Personality and environmental behavior: Perspectives of employees working in green and non-green restaurants

by

Michelle Ranae Alcorn

B.S., Oklahoma State University, 2009
M.S., Oklahoma State University, 2014

AN ABSTRACT OF A DISSERTATION

submitted in partial fulfillment of the requirements for the degree

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Department of Hospitality Management
College of Human Ecology

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Abstract

As restaurants continue to be a major contributor to the economy, operations continue to negatively impact the environment. Within the industry, sustainability initiatives are becoming more popular, however, success depends on the buy-in of employees. The purpose of this study was to examine the relationship between and impact of personality traits on environmentalism of restaurant employees. By detecting personality traits associated with environmentalism, a better understanding of environmental behavior is obtained. This understanding can be used to motivate pro-environmental behaviors of employees by tailoring sustainability programs to appeal to different personalities.

Employees working in green certified and non-certified restaurants completed a 95-item questionnaire measuring environmental attitude, personal conservation behavior, on-the-job environmental behavior, personality, and demographics. Data collection was completed using three methods: on-site, mailed questionnaires, and online.

A total of 229 questionnaires were completed. A significant relationship existed between personality and environmentalism. Specifically, personality was a significant predictor of environmental attitude, personal conservation behavior, and on-the-job environmental behavior. Employees working in green certified restaurant operations had significantly higher levels of agreeableness, conscientiousness, extraversion, openness, environmental attitude, personal conservation behavior, and on-the-job environmental behavior and lower levels of neuroticism than employees working in non-certified restaurant operations.

Findings from this study contribute to understanding the factors that impact environmental behavior. Potential environmental champions can be identified by their personality traits and encourage other employees to perform green practices. Furthermore,

recruitment of employees exhibiting these pro-environmental traits could increase environmental performance in restaurant operations. Additionally, training and educational programs could be formatted based on the differences among personality traits to elicit pro-environmental behaviors of employees.

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Major Professor
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Acknowledgements

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Chapter 1 - Introduction

Every living being depends on this planet for survival. A healthy Earth is essential to the longevity of humans. Human activity negatively impacts the environment through chemical pollution, waste (Adams, 2006), greenhouse gas emission (Imhoff, 2013), depletion of natural resources, and destruction of ecosystems (McMichael, 2008). The average American creates large amounts of air, water, and soil pollution daily (Bernard, Samet, Grambsch, Ebi, & Romieu, 2001; Conserve Energy Future, 2016). This pollution negatively impacts human health and causes environmental degradation, global warming, ozone layer depletion, and infertile land. As a result of this destruction, there are people around the world who do not have access to clean water, have inadequate sanitation, breathe unclean air, and are starving or malnourished (Environmental Protection, 2003). Therefore, it is vital that humans modify their behavior to reduce the damage to the planet (Steg & Vlek, 2009).

The United States (U.S.) has a variety of organizations passionate about a more sustainable environment, such as Global Green USA, U.S. Green Building Council, Green-e, Green Seal, and the Green Restaurant Association. Global Green USA is working to improve the sustainability of the environment through education, research, implementation of green projects, and designing solutions to issues affecting the health of the environment (Global Green USA, n.d.). The U.S. Green Building Council is dedicated to changing design and building practices and administers the Leadership in Energy and Environmental Design (LEED) certification program (U.S. Green Building Council, 2018). Green-e offers certification programs that recognize organizations using renewable energy (Green-e, 2018) while Green Seal offers certifications to products, services, or companies achieving sustainability (Green Seal, 2018). The Green Restaurant Association is dedicated to creating a sustainable environment

within the restaurant industry and has recognized over 200 foodservice operations for the sustainability efforts of their management and owners. These efforts include increasing energy and water efficiency; reducing waste and promoting recycling; using sustainable furnishings and building materials; purchasing sustainable, local foods and disposables; and reducing chemical use and pollution (Green Restaurant Association, 2018). Operators within the restaurant industry have the opportunity to partner with these organizations and similar organizations to combat the industry's negative impact on the environment.

Unfortunately, the restaurant industry is perceived among economic sectors as one of the most wasteful in the world (Wang, Chen, Lee, & Tsai, 2013). With projected sales greater than $799 billion in 2017, the volume of food served results in a great environmental impact on the earth, including depletion of natural resources, pollution, food waste, and greenhouse gas emissions (Hagglund, 2013; National Restaurant Association, 2018). A typical restaurant operation uses approximately 23 trillion BTU of electricity consumption, 18 trillion BTU of natural gas consumption, and 582,000 gallons of water per month (U.S. Energy Information Administration, 2016). Annually, over 11.4 million tons of wasted food is generated by the American restaurant industry, accounting for 22% of all food waste in landfills, resulting in more than 29.6 million tons of greenhouse gas emissions (Quested & Parry, 2011; Rethink Food Waste Through Economics and Data, 2016). Therefore, reducing the environmental footprint left by the restaurant industry is an issue that impacts all people (Choi & Parsa, 2006).

In 2013, 71% of American customers considered the environment when making daily purchases (Walker, 2013). Customers also perceive restaurants implementing green practices as an important step in combating environmental degradation (Szuchnicki, 2009). Implementing green practices has various benefits for restaurant operators including improved brand image and

increased performance. According to Perramon, del Mar Alonso-Almeida, Llach, and Bagur-Femenias (2014) implementing green practices in restaurant operations improves competitiveness and indirectly influences firm performance. Jeong and Jang (2010) found that customers who consider themselves environmentally friendly want to dine in green restaurants because they enjoy helping to protect the environment and want to be patrons of companies that are green. Jeong and Jang (2010) also noted that marketing the green practices of a restaurant has a positive impact on customer purchase intentions. Namkung and Jang (2014) noted that among 334 U.S. restaurant customers, the majority (67%) were willing to pay more at restaurants with green practices. Of the customers willing to pay more, 39% indicated they were willing to pay 10% more or higher (Namkung & Jang, 2014). In contrast, DiPietro and Gregory (2012) stated that customers were only willing to pay up to 1% more for green practices. Regardless, an opportunity exists for restaurant operators to use green practices as a marketing strategy to potentially increase revenue and customer loyalty. Green practices offer restaurant owners and managers a win-win situation, helping to reduce operational costs through decreased utility bills and waste fees (Ambec & Lanoie, 2008; Schubert, Kandampully, Solnet, & Kralj, 2010) and helping the environment (Dutta, Umashankar, Choi, & Parsa, 2008).

Though the restaurant industry has found many ways to introduce green practices, employees are the key to the success of green practices (Choi & Parsa, 2006). Policies related to sustainability are effective only if employees follow green practice guidelines and recognize the value of environmentalism (Sirota, Mischkind, & Meltzer, 2005). Denton (1999) identified three keys for involving employees in sustainability efforts: training, encouraging, recognizing and rewarding employees for their performance. However, a challenge for operators is changing the

culture, behavior, and involvement of employees to support green practices (Daily & Huang, 2001).

Many studies have attempted to understand and encourage environmental behavior through exploring attitudes, values, and beliefs. One psychographic predictor of human behavior is personality (Hirsh & Dolderman, 2007). Widely accepted personality traits identified in the five-factor model of personality, include neuroticism, extraversion, openness, agreeableness, and conscientiousness, also known as the "Big Five" (McCrae & Costa, 2003). Personality traits allow exploration and understanding of what defines an individual (McCrae & Costa, 2008). As an individual, one has a unique style of acting, feeling, and thinking, which influences almost every aspect of their daily life (Enimons, 1991).

Exploring personality traits permits researchers to examine stable individual factors that motivate environmental behavior (Markowitz, Goldberg, Ashton, & Lee, 2012). This type of research allows a deeper understanding of the pro-environmental individual (Markowitz et al., 2012). High-levels of certain personality traits have been strongly related to pro-environmental behaviors (Brick & Lewis, 2014; Markowitz et al., 2012), environmental concern and engagement (Hirsh, 2010; Milfont & Sibley, 2012), and environmentalism (Hirsh & Dolderman, 2007). For example, multiple studies have noted a strong association between the personality traits agreeableness and openness with environmental concern, environmental engagement, environmental behavior, and environmentalism (Brick & Lewis, 2014; Hirsh, 2010; Hirsh & Dolderman, 2007; Milfont & Sibley, 2012).

Various work attitudes and behaviors have also been associated with personality, such as job engagement and job satisfaction (Inceoglu & Warr, 2011; Kim, Shin, & Swanger, 2009). Kim et al. (2009) noted conscientiousness and neuroticism were strong predictors of job

engagement among 187 Subway employees in the U.S. Inceoglu and Warr (2011) corroborated this finding, stating that job engagement is impacted by personality and can be increased by understanding differences between individuals' personality. Tracey, Sturman, and Tews (2007) stated that conscientiousness is an important predictor of job performance among more tenured line-level restaurant employees across the U.S. In addition, among 178 Malaysian hotel employees, agreeableness, neuroticism, and openness to experience were reported as significant predictors to counterproductive work behavior (Kozako et al., 2013). Therefore, exploring personality traits of employees who work in green certified and non-certified restaurants is one strategy to understand the antecedents of environmental behaviors of restaurant employees. By understanding environmental behaviors, operators can develop policies and programs tailored to motivate employee engagement and performance.

Statement of Problem

Restaurant operations contribute to the negative impact on the environment through excessive waste, chemical pollution, greenhouse gas emission, and natural resource depletion (Green Restaurant Association, 2018). Operators must adapt their practices to help achieve a more sustainable environment for future generations (Green Restaurant Association, 2018). Successful sustainability initiatives are influenced by several factors: sustainability plans describing implementation and maintenance policies, evaluation programs, and commitment and engagement of employees at all levels (Daily & Huang, 2001). When addressing employee commitment and engagement, an important objective for restaurant managers and operators is achieving employee buy-in related to the green practices. However, increasing employee involvement can be a challenge for restaurant operators.

To increase employee involvement and motivate pro-environmental behaviors, a thorough understanding of environmental behaviors is necessary. Research has linked personality traits to pro-environmental employee involvement (Liao & Lee, 2009), attitudes, and behaviors (Brick & Lewis, 2014; Hirsh, 2010; Hirsh & Dolderman, 2007; Markowitz et al., 2012; Milfont & Sibley, 2012). Therefore, the results of this study will provide useful information in understanding the antecedents of environmental behaviors of restaurant employees which can be used to motivate more pro-environmental behaviors.

Using the results of this study, restaurant managers and owners who wish to improve or implement sustainability initiatives can tailor training programs and policies to encourage pro-environmental behavior. In addition, by recognizing specific personality traits related to pro-environmentalism, operators can identify employees who would be efficient environmental champions or advocates for sustainability initiatives within the operations. These employees would likely serve as a leader for sustainability programs and encourage other employees to increase pro-environmental behaviors within the operation.

Justification

Green practices in restaurants lead to improved financial performance through cost reduction and increased sales, while the environmental impact of the restaurant is reduced (Ambec & Lanoie, 2008; Dutta et al., 2008; Schubert et al., 2010). The success of green practices is heavily influenced by employee involvement (Daily & Huang, 2001). Therefore, employee engagement in the green initiatives the restaurant management team implements is essential to their success. Determining whether personality traits differ among employees working in restaurants with and without green practices can assist operators in decision making processes for increasing employee involvement in sustainability initiatives. Sustainability

programs can be tailored to specific personalities that are more likely to engage in green practices and encourage employee involvement from others.

Purpose and Research Questions

The purpose of this study was to examine the relationship between, and impact of, personality traits on environmentalism of restaurant employees. Specifically, the research questions include:

1) What are the relationships between and impact of the Big-Five personality traits and environmental attitude, personal conservation behaviors, and on-the-job environmental behaviors of restaurant employees, and
2) How do employees working in green certified and non-certified restaurants differ with regards to personality, environmental attitude, and environmental behaviors.

Significance of the Study

Research focusing on sustainable environmentalism in the restaurant industry is heavily focused on consumer perception (Choi & Parsa, 2006; Chou, Chen, & Wang, 2012; Dutta et al., 2008; Hu, Parsa, & Self, 2010), with little research examining employee perceptions and the operation itself (Choi & Parsa, 2006). To expand the knowledge base and examine the impact employees have on green practices, more research focusing on environmentalism in the restaurant industry is necessary. Within this study, environmentalism in the restaurant industry is explored by identifying currently implemented green practices, investigating the differences between employees working in green certified and non-certified restaurants, and exploring the association of individual characteristics, such as personality, of employees and environmentalism. This study adds to the knowledge base of personality research by exploring the impact of personality on environmental attitude and behavior.

By detecting personality traits associated with environmentalism, a better understanding of environmental behavior is obtained which can be used to motivate pro-environmental behaviors of employees through multiple strategies. First, sustainability programs and trainings can be tailored to appeal to different personalities. Secondly, personality traits can be used to identify pro-environmental employees. These pro-environmental employees can become the environmental champions and inspire other employees to follow policies that encourage environmentalism.

Limitations

The sample population was limited to frontline employees or non-managerial staff working in U.S. restaurant industry. Therefore, generalizations cannot be extended to managers, operators, or employees in other foodservice operations, such as healthcare, schools, prisons, or university settings or to restaurant operations beyond the U.S.

Self-reported surveys introduce several limitations due to their nature. The questionnaire addresses environmentalism. This topic could have been viewed as sensitive to some participants persuading them to answer questions in a way that makes them look favorably, creating social desirability bias.

Restaurant employees are typically very busy and requesting them to complete a questionnaire of sizable length could have resulted in participation fatigue, dropout, or dissuaded participation. To motivate completion of the questionnaire, an incentive was offered. Questionnaires were also available as a hard-copy and online through a Qualtrics link.

Within a population of restaurant employees, language barriers do exist limiting the sample available. To combat this limitation, the questionnaire was available in both English and Spanish. Any employee who could not speak English or Spanish was excluded from the study.

Definition of Terms

Ecological Footprint	All land and water expended to produce resources one consumes and absorb the continuous waste generated from those resources (Wackernagel & Rees, 1997).
Energy Conservation	Reduction of energy consumption (Herring, 2006).
Energy Efficiency	The effective use of each unit of energy (Herring, 2006).
Environmental Attitude	Views and beliefs regarding the preservation and utilization of the nature environment (Milfont & Duckitt, 2010).
Environmental Behavior	Actions related to conservation and preservation of the nature environment (Markowitz et al., 2012).
Environmental Champion	An inspirational person that has high interest in environmental issues (Boks, 2006).
Environment Degradation	Harmful or undesirable changes or disturbance to the environment (Tyagi, Garg, & Paudel, 2014).

Environmentalism	Concern for protecting the environment and actions focused on promoting the conservation or improvement of the environment (Goodland, 1996; Milton, 1996).
Environmental Pollution	Depletion of the quality and quantity of natural resources (Tyagi et al., 2014).
Five-Factor Model	A set of five dimensions used to describe broad personality traits, also referred to as the "Big Five" and include agreeableness, conscientiousness, openness to experience, extraversion, and neuroticism (McCrae & Costa, 2003).
Foodservice Industry	For-profit and non-profit companies and organizations providing meals outside the home. Types of businesses and organizations in this industry segment include: restaurants, catering, schools, prisons, healthcare facilities, and company cafeterias (Rogge & Becker, 2008).
Green Certified Restaurant	A restaurant operation with a certification from the Green Restaurant Association. Green restaurant certification includes more than 500 environmental standards within seven categories: water efficiency, chemical and pollution reduction, waste reduction and recycling, sustainable furnishings and

	building materials, sustainable food, energy, and disposables. Restaurant operations can be categorized as Level 1, 2-Star, 3-Star, 4-Star, or SustainaBuild.
Green Restaurant	A restaurant operation that implements and maintains sustainability initiatives to reduce environmental impact (Jang, Kim, & Bonn, 2011).
Green Restaurant Association	An organization focused on educating and encouraging operators in the restaurant industry to reduce their environmental impact. Founded in 1990, the Green Restaurant Association offers green restaurant certifications based on standards and practices to increase environmental sustainability (Green Restaurant Association, 2018).
Green Practices	Practices referred to as responsible to the environment and intended to reduce environmental impact (DiPietro & Gregory, 2012; Tzschentke, Kirk, & Lynch, 2008).
Non-Certified Restaurant	A restaurant operation without certification from the Green Restaurant Association. Operators do not market the operation as "green" however, the operation may have two or less green initiatives implemented.

Personality	A person's individual pattern of behaving, feeling, and thinking (American Psychological Association, 2017).
Pollution	Substances released into the air, soil, or water that are neither found in the natural atmosphere, soil, or bodies of water or found in higher concentrations than the natural environment which have adverse effect either short-term or long-term (Daly & Zannetti, 2007).
Pro-environmental Attitude	One's predisposition to focus on, worry about, and act favorably towards the protection of the environment (Corraliza & Berenguer, 2000).
Pro-environmental Behavior	Behaviors that reduce the negative impact on the world (Kollmus & Agyeman, 2002).
Restaurant Industry	A sector of the foodservice industry including for-profit companies that operate restaurants, buffets, snack bars, and cafeterias (National Restaurant Association, 2017).
Sustainability	Maintaining or at least not depleting natural capital (Goodland, 1996).

Chapter 2 - Literature Review

The following chapter summarizes pertinent literature in environmentalism and personality and its relationship to the restaurant industry. The following topics are examined: the history of environmentalism, green practices implemented in restaurant operations, environmental research in restaurant operations, the five-factor model of personality, and the relationship between personality and environmentalism.

History of Environmentalism

Concern for the environment has thrived throughout history and remains today. As early as the 1600s, issues of deforestation, agriculture, botany, climatology, and medicine produced environmental concern among the general population (Grove, 1996). Furthermore, the early environmental movement, spanning from the late 1800s to early 1900s, focused heavily on the preservation, conservation, and management of wilderness areas, forests, and nature (Dunlap & Mertig, 2013). In the past century, the advancement of industrialism and nuclear energy have raised environmental concern to a global level (Robertson, 2008). The long history of environmental concern influenced the formation of partnerships between the government and industry with the creation of various organizations, such as the Environmental Protection Agency, aimed to protect the environment, preserve natural resources, and improve the health of humans (U.S. Environmental Protection Agency, 2017a). As highlighted by the long history of our consumption and destruction of the planet, it is apparent everyone needs to account for their actions and consumption including organizations.

As environmental concern and government involvement in environmental protection continued to grow, it was clear that sustainability would need to be a key element of operations for businesses (Hoffman, 2001). Therefore, the emergence of corporate environmentalism, when

company leaders incorporate environmentalism into strategic planning, occurred as a result of issues surrounding pesticide usage, oil spills, tragedies, and consumer outrage (Banerjee, 1998; Hoffman, 2001). However, corporate environmentalism spans beyond the chemical and oil industries, and includes the technology, consumer products, services, utilities, pharmaceutical (Banerjee, Iyer, & Kashyap, 2003), manufacturing, and foodservice industries (Banerjee, 1998). Balancing the growth of industry and protecting the environment is an issue gaining the attention of people across the world.

Various research has been conducted to explore the factors influencing, and the impact of, corporate environmentalism (Banerjee, 1998; Banerjee et al., 2003; Hoffman, 2001; Onkila, 2017). Several studies have reported similar factors which influence corporate environmentalism (Banerjee et al., 2003; Kasim, 2007; Reynolds, 2013). Based on survey data from 243 managers in North America, Banerjee and colleagues (2003) stated public concern, regulatory forces, top management commitment to environmentalism, and achieving a competitive advantage are key antecedents to corporate environmentalism. More specifically, public concern had the greatest influence on high corporate environmentalism (Banerjee et al., 2003). Reynolds (2013) identified the same key antecedents for corporate environmentalism for the hotel sector among 24 hotel operators in Australia. However, in contrast to Banerjee et al. (2003), the most important factor influencing corporate environmentalism among hotel operations was competitive advantage for large hotel groups and top management commitment for small hotel groups (Reynolds, 2013). These key antecedents were similar to findings of Kasim (2007) who explored the drivers and barriers of corporate environmentalism in the Malaysian hotel sector. Drivers identified in interviews with 52 hotel managers, government officials, and trade associations included a commitment from top management and regulatory forces (Kasim, 2007).

However, several barriers existed for corporate environmentalism in the Malaysian hotel sector including: lack of resources, infrastructure, public concern, and attitude toward environmentalism (Kasim, 2007).

Like other industries, the restaurant sector has been faced with environmental concerns of various stakeholders such as consumers, employees, suppliers, and legislators. Restaurant leaders feel the pressure of these concerns to implement green practices in daily operations to combat their environmental impact (National Restaurant Association, 2018). As a result of this pressure, leaders have implemented green practices and have developed key partnerships with green organizations, such as U.S. Green Building Council, Green Seal, and the Green Restaurant Association. Another result of this environmental sustainability movement within the restaurant industry has been the publication of various research projects exploring the impact of environmentalism in the restaurant industry.

Environmentalism in the Restaurant Industry

The following section summarizes green practices implemented in the restaurant industry and research exploring the impact of environmentalism in the restaurant industry. Globally, studies exploring environmental sustainability in the restaurant industry are primarily focused on consumer behavior (DiPietro & Gregory, 2012; Dutta et al., 2008; Wang, 2012), indicating a gap in literature for environmentalism related to the employee and operation.

Green Practices

Leaders of restaurant operations are confronted with the burdens of legislation, public concern, and consumer pressures regarding environmentalism (Kirk, 1995). As a result of these pressures, several companies are implementing green practices and educating company leaders to assist in sustainable building, energy efficiency, purchasing practices, waste reduction, and water

efficiency. Examples of green practices related to the restaurant industry are discussed in the following sections.

Sustainable Building

Green building and development is the new norm for the hospitality industry (Butler, 2008). The U.S. Green Building Council developed and maintains the Leadership in Energy and Environmental Design (LEED) certification program for buildings (U.S. Green Building Council, 2018). This certification includes rating levels of certified, silver, gold, and platinum and is available for all building types (U.S. Green Building Council, 2018). LEED certification for restaurants has various categories that earn the facility points on the rating scale. These categories include practices related to protection of land and habitat, access to transit, use of green vehicles and renewable energy, reduction of construction pollution and water use, management of rainwater and waste, and optimization of energy performance (U.S. Green Building Council, 2018). Specific practices that U.S. restaurant operators have implemented include: use of chilled water systems; upgraded heating, ventilation, and air conditioning systems (Gates, 2013); installation of skylights (Commercial Kitchen, 2011); use of green buildings, design, and materials; and use of audit systems to monitor energy usage (Wang et al., 2013). These practices could earn restaurant facilities LEED certification, but they also help to decrease operating costs. Furthermore, various local ordinances are requiring or supporting LEED standards for new construction in cities such as Phoenix, San Diego, Denver, Chicago, Atlanta, and Philadelphia. Restaurant facility operators have various eco-friendly options when designing and constructing both new and renovated green buildings (Gates, 2013).

Energy Efficiency

Energy management is just as important as any managerial function in the hospitality industry and staff should be involved in energy management practices (Shiming & Burnett, 2002). Within the commercial sector, restaurants are the most energy-intensive operations (Responsible Energy, 2009). Thus, there is a need for restaurant operators to find environmentally strategic alternatives to using natural resources to meet energy demands (Armaroli & Balzani, 2006).

Onut and Soner (2006) identified practices hotel operators should implement to reduce resource consumption, which can be transferred to the restaurant industry. Strategies include: setting heating, ventilation, air-conditioning, and water heater thermostats to efficient temperatures; scheduling routine maintenance on all systems; using natural light as often as possible; and installing insulation on pipes and tanks. Onut and Soner (2006) also identified strategies to reduce propane and gas consumption including: servicing all gas equipment quarterly; cleaning all cooking equipment; replacing all broken equipment; and installing solar energy systems. These simple strategies signify financial savings for restaurant operators. Every 1,000 kilowatt-hours conserved equates to an approximate $100 in savings on the utility bills (National Grid, 2018).

However, some operators have little motivation to implement such practices (Revell & Blackburn, 2007). For example, restaurant operators in the UK stated that energy reduction is too difficult with minimal payback for their initial investment. Hence, energy conservation is not a priority for restaurant operators in the UK and not worth their time or money (Revell & Blackburn, 2007). However, U.S. restaurant operators have various options for energy conservation that can assist them in achieving their organizational mission and provide high

return on investments (Gates, 2013). These practices include: turning off lights in places of minimal use, such as storage spaces, turning off heating/air conditioning when the restaurant is closed (Walkup, 2008), using compact fluorescent lamps and light-emitting diodes light bulbs, using programmable thermostats (Alcorn & Curtis, 2016), limiting the number of times walk-in and freezer doors are opened, and minimizing the time external doors are open (Ma & Ghiselli, 2016).

Other energy efficient practices that require more monetary investments include using energy efficient equipment, such as insulated holding cabinets, fryers (Williams, 2008), burners, steamers (Bean, 2009), and air conditioning units (Alcorn & Curtis, 2016). The installation of motion sensors and equipment that reduces water temperature in bathrooms and handwashing sinks can also help decrease energy use (Gilg, Barr, & Ford, 2005; Szuchnicki, 2009). In addition to reducing energy use, restaurant operators should seek alternative energy sources. Renewable energy options for restaurants include small wind turbines, solar panels, superheated steam (DeMicco, Seferis, Bao, & Scholz, 2014), geothermal, and hydropower (Boutique Design, 2008).

Purchasing

According to Jang, Kim, and Bonn (2011), consumer demand for green purchasing practices is high in today's society. Green purchasing practices for restaurant operators include acquiring green food (Jang et al., 2011), buying fair-trade products, which are socially and environmentally produced (Gilg et al., 2005), and procuring supplies made from recycled and biodegradable materials (Ryan, 2010).

Green food refers to products that are organically farmed, grown, or sourced locally, and/or produced in a sustainable environment (Jang et al., 2011). Other green purchasing

practices related to food products include reducing the use of foods that are processed, buying food products in season, and avoiding protected wildlife as food sources (Wang et al., 2013). According to Namkung and Jang (2014) the use of locally sourced or organic food items on a menu assists in establishing a green image for the restaurant. These demands are equaled with a willingness to spend more on locally sourced and organic food, while creating a niche for restaurant operators. Purchasing locally sourced food items is more common among locally-owned restaurants, when compared to their chain counterparts (Starr et al., 2003). However, challenges arise for restauranteurs with procuring local food items such as jeopardizing established supplier relationships, fear of poor quality, and concern for reliability and availability of items (Iaquinto, 2014).

Purchasing practices in restaurants include more than food products alone. Buying products packaged with recycled material is popular among customers (Ryan, 2010), along with products completely made of recycled material, such as writing pads, toilet paper (Gilg et al., 2005), and menus (Iaquinto, 2014). A common consensus among pro-environmental operators when purchasing products is to avoid any products using Styrofoam (Szuchnicki, 2009). Another green purchasing strategy beyond the use of products made with recycled materials is products made with biodegradable packaging (Ryan, 2010), and the use of biodegradable and compostable products such as paper straws (Iaquinto, 2014), paper cups, and biodegradable to-go containers (Ryan, 2010). Szuchnicki (2009) stated organic uniforms are now available for purchase. These sustainable products are available, but often cost more (Ryan, 2010). However, restaurateurs can pass the cost on to customers who are willing to pay more for these items (Ryan, 2010).

Waste Reduction

The fact that restaurant operations produce a large amount of food waste, most of which is still usable, highlights a need for green practices to manage waste (Ma & Ghiselli, 2016). Reducing waste through source reduction or diversion has social, economic, and environmental impacts, such as feeding people without access to enough food, reducing operational costs, and decreasing greenhouse gases (Rethink Food Waste Through Economics and Data, 2016). In addition to lessening environmental impact, waste diverted from the landfill can reduce dumpster size requirements and frequency of pickups, which can decrease monthly waste disposal fees by approximately one-third (Bean, 2009; Waste Management, 2017). Recycling programs can divert waste from the landfill, reduce purchasing quantities, and even increase sales. Products such as cardboard, metal, plastic, glass, mixed paper, ink cartridges, and grease can and should be recycled instead of thrown away (Boutique Design, 2008). Restaurant grease waste can be sold and converted to biodiesel, making a profit for the operation (Canakci, 2005). Other waste diversion strategies include donating food items to shelters, composting, and donating or selling food waste to be used as animal feed (Iaquinto, 2014).

While recycling programs divert waste from landfills, source reduction is the preferred method of waste reduction (U.S. Environmental Protection Agency, 2017b), because it prevents materials from entering the waste stream (Rethink Food Waste Through Economics and Data, 2016). Strategies related to source reduction include: planning menus that utilize the entire food item including edible trimmings, using methods to ensure entire quantities of items in packages that are inconvenient to extract are removed before throwing out packaging, measuring chemicals to ensure standardization of cleaning solutions (Ma & Ghiselli, 2016), purchasing sufficient inventory stocks, and monitoring expiration dates of stock (Wang et al., 2013). Waste

management is essential in saving natural resources, conserving energy and water, and reducing pollution (U.S. Environmental Protection Agency, 2017b).

Water Efficiency

Water conservation and efficiency provides financial and environmental benefits for restaurant operators through decreased operating costs (Ma & Ghiselli, 2016). Dziegielewski et al. (2000) estimated that an average of six to nine gallons of water per meal is needed for food production. Strategies to conserve water and reduce sewer charges include: using water-efficient landscaping techniques to irrigate (Boutique Design, 2008; Commercial Kitchens, 2011), using water filtration systems to filter and reuse water (Bean, 2009), collecting rain and gray water for reuse (Wang et al, 2013) and using water-efficient equipment (Jeong, Jang, & Ha, 2014). Specific water-efficient equipment for restaurant operations include door-style dishwashers, pre-rinse spray valves, connectionless steamers (Williams, 2008), smaller rack machines, water-rationing systems, smart ice machines (Bean, 2009), and dual flush toilets (Iaquinto, 2014). Another example of water efficient equipment is waterless urinals, which can save restaurant operators 40,000 gallons of water a year (Rowe, 2009). An additional strategy for cost-savings is to track water usage. Changes in water bills or excessive water usage can alert operators to problems such as leaks. By simply fixing a slow dripping faucet, an operator can save approximately $1,200 a year (Rowe, 2009).

Impact of Green Practices

The restaurant industry has ample opportunity to remain active in environmentalism through sustainable building and purchasing, energy and water efficiency, and waste reduction (Ma & Ghiselli, 2016). According to Kwok, Huang, and Hu (2016), there is an increase in demand among hospitality consumers for eco-friendly products and services. This demand

allows many operators to gain financial benefits, along with improved environmental image through reduced operating costs and improved customer loyalty (DiPietro, Cao, & Partlow, 2013).

As a result of this green shift in the industry, environmentalism research has increased dramatically over the past 20 years (Myung, McClaren, & Li, 2012). Various research has been conducted investigating the financial, social, and environmental benefits of green practices for restaurant operations (DiPietro et al., 2013). However, studies are heavily focused on customer opinions and purchase intentions including perceptions of important green practices, intention to visit restaurants with green practices, perception of green brand image, and willingness to pay more for green practices (Dipietro et al., 2013; DiPietro & Gregory, 2012; Jang et al., 2011; Namkung & Jang, 2013; Szuchnicki, 2009; Wang, 2012).

According to Szuchnicki (2009), green practices in restaurants are important to customers. Through an online survey, 413 U.S. family/casual dining restaurant customers rated the importance of various green practices as well as their intention to return to green restaurants. The most important green practices reported by customers were recycling throughout the entire restaurant, using non-toxic chemical cleaners, and having automatic faucets. However, customers reported their intention to revisit a family/casual dining restaurant was positively influenced by specific green practices: using motion sensors, low-flow toilets, automatic faucets, and goods made from recycled materials. Therefore, the implementation of various green practices is a strategy to increase customer retention and sales, because according to Szuchnicki (2009), customers want restaurants to engage in environmental sustainability and understand their impact on the environment.

Wang (2012) also identified specific green practices that are important to restaurant customers. A total of 326 Starbucks customers in Taiwan completed a questionnaire while waiting in line or dining in the restaurant. Customers categorized green practices in restaurants by level of importance and satisfaction (Wang 2012). The most important green practices identified by customers that also provided a competitive advantage for the operation included: using systems to monitor temperatures; using green cleaners for dishes, linen, tables, and floors; using biodegradable or recyclable take-out containers; and offering organic, non-genetically modified, and sustainably sourced and harvested food products (Wang, 2012). By implementing these green practices, restaurant operators can influence customer satisfaction with little investment.

While green practices are important to some customers (Szuchnicki 2009; Wang, 2012), they are not the top attributes considered when customers select a restaurant (DiPietro et al., 2013). Sampled customers in upscale buffet restaurant customers were asked to complete an online survey measuring their perception and purchase intention related to green practices. Customers (n=600) identified influential attributes in selecting an upscale restaurant and green practices they perceived as important that restaurant operators should employ. The most important attributes are food and service quality, followed by price. While green practices were not ranked as one of the top three attributes influencing restaurant selection, customers did rank the use of local products as the fifth attribute influencing restaurant selection. Furthermore, customers perceived green initiatives, such as the use of local products, the operation having an environmental record, and the existence of a recycling program as important (DiPietro et al., 2013).

Jang et al. (2011) explored customers' food-related lifestyles, restaurant selection attributes, and customer behavioral intention among Generation Y customers on a university campus in Southeastern United States. A total of 322 undergraduate and graduate students completed the on-site survey (Jang et al., 2011). Four segments of students were identified according to their food-related lifestyles: adventurous, convenience-oriented, health-conscious, and unconcerned consumers. Among the four segments two displayed characteristics that might appeal to green restaurant operators: health-conscious and adventurous consumers. Health-conscious consumers were described as pursuing a healthy lifestyle while, adventurous consumers were described as shoppers looking for new meals. Jang et al. (2011) stated green restaurant operators should target these specific consumer segments of Generation Y, because these segments are more likely to pay premium prices for green practices. Other results indicated that among students who had never visited a green restaurant (n=202), 52.1% reported having no knowledge about green restaurants as a reason for not visiting green restaurants. Furthermore, of the students who had dined in green restaurants (n=117), 61.5% stated they only visit green restaurant sometimes. These results indicate green restaurants have unique marketing opportunities with Generation Y consumers.

Namkung and Jang (2013) also explored purchase intention, perceived quality, and perception of green restaurants' brand equity formation among 512 U.S. restaurant customers. The survey included a scenario-based, between-groups experiment design where comparisons of customer perception of quality, green brand image, and behavioral intention were made across three manipulated scenarios (green practices related to food, green practices related to the environment, and no green practices). Results indicated that green practices do not influence the perceived quality for U.S. customers. However, customers can recognize the green brand image

in restaurants with green practices. The results indicated that environmentally concerned guests are influenced by green practices. These guests reported higher intention to visit restaurant operations with green practices (Namkung & Jang, 2013).

In addition to increasing customer visit intention, restaurant operators can increase revenue with green practices. For example, Schubert et al. (2010) reported that 65.3% of respondents were willing to pay up to 10% more for green practices. Questionnaire data were collected on-site from 455 customers in five Columbus, Ohio restaurants over a four-week period. The majority (70.8%) of respondents believed that dining in green restaurants assists in environmental protection. Subsequently, 85.6% of respondents were willing to pay more for green practices, with 20.3% of these respondents willing to pay 10% more (Schubert et al., 2010). However, most (68.2%) respondents believed dining in green restaurants would cost more. Among open-ended comments, respondents were in favor of restaurants going green, as long as they continue to provide equivalent quality and service as non-green restaurants. Respondents also reported green restaurant operations should market the sustainability initiatives to encourage customer visit intention (Schubert et al., 2010). Therefore, customers would visit green restaurants and are willing to pay more for green practices which increase restaurant operation revenues.

However, DiPietro and Gregory (2012) stated that customers, on average, were only willing to pay up to 1% more for green practices and products and only if quality was not reduced. Data were collected from a total of 761 customers in upscale restaurants (n=501) and fast food restaurants (n=260). Upscale and fast food customers identified quality of food and service as the most important attributes when selecting a restaurant. The existence of an environmental record and recycling bins were significantly more important for upscale

customers than fast food customers (DiPietro & Gregory, 2012). Additionally, upscale customers preferred restaurants to use locally sourced and organic products, when possible, which was significantly more important than fast food customers. Fast food customers reported they could learn more about green activities significantly more often than upscale customers (DiPietro & Gregory, 2012).

In addition to the willingness of customers to pay more for green practices, restaurant leaders need to be willing to charge more for green practices. Choi and Parsa (2006) explored restaurant managers' attitudes of, preferences toward, involvement with, and willingness to charge more for green practices. A total of 167 U.S. restaurant managers completed a 44-item questionnaire. Restaurant managers who are highly involved in environmentalism (support green supplies, keep informed on environmentalism, and enjoy environmentalism) are 5.2 times more willing to raise prices for green practices up to 6% and 6.09 times more willing to raise prices for green practices more than 6% (Choi & Parsa, 2006). These results indicate that the more environmentally friendly managers are, the more profitable a restaurant operation can become with the right set of customers and increased menu prices (Choi & Parsa, 2006).

Various green practices exist to assist restaurant operators in energy and water conservation, pollution and waste reduction management, and sustainable building and purchasing policies. By implementing green practices, restaurant operators gain an improved environmental image, reduce operating costs, increase revenue, and improve customer loyalty. However, to maintain environmental programs and continue to achieve these benefits, restaurant operations need employee support and buy-in. Exploration into how to achieve restaurant employee buy-in of environmental programs is needed. A paucity of research related to the

assessment and understanding of pro-environmental behaviors of employees in the restaurant industry exists.

Environmental Sustainability Programs

Various research has identified several factors impacting the success of sustainability programs (Daily & Huang, 2001; Goodman, 2000; Scanlon, 2007; Zutshi & Sohal, 2004). For example, Scanlon (2007) reported common features of an effective environmental program include: environmental education, evidence of cost-saving, commitment from management, and community well-being outcomes. Daily and Huang (2001) identified human resource strategies, such as top management support, training, employee empowerment, teamwork, and reward programs, that positively impact environmental sustainability programs. Another essential element of successful environmental programs is attracting and maintaining customers and employees who support sustainability (Goodman, 2000). Zutshi and Sohal (2004) identified critical success factors of adopting and maintaining environmental management systems, such as management leadership, motivation of employees, cultural change, and appointment of an environmental champion. The importance of employee behavior is highlighted among these various factors. By understanding employee environmental behavior, firms may improve environmental sustainability programs by increasing commitment, empowerment, and teamwork (Thiralaway, Piercy, & Brandon-Jones, 2015).

Bamberg and Moser (2007) explored psycho-social determinants of pro-environmental behavior through a meta-analysis with 57 samples in studies published from 1995-2006. A pooled correlation was found between pro-environmental behavior and various psycho-social variables such as problem awareness, attribution, social norm, guilt, perceived behavioral control, attitude, moral norm, and intention. Additionally, pro-environmental behaviors have

been linked to three triggers: environmental knowledge, environmental awareness, and environmental concern (Chan, Hon, Chan, & Okumus, 2014). Cegarra-Navarro, Martinez-Martinez, Gutierrez, and Rodriguez (2013) presented a novel idea which stated an unlearning context among employees is needed to promote sustainability initiatives. This implies that employees should be motivated to adjust or update their beliefs and habits in order to continuously improve their environmental knowledge and behavior (Cegarra-Navarro et al., 2013). In order to increase environmental knowledge and motivate pro-environmental behavior of employees, individual views and habits of the employees performing the green practices should be considered when developing sustainability initiatives. This allows individuals in the operation to remain up-to-date on environmental ideas and practices and motivate a culture change throughout the operation (Cegarra-Navarro et al., 2013). Therefore, this study identifies individual views through exploring employees' environmental attitudes and behaviors and personality. By exploring personality traits, a deeper understanding of the individual is achieved.

As stated by Zutshi and Sohal (2004), the appointment of an environmental champion is paramount in the success of an environmental sustainability program. These individuals are typically viewed as leaders who inspire environmental change (Peredo & McLean, 2006). To appoint effective environmental champions, operators must understand these individuals. According to Taylor, Cocklin, and Brown (2012), one key aspect of fostering effective environmental champions is to identify important attributes of the individual such as personality traits.

Environmental values of employees are naturally diverse within an organization, which may result in contradictory behavior of employee to the business values (Onkila, 2017). These differences could indicate that employees working in green restaurant operations may have

different environmental values than employees working in non-green restaurant operations. According to Onkila (2017), these differences among employees need to be explored in order to unite the culture and achieve corporate environmentalism. Personality is the pattern in which an individual behaves, feels, and thinks (American Psychological Association, 2017). Personality traits influence almost every aspect one's daily life (Enimons, 1991). By exploring personality traits, this study can examine the individual factors that motivate environmental behavior (Markowitz et al., 2013) and help define the pro-environmental restaurant employee. While environmental attitudes can predict environmental behaviors, environmental attitudes have been reported as a mediator between personality and behavior (Brick & Lewis, 2014; Conner & Abraham; 2001). Therefore, a thorough understanding pro-environmental behavior requires exploration of individual characteristics preceding environmental attitude, such as exploration of personality (Chan et al., 2014; Onkila, 2017).

Personality

Personality research dates to 1932 when McDougall (1932) indicated personality can be distinguished into five factors: character, temper, temperament, disposition, and intellect. Allport and Odbert (1936) identified nearly 18,000 words in the English language that described personality and behavior. These words were classified into one of four categories. The first category included terms of personality traits such as aggressive and sociable. The second category contained terms related to mood and emotional state such as frantic and rejoicing. The third encompassed terms related to evaluation of one's character such as insignificant and worthy. The fourth category, labeled miscellaneous, contained terms that describe personality that did not fit in any other column such as crazed and gifted. Norman (1963) amended these factors to illustrate that the personality lexicon includes several concepts including: stable traits,

social effects, evaluative terms, physical terms, temporary states, activities, and social roles. Research attempting to classify and reduce personality terms into categories is still prominent today.

The Five Factors of Personality

Personality dimensions and categories of personality have been presented in various forms. The formation and clarification of the Big Five dimensions, or the Five Factor Model, can be attributed to several researchers (Digman, 1990; Fiske, 1949; Goldberg, 1990; McCrae & Costa, 1987; Norman, 1963; Tupes and Christal, 1958). Cattell (1943, 1956) reduced personality trait terms to 35 variables. These 35 variables were eventually classified into sixteen factors of personality and resulted in the 16 Personality Factors questionnaire (Cattell, Eber, & Tatsuoka, 1970). Fiske (1949) reduced Cattell's variables down to 22 variables and found five recurring factors: social adaptability, emotional control, conformity, inquiring intellect, and confident self-expression. Tupes and Christal (1958) reanalyzed Cattell's work categorizing the variables into five factors: surgency, agreeableness, dependability, emotional stability, and culture. Based on the work of Fiske (1949) and Tupes and Christal (1958), a consensus among Norman (1963), Borgatta (1964), and Digman and Takemoto-Chock (1981) was made about the existence of five dimensions of personality.

The first factor has been referred to as extraversion, introversion, or surgency (McCrae & Costa, 1987; Norman, 1963). This factor is generally agreed upon as having traits related to being friendly, outgoing, assertive, loquacious, and energetic (McCrae & Costa, 1987; Norman, 1963). The second factor has a few names including: agreeableness, likability, or social conformity (Fiske, 1949; Goldberg, 1990; McCrae & Costa, 1987; Norman, 1963). This factor is generally agreed upon as having traits linked to being polite, flexible, trusting, agreeable,

accommodating, compassionate, soft-hearted, and understanding (Fiske, 1949; Goldberg, 1990; McCrae & Costa, 1987; Norman, 1963). The third factor has several names including: neuroticism, emotional stability, stability, or emotionality (McCrae & Costa, 1987; Norman, 1963). This factor is generally agreed upon as having traits related to being anxious, unhappy, angry, humiliated, emotional, concerned, and timid (McCrae & Costa, 1987; Norman, 1963). The fourth factor has been referred to as openness to experience, intellect, intelligence, and culture (Goldberg, 1990; McCrae & Costa, 1987; Norman, 1963; Digman, 1990). This factor is generally agreed upon having traits related to being creative, well-educated, inquisitive, innovative, open-minded, intelligent, and creatively sensitive (Goldberg, 1990; McCrae & Costa, 1987; Norman, 1963; Digman, 1990). The fifth factor has several names including: conscientiousness, conscience, conformity, or dependability (Fiske, 1949; McCrae & Costa, 1987; Norman, 1963). This factor is generally agreed upon having traits linked to being trustworthy, cautious, detailed, responsible, organized, hardworking, and determined (Fiske, 1949; McCrae & Costa, 1987; Norman, 1963). In this study, the five factors of personality will be referred as extroversion, agreeableness, neuroticism, openness, and conscientiousness as stated by (McCrae & Costa, 1987). Goldberg (1990) coined the phrase "Big Five" for these five factors known in the five-factor model. These independent dimensions provide a taxonomy that allow research of individual differences and represent the variability in one's personality (Barrick & Mount, 1991). The Five Factor Model has developed over years of research into a theoretical structure (Digman, 1990).

Five-Factor Theory

The Five-Factor Theory identifies components to explain how personality functions at a given time (McCrae & Costa, 2008). It designates personality development and its evolution

over one's lifespan. According to McCrae and Costa (2008), the core components of the theory include basic tendencies, characteristic adaptations, and self-concept. These core components are combined with adjoining systems of biological bases, external influences, and objective biography. Through dynamic processes, all components are interrelated (McCrae & Costa, 2008).

Basic tendencies are the overall five factor dimensions of personality: neuroticism, extraversion, openness, agreeableness, and conscientiousness (McCrae & Costa, 2008). These traits are generally inferred from behavior and experience. Basic tendencies are individual, originate from biology, develop as one matures, only altered by processes that affect biological bases, and hierarchically (McCrae & Costa, 2008).

Characteristic adaptations are referred to as one's expressions of the five factor dimensions including one's beliefs, attitudes, habits, skills, and relationships (McCrae & Costa, 2008). The adaptations are formed as people adapt to the environment. While they mirror the core of the individual, they allow the individual to fit in as environments change. It was proposed that characteristic adaptations are reactions to the environment which are consistent to their personality traits but, may change over time due to biology, social roles, or life events. These adaptations on occasion may not align with social norms or personal values (maladjustment). The main difference between basic tendencies and characteristic adaptations is that basic tendencies are relatively fixed and stable, while characteristic adaptations can vary with the environment (McCrae & Costa, 2008).

Self-concept, although known as a characteristic adaptation, is identified as a core component of the theory because it is an essential and important adaptation (McCrae & Costa, 2008). Self-concept is referred to as the belief one has for oneself including knowledge and

views of one's identity. Self-concept is a characteristic adaptation that influences one's behavior. Self-concept is the view one has of themselves which is consistent with personality traits and represent the individual. The core components of the theory (basic tendencies, characteristic adaptations, and self-concept) are influenced by peripheral components: biological bases, objective biography, and external influences (McCrae & Costa, 2008).

According to McCrae and Costa (2008), biological bases, such as genetics, hormones, and biological structures, are the sole direct influence on basic tendencies, with the individual's environment having no direct influence. Objective biography is one's behavior and experience over their lifespan and includes the complex actions and experiences consistent with personality traits (McCrae & Costa, 2008). External influences are the social situations or life events that influence the personality system (McCrae & Costa, 2003). According to McCrae and Costa (2008) external influences interact with personality traits guiding behavior through characteristic adaptations. The way one views the environment is consistent with their personality traits and in turn influence their environment (McCrae & Costa, 2008).

The last element is dynamic processes which refer to pathways of distinct processes revealing the interaction between personality components (McCrae & Costa, 2008). Dynamic processes represent all relationships and variables impacting personality traits (McCrae & Costa, 2008). These dynamic processes present a better understanding of the Five-Factor Theory.

To summarize personality traits, solely influenced by biology, are guided through one's beliefs, attitudes, and goals (characteristic adaptations). These characteristic adaptations interact with life events and situations, both social and physical (external influences), causing one's behavior and reaction over a lifespan (objective biography) (Lockenhoff, Ironson, O'Cleirigh, & Costa, 2009). Based on the work of McCrae and Costa (2003, 2008), this study assumes that

personality traits are relatively stable and typically have matured within the first third of an individual's life. The Five-Factor Theory is used as a guide in this study to explore what restaurant employees are like and how they behave related to environmentalism.

The Relationship between Environmentalism and Personality

With personality traits being relatively stable and influencing one's behavior and attitude, differences in personality could indicate that appeals for pro-environmental behavior need to be tailored for different people. In the last decade, the link between personality traits and environmentalism has become a popular topic in academic literature. Several scholars have stated that personality traits are strongly related to pro-environmentalism behaviors and attitudes (Brick & Lewis, 2014; Hirsh, 2010; Hirsh & Dolderman, 2007; Markowitz et al., 2012; Milfont & Sibley, 2012).

Hirsh and Dolderman (2007) explored the relationship between personality, consumerism, and environmentalism. Data were collected from 106 University of Toronto undergraduate students to measure environmental concern, personal connection to the environment, perceived value of material possessions and wealth, behavioral intentions, and personality traits. To measure environmental concern, the 15-item New Ecological Paradigm (Dunlap & Van Liere, 1978) was used. Personal connection to the environment was measured with the 26-item Ecological Self Scale (Hirsh & Dolderman, 2007). To measure perceived value of material possessions and wealth, the 18-item Consumer Values Orientation Scale (Richins & Dawson, 1992) was used. Personality traits were measured with the 44-item Big Five Inventory (John & Srivastava, 1999). Participants also reported their behavioral intentions for 40 goals. Using responses from the New Ecological Paradigm, Ecological Self Scale, and pro-environmental behavior goals, the component environmentalism was measured. Overall, the

personality traits agreeableness and openness were reported as having significant positive relationships with environmentalism (Hirsh & Dolderman, 2007). Agreeableness and openness were also the only personality traits reported as independently predicting environmentalism. As for the relationship between consumerism and personality, the only personality trait significantly associated with consumerism reported was agreeableness (Hirsh & Dolderman, 2007).

Markowitz et al., (2012) explored the relationship between personality and pro-environmental action through two studies. In the first study, data were analyzed from 778 members of the Eugene-Springfield Community Sample (a longitudinal mail survey study). To measure personality, responses from four personality inventories were used: Revised NEO Personality Inventory (Costa & McCrae, 1992), HEXACO Personality Inventory (Lee & Ashton, 2004), Six Factor Personality Questionnaire (Jackson, Paunonen, & Tremblay, 2000), and the Big Five Inventory (John, Donahue, & Kentle, 1991). To measure environmental behavior, the nine-item Environmental Practices Scale (Markowitz et al., 2012) was used. The most frequently performed environmental practices were recycling, using both sides of the paper before discarding, and picking up litter after others. Results from the first study indicated that openness to experience was the only personality trait that was strongly associated with environmental behavior. The purpose of the second study was to authenticate the results of the first study. Survey data from 115 undergraduate students at a Northwestern U.S. university were collected. Measurements were modified to capture a better understanding of environmental behavior. To measure environmental behavior, three scales were used: the 15-item New Ecological Paradigm (Dunlap et al, 2000), the 14-item Connectedness to Nature Scale (Mayer & Frantz, 2004), and the 24-item Student Environmental Behavior Scale (Markowitz, 2012). In the second study, only one inventory was used to measure personality, the Big Five Inventory (John

et al., 1991). The results of the second study were consistent with results from the first, in that openness to experience was the only personality trait reported that had a significant unique effect on environmental behavior. Therefore, overall Markowitz et al. (2012) stated the personality trait openness to experience is a relatively strong predictor of pro-environmental behavior.

Milfont and Sibley (2012) explored the relationship between personality and environmental engagement through the analysis of data from three studies. The first study examined the relationship between personality and environmental value through analyzing data from the 2009 New Zealand Attitudes and Values Study. Data were analyzed from 6,507 participant responses of two measures: the Mini-IPIP (Donnellan, Oswald, Baird, & Lucas, 2006) for personality and a single-value item related to environmental protection from the Schwartz Value Survey (Schwartz, 1999). The results indicated that higher environmental value was significantly associated with higher agreeableness, conscientiousness, and openness and with lower neuroticism and extraversion. The second study examined the relationship between personality and self-reported electricity conservation behavior through the analyses of data from the 2008 Social Attitudes Survey. Data were analyzed from 377 New Zealand participant responses of two measures: the Ten-Item Personality Inventory (Gosling, Rentfrow, & Swann, 2003) for personality and 13 items related to previous electricity conserving behaviors. The results indicated that higher agreeableness, conscientiousness, and neuroticism were significantly associated with greater electricity conservation. Unlike the first study, in the second study, researchers reported no association between openness and environmental behavior. This discrepancy was reported as a possible result of the smaller sample size. The third study assessed the relationship between personality and environmental engagement across cultures using publicly available cross-cultural data. In the third study, researchers reported that greater

environmental concern was positively associated with a country's environmental performance. The results of the third study indicated that openness to experience and extroversion are the personality traits most associated with environmental engagement on a country-level. Milfont and Sibley (2012) stated that the main personality traits associated with environmental engagement across the three studies are openness to experience, conscientiousness, and agreeableness.

Brick and Lewis (2014) identify which personality traits are associated with pro-environmental behavior through online survey data from 345 U.S. adults. To measure personality, the 100-item HEXACO Personality Inventory (Lee & Ashton, 2004) was used. To measure environmental attitudes and values, the 15-item New Ecological Paradigm (Dunlap, Van Liere, Mertig, & Jones, 2000) was used. To measure environmental behavior, 15 behaviors related to individual greenhouse gas emission reducing behaviors. While all of the HEXACO personality traits, except emotionality, were associated with environmental behavior. The strongest predictors of environmental behavior were honesty-humility, extraversion, conscientiousness, and openness. The researchers reported that environmental attitude significantly mediates the associations between openness and environmental behavior and between consciousness and environmental behavior.

To examine the relationship between environmental concern and personality traits, Hirsh (2010) conducted a longitudinal study using survey data from 2690 German participants. Personality traits (Extraversion, Agreeableness, Conscientiousness, Openness to Experience, and Neuroticism) were measured using a shortened version of the Big Five Inventory which includes 15 items. Environmental concern was measured using three items related to environmental consciousness, importance of the environment, and concern for the environment. Environmental

concern was significantly predicted by the personality traits: agreeableness (β = 0.22), openness (β = 0.20), neuroticism (β = 0.16), and conscientiousness (β = 0.07). The results indicated that higher levels of environmental concern are demonstrated by individuals with high levels of agreeableness, openness, neuroticism, and/or conscientiousness.

These studies suggest that differences of individuals' personality impact pro-environmental behaviors. By understanding which personality traits predict pro-environmental behaviors, restaurant operators can predict which individuals may exhibit pro-environmental behaviors. This study will explore the personality traits of employees working in green restaurants to identify their link to environmentalism behaviors which will assist in identifying environmental champions. Environmental champions can further positively impact the environment by influencing other employees in the restaurant operation to promote and perform the green practices (Stern, 2000). These environmental champions serve as an advocate for environmentalism (Boks, 2006). By championing the green practices within the restaurant operation, these employees would likely raise awareness and morale of other employees which in turn would motivate pro-environmental behaviors.

Chapter 3 - Methods

The purpose of this study was to examine the relationship between, and impact of, personality traits on environmentalism of restaurant employees. Specific research questions included:

1) What are the relationships between and impact of the Big-Five personality traits and environmental attitude, personal conservation behaviors, and on-the-job environmental behaviors of restaurant employees, and
2) How do employees working in green certified and non-certified restaurants differ with regards to personality, environmental attitude, and environmental behaviors.

The following sections discuss the description of the population and sample, instrument development, data collection, and data analysis.

Population and Sample

The population for this study included non-managerial employees working in U.S. restaurant operations. Two groups of employees were surveyed: employees working in green certified and non-certified restaurants. Participants were required to meet the following criteria to be included in the study: 1) currently work as a non-managerial employee, 2) be 18 years old or older, and 3) speak and understand either English or Spanish with at least an eighth-grade reading level.

The Green Restaurant Association has certified over 200 foodservice operations in the U.S. (Green Restaurant Association, 2018). Restaurant operations with the Green Restaurant Association certification served as the source for employees working in green certified restaurant operations. The source for employees working in non-certified restaurant operations was determined by using an approximation of a matched sampling technique. A list of non-certified

restaurant operations was compiled using Google search engine to match green certified restaurants within the state based on the same service type such as fast food, quick casual, casual, or fine dining (Line, Runyan, & Costen, 2012). In the event more than one restaurant operation fit this criterion, non-certified restaurant operations were randomly chosen among them. The lists included the following information: restaurant name, service type, certification level (Level 1, 2-Star, 3-Star, 4-Star, or SustainaBuild), and restaurant contact information when available.

A total of 511 restaurant operations were included in this study. The aim of the study was to collect data from at least 178 participants with approximately half working in green certified restaurant operations and the other half working in restaurant operations with no green certification. According to computer software G*Power Version 3.1.9.2, a sample of this size would allow operation of regression analyses with a medium effect size with 95% power for the following predictors: restaurant type (working in green certified or non-certified restaurant operation), five personality traits, and environmental attitude and behaviors.

Instrument Development

The questionnaire was available both in paper-format and electronically. Questionnaires and consent information were translated into Spanish. The translation process included original translation by one individual, back-translation by another individual, and reconciliation by the researcher and one translator, as suggested by Brislin (1970). During the reconciliation process, any discrepancies were resolved based on discussion among the researcher and one translator (Koller et al., 2012).

Measurement items for the questionnaire were developed based on two sources: managers' responses from telephone interviews and previously developed and validated scales. The questionnaire included 95 items to address the following variables: on-the-job

environmental behavior, personal conservation behavior, environmental attitude, Big-Five personality factors, and demographic characteristics (Appendix A). Development of these measurement scales are discussed in the following section: Environmental Attitudes Inventory and Saucier's Mini-Markers (Milfont & Duckitt, 2007; 2010; Saucier, 1994).

Measurements

Variables in this study included personality and three aspects of environmentalism: environmental attitude, personal conservation behavior, and on-the-job environmental behavior. Measurements were sourced from literature and based on interviews with operators in green restaurants. Existing scales were chosen based content, number of items, and reliability.

On-the-Job Environmental Behavior

A structured, telephone interview was used to gather qualitative data from managers working in green certified restaurants to assist with questionnaire development. The data were used to develop specific questionnaire items to measure on-the-job environmental behavior.

Sample and Population

Certified green restaurant operations were randomly chosen from the list provided by the Green Restaurant Association. The goal was to target approximately eight managers to participate in telephone interviews. To qualify for the telephone interview, participants were required to currently work as a manager, supervisor, or operator in the specified restaurant; be knowledgeable about the sustainability initiatives of the operation; be 18 years old or older; and speak and understand English. These requirements were set to ensure the interviewee could provide useful information during the interview.

Interview Guide

Structured interviews were conducted to provide consistency among interviews and allow probing to gain more in-depth information. The interview guide included eight main questions with multiple probes for each question, if needed (Appendix B). The main questions were used to collect data related to policy and green practice procedures, specific green practices performed in the operation, sustainability initiative performance, and perception of and attitudes regarding green practices.

Data Collection Procedures

Managers were contacted through a scripted introductory telephone call requesting their participation in the interview (Appendix C). During the initial call, the researcher explained the project and scheduled the telephone interview, if applicable. All contact was recorded on a contact log (Appendix D).

The interview began with oral consent of participation in the study and consent to be audio-taped. Demographic interview questions pertaining to operation characteristics and manager demographics followed the consent process. The interview allowed managers to identify and describe the sustainability initiatives implemented in the restaurant operation where they work and lasted between 15-30 minutes for most managers. Interviews were audio-recorded and transcribed verbatim by the primary researcher. Data recordings and transcripts were stored on a password protected computer.

Data Analysis

Two independent analyses, by two separate researchers, were conducted for the manager interviews, both by hand and using NVIVO software. Because a researcher is a measurement tool within qualitative research, the researcher's perception can influence the analysis.

Therefore, the qualifications of the researchers within this study should be discussed. The two researchers were graduate research assistants with qualitative analysis experience. One researcher had intimate knowledge of the purpose of the study while, the other researcher had little knowledge. Furthermore, the second researcher had no experience with environmentalism research. These variances allowed two differing point-of-views for the interpretation of the qualitative analysis. An additional strength of the researchers was that both researchers had foodservice experience and understand the terminology used by restaurant staff and the restaurant environment.

An inductive analysis approach was conducted to condense raw text into a summarized format and identify themes related to current green practices within the restaurant industry and the perception of these green practices. The two researchers individually analyzed the data line-by-line. Collaboration among the researchers was completed to verify the identification, interpretation, and significance of themes, subthemes, and key phrases. Each individual interview was transcribed verbatim. During the analysis, coding for themes and subthemes were identified by locating and interpreting meaning of key phrases or statements. Once minimal agreement was reached, these themes and subthemes were used as the theme codebook within the NVIVO software. For both the hand-coded and software analyses, significant themes were identified by frequency as well as intensity. Specific quotes were highlighted for quick reference. Convergence of themes were categorized, and unique themes were identified. Inter-rater reliability, kappa 0.56, was minimally acceptable (Burla et al., 2008).

The green practices identified in the interviews were used to develop the 13 questionnaire items that measure employee on-the-job behavior for the main study. The questionnaire items address motivations for and behaviors related to performing green practices such as conserving

natural resources, composting, recycling, or repurposing. Responses for the items were on a seven-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree).

Personal Environmental Behavior

Various environmental attitude instruments have been developed to measure the connection between persons and nature to measure environmental attitude (Dunlap & Jones, 2002; Schultz, Shriver, Tabanico, and Khazian, 2004; Schultz and Tabanico, 2007). There are a number of studies that utilize techniques to measure self-reported environmental attitude (Corral-Verdugo, 1997). The Environmental Attitudes Inventory (EAI) gauges views regarding the environment using 120 items grouped into 12 specific subscales: enjoyment of nature, support for interventionist conservation policies, environmental movement activism, conservation motivated by anthropocentric concern, confidence in science and technology, environmental fragility, altering nature, personal conservation behavior, human dominance over nature, human utilization of nature, eco-centric concern, and support for population growth policies (Milfont & Duckitt, 2010). Each subscale is unidimensional and measures a facet of environmentalism (Milfont & Duckitt, 2010).

One subscale of the EAI is personal conservation behavior (Milfont & Duckitt, 2010). This subscale addresses personal daily behavior related to conservation and protection of the environment and its resources through 10 balanced items (five positively worded and five negatively worded) (Milfont & Duckitt, 2010). These 10 items were used to measure personal environmental behavior of the restaurant employees in this study. Responses for the items are measured on a 7-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree). Milfont and Duckitt (2010) reported results for the subscale indicate adequate reliability with a mean of 0.76 for alpha coefficients and a mean of 0.27 for inter-item correlations. This subscale

was selected due to its balanced content addressing conservation and protection of the environment, brevity, and adequate reliability.

Environmental Attitude

A brief version of the EAI containing 24 balanced items representing the 12 subscales was developed by Milfont and Duckitt (2007) and titled the EAI-24. In order to overcome the time constraint barrier and measure several aspects of environmental attitude, the brief version of the EAI was used to measure personal environmental attitude of the restaurant employees. Responses for the items are on a 7-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree) (Milfont & Duckitt, 2010). Reported results for the EAI-24 specify homogeneity and internal consistency for all EAI subscales with a mean of 0.81 for alpha coefficients and a mean of 0.23 for inter-item correlations (Milfont, 2009).

Personality

There are various instruments developed to measure the five-factor model of personality (Goldberg, 1992; McCrae, Costa, & Martin, 2005; Saucier, 1994). Saucier (1994) developed a short instrument for measuring the Big-Five personality traits. This short Big-Five marker set allows the primary researcher to administer a personality scale in less time with more understandable terms (Saucier, 1994). The Mini-Markers developed by Saucier (1994) include 40 marker terms: eight items for each Big-Five factor. Responses for each marker item are on a 9-point Likert scale, ranging from 1 (extremely inaccurate) to 9 (extremely accurate). Saucier (1994) reported results for the Mini-Markers indicate adequate reliability with a mean of 0.80 for alpha coefficients and a mean of 0.33 for inter-item correlations. By using Saucier's (1994) Mini-Markers, all five traits are measured without exhausting the participant.

Questionnaire Evaluation

A pilot study was conducted to evaluate data collection methods, response rate, evaluate reliability, and clarity of questions and directions. Prior to the actual pilot study, a panel of experts reviewed the questionnaire to establish face validity. Four experts were chosen based on their known experience with environmental practices, personality traits, the hospitality industry, and/or questionnaire development to collect feedback on the content and design of the questionnaire.

Criteria for participants in the pilot study included working as a non-managerial employee, being 18 years old or older, and speaking and understanding either English or Spanish with at least an eighth-grade reading level. During the pilot study, employees completed an initial version of the questionnaire and pilot study evaluation forms. Evaluation forms were used for employees to provide feedback on the clarity of questions and instructions in the survey (Appendix E).

A total of 26 questionnaires were returned during the pilot study (14 green certified and 12 non-certified). Data for the pilot study were collected using three methods: mailed questionnaires, online, and on-site. Initially, data were collected solely by mailed questionnaires and online. However, the response rate was low (seven completed questionnaires). Twelve randomly chosen restaurant operators (six green certified and six non-certified) agreed to distribute 240 questionnaires and post the online survey link for employees to see. Five of the 26 completed questionnaires were completed by mail (three green certified and two non-certified) and two were completed online (one green certified and one non-certified). The low response led to the addition of on-site data collection. Two cities were selected, based on location, to

collect on-site data from eight restaurant operations. Nineteen completed questionnaires were collected on-site (10 green certified and nine non-certified).

Data from the pilot study were entered in the Statistical Package for the Social Sciences (SPSS) version 24.0. Descriptive statistics were analyzed for frequencies, means, and standard deviations. Cronbach's alpha was used to ensure internal consistency and determine whether items would be removed.

Each Big-Five personality trait subscale consisted of eight items: agreeableness had questionable internal consistency ($\alpha = 0.59$), conscientiousness had a good internal consistency ($\alpha = 0.81$), extraversion had an excellent internal consistency ($\alpha = 0.93$), neuroticism had a good internal consistency ($\alpha = 0.79$), and openness had a good internal consistency ($\alpha = 0.82$). The variable environmental attitude consisted of 22 items and had an acceptable internal consistency ($\alpha = 0.77$). The variable personal conservation behavior consisted of 10 items and had an acceptable internal consistency ($\alpha = 0.75$). The variable on-the-job behavior consisted of 13 items and had an excellent internal consistency ($\alpha = 0.92$).

Except for agreeableness, all subscales were within or above the acceptable level; therefore, no items were removed (George and Mallery, 2003). No items were removed from the agreeableness subscale given the small sample size of the pilot study and previous literature supporting the items in the agreeableness subscale. In addition, results indicate that removing any one item would not improve the alpha. Results of the pilot study were used to modify the developed questionnaire and assess the feasibility and performance of the study design. Based on the pilot study, on-site data collection was added to the methods for the primary study.

Data Collection

After obtaining lists of restaurant operations (both certified green and non-certified), managers of the restaurants were contacted through a scripted introductory telephone call (Appendix F) to participate in the study. A maximum of three reminder calls were conducted within a month. All initial and reminder contact were recorded on a contact log (Appendix D).

An incentive was available for participants to complete the questionnaire. Participants were instructed to enter an email address and/or phone number for a chance to win one of five $15 gift cards or one $25 gift card to various companies. Data collection for this study was conducted using three methods: on-site, mailed questionnaires, and online.

On-Site Questionnaires

Selection of the 33 restaurant operations for on-site data collection was determined based on high concentration of green certified restaurants within a single location and the travel costs to the location. Seven cities were potential sites for on-site data collection: Asheville, NC, Boston, MA, Chicago, IL, Las Vegas, NV, New York, NY, Portland, OR, and Washington D.C. Two cities were chosen for on-site data collection: Chicago, IL and Las Vegas, NV. All 15 green certified restaurant operations within the cities were included. Eighteen non-certified restaurant operations were selected using the approximation of matched sampling technique described above within the same city.

Upon agreement from the operators that their employees could participate in the study, survey packets were mailed to the operation and a date for visitation was scheduled. The survey packet included questionnaires and a link for the online survey. Operators were instructed to distribute questionnaires among employees and post the online survey link.

The on-site visits to the cities ranged from three to four days. The researcher visited each operation for at least one hour and a maximum of three hours. Typical on-site collection periods were during slow production periods for the operation including: before opening, before lunch rushes, afternoons between 2-5pm, after dinner rushes, or after closing. During the on-site visit, the researcher collected previously completed questionnaires in-person. These questionnaires were in sealed envelopes. In addition, the primary researcher collected questionnaires completed by employees on-site, both paper versions and online versions via tablets provided by the researcher. During this collection, the researcher typically sat at a table in the dining room. Employees either completed the questionnaire at the same table as the researcher or completed elsewhere in the restaurant.

Mailed Questionnaires

Of the remaining green certified restaurant operations, 13 randomly selected restaurant operators agreed to distribute questionnaires to employees and post the online survey link for employees to see. After using an approximation of the matched sampling technique, fifteen non-certified restaurant operators agreed to distribute questionnaires to employees and post the online survey link for employees to see. A total of 450 questionnaires were mailed to managers or operators.

Upon agreement from the operators to participate in the study, survey packets were mailed to the operation. The survey packet included an introductory letter, questionnaires, and a link for the online survey. Within the introductory letter (Appendix G), operators were instructed to distribute questionnaires with attached postage paid return envelopes to employees and post the online survey link in view of employees.

Online Questionnaires

To increase participation without increasing research costs, postcards with the online survey link were mailed to the remaining 248 green certified restaurant operations (Appendix H). Using an approximation of the matched sampling technique, postcards were sent to 202 non-certified restaurant operations inviting employees to complete the questionnaire.

Data Analysis

After data collection, data were entered into SPSS 24.0. Descriptive statistics were analyzed for frequencies, means, and standard deviations. Demographic profiles for the participants were developed based on descriptive statistics. Three separate independent samples t-tests were conducted to compare employees working in restaurants with green certification and employees working in restaurants without green certification in relation to their personality traits, environmental attitude, and environmental behavior. Two separate simultaneous multiple regression analyses were used to examine the relationship among the independent variable (personality traits) and dependent variables (environmental attitude and environmental behavior). Hierarchical multiple regressions were used to test the main effects of two predictors (the standardized score of personality traits and whether the employee works in a restaurant with a green certification or not) and their interaction on environmental attitude of restaurant employees. Additional hierarchical multiple regressions were used to test the main effects of two predictors (the standardized score of personality traits and whether the employee works in a restaurant with a green certification or not) and their interaction on environmental behavior of restaurant employees. Simple slope analyses were conducted to probe significant interactions.

Chapter 4 - Results

The purpose of this study was to examine the relationship between and impact of personality traits on environmentalism of restaurant employees. Specifically, the research questions asked were 1) What are the relationships between and impact of the Big-Five personality traits and environmental attitude, personal conservation behaviors, and on-the-job environmental behaviors of restaurant employees, and 2) How do employees working in green certified and non-certified restaurants differ with regards to personality, environmental attitude, and environmental behaviors.

On-the-Job Environmental Behavior Interview Results

Participants

A total of eight interviews with nine participants were conducted and analyzed. Participants included owners, general managers, directors, and a project coordinator. These participants managed a total of 24 restaurant operations including multiple service types: fast casual, casual dining, fine dining, buffet, and catering. Among these operations, the majority (58.3%) had been in operation more than 20 years but most (81.0%) have had green certifications for six to 10 years. Various themes were identified during the analysis within each of the areas: current green practices performed, challenges and benefits related to implementing and maintaining green practices, and employee reaction to these green practices.

Sustainability Initiatives

Current green practices implemented in the restaurants included practices related to energy and water conservation, waste reduction and diversion, and purchasing. Energy conservation practices mentioned by participants included the use of solar panels, energy star appliances, energy-efficient lightbulbs, programmable thermostats, and solar powered

appliances. Water conservation practices identified included the use of water-efficient fixtures, low-flow faucets, and automatic sensors. Waste reduction and diversion practices included composting, recycling, repurposing products to divert them from the landfill, and offering items such as lemons, water, and straws on request. These waste reduction and diversion practices were the majority of practices mentioned that include employee involvement. Other practices included purchasing practices such as humanely and sustainably raised food items from local sources or on-site gardens and compostable, biodegradable paper and to-go products. Harvesting crops from on-site gardens was also mentioned as a practice involving employees.

Challenges and Benefits of Sustainability Initiatives

Several challenges were identified during the interviews. Operators mentioned maintaining consistency among sustainability programs and ensuring employees follow green practices as hurdles related to green practices. The most frequently mentioned challenge was training and educating employees and customers. However, various benefits were mentioned by the participants. These benefits included an overall increase in employee and guest satisfaction, increased employee retention, positive marketing opportunities, a sense of pride in improving the environment, and a positive sustainability culture within the work environment.

Employee Perception of Sustainability Initiatives

Overall, perception of employee reaction to sustainability initiatives was positive. Participants noted comments from the employees of satisfaction and pride that they are employed in restaurants whose leaders care about the environment. The perception of employee reaction was described as supportive and happy. Participants noted the most frequently mentioned complaint from employees was the extra steps and occasionally extra time that

ensuring waste was sorted correctly required. However, the majority of participants conveyed that the restaurant culture was positive and sustainability-driven.

Primary Study

A total of 251 questionnaires were returned. Sixteen questionnaires had more than ten answers missing and six questionnaires had patterned responses, such as answers were all ones or sevens; all were removed from the dataset. Therefore, a total of 229 usable questionnaires were included for analysis. This is a low response rate considering 511 restaurant operations were included in the sample. Of these 229 usable questionnaires, 73 were completed on-site in written form, 17 questionnaires were completed on-site electronically, 82 written questionnaires were completed and returned by U.S. mail, and 57 questionnaires were completed electronically using the questionnaire link provided.

One-way ANOVAs were conducted using the effect of survey methods (on-site, mailed, or online) on environmentalism variables (environmental attitude, personal conservation behavior, and on-the-job environmental behavior) and personality traits (agreeableness, conscientiousness, extraversion, neuroticism, and openness). For environmental attitude, no significant difference was found between group means, $F(2, 228) = 0.48$, $p = .62$.

For personal conservation behavior, a one-way ANOVA concluded there is at least one difference between survey method group means, $F(2, 225) = 4.93$, $p = .01$. A post-hoc multiple comparison Bonferroni test indicated that personal conservation behavior was significantly higher ($p = .01$) for the online survey method (M = 4.80, SD = 0.84) than the on-site survey method (M = 3.85, SD = 1.94). Personal conservation behavior did not significantly differ between the mailed survey method with on-site or online survey methods ($p > .05$).

For on-the-job environmental behavior, a one-way ANOVA concluded there is at least one difference between survey method group means, $F(2, 228) = 3.37$, $p = .04$. A post-hoc multiple comparison Bonferroni test indicated that on-the-job environmental behavior was significantly higher ($p = .03$) for the online survey method (M = 4.61, SD = 1.22) than the on-site survey method (M = 4.04, SD = 1.34). On-the-job environmental behavior did not significantly differ between the mailed survey method with on-site or online survey methods ($p > .05$).

Participants

Respondent characteristics are presented in Table 1. An approximately equal number of employees working in green certified restaurants (47.58%) and non-certified restaurants (52.42%) participated in the study. Of the 227 responses, males accounted for 49.34% of respondents, while 2.20% of respondents answered "other". Due to the small number of "other" responses, the category was excluded from further analyses. The age of respondents ranged from 18 to 66 years old. Respondents with some college education accounted for 28.19% while respondents with a Bachelor's degree accounted for 24.23%. Respondents worked in various positions within the restaurant operations with the majority (61.67%) of respondents working in the front of house. The majority (58.52%) of participants worked in casual or family style dining operations. One-way ANOVA analyses indicated no significant differences ($p > .05$) were found between service styles for environmental attitude, personal conservation behavior, and on-the-job environmental behavior.

Table 1. Participant Characteristics

Characteristic	N	%	Characteristic	N	%
Restaurant Operation			***Tenure in Foodservice Industry***		
Green certified	108	47.58	Less than 1 year	10	4.41
Non-certified	119	52.42	1-5 years	117	51.54
			6-10 years	66	29.07
Service Style			11-15 years	21	9.25
Fast food	9	3.93	16-20 years	7	3.08
Fast casual	11	4.80	More than 20 years	8	3.52
Casual/Family	134	58.52			
Fine dining	65	28.38	***Tenure in Current Position***		
Buffet	10	4.37	Less than 1 year	28	12.33
			1-3 years	130	57.27
Gender			4-6 years	38	16.74
Male	112	49.34	7-9 years	13	5.73
Female	110	48.46	10 years or more	20	8.81
Other	5	2.20			
			Position Title		
Age			Server	68	29.95
18-24 years old	89	39.21	Cook/ Chef	49	21.59
25-29 years old	57	25.11	Bartender	29	12.78
30-34 years old	39	17.18	Host	24	10.57
35-39 years old	15	6.61	Shift leader/ Supervisor	17	7.49
40-44 years old	12	5.29	Cashier/ To-go	10	4.41
45-49 years old	3	1.32	Dishwasher	9	3.96
50 years old and above	14	6.17	Multiple FOH positions	11	4.41
			Multiple BOH positions	6	2.64
Education Level			Multiple positions	6	2.64
Some high school	15	6.61			
High school degree	37	16.30	***Primary Work Area***		
Some college	64	28.19	Front-of-House	140	61.67
Associate's degree	37	16.30	Back-of-House	57	25.11
Bachelor's degree	55	24.23	Both	31	13.65
Some grad school	9	3.96			
Master's degree	10	4.41	***Employment Status***		
Doctoral degree	2	0.88	Full-time	169	74.45
			Part-time	60	26.43
Marital Status					
Single	143	62.4	***Care for Children***		
Married	60	26.2	No	156	68.72
Divorced	16	7.0	Yes	73	32.16
Widowed	8	3.5			
Separated	2	0.9			

Descriptive Statistics, Normality, and Reliability

The overall means for environmentalism included the following: environmental attitude, M = 4.08 ± 1.59; personal conservation behavior, M = 4.20 ± 1.80; and on-the-job environmental behavior, M = 4.26 ± 1.30. Means and standard deviations for all items within the environmentalism variables (environmental attitude, personal conservation behavior, and on-the-job environmental behavior) are presented in Table 2. The overall means for personality included the following: agreeableness, M = 5.27 ± 2.10; conscientiousness, M = 5.52 ± 2.26; extraversion, M = 5.27 ± 2.10; neuroticism, M = 5.23 ± 1.98; and openness, M = 5.56 ± 2.18. Means and standard deviations for all items of personality traits are presented in Table 3.

Table 2. Means and Standard Deviations for Environmentalism Items

	Overall	
Items	**Mean**	**SD**
On-the-Job Environmental Behavior	4.26	1.30
I perform green practices at work to avoid getting trouble.	4.97	1.97
I perform green practices at work because they are part of my job.	4.66	2.17
I perform green practices at work because other employees encourage me to.	4.49	2.29
While at work, I perform green practices because doing so gives me a sense of pride.	4.35	2.40
While at work, I perform green practices because it makes me feel good.	4.33	2.43
While at work, I perform green practices because I care about the environment.	4.30	2.35
At work, I recycle all packaging materials.	4.25	2.39
At work, I try to avoid items going into the trash by reusing or repurposing them whenever possible.	4.20	2.31
I compost all food waste while at work.	4.07	2.33
At work, I conserve natural resources whenever possible.	4.03	2.27
While at work, I share new ideas with my supervisors about how the restaurant can be more sustainable.	4.02	2.25
I encourage other employees to follow the green practices at my job.	3.88	2.31
If I were to seek other employment, I would seek a company with green practices.	3.79	2.30

7-point Likert scale (1-Strongly disagree, 7-Strongly agree)

Table 2 Continued. Means and Standard Deviations for Environmentalism Items

Items	Overall	
	Mean	SD
Environmental Attitude	4.08	1.59
I really like going on trips into the countryside, for example to forests or fields.	4.35	1.99
It makes me sad to see forests cleared for agriculture.	4.62	2.01
Humans are severely abusing the environment.	4.59	2.14
It does NOT make me sad to see natural environments destroyed.	4.55	2.19
Governments should control the rate at which raw materials are used to ensure that they last as long as possible.	4.37	2.09
I do not believe that the environment has been severely abused by humans.	4.37	2.28
We need to keep rivers and lakes clean in order to protect the environment, and NOT as places for people to enjoy water sports.	4.25	2.08
Protecting the environment is more important than protecting peoples' job.	4.25	2.01
I think spending time in nature is boring.	4.18	2.02
I would like to join and actively participate in an environmentalist group.	4.12	2.15
One of the most important reasons to keep lakes and rivers clean is so that people have a place to enjoy water sports.	4.09	1.91
I would NOT get involved in an environmentalist organization.	4.07	2.16
I am opposed to governments controlling and regulating the way raw materials are used in order to try and make them last longer.	4.03	2.05
I'd prefer a garden that is wild and natural to a well-groomed and ordered one.	3.93	1.95
Human beings were created or evolved to dominate the rest of nature.	3.93	2.04
I DO NOT believe humans were created or evolved to dominate the rest of nature.	3.93	2.04
I'd much prefer a garden that is well groomed and ordered to a wild and natural one.	3.67	1.89
Protecting peoples' jobs is more important than protecting the environment.	3.67	1.97
Families should be encouraged to limit themselves to two children or less.	3.66	2.1
Modern science will solve our environmental problems.	3.33	1.96
Modern science will NOT be able to solve our environmental problems.	3.31	1.98
A married couple should have as many children as they wish, as long as they can adequately provide for them.	3.24	1.96
Personal Conservation Behavior	4.20	1.80
I always switch the light off when I don't need it on any more.	4.72	2.16
In my daily life I try to find ways to conserve water or power.	4.50	2.07
I could not be bothered to save water or other natural resources.	4.46	2.05
I am NOT the kind of person who makes efforts to conserve natural resources.	4.42	2.1
Whenever possible, I try to save natural resources.	4.38	2.19
I make sure that during the winter the heating system in my room is not switched on too high.	4.33	1.98
Whenever possible, I take short shower in order to conserve water.	4.14	2.11
In my daily life I'm just not interested in trying to conserve water and/or power.	4.13	2.21
Even if public transportation was more efficient than it is, I would prefer to drive my car.	3.52	2.13
I drive whenever it suits me, even if it does pollute the atmosphere.	3.50	2.02

7-point Likert scale (1-Strongly disagree, 7-Strongly agree)

Table 3. Means and Standard Deviations for Personality Items

Items	Overall Mean	Overall SD	Items	Overall Mean	Overall SD
Agreeableness	5.59	5.52	***Neuroticism***	5.23	1.98
Warm	5.93	2.61	Unenvious	5.97	2.61
Cooperative	5.71	2.62	Moody	5.29	2.51
Rude	5.69	2.79	Fretful	5.28	2.53
Kind	5.66	2.86	Relaxed	5.17	2.56
Unsympathetic	5.58	2.84	Touchy	5.12	2.77
Sympathetic	5.41	2.78	Envious	5.08	2.7
Harsh	5.37	2.86	Jealous	5.04	2.67
Cold	5.21	2.75	Temperamental	5.04	2.66
Conscientiousness	5.52	2.26	***Openness***	5.56	2.18
Inefficient	5.70	2.56	Unintellectual	5.98	2.74
Organized	5.68	2.64	Intellectual	5.83	2.69
Disorganized	5.59	2.67	Imaginative	5.74	2.64
Efficient	5.52	2.80	Uncreative	5.56	2.79
Practical	5.50	2.72	Creative	5.48	2.53
Sloppy	5.45	2.94	Complex	5.25	2.58
Careless	5.28	2.66	Deep	5.22	2.7
Systematic	5.17	2.76	Philosophical	5.21	2.67
Extraversion	5.27	2.10			
Energetic	5.64	2.78			
Withdrawn	5.52	2.66			
Extroverted	5.43	2.67			
Bold	5.31	2.68			
Talkative	5.29	2.59			
Bashful	5.04	2.51			
Shy	4.97	2.80			
Quiet	4.90	2.50			

9-point Likert scale (1-Extremely inaccurate, 9-Extremely accurate)

Additional descriptive statistics for all variables are presented in Appendix I. Skewness and standard error for these variables ranged from -0.04 ± 0.16 to -0.56 ± 0.16 (Appendix I). Kurtosis and standard error for these variables ranged from -1.22 ± 0.32 to -1.49 ± 0.32 (Appendix I). According to Trochim and Donnelly (2006), these values are acceptable as they are within the range of -2.00 to 2.00. Distributions are bimodal and multimodal, as presented in

Appendix I. However, general linear model techniques are robust to violations of normality. Thus, the non-normal distribution is noted as a limitation.

Cronbach's alpha was used to ensure internal consistency for variables related to environmentalism and personality. George and Mallery (2003) categorized an alpha of 0.90 or above as an excellent internal consistency, an alpha between 0.80 and 0.89 as a good internal consistency, an alpha between 0.70 and 0.79 as an acceptable internal consistency, an alpha between 0.60 and 0.69 as a questionable internal consistency, and an alpha below 0.60 as a poor internal consistency.

The environmental attitude variable consisted of 22 items and had an excellent internal consistency ($\alpha = 0.97$). The variable personal conservation behavior consisted of 10 items and had an excellent internal consistency ($\alpha = 0.96$). The variable on-the-job behavior consisted of 13 items and had a good internal consistency ($\alpha = 0.83$). Each Big-Five personality trait subscale consisted of eight items: agreeableness had an excellent internal consistency ($\alpha = 0.95$), conscientiousness had an excellent internal consistency ($\alpha = 0.94$), extraversion had an excellent internal consistency ($\alpha = 0.92$), neuroticism had a good internal consistency ($\alpha = .89$), and openness had an excellent internal consistency ($\alpha = 0.93$). According to George and Mallery (2003), all subscales were within or above a good level; therefore, no items were removed.

The Impact of Personality on Environmentalism

To determine if a relationship exists between specific personality trait variables and environmentalism variables, a bivariate Pearson's correlation was conducted with the following variables: environmental attitude, personal conservation behavior, on-the-job environmental behavior, agreeableness, extraversion, conscientiousness, neuroticism, and openness. The results of the correlation analyses are presented in Table 4.

Table 4. Correlations for Environmentalism and Personality Variables

Variable	1	2	3	4	5	6	7	8
1. Environmental Attitude	-							
2. Personal Conservation Behavior	0.92**	-						
3. On-the-Job Environmental Behavior	0.82**	0.83**	-					
4. Extraversion	0.81**	0.78**	0.68**	-				
5. Agreeableness	0.83**	0.83**	0.73**	0.85**	-			
6. Conscientious	0.76**	0.76**	0.68**	0.87**	0.89**	-		
7. Neuroticism	-0.73**	-0.76**	-0.66**	-0.83**	-0.82**	-0.83**	-	
8. Openness	0.83**	0.83**	0.73**	0.88**	0.90**	0.90**	-0.84**	-

**Correlation is significant at 0.001 level (two-tailed).

For the personality traits agreeableness, conscientiousness, extraversion, and openness, a positive correlation was found with environmental attitude, personal conservation behavior, and on-the-job environmental behavior. However, for the personality trait neuroticism, a negative correlation was found with environmental attitude, personal conservation behavior, and on-the-job environmental behavior. Personality traits were also significantly correlated amongst each other.

The environmentalism variables were positively correlated amongst each other. Environmental attitude and personal conservation behavior were highly positively correlated, $r = 0.92$, $p < 0.001$. Environmental attitude and on-the-job environmental behavior were positively correlated, $r = 0.82$, $p < 0.001$. Personal conservation behavior and on-the-job environmental behavior were positively correlated, $r = 0.83$, $p < 0.001$.

To determine if personality traits effect change in environmentalism, various regressions were conducted. Simultaneous multiple regressions were conducted to explore which personality traits predicted environmentalism above and beyond other traits. Hierarchical multiple regression analyses were conducted to explore the effects of personality traits and

restaurant type on environmentalism variables and whether or not the effect of personality on environmentalism variables depends on restaurant type.

These hierarchical regressions were conducted using the specific personality variables, restaurant type (working in a green certified or non-certified restaurant), and their interaction on environmentalism variables. Within these analyses, the predictor variables (agreeableness, conscientiousness, extraversion, neuroticism, and openness) were mean centered by subtracting the mean from all values. The variable has a mean of zero which decreases multicollinearity between the interaction term and the main effects. The restaurant type variable (employees working in green certified or non-certified restaurants) was dummy coded into dichotomous variables with two categories, green certified and non-certified restaurants.

Personality and Environmental Attitude

A simultaneous multiple regression was conducted to explore which personality traits predicted environmental attitude above and beyond other traits. The overall simultaneous regression model with the centered variables of agreeableness, conscientiousness, extraversion, neuroticism, and openness with environmental attitude was significant, $F(5, 202)= 118.35$; $p < 0.001$, $R^2 = 0.75$, as presented in Table 5 and Table 6. Four centered traits of personality were significant unique predictors of environmental attitude; three of which were positive, agreeableness ($\beta = 0.41$, $p < 0.001$), extraversion ($\beta = 0.34$, $p < 0.001$), and openness ($\beta = 0.34$, $p < 0.001$) and one was negative, conscientiousness ($\beta = -0.21$, $p = 0.03$). However, the centered trait of neuroticism was not a significant unique predictor of environmental attitude ($\beta = -0.05$, $p = 0.96$). Coefficients are presented in Appendix J.

Table 5. Hierarchical Regression ANOVA Output: Agreeableness, Conscientiousness, Extraversion, Neuroticism, and Openness on Environmental Attitude

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	391.81	5	78.36	118. 35	0.00[b]
	Residual	133.75	202	0.66		
	Total	525.55	207			

a. Dependent Variable: Environmental Attitude
b. Predictors: (Constant), Agreeableness Centered, Conscientiousness Centered, Extraversion Centered, Neuroticism Centered, and Openness Centered

Table 6. Hierarchical Regression Model Summary: Agreeableness, Conscientiousness, Extraversion, Neuroticism, and Openness on Environmental Attitude

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	0.84[a]	0.75	0.74	0.81	0.75	118.35	5	202	0.00

a. Predictors: (Constant), Agreeableness Centered, Conscientiousness Centered, Extraversion Centered, Neuroticism Centered, Openness Centered

Five separate hierarchical multiple regressions were conducted to test the main effects of one continuous predictor (centered agreeableness, centered conscientiousness, centered extraversion, centered neuroticism, and centered openness) and one categorical predictor (restaurant type) and their interaction on environmental attitude. The multiple regressions were conducted as part of a three-step process. In step one, the centered variable of personality was entered because personality is inherent. In step two, the dummy coded variable of restaurant type was entered because restaurant type follows personality temporally. Finally, in step three, the product term carrying the interaction of the centered variable of personality and the dummy coded restaurant type variable was entered because it is the interaction term.

Agreeableness

Model 1, the model with the centered agreeableness variable with environmental attitude, was significant, $F(1, 221) = 504.10$, $p < 0.001$, as presented in Table 7. For green certified and

non-certified restaurants, agreeableness (centered) was a predictor of environmental attitude (β = 0.83, $p < 0.001$). Coefficients are presented in Appendix J.

Table 7. Hierarchical Regression ANOVA Output: Agreeableness, Restaurant Type, and their Interaction on Environmental Attitude

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	393.28	1	393.28	504.10	0.00[b]
	Residual	172.41	221	0.78		
	Total	565.70	222			
2	Regression	450.62	2	225.31	430.76	0.00[c]
	Residual	115.07	220	0.52		
	Total	565.69	222			
3	Regression	450.62	3	150.21	285.87	0.00[d]
	Residual	115.07	219	0.53		
	Total	565.69	222			

a. Dependent Variable: Environmental Attitude
b. Predictors: (Constant), Agreeableness Centered
c. Predictors: (Constant), Agreeableness Centered, Restaurant Type
d. Predictors: (Constant), Agreeableness Centered, Restaurant Type, Interaction

Model 2, the model with the dummy coded restaurant type variable with environmental attitude, was significant, $F(2, 220) = 430.76$, $p < 0.001$ (Table 7). These results indicate restaurant type added to the prediction of environmental attitude, $F(1, 220) = 109.63$, $p < 0.001$, $R^2 = 0.80$, as presented in Table 8. Green certified restaurant employees had higher environmental attitude scores (β = -0.42, $p < 0.001$) than non-certified restaurant employees (β = 0.42, $p < 0.001$) as presented in Appendix. J.

Table 8. Hierarchical Regression Model Summary: Agreeableness, Restaurant Type, and their Interaction on Environmental Attitude

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	0.83[a]	0.70	0.69	0.88	0.70	504.10	1	221	0.00
2	0.89[b]	0.80	0.78	0.72	0.10	109.63	1	220	0.00
3	0.89[c]	0.80	0.79	0.72	0.00	0.00	1	219	0.98

a. Predictors: (Constant), Agreeableness Centered
b. Predictors: (Constant), Agreeableness Centered, Restaurant Type
c. Predictors: (Constant), Agreeableness Centered, Restaurant Type, Interaction

Model 3, the model with the product term carrying the interaction of agreeableness (centered) scores and the dummy coded restaurant type variable with environmental attitude, was significant, $F(3, 219) = 285.87$, $p < 0.001$, as an independent model (Table 7). However, model 3 was not significant as an additive step to the hierarchical multiple regression, $F(1, 219) < 0.001$, $p = 0.98$, $R^2 = 0.80$ (Table 8), indicating the interaction did not predict environmental attitude. The effect of agreeableness (centered) on environmental attitude did not depend on restaurant type. For green certified and non-certified restaurant employees, the effect of agreeableness on environmental attitude was positive, $\beta = 0.57$, $p < 0.001$ (Appendix J).

Conscientiousness

Model 1, the model with the centered conscientiousness variable with environmental attitude, was significant, $F(1, 223) = 295.30$, $p < 0.001$, as presented in Table 9. For green certified and non-certified restaurants, conscientiousness (centered) was a predictor of environmental attitude ($\beta = 0.76$, $p < 0.001$). Coefficients are presented in Appendix J.

Table 9. Hierarchical Regression ANOVA Output: Conscientiousness, Restaurant Type, and Interaction on Environmental Attitude

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	323.03	1	323.03	295.30	0.00[b]
	Residual	243.95	223	1.09		
	Total	566.98	224			
2	Regression	425.82	2	212.91	334.85	0.00[c]
	Residual	141.16	222	0.64		
	Total	566.98	224			
3	Regression	428.08	3	142.69	227.03	0.00[d]
	Residual	138.90	221	0.63		
	Total	566.98	224			

a. Dependent Variable: Environmental Attitude
b. Predictors: (Constant), Conscientiousness Centered
c. Predictors: (Constant), Conscientiousness Centered, Restaurant Type
d. Predictors: (Constant), Conscientiousness Centered, Restaurant Type, Interaction

Model 2, the model with the dummy coded restaurant type variable with environmental attitude, was significant, $F(2, 222) = 334.85$, $p < 0.001$ (Table 9). These results indicate restaurant type added to the prediction of environmental attitude, $F(1, 222) = 161.66$, $p < 0.001$, $R^2 = 0.75$, as presented in Table 10. Green certified restaurant employees had higher environmental attitude scores ($\beta = -0.51$, $p < 0.001$) than non-certified restaurant employees ($\beta = 0.51$, $p < 0.001$) as presented in Appendix. J.

Table 10. Hierarchical Regression Model Summary: Conscientiousness, Restaurant Type, and Interaction on Environmental Attitude

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	0.76[a]	0.57	0.57	1.05	0.57	295.30	1	223	0.00
2	0.87[b]	0.75	0.75	0.80	0.18	161.66	1	222	0.00
3	0.87[c]	0.76	0.75	0.79	0.00	3.59	1	221	0.06

a. Predictors: (Constant), Conscientiousness Centered
b. Predictors: (Constant), Conscientiousness Centered, Restaurant Type
c. Predictors: (Constant), Conscientiousness Centered, Restaurant Type, Interaction

Model 3, the model with the product term carrying the interaction of conscientiousness (centered) scores and the dummy coded restaurant type variable with environmental attitude, was significant, $F(3, 221) = 227.03$, $p < 0.001$, as an independent model (Table 9). However, model 3 was not significant as an additive step to the hierarchical multiple regression, $F(1, 221) = 3.59$, $p = 0.06$, $R^2 = 0.76$ (Table 10), indicating the interaction did not predict environmental attitude. The effect of conscientiousness (centered) on environmental attitude did not depend on restaurant type. For green certified and non-certified restaurant employees, the effect of conscientiousness on environmental attitude was positive, $\beta = 0.33$, $p < 0.001$ and $\beta = 0.51$, $p < 0.001$, respectively (Appendix J).

Extraversion

Model 1, the model with the centered extraversion variable with environmental attitude, was significant, $F(1, 221) = 427.49$, $p < 0.001$, as presented in Table 11. For green certified and non-certified restaurants, extraversion (centered) was a predictor of environmental attitude ($\beta = 0.81$, $p < 0.001$). Coefficients are presented in Appendix J.

Table 11. Hierarchical Regression ANOVA Output: Extraversion, Restaurant Type, Interaction on Environmental Attitude

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	369.89	1	369.89	427.49	0.00[b]
	Residual	191.22	221	0.87		
	Total	561.11	222			
2	Regression	434.55	2	217.28	377.68	0.00[c]
	Residual	126.56	220	0.58		
	Total	561.11	222			
3	Regression	434.56	3	144.85	250.66	0.00[d]
	Residual	126.56	219	0.58		
	Total	561.11	222			

a. Dependent Variable: Environmental Attitude
b. Predictors: (Constant), Extraversion Centered
c. Predictors: (Constant), Extraversion Centered, Restaurant Type
d. Predictors: (Constant), Extraversion Centered, Restaurant Type, Interaction

Model 2, the model with the dummy coded restaurant type variable with environmental attitude, was significant, $F(2, 220) = 377.68$, $p < 0.001$ (Table 11). These results indicate restaurant type added to the prediction of environmental attitude, $F(1, 220) = 112.40$, $p < 0.001$, $R^2 = 0.77$, as presented in Table 12. Green certified restaurant employees had higher environmental attitude scores ($\beta = -0.43$, $p < 0.001$) than non-certified restaurant employees ($\beta = 0.43$, $p < 0.001$) as presented in Appendix. J.

Table 12. Hierarchical Regression Model Summary: Extraversion, Restaurant Type, Interaction on Environmental Attitude

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	0.81[a]	0.66	0.66	0.93	0.66	427.49	1	221	0.00
2	0.88[b]	0.77	0.77	0.76	0.12	112.40	1	220	0.00
3	0.88[c]	0.77	0.77	0.76	0.00	0.01	1	219	0.92

a. Predictors: (Constant), Extraversion Centered
b. Predictors: (Constant), Extraversion Centered, Restaurant Type
c. Predictors: (Constant), Extraversion Centered, Restaurant Type, Interaction

Model 3, the model with the product term carrying the interaction of extraversion (centered) scores and the dummy coded restaurant type variable with environmental attitude, was significant, $F(3, 219) = 250.66$, $p < 0.001$, as an independent model (Table 11). However, model 3 was not significant as an additive step to the hierarchical multiple regression, $F(1, 219) = 0.01$, $p = 0.92$, $R^2 = 0.77$ (Table 12), indicating the interaction did not predict environmental attitude. The effect of extraversion (centered) on environmental attitude did not depend on restaurant type. For green certified and non-certified restaurant employees, the effect of extraversion on environmental attitude was positive, $\beta = 0.54$, $p < 0.001$ and $\beta = 0.55$, $p < 0.001$, respectively (Appendix J).

Neuroticism

Model 1, the model with the centered neuroticism variable with environmental attitude, was significant, $F(1, 223) = 257.83$, $p < 0.001$, as presented in Table 13. For green certified and non-certified restaurants, neuroticism (centered) was a predictor of environmental attitude ($\beta = -0.73$, $p < 0.001$). Coefficients are presented in Appendix J.

Table 13. Hierarchical Regression ANOVA Output: Neuroticism, Restaurant Type, and Interaction on Environmental Attitude

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	303.78	1	303.78	257.83	0.00[b]
	Residual	262.74	223	1.18		
	Total	566.52	224			
2	Regression	413.03	2	206.51	298.69	0.00[c]
	Residual	153.49	222	0.69		
	Total	566.52	224			
3	Regression	433.36	3	144.45	239.75	0.00[d]
	Residual	133.16	221	0.60		
	Total	566.52	224			

a. Dependent Variable: Environmental Attitude
b. Predictors: (Constant), Neuroticism Centered
c. Predictors: (Constant), Neuroticism Centered, Restaurant Type
d. Predictors: (Constant), Neuroticism Centered, Restaurant Type, Interaction

Model 2, the model with the dummy coded restaurant type variable with environmental attitude, was significant, $F(2, 222) = 298.69$, $p < 0.001$ (Table 13). These results indicate restaurant type added to the prediction of environmental attitude, $F(1, 222) = 158.01$, $p < 0.001$, $R^2 = 0.73$, as presented in Table 14. Green certified restaurant employees had higher environmental attitude scores ($\beta = -0.53$, $p < 0.001$) than non-certified restaurant employees ($\beta = 0.53$, $p < 0.001$) as presented in Appendix. J.

Table 14. Hierarchical Regression Model Summary: Neuroticism, Restaurant Type, Interaction on Environmental Attitude

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	0.73[a]	0.54	0.53	1.09	0.54	257.83	1	223	0.00
2	0.85[b]	0.73	0.73	0.83	0.19	158.01	1	222	0.00
3	0.88[c]	0.77	0.76	0.78	0.04	33.75	1	221	0.00

a. Predictors: (Constant), Neuroticism Centered
b. Predictors: (Constant), Neuroticism Centered, Restaurant Type
c. Predictors: (Constant), Neuroticism Centered, Restaurant Type, Interaction

Model 3, the model with the product term carrying the interaction of neuroticism (centered) scores and the dummy coded restaurant type variable with environmental attitude, was significant, $F(3, 221) = 239.75$, $p < 0.001$, as an independent model (Table 13). Model 3 was also significant as an additive step to the hierarchical multiple regression, $F(1, 221) = 33.75$, $p < 0.001$, $R^2 = 0.77$ (Table 14), indicating the interaction predicted environmental attitude. The effect of neuroticism (centered) on environmental attitude depended on restaurant type. For green certified, the effect of neuroticism on environmental attitude was lower ($\beta = -0.17$, $p = 0.01$) than for non-certified restaurant operations ($\beta = -0.63$, $p < 0.001$) as displayed in Appendix J.

A simple slopes analysis was conducted to probe the significant product term carrying the interaction of neuroticism and restaurant type. Coefficients are presented in Appendix J. For employees working in both green certified and non-certified restaurant operations, there was a significant negative relationship between neuroticism and environmental attitude ($p = 0.01$) and ($p < 0.001$), respectively. For employees working in green certified operations, environmental attitude was decreased by 0.17 standardized deviations for every standard deviation increase in neuroticism. For employees working in non-certified operations, environmental attitude was decreased by 0.63 standardized deviations for every standard deviation increase in neuroticism.

Openness

Model 1, the model with the centered openness variable and environmental attitude, was significant, $F(1, 223) = 506.89$, $p < 0.001$, as presented in Table 15. For green certified and non-certified restaurants, openness (centered) was a predictor of environmental attitude ($\beta = 0.83$, $p < 0.001$). Coefficients are presented in Appendix J.

Table 15. Hierarchical Regression ANOVA Output: Openness, Restaurant Type, and Interaction on Environmental Attitude

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	396.01	1	396.01	506.89	0.00[b]
	Residual	174.22	223	0.78		
	Total	570.23	224			
2	Regression	448.18	2	224.09	407.60	0.00[c]
	Residual	122.05	222	0.55		
	Total	570.23	224			
3	Regression	448.29	3	149.43	270.82	0.00[d]
	Residual	121.94	221	0.55		
	Total	570.23	224			

a. Dependent Variable: Environmental Attitude
b. Predictors: (Constant), Openness Centered
c. Predictors: (Constant), Openness Centered, Restaurant Type
d. Predictors: (Constant), Openness Centered, Restaurant Type, Interaction

Model 2, the model with the dummy coded restaurant type variable with environmental attitude, was significant, $F(2, 222) = 407.60$, $p < 0.001$ (Table 15). These results indicate restaurant type added to the prediction of environmental attitude, $F(1, 222) = 94.89$, $p < 0.001$, $R^2 = 0.79$, as presented in Table 16. Green certified restaurant employees had higher environmental attitude scores ($\beta = -0.40$, $p < 0.001$) than non-certified restaurant employees ($\beta = 0.40$, $p < 0.001$) as presented in Appendix. J.

Table 16. Hierarchical Regression Model Summary: Openness, Restaurant Type, Interaction on Environmental Attitude

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	0.83[a]	0.69	0.69	0.88	0.69	506.89	1	223	0.00
2	0.89[b]	0.79	0.78	0.74	0.09	94.89	1	222	0.00
3	0.89[c]	0.79	0.78	0.74	0.00	0.20	1	221	0.66

a. Predictors: (Constant), Openness Centered
b. Predictors: (Constant), Openness Centered, Restaurant Type
c. Predictors: (Constant), Openness Centered, Restaurant Type, Interaction

Model 3, the model with the product term carrying the interaction of openness (centered) scores and the dummy coded restaurant type variable with environmental attitude, was significant, $F(3, 221) = 270.82$, $p < 0.001$, as an independent model (Table 15). However, model 3 was not significant as an additive step to the hierarchical multiple regression, $F(1, 221) = 0.20$, $p = 0.66$, $R^2 = 0.79$ (Table 16), indicating the interaction did not predict environmental attitude. The effect of openness (centered) on environmental attitude did not depend on restaurant type. For green certified and non-certified restaurant employees, the effect of openness on environmental attitude was positive, $\beta = 0.61$, $p < 0.001$ and $\beta = 0.56$, $p < 0.001$, respectively (Appendix J).

Personality and Personal Conservation Behavior

A simultaneous multiple regression was conducted to explore which personality traits predict personal conservation behavior above and beyond other traits. The overall simultaneous regression model with the centered variables of agreeableness, conscientiousness, extraversion, neuroticism, and openness with personal conservation behavior was significant, $F(5, 200) = 109.91$; $p < 0.001$, $R^2 = 0.73$, as presented in Table 17 and Table 18. Three centered traits of personality were significant unique predictors of personal conservation behavior: agreeableness ($\beta = 0.40$, $p < 0.001$), neuroticism ($\beta = -2.63$, $p = 0.01$), and openness ($\beta = 2.49$, $p = 0.01$).

However, the centered traits of conscientiousness (β = -0.83, $p = 0.41$) and extraversion (β = 1.43, $p = 0.16$) were not significant unique predictors of personal conservation behavior. Coefficients are presented in Appendix K.

Table 17. Hierarchical Regression ANOVA Output: Agreeableness, Conscientiousness, Extraversion, Neuroticism, and Openness on Personal Conservation Behavior

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	475.71	5	95.14	109.91	0.00[b]
	Residual	173.13	200	0.87		
	Total	648.83	205			

a. Dependent Variable: Personal Conservation Behavior
b. Predictors: (Constant), Agreeableness Centered, Conscientiousness Centered, Extraversion Centered, Neuroticism Centered, and Openness Centered

Table 18. Hierarchical Regression Model Summary: Agreeableness, Conscientiousness, Extraversion, Neuroticism, and Openness on Personal Conservation Behavior

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	0.86[a]	0.73	0.73	0.93	0.73	109.91	5	200	0.00

a. Predictors: (Constant), Agreeableness Centered, Conscientiousness Centered, Extraversion Centered, Neuroticism Centered, Openness Centered

Five separate hierarchical multiple regressions were conducted to test the main effects of one continuous predictor (centered agreeableness, centered conscientiousness, centered extraversion, centered neuroticism, and centered openness) and one categorical predictor (restaurant type) and their interaction on personal conservation behavior. The multiple regressions were conducted as part of a three-step process. In step one, the centered variable of personality was entered because personality is inherent. In step two, the dummy coded variable of restaurant type was entered because restaurant type follows personality temporally. Finally, in step three, the product term carrying the interaction of the centered variable of personality and the dummy coded restaurant type variable was entered because it is the interaction term.

Agreeableness

Model 1, the model with the centered agreeableness variable with personal conservation behavior, was significant, $F(1, 219) = 480.85$, $p < 0.001$, as presented in Table 19. For green certified and non-certified restaurants, agreeableness (centered) was a predictor of personal conservation behavior ($\beta = 0.83$, $p < 0.001$). Coefficients are presented in Appendix K.

Table 19. Hierarchical Regression ANOVA Output: Agreeableness, Restaurant Type, Interaction on Personal Conservation Behavior

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	486.67	1	486.67	480.85	0.00[b]
	Residual	221.65	219	1.01		
	Total	708.32	220			
2	Regression	539.90	2	269.95	349.42	0.00[c]
	Residual	168.42	218	0.77		
	Total	708.32	220			
3	Regression	542.40	3	180.80	236.46	0.00[d]
	Residual	165.92	217	0.77		
	Total	708.32	220			

a. Dependent Variable: Personal Conservation Behavior
b. Predictors: (Constant), Agreeableness Centered
c. Predictors: (Constant), Agreeableness Centered, Restaurant Type
d. Predictors: (Constant), Agreeableness Centered, Restaurant Type, Interaction

Model 2, the model with the dummy coded restaurant type variable with personal conservation behavior, was significant, $F(2, 218) = 349.42$, $p < 0.001$ (Table 19). These results indicate restaurant type added to the prediction of personal conservation behavior, $F(1, 218) = 68.90$, $p < 0.001$, $R^2 = 0.76$, as presented in Table 20. Green certified restaurant employees had higher personal conservation behavior scores ($\beta = -0.36$, $p < 0.001$) than non-certified restaurant employees ($\beta = 0.36$, $p < 0.001$) as presented in Appendix. K.

Table 20. Hierarchical Regression Model Summary: Agreeableness, Restaurant Type, Interaction on Personal Conservation Behavior

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	0.83[a]	0.69	0.69	1.01	0.69	480.85	1	219	0.00
2	0.87[b]	0.76	0.76	0.88	0.08	68.90	1	218	0.00
3	0.88[c]	0.77	0.76	0.87	0.00	3.27	1	217	0.07

a. Predictors: (Constant), Agreeableness Centered
b. Predictors: (Constant), Agreeableness Centered, Restaurant Type
c. Predictors: (Constant), Agreeableness Centered, Restaurant Type, Interaction

Model 3, the model with the product term carrying the interaction of agreeableness (centered) scores and the dummy coded restaurant type variable with personal conservation behavior, was significant, $F(3, 217) = 236.46$, $p < 0.001$, as an independent model (Table 19). However, model 3 was not significant as an additive step to the hierarchical multiple regression, $F(1, 217) = 3.27$, $p = 0.07$, $R^2 = 0.77$ (Table 20), indicating the interaction did not predict personal conservation behavior. The effect of agreeableness (centered) on personal conservation behavior did not depend on restaurant type. For green certified and non-certified restaurant employees, the effect of agreeableness on personal conservation behavior was positive, $\beta = 0.45$, $p < 0.001$ and $\beta = 0.64$, $p < 0.001$, respectively (Appendix K).

Conscientiousness

Model 1, the model with the centered conscientiousness variable with personal conservation behavior, was significant, $F(1, 220) = 308.10$, $p < 0.001$, as presented in Table 21. For green certified and non-certified restaurants, conscientiousness (centered) was a predictor of personal conservation behavior ($\beta = 0.76$, $p < 0.001$). Coefficients are presented in Appendix K.

Table 21. Hierarchical Regression ANOVA Output: Conscientiousness, Restaurant Type, Interaction on Personal Conservation Behavior

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	413.36	1	413.36	308.10	0.00[b]
	Residual	295.16	220	1.34		
	Total	708.52	221			
2	Regression	512.61	2	256.31	286.53	0.00[c]
	Residual	195.90	219	0.90		
	Total	708.52	221			
3	Regression	515.44	3	171.81	193.99	0.00[d]
	Residual	193.08	218	0.89		
	Total	708.52	221			

a. Dependent Variable: Personal Conservation Behavior
b. Predictors: (Constant), Conscientiousness Centered
c. Predictors: (Constant), Conscientiousness Centered, Restaurant Type
d. Predictors: (Constant), Conscientiousness Centered, Restaurant Type, Interaction

Model 2, the model with the dummy coded restaurant type variable with personal conservation behavior, was significant, $F(2, 219) = 286.53$, $p < 0.001$ (Table 21). These results indicate restaurant type added to the prediction of personal conservation behavior, $F(1, 219) = 110.96$, $p < 0.001$, $R^2 = 0.72$, as presented in Table 22. Green certified restaurant employees had higher personal conservation behavior scores ($\beta = -0.45$, $p < 0.001$) than non-certified restaurant employees ($\beta = 0.45$, $p < 0.001$) as presented in Appendix. K.

Table 22. Hierarchical Regression Model Summary: Conscientiousness, Restaurant Type, Interaction on Personal Conservation Behavior

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	0.76[a]	0.58	0.58	1.158	0.58	308.10	1	220	0.00
2	0.85[b]	0.72	0.72	0.95	0.14	110.96	1	219	0.00
3	0.85[c]	0.73	0.72	0.94	0.00	3.19	1	218	0.08

a. Predictors: (Constant), Conscientiousness Centered
b. Predictors: (Constant), Conscientiousness Centered, Restaurant Type
c. Predictors: (Constant), Conscientiousness Centered, Restaurant Type, Interaction

Model 3, the model with the product term carrying the interaction of conscientiousness (centered) scores and the dummy coded restaurant type variable with personal conservation behavior, was significant, $F(3, 218) = 193.99$, $p < 0.001$, as an independent model (Table 21). However, model 3 was not significant as an additive step to the hierarchical multiple regression, $F(1, 218) = 3.19$, $p = 0.08$, $R^2 = 0.73$ (Table 22), indicating the interaction did not predict personal conservation behavior. The effect of conscientiousness (centered) on personal conservation behavior did not depend on restaurant type. For green certified and non-certified restaurant employees, the effect of conscientiousness on personal conservation behavior was positive, $\beta = 0.37$, $p < 0.001$ and $\beta = 0.56$, $p < 0.001$, respectively (Appendix K).

Extraversion

Model 1, the model with the centered extraversion variable with personal conservation behavior, was significant, $F(1, 218) = 337.92$, $p < 0.001$, as presented in Table 23. For green certified and non-certified restaurants, extraversion (centered) was a predictor of personal conservation behavior ($\beta = 0.78$, $p < 0.001$). Coefficients are presented in Appendix K.

Table 23. Hierarchical Regression ANOVA Output: Extraversion, Restaurant Type, Interaction on Personal Conservation Behavior

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	430.16	1	430.16	337.92	0.00[b]
	Residual	277.51	218	1.27		
	Total	707.67	219			
2	Regression	502.80	2	251.40	266.30	0.00[c]
	Residual	204.86	217	0.94		
	Total	707.67	219			
3	Regression	503.68	3	167.89	177.78	0.00[d]
	Residual	203.99	216	0.94		
	Total	707.67	219			

a. Dependent Variable: Personal Conservation Behavior
b. Predictors: (Constant), Extraversion Centered
c. Predictors: (Constant), Extraversion Centered, Restaurant Type
d. Predictors: (Constant), Extraversion Centered, Restaurant Type, Interaction

Model 2, the model with the dummy coded restaurant type variable with personal conservation behavior, was significant, $F(2, 217) = 266.30$, $p < 0.001$ (Table 23). These results indicate restaurant type added to the prediction of personal conservation behavior, $F(1, 217) = 76.95$, $p < 0.001$, $R^2 = 0.71$, as presented in Table 24. Green certified restaurant employees had higher personal conservation behavior scores ($\beta = -0.41$, $p < 0.001$) than non-certified restaurant employees ($\beta = 0.41$, $p < 0.001$) as presented in Appendix. K.

Table 24. Hierarchical Regression Model Summary: Extraversion, Restaurant Type, Interaction on Personal Conservation Behavior

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	0.78[a]	0.61	0.61	1.13	0.61	337.92	1	218	0.00
2	0.84[b]	0.71	0.71	0.97	0.10	76.95	1	217	0.00
3	0.84[c]	0.71	0.71	0.97	0.00	0.93	1	216	0.34

a. Predictors: (Constant), Extraversion Centered
b. Predictors: (Constant), Extraversion Centered, Restaurant Type
c. Predictors: (Constant), Extraversion Centered, Restaurant Type, Interaction

Model 3, the model with the product term carrying the interaction of extraversion (centered) scores and the dummy coded restaurant type variable with personal conservation behavior, was significant, $F(3, 216) = 177.78$, $p < 0.001$, as an independent model (Table 23). However, model 3 was not significant as an additive step to the hierarchical multiple regression, $F(1, 216) = 0.93$, $p = 0.34$, $R^2 = 0.71$ (Table 24), indicating the interaction did not predict personal conservation behavior. The effect of extraversion (centered) on personal conservation behavior did not depend on restaurant type. For green certified and non-certified restaurant employees, the effect of extraversion on personal conservation behavior was positive, $\beta = 0.45$, $p < 0.001$ and $\beta = 0.55$, $p < 0.001$, respectively (Appendix K).

Neuroticism

Model 1, the model with the centered neuroticism variable with personal conservation behavior, was significant, $F(1, 220) = 303.68$, $p < 0.001$, as presented in Table 25. For green certified and non-certified restaurants, neuroticism (centered) was a predictor of personal conservation behavior ($\beta = 0.78$, $p < 0.001$). Coefficients are presented in Appendix K.

Table 25. Hierarchical Regression ANOVA Output: Neuroticism, Restaurant Type, Interaction on Personal Conservation Behavior

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	413.68	1	413.68	303.68	0.00[b]
	Residual	299.69	220	1.36		
	Total	713.37	221			
2	Regression	514.58	2	257.29	283.45	0.00[c]
	Residual	198.79	219	0.91		
	Total	713.37	221			
3	Regression	543.50	3	181.17	232.50	0.00[d]
	Residual	169.87	218	0.78		
	Total	713.37	221			

a. Dependent Variable: Personal Conservation Behavior
b. Predictors: (Constant), Neuroticism Centered
c. Predictors: (Constant), Neuroticism Centered, Restaurant Type
d. Predictors: (Constant), Neuroticism Centered, Restaurant Type, Interaction

Model 2, the model with the dummy coded restaurant type variable with personal conservation behavior, was significant, $F(2, 219) = 283.45$, $p < 0.001$ (Table 25). These results indicate restaurant type added to the prediction of personal conservation behavior, $F(1, 219) = 111.16$, $p < 0.001$, $R^2 = 0.72$, as presented in Table 26. Green certified restaurant employees had lower personal conservation behavior scores ($\beta = 0.41$, $p < 0.001$) than non-certified restaurant employees ($\beta = -0.45$, $p < 0.001$) as presented in Appendix. K.

Table 26. Hierarchical Regression Model Summary: Neuroticism, Restaurant Type, Interaction on Personal Conservation Behavior

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	0.76[a]	0.58	0.58	1.17	0.58	303.68	1	220	0.00
2	0.85[b]	0.72	0.72	0.95	0.14	111.16	1	219	0.00
3	0.87[c]	0.76	0.76	0.88	0.04	37.11	1	218	0.00

a. Predictors: (Constant), Neuroticism Centered
b. Predictors: (Constant), Neuroticism Centered, Restaurant Type
c. Predictors: (Constant), Neuroticism Centered, Restaurant Type, Interaction

Model 3, the model with the product term carrying the interaction of neuroticism (centered) scores and the dummy coded restaurant type variable with personal conservation behavior, was significant, $F(3, 218) = 232.50$, $p < 0.001$, as an independent model (Table 25). Model 3 was also significant as an additive step to the hierarchical multiple regression, $F(1, 218) = 37.11$, $p < 0.001$, $R^2 = 0.76$ (Table 26), indicating the interaction did predict personal conservation behavior. The effect of neuroticism (centered) on personal conservation behavior did depend on restaurant type. For green certified and non-certified restaurant employees, the effect of neuroticism on personal conservation behavior was negative, $\beta = -0.22$, $p < 0.001$ and $\beta = -0.71$, $p < 0.001$, respectively (Appendix K).

A simple slopes analysis was conducted to probe the significant product term carrying the interaction of neuroticism and restaurant type. Coefficients are presented in Appendix K. For employees working in both green certified and non-certified restaurant operations, there was a significant negative relationship between neuroticism and personal conservation behavior ($p < 0.001$). For employees working in green certified operations, personal conservation behavior was decreased by 0.48 standardized deviations for every standard deviation increase in neuroticism. For employees working in non-certified operations, personal conservation behavior

was decreased by 0.71 standardized deviations for every standard deviation increase in neuroticism.

Openness

Model 1, the model with the centered openness variable with personal conservation behavior, was significant, $F(1, 220) = 482.03$, $p < 0.001$, as presented in Table 27. For green certified and non-certified restaurants, openness (centered) was a predictor of personal conservation behavior ($\beta = 0.83$, $p < 0.001$). Coefficients are presented in Appendix K.

Table 27. Hierarchical Regression ANOVA Output: Openness, Restaurant Type, Interaction on Personal Conservation Behavior

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	492.41	1	492.41	482.03	0.00[b]
	Residual	224.74	220	1.02		
	Total	717.15	221			
2	Regression	542.56	2	271.28	340.28	0.00[c]
	Residual	174.59	219	0.80		
	Total	717.15	221			
3	Regression	543.22	3	181.07	226.96	0.00[d]
	Residual	173.93	218	0.80		
	Total	717.15	221			

a. Dependent Variable: Personal Conservation Behavior
b. Predictors: (Constant), Openness Centered
c. Predictors: (Constant), Openness Centered, Restaurant Type
d. Predictors: (Constant), Openness Centered, Restaurant Type, Interaction

Model 2, the model with the dummy coded restaurant type variable with personal conservation behavior, was significant, $F(2, 219) = 340.28$, $p < 0.001$ (Table 27). These results indicate restaurant type added to the prediction of personal conservation behavior, $F(1, 219) = 62.90$, $p < 0.001$, $R^2 = 0.76$, as presented in Table 28. Green certified restaurant employees had higher personal conservation behavior scores ($\beta = -0.35$, $p < 0.001$) than non-certified restaurant employees ($\beta = 0.35$, $p < 0.001$) as presented in Appendix. K.

Table 28. Hierarchical Regression Model Summary: Openness, Restaurant Type, Interaction on Personal Conservation Behavior

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	0.83[a]	0.69	0.69	1.01	0.69	482.03	1	220	0.00
2	0.87[b]	0.76	0.75	0.89	0.07	62.90	1	219	0.00
3	0.87[c]	0.76	0.75	0.89	0.00	0.83	1	218	0.36

a. Predictors: (Constant), Openness Centered
b. Predictors: (Constant), Openness Centered, Restaurant Type
c. Predictors: (Constant), Openness Centered, Restaurant Type, Interaction

Model 3, the model with the product term carrying the interaction of openness (centered) scores and the dummy coded restaurant type variable with personal conservation behavior, was significant, $F(3, 218) = 226.96$, $p < 0.001$, as an independent model (Table 27). However, model 3 was not significant as an additive step to the hierarchical multiple regression, $F(1, 218) = 0.83$, $p = 0.36$, $R^2 = 0.76$ (Table 28), indicating the interaction did not predict personal conservation behavior. The effect of openness (centered) on personal conservation behavior did not depend on restaurant type. For green certified and non-certified restaurant employees, the effect of openness on personal conservation behavior was positive, $\beta = 0.51$, $p < 0.001$ and $\beta = 0.62$, $p < 0.001$, respectively (Appendix K).

Personality and On-the-Job Environmental Behavior

A simultaneous multiple regression was conducted to explore which personality traits predict on-the-job environmental behavior above and beyond other traits. The overall simultaneous regression model with the centered variables of agreeableness, conscientiousness, extraversion, neuroticism, and openness with on-the-job environmental behavior was significant, $F(5, 202)= 47.93$; $p < 0.001$, $R^2 = 0.54$, as presented in Table 29 and Table 30. Two centered traits of personality were significant unique predictors of on-the-job environmental behavior: agreeableness ($\beta = 3.04$, $p < 0.001$) and openness ($\beta = 2.34$; $p = 0.02$). However, the centered

traits of conscientiousness (β = -0.49, p = 0.63), extraversion (β = 0.56, p = 0.57), and neuroticism (β = -0.69, p = 0.49) were not significant unique predictors of on-the-job environmental behavior. Coefficients are presented in Appendix L.

Table 29. Hierarchical Regression ANOVA Output: Agreeableness, Conscientiousness, Extraversion, Neuroticism, and Openness on On-the-Job Environmental Behavior

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	184.93	5	36.99	47.93	0.00[b]
	Residual	155.86	202	0.77		
	Total	340.79	207			

a. Dependent Variable: On-the-Job Environmental Behavior
b. Predictors: (Constant), Agreeableness Centered, Conscientiousness Centered, Extraversion Centered, Neuroticism Centered, and Openness Centered

Table 30. Hierarchical Regression Model Summary: Agreeableness, Conscientiousness, Extraversion, Neuroticism, and Openness on On-the-Job Environmental Behavior

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	0.74[a]	0.54	0.53	0.88	0.54	47.93	5	202	0.00

a. Predictors: (Constant), Agreeableness Centered, Conscientiousness Centered, Extraversion Centered, Neuroticism Centered, Openness Centered

Five separate hierarchical multiple regressions were conducted to test the main effects of one continuous predictor (centered agreeableness, centered conscientiousness, centered extraversion, centered neuroticism, and centered openness) and one categorical predictor (restaurant type) and their interaction on on-the-job environmental behavior. The multiple regressions were conducted as part of a three-step process. In step one, the centered variable of personality was entered because personality is inherent. In step two, the dummy coded variable of restaurant type was entered because restaurant type follows personality temporally. Finally, in step three, the product term carrying the interaction of the centered variable of personality and the dummy coded restaurant type variable was entered because it is the interaction term.

Agreeableness

Model 1, the model with the centered agreeableness variable with on-the-job environmental behavior, was significant, $F(1, 221) = 202.49$, $p < 0.001$, as presented in Table 31. For green certified and non-certified restaurants, agreeableness (centered) was a predictor of on-the-job environmental behavior ($\beta = 0.73$, $p < 0.001$). Coefficients are presented in Appendix L.

Table 31. Hierarchical Regression Model ANOVA Output: Agreeableness, Restaurant Type, Interaction on On-the-Job Environmental Behavior

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	202.49	1	202.49	257.99	0.00[b]
	Residual	173.46	221	0.79		
	Total	375.95	222			
2	Regression	273.14	2	136.57	292.26	0.00[c]
	Residual	102.81	220	0.47		
	Total	375.95	222			
3	Regression	274.28	3	91.43	196.94	0.00[d]
	Residual	101.67	219	0.46		
	Total	375.95	222			

a. Dependent Variable: On-the-Job Environmental Behavior
b. Predictors: (Constant), Agreeableness Centered
c. Predictors: (Constant), Agreeableness Centered, Restaurant Type
d. Predictors: (Constant), Agreeableness Centered, Restaurant Type, Interaction

Model 2, the model with the dummy coded restaurant type variable with on-the-job environmental behavior, was significant, $F(2, 220) = 292.26$, $p < 0.001$ (Table 31). These results indicate restaurant type added to the prediction of on-the-job environmental behavior, $F(1, 220) = 151.20$, $p < 0.001$, $R^2 = 0.73$, as presented in Table 32. Green certified restaurant employees had higher on-the-job environmental behavior scores ($\beta = -0.57$, $p < 0.001$) than non-certified restaurant employees ($\beta = 0.57$, $p < 0.001$) as presented in Appendix L.

Table 32. Hierarchical Regression Model Summary: Agreeableness, Restaurant Type, Interaction on On-the-Job Environmental Behavior

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	0.73[a]	0.54	0.54	0.89	0.54	257.99	1	221	0.00
2	0.85[b]	0.73	0.72	0.68	0.19	151.20	1	220	0.00
3	0.85[c]	0.73	0.73	0.68	0.00	2.45	1	219	0.12

a. Predictors: (Constant), Agreeableness Centered
b. Predictors: (Constant), Agreeableness Centered, Restaurant Type
c. Predictors: (Constant), Agreeableness Centered, Restaurant Type, Interaction

Model 3, the model with the product term carrying the interaction of agreeableness (centered) scores and the dummy coded restaurant type variable with on-the-job environmental behavior, was significant, $F(3, 219) = 196.94$, $p < 0.001$, as an independent model (Table 31). However, model 3 was not significant as an additive step to the hierarchical multiple regression, $F(1, 219) = 2.45$, $p = 0.12$, $R^2 = 0.73$ (Table 32), indicating the interaction did not predict on-the-job environmental behavior. The effect of agreeableness (centered) on on-the-job environmental behavior did not depend on restaurant type. For green certified and non-certified restaurant employees, the effect of agreeableness on on-the-job environmental behavior was positive, $\beta = 0.51$, $p < 0.001$ and $\beta = 0.33$, $p < 0.001$, respectively (Appendix L).

Conscientiousness

Model 1, the model with the centered conscientiousness variable with on-the-job environmental behavior, was significant, $F(1, 223) = 193.10$, $p < 0.001$, $R^2 = 0.46$, as presented in Table 33 and Table 34. For green certified and non-certified restaurants, conscientiousness (centered) was a predictor of on-the-job environmental behavior ($\beta = 0.68$, $p < 0.001$). Coefficients are presented in Appendix L.

Table 33. Hierarchical Regression Model ANOVA Output: Conscientiousness, Restaurant Type, Interaction on On-the-Job Environmental Behavior

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	175.66	1	175.66	193.10	0.00[b]
	Residual	202.86	223	0.91		
	Total	378.51	224			
2	Regression	271.50	2	135.75	281.61	0.00[c]
	Residual	107.01	222	0.48		
	Total	378.51	224			
3	Regression	271.60	3	90.53	187.14	0.00[d]
	Residual	106.92	221	0.48		
	Total	378.51	224			

a. Dependent Variable: On-the-Job Environmental Behavior
b. Predictors: (Constant), Conscientiousness Centered
c. Predictors: (Constant), Conscientiousness Centered, Restaurant Type
d. Predictors: (Constant), Conscientiousness Centered, Restaurant Type, Interaction

Model 2, the model with the dummy coded restaurant type variable with on-the-job environmental behavior, was significant, $F(2, 222) = 281.61$, $p < 0.001$ (Table 33). These results indicate restaurant type added to the prediction of on-the-job environmental behavior, $F(1, 222) = 198.82$, $p < 0.001$, $R^2 = 0.72$, as presented in Table 34. Green certified restaurant employees had higher on-the-job environmental behavior scores ($\beta = -0.60$, $p < 0.001$) than non-certified restaurant employees ($\beta = 0.60$, $p < 0.001$) as presented in Appendix L.

Table 34. Hierarchical Regression Model Summary: Conscientiousness, Restaurant Type, Interaction on On-the-Job Environmental Behavior

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	0.68[a]	0.46	0.46	0.95	0.46	193.10	1	223	0.00
2	0.85[b]	0.72	0.72	0.69	0.25	198.82	1	222	0.00
3	0.85[c]	0.72	0.71	0.70	0.00	0.21	1	221	0.65

a. Predictors: (Constant), Conscientiousness Centered
b. Predictors: (Constant), Conscientiousness Centered, Restaurant Type
c. Predictors: (Constant), Conscientiousness Centered, Restaurant Type, Interaction

Model 3, the model with the product term carrying the interaction of conscientiousness (centered) scores and the dummy coded restaurant type variable with on-the-job environmental behavior, was significant, $F(3, 221) = 187.14$, $p < 0.001$, as an independent model (Table 33). However, model 3 was not significant as an additive step to the hierarchical multiple regression, $F(1, 221) = 0.21$, $p = 0.65$, $R^2 = 0.72$ (Table 34), indicating the interaction did not predict on-the-job environmental behavior. The effect of conscientiousness (centered) on on-the-job environmental behavior did not depend on restaurant type. For green certified and non-certified restaurant employees, the effect of conscientiousness on on-the-job environmental behavior was positive, $\beta = 0.38$, $p < 0.001$ and $\beta = 0.34$, $p < 0.001$, respectively (Appendix L).

Extraversion

Model 1, the model with the centered extraversion variable with on-the-job environmental behavior, was significant, $F(1, 221) = 190.19$, $p < 0.001$, $R^2 = 0.46$, as presented in Table 35. For green certified and non-certified restaurants, extraversion (centered) was a predictor of on-the-job environmental behavior ($\beta = 0.68$, $p < 0.001$). Coefficients are presented in Appendix L.

Table 35. Hierarchical Regression Model ANOVA Output: Extraversion, Restaurant Type, Interaction on On-the-Job Environmental Behavior

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	172.43	1	172.43	190.19	0.00[b]
	Residual	200.36	221	.91		
	Total	372.79	222			
2	Regression	259.16	2	129.577	250.86	0.00[c]
	Residual	113.64	220	0.52		
	Total	372.79	222			
3	Regression	259.21	3	86.404	166.60	0.00[d]
	Residual	113.58	219	0.52		
	Total	372.79	222			

a. Dependent Variable: On-the-Job Environmental Behavior
b. Predictors: (Constant), Extraversion Centered
c. Predictors: (Constant), Extraversion Centered, Restaurant Type
d. Predictors: (Constant), Extraversion Centered, Restaurant Type, Interaction

Model 2, the model with the dummy coded restaurant type variable with on-the-job environmental behavior, was significant, $F(2, 220) = 250.86$, $p < 0.001$ (Table 35). These results indicate restaurant type added to the prediction of on-the-job environmental behavior, $F(1, 220) = 167.90$, $p < 0.001$, $R^2 = 0.70$, as presented in Table 36. Green certified restaurant employees had higher on-the-job environmental behavior scores ($\beta = -0.62$, $p < 0.001$) than non-certified restaurant employees ($\beta = 0.62$, $p < 0.001$) as presented in Appendix L.

Table 36. Hierarchical Regression Model Summary: Extraversion, Restaurant Type, Interaction on On-the-Job Environmental Behavior

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	0.68[a]	0.46	0.46	0.95	0.46	190.19	1	221	0.00
2	0.83[b]	0.70	0.69	0.72	0.23	167.90	1	220	0.00
3	0.83[c]	0.70	0.69	0.72	0.00	0.11	1	219	0.74

a. Predictors: (Constant), Extraversion Centered
b. Predictors: (Constant), Extraversion Centered, Restaurant Type
c. Predictors: (Constant), Extraversion Centered, Restaurant Type, Interaction

Model 3, the model with the product term carrying the interaction of extraversion (centered) scores and the dummy coded restaurant type variable with on-the-job environmental behavior, was significant, $F(3, 219) = 166.60$, $p < 0.001$, as an independent model (Table 35). However, model 3 was not significant as an additive step to the hierarchical multiple regression, $F(1, 219) = 0.11$, $p = 0.74$, $R^2 = 0.70$ (Table 36), indicating the interaction did not predict on-the-job environmental behavior. The effect of extraversion (centered) on on-the-job environmental behavior did not depend on restaurant type. For green certified and non-certified restaurant employees, the effect of extraversion on on-the-job environmental behavior was positive, $\beta = 0.32$, $p < 0.001$ and $\beta = 0.29$, $p < 0.001$, respectively (Appendix L).

Neuroticism

Model 1, the model with the centered neuroticism variable with on-the-job environmental behavior, was significant, $F(1, 223) = 172.03$, $p < 0.001$, $R^2 = 0.44$, as presented in Table 37. For green certified and non-certified restaurants, neuroticism (centered) was a predictor of on-the-job environmental behavior ($\beta = -0.66$, $p < 0.001$). Coefficients are presented in Appendix L.

Table 37. Hierarchical Regression Model ANOVA Output: Neuroticism, Restaurant Type, Interaction on On-the-Job Environmental Behavior

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	163.94	1	163.94	172.03	0.00[b]
	Residual	212.51	223	0.95		
	Total	376.45	224			
2	Regression	264.74	2	132.37	263.05	0.00[c]
	Residual	111.71	222	0.50		
	Total	376.45	224			
3	Regression	266.01	3	88.67	177.42	0.00[d]
	Residual	110.45	221	0.50		
	Total	376.45	224			

a. Dependent Variable: On-the-Job Environmental Behavior
b. Predictors: (Constant), Neuroticism Centered
c. Predictors: (Constant), Neuroticism Centered, Restaurant Type
d. Predictors: (Constant), Neuroticism Centered, Restaurant Type, Interaction

Model 2, the model with the dummy coded restaurant type variable with on-the-job environmental behavior, was significant, $F(2, 222) = 263.05$, $p < 0.001$ (Table 37). These results indicate restaurant type added to the prediction of on-the-job environmental behavior, $F(1, 222) = 200.31$, $p < 0.001$, $R^2 = 0.70$, as presented in Table 38. Green certified restaurant employees had higher on-the-job environmental behavior scores ($\beta = -0.62$, $p < 0.001$) than non-certified restaurant employees ($\beta = 0.62$, $p < 0.001$) as presented in Appendix L.

Table 38. Hierarchical Regression Model Summary: Neuroticism, Restaurant Type, Interaction on On-the-Job Environmental Behavior

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	0.66[a]	0.44	0.43	0.98	0.44	172.03	1	223	0.00
2	0.84[b]	0.70	0.70	0.71	0.27	200.31	1	222	0.00
3	0.84[c]	0.71	0.70	0.71	0.00	2.54	1	221	0.11

a. Predictors: (Constant), Neuroticism Centered
b. Predictors: (Constant), Neuroticism Centered, Restaurant Type
c. Predictors: (Constant), Neuroticism Centered, Restaurant Type, Interaction

Model 3, the model with the product term carrying the interaction of neuroticism (centered) scores and the dummy coded restaurant type variable with on-the-job environmental behavior, was significant, $F(3, 221) = 177.42$, $p < 0.001$, as an independent model (Table 37). However, model 3 was not significant as an additive step to the hierarchical multiple regression, $F(1, 221) = 2.54$, $p = 0.11$, $R^2 = 0.71$ (Table 38), indicating the interaction did not predict on-the-job environmental behavior. The effect of neuroticism (centered) on on-the-job environmental behavior did not depend on restaurant type. For green certified and non-certified restaurant employees, the effect of neuroticism on on-the-job environmental behavior was negative, $\beta = -0.23$, $p < 0.001$ and $\beta = -0.38$, $p < 0.001$, respectively (Appendix L).

Openness

Model 1, the model with the centered openness variable with on-the-job environmental behavior, was significant, $F(1, 223) = 247.10$, $p < 0.001$, $R^2 = 0.53$, as presented in Table 39. For green certified and non-certified restaurants, openness (centered) was a predictor of on-the-job environmental behavior ($\beta = 0.73$, $p < 0.001$). Coefficients are presented in Appendix L.

Table 39. Hierarchical Regression Model ANOVA Output: Openness, Restaurant Type, Interaction on On-the-Job Environmental Behavior

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	196.57	1	196.57	247.10	0.00[b]
	Residual	177.39	223	0.80		
	Total	373.96	224			
2	Regression	264.22	2	132.11	267.25	0.00[c]
	Residual	109.74	222	0.49		
	Total	373.96	224			
3	Regression	264.95	3	88.32	179.04	0.00[d]
	Residual	109.01	221	0.49		
	Total	373.96	224			

a. Dependent Variable: On-the-Job Environmental Behavior
b. Predictors: (Constant), Openness Centered
c. Predictors: (Constant), Openness Centered, Restaurant Type
d. Predictors: (Constant), Openness Centered, Restaurant Type, Interaction

Model 2, the model with the dummy coded restaurant type variable with on-the-job environmental behavior, was significant, $F(2, 222) = 267.25$, $p < 0.001$ (Table 39). These results indicate restaurant type added to the prediction of on-the-job environmental behavior, $F(1, 222) = 136.86$, $p < 0.001$, $R^2 = 0.71$, as presented in Table 40. Green certified restaurant employees had higher on-the-job environmental behavior scores ($\beta = -0.56$, $p < 0.001$) than non-certified restaurant employees ($\beta = 0.56$, $p < 0.001$) as presented in Appendix L.

Table 40. Hierarchical Regression Model Summary: Openness, Restaurant Type, Interaction on On-the-Job Environmental Behavior

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	0.73[a]	0.53	0.52	0.89	0.53	247.10	1	223	0.00
2	0.84[b]	0.71	0.70	0.70	0.18	136.86	1	222	0.00
3	0.84[c]	0.71	0.71	0.70	0.00	1.48	1	221	0.23

a. Predictors: (Constant), Openness Centered
b. Predictors: (Constant), Openness Centered, Restaurant Type
c. Predictors: (Constant), Openness Centered, Restaurant Type, Interaction

Model 3, the model with the product term carrying the interaction of openness (centered) scores and the dummy coded restaurant type variable with on-the-job environmental behavior, was significant, $F(3, 221) = 179.04$, $p < 0.001$, as an independent model (Table 39). However, model 3 was not significant as an additive step to the hierarchical multiple regression, $F(1, 221) = 1.48$, $p = 0.23$, $R^2 = 0.71$ (Table 40), indicating the interaction did not predict on-the-job environmental behavior. The effect of openness (centered) on on-the-job environmental behavior did not depend on restaurant type. For green certified and non-certified restaurant employees, the effect of agreeableness on on-the-job environmental behavior was positive, $\beta = 0.48$, $p < 0.001$ and $\beta = 0.33$, $p < 0.001$, respectively (Appendix L).

Differences between Employees Working in Green Certified and Non-Certified Restaurants

Of the 229 usable questionnaires, approximately half (47.58%) were from green certified restaurant employees. Employees working in green certified and non-certified had similar demographic characteristics including gender, age, caring for children, education level, and marital status. Pearson's chi-square and independent samples t-test analyses were performed to test for the relationship between working in a green-certified or non-green certified operation and gender, age, caring for children 18 and under, educational level, and marriage status (Table 42 and Table 43). No relationship was found between working in a green certified or non-certified restaurant and gender (X^2 (1, N = 222) = 1.15, p =0.28), caring for children under 18 years old (X^2 (1, N = 229) = 0.45, p = 0.83), age (t(227) = -1.19, p = 0.24, d = 0.16), marital status (X^2 (4, N = 229) = 3.61, p = 0.46), and education level (t(227) = 0.02, p = 0.98, d = 0.01). Participant characteristics split by green certified and non-certified restaurant operations are presented in Table 41.

Table 41. Participant Characteristics for Green Certified and Non-Certified Restaurants

Characteristic	Green (N)	Non-Certified (N)	Characteristic	Green (N)	Non-Certified (N)
Gender			***Tenure in Foodservice Industry***		
Male	51	61	Less than 1 year	3	7
Female	58	52	1-5 years	56	61
			6-10 years	32	34
Age			11-15 years	8	13
18-24 years old	50	39	16-20 years	6	1
25-29 years old	26	31	More than 20 years	4	4
30-34 years old	13	26			
35-39 years old	8	7	***Tenure in Current Position***		
40-44 years old	4	7	Less than 1 year	12	16
45-49 years old	2	1	1-3 years	52	78
50 years old and older	5	9	4-6 years	23	15
			7-9 years	7	6
Care for Children			10 years or more	15	5
No	75	81			
Yes	34	39	***Employment Status***		
			Full-time	84	85
Education Level			Part-time	25	35
Some high school	7	8			
High school degree	19	18	***Position Title***		
Some college	24	40	Server	36	32
Associate's degree	24	13	Cook/ Chef	25	24
Bachelor's degree	25	30	Bartender	19	10
Some grad school	6	3	Host	8	16
Master's degree	4	6	Shift leader/ Supervisor	6	11
Doctoral degree	0	2	Cashier/ To-go	4	6
			Dishwasher	4	5
Marital Status			Multiple FOH positions	1	10
Single	67	76	Multiple BOH positions	2	4
Married	29	31	Multiple positions	4	2
Divorced	10	6			
Widowed	3	5	***Primary Work Area***		
Separated	0	2	Front-of-House	68	72
			Back-of-House	25	32
			Both	15	16

Similarities were found among various employment characteristics for employees working in green certified and non-certified restaurant operations. Pearson's chi-square and independent samples t-test analyses were performed to test for the relationship between working

in a green-certified or non-green certified operation and employment characteristics (Table 42 and Table 43). A significant difference was reported for tenure in current position between employees working in green certified and non-certified restaurants ($t(227) = 2.46$, $p = 0.02$, $d = 0.32$). Employees working in green certified restaurants (M = 4.39, SD = 4.56) had been in their current position longer than employees working in non-certified restaurants (M = 3.14, SD = 3.02). However, no significant differences were presented for employees working in green certified and non-certified restaurants for tenure in foodservice industry ($t(227) = 0.98$, $p = 0.33$, $d = 0.13$), employment status (X^2 (1, N = 229) = 1.15, $p = 0.28$), and position title (X^2 (9, N = 229) = 15.90, $p = 0.07$).

Table 42. Independent Samples T-Test for Demographic Characteristics for Employees Working in Green Certified and Non-Certified Restaurants

Variable	*t*	*df*	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
						Lower	Upper
Age	-1.19	227	0.24	-1.53	1.28	-4.06	1.00
Education Level	0.02	227	0.98	0.00	0.20	-0.40	0.41
Tenure in Current Position	2.46	227	0.02	1.25	0.51	0.25	2.25
Tenure in Foodservice Industry	0.98	227	0.33	0.87	0.88	-0.87	2.60

Table 43. Pearson's Chi-Square Test for Demographic Characteristics for Employees Working in Green Certified and Non-Certified Restaurants

Variable	Value	*df*	Sig. (2-tailed)
Gender	1.15	1	0.28
Caring for Children	0.45	1	0.83
Marital Status	3.61	4	0.46
Position Title	15.90	9	0.07
Foodservice Work Area	0.38	2	0.83
Employment Status	1.15	1	0.28

Three separate independent samples t-tests were conducted to compare environmental attitude, personal conservation behavior, and on-the-job environmental behavior in employees working in green certified and non-certified restaurants, results are presented in Table 44. A significant difference, $t(227) = 18.44$, $p < 0.001$, $d = 2.45$, in the environmental attitude scores was present for employees working in green certified restaurants (M = 5.37, SD = 0.91) and employees working in non-certified restaurants (M = 2.91, SD = 1.09). In addition, personal conservation behavior scores significantly differed, $t(224) = 16.40$, $p < 0.001$, $d = 2.21$, for employees working in green certified restaurants (M = 5.60, SD = 0.93) and employees working in non-certified restaurants (M = 2.94, SD = 1.43). There was a significant difference, $t(227) = 20.06$, $p < 0.001$, $d = 2.69$, in the on-the-job environmental behavior scores for employees working in green certified restaurants (M = 5.35, SD = 0.65) and employees working in non-certified restaurants (M = 3.27, SD = 0.88).

Table 44. Independent Samples T-Test for Employees Working in Green Certified and Non-Certified Restaurants for Environmentalism

Variable	*t*	*df*	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
						Lower	Upper
Environmental Attitude	18.44	227	0.00	2.46	0.13	2.20	2.73
Personal Conservation Behavior	16.40	224	0.00	2.66	0.16	2.34	2.98
On-the-Job Environmental Behavior	20.06	227	0.00	2.08	0.10	1.87	2.28

Five separate independent samples t-tests were conducted to compare each of the Big-Five personality traits in employees working in green certified and non-certified restaurants, results are presented in Table 45. There was a significant difference, $t(221) = 12.54$, $p < 0.001$,

in the agreeableness trait scores for employees working in green certified restaurants (M = 7.18, SD = 1.20) and employees working in non-certified restaurants (M = 4.11, SD = 2.25). Employees working in green certified restaurants (M = 6.82, SD = 1.25) had significantly higher conscientiousness trait scores, $t(223) = 9.93$, $p < 0.001$, than employees working in non-certified restaurants (M = 4.32, SD = 2.32). A significant difference, $t(221) = 11.80$, $p < 0.001$, in the extraversion trait scores was present for employees working in green certified restaurants (M = 6.63, SD = 1.22) and employees working in non-certified restaurants (M = 4.02, SD = 1.96). The neuroticism trait scores were significantly lower, $t(223) = -9.93$, $p < 0.001$, for employees working in green certified restaurants (M = 4.08, SD = 1.54) than employees working in non-certified restaurants (M = 6.27, SD = 1.75). Lastly, there was a significant difference, $t(223) = 12.95$, $p < 0.001$, in the openness trait scores with employees working in green certified restaurants (M = 7.05, SD = 1.00) having higher openness trait scores than employees working in non-certified restaurants (M = 4.20, SD = 2.07).

Table 45. Independent Samples T-Test for Employees Working in Green Certified and Non-Certified Restaurants for Personality

Variable	*t*	*df*	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
						Lower	Upper
Agreeableness	11.80	221	0.00	2.61	0.22	2.17	3.04
Conscientiousness	12.54	221	0.00	3.07	0.24	2.59	3.55
Extraversion	9.93	223	0.00	2.50	0.25	2.00	3.00
Neuroticism	-9.90	223	0.00	-2.19	0.22	-2.62	-1.75
Openness	12.95	223	0.00	2.85	0.22	2.42	3.29

Predictors of On-the-Job Environmental Behavior

To determine the predictive power of personality traits, environmental attitude, and restaurant type on on-the-job environmental behavior, hierarchical multiple regression analyses

were conducted using the specific personality variables, environmental attitude, and restaurant type (working in a green certified or non-certified restaurant). The interest was whether restaurant type explains on-the-job environmental behavior better above and beyond personality and environmental attitude.

Within these analyses, the predictor variables (agreeableness, conscientiousness, extraversion, neuroticism, openness, and environmental attitude) were mean centered by subtracting the mean from all its values. The restaurant type variable (employees working in green certified or non-certified restaurants) was dummy coded into dichotomous variables with two categories, green certified and non-certified restaurants.

Five hierarchical multiple regressions were conducted to examine the contribution two continuous predictors (centered variables of personality and centered environmental attitude) and one categorical predictor (restaurant type) on on-the-job environmental behavior. The hierarchical regressions were conducted with three steps. In step one, the centered variables of personality were entered because personality is inherent. In step two, the centered variable environmental attitude was entered because attitude follows personality temporally. Finally, in step three, the dummy coded variable of restaurant type was entered because restaurant type follows attitude temporally.

Agreeableness

Model 1, the model with the centered agreeableness variable with on-the-job environmental behavior, was significant, $F(1, 221) = 257.99$, $p < 0.001$, as presented in Table 46. For green certified and non-certified restaurants, agreeableness (centered) was a predictor of on-the-job environmental behavior ($\beta = 0.73$, $p < 0.001$). Coefficients are presented in Appendix M.

Table 46. Hierarchical Regression ANOVA Output: Agreeableness, Environmental Attitude, Restaurant Type on On-the-Job Environmental Behavior

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	202.49	1	202.49	257.99	0.00[b]
	Residual	173.46	221	0.79		
	Total	375.95	222			
2	Regression	255.98	2	127.99	234.71	0.00[c]
	Residual	119.97	220	0.55		
	Total	375.95	222			
3	Regression	282.25	3	94.09	219.92	0.00[d]
	Residual	93.69	219	0.43		
	Total	375.95	222			

a. Dependent Variable: On-the-Job Environmental Behavior
a. Predictors: (Constant), Agreeableness Centered
b. Predictors: (Constant), Agreeableness Centered, Environmental Attitude Centered
c. Predictors: (Constant), Agreeableness Centered, Environmental Attitude Centered, Restaurant Type

Model 2, the model with the centered environmental attitude variable with on-the-job environmental behavior, was significant, $F(2, 220) = 234.71$, $p < 0.001$ as an independent model (Table 46). These results indicate environmental attitude further predicted on-the-job environmental behavior, $F(1, 220) = 98.09$, $p < 0.001$, $R^2 = 0.68$, as presented in Table 47. For green certified and non-certified restaurants, environmental attitude (centered) uniquely predicted on-the-job environmental behavior scores ($\beta = 0.16$, $p < 0.001$) as presented in Appendix M.

Table 47. Hierarchical Regression Model Summary: Agreeableness, Environmental Attitude, Restaurant Type on On-the-Job Environmental Behavior

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	0.73[a]	0.54	0.54	0.89	0.54	257.99	1	221	0.00
2	0.83[b]	0.68	0.68	0.74	0.14	98.09	1	220	0.00
3	0.87[c]	0.75	0.75	0.65	0.07	61.42	1	219	0.00

a. Predictors: (Constant), Agreeableness Centered
b. Predictors: (Constant), Agreeableness Centered, Environmental Attitude Centered
c. Predictors: (Constant), Agreeableness Centered, Environmental Attitude Centered, Restaurant Type

Model 3, the model with the dummy coded restaurant type variable with on-the-job environmental behavior, was significant, $F(2, 219) = 219.92$, $p < 0.001$ as an independent model (Table 46). These results indicate restaurant type further predicted on-the-job environmental behavior $F(1, 219) = 61.42$, $p < 0.001$, $R^2 = 0.75$ (Table 47). However, agreeableness (centered) and environmental attitude (centered) also uniquely predicted on-the-job environmental behavior, $\beta = -0.17$, $p = 0.01$ and $\beta = 0.35$, $p < 0.001$, respectively (Appendix M). Green certified restaurant employees had higher on-the-job environmental behavior scores ($\beta = -0.42$, $p < 0.001$) than non-certified restaurant employees ($\beta = 0.42$, $p < 0.001$), as presented in Appendix M.

Conscientiousness

Model 1, the model with the centered conscientiousness variable with on-the-job environmental behavior, was significant, $F(1, 223) = 193.10$, $p < 0.001$, as presented in Table 48. For green certified and non-certified restaurants, conscientiousness (centered) was a predictor of on-the-job environmental behavior ($\beta = 0.68$, $p < 0.001$). Coefficients are presented in Appendix M.

Table 48. Hierarchical Regression ANOVA Output: Conscientiousness, Environmental Attitude, Restaurant Type on On-the-Job Environmental Behavior

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	175.66	1	175.66	193.10	0.00[b]
	Residual	202.86	223	0.91		
	Total	378.51	224			
2	Regression	258.32	2	129.16	238.57	0.00[c]
	Residual	120.19	222	0.54		
	Total	378.51	224			
3	Regression	284.45	3	94.82	222.76	0.00[d]
	Residual	94.07	221	0.43		
	Total	378.51	224			

a. Dependent Variable: On-the-Job Environmental Behavior
a. Predictors: (Constant), Conscientiousness Centered
b. Predictors: (Constant), Conscientiousness Centered, Environmental Attitude Centered
c. Predictors: (Constant), Conscientiousness Centered, Environmental Attitude Centered, Restaurant Type

Model 2, the model with the centered environmental attitude variable with on-the-job environmental behavior, was significant, $F(2, 222) = 238.57$, $p < 0.001$, as an independent model (Table 49). These results indicate environmental attitude further predicted on-the-job environmental behavior, $F(1, 222) = 152.69$, $p < 0.001$, $R^2 = 0.68$, as presented in Table 49. For green certified and non-certified restaurants, environmental attitude (centered) uniquely predicted on-the-job environmental behavior scores ($\beta = 0.71$, $p < 0.001$) as presented in Appendix M.

Table 49. Hierarchical Regression Model Summary: Conscientiousness, Environmental Attitude, Restaurant Type on On-the-Job Environmental Behavior

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	0.68[a]	0.46	0.46	0.95	0.46	193.10	1	223	0.00
2	0.83[b]	0.68	0.68	0.74	0.22	152.69	1	222	0.00
3	0.87[c]	0.75	0.75	0.65	0.07	61.38	1	221	0.00

a. Predictors: (Constant), Conscientiousness Centered
b. Predictors: (Constant), Conscientiousness Centered, Environmental Attitude Centered
c. Predictors: (Constant), Conscientiousness Centered, Environmental Attitude Centered, Restaurant Type

Model 3, the model with the dummy coded restaurant type variable with on-the-job environmental behavior, was significant, $F(3, 221) = 222.76$, $p < 0.001$, as an independent model (Table 48). These results indicate restaurant type further predicted on-the-job environmental behavior, $F(1, 221) = 61.38$, $p < 0.001$, $R^2 = 0.75$ (Table 49). However, conscientiousness (centered) and environmental attitude (centered) also uniquely predicted on-the-job environmental behavior, $\beta = 0.17$, $p < 0.001$ and $\beta = 0.37$, $p < 0.001$, respectively (Appendix M). Green certified restaurant employees had higher on-the-job environmental behavior scores ($\beta = -0.42$, $p < 0.001$) than non-certified restaurant employees ($\beta = 0.42$ $p < 0.001$), as presented in Appendix M.

Extraversion

Model 1, the model with the centered extraversion variable with on-the-job environmental behavior, was significant, $F(1, 221) = 190.19$, $p < 0.001$, as presented in Table 50. For green certified and non-certified restaurants, extraversion (centered) was a predictor of on-the-job environmental behavior ($\beta = .68$, $p < 0.001$). Coefficients are presented in Appendix M.

Table 50. Hierarchical Regression ANOVA Output: Extraversion, Environmental Attitude, Restaurant Type on On-the-Job Environmental Behavior

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	172.43	1	172.43	190.19	0.00[b]
	Residual	200.36	221	0.91		
	Total	372.79	222			
2	Regression	252.51	2	126.25	230.91	0.00[c]
	Residual	120.29	220	0.55		
	Total	372.79	222			
3	Regression	278.02	3	92.67	214.14	0.00[d]
	Residual	94.78	219	0.43		
	Total	372.79	222			

a. Dependent Variable: On-the-Job Environmental Behavior
a. Predictors: (Constant), Extraversion Centered
b. Predictors: (Constant), Extraversion Centered, Environmental Attitude Centered
c. Predictors: (Constant), Extraversion Centered, Environmental Attitude Centered, Restaurant Type

Model 2, the model with the centered environmental attitude variable with on-the-job environmental behavior, was significant, $F(2, 220) = 230.91$, $p < 0.001$, as an independent model (Table 50). These results indicate environmental attitude further predicted on-the-job environmental behavior, $F(1, 220) = 146.46$, $p < 0.001$, $R^2 = 0.68$, as presented in Table 51. For green certified and non-certified restaurants, environmental attitude (centered) uniquely predicted on-the-job environmental behavior scores ($\beta = 0.79$, $p < 0.001$) as presented in Appendix M.

Table 51. Hierarchical Regression Model Summary: Extraversion, Environmental Attitude, Restaurant Type on On-the-Job Environmental Behavior

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	0.68[a]	0.46	0.46	0.95	0.46	190.19	1	221	0.00
2	0.82[b]	0.68	0.67	0.74	0.22	146.46	1	220	0.00
3	0.86[c]	0.75	0.74	0.66	0.07	58.95	1	219	0.00

a. Predictors: (Constant), Extraversion Centered
b. Predictors: (Constant), Extraversion Centered, Environmental Attitude Centered
c. Predictors: (Constant), Extraversion Centered, Environmental Attitude Centered, Restaurant Type

Model 3, the model with the dummy coded restaurant type variable with on-the-job environmental behavior, was significant, $F(3, 219) = 214.14$, $p < 0.001$, as an independent model (Table 50). These results indicate restaurant type further predicted on-the-job environmental behavior, $F(1, 219) = 58.95$, $p < 0.001$, $R^2 = 0.75$ (Table 51). Environmental attitude (centered) also uniquely predicted on-the-job environmental behavior, $\beta = 0.47$, $p < 0.001$ but, extraversion (centered) did not uniquely predict on-the-job behavior $\beta = 0.04$, $p = 0.49$ indicating environmental attitude and restaurant type were more important for predicting on-the-job behavior than extraversion. Green certified restaurant employees had higher on-the-job environmental behavior scores ($\beta = -0.41$, $p < 0.001$) than non-certified restaurant employees ($\beta = 0.41$, $p < 0.001$) as indicated in Appendix M.

Neuroticism

Model 1, the model with the centered neuroticism variable with on-the-job environmental behavior, was significant, $F(1, 223) = 172.03$, $p < 0.001$, as presented in Table 52. For green certified and non-certified restaurants, neuroticism (centered) was a predictor of on-the-job environmental behavior ($\beta = -0.66$, $p < 0.001$). Coefficients are presented in Appendix M.

Table 52. Hierarchical Regression ANOVA Output: Neuroticism, Environmental Attitude, Restaurant Type on On-the-Job Environmental Behavior

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	163.94	1	163.94	172.03	0.00[b]
	Residual	212.51	223	0.95		
	Total	376.45	224			
2	Regression	255.61	2	127.80	234.79	0.00[c]
	Residual	120.84	222	0.54		
	Total	376.45	224			
3	Regression	281.19	3	93.73	217.45	0.00[d]
	Residual	95.26	221	0.43		
	Total	376.45	224			

a. Dependent Variable: Environmental Attitude
a. Predictors: (Constant), Neuroticism Centered
b. Predictors: (Constant), Neuroticism Centered, Environmental Attitude Centered
c. Predictors: (Constant), Neuroticism Centered, Environmental Attitude Centered, Restaurant Type

Model 2, the model with the centered environmental attitude variable with on-the-job environmental behavior, was significant, $F(2, 222) = 234.79$, $p < 0.001$, as an independent model (Table 52). These results indicate environmental attitude further predicted on-the-job environmental behavior, $F(1, 222) = 168.41$, $p < 0.001$, $R^2 = 0.68$, as presented in Table 53. For green certified and non-certified restaurants, environmental attitude (centered) uniquely predicted on-the-job environmental behavior scores ($\beta = 0.73$, $p < 0.001$), as presented in Appendix M.

Table 53. Hierarchical Regression Model Summary: Neuroticism, Environmental Attitude, Restaurant Type on On-the-Job Environmental Behavior

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	0.66[a]	0.44	0.43	0.98	0.44	172.03	1	223	0.00
2	0.82[b]	0.68	0.68	0.74	0.24	168.41	1	222	0.00
3	0.86[c]	0.75	0.74	0.66	0.07	59.35	1	221	0.00

a. Predictors: (Constant), Neuroticism Centered
b. Predictors: (Constant), Neuroticism Centered, Environmental Attitude Centered
c. Predictors: (Constant), Neuroticism Centered, Environmental Attitude Centered, Restaurant Type

Model 3, the model with the dummy coded restaurant type variable with on-the-job environmental behavior, was significant, $F(3, 221) = 217.45$, $p < 0.001$, as an independent model (Table 52). These results indicate restaurant type further predicted on-the-job environmental behavior, $F(1, 221) = 59.35$, $p < 0.001$, $R^2 = 0.75$ (Table 53). However, neuroticism (centered) and environmental attitude (centered) also uniquely predicted on-the-job environmental behavior, $\beta = -0.14$, $p = 0.01$ and $\beta = 0.40$, $p < 0.001$, respectively (Appendix M). Green certified restaurant employees have higher on-the-job environmental behavior scores ($\beta = -0.41$, $p < 0.001$) than non-certified restaurant employees ($\beta = 0.41$, $p < 0.001$), as presented in Appendix M.

Openness

Model 1, the model with the centered openness variable with on-the-job environmental behavior, was significant, $F(1, 223) = 247.10$, $p < 0.001$, as presented in Table 54.. For green certified and non-certified restaurants, openness (centered) was a predictor of on-the-job environmental behavior ($\beta = 0.73$, $p < 0.001$). Coefficients are presented in Appendix M.

Table 54. Hierarchical Regression ANOVA Output: Openness, Environmental Attitude, Restaurant Type on On-the-Job Environmental Behavior

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	196.57	1	196.57	247.10	0.00[b]
	Residual	177.39	223	0.80		
	Total	373.96	224			
2	Regression	257.42	2	128.71	245.17	0.00[c]
	Residual	116.55	222	0.53		
	Total	373.96	224			
3	Regression	279.76	3	93.25	218.78	0.00[d]
	Residual	94.20	221	0.43		
	Total	373.96	224			

a. Dependent Variable: On-the-Job Environmental Behavior
a. Predictors: (Constant), Openness Centered
b. Predictors: (Constant), Openness Centered, Environmental Attitude Centered
c. Predictors: (Constant), Openness Centered, Environmental Attitude Centered, Restaurant Type

Model 2, the model with the centered environmental attitude variable with on-the-job environmental behavior, was significant, $F(2, 222) = 245.17$, $p < 0.001$, as an independent model (Table 54). These results indicate environmental attitude further predicted on-the-job environmental behavior, $F(1, 222) = 115.91$, $p < 0.001$, $R^2 = 0.69$, as presented in Table 55. For green certified and non-certified restaurants, environmental attitude (centered) uniquely predicted on-the-job environmental behavior scores ($\beta = 0.73$, $p < 0.001$), as presented in Appendix M.

Table 55. Hierarchical Regression Model Summary: Openness, Environmental Attitude, Restaurant Type on On-the-Job Environmental Behavior

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	0.73[a]	0.53	0.52	0.89	0.53	247.10	1	223	0.00
2	0.83[b]	0.69	0.69	0.72	0.16	115.91	1	222	0.00
3	0.87[c]	0.75	0.75	0.65	0.06	52.42	1	221	0.00

a. Predictors: (Constant), Openness Centered
b. Predictors: (Constant), Openness Centered, Environmental Attitude Centered
c. Predictors: (Constant), Openness Centered, Environmental Attitude Centered, Restaurant Type

Model 3, the model with the dummy coded restaurant type variable with on-the-job environmental behavior, was significant, $F(3, 221) = 218.78$, $p < 0.001$, as an independent model (Table 54). These results indicate restaurant type further predicted on-the-job environmental behavior, $F(1, 221) = 52.42$, $p < 0.001$, $R^2 = 0.75$ (Table 55). However, environmental attitude (centered) also uniquely predicted on-the-job environmental behavior, and $\beta = 0.35$, $p < 0.001$ but, openness (centered) did not uniquely predict on-the-job environmental behavior $\beta = 0.11$, $p = 0.09$ indicating that environmental attitude and restaurant type are more important to predicting on-the-job environmental behavior than openness. Green certified restaurant employees had higher on-the-job environmental behavior scores ($\beta = -0.39$, $p < 0.001$) than non-certified restaurant employees ($\beta = 0.39$, $p < 0.001$) as indicated in Appendix M.

Summary

In summary, a significant relationship existed between personality and environmentalism. A significant relationship existed amongst personality traits as well as amongst environmentalism variables. Personality traits were a significant predictor of environmental attitude, personal conservation behavior, and on-the-job environmental behavior. Restaurant type (working in green certified or non-certified restaurant) further predicted environmental attitude, personal conservation behavior, and on-the-job environmental behavior. However, the effect of personality on environmentalism did not depend on restaurant type, except with the personality trait neuroticism. Specifically, the effect of neuroticism on environmental attitude and personal conservation depended on restaurant type.

Employees working in green certified and non-certified restaurant operations did not significantly differ with regards to demographics, except in the case of tenure in current position. However, employees working in green certified and non-certified restaurant operations did

significantly differ with regards to personality traits and environmentalism. Employees working in green certified restaurant operations displayed higher agreeableness, conscientiousness, extraversion, openness, environmental attitudes, personal conservation behavior, and on-the-job environmental behavior scores and lower neuroticism scores than employees working in non-certified restaurant operations.

Chapter 5 - Discussion

In this study, two specific research questions were asked: 1) What are the relationships between and impact of the Big-Five personality traits and environmental attitude, personal conservation behaviors, and on-the-job environmental behaviors of restaurant employees, and 2) how do employees working in green certified and non-certified restaurants differ with regards to personality, environmental attitude, and environmental behaviors. Interpretation of the results for these questions are presented in the following chapter.

To answer these research questions various analyses were conducted. Pearson's correlation tests were conducted to determine the relationship between personality traits and environmentalism variables. To determine which personality traits are predictors of environmentalism variables, several multiple regressions were conducted. Three simultaneous multiple regressions were conducted to explore which personality traits uniquely predict environmental attitude, personal conservation behavior, and on-the-job environmental behavior. Hierarchical multiple regressions were conducted to determine the main effects of personality and restaurant type (working in green certified or non-certified restaurant) and their interaction on environmental attitude, personal conservation behavior, and on-the-job environmental behavior. The results of the hierarchical regression also provide insight into differences between employees working in green certified and non-certified restaurants.

Pearson's chi-square and independent samples t-test analyses determined if differences existed between employees working in green certified and non-certified restaurants for demographic characteristics, personality traits, and environmentalism. In addition, five hierarchical multiple regressions were conducted to determine predictors of on-the-job environmental behavior and whether working in green certified or non-certified restaurant

operations explains on-the-job environmental behavior better above and beyond personality and environmental attitude.

Data Collection Methods

For data collection, three methods were employed: on-site, mailed, and online. During the on-site visits in Las Vegas, NV and Chicago, IL, the primary researcher spent a maximum of three hours in the restaurant; mainly in the dining room area. Employees completed questionnaires both in paper version and online using provided tablets. For data collection using mailed questionnaires, employees were given the questionnaire and a postage paid return envelope. For online data collection, employees were provided with a survey link. These two methods (mailed and online) allowed employees to complete the questionnaire off-site of the restaurant operation.

In this study, confidentiality was provided. Individual responses were not available to managers or operators, allowing employees to answer openly free from social pressures; reducing the social desirability bias. However, within the restaurant environment, employees were likely surrounded by supervisors, managers, and other co-workers. The presence of these individuals could have influenced employees to answer items related to environmentalism in a way that would appear socially acceptable. However, there was no significant difference among data collection methods for environmental attitude. Personal conservation behavior and on-the-job environmental behavior scores did not significantly differ between the mailed survey method with on-site or online survey methods. Therefore, the only two significant differences among data collection methods were significantly higher personal conservation behavior and on-the-job environmental behavior scores for the online data collection method than the on-site data collection method. These results indicate employees were not socially pressured to answer

questions favorably related to environmentalism while completing questionnaires within the operation. More realistically, employees would likely be more susceptible to social desirability bias when recognition would be given for their environmentalism, rather than when confidentiality is provided. When recognition or reward is available, individuals are more motivated to perform green practices and appear as environmentally friendly (Grevet & Mankoff, 2009).

Employee Demographics

The demographic characteristics of participants in this study are similar to the demographic characteristics of restaurant employees nationwide. Almost half of the participants in this study were female (48.5%), while 2.2% of participants reported other. Nationally, gender of restaurant employees is almost equally split with women accounting for 51.8% (U.S. Bureau of Labor Statistics, 2018a). The national average of part-time restaurant workers is estimated to be 40%. However, in this study, only 26.2% of participants were part-time workers.

More than 58% of restaurant workers in the U.S. are 25 years old or older with these workers having various levels of education (The Aspen Institute, 2013). Of the employees 25 years old or older, approximately 38% have a high school degree, 27% have some college or an Associate Degree, and 15% have a Bachelor's Degree or higher (The Aspen Institute, 2013). For this study, more than 61% of the participants were 25 years old or older. Among these participants' educational levels differed slightly from the national group of restaurant workers with 13.57% having some high school education or high school degrees, 44.29% have some college or an Associate Degree, and 42.14% having a Bachelor's Degree or higher. Differences among education levels for this study could be due to the data for the national average being five years old. Within that five years, the national average could have changed. Another reason for

the difference among education levels could be that educated individuals may place higher value on participating in research projects.

Within this study, telephone interviews with managers of green restaurant operations were conducted. These managers reported that employees working in green restaurants felt a strong sense of pride that they were employed by operators who care about the environment which could have increased employee satisfaction. Furthermore, managers reported high levels of support for the sustainability initiatives from employees. This pride, satisfaction, and support of employees could be the reason employees working in green operations have more tenure in their positions than their counterparts working in non-certified operations. However, there were no significant differences among demographic characteristics or other employment characteristics of employees working in green certified or non-certified restaurant operations. As mentioned above, these characteristics are fairly similar to the national average of restaurant workers (The Aspen Institute, 2013; U.S. Bureau of Labor Statistics, 2018a).

Personality

The mean scores of personality traits (on a 9-point Likert scale) for employees in this study were as follows: agreeableness, M=5.59 ± 0.16, conscientiousness, M=5.52 ± 0.15, extraversion, M=5.27 ± 0.14, neuroticism, M=5.23 ± 0.13, and openness, M=5.56 ± 0.15. Among the sample, employees exhibited higher than average levels of all personality traits, indicating the employees display compassion, dependability, sociability, anxiety, and curiosity.

Similar to the results of this study, Brown, Mowen, Donavan, and Licata (2002) reported the scores of personality traits, on a 9-point scale, for restaurant employees as agreeableness, M=7.04 ± 1.51, conscientiousness, M=6.52 ± 1.35, introversion (extraversion), M=3.39 ± 1.82, instability (neuroticism), M=3.90 ± 1.79, and openness, M=6.20 ± 1.53. However, Kim, Shin,

and Swanger (2009) reported scores of personality traits, on a 7-point Likert scale, for foodservice workers: agreeableness, M=3.97 ± 0.56, conscientiousness, M= 3.75 ± 0.57, extraversion, M=3.50 ± 0.71, neuroticism, M=2.48 ± 0.71, and openness, M=3.75 ± 0.57. These comparisons indicate that in general restaurant employees are typically on the low side of the continuum for neuroticism and on the high side of the continuum for agreeableness, conscientiousness, extraversion, and openness. The results of this study support this notion except for the personality trait neuroticism which on the high side of continuum. Because neuroticism refers to one's emotional stability, an employee's mood at work may have influenced their responses related to neuroticism. Explanations for this difference could be the result of lower job satisfaction and higher burnout levels of employees during the time of the data collection (Szeliga, 2009).

According to McCrae and Costa (1987), the Big Five personality traits are orthogonal. However, within this study, there were high correlations among all personality traits and other personality traits. Similarly, Kim et al. (2009) found significant correlations among all personality traits except between extraversion and conscientiousness. Kvasova (2015) found correlations among all personality traits except between extraversion and neuroticism, extraversion and openness, and openness and neuroticism.

In this study, all personality traits significantly correlated with one another which usually signifies that a change in level of one personality trait also changes the level of another personality trait. However, as stated within the Five Factor Theory, personality traits are biological based and inherent meaning they do not largely fluctuate (McCrae & Costa, 2008). Therefore, the high correlations signify blended personalities. Intercorrelations among personality traits could indicate that the scale used to measure personality utilized blended

variables (Ashton, Lee, Goldberg, & de Vries, 2009). For example, various synonyms exist for each item creating the correlation between traits. An additional explanation for the high correlations between personality traits is the idea that the Big-Five personality traits are not orthogonal, but rather the existence of a Big One or a single general factor of personality (Musek, 2007). In this study, the high intercorrelations among all five personality traits specifies agreeableness, conscientiousness, extraversion, neuroticism, and openness may not be clearly separated as five precise domains. However, regardless of whether separation of the Big-Five domains within this study is clear, characteristics used to describe the traits stay the same.

Environmentalism

Significantly high positive correlations were found between all three environmentalism variables (environmental attitude, personal conservation behavior, and on-the-job environmental behavior). Not surprisingly, environmental attitude was highly correlated with both personal and on-the-job environmental behaviors. Norton, Zacher, and Ashkanasy (2014) reported that environmental attitude was significantly related to employees' behavior of performing green practices within their job description and employees' proactive behavior of performing green practices. The results in this study support Norton's et al. (2014) statement with the additional indication that the higher one's environmental attitude, the more likely one would perform environmental behaviors, both at home and at work.

High correlations were also found between personal conservation behavior and on-the-job environmental behavior. This high correlation demonstrates that employees are genuinely environmentally friendly and enjoy helping the environment, both at home and while at work. Moreover, this high correlation displays the presence of work-life spillover. When an employee realizes the benefit of green practices in the restaurant operation, the same realization is reflected

in their personal life. For example, being required to recycle at work, may have motivated the employee to recycle at home. This carryover effect can be reversed as well with the influence of pro-environmental behaviors starting at home and influencing behaviors in the workplace. This carryover effect could also be the result of environmentally friendly individuals seeking employment with operations caring about the environment.

Manika, Wells, Gregory-Smith, and Gentry (2015) reported several strong correlations between employee perception and environmentalism. For example, a strong correlation was reported between employee environmental behavior and employee perception of how green the firm is. Manika et al. (2015) indicated employee environmental behaviors are high when employees perceive the firm to be green and environmental attitudes are high. The results in this study support these notions. Significant differences were found between employees working in green certified and non-certified restaurant operations for environmental attitude, personal conservation behavior, and on-the-job environmental behavior. Scores for environmentalism were significantly higher for employees working in green certified restaurant operations than employees working in non-certified restaurant operations. Additionally, for both green certified and non-certified restaurant operations, environmental attitude uniquely predicted on-the-job environmental behavior scores. Restaurant type also uniquely predicted on-the-job environmental behavior, regardless of personality or environmental attitude.

Regardless of the mission of a specific restaurant, the overall aim of the industry is the same: prepare and serve food and drinks to make a profit. To be successful, a multitude of jobs and tasks must be accomplished. However, within a green certified operation, managers are charged with additional tasks related to sustainability. The mission of green restaurant operations includes sustainability and being green is interwoven into most operational decisions.

For example, during the interviews for instrument development for this study, managers of green certified restaurants identified various green practices ranging from small investments such as recycling programs and energy efficient lightbulbs to large investments such as energy efficient appliances and solar panels. The culture within a green restaurant operation is typically sustainability focused and plays a significant role in motivating employees to successfully maintain environmental programs. Therefore, in addition to typical job required tasks, employees working in green certified operations would also be required to perform tasks related to sustainability. During interviews conducted for this study, managers of green restaurants identified several sustainability initiatives that involve daily employee involvement. Examples of employee behaviors included participating in compost and recycling programs, raising awareness among customers, repurposing items, and harvesting crops from on-site gardens. Thus, compared to an average restaurant operation, employees working in green certified operations are required to be mindful of the environment and take extra steps to be sustainable.

Given the fast-paced, demanding work environment of a restaurant, requiring employees to complete more tasks related to environmentalism could add to their stress and encourage counterproductive behaviors. Heavy workloads have been associated as a job stressor in various studies (Ganster, Fox, & Dwyer, 2001; Spector, 2002; Tan & Netessine, 2014). If an employee views these heavy workloads as unfair or pointless, the employee might be inclined to retaliate against the environmental program by not performing the green practice. In a green certified restaurant, an example of environmental counterproductive work behaviors would be improper waste disposal such as not placing recyclable items in recycling bins or throwing trash in with compost. This further signifies that in order for an environmental program to be successful, employee involvement is needed. Employee involvement is higher when employee values align

with company values. Robertson and Barling (2013) found employees' environmental behaviors were predicted by employees' harmonious environmental passion. Within this study, the results indicate environmental values of employees working in green certified restaurant operations are aligned. When values of an employee align the values of a company, the outcome is higher organizational commitment and job satisfaction and lower frequency of work stress (Posner, 2010).

Employee perception of the presence of sustainability policies was significantly related to employees' behavior of performing green practices within their job description in a study by Norton et al. (2014). Supporting this relationship, the results in this study indicate that a green restaurant operation is significantly related to on-the-job environmental behaviors. Because green certified restaurant operations would require on-the-job environmental behaviors, this result was expected. However, the combined results of this study support the idea that employees working in green certified restaurants were attracted to the green practices and possibly targeted the operation for employment because of environmentalism. As a result, operators of green certified operations could use their commitment of pro-environmental programs as a marketing tool to attract well-qualified employees by listing required environmental behaviors within job descriptions of job postings.

The high scores of on-the-job environmental behaviors of employees working in green certified operations in this study also support the statement of Brekke and Nyborg (2008) that green firms attract environmentally responsible employees whom are highly motivated. These employees are important to firms to achieve environmental performance (Paille, Chen, Borial, & Jin, 2014). As stated by Raineri and Paille (2016), employee environmental commitment positively correlated with environmental citizenship behaviors at work. The results of this study

also indicate that employees with high environmental commitment would likely exhibit high on-the-job environmental behaviors. For restaurant operators, these results further indicate the importance of recruiting and hiring employees with high environmental commitment. These employees would likely result in high performance of green practices.

Personality and Environmentalism

In this study, all five personality traits were significantly related to environmentalism. However, previous research has varied on which personality traits are significantly correlated with environmentalism. For example, Hirsh and Dolderman (2007) reported the only significant positive relationships between personality and environmentalism were with the traits agreeableness and openness. Markowitz et al. (2012) reported significant relationship between personality and environmental behavior for the personality trait openness. Conversely, Nisbet, Zelenski, and Murphy (2009) stated positive relationships existed between one's connection to nature and the personality traits of extraversion, agreeableness, conscientiousness, and openness. Finally, Kvasova (2015) identified extraversion, agreeableness, conscientiousness, and neuroticism having strong relationships with eco-friendly tourist behavior.

While existing relationships have been identified for all five personality traits with environmentalism throughout various studies, it is unique for all five personality traits to be related with environmentalism, as it was in this study. Unlike previous studies, this study measured environmentalism as a combination of environmental attitude, personal conservation behavior, and on-the-job environmental behaviors. Including all three measures cumulated a well-rounded measure for environmentalism among employees.

A positive correlation was found between the personality traits agreeableness, conscientiousness, extraversion, and openness and the variables of environmentalism.

Specifically, as the scores of agreeableness, conscientiousness, extraversion, and openness increase, the scores of environmental attitude, personal conservation behavior, and on-the-job environmental increase. However, a negative correlation was found between the personality trait neuroticism and variables of environmentalism, indicating as the scores of neuroticism decrease, the scores of environmental attitude, personal conservation behavior, and on-the-job environmental increase.

A person with low levels of neuroticism would display high emotional stability. This employee would be perceived as calm and less affected by stressful situations. When considering the future well-being of the planet depends on our actions today, environmental sustainability may be viewed by some as a stressor. A person with low neuroticism would likely be more emotionally equipped to deal with this particular stressor; providing a possible explanation for the negative correlation between neuroticism and environmentalism stated in this study.

Hierarchical multiple regression analyses revealed that all five personality traits predict environmentalism. However, specific personality traits uniquely predict environmentalism. Agreeableness and openness appeared as unique predictors of environmentalism above and beyond other traits. Consistent with the results of this study, openness and agreeableness has been identified as a predictor for environmentalism throughout several research studies. Agreeableness and openness uniquely predicted environmentalism within the study conducted by Hirsh and Dolderman (2007). Brick and Lewis (2014) conveyed conscientiousness, extraversion, and openness as strong predictors of environmental behavior, specifically behaviors related to reducing greenhouse gas emissions. Conversely, Markowitz et al. (2012) reported openness was the only personality trait found as a unique predictor of pro-environmental action.

According to Leary and Hoyle (2009), openness affects one's perception and formation of social attitudes. Additionally, these individuals are generally open to cultural differences and are concerned with a high quality of life (Ang, Van Dyne, & Koh, 2006; Vitterso, 2004). In general, the qualities and views of a highly open individual would likely favor environmentalism. Individuals with high levels of openness have been described as intellectually curious, imaginative, and artistic (Leary & Hoyle, 2009). Therefore, they would likely be involved in improving sustainability programs by offering creative new environmentally friendly ideas. Furthermore, Moss, McFarland, Ngu, and Kijowska (2007) identified a positive relationship existed between openness and organizational commitment, so it was not surprising that these individuals would also display high scores for on-the-job environmental behaviors.

A person with high scores of agreeableness would likely display tactfulness, friendliness, cooperation with others, and generally get along well with others (McCrae & Costa, 1987). Individuals with high levels of agreeableness were also more likely to share knowledge with others (Gupta, 2008). When combining these qualities, the results of this study indicate individuals with high agreeableness would likely be effective trainers of environmental programs. Graziano, Habashi, Sheese, and Tobin (2007) reported that persons with high agreeableness also have high pro-social motivation (motivation to help others). Furthermore, a positive correlation exists between agreeableness and work-life balance (Devi & Rani, 2012). With high pro-social motivation and desire for work-life balance, these individuals put emphasis on taking care of others. Human life depends on the health of the environment and because our environmental behavior impacts others, it would be expected that these individuals would demonstrate environmental concern as well.

Significant differences were found between employees working in green certified and non-certified restaurant operations for all five personality traits. Employees working in green certified restaurant operations exhibit higher levels of agreeableness, conscientiousness, extraversion, and openness with lower levels of neuroticism, than employees working in non-certified restaurant operations. Furthermore, for both green certified and non-certified restaurant operations, the personality traits agreeableness, conscientiousness, extraversion, neuroticism, and openness were all predictors of on-the-job environmental behavior.

Moreover, restaurant type was not a mediator of environmentalism indicating the effect of personality does not depend on whether the restaurant was green or non-certified when predicting environmentalism, except for the trait of neuroticism. Specifically, the only significant interactions found were neuroticism and restaurant type for environmental attitude and personal conservation behavior. For both environmental attitude and personal conservation behavior, employees working in green restaurant operations had lower levels of neuroticism. However, the interaction between neuroticism and restaurant type for on-the-job environmental behavior was not significant as it would be expected since green restaurant operators would require environmental behaviors while at work.

These results indicate, in general, the effect of personality is stable, regardless of restaurant type. This should be the case when one considers that personality is stable, inherent, and rarely fluctuates. One explanation of the significant interactions between neuroticism and restaurant type for environmental attitude and personal conservation behavior is the nature of neuroticism. Neuroticism is one's emotional stability. While a person with low neuroticism would display calmness and would tend to have more control of their emotions at work, emotions are still volatile. Moreover, environmental attitude and personal conservation

behaviors are emotionally charged issues. It could be that the effect of neuroticism on environmental attitude and personal conservation behaviors is dependent on the restaurant environment because of social pressures within the restaurants to be more environmentally friendly.

Within this study, an ideal personality mix has been identified related to environmental programs. This ideal green employee would also be a potential environmental champion. Restaurant operators can recognize model environmental champions by identifying individuals who exhibit high levels of extraversion, openness, agreeableness, and conscientiousness and display an aptitude for leading and motivating employees. Assessment of personality traits of employees could be conducted formally through tests or informally through inferences made by managers. Environmental champions serve as figureheads in sustainability movements and advocate for a more sustainable planet (Boks, 2006). These individuals motivate pro-environmental behaviors in others and are proponents for increasing pro-environmental changes (Boks, 2006).

Champions, in general, exhibit various behaviors including commitment to innovation, expression of confidence, and persistence to the cause (Howell, Shea, & Higgins, 2005). According to Andersson and Bateman (2000), effective environmental champions typically act as leaders. Transformational leaders displayed similar personality traits to employees within this study working in green certified restaurant operations (Deinert, Homan, Boer, Voelpel, & Gutermann, 2015). Furthermore, significant positive correlations were reported between leader performance and the personality traits extraversion, openness, agreeableness, and conscientiousness (Dienert et al. 2015). Therefore, it is likely that the ideal green employee

would also be an ideal environmental champion and leader. These employees would be the model candidate to increase environmental performance within a restaurant operation.

If restaurant operators were seeking to increase the success of existing environmental programs or implement new environmental programs, they should recruit and hire individuals displaying these traits because they would likely support green initiatives more than their counterparts. The ideal green employee in this study is one with low levels of neuroticism and high levels of agreeableness, conscientiousness, extraversion, and openness. Operators could target specific personality traits like agreeableness and openness, which were consistently unique predictors of environmentalism in this study or attempt to hire a candidate possessing all ideal personality traits.

Hiring candidates with all ideal personality traits may prove to be a difficult task but, worthwhile because the traits of an ideal green employee would likely be associated with other desirable characteristics beyond environmentalism. For example, high agreeableness and conscientiousness have been correlated with higher job satisfaction and citizenship behavior (Ilies, Fulmer, Spitzmuller, & Johnson, 2009). High extraversion and conscientiousness have been correlated with higher employee engagement (Handa & Gulati, 2014). Low neuroticism have been correlated with lower levels of burnout, exhaustion, and cynicism (Kim et al., 2009). Furthermore, high agreeableness, conscientiousness, extraversion, and openness have been correlated with higher customer interaction quality and customer satisfaction (Ekinci & Dawes, 2009). The traits identified in this study describe not only ideal green employees but, ideal employees in general.

There are various work demands within a restaurant operation that go beyond solely focusing on environmentalism. Therefore, when considering tasks required by different

positions, different personality traits are desired. Sought-after traits specific to employees working in front-of-house positions (cashiers, hosts, servers, and bartenders) would include high levels of extraversion and agreeableness. These employees are generally the point-of-contact of the operation with customers. They are tasked with customer interactions and ensuring customer satisfaction. During these interactions, employees having high levels of extraversion and agreeableness would likely be more comfortable and get along well with customers. Furthermore, desirable traits of cooks, chefs, and other production employees would include a low level of neuroticism and high level of agreeableness. These employees are required to multi-task in kitchens with many time constraints. Hence, displaying emotional stability or remaining calm during stressful situations and working well with others would be beneficial.

Restaurant operators should consider that there are various ideal candidates with various mixtures of personality traits needed within their operation. Therefore, restaurant operators should rank personality traits based on the needs for the operation. Sackett and Walmsley (2014) stated the top ranked attributes for employees to exhibit within the food preparation and service industry was cooperation and dependability. When extrapolating these to the Big Five personality traits, high agreeableness and conscientiousness would be desired. However, if a new hire is needed to implement a new environmental program or improve an existing one, then high agreeableness and openness should be at the top of list. If a new hire is needed to lower ticket times and boost morale in the kitchen, then high conscientiousness and extraversion would rank high. Furthermore, several hires might be needed in both front- and back-of-house positions. Thus, building a base of employees with various traits is needed for the operation to successfully operate and compete in the market.

Assessing personality for hiring purposes is not a new concept. In fact, restaurant managers valued personality traits higher than general mental ability when making hiring decisions and typically infer an applicant's personality during the interview process (Cook, Vance, & Spector, 2000; Tews, Stafford, & Tracey, 2011). However, this informal personality assessment may not be effective in identifying personality traits of applicants because most managers are not formally trained to recognize personality traits. An ideal hiring process would include trained or at least knowledge interviewers (able to identify personality traits) and a formal personality assessment completed by the applicant during the application phase. This not only would provide additional information for employers when selecting applicants for interviews but, interviewers would be able to compare the self-reported personality assessment with their inferences of the personality of the applicant based on their behaviors during the interview. This gives a holistic view of the applicant's personality, allowing employers to hire based on the needs of the restaurant. However, personality assessment should not be the sole tool used by employers when selecting ideal candidates. By solely focusing on personality, potentially great candidates may be screened out.

In addition to using personality in the hiring process, restaurant operators should consider these personality traits when developing environmental training programs. While this study identified personality traits of an ideal green employee, these personality traits are also linked with training. For example, employees with high extroversion levels would likely enjoy training sessions which incorporate human interaction (McCrae & Costa, 2003). Furthermore, those with high agreeableness, conscientiousness, and openness levels would be more likely to willingly engage in training activities (Laguna & Purc, 2016). Restaurant operators attempting to motivate more pro-environmental behavior should focus on employees with low levels of environmental

attitude, personal conservation, and on-the-job environmental behavior. The results of this study indicate these employees would exhibit lower levels of agreeableness, conscientiousness, extraversion, and openness and higher levels of neuroticism. Therefore, training programs to motivate pro-environmental behavior should focus on employees with lower aptitude to be environmentally friendly because these employees would likely need more motivation to perform environmental behaviors. Employees with higher aptitude to be environmentally friendly would likely do so without training. However, training sessions should be required of all employees. This would provide reinforcement for employees with higher environmentalism propensity and encourage pro-environmental behaviors for employees with lower environmentalism propensity. To motivate pro-environmental behaviors of employees with higher levels of neuroticism and lower levels of agreeableness, conscientiousness, extraversion, and openness, training sessions should be structured and organized including deadlines and progress bars; include both social and private sessions; clearly define the tasks and activities; and emphasize how the green practices can impact the individual employee as well as the earth (Cheramie & Simmering, 2010; Laguna & Purc, 2016; McCrae, & Costa, 2008; Studer-Luethi, Jaeggi, Buschkuehl, & Perrig, 2012).

Chapter 6 - Conclusions

Major findings of this research project are summarized within this chapter. In addition, implications for researchers and restaurant professionals are presented. Finally, limitations and suggestions for future research are discussed.

Summary of Study

Due to the impact the restaurant industry has on the environment, environmental performance of restaurant operations is paramount in reducing the environmental footprint of the industry. Therefore, a movement has begun within the restaurant industry to be more environmentally friendly. One challenge of the movement is cultivating a culture change among management and employees to be more environmentally conscientious. As Paille, Chen, Boiral, and Jin (2014) stated, achieving environmental performance in an organization requires the support of environmentally motivated employees. Therefore, the ability to identify these environmentally motivated employees is important.

This research study aimed to improve the understanding of personality and environmentalism of restaurant employees. Therefore, the purpose of the study was to examine the impact of personality traits on environmentalism of restaurant employees. Specifically, the research questions asked were 1) What are the relationships between and impact of the Big-Five personality traits and environmental attitude, personal conservation behaviors, and on-the-job environmental behaviors of restaurant employees, and 2) How do employees working in green certified and non-certified restaurants differ with regards to personality, environmental attitude, and environmental behaviors.

To answer the research questions and address the purpose of the study, questionnaires (either paper or online versions) were distributed to a national sample of employees working in

green certified and non-certified restaurant operations after pilot testing. Data were collected using three methods: paper questionnaires mailed to restaurant operations and returned via mail or collected by researcher, the link to the online version of the questionnaire sent via a postcard to the restaurant operation, and questionnaires (online or paper versions) completed on-site at the restaurant operation. The questionnaire included 95 items addressing the following variables: the Big Five personality traits, environmental attitude, personal conservation behaviors, on-the-job environmental behaviors, and various demographic and employment characteristics.

To measure personality, Sauciers' (1994) Mini-Markers were used. The scale included 40 marker terms: eight items for each Big-Five factor. Responses were on a 9-point Likert scale, ranging from 1 (extremely inaccurate) to 9 (extremely accurate). To measure environmental attitude, the brief version of Environmental Attitudes Inventory (EAI-24), developed by Milfont and Duckitt (2007), was employed. The scale, aimed at gauging views about the environment, included 22 balanced items with responses on a 7-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree). Personal conservation behavior was measured using one subscale of the Environmental Attitudes Inventory developed by Milfont and Duckitt (2007). The scale, addressing personal daily environmental behavior, included 10 balanced items with responses on a 7-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree). The results of interviews with managers working in green certified restaurant operations influenced the development of the items used to measure on-the-job environmental behavior. The interviews targeted responses about which green practices employees were involved with on a daily basis. The scale, depicting motivations to perform green practices and the actual behavior related to green practices, included 13 items with responses on a 7-point Likert scale, ranging from 1 (strongly disagree) to 7 (strongly agree).

Analyses were conducted using Statistical Package for the Social Sciences (SPSS) (version 25). Internal consistency of items was measured using Cronbach's alpha. Normality assumptions were determined through kurtosis, skewness, and histogram evaluation. Descriptive statistics were calculated for demographic, personality, and environmentalism. Inferential statistics including Pearson's correlation, ANOVA's, independent samples t-tests, and regression analysis were performed to determine relationships and predictor variables.

Major Findings

A total of 229 usable questionnaires were included for analysis. Respondent demographics resembled the demographic profile of the restaurant industry. Males and females were almost equally split among the sample, 49.3% and 48.5%, respectively. Respondents' ranged in age from 18 to 66 years old and the majority had some college or a Bachelor's degree. Various positions were represented in the sample including server, host, bartender, cashier or to-go, cook or chef, dishwasher, and shift lead. Most (56.8%) of the respondents had been working in their current position from one to three years.

Research Question 1: What are the relationships between and impact of the Big-Five personality traits and environmental attitude, personal conservation behaviors, and on-the-job environmental behaviors of restaurant employees?

A significant relationship existed between personality and environmentalism. A positive correlation was found between the personality traits agreeableness, conscientiousness, extraversion, and openness and variables of environmentalism. A negative correlation was found between the personality trait neuroticism and variables of environmentalism. Therefore, the more cooperative, practical, extroverted, relaxed, and complex an individual is, the more

environmentally friendly the individual would tend to be. Therefore, the ideal employee for environmental programs would also possess these traits.

All five personality traits were a significant predictor of environmental attitude, personal conservation behavior, and on-the-job environmental behavior. However, specific personality traits uniquely predicted environmentalism. For environmental attitude, four personality traits were reported as unique predictors: agreeableness, conscientiousness, extraversion, and openness. For personal conservation behavior, three personality traits were reported as unique predictors: agreeableness, neuroticism, and openness. For on-the-job environmental behavior, two personality traits were reported as unique predictors: agreeableness and openness. For all three variables of environmentalism, agreeableness and openness appeared as unique predictors above and beyond. An individual with high levels of agreeableness and openness would be creative, curious, cooperative, and pro-social.

Research Question 2: How do employees working in green certified and non-certified restaurants differ with regards to personality, environmental attitude, and environmental behaviors?

There were no significant differences among demographic characteristics or employment characteristics of employees working in green certified or non-certified restaurant operations except with tenure in current position. Employees working in green certified operations had longer tenures in their current position than their counterparts indicating these employees wanted to stay at their job.

Significant differences were found between employees working in green certified and non-certified restaurant operations for all five personality traits, environmental attitude, personal conservation behavior, and on-the-job environmental behavior. Employees working in green

certified restaurant operations exhibited higher levels of agreeableness, conscientiousness, extraversion, openness, environmental attitude, personal conservation behavior, on-the-job environmental behavior, but lower levels of neuroticism, than employees working in non-certified restaurant operations.

Restaurant type (working in green certified or non-certified restaurant) further predicted environmental attitude, personal conservation behavior, and on-the-job environmental behavior beyond personality. However, the effect of personality on environmentalism did not depend on restaurant type, except with the personality trait neuroticism. For both green certified and non-certified restaurant operations, environmental attitude uniquely predicted on-the-job environmental behavior scores. Furthermore, restaurant type uniquely predicted on-the-job environmental behavior regardless of personality or environmental attitude.

Implications

Research Implications

Previous studies exploring restaurant employees' personality have attempted to identify the impact of personality traits on customer orientation (how customer oriented an employee is), performance, job burnout, job engagement, and customer satisfaction (Barrash & Costen, 2007; Brown, Mowen, Donavan, & Licata, 2002; Kim, Shin, & Swanger, 2009). However, no studies have explored restaurant employees' personality impact on environmentalism as this study does. This exploration provides updated knowledge on personality traits of restaurant employees as well as new knowledge of the relationship between personality and environmentalism within the restaurant setting.

As research on environmentalism has grown over the past three decades, various studies have explored the relationship between personality and environmental attitudes and behaviors.

However, limited studies have explored both environmental attitude and behavior. This study furthers this exploration by researching environmental attitude, personal conservation behavior, and on-the-job environmental behavior. This provides a holistic measure of environmentalism among restaurant employees.

This is the only study to date that identifies differences among employees working in green certified and non-certified restaurants with regards to personality, environmentalism, and demographic and employment characteristics. As environmental programs continue to be implemented, this knowledge is needed for future understanding of pro-environmental behavior within the restaurant industry and future research. This information can be used as baseline data to explore motivations of green employees and assist in development of future research.

Moreover, this study provides insight into collecting data among restaurant employees. For successful data collection among restaurant employees, several data collection methods were needed. Likewise, support from managers was needed to successfully reach employees. Without managerial support, access to employees would not have been achieved for this study.

Industry Implications

Results from the interviews conducted within this study provide valuable information for restaurant operators. Various green practices ranging from small to large investment have been identified. Restaurant operators with existing environmental programs could identify new green practices to implement based on these results while, operators without an environmental program could be motivated to implement green practices. Furthermore, for restaurant operators contemplating implementation of environmental programs, challenges and benefits have been identified by managers and operators. This information could help them in building the program

by anticipating possible challenges and help promote the implementation by focusing on the benefits that are likely to be achieved.

Employee involvement is an essential element for the success of environmental programs; however, employee motivation is a challenge recognized by restaurant operators. Because personality traits significantly impact environmental attitude, personal conservation behavior, and on-the-job environmental behavior, personality can be used as a factor to motivate more environmental friendly behaviors within operations with environmental programs. Therefore, the results of this study can be used in developing strategies to motivate on-the-job environmental behaviors.

For example, potential environmental champions can be identified by their personality traits. Specifically, managers should look for candidates with low neuroticism and high agreeableness, conscientiousness, extraversion, and openness. In other words, to identify an environmental champion, managers should look for a relaxed, kind, organized, energetic, and creative individual. An employee identified as a potential environmental champion could be formally tasked with promoting the environmental program and identifying new ways to be sustainable. Through support from the organization and management team, these environmental champions could be effective leaders in motivating other employees to perform green practices and initiate new green practices. During the interviews, managers identified the daily task of policing employees environmental behaviors as a challenge in implementing an environmental program. Environmental champions could be given authority during their shifts to reward employees for behaviors related to environmentalism; therefore, reducing the managers' responsibility for assuring expected environmental behaviors were being implement.

During the hiring process, personality assessment can be achieved formally or informally. Informal assessment would include interviewers deducing certain personality traits of applicants during the interview process. While employers would avoid any bias of self-reported data using this option, they may not be effective in determining personality traits due to lack of training or knowledge. Formal assessment would include requiring the applicant to complete a personality assessment at the time of application. Using this strategy, employers would be able to identify a potentially ideal green employee before the interview process. Interviewers would be able to compare self-reported data and make their inferences on the personality of applicants based on behaviors during the interview. It would be vital that interviewers have knowledge about personality traits and how to identify them in others before utilizing this within the hiring process. Personality tests and instructions for analyzing the results can be found on various websites for free and purchase. Restaurant operators can also hire various companies to administer the test and evaluate the results. However, because this study focused on non-managerial employees, options with low or no cost would likely be preferred.

In addition to hiring tactics using personality traits, various strategies can be employed for employee recruitment using the results of this study. For example, including key words and phrases related to ideal personality traits within criteria lists in job postings would be a strategy to attract ideal green employees to apply for open positions. Job descriptions should be updated and include key words and phrases related to ideal personality traits. For example, job descriptions and openings could highlight cooperating with others or teamwork as required tasks, appealing to highly agreeable individuals. Stating the importance of the green practice along with the required task would likely attract individuals with high conscientiousness because they tend to take responsibilities seriously. Listing tasks associated with creativity such as creating

new ways to repurpose items would draw an individual with high openness. In-house promotions should consider personality traits, previous environmental behaviors, and leadership capabilities. This consideration should include a holistic evaluation of these characteristics, including self-reported, peer, and supervisory evaluations.

Additionally, recruiters should have ideal personality traits in mind when visiting job fairs, schools, and other recruitment events. When ideal candidates are identified, the knowledge that employees working in green certified restaurant operations have higher levels of environmentalism could be used as a marketing tool for green operators to recruit employees with similar values. For example, recruiters could inform potential employees that environmentalism is important within their organization and that current employees are engaged with environmentalism.

Results of this study can also help drive changes and improvements to training and educational programs, which could be formatted to elicit behavior based on these personality traits. Employees with lower levels of neuroticism and higher levels of agreeableness, conscientiousness, extraversion, and openness are more likely to exhibit higher environmentalism voluntarily or without encouragement. Therefore, training programs should focus on employees more likely to exhibit low environmentalism. To motivate pro-environmental behavior of these employees, training programs should be required because these employees are less likely to engage in voluntary trainings. The program should be structured with built-in accountability, such as deadlines and progress indicators, because these employees have higher levels of learning when given formal accountability. The content should emphasize how the performance of green practices impacts the individual employee, as these employees

tend to be self-focused rather than big-picture thinkers. Additionally, to accommodate more introverted employees, the training should include private sessions along with group sessions.

Limitations and Future Research

Like most studies, this study had limitations. One limitation included the sample selection of employees working in green operations. Employees in this sample were limited to green-certified restaurant operations. Green restaurant operations were only included in study if they retained the Green Restaurant Association certification. The ability to generalize the findings to all green restaurant operations or operations with sustainability programs but no certification is limited because operators who have invested in certification may attract different employees than non-certified green restaurant operators. Furthermore, the sample population was limited to non-managerial employees. Therefore, generalizations cannot be extended to managers, operators, or employees in other foodservice operations, such as healthcare, schools, prisons, or university settings or to restaurant operations beyond the U.S.

Another limitation to consider is social desirability bias because measuring environmentalism can induce respondents to answer in favor of being environmentally friendly whether the response is true or not. However, to assist in controlling social desirability bias, two tactics were employed: self-completion of the survey and assurance of confidentiality of the respondent. Increasing the perception of confidentiality by the respondent reduces the perceived need of the respondent to answer in a socially desirable manner (King & Bruner, 2000; Nederhof, 1985). Furthermore, it is likely that employees were surrounding by managers and/or co-workers while completing the questionnaire on-site. This presence could have prompted employees to answer items in a way that is socially acceptable. However, results of several ANOVA analyses indicated that employees were not socially pressured. For example, only two

significant differences were found among data collection methods. Personal conservation behavior and on-the-job environmental behavior scores were significantly higher for the online data collection method than the on-site data collection method.

Two cities were selected for on-site data collection: Las Vegas, NV and Chicago, IL. These cities were chosen out of seven possible locations. Other location possibilities for on-site data collection included Portland, OR, Washington D.C., New York, NY, Asheville, NC, and Boston, MA. Employees working in the green certified restaurant operations within these cities could have had differing views than employees working in the other cities due to the sustainability initiatives and laws within the cities. For example, Portland, OR offers citywide composting and recycling programs and legislation to promote sustainability exist within Boston, MA, Washington D.C. and New York, NY (City of Boston, n.d.; City of New York, 2018; Sustainable DC, 2018). While the cities of Las Vegas and Chicago do not have official regulations to improve sustainability, their leaders are focused on creating more sustainable communities (City of Chicago, 2018; City of Las Vegas, 2018). These sustainability initiatives and regulations may influence employees' attitudes and behaviors regarding environmentalism. Therefore, employees working in restaurant operations within these cities may have responded differently to the questionnaire if it was provided to them on-site.

Variables assessed during the study were limited to the specific scales used. Various instruments exist for personality, environmental attitude, and environmental behaviors and could produce different results. Because restaurant employees are faced with heavy workloads, the questionnaire was designed with time as a factor. Even though only one scale per variable was used, the questionnaire was still of sizable length. The length of the questionnaire and time required to complete it could have resulted in fatigue, dropout, or dissuaded participation. To

combat these outcomes, the questionnaire was available in both paper-format and online and an incentive was offered.

Furthermore, non-response bias was not addressed within the study. Employees who responded may be more supportive of environmentalism; therefore, would have more positive views on environmentalism than those who did not participate in the study. To overcome non-response bias, multiple data collection methods were employed.

Another limitation should be noted for the data analysis phase. The variables did not hold the assumption of a normal distribution. While kurtosis and skewness values indicate normality, histograms displayed bimodal and multimodal distributions. However, the statistical tests used during analysis are robust and should account for the non-normality.

This study was foundational research and provides a foundation for future exploration of restaurant environmentalism. Future research should focus on identifying the best strategies to improve environmental performance in the restaurant industry. For example, evaluation of training programs and hiring tactics that use personality.

Greater understanding of pro-environmental behaviors is needed within the restaurant industry. Future research should explore how to define and further identify environmental champions within a restaurant operation. Once identified, research should investigate the influence environmental champions have on other employees and the performance of sustainability programs within an operation.

Further research should also explore the effect of environmentalism on job performance measures such as satisfaction and organizational citizenship. By understanding the antecedents of pro-environmental behavior, operators can employ strategies to improve environmentalism

within the operation. However, recognizing and identifying the effect of pro-environmental behaviors on performance may motivate more operators to implement sustainability programs.

Equally important research would be to identify the impact of personality on environmentalism of managers and owners in the restaurant industry. For example, research should explore if the same relationships between personality traits and environmentalism found in this study extend to managers and operators. Future research could also explore the relationships between personality, environmentalism, and supervisory support. Furthermore, this study focused on one aspect of the foodservice; the restaurant industry. Future research should explore the effect of personality on environmentalism within various areas of foodservice such as prisons, healthcare, and schools.

Additionally, it is recommended to replicate the procedures of this study using different instrument scales for personality and environmentalism. Possible future research could also employ multiple scales to measure personality and environmentalism to identify differences in scales among restaurant employees. Validation of on-the-job environmental behaviors items is also needed. Furthermore, based on the interviews conducted in this study, it is recommended that future qualitative research emphasize the importance of research qualifications and coding methods.

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Appendix A - Questionnaire

Personality and Green Attitude Survey

Kansas State University
Department of Hospitality Management
152 Justin Hall, Manhattan, KS 66506
Phone: 785-532-5521 Fax: 785-532-5522

Dear Employee,

Restaurant operations can have a large impact on the planet. Green practices are needed to protect the Earth and you can help. These green practices are only successful if employees do them. The purpose of this research project is to explore green attitudes and personality of restaurant employees. The results of this study could be used to improve green programs in restaurants and to encourage employees to be greener.

A raffle is available to all employees who finish the survey. Six gift cards ($15-25) will be given to out to six randomly chosen winners. Information for raffle is listed at the end of the survey.

It is understood that by finishing this survey, you are agreeing to be in this study titled, "Personality and the Green Restaurant Employee". Your involvement is voluntary and you may stop at any time without drawback. Questions ask for personal information however, all results will be reported as group data and your answers will remain private. It may take about 15 minutes to finish all questions. **Please carefully read and answer each question.**

For questions about the study, please contact Michelle Alcorn at (580) 603-3985. For questions about your rights in this study or the research process, you may contact the University Research Compliance Office at (785) 532-3224 or Rick Scheidt, Chair, Committee on Research Involving Human Subjects at 785-532-3224, 203 Fairchild Hall, Kansas State University, Manhattan, KS 66506.

Sincerely,

Michelle Alcorn, MS
Graduate Research Assistant
Department of Hospitality Management Management
Kansas State University
mralcorn@ksu.edu

Kevin Roberts, PhD
Associate Professor
Department of Hospitality

Kansas State University
kevrob@ksu.edu

KANSAS STATE UNIVERSITY

In this questionnaire you will be asked to respond to questions about your attitudes and behaviors toward the environment and your personality. Please read each question carefully. **Some of the questions may appear to be similar but they address different issues and practices.** Please mark your responses with a circle.

Please state your current level of agreement with each statement below related to thoughts and beliefs about environmental issues.

Environmental Attitude								
	Statement	Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
1.	I really like going on trips into the countryside, for example to forests or fields.	1	2	3	4	5	6	7
2.	I think spending time in nature is boring.	1	2	3	4	5	6	7
3.	Governments should control the rate at which raw materials are used to ensure that they last as long as possible.	1	2	3	4	5	6	7
4.	I am opposed to governments controlling and regulating the way raw materials are used in order to try and make them last longer.	1	2	3	4	5	6	7
5.	I would like to join and actively participate in an environmentalist group.	1	2	3	4	5	6	7
6.	I would NOT get involved in an environmentalist organization.	1	2	3	4	5	6	7
7.	One of the most important reasons to keep lakes and rivers clean is so that people have a place to enjoy water sports.	1	2	3	4	5	6	7
8.	We need to keep rivers and lakes clean in order to protect the environment, and NOT as places for people to enjoy water sports.	1	2	3	4	5	6	7
9.	Modern science will NOT be able to solve our environmental problems.	1	2	3	4	5	6	7
10.	Modern science will solve our environmental problems.	1	2	3	4	5	6	7
11.	Humans are severely abusing the environment.	1	2	3	4	5	6	7
12.	I do not believe that the environment has been severely abused by humans.	1	2	3	4	5	6	7

Environmental Attitude								
	Statement	Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
13.	I'd prefer a garden that is wild and natural to a well-groomed and ordered one.	1	2	3	4	5	6	7
14.	I'd much prefer a garden that is well groomed and ordered to a wild and natural one.	1	2	3	4	5	6	7
15.	Human beings were created or evolved to dominate the rest of nature.	1	2	3	4	5	6	7
16.	I DO NOT believe humans were created or evolved to dominate the rest of nature.	1	2	3	4	5	6	7
17.	Protecting peoples' jobs is more important than protecting the environment.	1	2	3	4	5	6	7
18.	Protecting the environment is more important than protecting peoples' job.	1	2	3	4	5	6	7
19.	It makes me sad to see forests cleared for agriculture.	1	2	3	4	5	6	7
20.	It does NOT make me sad to see natural environments destroyed.	1	2	3	4	5	6	7
21.	Families should be encouraged to limit themselves to two children or less.	1	2	3	4	5	6	7
22.	A married couple should have as many children as they wish, as long as they can adequately provide for them.	1	2	3	4	5	6	7

Please state your current level of agreement with each statement below related your current behavior.

Personal Conservation Behaviors								
	Statement	Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
23.	I could not be bothered to save water or other natural resources.	1	2	3	4	5	6	7
24.	I make sure that during the winter the heating system in my room is not switched on too high.	1	2	3	4	5	6	7
25.	In my daily life I'm just not interested in trying to conserve water and/or power.	1	2	3	4	5	6	7
26.	Whenever possible, I take short shower in order to conserve water.	1	2	3	4	5	6	7
27.	I always switch the light off when I don't need it on any more.	1	2	3	4	5	6	7
28.	I drive whenever it suits me, even if it does pollute the atmosphere.	1	2	3	4	5	6	7
29.	In my daily life I try to find ways to conserve water or power.	1	2	3	4	5	6	7
30.	I am NOT the kind of person who makes efforts to conserve natural resources.	1	2	3	4	5	6	7
31.	Whenever possible, I try to save natural resources.	1	2	3	4	5	6	7
32.	Even if public transportation was more efficient than it is, I would prefer to drive my car.	1	2	3	4	5	6	7

Please state your current level of agreement with each statement below related your current behavior while working at a restaurant.

On-the-Job Conservation Behavior and Attitude									
	Statement	Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree	Not Applicable
While at work, _____.									
33.	I follow policies and procedures aimed at conserving natural resources.	1	2	3	4	5	6	7	NA
34.	I always compost all food waste properly.	1	2	3	4	5	6	7	NA
35.	I always sort through waste placing every item in its specific recycling area.	1	2	3	4	5	6	7	NA
36.	I assist in harvesting crops from the restaurant garden. (Select NA, if your operation does not have a garden)	1	2	3	4	5	6	7	NA
37.	I try to eliminate food waste through improving my prepping/cooking techniques.	1	2	3	4	5	6	7	NA
38.	I only follow green practices because they are part of my job.	1	2	3	4	5	6	7	NA
39.	I follow green practices because I care about the environment.	1	2	3	4	5	6	7	NA
40.	I share new strategies/ideas for my restaurant to be ‘green’.	1	2	3	4	5	6	7	NA
41.	I encourage other employees to follow the green practices at my job.	1	2	3	4	5	6	7	NA
42.	I feel pride that the restaurant where I work has green practices.	1	2	3	4	5	6	7	NA

Using the list of human traits below, please describe yourself as accurately as possible. Describe yourself as you see yourself at the present time, not as you wish to be in the future. Describe yourself as you are generally or typically, as compared with other persons you know of the same sex and of roughly your same age.

Personality									
Statement	Extremely Inaccurate	Very Inaccurate	Moderately Inaccurate	Slightly Inaccurate	?	Slightly Accurate	Moderately Accurate	Very Accurate	Extremely Accurate
43. Bashful	1	2	3	4	5	6	7	8	9
44. Bold	1	2	3	4	5	6	7	8	9
45. Careless	1	2	3	4	5	6	7	8	9
46. Cold	1	2	3	4	5	6	7	8	9
47. Complex	1	2	3	4	5	6	7	8	9
48. Cooperative	1	2	3	4	5	6	7	8	9
49. Deep	1	2	3	4	5	6	7	8	9
50. Disorganized	1	2	3	4	5	6	7	8	9
51. Efficient	1	2	3	4	5	6	7	8	9
52. Energetic	1	2	3	4	5	6	7	8	9
53. Envious	1	2	3	4	5	6	7	8	9
54. Extraverted	1	2	3	4	5	6	7	8	9
55. Fretful	1	2	3	4	5	6	7	8	9
56. Harsh	1	2	3	4	5	6	7	8	9
57. Imaginative	1	2	3	4	5	6	7	8	9
58. Inefficient	1	2	3	4	5	6	7	8	9
59. Intellectual	1	2	3	4	5	6	7	8	9
60. Jealous	1	2	3	4	5	6	7	8	9

Personality									
Statement	Extremely Inaccurate	Very Inaccurate	Moderately Inaccurate	Slightly Inaccurate	Neither	Slightly Accurate	Moderately Accurate	Very Accurate	Extremely Accurate
61. Kind	1	2	3	4	5	6	7	8	9
62. Moody	1	2	3	4	5	6	7	8	9
63. Organized	1	2	3	4	5	6	7	8	9
64. Philosophical	1	2	3	4	5	6	7	8	9
65. Practical	1	2	3	4	5	6	7	8	9
66. Quiet	1	2	3	4	5	6	7	8	9
67. Relaxed	1	2	3	4	5	6	7	8	9
68. Rude	1	2	3	4	5	6	7	8	9
69. Shy	1	2	3	4	5	6	7	8	9
70. Sloppy	1	2	3	4	5	6	7	8	9
71. Sympathetic	1	2	3	4	5	6	7	8	9
72. Systematic	1	2	3	4	5	6	7	8	9
73. Talkative	1	2	3	4	5	6	7	8	9
74. Temperamental	1	2	3	4	5	6	7	8	9
75. Touchy	1	2	3	4	5	6	7	8	9
76. Uncreative	1	2	3	4	5	6	7	8	9
77. Unenvious	1	2	3	4	5	6	7	8	9
78. Unintellectual	1	2	3	4	5	6	7	8	9
79. Unsympathetic	1	2	3	4	5	6	7	8	9
80. Warm	1	2	3	4	5	6	7	8	9
81. Withdrawn	1	2	3	4	5	6	7	8	9

Demographic Information

	Statement	Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
82.	Whether or not a company is green or has green practices is important to me, if I were to seek other employment.	1	2	3	4	5	6	7

83. What gender do you identify with most?

Male _____

Female _____

Gender Variant _____

Prefer not to answer _____

84. What is your age?

18-24 years old _____

25-34 years old _____

35-44 years old _____

45-54 years old _____

55-64 years old _____

65 years old or older _____

85. Which of the following best describes your highest education level?

No diploma _____

High School Degree or equivalent _____

Some College _____

Associate's Degree _____

Bachelor's Degree _____

Graduate Degree _____

86. What is your marital status?

Single (never married) _____

Married/Domestic Partnership _____

Widowed _____

Divorced _____

Separated _____

87. How many children (under the age 18) do you care for?

1 child _____

2 children _____

3 children _____

4 children _____

5 children _____

6 or more children _____

88. How long have you worked in the foodservice industry?

Less than 1 year _____

1-2 years _____

3-5 years _____

6-10 years _____

11-15 years _____

16-20 years _____

21 years or more _____

89. What is your current position?

_____

90. How long have you worked in your current position?

Less than 1 year _____

1-2 years _____

3-5 years _____

6-10 years _____

11-15 years _____

16-20 years _____

21 years or more _____

92. Which category does your current position fall within?

Front of House (Service) _____

Back of House (Kitchen) _____

Both FOH & BOH _____

93. What is your current employment status?

Full-time
(38 or more hours per week) _____

Part-time
(up to 37 hours per week) _____

Thank you for your time and effort.
To enter for a chance to win a gift card. Please visit the following website to enter:

http://www.rafflecopter.com/rafl/display/16d7143d1/

Appendix B - Interview Guide

Interview Guide

Thank you for agreeing to participate in this interview. First, I want to go over the details of the research project and confirm consent for your participation.

Consent

The purpose of this research study is to explore the impact of personality on environmentalism. The purpose of the interview is to identify commonly implemented green practices in U.S. restaurants. The interview should last no more than 30 minutes and will be audio-recorded. I will ask questions related your experience and views of green practices in the restaurant where you work. There are no foreseeable risks for your participation and no compensation for your time. Your responses and identity will remain confidential and referred to only by code. Your participation is completely voluntary and you may refuse to answer any question or end the interview at any time. Your participation benefits the research community and provides strategies for restaurant operations to reduce their environmental impact. Should you have any questions regarding the research process or your rights in this study, you may contact Rick Scheidt, Chair, Committee on Research Involving Human Subjects at 785-532-3224, 203 Fairchild Hall, Kansas State University, Manhattan, KS 66506.

Interview Demographic Information

Date: _____ Restaurant Code: _____

Current Position in Restaurant:

Owner ☐ GM ☐ Asst. Mgr. ☐ FOH Mgr. ☐ BOH Mgr. ☐

Other: _____

What is the service type of restaurant?

Fast Food ☐ Fast Casual ☐ Casual Dining ☐ Fine Dining ☐ Buffet ☐

Other:

_____

Is the restaurant: Corporate ☐ Franchise ☐ or Independent ☐

How long has the restaurant been in operation? _____

How many employees work at the restaurant?

BOH: _____ FOH: _____ Mgt: _____

How long have you worked in the restaurant industry? _____

Have you worked in any other positions in the foodservice industry? YES ☐ NO ☐

What positions and how long? _____

_____

Interview Questions

Introduction:

- I am interested in your description of green practices performed in the restaurant where you work. Your experience and views regarding any and all sustainability initiatives implemented in the restaurant operation.
- Please feel free to speak openly and stop me at any time if you need clarification or time to think about the question.

Questions:

First, I would like to discuss the restaurant where you work.

- Describe the restaurant where you work.
  Probes
  - In general, how are policies and decisions made in your operation?
  - Describe management involvement in decision making for your operation.
  - Describe the level of involvement owners have in implementing policy for your operation.
- Tell me about the green practices you have implemented in your restaurant.
  Probes
  - Energy conservation practices
  - Water conservation practices
  - Waste reduction
  - Waste diversion
  - Pollution control
  - Recycling programs
- Describe your experience with the sustainability initiatives in the restaurant.
  Probes
  - Describe your involvement with the development of the green practices.
  - Describe your involvement with the implementation of the green practices.
  - Describe your involvement with the daily performance of the green practices.
- How have the green practices you have implemented performed in your operation?
  Probes
  - Describe how the green practices are performed daily.
  - What are the challenges associated with the green practices?
  - What are the benefits associated with the green practices?
- Tell me about the reaction of employees to the green practices?
  Probes
  - Describe the complaints of employees related to the green practices.
  - Describe the compliments of employees related to the green practices.
- Which green practice do you find most important? And why?
- What are your overall views of the green practices?
- To conclude, do you feel like there is anything related to green practices that I have not asked you that you would like to share?

Appendix C - Interview Call Script

Sample Interview Call Script

Hello,

May I speak with a manager, please. My name is Michelle Alcorn and I am a graduate student at Kansas State University. I am working on my dissertation which explores environmentalism in restaurant operations. I am conducting telephone interviews with managers to identify current green practices being performed in restaurants. I am calling today to request your participation in this research project.

Is something you would be interested in?

Can I provide you with more information?

I would like to schedule the interview at your convenience, what date and time would work best for you?

Appendix D - Restaurant Call Log

Call Log

	Notes	Restaurant Code	TIME ZONE	Restaurant	Service Type	Certification Level	State	Telephone	Address	Email	# of Employees	Manager 1 Name	Manager 2 Name	Initial Contact	Follow-Up 1	Follow-Up 2	Notes
1																	
2																	
3																	
4																	
5																	
6																	
7																	
8																	
9																	
10																	
11																	
12																	

Appendix E - Pilot Evaluation Form

Pilot Evaluation Form

For the following questions, please provide any comments or concerns related to the statements or instructions in the previous section.

Were all the instructions clear?
Yes _____ No _____
If no, please list which instructions were unclear and what needs to be changed.

Were the statements understandable?
Yes _____ No _____
If no, please list which statements were unclear and what needs to be changed.

Were the response categories clear?
Yes _____ No _____
If no, please list which response categories were unclear and what needs to be changed.

Please provide any comments you have about this section.

Appendix F - Survey Call Script

Call Script

Hello,

My name is Michelle Alcorn and I am a graduate student at Kansas State University. May I please speak with a manager? I am working on my dissertation which explores the impact on personality on environmentalism. I am looking for restaurant employees to complete a questionnaire. I am calling today to request your assistance in this research project. I am asking if you would be willing to post a recruitment flyer where employees could see and distribute questionnaires to employees willing to participation.

Is something you would be interested in?

Can I provide you with more information?

Appendix G - Manager Introduction Letter

Hello,

Thank you so much for your help with my research project. I have moved on to the next phase of my dissertation project and requesting additional assistance from your operation. Specifically, I am asking that you, as a manager, do the following:

1) Post a marketing flyer in the restaurant (visible to all employees) and
2) Distribute surveys to employees who wish to complete the survey on paper.

As an incentive for employees to complete the survey, a research raffle is being offered. Employees who enter contact information in the raffle will have the chance to win one of six prizes (one $25 gift card or one of five $15 gift cards). Once an employee has completed the survey, to enter the raffle they must go to http://www.rafflecopter.com/rafl/display/16d7143d1/?.

In today's world, the health of the environment is a top priority for customers and industry professionals. As such, restaurant operators are faced with the opportunity to implement green practices. These green practices are heavily influenced by employee engagement. The goals of this project are to identify environmental attitude/behavior and personality traits of restaurant employees in order to understand the impact of personality on environmentalism. The results of this study could be used to tailor sustainability initiatives to motivate employee engagement and improve sustainable performance.

For questions about your rights in this study or the research process, you may contact the University Research Compliance Office at (785) 532-3224 or Rick Scheidt, Chair, Committee on Research Involving Human Subjects at 785-532-3224, 203 Fairchild Hall, Kansas State University, Manhattan, KS 66506.

If you have any questions, please feel free to contact Michelle Alcorn at (580) 603-3985.

Michelle Alcorn
Kansas State University
Graduate Research Assistant
mralcorn@ksu.edu

Appendix H - Marketing Postcard


Want to Win $25?
Visit Facebook to fill out a survey
fb.me/restaurantemployeesurvey
One winner will receive a $25 gift card and five winners will receive a $15 giftcard.To be eligible to win, contact info must be provided.

Appendix I - Descriptive Statistics

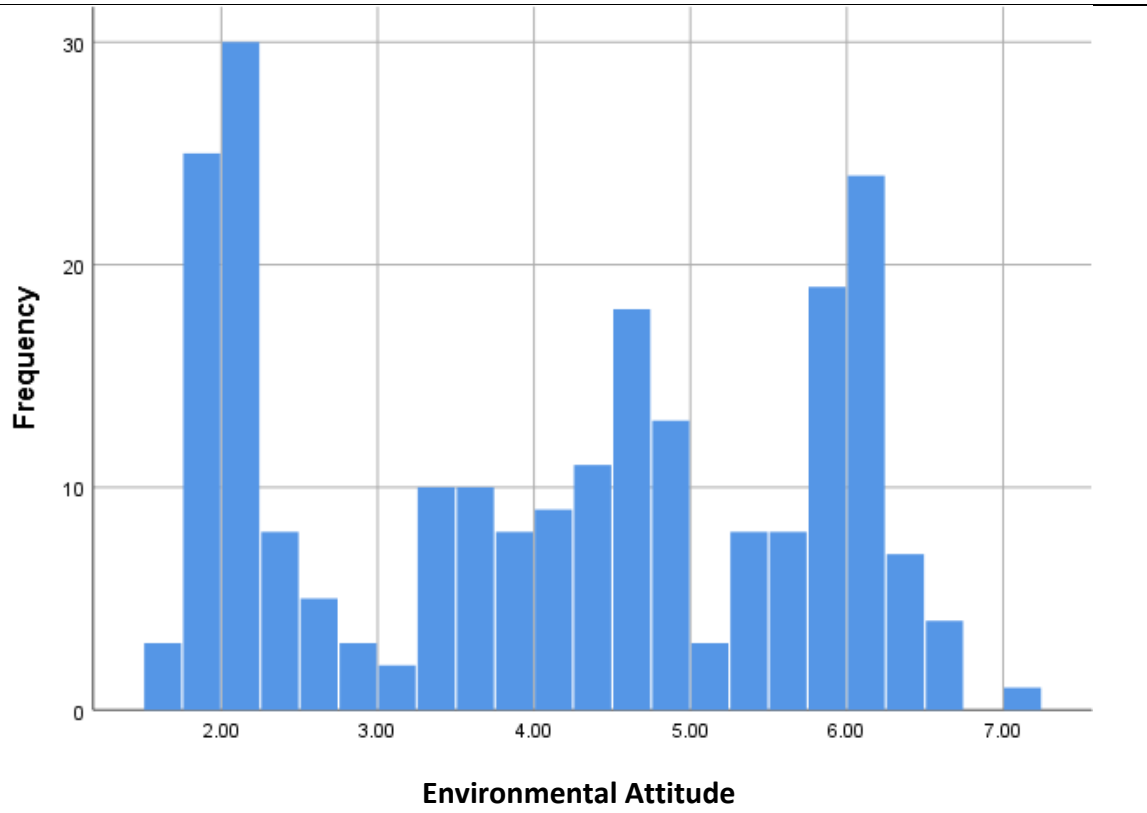
Table I.1. Environmentalism Descriptive Statistics Summary

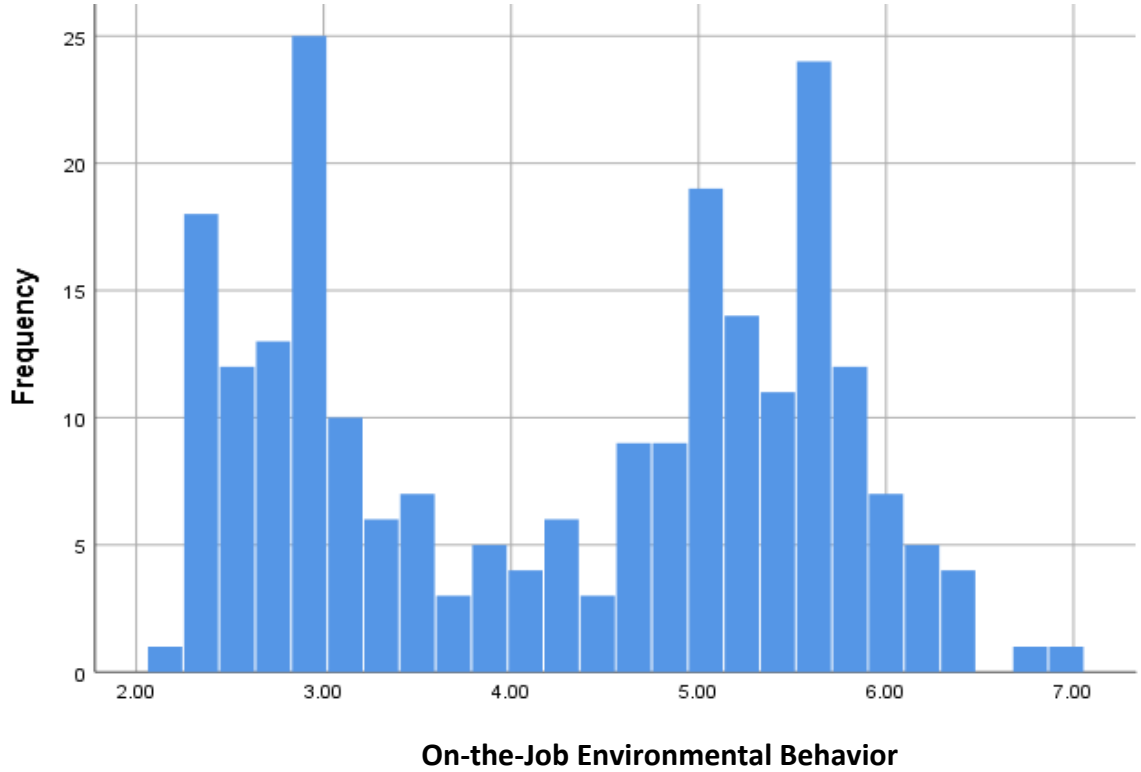
Descriptive Item		Environmental Attitude	Personal Conservation Behavior	On-the-job Environmental Behavior
Mean ± Std. Deviation		4.08 ± 1.59	4.20 ± 1.80	4.26 ± 1.30
95% Confidence Interval for Mean	Lower Bound	3.87	3.96	4.09
	Upper Bound	4.29	4.44	4.43
5% Trimmed Mean		4.07	4.21	4.25
Median		4.27	4.80	4.62
Variance		2.5	3.24	1.69
Std. Error		0.11	0.12	0.09
Minimum		1.68	1.30	2.15
Maximum		7.00	7.00	6.92
Range		5.32	5.70	4.77
Interquartile Range		3.48	3.80	2.50
Skewness ± Std. Error		-0.04 ± 0.16	-0.25 ± 0.16	-0.06 ± 0.16
Kurtosis ± Std. Error		-1.42 ± 0.32	-1.49 ± 0.32	-1.49 ± 0.32

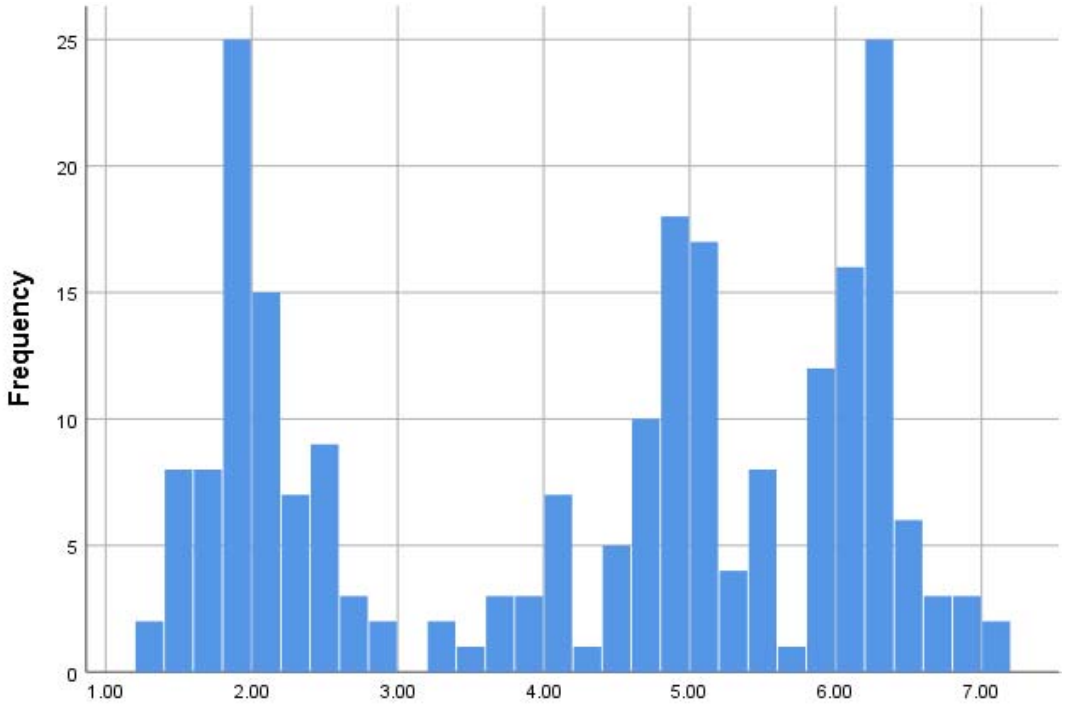
Table I.2. Personality Traits Descriptive Statistics Summary

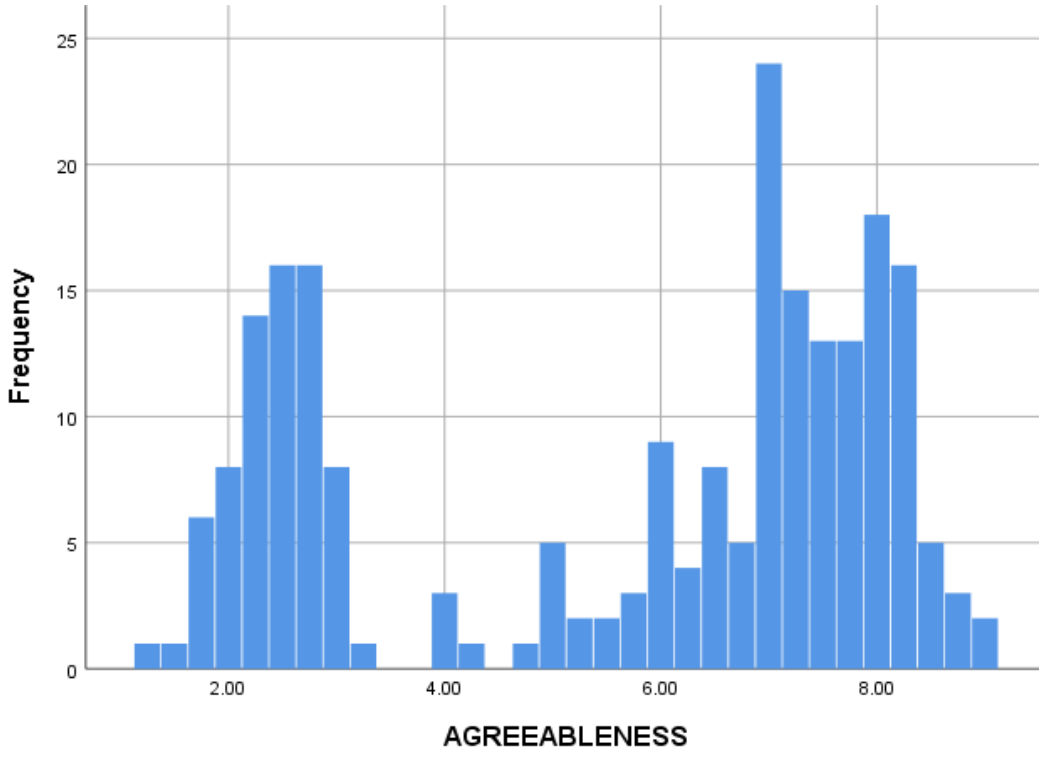
Descriptive Item		Extraversion	Agreeableness	Consciousness	Neuroticism	Openness
Mean ± Std. Deviation		5.27 ± 2.10	5.59 ± 2.38	5.52 ± 2.26	5.23 ± 1.98	5.56 ± 2.18
95% Confidence Interval for Mean	Lower Bound	4.99	5.27	5.22	4.97	5.27
	Upper Bound	5.55	5.90	5.81	5.49	5.84
5% Trimmed Mean		5.28	5.64	5.55	5.23	5.61
Median		5.88	6.75	6.50	4.75	6.50
Variance		4.41	5.68	5.11	3.93	4.75
Std. Error		0.14	0.16	0.15	0.13	0.15
Minimum		1.75	1.25	1.63	1.13	1.50
Maximum		9.00	9.00	8.88	8.75	8.50
Range		7.25	7.75	7.25	7.63	7.00
Interquartile Range		4.00	5.00	4.38	3.31	4.25
Skewness ± Std. Error		-0.24 ± 0.16	-0.46 ± 0.16	-0.45 ± 0.16	0.10 ± 0.16	-0.56 ± 0.16
Kurtosis ± Std. Error		-1.32 ± 0.32	-1.44 ± 0.32	-1.30 ± 0.32	-1.24 ± 0.32	-1.22 ± 0.32

Table I.2. Environmentalism and Personality Histograms






Frequency
25
20
15
10
5
0
1.00
2.00
3.00
4.00
5.00
6.00
7.00
Personal Conservation Behavior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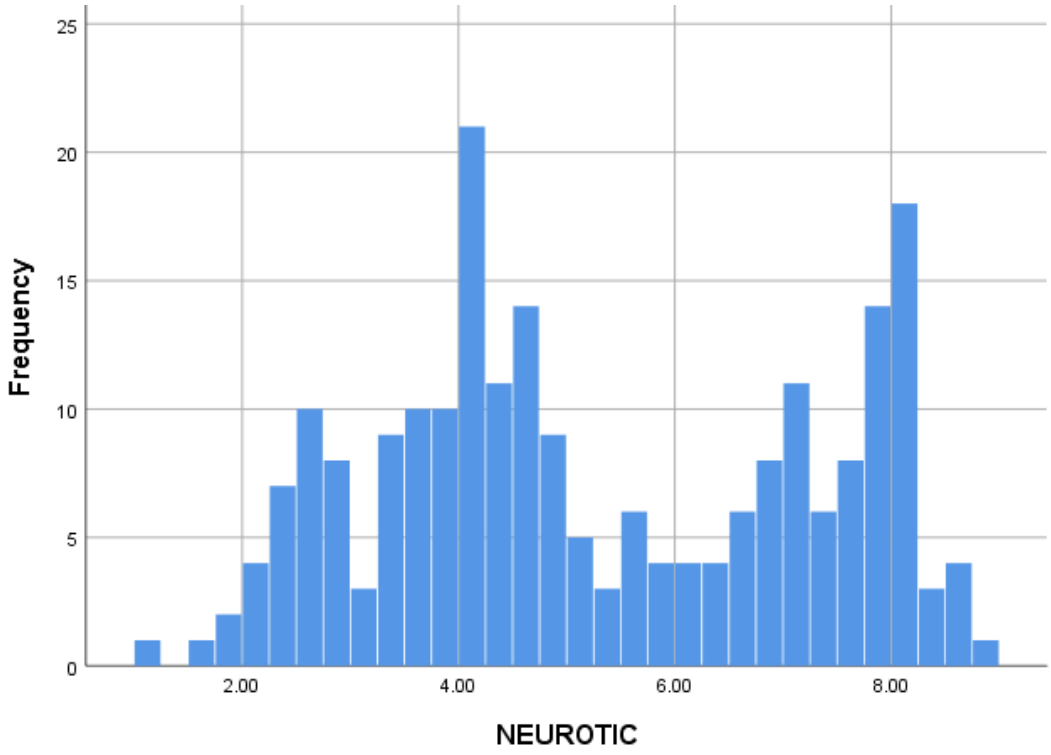
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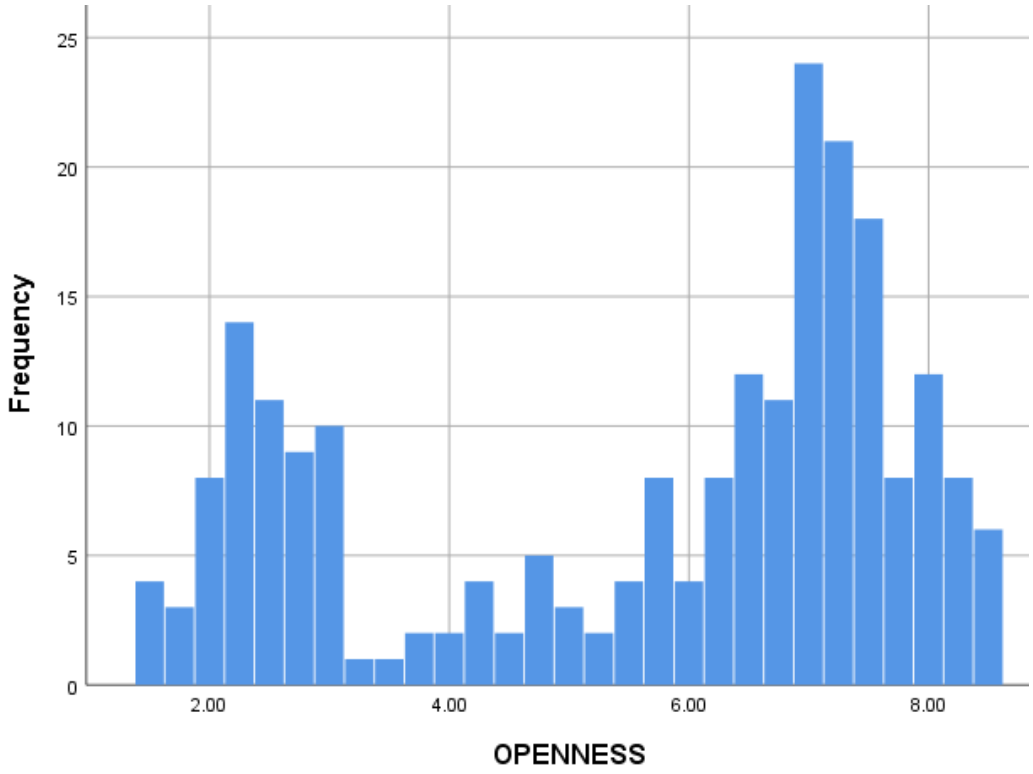
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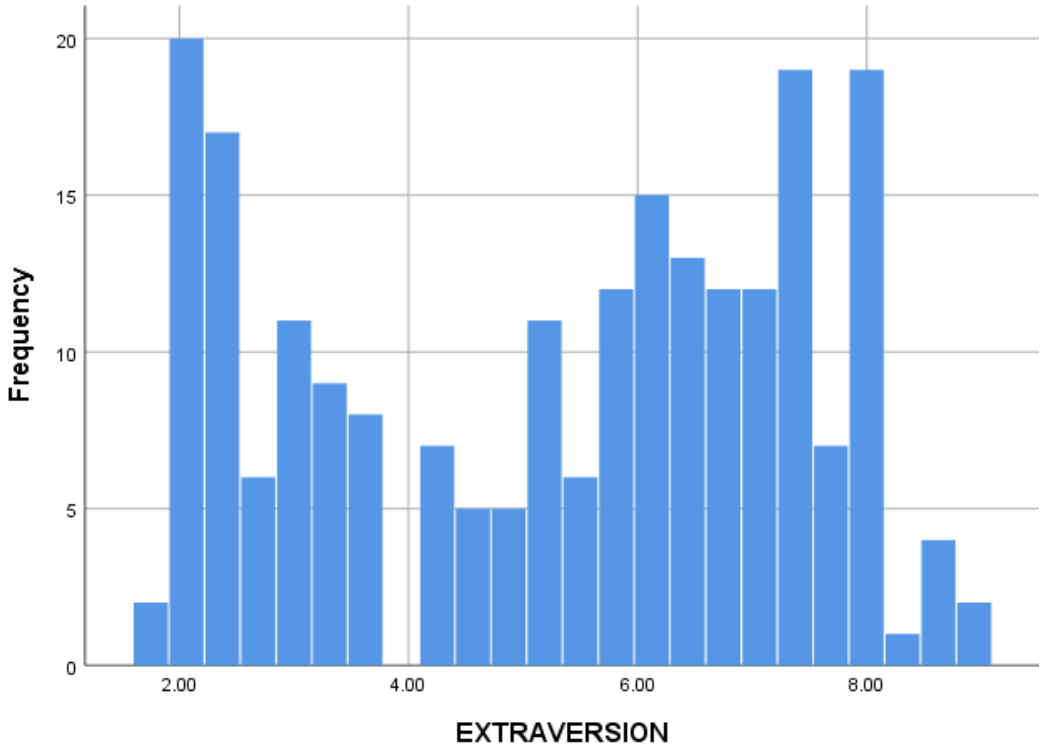
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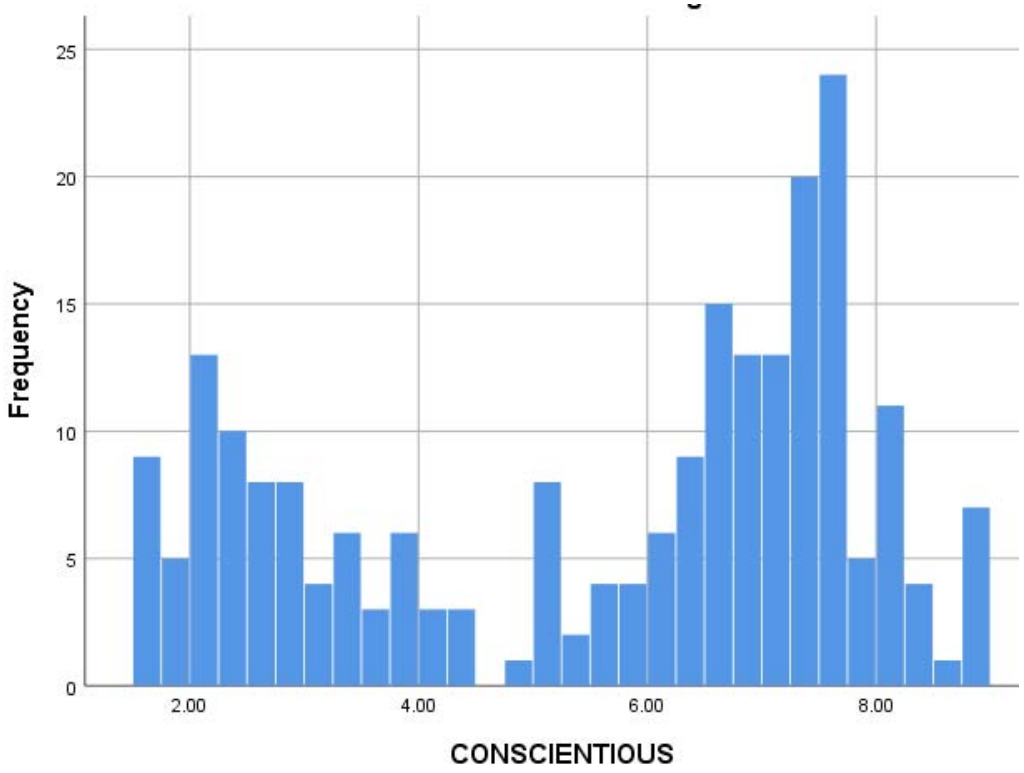
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Appendix J - Coefficients: Environmental Attitude

Table J.1 Coefficients for Hierarchical Multiple Regression: Agreeableness, Conscientiousness, Extraversion, Neuroticism, and Openness on Environmental Attitude

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.065	0.057		71.950	0.000
	Agreeableness Centered	0.278	0.061	0.410	4.586	0.000
	Conscientiousness Centered	-0.148	0.066	-0.206	-2.253	0.025
	Extraversion Centered	0.259	0.063	0.343	4.113	0.000
	Neuroticism Centered	-0.003	0.057	-0.003	-0.048	0.962
	Openness Centered	0.253	0.077	0.339	3.265	0.001

a. Dependent Variable: Environmental Attitude

Table J.2. Coefficients for Hierarchical Multiple Regression: Agreeableness, Restaurant Type (0-Green, 1-Non-Green), Interaction on Environmental Attitude

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.072	0.059		68.853	0.000
	Agreeableness Centered	0.559	0.025	0.834	22.452	0.000
2	(Constant)	4.763	0.082		58.199	0.000
	Agreeableness Centered	0.379	0.027	0.565	14.205	0.000
	Restaurant Type (Dummy: 0-Green, 1-Non-Green)	-1.328	0.127	-0.417	-10.471	0.000
3	(Constant)	4.762	0.117		40.808	0.000
	Agreeableness Centered	0.380	0.058	0.567	6.497	0.000
	Restaurant Type (Dummy: 0-Green, 1-Non-Green)	-1.327	0.142	-0.416	-9.358	0.000
	Interaction (Agreeableness X Restaurant Type: 0-Green, 1-Non-green)	-0.001	0.066	-0.002	-0.021	0.984

a. Dependent Variable: Environmental Attitude

Table J.3. Coefficients for Hierarchical Multiple Regression: Agreeableness, Restaurant Type (1-Green, 0-Non-Green), Interaction on Environmental Attitude

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.072	0.059		68.853	0.000
	Agreeableness Centered	0.559	0.025	0.834	22.452	0.000
2	(Constant)	3.435	0.078		44.167	0.000
	Agreeableness Centered	0.379	0.027	0.565	14.205	0.000
	Restaurant Type (Dummy: 1-Green, 0-Non-Green)	1.328	0.127	0.417	10.471	0.000
3	(Constant)	3.435	0.081		42.650	0.000
	Agreeableness Centered	0.378	0.030	0.565	12.596	0.000
	Restaurant Type (Dummy: 1-Green, 0-Non-Green)	1.327	0.142	0.416	9.358	0.000
	Interaction (Agreeableness X Restaurant Type: 1-Green, 0-Non-green)	0.001	0.066	0.001	0.021	0.984

a. Dependent Variable: Environmental Attitude

Table J.4. Coefficients for Hierarchical Multiple Regression: Conscientiousness, Restaurant Type (0-Green, 1-Non-Green), Interaction on Environmental Attitude

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.103	0.070		58.845	0.000
	Conscientiousness Centered	0.531	0.031	0.755	17.184	0.000
2	(Constant)	4.948	0.085		58.148	0.000
	Conscientiousness Centered	0.332	0.028	0.472	11.731	0.000
	Restaurant Type (Dummy: 0-Green, 1-Non-Green)	-1.625	0.128	-0.511	-12.714	0.000
3	(Constant)	5.082	0.110		46.099	0.000
	Conscientiousness Centered	0.229	0.061	0.325	3.740	0.000
	Restaurant Type (Dummy: 0-Green, 1-Non-Green)	-1.725	0.138	-0.543	-12.527	0.000
	Interaction (Conscientiousness X Restaurant Type: 0-Green, 1-Non-green)	0.131	0.069	0.146	1.894	0.060

a. Dependent Variable: Environmental Attitude

Table J.5. Coefficients for Hierarchical Multiple Regression: Conscientiousness, Restaurant Type (1-Green, 0-Non-Green), Interaction on Environmental Attitude

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.103	0.070		58.845	0.000
	Conscientiousness Centered	0.531	0.031	0.755	17.184	0.000
2	(Constant)	3.323	0.081		40.946	0.000
	Conscientiousness Centered	0.332	0.028	0.472	11.731	0.000
	Restaurant Type (Dummy: 1-Green, 0-Non-Green)	1.625	0.128	0.511	12.714	0.000
3	(Constant)	3.356	0.083		40.652	0.000
	Conscientiousness Centered	0.360	0.032	0.511	11.349	0.000
	Restaurant Type (Dummy: 1-Green, 0-Non-Green)	1.725	0.138	0.543	12.527	0.000
	Interaction (Conscientiousness X Restaurant Type: 1-Green, 0-Non-green)	-0.131	0.069	-0.089	-1.894	0.060

a. Dependent Variable: Environmental Attitude

Table J.6. Coefficients for Hierarchical Multiple Regression: Extraversion, Restaurant Type (0-Green, 1-Non-Green), Interaction on Environmental Attitude

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	4.088	0.062		65.621	0.000
	Extraversion Centered	0.615	0.030	0.812	20.676	0.000
2	(Constant)	4.803	0.084		56.848	0.000
	Extraversion Centered	0.411	0.031	0.542	13.266	0.000
	Restaurant Type (Dummy: 0-Green, 1-Non-Green)	-1.376	0.130	-0.433	-10.602	0.000
3	(Constant)	4.811	0.110		43.694	0.000
	Extraversion Centered	0.405	0.060	0.535	6.703	0.000
	Restaurant Type (Dummy: 0-Green, 1-Non-Green)	-1.381	0.138	-0.435	-9.981	0.000
	Interaction (Extraversion X Restaurant Type: 0-Green, 1-Non-green)	0.007	0.070	0.007	0.106	0.916

a. Dependent Variable: Environmental Attitude

Table J.7. Coefficients for Hierarchical Multiple Regression: Extraversion, Restaurant Type (1-Green, 0-Non-Green), Interaction on Environmental Attitude

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	4.088	0.062		65.621	0.000
	Extraversion Centered	0.615	0.030	0.812	20.676	0.000
2	(Constant)	3.427	0.080		42.642	0.000
	Extraversion Centered	0.411	0.031	0.542	13.266	0.000
	Restaurant Type (Dummy: 1-Green, 0-Non-Green)	1.376	0.130	0.433	10.602	0.000
3	(Constant)	3.430	0.084		40.912	0.000
	Extraversion Centered	0.413	0.036	0.545	11.414	0.000
	Restaurant Type (Dummy: 1-Green, 0-Non-Green)	1.381	0.138	0.435	9.981	0.000
	Interaction (Extraversion X Restaurant Type: 1-Green, 0-Non-green)	-0.007	0.070	-0.005	-0.106	0.916

a. Dependent Variable: Environmental Attitude

Table J.8. Coefficients for Hierarchical Multiple Regression: Neuroticism, Restaurant Type (0-Green, 1-Non-Green), Interaction on Environmental Attitude

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	4.084	0.072		56.430	0.000
	Neuroticism Centered	-0.588	0.037	-0.732	-16.057	0.000
2	(Constant)	4.961	0.089		55.641	0.000
	Neuroticism Centered	-0.354	0.034	-0.441	-10.524	0.000
	Restaurant Type (Dummy: 0-Green, 1-Non-Green)	-1.674	0.133	-0.527	-12.570	0.000
3	(Constant)	5.210	0.094		55.652	0.000
	Neuroticism Centered	-0.137	0.049	-0.171	-2.808	0.005
	Restaurant Type (Dummy: 0-Green, 1-Non-Green)	-1.764	0.125	-0.555	-14.077	0.000
	Interaction (Neuroticism X Restaurant Type: 0-Green, 1-Non-green)	-0.370	0.064	-0.318	-5.810	0.000

a. Dependent Variable: Environmental Attitude

Table J.9. Coefficients for Hierarchical Multiple Regression: Neuroticism, Restaurant Type (1-Green, 0-Non-Green), Interaction on Environmental Attitude

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	4.084	0.072		56.430	0.000
	Neuroticism Centered	-0.588	0.037	-0.732	-16.057	0.000
2	(Constant)	3.287	0.084		39.058	0.000
	Neuroticism Centered	-0.354	0.034	-0.441	-10.524	0.000
	Restaurant Type (Dummy: 1-Green, 0-Non-Green)	1.674	0.133	0.527	12.570	0.000
3	(Constant)	3.447	0.083		41.413	0.000
	Neuroticism Centered	-0.507	0.041	-0.632	-12.368	0.000
	Restaurant Type (Dummy: 1-Green, 0-Non-Green)	1.764	0.125	0.555	14.077	0.000
	Interaction (Neuroticism X Restaurant Type: 1-Green, 0-Non-green)	0.370	0.064	0.281	5.810	0.000

a. Dependent Variable: Environmental Attitude

Table J.10. Simple Slope Analysis Coefficients for Hierarchical Multiple Regression: Neuroticism, Green Certified Restaurant Operations, Interaction on Environmental Attitude

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.962	0.089		55.641	0.000
	Green Certified	-1.674	0.133	-0.527	-12.570	0.000
	Z:score (Neuroticism)	-0.702	0.067	-0.441	-10.524	0.000
2	(Constant)	5.210	0.094		55.653	0.000
	Green Certified	-1.764	0.125	-0.555	-14.077	0.000
	Z:score (Neuroticism)	-0.272	0.097	-0.171	-2.808	0.005
	Green x Neuroticism	-0.734	0.126	-0.318	-5.810	0.000

a. Dependent Variable: Environmental Attitude

Table J.11. Simple Slope Analysis Coefficients for Hierarchical Multiple Regression: Neuroticism, Non-Certified Restaurant Operations, Interaction on Environmental Attitude

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	3.287	0.084		39.058	0.000
	Z:score (Neuroticism)	-0.702	0.067	-0.441	-10.524	0.000
	Non-Certified	1.674	0.133	0.527	12.570	0.000
2	(Constant)	3.447	0.083		41.413	0.000
	Z:score (Neuroticism)	-1.005	0.081	-0.632	-12.368	0.000
	Non-Certified	1.764	0.125	0.555	14.077	0.000
	Non-Certified x Neuroticism	0.734	0.126	0.281	5.810	0.000

a. Dependent Variable: Environmental Attitude

Table J.12. Coefficients for Hierarchical Multiple Regression: Openness, Restaurant Type (0-Green, 1-Non-Green), Interaction on Environmental Attitude

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	4.073	0.059		69.121	0.000
	Openness Centered	0.610	0.027	0.833	22.514	0.000
2	(Constant)	4.742	0.085		56.032	0.000
	Openness Centered	0.418	0.030	0.571	13.899	0.000
	Restaurant Type (Dummy: 0-Green, 1-Non-Green)	-1.276	0.131	-0.400	-9.741	0.000
3	(Constant)	4.699	0.130		36.253	0.000
	Openness Centered	0.447	0.072	0.611	6.199	0.000
	Restaurant Type (Dummy: 0-Green, 1-Non-Green)	-1.241	0.153	-0.389	-8.095	0.000
	Interaction (Openness X Restaurant Type: 0-Green, 1-Non-green)	-0.035	0.079	-0.036	-0.443	0.658

a. Dependent Variable: Environmental Attitude

Table J.13. Coefficients for Hierarchical Multiple Regression: Openness, Restaurant Type (1-Green, 0-Non-Green), Interaction on Environmental Attitude

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	4.073	0.059		69.121	0.000
	Openness Centered	0.610	0.027	0.833	22.514	0.000
2	(Constant)	3.466	0.080		43.586	0.000
	Openness Centered	0.418	0.030	0.571	13.899	0.000
	Restaurant Type (Dummy: 1-Green, 0-Non-Green)	1.276	0.131	0.400	9.741	0.000
3	(Constant)	3.458	0.082		42.243	0.000
	Openness Centered	0.412	0.033	0.563	12.420	0.000
	Restaurant Type (Dummy: 1-Green, 0-Non-Green)	1.241	0.153	0.389	8.095	0.000
	Interaction (Openness X Restaurant Type: 1-Green, 0-Non-green)	0.035	0.079	0.022	0.443	0.658

a. Dependent Variable: Environmental Attitude

Appendix K - Coefficients: Personal Conservation Behavior

Table K.1. Coefficients for Hierarchical Multiple Regression: Agreeableness, Conscientiousness, Extraversion, Neuroticism, and Openness on Personal Conservation Behavior

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.203	0.065		64.722	0.000
	Agreeableness Centered	0.302	0.070	0.399	4.333	0.000
	Conscientiousness Centered	-0.063	0.075	-0.078	-0.833	0.406
	Extraversion Centered	0.103	0.072	0.122	1.427	0.155
	Neuroticism Centered	-0.174	0.066	-0.192	-2.629	0.009
	Openness Centered	0.221	0.089	0.265	2.492	0.014

a. Dependent Variable: Personal Conservation Behavior

Table K.2. Coefficients for Hierarchical Multiple Regression: Agreeableness, Restaurant Type (0-Green, 1-Non-Green), Interaction on Personal Conservation Behavior

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.211	0.068		62.217	0.000
	Agreeableness Centered	0.623	0.028	0.829	21.928	0.000
2	(Constant)	4.882	0.100		48.731	0.000
	Agreeableness Centered	0.450	0.032	0.599	13.880	0.000
	Restaurant Type (Dummy: 0-Green, 1-Non-Green)	-1.283	0.155	-0.358	-8.301	0.000
3	(Constant)	5.063	0.141		35.827	0.000
	Agreeableness Centered	0.336	0.071	0.448	4.770	0.000
	Restaurant Type (Dummy: 0-Green, 1-Non-Green)	-1.420	0.171	-0.396	-8.283	0.000
	Interaction (Agreeableness X Restaurant Type: 0-Green, 1-Non-green)	0.143	0.079	0.143	1.807	0.072

a. Dependent Variable: Personal Conservation Behavior

Table K.3. Coefficients for Hierarchical Multiple Regression: Agreeableness, Restaurant Type (1-Green, 0-Non-Green), Interaction on Personal Conservation Behavior

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.211	0.068		62.217	0.000
	Agreeableness Centered	0.623	0.028	0.829	21.928	0.000
2	(Constant)	3.598	0.095		38.066	0.000
	Agreeableness Centered	0.450	0.032	0.599	13.880	0.000
	Restaurant Type (Dummy: 1-Green, 0-Non-Green)	1.283	0.155	0.358	8.301	0.000
3	(Constant)	3.642	0.097		37.492	0.000
	Agreeableness Centered	0.480	0.036	0.638	13.235	0.000
	Restaurant Type (Dummy: 1-Green, 0-Non-Green)	1.420	0.171	0.396	8.283	0.000
	Interaction (Agreeableness X Restaurant Type: 1-Green, 0-Non-green)	-0.143	0.079	-0.092	-1.807	0.072

a. Dependent Variable: Personal Conservation Behavior

Table K.4. Coefficients for Hierarchical Multiple Regression: Conscientiousness, Restaurant Type (0-Green, 1-Non-Green), Interaction on Personal Conservation Behavior

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.236	0.078		54.492	0.000
	Conscientiousness Centered	0.604	0.034	0.764	17.553	0.000
2	(Constant)	5.070	0.101		49.970	0.000
	Conscientiousness Centered	0.408	0.034	0.516	12.120	0.000
	Restaurant Type (Dummy: 0-Green, 1-Non-Green)	-1.605	0.152	-0.449	-10.534	0.000
3	(Constant)	5.219	0.131		39.869	0.000
	Conscientiousness Centered	0.292	0.073	0.369	3.986	0.000
	Restaurant Type (Dummy: 0-Green, 1-Non-Green)	-1.716	0.164	-0.480	-10.470	0.000
	Interaction (Conscientiousness X Restaurant Type: 0-Green, 1-Non-green)	0.147	0.082	0.147	1.785	0.076

a. Dependent Variable: Personal Conservation Behavior

Table K.5. Coefficients for Hierarchical Multiple Regression: Conscientiousness, Restaurant Type (1-Green, 0-Non-Green), Interaction on Personal Conservation Behavior

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.236	0.078		54.492	0.000
	Conscientiousness Centered	0.604	0.034	0.764	17.553	0.000
2	(Constant)	3.465	0.097		35.763	0.000
	Conscientiousness Centered	0.408	0.034	0.516	12.120	0.000
	Restaurant Type (Dummy: 1-Green, 0-Non-Green)	1.605	0.152	0.449	10.534	0.000
3	(Constant)	3.503	0.099		35.500	0.000
	Conscientiousness Centered	0.439	0.038	0.555	11.647	0.000
	Restaurant Type (Dummy: 1-Green, 0-Non-Green)	1.716	0.164	0.480	10.470	0.000
	Interaction (Conscientiousness X Restaurant Type: 1-Green, 0-Non-green)	-0.147	0.082	-0.088	-1.785	0.076

a. Dependent Variable: Personal Conservation Behavior

Table K.6. Coefficients for Hierarchical Multiple Regression: Extraversion, Restaurant Type (0-Green, 1-Non-Green), Interaction on Personal Conservation Behavior

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.228	0.076		55.574	0.000
	Extraversion Centered	0.667	0.036	0.780	18.383	0.000
2	(Constant)	4.991	0.109		45.830	0.000
	Extraversion Centered	0.449	0.040	0.525	11.237	0.000
	Restaurant Type (Dummy: 0-Green, 1-Non-Green)	-1.470	0.168	-0.410	-8.772	0.000
3	(Constant)	5.077	0.141		36.053	0.000
	Extraversion Centered	0.385	0.078	0.450	4.954	0.000
	Restaurant Type (Dummy: 0-Green, 1-Non-Green)	-1.527	0.178	-0.425	-8.596	0.000
	Interaction (Extraversion X Restaurant Type: 0-Green, 1-Non-green)	0.087	0.091	0.075	0.963	0.336

a. Dependent Variable: Personal Conservation Behavior

Table K.7. Coefficients for Hierarchical Multiple Regression: Extraversion, Restaurant Type (1-Green, 0-Non-Green), Interaction on Personal Conservation Behavior

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.228	0.076		55.574	0.000
	Extraversion Centered	0.667	0.036	0.780	18.383	0.000
2	(Constant)	3.520	0.104		33.879	0.000
	Extraversion Centered	0.449	0.040	0.525	11.237	0.000
	Restaurant Type (Dummy: 1-Green, 0-Non-Green)	1.470	0.168	0.410	8.772	0.000
3	(Constant)	3.550	0.108		32.772	0.000
	Extraversion Centered	0.472	0.047	0.552	10.129	0.000
	Restaurant Type (Dummy: 1-Green, 0-Non-Green)	1.527	0.178	0.425	8.596	0.000
	Interaction (Extraversion X Restaurant Type: 1-Green, 0-Non-green)	-0.087	0.091	-0.052	-0.963	0.336

a. Dependent Variable: Personal Conservation Behavior

Table K.8. Coefficients for Hierarchical Multiple Regression: Neuroticism, Restaurant Type (0-Green, 1-Non-Green), Interaction on Personal Conservation Behavior

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.232	0.078		54.014	0.000
	Neuroticism Centered	-0.693	0.040	-0.762	-17.426	0.000
2	(Constant)	5.079	0.103		49.441	0.000
	Neuroticism Centered	-0.465	0.039	-0.511	-11.936	0.000
	Restaurant Type (Dummy: 0-Green, 1-Non-Green)	-1.622	0.154	-0.452	-10.543	0.000
3	(Constant)	5.373	0.107		50.352	0.000
	Neuroticism Centered	-0.203	0.056	-0.223	-3.617	0.000
	Restaurant Type (Dummy: 0-Green, 1-Non-Green)	-1.719	0.143	-0.479	-11.987	0.000
	Interaction (Neuroticism X Restaurant Type: 0-Green, 1-Non-green)	-0.447	0.073	-0.340	-6.092	0.000

a. Dependent Variable: Personal Conservation Behavior

Table K.9. Coefficients for Hierarchical Multiple Regression: Neuroticism, Restaurant Type (1-Green, 0-Non-Green), Interaction on Personal Conservation Behavior

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.232	0.078		54.014	0.000
	Neuroticism Centered	-0.693	0.040	-0.762	-17.426	0.000
2	(Constant)	3.458	0.097		35.513	0.000
	Neuroticism Centered	-0.465	0.039	-0.511	-11.936	0.000
	Restaurant Type (Dummy: 1-Green, 0-Non-Green)	1.622	0.154	0.452	10.543	0.000
3	(Constant)	3.654	0.096		38.141	0.000
	Neuroticism Centered	-0.650	0.047	-0.714	-13.784	0.000
	Restaurant Type (Dummy: 1-Green, 0-Non-Green)	1.719	0.143	0.479	11.987	0.000
	Interaction (Neuroticism X Restaurant Type: 1-Green, 0-Non-green)	0.447	0.073	0.298	6.092	0.000

a. Dependent Variable: Personal Conservation Behavior

Table K.10. Simple Slope Analysis Coefficients for Hierarchical Multiple Regression: Neuroticism, Green Certified Restaurant, Interaction on Personal Conservation Behavior

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	5.079	0.103		49.441	0.000
	Green Certified	-1.622	0.154	-0.452	-10.543	0.000
	Z:score (Neuroticism)	-0.922	0.077	-0.511	-11.936	0.000
2	(Constant)	5.373	0.107		50.353	0.000
	Green Certified	-1.719	0.143	-0.479	-11.987	0.000
	Z:score (Neuroticism)	-0.403	0.111	-0.223	-3.617	0.000
	Green x Neuroticism	-0.886	0.145	-0.340	-6.092	0.000

a. Dependent Variable: Personal Conservation Behavior

Table K.11. Simple Slope Analysis Coefficients for Hierarchical Multiple Regression: Neuroticism, Non-Certified Restaurant, Interaction on Personal Conservation Behavior

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	3.458	0.097		35.513	0.000
	Z:score (Neuroticism)	-0.922	0.077	-0.511	-11.936	0.000
	Non-Certified	1.622	0.154	0.452	10.543	0.000
2	(Constant)	3.654	0.096		38.141	0.000
	Z:score (Neuroticism)	-1.288	0.093	-0.714	-13.784	0.000
	Non-Certified	1.719	0.143	0.479	11.987	0.000
	Non-Certified x Neuroticism	0.886	0.145	0.298	6.092	0.000

a. Dependent Variable: Personal Conservation Behavior

Table K.12. Coefficients for Hierarchical Multiple Regression: Openness, Restaurant Type (0-Green, 1-Non-Green), Interaction on Personal Conservation Behavior

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.205	0.068		61.990	0.000
	Openness Centered	0.684	0.031	0.829	21.955	0.000
2	(Constant)	4.866	0.103		47.420	0.000
	Openness Centered	0.494	0.036	0.599	13.545	0.000
	Restaurant Type (Dummy: 0-Green, 1-Non-Green)	-1.262	0.159	-0.350	-7.931	0.000
3	(Constant)	4.973	0.156		31.886	0.000
	Openness Centered	0.422	0.087	0.511	4.848	0.000
	Restaurant Type (Dummy: 0-Green, 1-Non-Green)	-1.348	0.185	-0.374	-7.287	0.000
	Interaction (Openness X Restaurant Type: 0-Green, 1-Non-green)	0.087	0.096	0.080	0.912	0.363

a. Dependent Variable: Personal Conservation Behavior

Table K.13. Coefficients for Hierarchical Multiple Regression: Openness, Restaurant Type (1-Green, 0-Non-Green), Interaction on Personal Conservation Behavior

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.205	0.068		61.990	0.000
	Openness Centered	0.684	0.031	0.829	21.955	0.000
2	(Constant)	3.604	0.097		37.302	0.000
	Openness Centered	0.494	0.036	0.599	13.545	0.000
	Restaurant Type (Dummy: 1-Green, 0-Non-Green)	1.262	0.159	0.350	7.931	0.000
3	(Constant)	3.625	0.099		36.471	0.000
	Openness Centered	0.509	0.040	0.617	12.675	0.000
	Restaurant Type (Dummy: 1-Green, 0-Non-Green)	1.348	0.185	0.374	7.287	0.000
	Interaction (Openness X Restaurant Type: 1-Green, 0-Non-green)	-0.087	0.096	-0.049	-0.912	0.363

a. Dependent Variable: Personal Conservation Behavior

Appendix L - Coefficients: On-the-Job Environmental Behavior

Table L.1. Hierarchical Regression Coefficients: Agreeableness, Conscientiousness, Extraversion, Neuroticism, and Openness on On-the-Job Environmental Behavior

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	4.243	0.061		69.563	0.000
	Agreeableness Centered	0.199	0.065	0.365	3.044	0.003
	Conscientiousness Centered	-0.035	0.071	-0.060	-0.488	0.626
	Extraversion Centered	0.038	0.068	0.063	0.564	0.573
	Neuroticism Centered	-0.043	0.062	-0.066	-0.689	0.491
	Openness Centered	0.199	0.084	0.331	2.378	0.018

a. Dependent Variable: On-the-Job Environmental Behavior

Table L.2. Hierarchical Regression Coefficients: Agreeableness, Restaurant Type (0-Green, 1-Non-Green), Interaction on On-the-Job Environmental Behavior

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.253	0.059		71.695	0.000
	Agreeableness Centered	0.401	0.025	0.734	16.062	0.000
2	(Constant)	5.020	0.077		64.894	0.000
	Agreeableness Centered	0.201	0.025	0.368	7.980	0.000
	Restaurant Type (Dummy: 0-Green, 1-Non-Green)	-1.474	0.120	-0.567	-12.296	0.000
3	(Constant)	4.898	0.110		44.659	0.000
	Agreeableness Centered	0.278	0.055	0.508	5.052	0.000
	Restaurant Type (Dummy: 0-Green, 1-Non-Green)	-1.382	0.133	-0.532	-10.369	0.000
	Interaction (Agreeableness X Restaurant Type: 0-Green, 1-Non-green)	-0.097	0.062	-0.132	-1.566	0.119

a. Dependent Variable: On-the-Job Environmental Behavior

Table L.3. Hierarchical Regression Coefficients: Agreeableness, Restaurant Type (1-Green, 0-Non-Green), Interaction on On-the-Job Environmental Behavior

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.253	0.059		71.695	0.000
	Agreeableness Centered	0.401	0.025	0.734	16.062	0.000
2	(Constant)	3.546	0.074		48.235	0.000
	Agreeableness Centered	0.201	0.025	0.368	7.980	0.000
	Restaurant Type (Dummy: 1-Green, 0-Non-Green)	1.474	0.120	0.567	12.296	0.000
3	(Constant)	3.516	0.076		46.451	0.000
	Agreeableness Centered	0.181	0.028	0.331	6.405	0.000
	Restaurant Type (Dummy: 1-Green, 0-Non-Green)	1.382	0.133	0.532	10.369	0.000
	Interaction (Agreeableness X Restaurant Type: 1-Green, 0-Non-green)	0.097	0.062	0.086	1.566	0.119

a. Dependent Variable: On-the-Job Environmental Behavior

Table L.4. Coefficients for Hierarchical Multiple Regression: Conscientiousness, Restaurant Type (0-Green, 1-Non-Green), Interaction on On-the-Job Environmental Behavior

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.271	0.064		67.169	0.000
	Conscientiousness Centered	0.392	0.028	0.681	13.896	0.000
2	(Constant)	5.087	0.074		68.656	0.000
	Conscientiousness Centered	0.199	0.025	0.347	8.090	0.000
	Restaurant Type (Dummy: 0-Green, 1-Non-Green)	-1.569	0.111	-0.604	-14.100	0.000
3	(Constant)	5.059	0.097		52.304	0.000
	Conscientiousness Centered	0.221	0.054	0.384	4.114	0.000
	Restaurant Type (Dummy: 0-Green, 1-Non-Green)	-1.548	0.121	-0.596	-12.807	0.000
	Interaction (Conscientiousness X Restaurant Type: 0-Green, 1-Non-green)	-0.027	0.060	-0.038	-0.454	0.650

a. Dependent Variable: On-the-Job Environmental Behavior

Table L.5. Coefficients for Hierarchical Multiple Regression: Conscientiousness, Restaurant Type (1-Green, 0-Non-Green), Interaction on On-the-Job Environmental Behavior

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.271	0.064		67.169	0.000
	Conscientiousness Centered	0.392	0.028	0.681	13.896	0.000
2	(Constant)	3.518	0.071		49.780	0.000
	Conscientiousness Centered	0.199	0.025	0.347	8.090	0.000
	Restaurant Type (Dummy: 1-Green, 0-Non-Green)	1.569	0.111	0.604	14.100	0.000
3	(Constant)	3.511	0.072		48.470	0.000
	Conscientiousness Centered	0.194	0.028	0.337	6.964	0.000
	Restaurant Type (Dummy: 1-Green, 0-Non-Green)	1.548	0.121	0.596	12.807	0.000
	Interaction (Conscientiousness X Restaurant Type: 1-Green, 0-Non-green)	0.027	0.060	0.023	0.454	0.650

a. Dependent Variable: On-the-Job Environmental Behavior

Table L.6. Coefficients for Hierarchical Multiple Regression: Extraversion, Restaurant Type (0-Green, 1-Non-Green), Interaction on On-the-Job Environmental Behavior

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.248	0.064		66.626	0.000
	Extraversion Centered	0.420	0.030	0.680	13.791	0.000
2	(Constant)	5.077	0.080		63.415	0.000
	Extraversion Centered	0.183	0.029	0.297	6.252	0.000
	Restaurant Type (Dummy: 0-Green, 1-Non-Green)	-1.594	0.123	-0.616	-12.958	0.000
3	(Constant)	5.055	0.104		48.465	0.000
	Extraversion Centered	0.200	0.057	0.323	3.486	0.001
	Restaurant Type (Dummy: 0-Green, 1-Non-Green)	-1.579	0.131	-0.610	-12.045	0.000
	Interaction (Extraversion X Restaurant Type: 0-Green, 1-Non-green)	-0.022	0.067	-0.026	-0.330	0.742

a. Dependent Variable: On-the-Job Environmental Behavior

Table L.7. Coefficients for Hierarchical Multiple Regression: Extraversion, Restaurant Type (1-Green, 0-Non-Green), Interaction on On-the-Job Environmental Behavior

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	4.248	0.064		66.626	0.000
	Extraversion Centered	0.420	0.030	0.680	13.791	0.000
2	(Constant)	3.483	0.076		45.741	0.000
	Extraversion Centered	0.183	0.029	0.297	6.252	0.000
	Restaurant Type (Dummy: 1-Green, 0-Non-Green)	1.594	0.123	0.616	12.958	0.000
3	(Constant)	3.476	0.079		43.771	0.000
	Extraversion Centered	0.178	0.034	0.288	5.185	0.000
	Restaurant Type (Dummy: 1-Green, 0-Non-Green)	1.579	0.131	0.610	12.045	0.000
	Interaction (Extraversion X Restaurant Type: 1-Green, 0-Non-green)	0.022	0.067	0.018	0.330	0.742

a. Dependent Variable: On-the-Job Environmental Behavior

Table L.8. Coefficients for Hierarchical Multiple Regression: Neuroticism, Restaurant Type (0-Green, 1-Non-Green), Interaction on On-the-Job Environmental Behavior

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.261	0.065		65.468	0.000
	Neuroticism Centered	-0.432	0.033	-0.660	-13.116	0.000
2	(Constant)	5.104	0.076		67.093	0.000
	Neuroticism Centered	-0.207	0.029	-0.317	-7.223	0.000
	Restaurant Type (Dummy: 0-Green, 1-Non-Green)	-1.608	0.114	-0.621	-14.153	0.000
3	(Constant)	5.166	0.085		60.587	0.000
	Neuroticism Centered	-0.153	0.044	-0.234	-3.444	0.001
	Restaurant Type (Dummy: 0-Green, 1-Non-Green)	-1.630	0.114	-0.629	-14.290	0.000
	Interaction (Neuroticism X Restaurant Type: 0-Green, 1-Non-green)	-0.093	0.058	-0.098	-1.593	0.113

a. Dependent Variable: On-the-Job Environmental Behavior

Table L.9. Coefficients for Hierarchical Multiple Regression: Neuroticism, Restaurant Type (1-Green, 0-Non-Green), Interaction on On-the-Job Environmental Behavior

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.261	0.065		65.468	0.000
	Neuroticism Centered	-0.432	0.033	-0.660	-13.116	0.000
2	(Constant)	3.496	0.072		48.687	0.000
	Neuroticism Centered	-0.207	0.029	-0.317	-7.223	0.000
	Restaurant Type (Dummy: 1-Green, 0-Non-Green)	1.608	0.114	0.621	14.153	0.000
3	(Constant)	3.536	0.076		46.644	0.000
	Neuroticism Centered	-0.246	0.037	-0.375	-6.573	0.000
	Restaurant Type (Dummy: 1-Green, 0-Non-Green)	1.630	0.114	0.629	14.290	0.000
	Interaction (Neuroticism X Restaurant Type: 1-Green, 0-Non-green)	0.093	0.058	0.086	1.593	0.113

a. Dependent Variable: On-the-Job Environmental Behavior

Table L.10. Coefficients for Hierarchical Multiple Regression: Openness, Restaurant Type (0-Green, 1-Non-Green), Interaction on On-the-Job Environmental Behavior

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.263	0.059		71.696	0.000
	Openness Centered	0.430	0.027	0.725	15.719	0.000
2	(Constant)	5.025	0.080		62.616	0.000
	Openness Centered	0.211	0.029	0.356	7.405	0.000
	Restaurant Type (Dummy: 0-Green, 1-Non-Green)	-1.453	0.124	-0.563	-11.698	0.000
3	(Constant)	4.913	0.123		40.087	0.000
	Openness Centered	0.287	0.068	0.483	4.201	0.000
	Restaurant Type (Dummy: 0-Green, 1-Non-Green)	-1.362	0.145	-0.528	-9.398	0.000
	Interaction (Openness X Restaurant Type: 0-Green, 1-Non-green)	-0.091	0.075	-0.116	-1.215	0.226

a. Dependent Variable: On-the-Job Environmental Behavior

Table L.11. Coefficients for Hierarchical Multiple Regression: Openness, Restaurant Type (1-Green, 0-Non-Green), Interaction on On-the-Job Environmental Behavior

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.263	0.059		71.696	0.000
	Openness Centered	0.430	0.027	0.725	15.719	0.000
2	(Constant)	3.572	0.075		47.369	0.000
	Openness Centered	0.211	0.029	0.356	7.405	0.000
	Restaurant Type (Dummy: 1-Green, 0-Non-Green)	1.453	0.124	0.563	11.698	0.000
3	(Constant)	3.550	0.077		45.874	0.000
	Openness Centered	0.195	0.031	0.329	6.227	0.000
	Restaurant Type (Dummy: 1-Green, 0-Non-Green)	1.362	0.145	0.528	9.398	0.000
	Interaction (Openness X Restaurant Type: 1-Green, 0-Non-green)	0.091	0.075	0.072	1.215	0.226

a. Dependent Variable: On-the-Job Environmental Behavior

Appendix M - Coefficients: Personality, Environmental Attitude, and Restaurant Type on On-the-Job Environmental Behavior

Table M.1. Coefficients for Hierarchical Multiple Regression: Agreeableness, Environmental Attitude, and Restaurant Type (0-Green, 1-Non-Green) on On-the-Job Environmental Behavior

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.253	0.059		71.695	0.000
	Agreeableness Centered	0.401	0.025	0.734	16.062	0.000
2	(Constant)	4.257	0.049		86.089	0.000
	Agreeableness Centered	0.090	0.038	0.164	2.381	0.018
	Environmental Attitude Centered	0.557	0.056	0.683	9.904	0.000
3	(Constant)	4.828	0.085		56.827	0.000
	Agreeableness Centered	0.094	0.033	0.173	2.831	0.005
	Environmental Attitude Centered	0.281	0.061	0.345	4.615	0.000
	Restaurant Type (Dummy: 0-Green, 1-Non-Green)	-1.100	0.140	-0.423	-7.837	0.000

a. Dependent Variable: On-the-Job Environmental Behavior

Table M.2. Coefficients for Hierarchical Multiple Regression: Agreeableness, Environmental Attitude, and Restaurant Type (1-Green, 0-Non-Green) on On-the-Job Environmental Behavior

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.253	0.059		71.695	0.000
	Agreeableness Centered	0.401	0.025	0.734	16.062	0.000
2	(Constant)	4.257	0.049		86.089	0.000
	Agreeableness Centered	0.090	0.038	0.164	2.381	0.018
	Environmental Attitude Centered	0.557	0.056	0.683	9.904	0.000
3	(Constant)	3.727	0.081		46.263	0.000
	Agreeableness Centered	0.094	0.033	0.173	2.831	0.005
	Environmental Attitude Centered	0.281	0.061	0.345	4.615	0.000
	Restaurant Type (Dummy: 1-Green, 0-Non-Green)	1.100	0.140	0.423	7.837	0.000

a. Dependent Variable: On-the-Job Environmental Behavior

Table M.3. Coefficients for Hierarchical Multiple Regression: Conscientiousness, Environmental Attitude, and Restaurant Type (0-Green, 1-Non-Green) on On-the-Job Environmental Behavior

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.271	0.064		67.169	0.000
	Conscientiousness Centered	0.392	0.028	0.681	13.896	0.000
2	(Constant)	4.257	0.049		86.765	0.000
	Conscientiousness Centered	0.082	0.033	0.143	2.488	0.014
	Environmental Attitude Centered	0.582	0.047	0.712	12.357	0.000
3	(Constant)	4.824	0.084		57.162	0.000
	Conscientiousness Centered	0.099	0.029	0.172	3.352	0.001
	Environmental Attitude Centered	0.303	0.055	0.371	5.516	0.000
	Restaurant Type (Dummy: 0-Green, 1-Non-Green)	-1.077	0.137	-0.415	-7.834	0.000

a. Dependent Variable: On-the-Job Environmental Behavior

Table M.4. Coefficients for Hierarchical Multiple Regression: Conscientiousness, Environmental Attitude, and Restaurant Type (1-Green, 0-Non-Green) on On-the-Job Environmental Behavior

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	4.271	0.064		67.169	0.000
	Conscientiousness Centered	0.392	0.028	0.681	13.896	0.000
2	(Constant)	4.257	0.049		86.765	0.000
	Conscientiousness Centered	0.082	0.033	0.143	2.488	0.014
	Environmental Attitude Centered	0.582	0.047	0.712	12.357	0.000
3	(Constant)	3.747	0.078		47.842	0.000
	Conscientiousness Centered	0.099	0.029	0.172	3.352	0.001
	Environmental Attitude Centered	0.303	0.055	0.371	5.516	0.000
	Restaurant Type (Dummy: 1-Green, 0-Non-Green)	1.077	0.137	0.415	7.834	0.000

a. Dependent Variable: On-the-Job Environmental Behavior

Table M.5. Coefficients for Hierarchical Multiple Regression: Extraversion, Environmental Attitude, and Restaurant Type (0-Green, 1-Non-Green) on On-the-Job Environmental Behavior

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	4.248	0.064		66.626	0.000
	Extraversion Centered	0.420	0.030	0.680	13.791	0.000
2	(Constant)	4.243	0.050		85.686	0.000
	Extraversion Centered	0.022	0.040	0.036	0.541	0.589
	Environmental Attitude Centered	0.647	0.053	0.794	12.102	0.000
3	(Constant)	4.798	0.085		56.690	0.000
	Extraversion Centered	0.025	0.036	0.040	0.690	0.491
	Environmental Attitude Centered	0.386	0.058	0.474	6.602	0.000
	Restaurant Type (Dummy: 0-Green, 1-Non-Green)	-1.063	0.138	-0.411	-7.678	0.000

a. Dependent Variable: On-the-Job Environmental Behavior

Table M.6. Coefficients for Hierarchical Multiple Regression: Extraversion, Environmental Attitude, and Restaurant Type (1-Green, 0-Non-Green) on On-the-Job Environmental Behavior

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	4.248	0.064		66.626	0.000
	Extraversion Centered	0.420	0.030	0.680	13.791	0.000
2	(Constant)	4.243	0.050		85.686	0.000
	Extraversion Centered	0.022	0.040	0.036	0.541	0.589
	Environmental Attitude Centered	0.647	0.053	0.794	12.102	0.000
3	(Constant)	3.735	0.079		47.007	0.000
	Extraversion Centered	0.025	0.036	0.040	0.690	0.491
	Environmental Attitude Centered	0.386	0.058	0.474	6.602	0.000
	Restaurant Type (Dummy: 1-Green, 0-Non-Green)	1.063	0.138	0.411	7.678	0.000

a. Dependent Variable: On-the-Job Environmental Behavior

Table M.7. Coefficients for Hierarchical Multiple Regression: Neuroticism, Environmental Attitude, and Restaurant Type (0-Green, 1-Non-Green) on On-the-Job Environmental Behavior

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	4.261	0.065		65.468	0.000
	Neuroticism Centered	-0.432	0.033	-0.660	-13.116	0.000
2	(Constant)	4.258	0.049		86.574	0.000
	Neuroticism Centered	-0.085	0.037	-0.129	-2.316	0.021
	Environmental Attitude Centered	0.591	0.046	0.725	12.977	0.000
3	(Constant)	4.815	0.085		56.979	0.000
	Neuroticism Centered	-0.091	0.033	-0.140	-2.810	0.005
	Environmental Attitude Centered	0.327	0.053	0.402	6.178	0.000
	Restaurant Type (Dummy: 0-Green, 1-Non-Green)	-1.060	0.138	-0.409	-7.704	0.000

a. Dependent Variable: On-the-Job Environmental Behavior

Table M.8. Coefficients for Hierarchical Multiple Regression: Neuroticism, Environmental Attitude, and Restaurant Type (1-Green, 0-Non-Green) on On-the-Job Environmental Behavior

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.261	0.065		65.468	0.000
	Neuroticism Centered	-0.432	0.033	-0.660	-13.116	0.000
2	(Constant)	4.258	0.049		86.574	0.000
	Neuroticism Centered	-0.085	0.037	-0.129	-2.316	0.021
	Environmental Attitude Centered	0.591	0.046	0.725	12.977	0.000
3	(Constant)	3.755	0.079		47.776	0.000
	Neuroticism Centered	-0.091	0.033	-0.140	-2.810	0.005
	Environmental Attitude Centered	0.327	0.053	0.402	6.178	0.000
	Restaurant Type (Dummy: 1-Green, 0-Non-Green)	1.060	0.138	0.409	7.704	0.000

a. Dependent Variable: On-the-Job Environmental Behavior

Table M.9. Coefficients for Hierarchical Multiple Regression: Openness, Environmental Attitude, and Restaurant Type (0-Green, 1-Non-Green) on On-the-Job Environmental Behavior

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.263	0.059		71.696	0.000
	Openness Centered	0.430	0.027	0.725	15.719	0.000
2	(Constant)	4.267	0.048		88.333	0.000
	Openness Centered	0.069	0.040	0.117	1.724	0.086
	Environmental Attitude Centered	0.591	0.055	0.730	10.766	0.000
3	(Constant)	4.789	0.084		56.881	0.000
	Openness Centered	0.062	0.036	0.105	1.712	0.088
	Environmental Attitude Centered	0.357	0.059	0.441	6.038	0.000
	Restaurant Type (Dummy: 0-Green, 1-Non-Green)	-0.998	0.138	-0.387	-7.240	0.000

a. Dependent Variable: On-the-Job Environmental Behavior

Table M.10. Coefficients for Hierarchical Multiple Regression: Openness, Environmental Attitude, and Restaurant Type (1-Green, 0-Non-Green) on On-the-Job Environmental Behavior

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.263	0.059		71.696	0.000
	Openness Centered	0.430	0.027	0.725	15.719	0.000
2	(Constant)	4.267	0.048		88.333	0.000
	Openness Centered	0.069	0.040	0.117	1.724	0.086
	Environmental Attitude Centered	0.591	0.055	0.730	10.766	0.000
3	(Constant)	3.791	0.079		48.079	0.000
	Openness Centered	0.062	0.036	0.105	1.712	0.088
	Environmental Attitude Centered	0.357	0.059	0.441	6.038	0.000
	Restaurant Type (Dummy: 1-Green, 0-Non-Green)	0.998	0.138	0.387	7.240	0.000

a. Dependent Variable: On-the-Job Environmental Behavior