

Original Article

The impact of the COVID-19 pandemic on home gardening practices in Irbid District, Jordan

O impacto da pandemia de COVID-19 nas práticas de horticultura doméstica no Distrito de Irbid, Jordânia

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Abstract

Home gardening has been instrumental in enhancing the self-sufficiency initiatives of families across the globe. Numerous researched emphasized the positive impacts of practicing home gardening throughout COVID-19. In Jordan, few studies were conducted to examine the influence of COVID-19 on various facets of life, including employment and the livelihoods of Jordanians, but no research had discussed the pandemic impacts on home gardening. To address this research gap, a quantitative survey was conducted to assess the attitudinal, behavioral, and emotional responses related to home gardening among individuals residing in the Irbid District, both prior to and during the COVID-19 pandemic. The survey instrument comprised 11 statements, with responses measured on a 5-point Likert scale, ranging from 1 (very low extent) to 5 (very high extent). A total of 374 Jordanian participants from the Irbid District completed the questionnaire. Furthermore, the study aimed to ascertain whether demographic variables, specifically age and educational background, significantly influenced these trends during the pandemic. Analysis of the collected data revealed several key findings, as participants reported a moderate level of importance attributed to home gardening during the COVID-19 pandemic, a notable increase from the low importance perceived prior to the pandemic. Also, a significant increase in the time dedicated to home gardening activities was observed during the pandemic compared to pre-pandemic periods. Moreover, the respondents indicated that home gardening during the pandemic was associated with increased happiness and a substantial reduction in stress levels, while the perceived contribution of home gardening to household food security rose to a moderate extent during the pandemic, contrasting with a pre-pandemic rating of low. Also, a shift in preference towards cultivating edible plants over ornamental varieties was evident during the COVID-19 period. According to the results, a substantial proportion of participants (49.2%) utilized internet and social media platforms for acquiring home gardening information, while reading books was the least preferred method. Also, statistically significant differences were identified in home gardening trends during and prior to the COVID-19 pandemic concerning age and academic qualifications. These differences were more pronounced among the youngest age cohort (18-30 years) and individuals with lower educational attainment. The findings of this study indicate that the COVID-19 pandemic significantly influenced home gardening practices in the Irbid district, demonstrating a positive shift in citizen perceptions and engagement. The increased importance and engagement in home gardening during the pandemic highlight its adaptive capacity in supporting both individual well-being and household food security during a public health crisis. Future research is recommended to investigate the long-term sustainability of these observed changes in home gardening trends in the post-pandemic era.

Keywords: COVID-19, home gardening, Irbid, Jordan, trends.

Resumo

A horticultura doméstica tem sido fundamental para aprimorar as iniciativas de autossuficiência de famílias em todo o mundo. Diversas pesquisas enfatizaram os impactos positivos da prática da horticultura doméstica durante a COVID-19. Na Jordânia, embora poucos estudos tenham investigado a influência da COVID-19 em vários aspectos como emprego e meios de subsistência dos jordanianos, nenhuma pesquisa discutiu os impactos da pandemia na horticultura doméstica. Para suprir essa lacuna, foi realizado um levantamento quantitativo para avaliar as respostas atitudinais, comportamentais e emocionais relacionadas à horticultura doméstica entre indivíduos

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residentes no Distrito de Irbid, antes e durante a pandemia de COVID-19. O instrumento de pesquisa foi composto por 11 afirmações, com respostas medidas em uma escala Likert de 5 pontos, variando de 1 (grau muito baixo) a 5 (grau muito alto). Um total de 374 participantes jordanianos do Distrito de Irbid responderam ao questionário. Além disso, o estudo teve como objetivo verificar se variáveis demográficas, especificamente idade e escolaridade, influenciaram significativamente essas tendências durante a pandemia. A análise dos dados coletados revelou várias descobertas relevantes, pois os participantes relataram um nível moderado de importância atribuído à horticultura doméstica durante a pandemia de COVID-19, um aumento notável em relação à baixa importância percebida antes da pandemia. Além disso, um aumento significativo no tempo dedicado às atividades de horticultura doméstica foi observado durante a pandemia, em comparação com os períodos pré-pandêmicos. Além disso, os entrevistados indicaram que a horticultura doméstica durante a pandemia foi associada ao aumento da sensação de felicidade e a uma redução substancial nos níveis de estresse. A contribuição percebida da horticultura doméstica para a segurança alimentar das famílias aumentou moderadamente durante a pandemia, contrastando com uma classificação baixa pré-pandêmica. Constatou-se ainda uma mudança na preferência pelo cultivo de plantas comestíveis em vez de variedades ornamentais. De acordo com os resultados, uma proporção expressiva de participantes (49,2%) utilizou plataformas de internet e mídia social para obter informações sobre horticultura doméstica, enquanto a leitura de livros foi o método menos preferido. Diferenças estatisticamente significativas foram identificadas nas tendências de horticultura doméstica durante e antes da pandemia de COVID-19 em relação à idade e escolaridade. Essas diferenças foram mais pronunciadas entre a faixa etária mais jovem (18 a 30 anos) e indivíduos com menor nível educacional. Os resultados deste estudo indicam que a pandemia de COVID-19 influenciou significativamente as práticas de horticultura doméstica no distrito de Irbid, demonstrando uma mudança positiva nas percepções e no engajamento dos cidadãos. A crescente importância e adesão à horticultura doméstica durante a pandemia destacam sua capacidade adaptativa para promover o bem-estar individual e a segurança alimentar das famílias durante uma crise de saúde pública. Pesquisas futuras são recomendadas para investigar a sustentabilidade a longo prazo dessas mudanças observadas nas tendências de horticultura doméstica na era pós-pandemia.

Palavras-chave: COVID-19, horticultura doméstica, Irbid, Jordânia, tendências.

1. Introduction

Gardening is the practice of cultivating and maintaining a garden, which involves the growth and care of plants while ensuring the garden remains visually appealing (Gillard, 2001; Chalmin-Pui et al., 2021). Throughout history, home gardening has played a vital role in the self-sufficiency efforts of households worldwide (Galhena et al., 2013; Vávra et al., 2018). In times of social, economic and environmental turmoil, home gardening has gained even greater significance, as such practices contribute to maintaining food security within households (Mullins et al., 2021).

Numerous instances have highlighted the significance of gardening in times of war or natural disasters, as gardening was reported to act as symbol of aspiration and empowerment during many amidst challenges (Helphand, 2014; Gripper et al., 2022; Kingsley et al., 2023). For example, throughout the first and the second world wars and the economic downturn known as the Great Depression which occurred during the 1930s., governments actively encouraged gardening to induce self-reliance (Bassett, 1981; Gaynor, 2006; Ginn, 2012).

Amidst the economic crisis during the 1970s, the comeback of edible gardens in New York City highlighted the important function of the edible gardens in providing food, fostering social ties, and reclaiming neglected urban areas as a mean of community empowerment (Lawson, 2005).

The global public health emergency of COVID-19 hit the world in 2020 and has led to health risks, hospitalization in addition to mental health issues and increased stress levels due to containment measures (Achterberg et al., 2021; Wu et al., 2022).

Several research articles have highlighted the advantages of engaging in home gardening amidst COVID-19. These advantages encompass various aspects such as the assurance of food supply (Lal, 2020; Mullins et al., 2021) in addition

to psychological and physical improvements (Corley et al., 2021; Theodorou et al., 2021). For example, in Chile engaging home food gardening was seen as a way to increase ties with nature and reduce stress, while the primary obstacles were the absence of space for gardening and a lack of knowledge about it (Cerdeira et al., 2022). Another research article revealed that in Taiwan the increased stress due to the pandemic of COVID-19 led to a greater intention to engage in home gardening as it could play a positive role in reducing stress (Wu et al., 2022). Also, Chalmin-Pui et al. (2021) reported that data obtained from people from the United Kingdom who responded to their questionnaire demonstrated a notable connection between perceived stress with increased gardening frequency.

Jordan is situated in the Southern Levant area of West Asia. The country is organized into 12 governorates where each governorate consists of various districts and sub-districts. Irbid district is positioned in the northernmost part of Jordan and is recognized as the leading agricultural region in the country. The district is distinguished by its diverse social, cultural, and youth services, as well as ongoing construction development. The population of Irbid district stands at 1,770,158, accounting for approximately one-third of Jordan's total population (Alwedyan, 2023). Few researches were conducted in Jordan to find out the impacts of COVID-19 on the different aspects of life. A report was made by UNDP (2020) about the impacts of COVID-19 on the employment and livelihood of the Jordanians. While numerous studies have emphasized the positive impacts of home gardening during COVID-19 globally, and some research in Jordan has examined the pandemic's influence on employment and livelihoods, there has been a notable lack of research specifically addressing the impact of the COVID-19 pandemic on home gardening practices in Jordan. This gap is particularly significant

given the observed increase in commercial nursery shops in main Jordanian cities during and after the pandemic, a phenomenon not seen before COVID-19. This study aimed to investigate the trends of residents in Irbid district, northern Jordan, regarding home gardening both prior to and during the COVID-19 pandemic. Additionally, it aimed to determine whether the age or educational background of these residents had any significant impact on their home gardening trends during the pandemic.

2. Materials and Methods

2.1. Research hypotheses

H0: There are no statistically significant variations in the trends of people in the study sample related to the age and academic qualification.

2.2. Study population and sample

The present study employed a cross-sectional survey design with retrospective elements to align with the objectives of our research, which aims to determine whether COVID-19 has influenced the trends of Jordanian citizens residing in the Irbid district regarding home gardening. The research was carried out in August 2021 in the Irbid district, which has a population of 836,700 Jordanian citizens. The sample of the study was (384) based on Krejcie and Morgan (1970) and Sekaran and Bougie (2010) and according to the required Sample Size Table.

The questionnaires (384) were distributed randomly to Jordanians living in Irbid district in August (2021) by meeting them directly in their houses when the district had left partly the lock down and people were allowed to go out but on masks. The number of valid questionnaires for analysis was 374, resulting in a response rate of 97.4%. The demographic features are illustrated in Table 1 and Figure 1.

2.3. Primary and secondary sources

The study utilized primary sources such as books and related journals periodicals to develop and implement the questionnaire. The study has additionally utilized journal articles and article abstracts to formulate and execute the questionnaire.

2.4. Study tool (the questionnaire)

The survey was divided into three distinct sections, which included:

- **Section One:** Demographic Variables: the age (3 levels) and academic qualification (5 levels).
- **Section Two:** COVID-19 impacts on the trends of Jordanian people living in Irbid district towards home gardening (11 statements).
- **Section Three:** Source of information about home gardening.

2.5. Validity

The researchers evaluated the validity of the questionnaire by distributing it to academic reviewers affiliated with universities in Jordan. This was done to confirm the integrity of its items, gather their feedback, and rephrase certain statements to implement necessary adjustments, thereby demonstrating the content validity of the study tool.

2.6. Reliability

The stability of the study tool was assessed by employing the internal consistency equation utilizing Cronbach's alpha test. The results indicated that the Cronbach's alpha value for all statements was (0.927), which is significantly above the acceptable threshold of (0.70) established for this research.

Table 1. Frequency of Demographic Characteristics of the Sample.

Age	Frequency	Percentage
18-30	74	19.8
31-40	122	32.6
40 and above	178	47.6
Total	374	100.0
Academic Qualification		
Secondary and less	167	44.7
Diploma	65	17.4
BSc	74	19.8
Master	51	13.6
PhD	17	4.5
Total	374	100.0

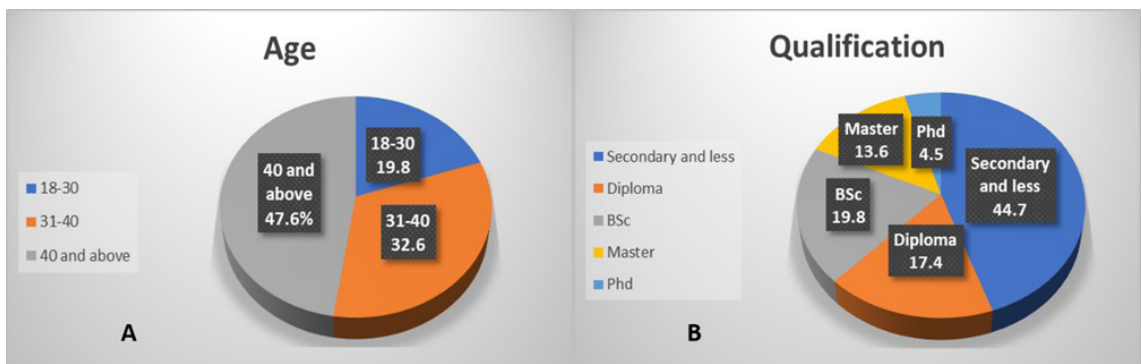


Figure 1. Percentages of demographic characteristics of the study sample in terms of (A) age and (B) qualification.

2.7. Data analysis

In order to address the study questions and the hypothesis designed to investigate the impact of COVID-19 on the trends of the participants toward home gardening, the Statistical Package for Social Sciences (SPSS) was employed to analyze the gathered data and evaluate the research hypotheses. The subsequent statistical methods and tests were utilized in the data analysis.

1. Cronbach's Alpha reliability was used to evaluate the strength of the correlation and coherence among questionnaire items. The instrument's ability to assess the concept with stability and consistency was also highlighted, contributing to the overall evaluation of the measure's quality.
2. Frequencies and percentages were utilized to characterize demographic variables and to indicate the sources of information regarding home gardening.
3. Descriptive statistical techniques, which encompassed means and standard deviations, were employed to represent the participants' responses within the study fields.
4. The Paired Sample T-test was employed to analyze the trends in home gardening practices before and during COVID-19, as well as to assess the impact of these trends on Jordanians residing in Irbid.
5. Three-way ANOVA, and the Scheffe test to determine whether there were statistically significant differences in the trends of the study sample towards home gardening during COVID-19, in relation to age and academic qualifications.
6. The research type scale comprised five distinct items on a Likert scale, as detailed in Table 2:

The relative importance was assigned based on the following Equation 1:

$$\text{Class Interval} = \frac{\text{Maximum Class} - \text{Minimum Class}}{\text{Number of Levels}} = 1.33 \quad (1)$$

- Low: 0.00- 1.33
- Medium: 1.34 – 2.67
- High: 2.68 – 4.00

3. Results and Discussions

3.1. The result of question number (1): Did COVID-19 influence trends of Jordanian people living in Irbid district towards home gardening?

To get the answers for the statements of this question, the means of the participants answers were extracted and Standard deviation and Paired Sample T-test were used to show whether the trends of the citizens in the study sample toward home gardening were influenced by Covid -19 (Table 3) or not.

Table 2. The research scale comprised five distinct items on a Likert scale.

Very High	High	Moderate	Limited	None
4	3	2	1	0

Data indicated that there were statistically significant differences in the trends of participants towards home gardening before and during COVID-19, with the trends showing a more positive inclination during the pandemic. Key changes include an increased perception of importance for home gardening, more time spent on it, greater family involvement, improved mood (happiness and reduced stress), strengthened family ties, enhanced sense of belonging to home, stronger ties with nature, and a higher perceived contribution of home gardening to household food security during the pandemic. Participants also preferred planting edible plants over ornamental ones during COVID-19.

The result of paired Sample T-test showed that there were a statistically significant differences in the trends of the participants toward home gardening before and during COVID-19 at probability level of (0.05), and the variance of the trends towards home gardening was in favor of the period during COVID-19 (Table 3). For example, in statement number (1); the participants saw that practicing home gardening during COVID-19 was of medium importance (2.22) while they used to see it of low importance before COVID-19 (1.14) (Table 3). Also, people were found to spent more time practicing home gardening during COVID-19 than they used to do before the pandemic (Statement 2 Table 3). The lockdown during COVID-19 had imposed extra free time for people who might found in gardening a good option for spending their prolonged free times. In statement (3); it was noticed that the family members became highly involved in gardening during COVID-19 while they were practicing gardening in a low level before COVID-19 (Table 3). Moreover, practicing home gardening during COVID-19 was found to improve the mood of the members of the study sample in terms of happiness and reduction in stress feelings to a high level compared to a medium improvement in their mood before COVID-19 as you can see in statements (4, 9) (Table 3). These results were in complete agreement with Cerda et al. (2022) study about the benefits of home gardening during the pandemic of COVID-19 as they reported that home gardening had improved people's health and reduced stress and loneliness feelings in in Santiago, Chile.

According our study sample, additional achievements of practicing home gardening during COVID-19 time were found in the option of the participants, like highly strengthening family ties and sense of home belonging (Statements 6 and 7 Table 3) compared to the results obtained before Covid- 19. Additionally, people in the study expressed stronger ties to the nature during the pandemic than before (Statement 8, Table 3). According to Wu et al. (2022), home gardening served as a beneficial mean for individuals in Taiwan to connect with nature during the pandemic of COVID-19, particularly when the government enforced lockdowns on parks, leisure farms and forests, which significantly contributed to enhancing their mental well-being.

Another influence of COVID-19 on people trends toward home gardening was that the participant saw that home gardening could contribute to household food security to a medium level while they scored its contribution as low before the pandemic (Statement 10, Table 3). The change

Table 3. Paired Sample T-test of means of the trends of Jordanian people living in Irbid district towards home gardening before and during COVID -19.

No.	Statement	Period	Mean	S.D	Mean difference	T value	Sig.
1	Practicing Home Gardening is important to this degree	Before COVID-19	1.14	.71	-1.07	-19.098	0.00*
		During COVID-19	2.22	.92			
2	I practice home gardening in to this degree	Before COVID-19	1.17	.73	-1.10	-19.098	0.00*
		During COVID-19	2.27	.91			
3	My family members are involved in agricultural work in our garden to this degree	Before COVID-19	1.19	.75	-2.21	-43.407	0.00*
		During COVID-19	3.40	.70			
4	Practicing of home gardening improves my sense of happiness	Before COVID-19	2.41	.60	-1.12	-21.736	0.00*
		During COVID-19	3.52	.50			
5	I encourage my family members to practice home gardening in the garden of our house to this degree	Before COVID-19	2.40	.61	-0.14	-5.948	0.00*
		During COVID-19	2.54	.70			
6	Practicing home gardening with my family members strengthens family ties	Before COVID-19	2.33	.63	-0.34	-6.437	0.00*
		During COVID-19	2.68	.78			
7	Practicing home gardening strengthens my sense of belonging to home	Before COVID-19	2.43	.63	-0.30	-4.967	0.00*
		During COVID-19	2.73	.71			
8	Practicing home gardening strengthens my ties with nature	Before COVID-19	2.45	.64	-0.23	-7.842	0.00*
		During COVID-19	2.68	.83			
9	Practicing home gardening reduces feelings of life's stresses	Before COVID-19	2.45	.65	-0.24	-6.332	0.00*
		During COVID-19	2.69	.79			
10	In your opinion, home gardening contributes to household food security	Before COVID-19	1.20	.80	-0.32	-7.717	0.00*
		During COVID-19	1.52	1.01			
11	I prefer to plant fruit trees and vegetables instead of ornamental plants in my garden	Before COVID-19	1.19	.78	-0.49	-9.692	0.00*
		During COVID-19	1.68	1.12			

*Significant at level of (0.05).

in their opinion might refer to the reason that most people during the lockdown used to have big concerns about food availability especially when they were not allowed to leave their homes for shopping, so planting vegetables and fruits in their gardens during COVID-19 might have

reduced their concerns . Ensuring the availability of food was reported to induce human mental well-being and to guarantee nutritional security throughout the COVID-19 pandemic (Wu et al., 2023). According to Lal (2020), home gardening had significantly contributed to enhancing food

and nutritional security during and after the COVID-19 pandemic, while simultaneously bolstering the provision of various ecosystem services. Also,

Interestingly, people in the study sample preferred planting fruit trees and vegetables instead of ornamental plants in their gardens to a medium level (1.68) compared times before COVID-19 when their agreement with this statement was of low level (Statement 11 Table 3). In a study conducted by Turnšek et al. (2022), data collected from a survey carried out during Covid- 10 across five European countries indicated that the pandemic served as a significant motive for home gardening, driven primarily by concerns regarding food security where people tended to include more vegetables and fruits in their gardens than ornamental plants. In Irbid district, two thirds of the residential houses have gardens where half of these gardens served for production of food and were primarily located in rural regions, whereas gardens designed for aesthetic appeal accounted for 21% of the total and were notably located in the central urban area of Irbid district (Al-Kofahi et al., 2019). From our results, a change in the trend of people could be predicted especially for those living in the central urban area of Irbid district toward the primary purpose of home gardens which became food production rather than recreation.

3.2. Result of question number (2)

3.2.1. What is the source of information about home gardening?

To find out the source of information about home gardening used by the participants, the study used frequency and percentages as shown in Table 4.

The results showed that the internet and social media were the primary sources of information about home gardening for nearly half of the participants. In contrast, reading books was the least common source of information.

According to the statistical analysis, the internet and social media were the main sources of information about home gardening for (49.2%) of the participants, while reading books about home gardening was the last in the list (2.4%) as shown in Table 4. This might refer to the ease of accessibility, the huge size of information and the widely diversified sources offered by the internet and social media which were perfectly perfect for people who were locked down in their houses for long time and not allowed to go

to libraries or make direct social communication with specialists. Our findings agreed with Mullins et al. (2021) and Cerda et al. (2022) who revealed that the internet and social media were the main resources for people in their studies to get information during the pandemic about gardening. On the other hand in Sunga and Advincula (2021) study about home gardening during the pandemic in Philippines reported that 46% of the participant got their information and interest in home gardening from experienced people, while only 27% of the study sample got their knowledge from the social media. In Jordan, in a study conducted before COVID-19 it was found that the internet and social media were the main sources for the housewives living in Amman city to get information about home gardening while they used specialized books about gardening at medium level (Tahtamouni, 2019).

3.3. The result of question number (3)

3.3.1. Are there statistically significant differences in the trends of Jordanians living in Irbid district towards home gardening during COVID-19 related to the age and academic qualification?

The obtained results showed that there were notable variations in the mean values of home gardening trends during the COVID-19 pandemic across different age groups and academic qualifications. Specifically, younger age categories and those with lower academic qualifications (secondary and less, followed by diploma and then BSc) showed a more positive trend towards home gardening during this period.

Our study employed descriptive statistics, a Three-way ANOVA, and the Scheffe test to determine whether there were statistically significant differences in the trends of the study sample towards home gardening during COVID-19, in relation to age and academic qualifications.

Data presented in Table 5 indicated notable variations in the mean values of the trends among Jordanians in the sample regarding home gardening during the COVID-19 pandemic in relation to age and academic qualifications. Furthermore, a Three-way ANOVA analysis demonstrated significant differences in the means, as illustrated in Table 6 as it revealed statistically significant differences in the trends of Jordanians residing in the Irbid district towards home gardening during the COVID-19 period, with F values recorded at (61.909 and 7.515) respectively, both significant.

The result of scheffe test in Tables 7 and 8 showed that the source of variance in the trends of Jordanians living in Irbid towards home gardening during COVID-19 was in favor of the youngest age category (18-30) and the least educated (Secondary and less followed by diploma then to BSc). According to Jordanian culture, seeking high academic qualification is the key for high income jobs. This might offer a possible explanation for our results, as people in the youngest age category (18-30) might be mostly students or working in low-income jobs where no high academic qualifications are required, so due to the lock down these participants got more free time which made them use home gardening as a method to improve their

Table 4. Frequency and Percentages to show the source of information about home gardening.

My source of information about home gardening is:	Frequency	Percentage (%)
Experiences of others	74	19.8
Social media	184	49.2
TV	54	14.4
Agriculture specialists	53	14.2
Books	9	2.4
Total	374	100.0

Table 5. Descriptive Statistics of means of the trends of Jordanians living in Irbid district towards home gardening during COVID-19 related to the age and academic qualification.

Age	Qualification	Specialist	Mean	Std. Deviation	N
18-30 years	secondary and less	secondary	2.86	0.33	74
		Total	2.86	0.33	74
	Total	Secondary	2.86	0.33	74
		Total	2.86	0.33	74
31-40 years	secondary and less	Secondary	2.22	0.42	93
		Total	2.22	0.42	93
	diploma	agriculture	2.11	0.41	29
		Total	2.11	0.41	29
	Total	secondary	2.22	0.42	93
		agriculture	2.11	0.41	29
		Total	2.19	0.41	122
		Total	2.19	0.41	122
40 and above	diploma	agriculture	2.27	0.28	24
		others	2.20	0.31	12
		Total	2.24	0.28	36
	BSc	others	2.17	0.40	74
		Total	2.17	0.40	74
	Master	others	1.87	0.38	51
		Total	1.87	0.38	51
	PhD	others	2.19	0.24	17
		Total	2.19	0.24	17
	Total	agriculture	2.27	0.28	24
		others	2.07	0.40	154
		Total	2.10	0.39	178
Total	secondary and less	secondary	2.50	0.50	167
		Total	2.50	0.50	167
	diploma	agriculture	2.18	0.36	53
		others	2.20	0.31	12
		Total	2.18	0.35	65
	BSc	others	2.17	0.40	74
		Total	2.17	0.40	74
	Master	others	1.87	0.38	51
		Total	1.87	0.38	51
	PhD	others	2.19	0.24	17
		Total	2.19	0.24	17
	Total	secondary	2.50	0.50	167
		agriculture	2.18	0.36	53
		others	2.07	0.40	154
		Total	2.28	0.48	374

income by providing free fresh food for their homes or by selling their products. In another related study conducted in several states in USA by Chenarides et al. (2021), they indicated that the likelihood of home gardening increased

during COVID-19 in younger households in Detroit as they their income was lower than the elder participants which made them grow plants for extra money. On the other hand, our data contrasted the findings of Turnšek et al.

Table 6. Three-way ANOVA test of means of the trends of Jordanians living in Irbid district towards home gardening during COVID-19 related to the age and academic qualification.

Source	Type III Sum of Squares	df	Mean Square	F	Sig.
Corrected Model	35.624	6	5.089	36.317	.000
Intercept	421.306	1	421.306	3006.547	.000
Age	17.351	2	8.675	61.909	.000*
Academic Qualification	3.159	4	1.053	7.515	.000*
Error	51.287	368	.140		
Total	2030.395	374			
Corrected Total	86.911	373			

*Significant at level of (0.05).

Table 7. Scheffe test for age.

Age	Age	Mean Difference	Sig.
18-30 years	31-40 years	.6675*	.000
	40 and above	.7580*	.000
31-40 years	18-30 years	-.6675-*	.000
	40 and above	.0905	.122
40 and above	18-30 years	-.7580-*	.000
	31-40 years	-.0905-	.122

*Significant at level of (0.05).

Table 8. Scheffe test for Qualification.

Qualification	Qualification	Mean Difference	Sig.
secondary and less	diploma	.3154*	.000
	BSc	.3336*	.000
	Master	.6287*	.000
	PhD	.3051*	.038
diploma	secondary and less	-.3154-*	.000
	BSc	.0182	.999
	Master	.3133*	.001
	PhD	-.0102-	1.000
BSc	secondary and less	-.3336-*	.000
	diploma	-.0182-	.999
	Master	.2951*	.001
	PhD	-.0285-	.999
Master	secondary and less	-.6287-*	.000
	diploma	-.3133-*	.001
	BSc	-.2951-*	.001
	PhD	-.3235-	.051
PhD	secondary and less	-.3051-*	.038
	diploma	.0102	1.000
	BSc	.0285	.999
	Master	.3235	.051

*Significant at level of (0.05).

(2022) as the respondents of their study who possessed higher education levels showed a greater interest in home gardening activities during the pandemic than the others.

4. Conclusions

This study revealed that the COVID-19 pandemic significantly transformed home gardening in Irbid district, making it a more central and valued activity. This shift led to improved psychological well-being, reduced stress, and stronger family ties, highlighting home gardening's role as a coping mechanism and contributor to household stability and food security. The increased focus on edible plants and reliance on digital information sources underscore an adaptive community response.

The obtained findings would suggest broad implications for public health, urban planning, and food security, advocating for policy integration of gardening support and the promotion of local food systems.

However, limitations might be acknowledged, including its specific geographical focus and cross-sectional nature. This would recommend future research to expand geographically, conduct longitudinal studies to assess long-term sustainability, and perform qualitative research to delve into motivations of different demographic groups, especially younger and less educated individuals.

Based on this study specific recommendations can be proposed such as developing targeted gardening education programs that leverage digital platforms and encouraging community-based initiatives.

Data Availability Statement

The entire data set that supports the results of this study was published in the article itself.

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