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Affect, Satisfaction with Life and Pro-Environmental Behavior of Community Gardens Users in Southern Brazil

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ABSTRACT

This study aimed to analyze the affect, satisfaction with life and pro-environmental behavior of community garden users. Of the total of participants, 22 (55.5%) were aged over 60 years and 18 (44.5%) were in middle age. Data were obtained through a multi-method methodology. Were applied the Affective Maps Generator Instrument, the Satisfaction with Life Scale, the Positive and Negative Affect Scale and the Environmental Behavior Scale. The results assessed pleasantness, restoration and belonging perception in the community gardens' environment. High levels of satisfaction with life ($M=28.38$; $SD=5.38$) and positive affect ($M=40.00$; $SD=5.51$) were obtained. There was a high score in water and energy savings ($M=4.14$; $SD=0.63$) as well as in urban cleaning ($M=4.62$; $SD=0.16$), and an average score in recycling ($M=3.23$; $SD=0.28$) and a low score in activism and consumption ($M=2.59$; $SD=0.14$). It is concluded that interdisciplinary strategies should be encouraged to enhance community gardens' experiences, such as mobile social technologies, which make it possible to encourage emancipatory behaviors among their users.

Keywords: urban green space; health promotion; environmental health; pro-environmental behavior; well-being.

RESUMO

Este estudo teve como objetivo analisar os afetos, a satisfação de vida e o comportamento pró-ambiental de usuários das hortas comunitárias. Do total de participantes, 22 (55,5%) apresentaram mais de 60 anos e 18 (44,5%), meia idade. Os dados foram obtidos através de uma metodologia multimétodo. Aplicou-se o Instrumento Gerador de Mapas Afetivos, as Escalas de Satisfação de Vida (ESV), Afetos Positivos e Negativos (PANAS) e Comportamento Ecológico (ECE). Os resultados mostraram a percepção de agradabilidade, restauração e pertencimento no ambiente das hortas comunitárias. Obteve-se níveis altos em satisfação com a vida ($M=28,38$; $DP=5,38$) e em afetos positivos ($M=40,00$; $DP=5,51$). Houve escore alto em economia de água e energia ($M=4,14$; $DP=0,63$), bem como em limpeza urbana ($M=4,62$; $DP=0,16$), escores médios em reciclagem ($M=3,23$; $DP=0,28$) e baixos em ativismo e consumo ($M=2,59$; $DP=0,14$). Conclui-se que estratégias interdisciplinares devem ser estimuladas para potencializar as



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experiências das hortas comunitárias, como tecnologias sociais sustentáveis, que possibilitem estimular comportamentos emancipatórios entre seus usuários.

Palavras-chave: espaços verdes urbanos; promoção da saúde; saúde ambiental; comportamento pró-ambiental; bem-estar.

Introduction

In urban environments, community gardens are plots of land used to grow food by people from different families, usually urban dwellers (Biazoti & Sorrentino 2022). Thus, they represent a situation that enables reconnection with natural environments, since, due to increasing urbanization, there has been a reduction in people's involvement with nature (Schultz 2000; Nagib & Giacchè 2021). Moreover, they are considered to be sustainable social technologies with aesthetic and economic value, in addition to mediating and providing experiences, affective exchanges and sharing among users (Costa *et al* 2015), which can contribute to increasing their sense of belonging and self-esteem (Nagib & Giacchè 2021).

Based on Positive Environmental Psychology's contributions, the study investigated affect, contentment and how ecological behavior occurs in these environments. Those attributes are variables of the model of positive environments: places that provide quality of life and foster pro-environmental and pro-social behaviors. Environmental psychology researchers (Corral-Verdugo & Frías Armenta 2016) have appropriated the concept of positive environments, and critically reviewed the inclusion of sustainability and environmental preservation as conditions present in positive experiences that cannot be dissociated from continuity of life, promotion of collective benefits and mental health (Corral-Verdugo & Frías Armenta 2016; Bloomfield 2017).

Psychological aspects related to pro-environmental and pro-social behaviors are associated with several constructs, such as extrinsic (resource availability, economic or environmental conditions) and intrinsic factors (motivational aspects, affective memories of place, environmental beliefs and altruism) (Kiesling & Manning 2010; Nagib & Giacchè 2021). In community gardens, there are strong correlations with a connection to nature and with certain modalities of conduct; factors that enable not only the inclusion of positive environments but also educational, recreational and integrated health practices (Genget *et al* 2015; Izagirre *et al* 2015; Zalenski *et al* 2015).

Community gardens are privileged places for the manifestation and inclusion of these themes in urban planning, as they enable well-being promotion through healthy eating and community practices (Sperandio *et al* 2016; Biazoti & Sorrentino 2022). For the environment, agroecological inspiration is the main trend, and the aim is to preserve biodiversity, organic practices and cultivation alternatives, with an emphasis on community participation and traditional knowledge exchanges (Costa *et al* 2015).

Using the positive environment model in this context enables the amplification of underlying psychological and social phenomena, and can contribute to connecting social behavior to environmental impacts, promoting sustainable development of cities and improving participants' quality of life (Kiesling & Manning 2010; Nagib & Giacchè 2021). Thus, the main aim was to analyze the affect, satisfaction with life and pro-environmental behaviors of people who participate in the community garden program in the city of Maringá, southern Brazil.

2. Methods

2.1 Description of Participants and Investigated Environment

The research was conducted using a quali-quantitative approach and descriptive analysis of results. Forty community garden users were selected according to the following criteria: men and women between 46 and 82 years old. The investigation was approved by the Research Ethics Committee, under Registration 1,953,029.



People were approached at the investigated site and asked if they would like to join in, and upon acceptance, they received the Informed Consent Form.

The study was conducted in an urban context, in the areas of three community gardens in Maringá city, located in southern Brazil, latitude 23° 25 '31 'S and longitude 51° 56' 19' W. According to information from the Municipal Department of Public Services (SEMUSP - *Secretaria Municipal de Segurança Pública e Defesa Comunitária*), Maringá had 37 community gardens at the time of the research, all linked to the Department of Health and aimed at promoting healthy eating. They involve about 1,500 families. Community gardens were selected according to length of use, corresponding to two areas with more than 6 years of use and one area with less than one year.

2.2 Instruments and Analysis Procedures

The instruments used had been previously assessed in a pilot study, and changes in the instructions directed to participants were made in order to favor users' understanding and response in individual interviews. Initially, qualitative and later quantitative procedures were used.

An adaptation of the Affective Maps Generator Instrument (AMGI) (Bonfim 2010) was applied, aiming to understand and analyze the affects through image production, which in this case correspond to the community garden. Participants were instructed to make a free drawing that represented their vision of the community garden on A4 paper. After the preparation of drawings, participants were invited to answer questions adapted from AMGI. Thus, participants answered a survey about topics such as feelings and meanings attributed to the context represented, in addition to synthesizing their experience in community gardens in one sentence. Subsequently, data were catalogued according to the type of drawing (cognitive or metaphorical), with the feelings and meanings attributed to the drawing or phrase. Some responses were classified in more than one category, in order to maintain data organicity. Moreover, responses considered superficial or general, or samples from only one participant were excluded from the analyzes. Content interpretation was based on Bardin (2009), whose work seeks to categorize and systematize the elements of the text to represent participants' behavioral intentions and beliefs (Caregnato & Mutti 2006). Data analysis was performed using the software MAQXDA-12, which enables various types of qualitative analysis.

The Satisfaction with Life Scale (SWLS), consisting of five items, was applied to assess individuals' level of satisfaction with their living conditions. By using a Likert-type scale, people pointed out the variations between 'strongly disagree' and 'strongly agree', from one to seven, respectively, based on scores and with Brazilian validity (Hutz *et al* 2014). Subsequently, the Positive and Negative Affect Scale (PANAS) was applied, consisting of 10 items that assess positive affect and 10 items that assess negative affect (Zanon and Hutz 2014). The items consist of an adjective, with answer keys distributed in a five-point Likert scale.

Then, to have an understanding of participants' pro-environmental behavior, we used the Ecological Behavior Scale (EBS), which consists of 34 ecological behavior items and five social desirability items. The questionnaire was measured using a five-point Likert frequency scale and validated for Brazilian territory (Pato & Tamayo 2006).

2.3 Statistical analysis

Cronbach's alpha coefficients were calculated to estimate internal consistency reliability for the instruments, based on the sums of item scores. That analysis showed a good internal consistency index and was considered acceptable for PANAS ($\alpha = 0.75$), SWLS ($\alpha = 0.62$) and EBS ($\alpha = 0.60$) (George and Mallery, 2003).



For data analysis, a preliminary exploratory study was first performed to understand the statistical results. The three scales were treated by descriptive analysis (clarification of results), correlation analysis according to Spearman's coefficient and nonlinear principal component analysis (correspondence and internal understanding of instruments) using the Package homals for homogeneity analysis in an R environment (R Core Team 2017).

3. Results

The results regarding the sociodemographic context showed that 20 (50%) participants are male and 20 (50%) are female. Older adults ($n=22$; 55.5%) prevailed, followed by middle aged persons ($n=18$; 44.5%). Regarding occupation, 26 (65%) of respondents stated they were retired; 8 (20%) are self-employed; and 6 (15%) have formal employment. Regarding education, most participants ($n=19$; 47.5%) reported having completed elementary school; 13 people had completed high school (32.5%); six had completed kindergarten (15%); only one participant had not attended school (2.5%); and only one had completed higher education (2.5%). Data on participants' wage range showed that 31 (77.5%) have a family income between one and two minimum wages (in 2023, one minimum wage in Brazil is equivalent to R\$1,320.00 per month), and 9 (22.5%) have between two and four minimum wages. Regarding the number of people per household, 17 (42.5%) of participants live with one person, represented by users as husband or wife; 20 (50%) live with 3 or more three family members; and only 30 (7.5%) reported living alone in their homes.

The values show that 22 (55%) of participants have worked for between seven and 24 months in gardens; 15 (37.5%) have worked between 72 and 120 months; and 3 (7.5%) have worked between 24 and 72 months. All survey participants work in gardens weekly. It was also possible to identify, by using Fisher's test, that there is a positive association between the length of use of gardens and education (p -value < 0.04). Furthermore, 39 (97.5%) of participants had previously lived in rural areas. Nevertheless, all users currently live in the urban area, characterized as (intra-municipal) peripheral neighborhoods.

In the analysis of affective maps, images were categorized into four main categories that group the attributes of feeling and meaning (Table 1). The image most presented by community garden users was the pleasantness category, represented by feelings of happiness, pleasure, memories, gratification, altruism, peace and tranquility. Then, distraction and restoration themes emerged, exemplified in feelings of passing time and forgetting problems and pains. The third image represented the belonging category; an attribute that encompasses participating, being part and sharing a common environment. Finally, the unpleasantness theme revealed that feelings of sadness and disunity are also present in these scenarios (Table 1).

In the pleasantness category, connection with nature was the most reported meaning by participants and can be exemplified in the following statement: "*I arrive early ... I smell the garden and everything comes into my mind; I like it so much and I feel good*" (Interviewee 30).

Table 2 shows the results of SWLS, PANAS, and EBS. The average score on SWLS was 28.38. The total mean positive affect was 40.00 and negative affect was 21.67. It is observed that standard deviation maintained values greater than one ($SD > 1$), thus indicating the multiplicity of answers. Regarding the results of EBS, the highest global averages correspond to urban cleanliness and water and energy saving, with medium scores for recycling and lower values for activism and consumption. The social desirability item had an average of 2.80 ($SD = 0.27$), suggesting that respondents almost never demonstrated this type of behavior.



Table 1. Results obtained from the images of community gardens according to participants' feelings and meanings

Categories	Feeling	Meaning	Frequency of meanings
Pleasantness	Happiness; pleasure; memories; gratification; dream fulfilment; quiet; satisfaction; altruism; peace and tranquility.	Connection with nature;	13
		participation and social interaction;	6
		distraction/passing time;	5
		health and wellness;	4
		altruism /pro-sociability;	3
		affective memories;	3
		healthy eating;	2
		spirituality;	1
		aesthetic or beauty.	1
Distraction and restoration	Distraction/passing time; occupy the mind; peaceful; get rid of bad thoughts; forget problems and pains.	Cultivation and work;	5
		connection with nature;	2
		social interaction.	4
Belonging	Solidarity; share; participate; be part.	Advisers and sharing.	2
Unpleasantness	Sadness and disunity.	Lack of sense of community.	2

Table 2. Results of the Satisfaction with Life Scale, Negative and Positive Affects Scale, and Ecological Behavior Scale

Scales and variables	Mean	SD
(SWLS) Satisfaction with Life	28.38	5.38
(PANAS) Positive Affect	40.00	5.51
(PANAS) Negative Affect	21.67	8.39
(EBS)	3.60	2.16
(EBS - REC) Recycling	3.23	0.28
(EBS - WES/ECO) Water and Energy Saving	4.14	0.63
(EBS - UC) Urban Cleanliness	4.62	0.16
(EBS - ATI) Activism and Consumption	2.59	0.14
(EBS - DES) Social Desirability	2.80	0.27

SD= standard deviation; EBS= Likert scale frequency (1 = never; 2 = almost never; 3 = often; 4 = almost always; and 5 = always). For SWLS (from 5 to 32) and PANAS (from 10 to 50), the means were calculated from raw scores.

In PANAS, the positive affect descriptors among participants were: Cheered up (mean=4.50, SD= 0.95); Determined (mean=4.43, SD= 1.07); Strong (mean=4.40, SD=1.07); Enthusiastic (mean=4.33, SD=0.96); Vigorous (mean=4.28, SD=1.02); Dynamic (mean= 4.25, SD=0.89); Kind (mean= 4.24, SD= 0.96); In love (mean= 4.20, SD= 1.12); Inspired (mean=3.78, SD=1.35); and Proud (mean=1.63, SD=1.28). And the negative



affect descriptors were: Afflicted (mean=2.68, SD=1.31); Nervous (mean=2.58, SD=1.53); Restless (mean=2.45, SD=1.52); Riled up (mean= 2.40, SD=1.51); Distressed (mean=2.23, SD=1.46); Frightened (mean=2.13, SD=1.45); Bothered (mean= 2.13, SD=1.49); Disturbed (mean=1.78, SD=1.31); Humiliated (mean=1.75, SD= 1.28); and Spiteful (mean= 1.58, SD=1.18).

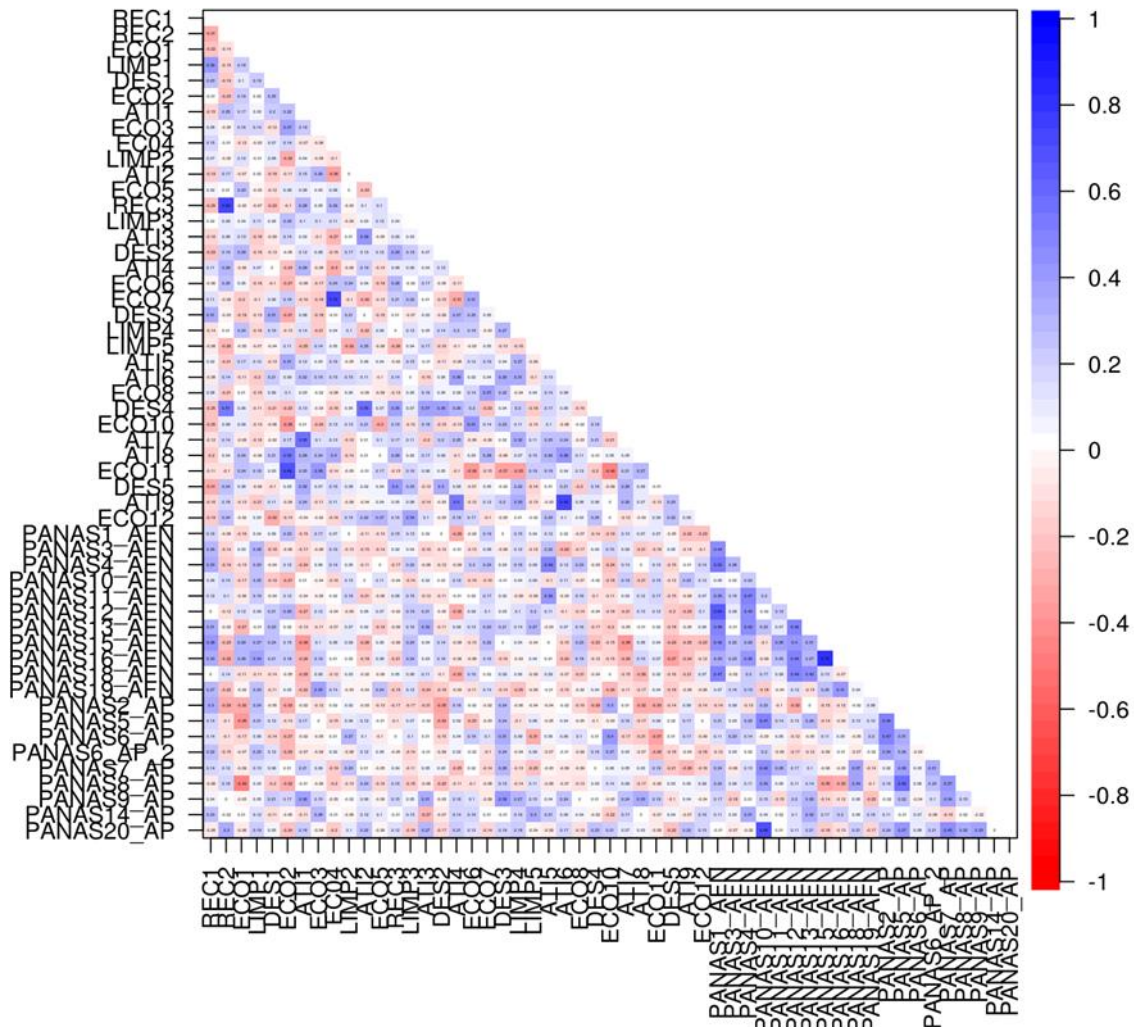


Figure1. Shows the correlation analysis.

Correlations between study variables were not significant (Figure 1). However, positive correlations were found between some SWLS and EBS items. They are: In most ways my life is close to my ideal (ESV1); The conditions of my life are excellent (ESV2); and So far I have gotten the important things I want in life (ESV4), with the following items from the EBS activism-consumption domain: I talk about the importance of the environment with people (EBS7, $r= 0.26$; $p<0.05$); I participate in public demonstrations for environmental defenders (EBS24, $r=0.38$; $p<0.05$); and I mobilize people in the necessary care for the conservation of public spaces (EBS29, $r=0.38$; $p<0.05$).

4. Discussion

Throughout the phases of life, individuals experience environmental interactions and spatial transformations, resulting in reformulations in their identity (Paúl 2005). Among the community garden users investigated, there was a predominance of people of advanced and middle age living in the urban area, but most



had already lived in the countryside, which indicates their affinity with the natural environment. Thus, the following discussions about the results are based on those perceptions.

The social inclusion and occupation that the garden provides is positive for older adults and in reinvention of work in the face of retirement (Stein, 2007; Biazoti & Sorrentino 2022). Daily cultivating, watering, harvesting and interacting help with transitional experiences, as aging can bring several losses, such as missing work, suffering the absence of children and the aging of the body (Loureiro *et al.* 2014). It is noteworthy that, in socio-environmental experiences, such expressivities may be linked to affective memory, since respondents reported having lived in the countryside at some point in their lives. The presence of these experiences is a facilitating element in the composition of the affection for the place, a theme studied in urbanism and environmental psychology, revealing identity and belonging elements (Macintyre *et al.* 2019).

Older adults in community gardens also demonstrates “green care”, as it has shown improvements in the cognitive and nutritional results of this population (Strout *et al.* 2017). Connection with nature is important to humans and is considered a constructive basis for physical and mental health and that is supported by many researchers (Kiesling & Manning 2010; Nagib & Giacchè 2021). From a systemic perspective, in the garden space, it is possible to ensure cyclical economic progress and minimize environmental impacts (Zacarias & Higuchi 2017). Additionally, it represents an alternative financial source for low-income people.

Regarding education, the positive association with length in gardens showed that the higher the education level, the greater the tendency to continue participating in the program in the long term. This finding is in line with factors cited in literature, such as higher level of access to health information and primary care programs observed in higher-income and educated populations (Viacava *et al.* 2019). One hypothesis is that individuals with higher education have more access to information about the benefits of community garden, which, in turn, may favor participation in and compliance with the program over a longer period of time.

Moreover, the social inclusion of people in retirement causes changes in functional capacity that can be adapted or reinvigorated (Macintyre *et al.* 2019). Working in community gardens provides connections that can contribute to contentment and life satisfaction as well as revitalizing the experience of working by means of cultivation, harvesting and trade (Macintyre *et al.* 2019), which can be visualized in the results of affective maps in the pleasantness category, where participants reported feelings of happiness, pleasure, memories, gratification, altruism, peace and tranquility.

We observed that the qualitative proportions and participants’ attribution of feelings and meanings made it possible to systematize a collective with its individual attributes, stories and singular experiences inherent to each interviewee, making it impossible to dissociate social representations from any endeavor to understand people’s environmental dynamics (Polli & Kuhnen 2011).

In this regard, meanings attributed to images were presented with several words or images, but with similar connotations, common backgrounds that make it possible to extract contents in categories. The human quality of affectionately experiencing the environment, qualifying nature and experiencing its senses is the result of the evolutionary process, since such interactions enabled the development of the species, culminating in people capable of responding positively to nature (Rosa *et al.* 2015). In interviewees’ statements, it is easy to perceive the metaphorical connection between smelling the garden and the things that come into their mind, the functionality of waking up early and being willing to experience that connection.

The feelings of distraction and peacefulness were contemplated in users’ responses. They instigate a reflection on the psychological restoration potential of these environments that allow reducing daily stress through escape, extension, fascination and compatibility factors (Albuquerque *et al.* 2016). The feeling of escape and distance from stressful places involves an affective bond mediated by belonging.



The feelings of belonging and social insertion that were very present among interviewees suggest interaction and dialogue dynamics, whether with customers, colleagues, or environments. Social insertion contributes to belonging when being known and recognized as a person that allows security and acceptance (Angelim & Silva 2016). Pocinho *et al.* (2015) have demonstrated the importance of a social network for older adults, and argue that gardens enable the relationships of neighborliness and friendship that act as a protective factor. This network of affective bonds also influences environmentally responsible behavior and can be considered in the government's actions in different themes involving health and environments, such as minimizing disease vectors, correctly separating and disposing of solid waste and increasing agroecological practices (Krasny *et al.* 2015). The experience of working in gardens provides the development of personal skills that culminate in autonomy and empowerment (Costa *et al.* 2015; Keane *et al.* 2015; Rostami *et al.* 2016). Such tasks indicate people functionality and represent the social, physical, productive and leisure dimensions present in gardens (Dias *et al.* 2014).

On the other hand, the contrasting feelings of sadness and disunity were portrayed in two different gardens throughout the research, and were associated with a lack of participation and integration. Individuals' identities are reflected in the way they deal with cultivation (Freeman *et al.* 2012) as well as how they engage and cope with the differences to allow the experience in gardens to take place harmoniously (Hale *et al.* 2011).

Although in this research the physical and functional capacity dimensions were not assessed with specific geriatric instruments, it was noted in on-site observation that active participation in vegetable cultivation and sale and social interactions in those situations indicated healthy and dynamic people (Guedea *et al.* 2006; Macintyre *et al.* 2019). Such aspects may explain the positive results on the SWLS.

Regarding the results obtained in PANAS, the mean total positive affect (PANAS) was higher than that found by Zanon and Hutz (2014), although negative affect values were very close to the means obtained in the same study. Social relations are progressively diminished throughout life and can cause anxieties and feelings of loneliness, sadness and apathy. In the literature, an active social network tends to increase the possibility of facing adverse situations and contributes to reducing negative feelings (Guedea *et al.* 2006). Bloomfield (2017) notes that activities in publicly visible environments such as gardening present an opportunity for socialization. In this research, it is clear that activities developed in gardens contribute to balance in such contexts, especially considering enthusiasm, determination and strength (predominant positive affects), commonly linked to interactions and work. In fact, negative affect does not cease to exist, but it is possible to keep opposites in play, since in expressing discontent, distress, and anxiety, it allows for the establishment of resilience and coping factors.

The incidence of satisfaction with life and positive affect demonstrated in this research made it possible to point out equivalences in users' well-being, especially self-esteem. In common with the research by Diener & Lucas (2002), presented by Hutz *et al.* (2014), the absence of neuroticism in people with satisfaction levels and positive affective experiences enables the manifestation of dynamism, determination and strength; extrovert qualities that signal the potentiality of action-in-the-world (Thompson *et al.* 2016). Thus, it was questioned whether such potentialities would have affinity with the ability to act in a manner committed to environmental preservation, since in the person-environment dialectic, the ability to respond differently is usually associated with the benefits that the environment can provide to people.

Regarding ecological behavior, the strong positive values in the water and energy saving and urban cleanliness variables should be carefully analyzed, since the need for economy was observed as one of the main motivators of these behaviors, and not necessarily the environmental cause. Campos & Pol (2010) found similar results, suggesting the influence of this action on domestic life. Even if these data do not reveal an altruistic



attitude, actions tend to positively impact environments, since it is perceived that natural resources are not available for frivolous pleasure and thoughtless use. Regarding urban cleanliness, a factor that also had a high score among the interviewees, it was possible to observe responses linked to environmental care, especially in homes and planting beds. In the literature, it is possible to find the relationship of these values with ecocentric beliefs (Campos & Pol 2010). For the Brazilian population, the results for water and energy saving as well as for urban cleanliness are expected, since they cover common socio-economic concerns and are simple factors when compared to recycling, activism and consumption. These last represent complex themes that require specific motivations, information and structures (Costa *et al* 2015). However, research on pro-environmental behavior in the communities investigated is still scarce, which makes comparison with other groups difficult.

In the recycling category, median values were identified, suggesting a behavior that should be encouraged (Pato & Tamayo 2006). Among the issues, there is low user participation regarding the disposal of used batteries. Recycling paper, even though it is a socially desirable item, was cited by few respondents as a regular action. During the investigation, many pointed out that they sell or work with recyclable materials or know collectors of these materials. Such findings may point to the relevance of the Brazilian National Solid Waste Policy (Brasil 2010), as it seeks to strengthen shared responsibility among solid waste generators with the final disposal.

The low results regarding activism and consumption were expected; however, talking about the environment with third parties stood out favorably, and correlated with satisfaction with life items. These results collaborate with the possibility, already mentioned in this article, of intensifying the environmental education's work. Environmental awareness can help garden users act as environmental agents and educators in their communities. Environmental psychology researchers report that such campaigns have impacts on people's lives, particularly when they take place horizontally and through community representatives (Fabris *et al.* 2010; Schwab *et al.* 2014). In these campaigns, it is important to consider the social and environmental aspects critically and to encourage citizenship experiences and community participation.

Community gardens can be identified as affordance, which is a situation of encouragement for the manifestation of this practice, as a result of reviving environmental care; a conduct highlighted in the literature as a variable that transcends local experience, linked to altruism and pro-environmental behavior (Günther 2011; Alaimo *et al.* 2016). Thus, positive feelings from contact with nature can generate a social and psychological identity that results in pro-environmental behaviors (Zavestoski 2003; Nagib & Giacchè 2021).

Some variables found in this research strengthen the possibility that pro-environmental behavior will occur, such as well-being, positive affect, social interaction, pro-social behavior and sense of belonging (Nigbur *et al.* 2010; Chan and Bishop 2013). Thus, it is necessary to motivate and encourage such behaviors in a transformative educational project, which, based on experiences and the local community, establish critical reflections between feeling and doing among the population.

Initially, community gardens can represent individual (family consumption and commerce) and collective (sharing and neighborhood relations) benefits; however, from a systemic and integrated view of the underlying psychological phenomena, it is possible to point out the potentiality of pro-environmental behavior as well as prosocial attitudes. In short, the results of this research dealt with the hypothesis that community gardens support specific dimensions that encourage the (re) formulation of urban environments in favor of the positive dimension through environmental psychology, i.e., the ecological vision that seeks to ensure satisfaction with life, affect and behavior related to environmental preservation. For the future, such findings are expected to highlight and assist in social transformation in such contexts so that they become increasingly close to the positive environment model of Corral-Verdugo *et al.* (2014).



5. Conclusion

This study analyzed the affects, life contentment and pro-environmental behaviors present in community garden users. The answers regarding pro-environmental behavior raised questions about possible environmental education strategies in these communities, through the valuation of local culture, social interactions and other variables assessed in this research.

Among the limitations and strengths of this study, the possibility of investigating the understanding of variables through standardized scales and with validated scores in Brazilian territory was positive. However, the small sample size made correlational analysis unfeasible, and although the values showed positive aspects, it was not possible to prove them statistically.

It can be concluded that educational actions as well as interdisciplinary strategies, such as conversation circles or cooperative groups, should be encouraged to enhance community gardens' experiences as sustainable social technologies and endowed with the possibility of promoting emancipatory behavior among users.

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