

# Green Behavior of Hotel Employees in Olongapo City: Basis for Sustainability Implementation

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**Abstract:** *To encourage environmentally friendly behaviors, organizations are increasingly implementing green behavior management and policies. And hotel employees also play a significant role in further enhancing and encouraging eco-friendly behaviors and practices to be implemented within the workplace. This study was a quantitative research design that aimed to determine the level of green behavior awareness among hotel employees as the basis for environmental sustainability implementation. The study has shown that hotel employees have a high level of green behavior awareness, which was determined using the five green taxonomies: working sustainably, avoiding harm, conserving, influencing others, and taking initiative. Thus, the study revealed that the level of awareness of employees' green behavior is statistically not different when grouped according to their demographic profile: age, sex, educational attainment, job title, and years of service. Based on the result of the study, the researchers recommend that the hotel sector understand effective methods to enhance green environmental behavior that are applicable to all employees regardless of their age, sex, educational attainment, job title, and years of service, and to utilize an action plan with regards to motivating employees to perform day-to-day business operations in eco-friendly ways without compromising quality and efficiency of the environment or resources of the hotel accommodations.*

**Keywords:** green behavior awareness, working sustainably, avoiding harm, conserving, influencing others, taking initiative, environmental sustainability, green practices

## Introduction

Environmental sustainability has grown in importance over the years, with advocates advocating for more environmentally friendly operations and activities. The tourism industry has been facing various natural disasters that were caused by environmental pollution and climate change, which result in environmental deterioration. The deterioration of the environment has become a threat to human lives (Mumtaz et al., 2022), and as a result, protecting biodiversity and fostering green practices and sustainable environmental management have become one of the top priorities of world leaders (Auwalet et al., 2020), as well as a means of increasing the level of green behavior awareness among hospitality employees (Mi et al., 2020). There is also a growing need to understand what leaders can do to enable successful green management practices within the hospitality sector in order to enhance employees' green behavior awareness and mitigate environmental problems as well as enhance sustainability implementations. The hotel industry then started to promote green practices as part of their operations and management practices to improve the green behavior awareness of their employees (Kim et al., 2020). Green behavior includes the positive attitudes towards sustainability that are being embraced by those who are concerned about the environment and the intention to adopt innovative green practices, and this is realized by the possession of their caring attribute or their level of green behavior awareness.

The Employees' green behavior refers to a range of actions taken by staff members with the goal of minimizing environmental harm and promoting environmental sustainability. Employee green behavior has also directly benefited both the firm and the environment, which has become one of the typical goals for businesses and people (Green, 2020). According to Peng et al. (2019), the success of a hotel's environmental protection effort is directly impacted by employee behavior, which is also essential to promoting sustainable business growth. The pressure of environmental protection promotion encourages businesses to embrace green behavior as much as possible in certain organizational work processes. Employee green behavior may also assist employees in achieving task rewards and improving job satisfaction (Manag, 2019), which has a positive impact on employees' professional, physical, and mental health development in addition to meeting the needs of work tasks for environmental protection goals and positively influencing the enhancement of environmental sustainability implementations.

The green five taxonomy was used to determine the different levels of green behavior awareness among employees in the hospitality industry in order to gain a better understanding of what constitutes essential environmental behavior. And according to Iqbal et al. (2018), there is a direct positive relationship between the five dimensions of Employee Green Behavior and Environmental Sustainability. This taxonomy of employee green behaviors was classified into psychologically meaningful and functionally similar categories. Wherein the apex of this hierarchy of employee green behaviors is "general green performance." The Green Five

Taxonomy is also categorized by five major behavioral categories: (1) Working Sustainably, (2) Avoiding Harm, (3) Conserving, (4) Influencing Others, (5) Taking Initiative.

### **Working Sustainably**

This includes the product and process of sustainable work—the awareness of the product that will be made based on the work that needs to be sustained. This will also contribute to increased environmental awareness, reduced material waste, and the ability to foster an environment conducive to long-term sustainable change (Thomas & Mollenkamp, 2022). Behaviors aimed at adapting and changing to be more sustainable include innovating new green solutions and choosing sustainably responsible alternatives.

### **Avoiding Harm**

First, pollution prevention has previously been described as requiring employees to demonstrate frugality, thrift, and adaptability as well as the inhibition of negative environmental behaviors. The second is monitoring environmental effects, which aids in identifying threats to people and wildlife and also aims to limit gas emissions. Third, strengthening the ecosystem improves its ability to protect nature. Awareness shows that the Golden Rule for the environment must be prevention. The loss of species of plants or animals, erosion, or even the release of long-lasting toxins into the ocean produce situations that are often impossible to change (Palmer, 2019).

### **Conserving**

Behaviors aimed at avoiding waste and preserving resources include the "3 Rs plus one"; reducing use, reusing, repurposing, and recycling (Munoz et al., 2019). maintaining the environment for future generations, and maintaining species diversity for the environment and that of wildlife. The goal of environmental conservation is to prevent environmental collapse brought on by human mistakes and pollution. This strategy aids in the preservation of biodiversity, which is essential in human lives.

### **Influencing Others**

Influencing others to be more environmentally friendly and responsible requires both educating and training for sustainability and encouraging and supporting environmentally sustainable behaviors. It will need an effective instrument to communicate a story in order to inspire people to take action and save the environment as a whole (Rahman et al., 2017).

### **Taking Initiative**

Taking initiative can be considered an instrumental behavior, it describes how employees go about initiating and promoting environmentally relevant behaviors. Taking initiative at work in a variety of ways can also increase the value of an employee and broaden their skill set, including leadership responsibilities, supporting teammates, and coming up with suggestions to make the business exceed (Miles, 2022). The initiatives of sustainability are to change a firm's business procedures to lessen its adverse effects on the environment. A change indicates the hotel's care for safeguarding the current environment for future generations to distinguish the features of this endeavour.

The Green Five model is a taxonomy for understanding the many kinds of environmental behaviors people perform in their lives—at work, at home, and in the community. With this taxonomy, hotel accommodations could foster and eventually change employees' attitudes and behaviors so that such behavior is in line with the green goals of the organization.

This study provides an overview of employee green behavior for the environmental sustainability of Olongapo City's hotel. As one of the fastest-growing industries, integrating environmental measures and promoting green employee behavior with the intention of addressing the aforementioned concerns is fundamental. According to Ones et al. (2018), many organizations now include environmental sustainability goals in their strategies. The environmental sustainability of the hospitality industry can be viewed as the core of sustainability because organizations cannot achieve their environmental sustainability goals unless employees at various hierarchical levels perform. Employee green behavior spans several established first-order dimensions that represent the latent structure of work performance (Ciocirlan, 2017). Employee green behavior, on the other hand, can be discretionary in environmentally beneficial or harmful ways or require exceptionally high levels of adaptability, initiative, or creativity by acting proactively, such as by voicing suggestions, to make the organization more environmentally sustainable (Yuriev et al., 2021). As a result, it could be used as a foundation for strengthening the hotel industry's sustainability implementation.

This study, entitled "Green Behavior of Hotel Employees in Olongapo City: Basis for Sustainability Implementation," aims to assess the green behavior of hotel employees in Olongapo City using the five green taxonomies of Ones and Dilchert in order to enhance sustainability implementation.

This study aims to distinguish the levels of Green Behavior Awareness among the employees in Olongapo City using the Five Green Taxonomy that was developed by Ones and Dilchert. Specifically, the researchers aimed to answer the following research questions:

1. What is the demographic profile of the respondents in terms of:
  - 1.1. age;
  - 1.2. sex;
  - 1.3. educational attainment;
  - 1.4. job title; and
  - 1.5. years in service?
2. What is the level of awareness of the employees in green behavior be described in terms of:
  - 2.1. employees' working sustainability;
  - 2.2. practices in avoiding harm;
  - 2.3. conserving resources;
  - 2.4. how they influence others; and
  - 2.5. taking initiatives?
3. Is there a significant difference in the level of awareness of the employees in green behavior when grouped according to demographic profile?
4. Based on the result of the study, what are the enhancement strategies to be proposed to improve the green behavior awareness and practices of the employees?

### **Conceptual Framework**

This study aims to provide an overview of green behavior, particularly in and around Olongapo hotels. The researchers collect the information of the target respondents, including their age, sex, educational attainment, job title, and years of service. In order to proceed to the next stage of the research study, which is the data gathering, this includes disseminating survey questionnaires and conducting data analysis. "Employee Green Behavior (EGB) is an environmentally friendly practice in the workplace that serves as a foundation for achieving an enhancement action plan. This paper aims at presenting reviews of the literature on employee green behavior trends and their importance. A literature search in different scientific databases was employed to identify studies that examine green behavior. The review will give a holistic understanding of the concept of "green behavior" for future researchers and aid in identifying the research gap (Razali et al., 2022).

The Input-Process-Output (IPO) model of research was utilized by the researchers to collect significant data since it offers a framework for conceptualizing the respondents.

According to Canonizado (2021), in order to illustrate the conceptual framework of educational research, most researchers adopted the Input-Process-Output (IPO) model of study. The IPO model is a synthesis of numerous articles that explain the steps involved. This instructs the researcher in formulating the succession of actions necessary throughout the period of the specified educational research. It takes into account the opinions, observations, and conclusions of other researchers on the subject of their educational research in promoting habitability, minimizing behavioral barriers, and encouraging green behavior. This study gives direction and helps the researchers organize ideas and clarify concepts based on the results of the study.

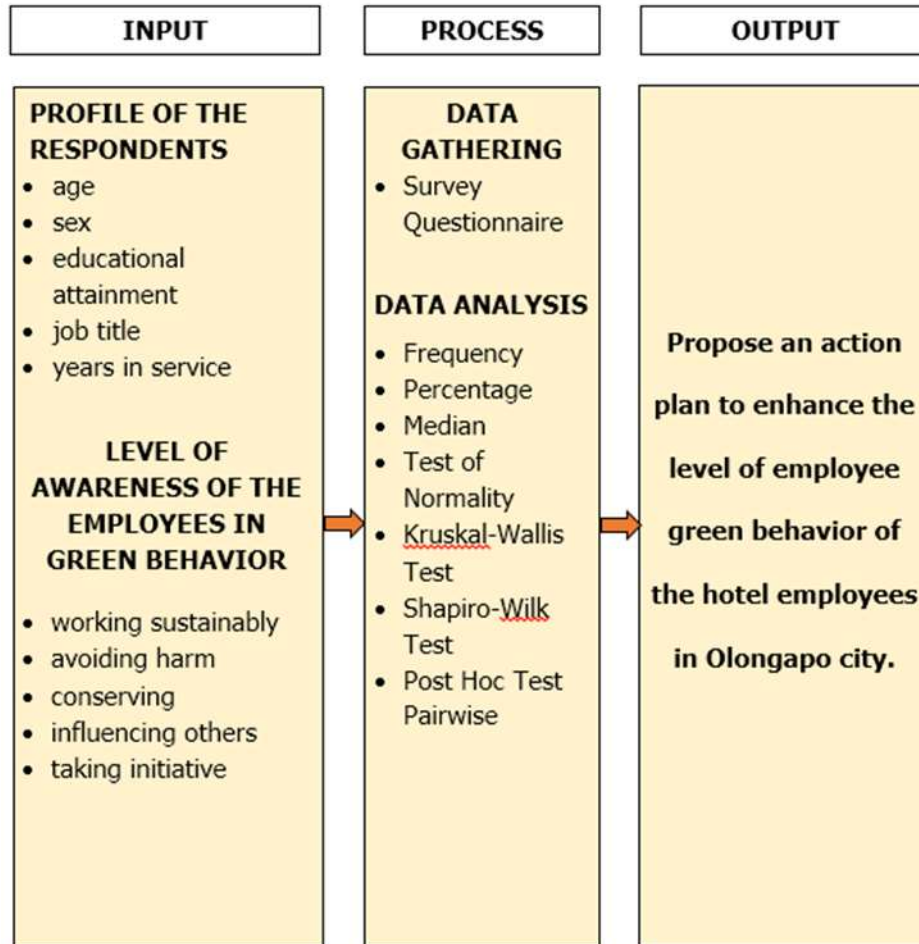


Figure 1. Paradigm of the Study

### Methodology

The study utilized a quantitative research design. This method was used to assess the difference in employees' levels of green behavior awareness in order to strengthen the implementation of sustainability in Olongapo City. According to Bhandari (2020), quantitative research is the process of collecting information from existing and potential customers using sampling methods and sending out online surveys, online polls, and questionnaires. Quantitative research was used in this study to quantify the data collection and analysis, analyze the relationships, and verify the measurements made for the study. This study was conducted in Olongapo City.

A survey questionnaire, which was face-validated and underwent a reliability test, was utilized by the researchers to gather data and information to be able to complete the study with proper and appropriate information regarding the topic.

In gathering the data needed for the study the researchers approached respondents by sending physical survey questionnaires and gathered the data to achieve the responses of the respondents who engaged with this study. Then, the researchers collected and tallied the results of the survey. Following the data gathering, the researchers based their investigations on the findings and the analysis of the data.

The gathered data were compiled, sorted, and tabulated by the researchers. They were subject to statistical treatment and were used to analyze the collected data. The statistical tools employed in the study were the frequency, percentage, median, normality test, Likert scale, Kruskal-Wallis Test, Shapiro-Wilk Test, and Post Hoc Test Pairwise were the statistical tools used to interpret data.

### Results and Discussion

Table 1. Summary of the Profile of the Respondents

<b>Age</b>		
<b>Age</b>	<b>Frequency</b>	<b>Percent</b>
28 and below	65	43.6
29 - 38	46	30.9
39 - 48	29	19.5
49 and above	9	6.0
<b>Total</b>	149	100.0
<b>Sex</b>		
<b>Sex</b>	<b>Frequency</b>	<b>Percent</b>
Male	77	51.7
Female	72	48.3
<b>Total</b>	149	100.0
<b>Educational Attainment</b>		
<b>Educational Attainment</b>	<b>Frequency</b>	<b>Percent</b>
College Graduate	54	36.2
College Level	50	33.6
High School Graduate	16	10.7
Elementary Graduate	10	6.7
Vocational Training	19	12.8
<b>Total</b>	149	100.0
<b>Job Title</b>		
<b>Job Title</b>	<b>Frequency</b>	<b>Percent</b>
FO/HK Supervisor	11	7.4
Front Desk Officer	33	22.1
Housekeeping	46	30.9
Concierge	1	0.7
Waiter/Waitress	10	6.7
Internal Security	14	9.4
Others	34	22.8
<b>Total</b>	149	100.0
<b>Years in Service</b>		
<b>Years in Service</b>	<b>Frequency</b>	<b>Percent</b>
below 2	51	34.2
2 - 4	40	26.8
5 - 7	36	24.2
above 7	22	14.8
<b>Total</b>	149	100.0

The frequency and percentage of respondents' demographic profile. There are 65 or 43.6 percent of the respondents has an age ranging to 28 and below, 46 or 30.9 percent for 29-38 years old, 29 or 19.5 percent for 39-48 years old, and 9 or 6 percent for 49 and above years old. For the sex, 77 respondents or 51.7 percent are male and 72 respondents or 48.3 percent are female. For educational attainment, 54 or 36.2 percent of the respondents are college graduate, 50 or 33.6 percent for college level, 16 or 10.7 percent for high school graduate, 10 or 6.7 percent for elementary graduate, and 19 or 12.8 percent for vocational training. For job title, 11 or 7.4 percent of the respondents are FO/HK supervisor, 33 or 22.1 percent for front desk officer, 46 or 30.9 percent for housekeeping, 1 or 0.7 percent for concierge, 10 or 6.7 percent for waiter/waitress, 14 or 9.4 percent for internal security, and 34 or 22.8 percent for others. For the years in service, 51 or 34.2 percent are below 2 years, 40 or 26.8 percent for 2-4 years, 36 or 24.2 percent for 5-7 years, and 22 or 14.8 percent for above 7 years in service.

**Table 2.** Level of Awareness of the Employees in Green Behavior in terms of Working Sustainability

	<b>Indicators</b>	<b>Median</b>	<b>Descriptive Interpretation</b>
1.	When there is a choice, choose products that are better for the environment	4	Highest level of green behavior awareness

2.	Design new, environmentally-friendly products	4	Highest level of green behavior awareness
3.	Utilize new technologies that benefit the environment	3	High level of green behavior awareness
4.	Buy company supplies with thought for environmental impact	4	Highest level of green behavior awareness
5.	Use efficient work processes that conserve natural resources	4	Highest level of green behavior awareness
6.	Change work processes to reduce negative impacts on the environment	3	High level of green behavior awareness
7.	Develop new work processes that use fewer natural resources	3	High level of green behavior awareness

Table 2 shows the descriptive analysis of the level of awareness of the employees' green behavior in terms of working sustainability. The important factors of working toward sustainability in terms of sustainable working processes are halfway down, but primarily in promoting high levels of green behavior among employees. The highest median among respondents was 4 out of 4 indicators, followed by a median of 3 out of 3 indicators. According to Mohammed et al. (2020), the indicators observation states that having a good goal in a hotel based on what it wants to do and spread when it comes to the environmental impact is a good focus of benefits that can be tried and learned to appreciate. At the present time, tourism is widely recognized as the key to accomplishing sustainable development goals. Adopting environmentally friendly behaviors remains one of the most persistent challenges in environmental protection. At this point, achieving the highest level of green awareness is a good goal to enhance the sustainability of employee work in managing sustainability in hotel accommodations.

Table 8 shows the descriptive analysis of the level of awareness of the employees' green behavior in terms of avoiding harm. The significant factor in avoiding harm has a median of 4 in four indicators that is described as the highest level of green behavior awareness.

**Table 3.** Level of Awareness of the Employees in Green Behavior in terms of Avoiding Harm

	Indicators	Median	Descriptive Interpretation
1.	Monitor the environmental impact of workplace processes	4	Highest level of green behavior awareness
2.	Properly handle hazardous materials	4	Highest level of green behavior awareness
3.	Clean up after an environmentally-harmful accident or event	4	Highest level of green behavior awareness
4.	Knowingly avoid unnecessary damage to the environment through work related decisions	4	Highest level of green behavior awareness

According to Alla (2022), the indicators of awareness of risk management within the establishment are simply valued for their safeness, not only for the customer but also to support the sustainability implementations of the hotel. Managing risks and avoiding harm could enhance pro-environmental behavior (Martin et al., 2019), the key to environmental sustainability in the future, and human behaviors and attitudes regarding nature within the workplace.

**Table 4.** Level of Awareness of the Employees in Green Behavior in terms of Conserving

	Indicators	Median	Descriptive Interpretation
1.	Utilizing single-use, disposable products, such as paper towels	4	Highest level of green behavior awareness
2.	Maximize the life span of equipment through repair and maintenance	4	Highest level of green behavior awareness



3.	Use supplies in new ways	4	Highest level of green behavior awareness
4.	Reduce water consumption by turning off faucets when not in use	4	Highest level of green behavior awareness
5.	Save extra supplies or materials for a future project	4	Highest level of green behavior awareness
6.	Decrease energy consumption by turning off equipment when not in use	4	Highest level of green behavior awareness
7.	Recycle paper, plastic, metal cans, etc.	4	Highest level of green behavior awareness
8.	Keep recyclable materials for future use	4	Highest level of green behavior awareness
9.	Give materials a new use or purpose instead of throwing them away	4	Highest level of green behavior awareness
10.	Reduce waste by reusing items such as water bottles, paper, plastic, etc.	3	High level of green behavior awareness

Table 4 shows the descriptive analysis of the level of awareness of the employees' green behavior in terms of conserving. The significance of conservation and consumption control initiatives is ranked as the highest level of green behavior awareness by having a mostly median score of 4 in nine indicators. Reusing materials like water bottles, paper, plastic, etc. had the lowest median of 3, according to respondents. The overall descriptive interpretation of the level of awareness of employees toward environmentally friendly conduct is the highest level of green behavior awareness in terms of conserving. According to Dumont et al. (2017), the word "conserving" represents the behaviors related to helping preserve resources and reducing waste. It is important for employees to understand environmental protection goals, which can interactively influence employees' green beliefs and include reducing use and recycling as the most common behaviors (Liu & Li, 2020).

**Table 5.** Level of Awareness of the Employees in Green Behavior in terms of Influencing Others

	Indicators	Median	Descriptive Interpretation
1.	Compliment other employees for behaviors that benefit the environment	3	High level of green behavior awareness
2.	Tell other employees that environmentally-friendly behaviors are effective	3	High level of green behavior awareness

Table 5 shows the descriptive analysis of the level of awareness of the employees' green behavior in terms of influencing others. Influencing others in the workplace is a significant factor, mainly in promoting green behavior. The respondents had a median of 3 in two indicators. According to the respondents, employee knowledge of influencing green behavior is 3, indicating a high level of green behavior awareness in terms of influencing others. According to Robertson (2018), once employees encounter high-intensity green human resource management practices, the employees might perceive that the organization values environmental concerns and has environmental responsibilities. This will be essential in maintaining an employee's level of green behavior. Promoting and advocating for a company's environmental protection policy is beneficial for increasing the efficacy of green initiatives and encouraging employee green behavior (Wang & Xu, 2017).

Table 6 shows the descriptive analysis of the level of awareness of the employees' green behavior in terms of taking initiatives. Respondents place a high value on the importance of taking initiative as an indication. The four indicators had a median of 4, while the other four had a median of 3. In terms of taking initiative, this corresponds to the highest level of awareness of green behavior. According to Unsworth & McNeill (2017), the significance of taking initiatives is that they are interventions that systematically improve employees' pro-environmental attitudes, perceived norms, and perceived behavioral control to enhance their pro-environmental intentions.

In addition, (Barbaro & Pickett, 2019), green transformational leaders attach importance to sustainable development, take sustainable development goals as their guide, and have strong environmental consciousness.

**Table 6.** Level of Awareness of the Employees in Green Behavior in terms of Taking Initiatives

	Indicators	Median	Descriptive Interpretation
1.	Propose a new environmentally-friendly program for the company	3	High level of green behavior awareness
2.	Voice concerns that acting pro-environmentally could hurt the company	4	Highest level of green behavior awareness
3.	Push the company's leaders to take a stronger position on environmental issues	4	Highest level of green behavior awareness
4.	Prompt action on environmentally program related to the business	3	High level of green behavior awareness
5.	Prioritize actions that would benefit the environment	4	Highest level of green behavior awareness
6.	Propose a desirable project that would not harm the environment	3	High level of green behavior awareness
7.	Help implement new policies that reduce the company's impact on the environment	3	High level of green behavior awareness
8.	Choose a less convenient commute because it helps the environment	4	Highest level of green behavior awareness

Table 7 compares the level of awareness of employees in green behavior as measured by the Kruskal-Wallis Test across four age groups. The test revealed a statistically insignificant difference across age groups for working sustainability [ $H(3) = 2.558$ ,  $p = .465$ ], with a median value of 3.57 for those 28 and under, 3.57 for those 29 to 38, 3.43 for those 39 to 48, and 3.57 for those 49 and above, because the p-value of .465 is greater than the significance level of .05. To avoid harm, the test showed a statistically no significant difference across age-groups [ $H(3) = .650$ ,  $p = .885$ ], with a median value of 3.50 for all age groups. The test finds no statistically significant difference between age groups [ $H(3) = 2.173$ ,  $p = .537$ ], with a median value of 3.50 for those aged 28 and under, 3.50 for those aged 29 to 38, 3.50 for those aged 39 to 48, and 3.60 for those aged 49 and up, because the p-value of .537 is greater than the significance level of .05. The test revealed a statistically insignificant difference in influencing across age groups [ $H(3) = 2.016$ ,  $p = .569$ ], with all age groups having a median value of 3.50. The test also revealed a statistically insignificant difference in taking initiative across age groups [ $H(3) = .790$ ,  $p = .852$ ], with all age groups having a median value of 3.50 because .852 is greater than .05.

This supports the study of Chrysoula (2021), as she stated that there was no statistical significance between age and employee green behavior as well as the relationship between age and environmental knowledge and awareness. The relationship between age and employee behavior can be mediated by the employee's environmental knowledge and awareness, which refers to the individual's insight into and concern for the behavioral impact of environmental issues (Abolghasemian et al., 2018).

**Table 7.** Difference on the Level of Awareness of the Employees in Green Behavior by Age

Level	Age	n	Median	H	df	Asymp. Sig	Conclusion
Working Sustainability	28 and below	65	3.57	2.558	3	.465	Not Significant
	29 - 38	46	3.57				
	39 - 48	29	3.43				
	49 and above	9	3.57				
Avoiding Harm	28 and below	65	3.50	.650	3	.885	Not Significant
	29 - 38	46	3.50				



	39 - 48	29	3.50				
	49 and above	9	3.50				
Conserving	28 and below	65	3.50	2.173	3	.537	Not Significant
	29 - 38	46	3.50				
	39 - 48	29	3.50				
	49 and above	9	3.60				
Influencing Others	28 and below	65	3.50	2.016	3	.569	Not Significant
	29 - 38	46	3.50				
	39 - 48	29	3.50				
	49 and above	9	3.50				
Taking Initiatives	28 and below	65	3.50	.790	3	.852	Not Significant
	29 - 38	46	3.50				
	39 - 48	29	3.50				
	49 and above	9	3.50				

Wiernik et al. (2017) discovered that the relationships between age and most environmental behaviors were insignificant. In fact, older individuals were somewhat more likely to engage in behaviors that avoided environmental harm, conserved resources, or involved engaging with the natural world in their personal lives. Based on these results, the age differences in environmental behaviors in work settings will be similarly small (Ones & Dilchert, 2017).

Table 8 shows A Mann-Whitney U test revealed no significant difference in the Level of Awareness of Employees in Green Behavior between sexes for males (M = 3.57) and females (M = 3.57), U = 2623.500, z = -.571, p = .568 for working sustainability, which is greater than the significance level of 0.05. For avoiding harm, there is no significant difference between the sexes for males (M = 3.50) and females (M = 3.50), U = 2700.500, z = -.279, p = .780. There is no statistically significant difference between males (M = 3.50) and females (F = 3.50) in conserving; U = 2671.500, z = -.591, p = .555. Males (M = 3.50) and females (F = 3.50) have equal influence; U = 2763.000, z = -.036; p = .971. And for taking initiatives, there is no significant difference between sexes for males (M = 3.50) and females (F = 3.50), U = 2718.000, z = -.207, p = .836 which is greater than the significance level of 0.05 for taking initiatives.

**Table 8.** Difference on the Level of Awareness of the Employees in Green Behavior by Sex

Level	Sex	n	Median	U	z	Asymp. Sig.	Conclusion
Working Sustainability	Male	77	3.57	2623.500	-.571	.568	Not Significant
	Female	72	3.57				
Avoiding Harm	Male	77	3.50	2700.500	-.279	.780	Not Significant
	Female	72	3.50				
Conserving	Male	77	3.50	2617.500	-.591	.555	Not Significant
	Female	72	3.50				
Influencing Others	Male	77	3.50	2763.000	-.036	.971	Not Significant
	Female	72	3.50				
Taking Initiatives	Male	77	3.50	2718.000	-.207	.836	Not Significant
	Female	72	3.50				

According to Chakrabarti (2020), sex issues in environmental protection involve identifying the influence of gender roles, responsibilities, and their relations to the environment's use, management, and conservation. The roles of men and women in environmental protection differ from one establishment to the next, as well as within the environment and cultures, implying that gender has no significant differences in the level of green behavior. It mainly depends on the knowledge, experience, awareness, needs, risks, vulnerabilities, and decision-making power of the respective gender. The sexes of an employee can be mediated by the employee's environmental knowledge and awareness, which refers to the individual's insight into and concern for the behavioral impact of environmental issues (Abolghasemian et al., 2018).

Table 9 shows the evaluation of the differences across five educational attainment groups for the level of awareness of the Employees in Green Behavior was tested using the Kruskal – Wallis Test. The test revealed a statistically insignificant difference across years-of-service groups for working sustainability [ $H(4) = 8.347, p = .080$ ], with a median value of 3.57 for college graduates, 3.57 for college level, 3.57 for high school graduates, 3.14 for elementary graduates, and 3.43 for vocational training, because the p value of .080 is greater than the significance level of .05. To avoid harm, the test found no statistically significant difference across years of service groups [ $H(4) = 4.589, p = .332$ ], with a median value of 3.50 for college graduates, 3.75 for college level, 3.63 for high school graduates, 3.38 for elementary graduates, and 3.50 for vocational training, because the p value of .332 was greater than the significance level of .05. The test revealed a statistically insignificant difference across years-of-service groups for the conserving [ $H(4) = 2.284, p = .684$ ], with a median value of 3.50 for college graduates, 3.55 for college level, 3.50 for high school graduates, 3.75 for elementary graduates, and 3.40 for vocational training, because the p value of .684 is greater than the significance level of .05. The test revealed a statistically insignificant difference across years of service groups for influencing others [ $H(4) = 3.877, p = .423$ ], with a median value of 3.50 for college graduates, 3.50 for college level, 3.25 for high school graduates, 3.25 for elementary graduates, and 3.50 for vocational training, because the p value of .423 is greater than the significance level of .05. The test found no statistically significant difference in taking initiative across years of service groups [ $H(4) = 2.558, p = .491$ ], with a median value of 3.50 for college graduates, 3.38 for college level, 3.38 for high school graduates, 3.25 for elementary graduates, and 3.50 for vocational training, because the p value of .491 is greater than the significance level of .05.

**Table 9.** Difference on the Level of Awareness of the Employees in Green Behavior by Educational Attainment

Level	Educational Attainment	n	Median	H	df	Asymp. Sig	Conclusion
Working Sustainability	College Graduate	54	3.57	8.347	4	.080	Not Significant
	College Level	50	3.57				
	High School Graduate	16	3.57				
	Elementary Graduate	10	3.14				
	Vocational Training	19	3.43				
Avoiding Harm	College Graduate	54	3.50	4.589	4	.332	Not Significant
	College Level	50	3.75				
	High School Graduate	16	3.63				
	Elementary Graduate	10	3.38				
	Vocational Training	19	3.50				
Conserving	College Graduate	54	3.50	2.284	4	.684	Not Significant
	College Level	50	3.55				
	High School Graduate	16	3.50				
	Elementary Graduate	10	3.75				
	Vocational Training	19	3.40				
Influencing Others	College Graduate	54	3.50	3.877	4	.423	Not Significant
	College Level	50	3.50				
	High School Graduate	16	3.25				
	Elementary Graduate	10	3.25				
	Vocational Training	19	3.50				
Taking Initiatives	College Graduate	54	3.50	2.558	4	.491	Not Significant
	College Level	50	3.38				
	High School Graduate	16	3.38				
	Elementary Graduate	10	3.25				

In contrast with the study of Meyer (2017), it says that it is often observed that individuals with higher educational levels tend to be more environmentally friendly. Hoffman & Muttarak (2018) found that education positively influences environmental

behavior. The literature has suggested that more educated people are more likely to exhibit higher levels of environmental knowledge, develop positive environmental attitudes, and report a higher level of environmental concern (Diamantopoulos, 2017).

**Table 10.** Difference on the Level of Awareness of the Employees in Green Behavior by Job Title

Level	Job Title	n	Median	H	df	Asymp. Sig	Conclusion
Working Sustainability	FO/HK Supervisor	11	3.43	16.876	6	.010	Significant
	Front Desk Officer	33	3.71				
	Housekeeping	46	3.43				
	Concierge	1	3.00				
	Waiter/Waitress	10	3.57				
	Internal Security	14	3.36				
	Others	34	3.57				
Avoiding Harm	FO/HK Supervisor	11	3.50	7.606	6	.268	Not Significant
	Front Desk Officer	33	3.75				
	Housekeeping	46	3.50				
	Concierge	1	4.00				
	Waiter/Waitress	10	3.75				
	Internal Security	14	3.50				
	Others	34	3.50				
Conserving	FO/HK Supervisor	11	3.40	1.612	6	.952	Not Significant
	Front Desk Officer	33	3.50				
	Housekeeping	46	3.55				
	Concierge	1	3.40				
	Waiter/Waitress	10	3.40				
	Internal Security	14	3.55				
	Others	34	3.55				
Influencing Others	FO/HK Supervisor	11	3.50	7.369	6	.288	Not Significant
	Front Desk Officer	33	3.50				
	Housekeeping	46	3.50				
	Concierge	1	4.00				
	Waiter/Waitress	10	3.50				
	Internal Security	14	3.50				
	Others	34	3.50				
Taking Initiatives	FO/HK Supervisor	11	3.50	2.219	6	.898	Not Significant
	Front Desk Officer	33	3.50				
	Housekeeping	46	3.50				
	Concierge	1	3.38				
	Waiter/Waitress	10	3.63				
	Internal Security	14	3.44				
	Others	34	3.50				

Table 10 shows the evaluation of the differences across seven job title groups for the Level of Awareness of the Employees in Green Behavior was tested using the Kruskal – Wallis Test. For working sustainability, the test revealed a statistically significant difference across job-title-groups [ $H(6) = 16.876, p = .010$ ], with a median value of 3.43 for FO/HK Supervisor, 3.71 for Front Desk Officer, 3.43 for Housekeeping, 3.00 for Concierge, 3.57 for Waiter/Waitress, 3.36 for Internal Security, and 3.57 for other job titles, since the p-value of .010 is less than the significance level of .05. The Kruskal-Wallis compare distribution across groups was used for the post hoc analysis, and there is a significant difference in terms of Working Sustainability between the job-title-groups of housekeeping and front desk officer ( $p = .017$ ) because the probability value of the pairwise comparison is less than the significance level of .05. Therefore, the result shows that the two groups are statistically different from each other (See Appendix H). The test revealed no statistically significant difference across job-title groups for Avoiding Harm [ $H(6) = 7.606, p = .268$ ], with a median value of 3.50 for FO/HK Supervisor, 3.75 for Front Desk Officer, 3.50 for Housekeeping, 4.00 for Concierge, 3.75 for Waiter/Waitress, 3.50 for Internal Security, and 3.50 for other job titles, because the p-value of .268 is greater than the significance level of .05. The test revealed a statistically no significant difference in Conserving across job title groups [ $H(6) = 1.612, p = .952$ ], with a median value of 3.40 for FO/HK Supervisor, 3.50 for Front Desk Officer, 3.55 for Housekeeping, 3.40 for Concierge, 3.55 for Internal Security, and 3.55 for other job titles. The test found no statistically significant difference in Influencing Others across

job title groups [ $H(6) = 7.369$ ,  $p = .288$ ] with a median value of 3.50 for FO/HK Supervisor, 3.50 for Front Desk Officer, 3.50 for Housekeeping, 4.00 for Concierge, 3.50 for Waiter/Waitress, 3.50 for Internal Security, and 3.50 for other job titles because the p-value of .288 is greater than the significance level of 0.05. The level of Taking Initiative revealed a statistically insignificant difference across job title groups [ $H(6) = 2.219$ ,  $p = .898$ ] with a median value of 3.50 for FO/HK Supervisor, 3.50 for Front Desk Officer, 3.50 for Housekeeping, 3.38 for Concierge, 3.63 for Waiter/Waitress, 3.44 for Internal Security, and 3.50 for other job titles because the probability value of .898 is greater than the significance level of 0.05. Working sustainably is significant because the employee's position contributes to the experience and knowledge that they gain at work, which impacts their green behavior awareness. Sustainability is not only good for the environment, but it also helps employees within the workplace (Shuler & Voss, 2022). When employees engage in sustainability-related actions at work, these are often referred to as green behaviors. While according to Dilchert (2017), the green five focus on people's behavior, on what they do, and not on outcomes or resources like their job position.

**Table 11.** Difference on the Level of Awareness of the Employees in Green Behavior by Years in Service

Level	Years in Service	n	Median	H	df	Asymp. Sig	Conclusion
Working Sustainability	below 2	51	3.57	.898	3	.826	Not Significant
	2 - 4	40	3.57				
	5 - 7	36	3.57				
	above 7	22	3.50				
Avoiding Harm	below 2	51	3.50	.699	3	.873	Not Significant
	2 - 4	40	3.50				
	5 - 7	36	3.50				
	above 7	22	3.50				
Conserving	below 2	51	3.60	2.503	3	.475	Not Significant
	2 - 4	40	3.50				
	5 - 7	36	3.60				
	above 7	22	3.45				
Influencing Others	below 2	51	3.50	.609	3	.894	Not Significant
	2 - 4	40	3.50				
	5 - 7	36	3.50				
	above 7	22	3.50				
Taking Initiatives	below 2	51	3.63	5.696	3	.127	Not Significant
	2 - 4	40	3.56				
	5 - 7	36	3.38				
	above 7	22	3.38				

Table 11 shows the evaluation of the differences across four years-of-service-groups for the Level of Awareness of the Employees in Green Behavior was tested using the Kruskal – Wallis Test. For working sustainability, the test revealed a statistically no significant difference across years-of-service-groups [ $H(3) = .898$ ,  $p = .826$ ], with a median value of 3.57 for below 2, 3.57 for 2 - 4, 3.57 for 5 - 7 and 3.50 for above 7 of years in service, since the p value of .826 is greater than the significance level of .05. For avoiding harm, the test revealed a statistically no significant difference across years-of-service-groups [ $H(3) = .699$ ,  $p = .873$ ], with a median value of 3.50 for below 2, 3.50 for 2 - 4, 3.50 for 5 - 7 and 3.50 for above 7 of years in service, since the p value of .873 is greater than the significance level of .05. For conserving, the test revealed a statistically no significant difference across years-of-service-groups [ $H(3) = 2.503$ ,  $p = .475$ ], with a median value of 3.60 for below 2, 3.50 for 2 - 4, 3.60 for 5 - 7 and 3.45 for above 7 of years in service, since the p value of .475 is greater than the significance level of .05. For the influencing, the test showed a statistically no significant difference across years-of-service groups [ $H(3) = .609$ ,  $p = .894$ ], with a median value of 3.50 for all years-of-service groups. For taking initiatives, the test revealed a statistically no significant difference across years-of-service-groups [ $H(3) = 5.696$ ,  $p = .127$ ], with a median value of 3.63 for below 2, 3.56 for 2 - 4, 3.38 for 5 - 7 and 3.38 for above 7 of years in service, since the p value of .127 is greater than the significance level of .05.

This contradicted the study of Katrina & Jalil (2019), they stated that the length of employment may also affect how employees responds to their organization and responsibilities. Their study shows that the longer the employee works in an organization, more working experience and knowledge they will gain. In addition, according to Putri (2020), work experience had a positive correlation with work performance, in summary based on those studies, it is certain that work experience and length of employment is considered important in enhancing employees' green awareness and practices.

## Conclusions and Recommendations

Based on the findings of the study the following conclusion were drawn:

1. Respondents of this study are mostly male aged 18 and under; majority of them are college graduates working as housekeepers or room attendants, in a hotel for less than 2 years.
2. Hotel employees have been seen to have a high level of “green behavior awareness”, which can be described in terms of working sustainably, avoiding harm, conserving, influencing others and taking initiatives.
3. The level of green behavior awareness among employees are significant in terms of working sustainability between the job-title-group of housekeeping and the front desk. Therefore, the result shows that the two job titles are statistically different from each other. However the profile variables of age, sex, educational attainment, job title and years of service were not significant to the hotel employee’s level of green behavior awareness. Therefore, the researchers concluded that the demographic profile of the employees do not have significant difference with their level of green behavior awareness.
4. The action plan developed by the researchers aims to enhance the level of green behavior of the hotel employees and put it into practice to further enhance their sustainable actions or green practices in terms of the five green taxonomies of Ones and Dilchert; working sustainably, avoiding harm, conserving, influencing others and taking initiatives of an employee.

The researchers came up with the following suggestions after deriving their findings and conclusions:

1. The researchers encourage all accommodations in Olongapo city to understand effective methods to enhance the green environmental behavior that are applicable to all employees regardless of their age, sex, educational attainment, job title and their years in service.
2. Hotel management may think about supporting, influencing, and changing employee behaviors so that they approximate the ecological sustainability objectives of organizations that are environmentally sustainable in order to promote employee green practices.
3. Management must be aware of the elements influencing staff members’ attitudes toward environmental issues and how these sentiments affect their intentions to embrace green hotel practices in order to ensure the effectiveness of environmental initiatives and limit the negative effects on employees.
4. The researchers advise the hotel industry to implement an action plan to provide sustainability training and seminars, promote and support green behavior, and motivate employees to conduct regular business operations in eco-friendly ways without compromising quality or efficiency, which could increase the sustainability of the environment and resources of the hotel accommodations.
5. Future researchers may consider reinvestigating this topic, which would verify and magnify this study. The researchers advocate including additional respondents and hotel accommodations to better assess the significance of green behavior within the respondent's demographic profile.

## References

- Brydges, C. R. (2019). Effect size guidelines, sample size calculations, and statistical power in gerontology. *Innovation in Aging*, Volume 3, Issue 4, August 2019, igz036, <https://doi.org/10.1093/geroni/igz036>
- Ciocirlan, C. E. (2017). Environmental workplace behaviors: Definition matters. *Organization & Environment*, 30(1), 51-70. <https://doi.org/10.1177/1086026615628036>
- Iqbal, Q., Hassan, S.H., Akhtar, S. and Khan, S. (2018), Employee’s green behavior for environmental sustainability: A case of banking sector in Pakistan", *World Journal of Science, Technology and Sustainable Development*, Vol. 15 No. 2, pp. 118-130. <https://doi.org/10.1108/WJSTSD-08-2017-0025>
- Kang H. Sample size determination and power analysis using the G\*Power software. *J Educ Eval Health Prof*. 2021;18:17. doi: 10.3352/jeehp.2021.18.17. Epub 2021 Jul 30. PMID: 34325496; PMCID: PMC8441096.
- Kyonka EGE (2018). Tutorial: Small-n power analysis. *Perspect Behav Sci*. 2018 May 22;42(1):133-152. doi: 10.1007/s40614-018-0167-4. PMID: 31976425; PMCID: PMC6701714.
- McConnaughy, J. C. (2014). Development of an employee green behavior descriptive norms scale. *Electronic Theses, Projects, and Dissertations*. 83.
- Miles, M. (2022, January 13). Take the initiative. BetterUp. <https://www.betterup.com/blog/taking-initiative>
- Mohd Razali, M., Sam, N. M., Roslan, A. H., Ahmad Jeffy, F. H., & Norazam, M. F. (2022). Promoting green behavior at workplace: A literature review. *International Journal of Accounting, Finance and Business (IJAFB)*, 7(42), 140 – 147 doi: 10.55573/IJAFB.074219
- Mumtaz A, Rehman E, Rehman S and Hussain I (2022) Impact of environmental degradation on human health: An assessment using multicriteria decision making. *Front. Public Health* 9:812743. doi: 10.3389/fpubh.2021.812743
- Munoz, M. C., Valle, M., White, R. L., & Jaffe, R. (2019). How can we help conserve nature? *Front. Young Minds*. 7:84. doi:10.3389/frym.2019.00084

- Norton, Thomas & Parker, Stacey & Zacher, Hannes & Ashkanasy, Neal. (2015). Employee green behavior. *organization & environment*. 28. 103-125. 10.1177/1086026615575773.
- Ones, D. S., & Dilchert, S. (2012). Employee green behaviors. In S. E. Jackson, D. S. Ones, & S. Dilchert (Eds.), *Managing human resources for environmental sustainability* (pp. 85–116).
- Ones, D., & Dilchert, S. (2017). The Green Five. Earth Ethics Institute at Miami Dade College. [https://www.earthethicsinstitute.org/Resources/MDC\\_2014\\_Handout\\_GreenFive.pdf?](https://www.earthethicsinstitute.org/Resources/MDC_2014_Handout_GreenFive.pdf?)
- Palmer, J. (2019, April 25). The golden rule and the green rule. BahaiTeachings.Org. <https://bahaiteachings.org/golden-rule-green-rule/>
- Sharma, G. (2017). Pros and cons of different sampling techniques. *International Journal of Applied Research*, 3(7), 749-752.
- Shuler, M., & Voss, N. (2022, March 11). Sustainability in the workplace: Why it matters and what you can do. FMP Consulting. <https://www.fmpconsulting.com/sustainability-in-the-workplace-why-it-matters-and-what-you-can-do/?>
- Wang Q, Niu G, Gan X, Cai Q. (2022). Green returns to education: Does education affect pro-environmental attitudes and behaviors in China? *PLoS One*. 2022 Feb 3;17(2):e0263383. doi: 10.1371/journal.pone.0263383. PMID: 35113928; PMCID: PMC8812898.
- Wiernik, B. M., Dilchert, S., & Ones, D. S. (2017). Age and employee green behaviors: A meta-analysis. *Frontiers in Psychology*, 7, Article 194. <https://doi.org/10.3389/fpsyg.2016.00194>