareness	15	11.5
Change to organic food	13	9.9
Talk with more people	9	6.9

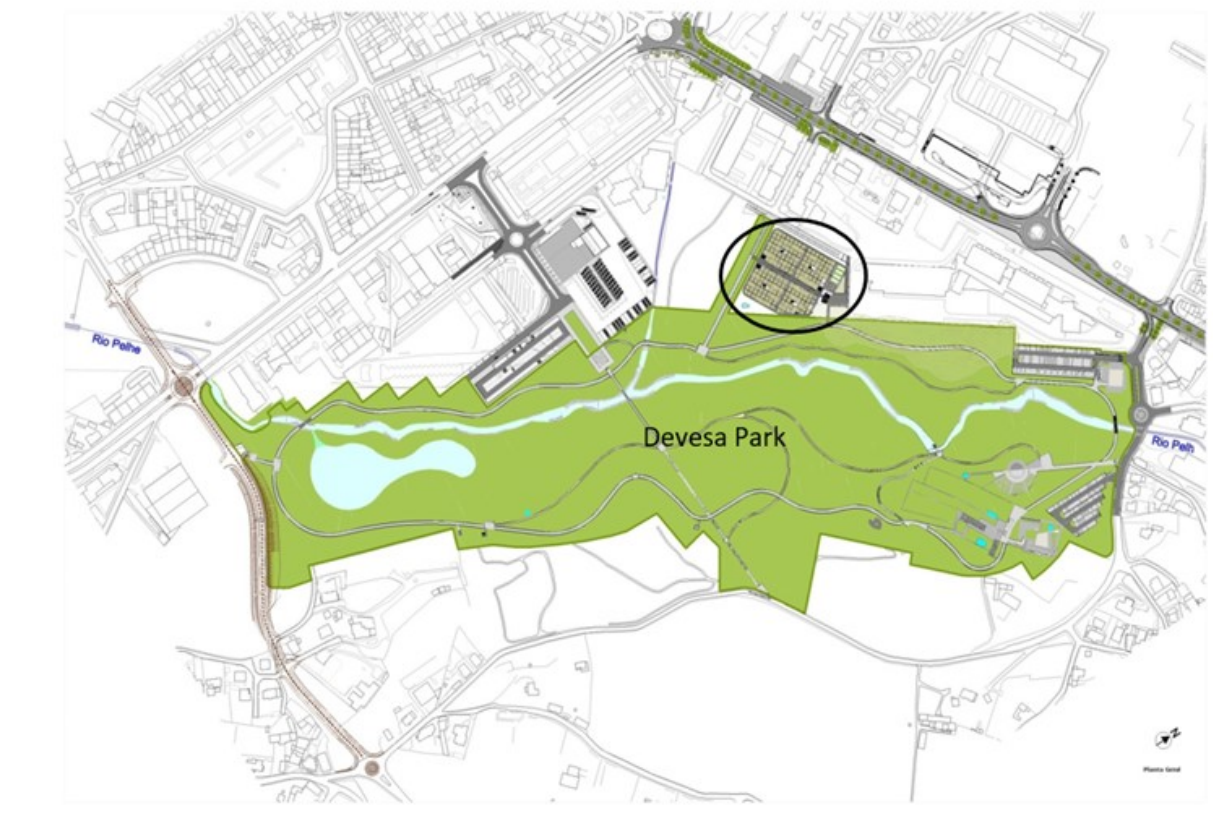


Figure 1. Integration of the urban organic allotments garden with 1.1 ha (ellipse), in the Devesa Park, V. N. Famalicão, Portugal.



Results

- Respondents were mainly adults under 65 years old, married, academically well qualified and about half of them had a professional activity, with nearly one third being retired.
- The periodicity of gardening ranged from a few days a week (47.7%), on a daily basis (41.5%) and once a week (10.8%). The gardeners' perception about changes in their lives since the beginning of the allotment cultivation was the occupation of free time and relaxation, as well as, the production of healthy foods (Table 1). There was also an increased environmental awareness, increased consumption of organic products, increased food care, physical exercise and interaction with others.
- The periodicity of visits to the AG increased with respondents' age, lower level of academic education and lower incomes. The active professionals were associated with less frequent visits to the garden, compared to the retired and unemployed gardeners (Table 2).
- Respondents considered themselves happy with their life (Personal Well-being Index = 74.5%) and revealed an optimistic and positive attitude towards life, regardless of economic or social difficulties.
- The increased frequency of visits for gardening was positively related to a greater perception of subjective happiness. The gardeners who visited the AG more frequently considered themselves happier from a self-perspective and in comparison with peers. (Table 3).



Table 2. Relationship between the periodicity of visits to the urban organic allotment gardens in Devesa Park and the sociodemographic variables age, education, professional activity and monthly income (n=65).

	Every day (%)	Some days/week (%)	At least 1 day/week (%)
Age (years old)			
25-35	5.7	22.8	53.4
36-45	13.7	21.9	32.1
46-55	18.7	22.4	14.6
56-65	30.9	16.4	0.0
> 65	30.9	16.4	0.0
<i>Pearson's chi-squared test</i>	<i>Value</i>	<i>Df</i>	<i>p</i>
	110.797a	8	0.000
Education			
No education	7.4	0.0	0.0
From 1 to 6 years	44.5	29.0	0.0
From 7 to 12 years	22.2	32.3	0.0
Higher education (under)	18.5	38.7	57.1
Master degree	7.4	0.0	42.9
<i>Pearson's chi-squared test</i>	<i>Value</i>	<i>Df</i>	<i>p</i>
	168.699	8	0.000
Professional activity			
Employed	22.2	58.1	85.7
Unemployed	25.9	19.3	14.3
Retired	51.9	22.6	0.0
<i>Pearson's chi-squared test</i>	<i>Value</i>	<i>Df</i>	<i>p</i>
	95.220a	4	0.000
Monthly income			
< 500 €	22.2	12.9	14.3
500 € to 750 €	40.7	16.1	0.0
750 € to 1.250 €	14.8	25.8	42.9
1.250 € to 1.750 €	18.5	25.8	14.3
> 1.750 €	3.7	19.4	28.6
<i>Pearson's chi-squared test</i>	<i>Value</i>	<i>Df</i>	<i>p</i>
	83.944	8	0.000

Conclusions

- The main hypothesis was confirmed with the significant correlations between the subjective well-being and gardening. Gardeners consider themselves happy with their life and revealed an optimistic and positive attitude with life, regardless of their economic or social difficulties. The gardeners who visit the garden more frequently consider themselves happier which agrees with the suggestion that happiness improvements come from simple cognitive and behavioural strategies in daily lives.
- Urban organic allotment gardens can be considered one of the recommended measures beyond economic ones that are needed to capture the well-being of societies. They should be implemented not only for ordinary citizens but also as for social and therapeutic horticulture purposes, through gardening programs intended for the elderly, disabled or health care dependents, psychosocial rehabilitation or social inclusion.
- For ecological and public health reasons, the urban allotment gardens should always be managed according to organic regulatory guidelines, for which it is crucial to provide training and technical information to gardeners. Similarly, it is essential to keep a permanent gardener for site maintenance, able to provide technical advice and to supervise the gardeners' agricultural practices.

Table 3. Pearson's chi-squared test for independence between the frequency of the visit to the urban organic allotment gardens and the gardeners' personal perspective of happiness (n=65).

Personal perspective of happiness	Frequency of the visit to the urban organic allotments garden		
	Every day (%)	Some days/week (%)	At least 1 day/week (%)
1	0.0	0.0	0.0
2	0.0	0.0	14.3
3	0.0	0.0	0.0
4 (neutral)	3.7	12.9	14.3
5	33.3	32.3	42.9
6	29.6	38.7	14.3
7 (a very happy person)	33.3	16.1	14.3
<i>Pearson's chi-squared test</i>	<i>Value</i>	<i>Df</i>	<i>p</i>
	123.313a	12	0.000
Perspective of personal happiness compared to others			
1	0.0	0.0	0.0
2	0.0	0.0	14.3
3	0.0	0.0	0.0
4 (neutral)	7.4	16.1	0.0
5	22.2	29.0	42.9
6	44.4	41.9	42.9
7 (a very happy person)	25.9	12.9	0.0
<i>Pearson's chi-squared test</i>	<i>Value</i>	<i>Df</i>	<i>p</i>
	105.785 ^a	12	0.000