

Influence of Plant Attitude Towards Environmental Identity of Plant Lovers in Angeles City

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Abstract

The surge of COVID – 19 pandemics has given rise to numerous people to engage in planting. The researchers' aim is to find out the relationship of plant attitudes towards environmental identity. This study focuses on what factors influence a plant lover such as the demographic and gardening profile. To contextualize this, the study employed a quantitative-descriptive method. The participants were the Plant lovers in Angeles City. This comprised 51 Males, 116 Females and six (6) LGBTQ+ and a total of 173 respondents. The data were collected via online with the use of google form. The sampling techniques used are convenience sampling, specifically quota sampling. Major findings show that there is a significant relationship between plant attitude and environmental identity. When the plant attitude gets higher the environmental identity gets higher too.

Keywords: *plant lover, environmental identity, plant attitude, pandemic gardening*

Background of the Study

According to Whiteburn et al., (2018). Pro-environmental behaviors (PEBs) may be associated with a personal relationship with nature. In this the researchers tested whether exposure to nature and whether key psychological constructs would mediate these relationships. The structural equation mediation models revealed that the level of neighborhood vegetation and involvement in the planting scheme explained 46% of the variance in PEB, and it has connection to nature, the use of nature for psychological restoration, and environmental attitudes mediating the relationships. The connection to nature was more strongly associated with engagement in PEB than the use of nature for psychological restoration and environmental attitudes.

Gardening now and the history made us live and also as part of our daily activities and as the pandemic strikes the world where we are quarantined into our home, people think to have

physical activities that make ourselves lively. People bring back Gardening as an activity and the gardeners now in the Philippines are called them as plantitos and plantitas and share platforms in social media about gardening and environmental awareness.

According to Lumawag (2020), as people pick up new hobbies while they remain in self-quarantine due to the Covid-19 pandemic, interest in plant parenting and gardening is booming in various parts of the globe, most especially in the Philippines. Home gardening became a trend after the Philippine president declared a lockdown when COVID-19 outbreak started in the year 2020 in the month of March. According to Infante-Casella (2020), Gardening has always been touted as a relaxing recreational activity that can provide great personal rewards. During this time, when many people are working home and students are learning

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at home, gardening can be a positive family-inclusive activity to adopt.

Factors Influencing Gardening Attitude

Gardening has been shown to encourage people to undertake physical exercise, which in turn would contribute to improving both the physical and psychological health of gardeners (Soga et al. 2017). Gardening is an exercise for us because our body is always moving and it helps us to relax our mind and reduce stress.

The garden retail industry is influenced by socio-cultural drivers including consumer pro-environmental attitudes and behaviour (Horticultural Trades Association, 2017). Your surroundings influence you to take more care of your plants and to sell them, because you know it will be helpful not only to them but to us and also to our environment, especially the snake plant that helps us clean the air.

Children who experienced nature in parks reported feeling a greater connection to nature and claimed that the visit made them want to take better care of the local environment (Crawford et al., 2017). Because of having a greater feeling experience in nature, children are willing to take care of the environment which is good and important for the children to have a concern for the environment while they are young, for them to be responsible to their surroundings that can help to maintain the beauty of our environment.

Consumer awareness of production methods that aid pollinators also influence behavior toward ornamental plants (Rihn and Khachatryan, 2016). Having a concern for the pollinators like butterflies made you realize to take care more of your ornamental plants because you help the pollinators by giving them a plant to pollinate and it also helps you to clean the air on your surroundings.

Gardens are important locations to relax, find restoration from stress, engage with physical

activity and help restore a sense of balance in one's life (Tidball et al., 2019). Having more plants in your surroundings is helpful to us because plants give us fresh air that makes us relax.

School gardening increase their capability to identify vegetables and improve preference. And in addition, it will be increased willingness to perform gardening, cooking and outdoor activities (Leuven et al., 2018). Knowing vegetables is important especially on the characteristic on it how it grow what is the proper things to do when planting and more, so in this case if children's know vegetables and proper ways of caring it enhance the knowledge towards vegetables and also the willingness on doing something that related on school gardening.

Factors Influencing Environmental Health Awareness

Students should acquire an appropriate range of awareness, understanding, and concepts about the environment while they are in school, so that critical judgement can be achieved. Environmental education can help create positive awareness and attitudes about environmental issues (Bozuglu et al., 2016). Environmental education is very important because we need to become aware of our surroundings, especially into our environment to create a positive awareness and also to minimize environmental issues.

With socio-economic development, the growth of population and the improvement of people's demand for quality of life, human activities are sharply deteriorating the consumption of natural resources and environmental pollution. Thus, human behaviors have become the most important factor affecting the natural environment (Chen 2017.) Because of socio-economic development and human activities quality of life has been improved, human behavior such as knowing consumption of natural resources have factors affecting the environment and it will cause environmental awareness.

Humankind has long recognized that its existence depends on environmental status. However, consumer attitudes towards nature led to a strong conviction in the primacy of human beings in relation to the environment (Shorette et al., 2017). Seeing the environmental status reflects humankind if it is existing and attitude towards the environment creates relation to the environment.

Environmental health awareness and sustainable consumption by generations is highlighted. The impact of COVID-19 on environmental awareness, sustainable consumption, and social responsibility of generations, caused economic slowdown and negative effect of human beings and organizations on the environment (Severo et al., 2021). Environmental health awareness and consumption show up as causes of negative impact in our environment and because of the pandemic COVID-19 our economy is slowly taking down, limited supply of goods, expensive items and it causes negative effects into our environment.

Social Networking Sites (SNSs) have been used to foster environmental behavior, to provide new sign petitions, and to create more environmental health awareness and motivations. Environmental awareness equips individuals with the knowledge of the environment and the challenges it faces (Okuah et al., 2019). Since we are in the 20th century, surrounded by technology SNSs help a lot to make people become aware of environmental health, then also SNSs is worldwide it can be easy to spread news and awareness thru SNSs platforms like Facebook, Youtube, Instagram etc.

Factors Influencing Environmental Identity

Accordingly, what people think is important to (i.e., perceived group values) and how they characterize (i.e., environmental group identity) their group may influence their beliefs and behavior. (Jans et al., 2018). Because of people's beliefs and behavior, they can influence people from what they are doing, so in that case other

people will influence and want to do also what they are seeing.

Identification with a group of people who possess similar worldviews and/or political affiliations has been found in certain contexts to significantly influence one's environmental attitudes and behaviours, prompting group members to act in more or less pro-environmental ways (Fielding & Hornsey, 2016). They found people who have the same world views to influence them to their behaviors and attitude to act more caring for the environment.

Beyond providing information, education could also encourage a stable sense of oneself as connected to the natural world, or environmental identity (EID), which is a predictor of environmental concern and behavior. (Prevot, A-C., Clayton, S., And Mathevet, R., 2016). Education is the most powerful way to influence people, also to deepen their concern and behavior toward the environment.

Influence of Gardening Attitude Towards Environmental Health

Higher well-being scores were associated with the cultivation of vegetables over ornamentals, and attributed this to a strong sense of purpose linked to growing one's own food (Chalmin Pui et al., 2020). Being higher well-being has an effect on a positive attitude and creates a motivation in growing one's own vegetation that has attributes in lessening the inflation of food consumption that has effects on both economic and environment.

Other factors include pleasure, the promotion of social change (e.g. pro-environmental behaviour) and access to fresh and affordable food. With the exception of providing resources and habitat for wildlife (Salisbury et al., 2017). As we engage in the environment by cultivating or gardening we also do an engagement to the environment habitat for the wildlife and also help us to have other resources for foods.

Increasing the proportion of greenery in a garden can boost the positive well-being effects and in addition to increasing the area of vegetation, diversity may also be important. Enhancing the number of plant taxa present has been linked to stronger restorative effects (Young et al., 2020). Through gardening it boosts our attitude to positive well being effects as it is positively interconnected in the increasing vegetation that has a restorative effect on the environment.

People were not gardening to specifically protect their health from e.g. the impacts of flooding, excess heat or poor air quality (Chalmin-Pui et al., 2019). As people act to be conscious of their health it also influences their attitude of consciousness that gardening may lessen the poor environmental health impacts.

Organic community vegetable gardens can induce significant, positive behavioural changes among its users. In particular this research suggests horticulture is associated with positive improvements in personal environmental behaviours, awareness of the environment's high social priority and increased consumption of organic food, fruit and vegetables (Nova et al., 2020). Gardens have created positive behavioral changes towards their attitude and as a result of this positive improvement it increases the environmental health awareness by planting fruits and vegetables as our alternative resource of food.

This study will describe the relationship of Plant Attitude towards the Environmental Identity of selected Plant Lovers in Angeles City. Specifically, this research will answer the following questions:

1. What is the level of the Plant Attitude of the respondents?
2. What is the level of the Environmental Identity of the respondents?
3. How does plant attitude influence the environmental identity of plant lovers?
4. What is the implication of the result of the study in teaching environmental health

Conceptual Framework

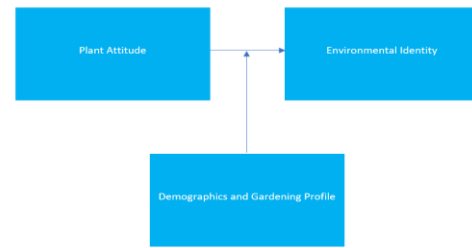


Figure 1 shows how attitudes influence environmental identity. In this study, the Plant attitude was used as an independent variable that will influence the environmental identity of plant lovers on the environment. Environmental Identity was used as a dependent variable of the study. The role of the demographic and gardening profile is to provide facts about gardening experience and motivation. The demographic will classify information about the age, gender and who influences them and so on. Inline with the general goal, this study also aims to show how attitude plays a significant role in influencing plant lovers to be aware of the environment.

The following hypotheses will be answered:

1. There is no significant relationship between Plant Attitude and Environmental Identity of the Plant Lovers in Angeles City.
2. Demographic profile and Planting History has no direct effect on the relationship between the level of Plant attitude and level of Environmental Identity of the Plant lovers in Angeles City.

Methodology

The study will utilize Quantitative - Descriptive research. Quantitative research is the process of collecting and analyzing numerical data (Bhandari, 2021). Descriptive research is a quantitative research method that is considered conclusive and is used to test specific hypotheses and describe characteristics or functions (Fluet, 2021). The data will be collected through an online survey through

Facebook and Messenger. Online survey refers to the emerging data collection approach based on internet/e-based technologies (Regmi et al.). The researchers use Convenience sampling, specifically Quota sampling. The Quota sampling method is a non-probability sampling technique where the researcher generates a sample involving specific qualities and traits. The respondents of the study will be selected based on the following criteria:

- Must be residents of Angeles City
- Must have plants and have been gardening for the past six months
- Must be 18 years old above
- Any gender or sexual orientation

Instrumentation

For this study, the researchers will be using a three (3) part questionnaire. Part I deals with the demographic profile and history such as Name, Age, Gender as well as the planting history. All items in this part are identified by the researchers based on existing literature reviews. Part II is an adapted questionnaire from Development and Initial Psychometric Assessment of the Plant Attitude Questionnaire. Based on literature, the Cronbach Alpha of Plant Attitude Scale (PAS) is a total of 0.83. Part III is an adapted questionnaire from Cross-Cultural Validation of A Revised Environmental Identity Scale . Based on literature, the Cronbach Alpha of Environmental Identity Scale (EID)is 0.92.

To get all the information needed in this study, the researcher uses 3 questionnaires one (1) is for the demographics and gardening profile of the respondents that includes the name (optional), Age, and Gardening profile. All information that's necessary to know the background of the respondents. The part two (2) questionnaire is an adapted questionnaire from Development and Initial Psychometric Assessment of the Plant Attitude Questionnaire by Fančovičová, J., & Prokop, P. intended to know their planting attitude. The third (3) questionnaire is also an adapted questionnaire from Cross-Cultural Validation of A

Revised Environmental Identity Scale by Clayton, S et al., intended to know about their environmental identity. The part two (2) and (3) questionnaires Cronbach Alpha is reliable.

To ensure validity and reliability of the data gathering tool to be used, (1) face, (3) content, and (2) expert validation will be secured. For Face Validity, member checking was conducted. Face Validity is the extent to which a test appears to measure what is intended to measure (Johnson, 2013). For Content Validity, the researchers secured an approval from the CCA College Guidance and Formation Office. Content Validity refers to the degree to which an assessment instrument is relevant to, and representative of, the targeted construct it is designed to measure (Rusticus, 2014) . And for Expert Validity, the researchers asked for professional advice from faculty handling the subject matter. Expert Validity refers to using “experts” as a panel and can examine the item and decide what specific is intended to measure (Phelan & Wren, 2006).

This study uses three (3) data gathering tools such as (1) face, (2) content, and (3) expert validation as these tools use to ensure validity and reliability of the study. Ensuring the face validity will likely lead to higher perceptions of fairness and more favorable perceptions towards the organization (Simpson, 2018). And, the content validation to ensure the content is appropriate by the validation of the CCA College Guidance and Information office. While in expert, it is to ensure the reliability of all the items.

As the researchers conduct the pilot testing to improve the validity and reliability of the data gathering tool to be used, the researchers pilot the adapted questionnaire. Pilot Testing is a rehearsal of the research study, allowing it to test the research approach with a small number of test participants before conducting the main study (Wright, 2021). For this part, the target pilot testing will require 10 individuals. To facilitate this, the researcher followed this protocol such as first Seek a verbal

consent to target individuals, indicating the objectives of the study and the respondents expected contribution, risks, and benefits. As the participants approved the letter consent researcher will ask for a preferred method of gathering data either via online or face to face, provided minimum health protocols will be observed. Second researchers provide a sample questionnaire as for the respondents to know what questions indicate in the survey. And then the researcher scheduled the date of pilot testing. Lastly, conducting the pilot testing based on agreed conditions.

The individuals were selected based on the similar characteristics of the target respondents of the study. The data gathering tool was tested on its understandability as well as the time it will take to finish the whole data gathering protocol. Items were adjusted based on the result of the pilot testing.

Sampling and Data Gathering

As for the sampling and data gathering the researcher uses the Quota sampling technique to be utilized for this research study. The target sample size for this study is 200 respondents. To recruit the respondents in this study, the researcher followed the following protocol, first we seek verbal consent to the Plants lover for approval conducting a survey. It can be via a written formal letter of request that indicates the objectives of the study and the respondents expected contribution, risks, and benefits. The researcher secures a list of names and contact information of the respondents if possible. Then researchers contact potential respondents and properly explain objectives of the study and the respondents expected contribution, risks, and benefits and ask for both verbal and written consents to conduct surveys of the respondents. The researchers ask the respondents for a preferred method of gathering data either via online or face to face, provided minimum health protocols will be observed. Then the researcher schedules data gathering at their convenience. Lastly, conduct data gathering based on agreed conditions. Below is the

summary of information based from the demographic and gardening history of the respondents.

Table 1. Demographic Profile of Plant Lovers

Profile	Frequency (n)	Percentage
Age		
<i>20 and below</i>	62	35.8
<i>21-29</i>	90	52.0
<i>30 and above</i>	21	12.1
Gender		
<i>Male</i>	51	29.5
<i>Female</i>	116	67.1
<i>LGBTQ+</i>	6	3.5

In demographic profile of plant lovers table, that consist of the demographic and gardening profile shows that in total of 173 respondents, the results show the highest age with 52.0% or 90 respondents age is ranging from 21-29 years old while 12.1% or 21 respondents age is ranging from 30 and above for the lowest age.

Table 2. Gardening/Planting History of Plant Lovers

Profile	Frequency (n)	Percentage
Age when they realized they are plant lovers		
<i>5-10</i>	32	18.5
<i>11-15</i>	42	24.3
<i>16-20</i>	80	46.2
<i>21 and above</i>	19	11.0
Year they started being plant enthusiast		
<i>2015 and below</i>	61	35.3
<i>2016-2017</i>	16	9.2
<i>2018-2019</i>	30	17.3
<i>2020-present</i>	66	38.2
Influenced by		
<i>Personal choice</i>	94	54.3
<i>Family member</i>	63	35.0
<i>Friend</i>	10	5.6
<i>Others</i>	6	3.3
Reason for collecting plants		
<i>Hobby</i>	123	71.1

<i>Therapy</i>	35	20.2
<i>Business</i>	4	2.3
<i>Others</i>	11	6.4
Type of plants owned		
<i>Ornamental</i>	115	66.5
<i>Vegetation</i>	34	19.7
<i>Fruit bearing</i>	15	8.7
<i>Others</i>	9	5.2
Do they buy plants from growers		
<i>Yes</i>	102	59.0
<i>No</i>	71	41.0
Do they cultivate or grow their own plants		
<i>Yes</i>	157	90.8
<i>No</i>	16	9.2

In the gardening/planting history of plant lovers table it revealed that the highest total is 116 respondents or 67.1% are females and six (6) respondents or 3.5% are LGBTQ+ for the lowest. As shown in the 3rd row are the results at what age they realized they are plant lovers. It shows that 80 respondents or 46.2% age is ranging 16-20 years old for the highest and 19 respondents or 11.0% age is ranging from 21 and above for the lowest. In the 4th row is the Year they started being a plant enthusiast. As shown in the table the highest is with 66 respondents or 38.2% started at the year 2020-Present and 16 respondents or 9.2% started at the year 2016-2017 for the lowest.

Most of the respondents are influenced by their personal choice with 94 respondents or 54.3% and the lowest with six (6) respondents or 3.3% are influenced by others. The most reasons for collecting plants are hobby with 123 respondents or 71.1 and the lowest is with four (4) respondents or 2.3% the reasons are for business. Most of the Type of plant they owned is ornamental with 115 respondents or 66.5 and nine (9) respondents or 5.2% is the lowest for others. The highest response answered Yes that they buy plants from growers with 102 respondents or 59.0% and No for the lowest with 71 respondents or 41.0%. And, the highest response answered Yes that they cultivate

or grow their own plants with 157 respondents or 90.8% while No with 16 respondents or 9.2%.

Data Analysis

In order to come up with reliable results after reaching the target quota, the following quantitative data analysis procedures will be implemented:

- Descriptive – to illustrate the frequency, percentage, and mean of factual data from the respondents’ answers. Descriptive are brief descriptive coefficients that summarize a given data set, which can be either a representation of the entire or a sample of a population (Hayes, 2021).
- Inferential – to measure the relationship/influence/significance between Gardening Attitude (GA) and Environmental Identity (EID). Inferential, are often used to compare the differences between the treatment groups (Kuhar, 2010). This study used Chi-Square as their statistical tool. Chi-Square statistics is commonly used for testing the relationships between categorical variables (Dsouza, J et al., 2021). In order to determine the relationship of the two (2) variables the chi-square is used to test the correlation of the variables.

Results and Discussion

After data gathering, raw data were quantitatively analyzed and gave rise to the following result:

Table 3. Level of Plant Attitude

Level	Frequency (n)	Percentage
Negative	11	6.4
Neutral	69	39.9
Positive	93	53.8

Based on the level of plant attitude table, it revealed that in total of 173 respondents of Plant Lovers, 93 of this (53.8%) showed that the level of Attitude of the Plant Lovers scored positive while

11 respondents (6.9%) scored Negative. People had a generally good attitude regarding planting. This suggests that engaging in the behavior was linked to beneficial outcomes (Meijer, Catacutan, Sileshi, & Nieuwenhuis, 2015). And, The individuals' emotional condition is positive, with a large number expressing good emotions. Planting was linked to more good moods, and residents set aside more time for plant maintenance (Pérez-Urrestarazu, Kaltsidi, Nektarios, Markakis, Loges, Perini, & Fernández-Cañero, 2021).

Table 4. Level of Environmental Identity

Level	Frequency (n)	Percentage
Negative	9	5.2
Neutral	36	20.8
Positive	128	74.0

Based on the Level of Environmental Identity table, it revealed that in total of 173 respondents of Plant Lovers, 128 of this (74.0%) showed that the Level of Environmental Identity of Plant lovers scored Positive while nine (9) respondents (5.2%) scored Negative.

Results show that environmental identity, as measured by the EID, significantly predicts ecological gardening behavior. Additional analyses show that respondents' reasons to have a garden are linked to the strength of both EID and EGID (Environmental Gardening Identity scale) especially for those respondents who garden as a way to connect with nature (Kiesling F. et al 2010).

Table 5a. Plant Attitude vis-à-vis Demographic Profile and Planting History

Profile	Plant Attitude Level			Total	Mean
	Negative	Neutral	Positive		
Age					
<i>Below 20</i>	3	24	35	62	4.04
<i>21-29</i>	7	40	44	91	3.85
<i>Above 30</i>	1	5	14	20	4.16
<i>Total</i>	11	69	93	173	
Gender					
<i>Male</i>	3	17	31	51	4.12
<i>Female</i>	7	48	61	116	3.89
<i>LGBTQ+</i>	1	4	1	6	3.90
<i>Total</i>	11	69	93	173	
Influencer					

<i>Personal</i>	5	35	54	94	3.98
<i>Family</i>	5	29	29	63	3.86
<i>Friends</i>	0	3	7	10	4.30
<i>Others</i>	1	2	3	6	3.90
<i>Total</i>	11	69	93	173	
Reason for Collecting Plants					
<i>Hobby</i>	8	41	74	123	4.02
<i>Therapy</i>	2	17	16	35	3.98
<i>Business</i>	1	1	2	4	4.18
<i>Others</i>	0	10	1	11	4.15
<i>Total</i>	11	69	93	173	
Type of Plants Owned					
<i>Ornamental</i>	10	45	60	115	3.91
<i>Vegetation</i>	1	16	17	34	3.95
<i>Fruitbearing</i>	0	5	10	15	4.20
<i>Others</i>	0	3	6	9	4.12
<i>Total</i>	11	69	93	173	

In planting attitude vis a vis demographic profile and planting history table, it shows that the highest mean score under planting attitude age above 30 is 4.16 which the level of their planting attitude is positive. As shown, those who are age ranging from 30 and above tend to have a higher level of planting attitude that results in a positive level. Studies have demonstrated that gardening as a leisure pursuit may maintain or promote an older adult's psychosocial and physical functioning and therefore enhance their quality of life (Scott et al. 2020).

While the highest mean score under gender is the male with 4.12 which the level of their planting attitude is positive. Shows that male in terms of planting attitude tend to have a higher level that results in a positive level. This also supports that, Males have a higher level of Pro Environmental behavior than females, based on the current findings. The changing roles of men and women may explain why males exhibit more pro environmental behavior than females (Patel, Modi, & Paul, 2017).

In the influencer the highest mean is the friends with 4.30 which the level of their planting attitude is positive. It reveals that friends contribute a higher planting attitude that leads to a positive level. Everyone in the world listens to their friends

before going to listen to an influencer to make a decision, at least most of them (Godwin, 2018).

The reasons for collecting plants the highest mean is the business with 4.18 which the level of their planting attitude is positive. The business sectors, explicitly the global business sectors for therapeutic plants, have consistently been extremely enormous (Furqan et al. 2021).

On their type of plants the highest mean is the fruit bearing with 4.20 which the level of planting attitude is positive. The more students know about fruits and vegetables from gardening, the more positive their outlook tends to be and can impact their desire to learn and keep positive attitudes. (Lautenschlager & Smith, 2008).

Table 5b. Environmental Identity vis-à-vis Demographic Profile and Gardening History

Profile	Environmental Identity Level				Total	Mean
	Negative	Neutral	Positive	Total		
Age						
<i>Below 20</i>	3	8	51	62	4.33	
<i>21-29</i>	5	24	62	91	4.01	
<i>Above 30</i>	1	4	15	20	4.28	
<i>Total</i>	11	69	93	173		
Gender						
<i>Male</i>	3	12	36	51	4.38	
<i>Female</i>	5	24	87	116	4.07	
<i>LGBTQ+</i>	1	0	5	6	3.67	
<i>Total</i>	11	69	93	173		
Influencer						
<i>Personal</i>	4	14	76	94	4.21	
<i>Family</i>	4	17	42	63	4.07	
<i>Friends</i>	0	2	8	10	4.24	
<i>Others</i>	1	3	2	6	3.67	
<i>Total</i>	11	69	93	173		
Reason for Collecting Plants						
<i>Hobby</i>	6	21	96	123	4.17	
<i>Therapy</i>	2	10	23	35	4.12	
<i>Business</i>	1	1	2	4	4.07	
<i>Others</i>	0	4	7	11	3.97	
<i>Total</i>	11	69	93	173		
Type of Plants Owned						
<i>Ornamental</i>	8	21	86	115	4.11	
<i>Vegetation</i>	0	9	25	34	4.10	
<i>Fruit-bearing</i>	0	4	11	15	4.22	

<i>Others</i>	1	2	6	9	3.97
<i>Total</i>	11	69	93	173	

In environmental identity vis a vis demographic profile and gardening history table, it shows that the highest mean score under environmental identity age below 20 is 4.33 which the level of their environmental identity is positive. Early life experiences can lay the groundwork for a lifetime of environmental stewardship and exposure to nature and parental eco-friendly behaviors. (Hahn, E. 2021).

While the highest mean score under gender is the male with 4.38 which the level of their environmental identity is positive. Males had higher environmental-identity salience than females, and a salient environment identity was only weakly associated with environmentally responsive behavior (Stets, J. E., & Biga, C. F. 2003).

In the influencer the highest mean is the friends with 4.24 which the level of their environmental identity is positive. Recent studies on Environmental Identity confirm the connection between EID and empathy between people (Clayton, Nartova-Bochaver, & Irkhin, 2019).

The reasons for collecting plants the highest mean is the hobby with 4.17 which the level of their environmental identity is positive. Identity particularly important for devotee gardeners. The deeper the level of engagement, the more gardening was perceived as contributing to overall life satisfaction. gardening could be a serious leisure pursuit that assists in the development of a positive leisure identity and contributes to a more mobile and active life (Cheng, E. Stebbins, R. et al., 2017).

On their type of plants owned the highest mean is the fruit bearing with 4.22 which the level of environmental identity is positive. The importance of the fruits was pointed out by all the leaders. They consider that the consumption of available food and food that is part of the quilombola food culture is

important to avoid hunger, to increase health, to the improvement of the quality of life, increase of income, reduction of consumption of pesticides, appreciation of culture and environmental preservation (Borges et al. 2021).

Table 6a. Chi square Test Between Plant Attitude Level and Demographic Profile and Gardening History

Profile	X2	df	Phi	Cramer's V	p
Age	3.608	4	.144	.102	.462
Gender	4.766	4	.166	.117	.312
Influencer	1.233	2	.084	.084	.540
Reason for Collecting	17.754	6	.320	.227	.007
Type of Plants Owned	4.739	6	.166	.117	.578

In table 6a, the table shows the chi-square test between Plant Attitude level and Demographic Profile and Gardening history. Only **Reason for Collecting Plants has a significant association with Plant Attitude Level**, which means those who collect because it is their hobby tend to have a higher plant attitude level. As shown in the table only the reason for collecting has association with the plant attitude and demographics profile and gardening history with the *p* value equals to .007. This includes the efforts to support the students who like to grow plants and take care of them which in turn will educate them to have the discipline, caring, and responsible character (Situmorang & Tarigan, 2018).

Table 6b. Chi Square Test Between Environmental Identity Level and Demographic Profile and Gardening History

Profile	X2	df	Phi	Cramer's V	p
Age	4.253	4	.157	.111	.373
Gender	3.336	4	.139	.098	.503
Influencer	9.997	6	.240	.170	.125
Reason for Collecting	7.848	6	.213	.151	.249

Type of Plants Owned	5.049	6	.171	.121	.538
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In table 6b, the table shows the chi-square test between Environmental Identity Level and Demographic Profile and Gardening History. The **demographic profile and planting history has no significant association with environmental identity, which means these variables have nothing to do with one another**. Moreso, Environmental identity can have a significant impact by guiding personal, social and political behavior (Clayton, 2003).

Table 6c. Correlation Between Plant Attitude and Environmental Identity

	Environmental identity	
Plant Attitude	r	p
	.671	<.001

For Correlation between Plant attitude and Environmental identity table, **there is a significant relationship between plant attitude and environmental identity**, which means as the plant attitude gets higher, environmental identity gets higher too. The correlation coefficient (*r*) is a numerical measure that measures the strength and direction of a linear relationship between two quantitative variables (Nazzaro, V. et al., 2021) As shown in the table the *r* scored .671 which means strong positive correlation. The *P*-value is the area under the density curve of this chi-square distribution to the right of the value of the test statistic (Moore, D. et al., 2013) moreso, the *p* value scored <.001 which shows strong correlation. Individuals who are more connected to nature tend to have greater eudaimonic well-being, and in particular have higher levels of self-reported personal growth (Alison, P. et al., 2019).

Implications

Based from the results of the study, the researchers would like to emphasize the following

propositions within the areas of teaching environmental health and awareness:

1. Enhancement of the current college curriculum addressing environmental health as a component of holistic development of students specifically on Environmental Science and Science, Technology, and Society.
2. Integration of planting or gardening within the scopes of basic education to facilitate early engagement in environmental awareness.
3. Environmental health and awareness can be integrated on the National Service Training Program under the Civic Welfare Training Service to foster community development.
4. Planting initiatives and the physical demands of gardening can be integrated as a major component of physical education and health under the Music, Arts, Physical Education, and Health curricula.

Limitations

Since the research is conducted within the time of pandemic, several restrictions were noted. These are as follows:

1. Scheduling of available time, as well as conflicts on other academic requirements made it difficult on the part of the researchers.
2. There are a limited number of available respondents taking part in the study primarily because of time, priority, and willingness.
3. Since the researchers are working and coordinating at their respective homes, internet connection is limited.
4. Limited literature sources addressing the study since the majority of the articles were published before 2015, while the new articles are to be accessed once purchased.
5. Not all plant lovers are on the social media used to recruit respondents.

Summary

Based on gathered data, the general outcome in this study are as follows:

1. Majority of the respondents are aged between 21 to 29 and females.
2. Majority of the respondents realized that they are plant lovers aged between 16 to 20. The year they started being a plant enthusiast majority are from 2020 to present. Majority of the respondents are influenced by their personal choice. Majority of the reasons for collecting plants are hobbies. The type of plant owned majority is an ornamental. Majority of the plant lovers buy from growers and majority they cultivate or grow their own plant.
3. Majority of the respondents' level of plant attitude is positive. Older plant lovers have a higher PA. Males scored higher in terms of PA. Having influenced by friends resulted in higher PA scores. Reasons for collecting as a business are higher in PA scores. And, plant lovers who collect fruit bearing plants resulted in higher PA scores.
4. Majority of the respondents' level of environmental identity is positive. Younger ones are higher in environmental identity. Males also scored higher in EID scores. Having influenced by friends resulted also in higher EID scores. Those who collect because of hobby are higher in EID and Plant lovers who collect fruit bearing results are higher in EID.
5. There is a significant relationship between plant attitude and environmental identity. Moreso, reason for collecting, specifically planting or gardening as a hobby, found to have a significant association with plant attitude. On the other hand, demographic profile and planting history has no significant association with environmental identity.

Recommendations

From the results acquired we recommend the following for better understanding and appreciation of the research:

1. The use of qualitative methods for better and in depth data would be obtained such as the

respondents' engagements and narratives in planting and gardening.

2. Formulate another tool for data gathering in order to collect more information that may help the variables such as time consumed during planting and gardening, background knowledge, perceived benefits, etc.
3. The physical activity and mental health component of planting and gardening can be elaborately studied by incorporating other variables.
4. It is also recommended that a larger sample size may be used such as to include other places so that the sample will be more reliable.

The following lists recommend to stakeholders on how to find appropriate studies that may be helpful to their field:

1. To the future researchers, that they may conduct and replicate the study or may use it as a reference in the future to further validate the results.
2. As mentioned in the implications of this study, school administrators and curriculum developers can integrate planting and gardening in the academic setting by infusing pedagogical strategies which eventually can result in higher levels of plant attitude and environmental identity leading to environmental health awareness.

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