Diversitas Journal
ISSN 2525-5215
Volume 11, Number Special 1 (Mar./Apr. 2026) p. 048 – 065
https://diversitasjournal.com.br/diversitas_journal

Visitors' environmental awareness, experiences, and motivations towards botanical gardens: Implications for visitor education center

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ABSTRACT

Garden visitation has transitioned from a simple appreciation of plants and flowers to a multifaceted experience encompassing social, intellectual, and personal dimensions. Historically, tourism focused on delivering novel and unique experiences, but modern garden attractions now cater to visitors seeking fresh air, picturesque scenery, recreational activities, and local goods. Botanical gardens (BGs) play a critical role in education and sustainable development, prompting the need for Cebu's garden attractions to repackage their offerings and assess visitors' readiness to embrace these changes. This study employed a quantitative design with non-purposive sampling and descriptive statistics to explore garden visitors' environmental consciousness, experiences, and motivations. Results from a One-Way Analysis of Variance (ANOVA) indicated no significant differences between visitors' demographics and their environmental consciousness, suggesting that awareness of environmental issues transcends demographic profiles. Visitors acknowledged the role of BGs in preserving and conserving flora. Notably, those who expected visitor education centers demonstrated higher environmental consciousness and motivation. The findings highlight the importance of integrating educational programs within botanical gardens to enhance visitor experiences and foster environmental awareness, ultimately positioning these gardens as hubs for both leisure and learning.

RESUMO

A visitação a jardins passou de uma simples apreciação de plantas e flores para uma experiência multifacetada que abrange dimensões sociais, intelectuais e pessoais. Historicamente, o turismo se concentrava em proporcionar experiências novas e únicas, mas as atrações modernas em jardins agora atendem visitantes que buscam ar fresco, paisagens pitorescas, atividades recreativas e produtos locais. Os jardins botânicos (JBs) desempenham um papel fundamental na educação e no desenvolvimento sustentável, o que levou as atrações de jardins de Cebu a reformularem suas ofertas e avaliarem a prontidão dos visitantes para acolher essas mudanças. Este estudo empregou um delineamento quantitativo com amostragem não intencional e estatística descritiva para explorar a consciência ambiental, as experiências e as motivações dos visitantes dos jardins. Os resultados de uma Análise de Variância Unidirecional (ANOVA) não indicaram diferenças significativas entre a demografia dos visitantes e sua consciência ambiental, sugerindo que a conscientização sobre questões ambientais transcende os perfis demográficos. Os visitantes reconheceram o papel dos JBs na preservação e conservação da flora. Notavelmente, aqueles que esperavam centros de educação para visitantes demonstraram maior consciência ambiental e motivação. As descobertas destacam a importância de integrar programas educacionais em jardins botânicos para melhorar as experiências dos visitantes e promover a conscientização ambiental, posicionando esses jardins como centros de lazer e aprendizado.

ARTICLE INFORMATION

Article process:
Submitted: 09/23/2025
Approved: 03/12/2026
Published: 03/15/2026

Keywords:
botanical garden; environmental consciousness; motivation; tourist experience; sustainability

Keywords:
jardim botânico; consciência ambiental; motivação; experiência turística; sustentabilidade

DOI: 10.48017/dj.v11iSpecial_1.3635

Introduction

From a global perspective, botanical gardens (BGs) have become popular tourist attractions and leisure venues for local communities. Beyond their aesthetic appeal, BGs offer unique opportunities for interactive education, foster creativity and learning (Blaszak et al., 2019), and engage the public in sustainability initiatives (Zelenika et al., 2018). They also contribute to climate change research and conservation efforts (Primack et al., 2021) while providing informal learning experiences that influence visitors' values, attitudes, and actions (Ballantyne et al., 2008). These factors position botanical gardens as vital platforms for education and sustainable development (Borsch & Löhne, 2014). However, these challenges garden attractions in Cebu to explore whether such a concept is viable and if visitors and tourists would embrace it.

Ballantyne et al. (2008) emphasized the need for visitor research to create garden experiences that inspire conservation activities. Environmental education plays a key role in enhancing ecological knowledge and fostering positive environmental attitudes (Williams et al., 2015). As He and Chen (2012) pointed out, tourists' satisfaction is influenced by their motivations and expectations, which shape their experiences before and during a visit. Research has identified key motivators for visiting BGs, including the desire to gain knowledge (Sulistiono et al., 2020), recreational purposes (Affandi et al., 2020), and enjoyment of natural beauty, exercise, and fresh air (Karaşah et al., 2013).

Although visitor education centers (VECs) are considered essential facilities for botanical gardens, only 10% of the 2,820 botanical gardens worldwide currently have them (He & Chen, 2012). Affandi et al. (2020) also highlighted the relevance of visitor demographics—such as age, marital status, gender, income, and education—in shaping travel behavior, influencing visitation rates, and guiding the development of information facilities, flora tours, and tour services. This raises the question of whether today's visitors would appreciate botanical gardens with VECs.

Utama (2015) suggested that botanical gardens should diversify their offerings by considering entrance fees, service quality, natural attractions, accessibility, atmosphere, and visitor facilities. Despite substantial research on visitor satisfaction and environmental awareness in BGs globally, such studies are scarce in the Philippines, where there are very few officially recognized botanical gardens. However, the growing demand for new attractions has led to a proliferation of garden attractions across the country. This highlights the relevance of studying visitor satisfaction and competitive advantage within the local context.

As a nascent field of research, this study represents the first effort in Central Visayas. The study aims to explore visitors' environmental consciousness, experiences, and motivations regarding botanical gardens. Specifically, it seeks to: (1) present the socio-demographic profile and visitor stay of garden visitors; (2) assess visitors' level of environmental consciousness; (3)

determine visitors' motivations and experiences in botanical gardens; (4) test the significant relationships between environmental consciousness, motivations, and experiences based on socio-demographic factors; (5) examine significant differences in environmental consciousness, motivations, and experiences based on visitor stay.

Today, there are over 2,500 botanical gardens worldwide (Golding et al., 2010). Research shows that garden visitors are often less interested in conservation issues and less motivated to learn compared to visitors of other free-choice learning settings, such as museums, zoos, aquariums, heritage sites, natural areas, and wildlife tourism activities (Ballantyne, 2008). This may be partly due to the diversity in garden design, purpose, and features. Ballantyne (2008) notes that motivations for visiting gardens vary widely, including an appreciation for the aesthetic and unique qualities of plants, an interest in garden design and historical landscaping techniques, a love for the beauty and ambiance of gardens, and a desire to spend time outdoors.

Botanical gardens provide informal learning opportunities to teach the significance of plants, environmental conservation, and sustainable practices through well-designed interpretive programs. Without such interpretation, gardens risk being perceived merely as attractions or urban green spaces. Understanding visitors' perceptions of gardens is crucial for gauging whether Filipinos are ready to embrace the concept of authentic botanical gardens. This study also offers foundational insights for garden owners to sustain their businesses, remain competitive, and align their offerings with visitors' expectations and needs.

Botanic gardens serve as unique tourist attractions, catering to a wide spectrum of visitors, including domestic and international tourists and local residents. Often referred to as BGs, botanic gardens are collections of live plants, initially intended to showcase the relationships between plant groupings. Over time, they have evolved to focus on displaying visually appealing plants in systems that emphasize natural connections. According to Encyclopedia Britannica (2024), botanic gardens balance two primary roles: visual appeal and taxonomic order.

The concept of garden visiting has emerged as a notable niche within the tourism industry. Botanic gardens are designed to educate the community about conservation, foster pro-conservation attitudes, and inspire public support for conservation initiatives. Conservation and education remain their core goals. Beyond knowledge and learning, botanic gardens offer visitors new perspectives, discoveries, and the chance to experience the destination's daily life, blending enjoyment with environmental and cultural awareness.

Visitors perceive botanical gardens as spaces for mental refreshment, physical activity, and social interaction, particularly in urban settings (Ballantyne et al., 2008). Sensory experiences, such as engaging with the ambiance of gardens and the beauty of natural scenery, are critical factors driving visitation (McLoughlin, 1998). Visitor motivations for attending

botanical gardens are diverse, including appreciation for aesthetics, a love for nature, a desire to learn, and the need for relaxation or social bonding (Ballantyne, 2008; Connell & Meyer, 2004). First-time visitors often show greater enthusiasm for discovery and learning, highlighting the need for targeted experiences for different visitor types (Ballantyne, 2008).

Recent studies emphasize the importance of landscape features in encouraging outdoor leisure. The physical and practical elements in landscapes such as open spaces like parks and gardens can inspire outdoor activities while enhancing visitor satisfaction. However, factors such as entry fees, the availability of free-access green spaces, and the association of outdoor areas with physical exercise rather than relaxation may affect motivations to visit botanical gardens. Landscape design, signage, and interpretative elements significantly influence visitor satisfaction and learning experiences (Hadi, 2017; Goh, 2015). Gardens that combine aesthetic beauty with functional and educational components provide a richer experience, aligning with diverse visitor preferences.

Despite their potential, botanical gardens often struggle to attract high levels of interest in conservation compared to other free-choice learning environments like zoos or museums (Ballantyne, 2008). To remain relevant and sustainable, botanical gardens must continuously adapt to visitor preferences and offer tailored experiences. By integrating educational programs, accessible pricing models, and diverse recreational opportunities, botanical gardens can balance their roles in conservation, education, and tourism (Steinhauer et al., 2007; Hadi et al., 2017).

It is therefore important for botanical gardens to maintain a harmonious balance between their conservation and educational objectives while ensuring they remain engaging and accessible to a diverse audience. These gardens hold immense potential as platforms for promoting environmental awareness and as serene sanctuaries where urban populations can reconnect with nature. Botanical gardens are found to be venues for the development or expansion of educational resources, provides engaging programs and interactive displays about biodiversity, conservation, and environmental sustainability. This aligns with SDG 4's goal of ensuring inclusive and equitable quality education and promoting lifelong learning opportunities for all. Regardless of gender, any visitor who wants to learn about environmental conservation, biodiversity, and sustainability can go to a botanical garden. The study promotes environmental consciousness and education, empowering both men and women, especially in leadership and advocacy roles related to conservation and sustainability. It encourages active participation from both genders in environmental education and conservation efforts.

Methodology

This study employed a quantitative research design. The research was conducted across five prominent flower gardens along the Transcentral Highway in Cebu: Sirao Flower Garden

(Original Garden), Sirao's Pictorial Garden, Terrazas de Flores, Buwakan ni Alejandra, and Evo Nature Camp. These gardens are recognized as top attractions in Cebu (Sugbo.ph, 2021) and are popular destinations for visitors.

Data collection used a non-probability purposive sampling method, in which respondents were randomly selected (Botha et al., 2021; Affandi et al., 2020). Questionnaires were distributed exclusively to garden visitors. The data collection period spanned for five months. To estimate the sample size, the Raosoft sample size calculator was employed, with a 95% confidence level and a 5% margin of error (Raosoft Inc., 2004; Lian & Yoong, 2019). This resulted in a recommended minimum sample size of 385 respondents from the target population.

A combination of physical distribution and online surveys via Google Forms was used to gather data. A total of 250 questionnaires were distributed equally across the five identified gardens (50 per garden). After five months, 338 responses were collected, of which 310 were deemed usable for analysis. The questionnaire for this study was adapted from previous research and consisted of three sections. The instrument consisted of a single set of questionnaires, uniformly applied across all selected botanical gardens. The questionnaire was structured into three sections. Part one was a checklist designed to capture the socio-demographic profile of visitors and details about their stay, based on He & Chen (2012). Part two was an assessment of the level of environmental consciousness, adapted from Ballantyne (2008). While part three was an evaluation of visitors' experiences and motivations, also adapted from He & Chen (2012). Each section included a series of indicators, measured using a qualitative scale with assigned response options from 4 (Strongly Agree) to 1 (Strongly Disagree). A statistician provided assistance in analyzing the data using qualitative analysis software. This process involved identifying high-level concepts, exploring connections between these concepts, and generating overarching themes to interpret the findings effectively.

Reliability and Validity

To ensure the reliability and validity of the questionnaire, academic experts in both research and the tourism industry were consulted. Based on their feedback, the initial version of the instrument, which was a mixed-method approach, was revised into a quantitative format. The original six-part questionnaire was streamlined to three sections, and a four-point Likert scale was recommended instead of a five-point scale. The internal consistency of the 31 items, representing the three dependent variables—environmental consciousness, experience, and motivation—was assessed using Cronbach's alpha. The result was 0.935, which exceeds the recommended value, indicating excellent reliability (Taber, 2018).

Prior to data collection, the necessary approvals for the study were obtained. Meetings with enumerators were conducted to discuss the questionnaire distribution process, ensuring adherence to the Data Privacy Act throughout the research.

For data analysis, descriptive statistics were employed to assess visitors' levels of environmental consciousness and to determine their experiences and motivations. One-way ANOVA was used to identify any significant differences between visitors' demographics, visitor stay, and their levels of environmental consciousness, experience, and motivation. Pearson correlation was applied to analyze relationships within socio-demographic and visitor profile groups. Socio-demographic data and visitor stay information were presented using descriptive statistics (frequencies and percentages) and illustrated in tabular format.

Results And Discussions

Visitors' Demographic Profile

Table 1:

Demographic Profile

Age	**No**	**%**	**R**
18-25 (Genz)	234	75	1
26-41 (Gen Y)	35	11	2
42-56 (Gen X)	14	5	4
57 -Above (Baby Boomers)	27	9	3
Total	**310**	**100**	
Gender	**No**	**%**	**R**
Male	92	30	2
Female	218	70	1
Total	**310**	**100**	
Highest Education	**No**	**%**	**R**
High School Graduate	34	11	3
College Graduate	188	61	1
Graduate Studies	72	23	2
Others	16	5	4
Total	**310**	**100**	

Monthly Income	**No**	**%**	**R**
Below 9,520.00	140	45	1
9,521.00-19,040.00	58	19	2
19,041.00-28,560.00	49	16	3
28,561.00-38,080.00	29	9	4
38,081.00-47,600.00	10	3	6
47,601.00-66,640.00	10	3	6
66,641.00-76,159.00	2	1	7
76,160.00-above	12	4	5
Total	**310**	**100**	

Among the 310 survey respondents, 75% belonged to the Gen Z age group (18–25 years old), followed by the Gen Y group (26–41 years old) with 11%, and a small percentage (5%) from the Gen X group. This indicates that the majority of botanical garden visitors in Cebu City are young individuals. Of these respondents, 92 (30%) were male, and 218 (70%) were female. Most respondents were college graduates, with 45% earning a monthly salary below Php 9,520.00 and 19% earning between Php 9,521.00 and Php 19,040.00. At the time of data collection, conducted during pandemic-related restrictions, many respondents reported job losses, which may explain the high proportion of salaries below the minimum wage. Nevertheless, 36% of respondents had incomes exceeding Php 19,041.00.

Sociological, psychological, and managerial studies have extensively explored tourist behavior, using variables such as socio-economic status, demographics, and psychographics to profile tourists and analyze their decision-making, motivations, and behavior (Buffa, 2015). Younger generations, particularly Gen Z, are known for their energy and curiosity about the world. As a generation shaped by technology, they are keen on following travel trends. According to Robinson and Schänzel (2019), Gen Z travelers have diverse motivations, while Živković (2021) highlights this group as the largest consumer base for social media platforms, driven by openness to new experiences, challenges, and adventures.

Steinhauer (2007) also noted that sociodemographic factors such as gender, income, and education significantly influence botanical garden visitation. This study reflects that females, regardless of income level or educational attainment, demonstrate a strong inclination toward relaxation and exploring nature.

Table 2:

Visitor Stay

Length of Stay	**No**	**%**	**R**
Less than 1 hour	112	36	2
2-3 hours	151	49	1
4-5 hours	28	28	3
6 hours and above	19	19	4
Total	**310**	**100**	
Willingness to Revisit	**No**	**%**	**R**
Definitely yes	33	11	3
Uncertain	218	70	1
Definitely no	59	19	2
Total	**310**	**100**	
Willingness to Recommend	**No**	**%**	**R**
Definitely yes	250	81	1
Uncertain	50	16	2
Definitely no	10	3	3
Total	**310**	**100**	

Entrance Fee	**No**	**%**	**R**
Expensive	281	91	1
Reasonable	28	9	2
Affordable	1	0	0
Total	**310**	**100**	
VEC Expectation	**No**	**%**	**R**
Yes	203	66	1
No	107	34	2
Total	**310**	**100**	

The frequency distribution reveals that among the 310 botanical garden visitors, nearly half (49% or 151 visitors) intended to stay for 2–3 hours, while 36% (112 visitors) planned to stay for less than an hour. Despite this, 91% of respondents perceived the entrance fee as expensive. This suggests that visitors tend to stay longer in botanical gardens to fully appreciate the plants and scenery and to feel they are getting value for their payment. According to Wassenberg (2012), botanical garden visitors are often motivated by a broader range of recreational activities, such as mental relaxation and spending quality time with family and friends. Ballantyne (2008) observed that first-time visitors are generally more motivated to learn and explore the site compared to frequent visitors.

In terms of tourist behavioral intention, 70% of respondents were uncertain about revisiting the gardens, although a majority (81%, or 250 visitors) expressed willingness to recommend the gardens to others. Research by Mahdzar et al. (2015) indicates that tourists who create enjoyable memories tied to destination attributes are more likely to revisit and recommend the destination. This suggests that while visitors enjoyed their stay and had memorable experiences, the gardens' offerings—such as their beauty, landscaping, and relaxing environment—were insufficient to convince them to return.

To encourage revisits, additional attractions or enhancements may be necessary. One potential improvement is incorporating Visitor Education Centers (VECs) in botanical gardens, which can enrich visitors' experiences by offering opportunities for learning and knowledge acquisition. He and Chen (2012) found that gardens with VECs achieved higher visitor satisfaction compared to those without.

As cited by Viet et al. (2020), tourists feel satisfied when their experiences evoke pleasant emotions. Notably, the majority of garden visitors in this study were young adults, a demographic characterized by openness to new experiences, challenges, and adventures (Živković, 2021). This generation frequently shares their travel experiences on social media, often posting during or after their trips. According to Lui et al. (2020), young tourists often revisit their social media posts to reminisce about past travel experiences, which can influence future travel decisions.

Table 3:

Level of Environmental Consciousness

Indicators	WM	Interpretation	Rank
1. Botanical gardens use environmentally friendly products	3.4323	SA	4
2. Botanical gardens practices recycling.	3.3742	SA	5
3. Botanical garden address environmental issues.	3.3387	SA	7
4. Botanical gardens do take into consideration whether its operations can harm the natural environment.	3.3613	SA	6
5. Botanical gardens advocate for environmental conservation.	3.4806	SA	3
6. Botanical gardens encourage visitors to help protect the natural environment.	3.4935	SA	1
7. Plant species in botanical gardens are meant to preserve some of the important species of flora.	3.4903	SA	2

Table 3 presents the level of environmental consciousness among garden visitors. The findings reveal that visitors exhibit a high level of environmental consciousness, as evidenced by the mean scores for all seven factors, which fall within the range of 3.26 to 4.00, interpreted as "strongly agree." This suggests that visitors view botanical gardens not merely as attractions

but as vital spaces for biodiversity conservation and the promotion of environmental awareness.

Moreover, visitors are highly conscious of the role botanical gardens play in addressing environmental issues. They believe botanical gardens should carefully consider their operational impacts on the natural environment. Visitors strongly agree that botanical gardens should advocate for environmental conservation (mean = 3.48), encourage guests to protect the natural environment (mean = 3.49), and emphasize the preservation of plant species housed in these gardens (mean = 3.49).

As highlighted by Dunn (2017), botanical gardens hold social significance in addressing public engagement issues, particularly biodiversity and plant conservation. By implementing environmental education programs at popular tourist destinations known for their natural beauty, visitors can gain valuable insights about the environment while becoming more aware of pressing environmental concerns. These findings suggest that visitors to botanical gardens anticipate gaining knowledge while enjoying recreational activities, the gardens' natural beauty, and the refreshing outdoor environment.

Table 4:

Visitor Experience

Indicators	WM	Interpretation	Rank
1. Feeling relaxed.	3.6194	SA	3
2. Improved relationship with family or friends/colleagues.	3.6194	SA	3
3. Gaining botanical knowledge	3.300	SA	10
4. Getting close to nature	3.6806	SA	2
5. Seeing many exotic plants.	3.400	SA	9
6. Learning about a variety of plants	3.4581	SA	4
7. Gaining knowledge on environment protection.	3.4032	SA	7
8. Enjoying beautiful garden views.	3.7387	SA	1
9. Learning about various plants.	3.4226	SA	6
10. Helpful maps, signages, rules (codes of conduct) and general information.	3.3903	SA	8
11. Cleanliness of the facilities in the garden (rest room, walk-ways, etc.)	3.4548	SA	5
12. Staff friendliness and hospitality.	3.4581	SA	4

Table 4 presents the experiences of visitors in the botanical gardens they visited. The results reveal that visitors generally report a positive experience, with all the mean scores for the twelve factors falling within the range of 3.26 to 4.00, indicating "strongly agree." During their visit, visitors report feeling relaxed (mean = 3.6), closer to nature (mean = 3.7), and enjoying the beauty of the garden (mean = 3.7).

In addition to these experiences, visitors gain botanical knowledge, appreciate the variety of plants, and have the opportunity to see exotic species. Beyond the plants, visitors also enjoy beautiful garden views while learning about environmental protection. The gardens they visited provided essential amenities, such as helpful maps, signage, rules, and general information. Cleanliness of the garden facilities also contributed positively to their experience. Lastly, the presence of friendly and hospitable staff made the visit even more enjoyable and memorable.

As noted by Dunn (2017), botanical gardens can bridge the gap between biodiversity conservation and the appreciation of cultural and natural diversity, creating an impactful experience that broadens human understanding. The gardens' landscapes and sceneries significantly influence visitors' satisfaction levels (Hadi, 2017), where satisfaction is closely linked to travel motivation (He & Chen, 2012). The visitor experience becomes meaningful when it is filled with positive, memorable moments. Pleasant experiences lead to satisfaction and contribute to a meaningful visit.

Table 5:

Visitor Motivation

Indicators	WM	Interpretation	Rank
1. To relax and escape daily routine.	3.6516	SA	3
2. To get close to nature.	3.6548	SA	2
3. To spend time with relatives and friends.	3.6452	SA	4
4. To gain knowledge.	3.4032	SA	8
5. To get exercise.	3.3032	SA	10
6. To spend time alone.	3.1581	A	11
7. To enjoy the scenery.	3.7323	SA	1
8. Due to the reputation of the garden.	3.3548	SA	9
9. It contributes to my overall well-being.	3.5065	SA	7
10. To admire the different varieties of plants.	3.5645	SA	5
11. To photograph the different varieties of plants.	3.5516	SA	6
12. It is near to my place and the entrance fee is affordable.	2.8677	A	12

Table 5 presents the motivations behind why people visit botanical gardens. The results show that the primary motivation for visiting is to enjoy the scenery (mean = 3.73), followed by the desire to relax and escape from daily routines (mean = 3.65), to get closer to nature (mean = 3.65), and to spend time with family and friends (mean = 3.64).

These findings indicate that visitors are highly motivated to gain knowledge (Sulistiono et al., 2020), engage in recreational activities (Affandi et al., 2020), enjoy the garden's natural beauty, exercise, and breathe fresh air (Karaşah et al., 2013), as well as connect with nature.

These motivations are related to relaxation of both the mind and body, along with the social aspect of spending time with loved ones (Wassenberg, 2012).

Additionally, for some visitors, studying plants offers both enjoyment and professional fulfillment. Gardens, with their awe-inspiring landscapes and sceneries, attract people, especially those seeking respite from work or simply wanting to unwind or spend time with family and friends. The kaleidoscopic sights of gardens have a psychological impact, drawing visitors for their soothing and calming effect.

Table 6:

Relationship Between Demographics, Environmental Consciousness, Experience, and Motivation

	Age	Gender	Monthly Income	Education
Environmental Consciousness	0.500	0.423	0.918	0.501
Visitor Experience	0.164	0.572	0.618	0.961
Visitor Motivation	0.149	0.097	0.359	0.956

H1 – There is no significant relationship between visitors' demographic profile and their level of environmental consciousness, experience, and motivation.

Using one-way analysis of variance (ANOVA), the results indicate no significant difference between visitors' demographics and their level of environmental consciousness, experience, and motivation. This is evident as all the p-values in Table 5 are greater than 0.05. The findings suggest that visitors' demographic characteristics, such as age, gender, monthly income, and educational level, do not influence their level of environmental consciousness. This means that regardless of these demographic factors, visitors' awareness of environmental issues, their experiences, and motivations remain unchanged.

Satisfaction plays a critical role in a traveler's behavioral intention, particularly in terms of revisiting the garden and recommending it to others. A tourist attraction should not only be eco-friendly but also educational for visitors. Therefore, attributes of botanical gardens, such as landscapes, sceneries, and educational activities, should aim to provide visitors with a positive and memorable experience. According to Hadi (2017), the overall experience significantly impacts the satisfaction level of visitors.

The result the importance of creating a balanced environment where education, recreation, and relaxation coexist. BGs should aim to provide universally appealing experiences that combine environmental education, enjoyment of nature, and personal well-being. Ensuring that these attributes are consistently reinforced will not only enhance visitor satisfaction but also position BGs as leaders in environmental awareness and tourism in Cebu.

By continuing to focus on sustainability, visitor education, and creating memorable experiences, BGs can build a strong foundation for future growth and long-term success.

Table 7:

Relationship Between Visitor Stay, Environmental Consciousness, Experience, and Motivation.

	Length of Stay	Times of Visit	Willing to Revisit	Willing to Recommend	Entrance Fee	VEC Expectation
Environmental Consciousness	0.123	0.007*	0.178	0.076	0.982	0.006*
Visitor Experience	0.000*	0.328	0.000*	0.000*	0.079	0.139
Visitor Motivation	0.000*	0.041*	0.000*	0.000*	0.193	0.004*

H2 – There is no significant difference between visitor stay and environmental consciousness, experience, and motivation.

Table 7 reveals a significant difference between the frequency of visits to a botanical garden and the expectation of a Visitor Education Center (VEC) in relation to visitors' environmental consciousness (p=0.007; p=0.006). Post hoc analysis indicates that visitors who expect a VEC exhibit a significantly higher level of environmental consciousness compared to those who do not. This aligns with the findings of He & Chen (2012), who also observed a correlation between the presence of educational resources and heightened environmental awareness.

Additionally, the data indicates a significant relationship between the length of stay, visitors' willingness to revisit the garden, and their intention to recommend it. Specifically, visitors who spent more time in the garden reported a higher level of overall experience than those who stayed for less than an hour. This suggests that a longer duration of stay contributes to a deeper connection with nature and a more enriching experience. Furthermore, visitors who stayed longer were more motivated to learn about the garden and enjoy its natural scenery.

Moreover, the study found a notable difference in experience levels between visitors who expressed a willingness to revisit and recommend the garden versus those who did not. Consistent with He & Chen's (2012) study, visitors who engaged with the VECs reported significantly higher satisfaction levels during their visit. This finding suggests that the presence of a VEC can positively impact visitor satisfaction, making them more likely to return. In fact, 70% of the respondents expressed uncertainty about revisiting, highlighting that factors beyond the garden's intrinsic qualities are needed to encourage repeat visits.

Lastly, the study found that the garden's entrance fee did not significantly affect visitors' motivation levels. Instead, visitors who expected a VEC demonstrated a higher level

of motivation, reinforcing the importance of educational offerings in driving visitor engagement and motivation.

These findings indicate that BGs can enhance their appeal and effectiveness by prioritizing educational resources, such as VECs, and creating environments that encourage longer visits and deeper engagement with nature. By improving the visitor experience, focusing on education, and emphasizing the conservation and environmental awareness aspects of the garden, BGs can increase visitor satisfaction, loyalty, and motivation to recommend the site to others. Additionally, these efforts can contribute to a more informed and environmentally conscious visitor base, furthering the mission of botanical gardens as spaces for both recreation and education.

Conclusion And Recommendation

This study explored the environmental consciousness, experiences, and motivations of botanical garden visitors along the Transcentral Highway of Cebu, focusing on five major flower gardens. The findings reveal that visitors generally exhibit a high level of environmental consciousness, recognizing the importance of botanical gardens for biodiversity conservation and environmental education. The visitors' experiences are overwhelmingly positive, with many enjoying the tranquility, beauty, and educational opportunities provided by these gardens. Additionally, the study found that the majority of visitors are motivated by a desire to enjoy the natural scenery, relax, and escape daily routines.

Despite these positive experiences, the willingness of visitors to revisit the gardens is uncertain, with many respondents showing a strong inclination to recommend the gardens to others but remaining unsure about returning. A significant factor contributing to visitor satisfaction and motivation is the presence of Visitor Education Centers (VECs), which were found to enhance environmental consciousness and overall visitor satisfaction. Furthermore, the length of stay was correlated with a more meaningful visitor experience, with those who spent more time in the gardens reporting higher levels of satisfaction and motivation to learn about the place and its natural features.

Interestingly, socio-demographic factors such as age, gender, income, and education did not show a significant impact on environmental consciousness or visitor experience. This suggests that visitors from various demographic backgrounds share similar views on the importance of botanical gardens for environmental awareness, as well as the recreational and educational benefits they provide.

Recommendation

To be competitive and sustainable, botanic gardens should not only focus on being an attraction but must also offer activities that will instill value and change individual's attitude

towards nature. BGs need to refocus their concept towards becoming a real botanical garden, which should be a place for public education, ex-situ conservation, and scientific research. Having a visitor educational center is highly recommended.

Given the significant role that VECs play in enhancing environmental consciousness and visitor satisfaction, it is recommended that all botanical gardens along the Transcentral Highway consider establishing or improving VECs. These centers should focus on educating visitors about biodiversity conservation, plant species preservation, and environmental protection.

The findings indicate that visitors who stay longer in the gardens have a more positive and educational experience. Therefore, botanical gardens should create programs and activities that encourage longer stays, such as guided tours, educational workshops, and interactive exhibits that enhance visitors' connection with nature.

While many visitors are willing to recommend the gardens, a significant portion is uncertain about revisiting. To address this, the gardens should implement targeted marketing strategies that emphasize new or seasonal attractions, special events, or enhanced visitor experiences to encourage repeat visits. Although entrance fees were seen as expensive by many visitors, they did not significantly impact motivation. Nevertheless, to address potential concerns, the gardens could consider offering discounts or membership packages, especially for frequent visitors, and ensure that the value of the experience justifies the cost.

Considering that younger visitors, particularly from the Gen Z demographic, are active on social media, botanical gardens should develop an online presence that engages visitors before, during, and after their visit. Sharing educational content, showcasing scenic views, and promoting special events can increase both awareness and motivation to visit.

The gardens should continuously strive to enhance the overall visitor experience by maintaining cleanliness, providing helpful signage, and ensuring that staff are friendly and approachable. A positive experience is essential for visitor satisfaction and could lead to higher retention and recommendations.

With increasing awareness of environmental issues, botanical gardens should further align their operations with eco-tourism principles. This includes reducing their environmental footprint, promoting sustainable practices, and integrating conservation efforts into their tourism programs to appeal to environmentally conscious tourists.

By focusing on these recommendations, botanical gardens can improve their appeal, ensure a more meaningful visitor experience, and promote environmental consciousness, thus becoming a more integral part of Cebu’s eco-tourism sector.

Acknowledgment

The author extends heartfelt gratitude to Cebu Normal University for providing financial support for this study. Special appreciation is given to Dr. Jay Picardal, Director of the Research Institute of Tropical Biology and Pharmacology, for his invaluable guidance, unwavering support, and patience throughout this endeavor.

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