The Influence of Pro-Environmental Behavior, Lifestyle and Eating Behavior of Consumers on Food Waste and Loss Prevention Behavior Mediated by Environmental Awareness of Star Hotel Consumers in Padang City

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ABSTRACT: This research aims to determine The Influence of Pro-environmental behavior, Lifestyle and Eating behavior of Consumers on Food waste and loss prevention behavior Mediated by Environmental Awareness of Star Hotel Consumers in Padang City. This research is explanatory research. The population in this study were all hotel guests who stayed and ate at star hotel restaurants in Padang City, with a sample size of 200 people. The sampling technique used purposive sampling technique. The data analysis method uses Structural Equation Modeling - Partial Least Square (SEM-PLS). The results of this research show that pro-environmental behavior has a negative and significant effect on food waste and loss prevention behavior. Meanwhile, lifestyle has no effect on behavior to prevent food waste and loss. then eating behavior and environmental awareness have a positive and significant effect on food waste and loss prevention behavior. However, after being mediated by environmental awareness variables, pro-environmental behavior and lifestyle had no effect on food waste and loss prevention behavior which was mediated by environmental awareness. Meanwhile, eating behavior has a positive and significant effect on food waste and loss prevention behavior which is mediated by environmental awareness. It is hoped that the results of this research will increase efforts in providing knowledge and awareness about these factors so that they can have a positive impact on food waste and loss prevention behavior, by conducting educational and counseling campaigns about the importance of pro-environmental behavior, environmentally friendly lifestyles, eating behavior. good practices, and environmental awareness in reducing food waste and loss.

KEYWORDS: Pro-environmental behavior, Lifestyle, Eating behavior, Environmental awareness, Food waste and loss prevention behavior

I. INTRODUCTION

Food loss and food waste is now a special concern of the UN. According to the official Sustainable Development Goal (SDG) website, the driving force of the global economy, namely consumption and production throughout the world which relies on the use of the environment and natural resources, has an impact that can damage the planet. The UN also states that every year, an estimated one-third of all food produced throughout the world, or the equivalent of 1.3 billion tonnes of food, ends up rotting in consumer and retailer trash, or is lost between harvest and production. This issue is gradually becoming a major concern (Vázquez-Rowe et al., 2019).

The Food and Agriculture Organization of the United Nations (FAO) considers the distinction between food loss (i.e. a decrease in the quantity or quality of the mass of edible food, intended for human consumption, which occurs at the main stages of the supply chain - production, post-harvest stages and processing) and waste food (i.e. food losses that occur at the end of the food chain – retail and final consumption – related to retailer and consumer behavior) (FAO, 2011). Nevertheless, usually both terms are considered together as FLW (Food Loss and Waste) when measuring them for further analysis (Corrado

The Influence of Pro-Environmental Behavior, Lifestyle and Eating Behavior of Consumers on Food Waste and Loss Prevention Behavior Mediated by Environmental Awareness of Star Hotel Consumers in Padang City

and Sala, 2018; Wunderlich and Martinez, 2018). In Europe it is estimated that around 20% of all food is lost or wasted throughout the supply chain (EU FUSIONS, 2016).

The importance of FLW (Food Loss and Waste) is highlighted in other action blocks such as in the stimulation of sustainable food processing practices, whole sales, retail, hospitality and food services, directed at promoting circular business models that utilize food waste. Special attention is paid to food packaging materials for which legislation will be revised to support the use of environmentally friendly food packaging solutions, reusable and recyclable materials, using LCA to select the best options (Abejón et al., 2020), and to contribute on reducing food waste. Reducing food loss and food waste can make a potential contribution to other SDG indicators, including the Zero Hunger goal (SDG number 2), sustainable water management (SDG number 6), and other SDG indicators (FAO 2019). At least in the last few years research results have shown that the largest food waste producer in the world is Indonesia, as seen in table 1:

Table 1 The World's Largest Food Waste Producer (per person per year)

No	Country	Weight (kg)
1	Saudi Arabia	427
2	Indonesia	300
3	United States of America	277
4	United Arab Emirates	196

Source: Economist Intelligence Unit (EIU, 2016)

Becoming one of the countries producing the most food waste in the world in 2017, which is in second place after Saudi Arabia, which is then followed by the United States and the United Arab Emirates. Based on this report, it is concluded that there is at least 1.3 billion tons of food wasted in the world and Indonesia is estimated to contribute around 13 million tons of food waste, both from food loss and food waste (EIU, 2017),

Slorach et al. (2020) evaluated the environmental and economic sustainability of the life cycle of five logical scenarios for food waste processing in the UK. On the other hand, FLW has also been addressed with the nexus approach (Laso et al., 2018b). Only a few case studies have been reported in the literature related to economic aspects, mostly related to urban FLW management (De Menna et al., 2018). Thus, economic factors, especially hotel economic activities, have become a new study in this FLW issue when viewed from the perspective of consumer behavior (McCarthy et al., 2020).

Food waste in the hospitality sector it is defined as food that is unwanted and thrown away, such as leftovers from guests' plates or leftovers from food preparation during the cooking process (Pirani & Arafat, 2016), or even from leftover food that is stored and then rots. Food waste has tremendous economic, social and environmental consequences, but it is preventable. New research on behalf of Champion 12.3 builds a strong business case for hotels to reduce these inefficiencies. The first analysis of 42 hotels in 15 countries found that nearly every company achieved positive returns when investing in food waste reduction programs, with the average site seeing a 600 percent return on investment. However, this financial opportunity is often overlooked by managers and business leaders. Costs related to food loss and waste may be buried in operational budgets, accepted as a cost of doing business, or deemed not worth the investment required to achieve reductions. Benefits such as optimized operational costs, enhanced employee loyalty, better customer retention, and a better public reputation, encourage more and more hospitality businesses to at least examine the feasibility of implementing environmental management practices and programs (Graci and Dodds, 2008). This applies to the FLW challenge, which occupies a prominent position in the environmental management programs considered by many hospitality companies (Radwan et al., 2020). As a result, many industry professionals seek to innovate in this area to reduce waste disposal costs, create a better corporate image, and contribute to environmental preservation and social welfare, thereby increasing the attractiveness of the business to its shareholders (Martin-Rios et al., 2018).

The hotel industry is the second largest industry in the world. The buffet concept in hotel restaurants is one of the factors causing food waste. (Pirani, 2016) This is based on differences in consumer preferences in determining the type and portion of food (Airana et. al., 2021). While there are no specific figures reporting how much hospitality waste contributes to the waste equation, we do know that food waste is a major problem in the hospitality sector in many countries. For example, the hospitality industry in Sri Lanka has been labeled as one of the highest energy consumers and waste producers with an estimated seventy-nine percent of it being food waste. (Edmund, 2019).

The Influence of Pro-Environmental Behavior, Lifestyle and Eating Behavior of Consumers on Food Waste and Loss Prevention Behavior Mediated by Environmental Awareness of Star Hotel Consumers in Padang City

Recent academic literature, official government publications, and business studies show significant interest in consumer behavior. The main focus is on economic and marketing aspects, often motivated by strategic reasons and profitable in the private sector; However, a growing number of scholars and decision makers have investigated environmental awareness, social motivation, eating behavior, psychological and ecological implications of consumer actions. It provides an alternative branch of research and an opportunity for complementary inquiry into economics.

In fact, in recent years the steady increase in the study of consumer behavior, in relation to sustainable development, indicates the need, especially by academics and executives, to deepen the economic and social analysis of consumer activity related to consumer behavior towards the environment, lifestyle, eating behavior and environmental awareness which influences their attitudes towards handling waste and food waste in Indonesia.

Based on the official website of the 2021 National Waste Management Information System under the auspices of the Indonesian Ministry of Environment and Forestry, it is reported that 40.50% of existing waste is food waste. In fact, food waste is very dangerous for the environment. Food waste only has a bad impact on the environment, such as increasing methane gas, which is a greenhouse gas that also has an impact on global warming (Duncan, 2018). Increasing food waste can trigger a waste explosion disaster which can cause landslides and kill people. (CIMSA UI, 2020). When rubbish accumulates, rainwater will seep into the rubbish pile and produce leachate which is very dangerous and toxic because it contains heavy metal elements such as lead, iron and copper. If it is not treated properly, leachate will seep into the ground and pollute drinking water. (CIMSA UI, 2020). Food waste can also damage the ecosystem because when leachate enters the river flow, this will damage the river ecosystem.

In addition, the drivers and reasons for food waste have been examined by exploring individual lifestyles. Indeed, food waste and loss prevention behavior is complex, as a result of consumers' socio-demographic characteristics and personal attitudes (Quested et al., 2013). In particular, research investigating the concept of a healthy lifestyle has largely been examined for its impact on healthy food choices and habits, as well as its role in preventing chronic disease (Gadais et al., 2018). In addition, recent literature highlights the growing importance of this market segment, predicting significant growth for the next years, thus underpinning that it can make a difference to reduce waste (Technavio, 2018). As to the best of our knowledge, very few studies (Roodhuyzen et al., 2017) have examined the possible relationship between a healthy lifestyle and food waste intensity, researchers' attention has been focused on this concept, with the aim of understanding whether such adoption of a wellness-oriented lifestyle can be very important for minimizing food waste.

Despite the many public policies that have been implemented by NGOs and food market stakeholders to reduce food waste, it is unclear whether such actions actually reduce wasted food. These actions may simply shift food waste disposal from retailers to consumer households (Aschemann-Witzel 2016; Devin and Richards 2016). It is very important to understand food waste behavior as a symptom of consumer lifestyles in rich societies, strongly characterized by the cultural paradigm of consumerism (Assadourian 2010). Food consumer behavior must be understood in relation to the consumer's motives and value orientations and in its environmental and social context (Evans, 2011). Macromarketers and policymakers must consider this interdependence(Nyborg et al., 2016). Exploring food waste behavior and underlying factors with a more complex consumer lifestyle perspective can contribute to explaining how food waste avoidance actions will interact with consumers in their respective contexts. According to Bin & Dowlatabadi (2005) the basic premise underlying consumer lifestyle research is that by understanding consumers we can design better public policies. Lorenzen (2012) even suggesting that lifestyle change can be a deliberate process undertaken in response to problems addressed by current policies and practices. Thus, a lifestyle perspective can help identify targeted actions and to align existing actions with consumer behavior, so that social marketing or CSR activities of food sector stakeholders can be most effective.

Aktas et al. (2018) stated that consumer behavior is a significant contributor to food waste. Pro-environmental consumer behavior will have a big impact on environmentally friendly growth. Several studies show that environmental awareness has a significant relationship with attitudes towards disposing of food waste (McCarthy & Liu, 2017). The limited research on the interaction between pro-environmental consumer behavior (PECB) and general consumer behavior (GenCB) on the environmental awareness of hotel consumers makes this issue important to research, especially those related to culture (eating habits) and people's lifestyles. In this paper, this interaction is interpreted as an interaction between people who have high pro-environmental sensitivity and people who have no concern for sustainable development. This type of relationship influences the effectiveness of recycling at the end-user level, and the diffusion of good recycling practices among consumers. This effectiveness is related to the availability of strong recycling infrastructure and a supportive legal framework Bliacheris, 2014; Feldman and Perez, 2012) With these two components, consumers can contribute significantly to reducing FLW when eating at hotels and restaurants.

The Influence of Pro-Environmental Behavior, Lifestyle and Eating Behavior of Consumers on Food Waste and Loss Prevention Behavior Mediated by Environmental Awareness of Star Hotel Consumers in Padang City

In the hotel business, analysis of consumer behavior towards food waste has become a world concern in making food waste management policies in this industry. At least food waste management in hotels needs to analyze consumer behavior in relation to efforts to preserve the environment and increase hotel business profits through saving food ingredients, not being wasteful in processing food and using environmentally friendly ingredients in serving food (Zhang et al., 2018).

II. LITERATURE REVIEW

Food Loss and Waste (FLW)

In The State of Food Agriculture in 2019, Food and Agriculture Organization of the United Nations(FAO UN) stated that food loss is a reduction in the quantity or quality of food due to the decisions and actions of its suppliers, excluding retailers, food service providers and consumers. Food loss usually driven by infrastructure limitations, climate and environmental factors as well as quality, aesthetic or safety standards. Food loss most often occurs at the production, post-harvest and processing stages of the food chain. Whereas food waste occurs at the end of the food chain. Food waste is food that was originally produced for human consumption but is then thrown away or not consumed by humans. This includes food that was spoiled before being thrown away and food that was still edible when thrown away. Food waste typically occurs at the retail and consumer level and is driven by decisions made by consumers and businesses that consider quality, aesthetics, and/or safety standards. Food waste as defined here is more directly related to consumer behavior. Such as expired packaged or canned food from retail wholesalers, unfinished food, or undercooked products. (Melisa, 2020).

On in the hotel industry, the issue of food waste itself has become a matter of full concern for hotel management and consumers, because the food waste that occurs in the hotel industry is very worrying and is predicted to worsen over time.
Food waste refers to food fit for human consumption that is thrown away, whether or not after it has been stored beyond its expiration date or allowed to spoil. Often this is because the food has gone stale but it can also be due to other reasons such as excess supply due to the market, or individual consumer shopping/eating habits.

Food waste and loss prevention behavior

Consumer food waste behavior is an environmental and social problem that often occurs in society. Scientifically, up to now there has been no prevention effort through various research results, except only campaigning for environmental care (Principato, 2018; Quested et al., 2013). Neglect of food waste and loss prevention behavior contributes to environmental damage, such as deforestation, food waste (Houghton, 2012), water pollution (Chapagain & James, 2013), and climate change (Melikoglu et al., 2013), and in in turn, has a negative impact on the lives of people around the world (Intergovernmental Panel on Climate Change, 2018). World organizations through the Intergovernmental Panel on Climate Change Movement continue to strive for governments to minimize the negative impact of food waste by changing food waste and loss prevention behavior through increasing environmental awareness, caring for the environment and cultivating healthy, simple and non-wasteful living behavior, especially food waste and loss prevention behavior. causing the increase in food waste to continue to increase until 2030 (United Nations, 2020). This analysis aims to call for awareness campaigns to change consumer behavior so that they do not behave wastefully towards food (European Commission, 2021).

In industrialized countries, the amount of food wasted by consumers is very large, including food waste in households (Parfitt et al., 2020). To prevent negative consequences, we need to understand the behaviors that make people throw away their food and the reasons that make them do it. Recent research on household food waste emphasizes the important role that two categories play in shaping food waste behavior in terms of individual and situational factors (Hebrok & Boks, 2017; Porpino, 2016; Principle, 2018; Schanes et al., 2018) . Food waste and loss prevention behavior is seen from individual behavior, for example, psychological characteristics, age and situational factors such as household size and economic situation which influence food waste behavior.

Pro-environmental Behavior

Pro-environmental behavior is an action carried out consciously to minimize the negative impacts of human activities carried out every day (Kollmus and Agyman in Nurfajriani, Azrai and Sigit, 2018). Sanyal and Pal (2017) also define that pro-environmental behavior is behavior that is aware of the environment and attempts to reduce negative impacts caused by humans themselves.

Pro-environmental behavior is a useful action to minimize environmental damage by improving environmental conditions such as processing and reusing waste, using environmentally friendly products and saving electrical energy (Putra, 2014). Pro-environmental behavior is very important for individuals to have, this is because it can provide several good impacts

The Influence of Pro-Environmental Behavior, Lifestyle and Eating Behavior of Consumers on Food Waste and Loss Prevention Behavior Mediated by Environmental Awareness of Star Hotel Consumers in Padang City

such as reducing air pollution, reducing energy consumption, improving human and environmental health and can reduce costs related to energy consumption (Meyer, 2015)

Eating behavior

Eating behavior is the nature of appetite which is closely related to eating habits. Eating behavior is also known as Behavioral Susceptibility Theory (BST), a person's response to several characteristics such as: food response (wanting to eat due to seeing food, the smell or taste of delicious food) and satiety response (fullness threshold). The characteristics of appetite are behavioral tendencies towards food and their eating events. Variation between individuals in their appetite traits Food Responsiveness and Satiety Responsiveness. There is some evidence that a person's eating behavior is related to taste and the nature of appetite. To measure eating behavior in adolescents and adults, the Adult Eating Behavior Questionnaire (AEBQ) is often used (Hunot et al, 2016)

Lifestyle

According to Kotler (2020) lifestyle is a person's pattern of living in the world which is expressed in their activities, interests and opinions. Lifestyle describes a person's whole self in interacting with his environment. Setiasi (2003) defines lifestyle broadly as a way of life that is defined by how people spend their time with what they consider important in their environment and what they estimate about themselves and the world around them.

Meanwhile, according to Plummer (1974) lifestyle is an individual's unique behavior which is based on various activities, interests and opinions. Previous research highlights that in-depth examination of individual lifestyles is very important for developing marketing strategies for the food industry (Qing et al., 2012). Over the years, there have been several attempts to measure different lifestyle dimensions, such as the VALS program (Kahle et al., 1986) and the PRIZM system (Englis and Solomon, 1995). Further studies, specifically focused on the food sector, pay great attention to the concept of lifestyle, which is considered as an orientation towards maximizing personal well-being and preventing health problems (Divine and Lepisto, 2015; Kim and Chung, 2011).

Environmental Awareness

Environmental awarenessis the main driving factor towards individual pro-environmental behavior. Studies in the psychological factors of pro-environmental behavior have found a causal relationship between an individual's environmental awareness and pro-environmental behavior. Behavior change theory assumes that individuals with strong environmental values recognize the impact of their behavior on the environment. To justify how environmental awareness leads to pro-environmental behavior, behavior change theory is used. Behavior change theory applies the idea that when people are well informed about environmental issues, they become more aware of human-caused environmental problems which in turn motivates them to live sustainable lives. Knowledge builds attitudes, beliefs, and ultimately desired behavior (Clayton & Myers, 2015).

Producers and consumers are expected to mitigate environmental damage and are pressured by regulations, customer expectations, and community groups to embrace green practices to move up the value chain (Ndubisiet al., 2021). Through green retail practices, it can influence environmental awareness among consumers. It is also hoped that this practice can create consumers who are aware of the environment. According to Ndubisiet al. (2021) environmentally conscious consumers are consumers who at least have the knowledge and willingness to buy environmentally friendly products. Environmental awareness or environmental awareness refers both to the tendency to reflect mentally on the environment and to behavior and psychological states that reflect environmental commitment (Huang et al., 2014).

Environmental awareness is a kind of belief that refers to an individual's descriptive ideas about certain things and attitudes that reflect consistent evaluations, feelings and concern for those things or concepts (Huang et al., 2014). In recent years, environmental damage has become an issue that continues to be highlighted through the mass media and environmental activists who are trying to move people to be aware and care about the environment, especially waste. Several other studies mention environmental awareness. Environmental awareness is an important part of sustainability.

Actions can be taken in various sectors to increase environmental awareness for sustainable education. These actions include legal rights and responsibilities on the environment, related consequences, use of the media, awareness-raising campaigns, incorporation of environmental issues in mainstream education, increasing awareness and education in target groups, and encouragement of public participation in environmental issues (Shelest et al. al., 2017).

With supporting facilities, it is hoped that it can educate and encourage people to have environmental awareness. By having environmental awareness, at least we have the mind to keep the environment sustainable. Through environmentally

friendly retail practices, we can provide examples of how to apply environmental friendliness in everyday life. From throwing rubbish in the right place, to other small actions can have a positive impact on society.

According to Bansal (2018), there are three components of environmental consciousness, namely environmental knowledge, environmental concern and social environmentalism. Environmental knowledge is defined as general knowledge about facts, concepts and relationships regarding the natural environment and its ecosystems, measures an individual's level of information about environmental issues (Sánchez & Lafuente, 2020), and is a key factor that activates both personal norms that guide behavior and processes to internalize pro-environmental values and beliefs (Bansal, 2018).

Meanwhile, according to Bansal (2018), defining environmental concern is a general concept that can refer to feelings about many different green issues. This understanding shows the general consumer's orientation towards the environment. The third component is social environmentalism. It was further explained that social environmentalism intends to capture the strength of consumers' beliefs about society's role in considering and protecting the environment through environmentally conscious behavior.

III. RESEARCH METHODS

This research is explanatory research. Target population in this research were all hotel guests who stayed and ate at star hotel restaurants in Padang City. The sampling technique used non-probability sampling (Sekaran & Bougie, 2016). In this research, researchers used a purposive sampling technique (Sekaran & Bougie, 2016). The criteria selected as respondents in this research were consumers of star hotels in the city of Padang.Hair et al., (2014)states that sample determination can be done using the ratio of observations (indicators) to variables in a ratio of 5:1, 10:1 or 20:1. Based on this rule, the number of drinking samples in this study is 36 indicators × 5 = 180 samples and rounded up to 200 samples. In this research, the type of data used is quantitative data obtained through questionnaire results. This research uses two types of data sources, namely primary data and secondary data. Data collection techniques in this research used a survey method. The data collection technique in this research uses a questionnaire with a 1-5 point Likert scale. The independent variables in this research are pro-environmental behavior, lifestyle, and eating behavior. Then the mediating variable is environmental awareness and the dependent variable is food loss and waste prevention behaviour. This research model will be analyzed using the Structural Equation Model (SEM) technique, with the help of Partial Least Square (PLS) software.

IV. RESEARCH RESULTS AND DISCUSSION

Structural Equation Model (SEM) Analysis

Data were analyzed using PLS-SEM through two stages, namely (1) measurement model assessment and (2) structural model assessment

Measurement Model Assessment

Testing the measurement model aims to determine the quality of the construct(Hair et al., 2014). Testing the measurement model uses tests Convergent Validity as well discriminant Validity. Internal Consistency and Convergent Validity can be seen from Outer loading or reliability indicators are observations that can be measured directly(Hair et al., 2014). Outer loading is considered valid if the value is above 0.70. Generally, indicators with loadings below 0.4 should be removed. Meanwhile, indicators range0.40 to 0.70 can be eliminated if it can increase composite reliability or AVE(Hair et al., 2014)..The consistency of a scale or construct to produce the same results under similar conditions is called reliability. Reliability is generally measured by Cronbach's alpha and composite reliability with a threshold of 0.70(Hair et al., 2014).

Validity is defined as the extent to which all constructs can measure what they are supposed to measure. Convergent validity is a metric from the reflective measurement model that explains the variance of the items. Convergent validity is measured by average variance extracted (AVE) with a threshold of 0.50(Hair et al., 2014). Following are the processing results for each variable:

Table 2. Internal Consistency and Convergent Validity Variable

Variable	items	Outer loading	Composite reliability	Cronbrach Alpha	Ave
Pro-environmental behavior	PEB1	0.948	0.948	0.947	0.827
	PEB2	0.846			
	PEB3	0.948			

	PEB4	0.850			
	PEB5	0.950			
Lifestyle	LS1	0.948	0.922	0.921	0.810
	LS2	0.846			
	LS3	0.948			
	LS4	0.850			
Eating behavior	EB1	0.888	0.943	0.940	0.739
	EB2	0.877			
	EB3	0.860			
	EB4	0.740			
	EB5	0.876			
	EB6	0.865			
	EB7	0.902			
Environmental Awareness	EA1	0.792	0.876	0.869	0.719
	EA2	0.903			
	EA3	0.805			
	EA4	0.888			
Food waste and loss prevention behavior	FWB1A	0.833	0.972	0.973	0.705
	FWB1B	0.835			
	FWB1C	0.737			
	FWB2A	0.876			
	FWB2B	0.855			
	FWB2C	0.887			
	FWB3A	0.777			
	FWB3B	0.861			
	FWB3C	0.868			
	FWB4A	0.876			
	FWB4B	0.839			
	FWB4C	0.840			
	FWB5A	0.851			
	FWB5B	0.846			
	FWB5C	0.870			
	FWB5D	0.768			

Source: Processed Data (2023)

Based on the data in table 2 above, it can be explained that the pro-environmental behavior variable is measured with 5 statements, lifestyle is measured with 4 statements, eating behavior is measured with 7 statements, environmental awareness is measured with 4 questions, food waste and loss prevention behavior is measured with 16 statements. All outer loading items pro-environment, lifestyle, eating behavior, environmental awareness, food waste and loss prevention behavior are above 0.4. Therefore, all items enter the next stage. The Cronbach alpha and composite reliability values for all variables are above the threshold of 0.70. Furthermore, all variables are also above the threshold of 0.5. Therefore, it can be concluded that the internal consistency and convergent validity of all variables have been achieved.

Discriminant Validity testing using the Fornell-Larcker criteria, a construct is considered valid if the root AVE of each construct is greater than the correlation between constructs(Hair et al., 2014). Based on the results of the second-order construct calculation in Table 4. The root of the AVE second-order construct is 0.982; 0.972; 0.973; 0.972 and 0.840 have greater values than the correlation between constructs. These results indicate that discriminant validity with the Fornell-Larcker criteria has been achieved.

The Influence of Pro-Environmental Behavior, Lifestyle and Eating Behavior of Consumers on Food Waste and Loss Prevention Behavior Mediated by Environmental Awareness of Star Hotel Consumers in Padang City

Table 3. Fernell-Larcker Criteria Second Order Construct

	Pro-environmental behavior (X1	Lifestyle (X2)	Eating behavior (X3)	Food Loss and Waste Behavior (Y)	Environmental Awareness (Z)
X1	0.982				
X2	0.969	0.973			
X3	0.948	0.952	0.973		
Y	0.935	0.945	0.955	0.972	
Z	0.91	0.9	0.86	0.848	0.840

Source: Processed Data (2023)

Furthermore, discriminant validity can also be tested using the cross loading method, which will be achieved if the loading indicator value is greater than the cross loading (Hair et al., 2014). Based on the calculation results in Table 4. the loading indicator value for all constructs (in gray highlight) has a value which is greater than the cross loading. Therefore, the discriminant validity of all constructs based on the cross loading method has been achieved.

Table 4 Cross Loadings

	Pro-environmental behavior (X1)	Lifestyle (X2)	Eating behavior (X3)	Food Waste and Loss Behavior (Y)	Environmental Awareness (Z)
PEB1	0.948	0.946	0.890	0.886	0.856
PEB2	0.846	0.836	0.853	0.844	0.840
PEB3	0.948	0.939	0.894	0.896	0.860
PEB4	0.850	0.811	0.881	0.794	0.840
LS1	0.783	0.867	0.851	0.793	0.832
LS2	0.948	0.949	0.895	0.888	0.861
LS3	0.947	0.942	0.885	0.897	0.861
LS4	0.847	0.837	0.867	0.842	0.846
EB1	0.939	0.946	0.888	0.888	0.855
EB2	0.852	0.819	0.877	0.800	0.839
EB3	0.845	0.822	0.860	0.837	0.843
EB4	0.627	0.621	0.740	0.698	0.726
EB5	0.787	0.807	0.876	0.817	0.876
EB6	0.792	0.865	0.865	0.795	0.841
EB7	0.956	0.942	0.902	0.894	0.865
FWB1A	0.827	0.786	0.843	0.783	0.833
FWB1B	0.839	0.825	0.850	0.835	0.835
FWB1C	0.635	0.634	0.747	0.699	0.737
FWB2A	0.748	0.768	0.841	0.799	0.876
FWB2B	0.756	0.820	0.835	0.779	0.855
FWB2C	0.897	0.895	0.865	0.873	0.887
FWB3A	0.658	0.686	0.705	0.799	0.777
FWB3B	0.803	0.818	0.812	0.896	0.861
FWB3C	0.774	0.795	0.804	0.881	0.868
FWB4A	0.762	0.784	0.857	0.804	0.876
FWB4B	0.738	0.802	0.816	0.761	0.839
FWB4C	0.793	0.743	0.814	0.761	0.840

FWB5A	0.937	0.940	0.879	0.889	0.851
FWB5B	0.852	0.843	0.871	0.842	0.846
FWB5C	0.874	0.860	0.827	0.860	0.870
FWB5D	0.613	0.643	0.677	0.773	0.768
EA1	0.656	0.674	0.704	0.792	0.742
EA2	0.819	0.829	0.840	0.903	0.860
EA3	0.781	0.771	0.813	0.805	0.845
EA4	0.936	0.934	0.869	0.888	0.844

Source: Processed Data (2023)

Structural Model Assessment

Structural Model Assessment discusses the coefficient of determination test and hypothesis testing. The coefficient of determination aims to measure the strength of the prediction model. An R^2 value of 0 indicates there is no relationship and a value of 1 indicates a perfect relationship(Hair et al., 2014).

Table 5 Coefficient of Determination Test Results

Variable	R^2
Prevention of Food Waste and Loss Behavior	0.974
Environmental Awareness	0.922

Source: Processed Data (2023)

The coefficient of determination value of the food loss and waste behavior variable is 0.974. This value shows that the variables pro-environmental consumer behavior, consumer lifestyle and eating behavior of star hotel consumers in the city of Padang contribute to the variable food waste and loss prevention behaviors by 97.4% while the remaining 2.6% is influenced by other variables outside variables in this research. Furthermore, the coefficient of determination value of the environmental awareness variable is 0.922. These results also show that the pro-environmental behavior variables of hotel consumers, hotel consumer lifestyle and eating behavior of star hotel consumers in West Sumatra Province are able to influence changes in the environmental awareness variable by 92.2% while the remaining 7.8% is influenced by other variables. not used in this study.

The hypothesized relationship between constructs is described by the path coefficient where a value close to +1 indicates a strong positive relationship while a value of -1 indicates a strong negative relationship. This research uses a two-tail test with a significance level of 5% with a critical value of 1.96. The relationship between variables is said to be statistically significant if the empirical t value is greater than the critical value or the p value is smaller than 0.05.

Table 6. Hypothesis Testing Results

Variable	Original sample (path coefficient)(O)	Sample mean (M)	Standard deviation (STDEV)	T statistics (|O/STDEV|)	P values	conclusion
X1 -> Y	-0.317	-0.317	0.071	4,446	0,000	Accepted
X2 -> Y	-0.053	-0.052	0.089	0.601	0.548	Rejected
X3 -> Y	0.776	0.779	0.085	9,127	0,000	Accepted
Z -> Y	0.582	0.577	0.070	8,316	0,000	Accepted
X1 -> Z -> Y	0.106	0.115	0.092	1,150	0.250	Rejected
X2 -> Z -> Y	0.168	0.157	0.091	1,839	0.066	Rejected
X3 -> Z -> Y	0.289	0.286	0.077	3,743	0,000	Accepted

The influence of pro-environmental behavior on food waste and loss prevention behavior

The results of the H1 test show that pro-environmental behavior has a negative and significant effect on food waste and loss prevention behavior with valueβThe value is -0.317, which means a negative path coefficient value of 0.317 indicates that if the value of the pro-environmental behavior variable increases by one standard deviation unit, the value of food waste and loss

The Influence of Pro-Environmental Behavior, Lifestyle and Eating Behavior of Consumers on Food Waste and Loss Prevention Behavior Mediated by Environmental Awareness of Star Hotel Consumers in Padang City

prevention behavior will decrease by 0.317 standard deviation units. The findings of the data analysis results also show that pro-environmental behavior has a significant effect with a p-value of 0.000 and the t statistic is 4.446, which is greater than 1.96. Therefore it can be concluded that H1 is accepted.

Pro-environmental behavior turns out to have a negative effect on food waste and loss prevention behavior, this occurs because assumptions about environmental awareness are not enough to reduce food waste and loss prevention behavior. It requires more stimulus and knowledge than just awareness about pro-environmental behavior in order to have a positive impact on food waste and loss prevention behavior.

In the context of food waste management, pro-environmental behavior can have negative impacts. For example, someone may choose to buy organic products in the hope of reducing their environmental impact, but if they throw away uneaten food, this can produce methane, a greenhouse gas that is 32 times more powerful than carbon dioxide2. In addition, food waste also means throwing away the resources used to produce and transport that food (for example, land, water, fertilizer, pesticides, and fuel)

The influence of lifestyle on food waste and loss prevention behavior

The results of the H2 test show that lifestyle has no effect on food waste and loss prevention behavior with valueβthe value is -0.053. This means that a negative path coefficient value of 0.053 indicates that if the value of the lifestyle variable increases by one standard deviation unit, the value of food waste and loss prevention behavior will decrease by 0.053 standard deviation units. The findings of the data analysis also show that lifestyle has an insignificant effect with a p-value of 0.548 (greater than 0.05) and a t statistic of 0.601 (smaller than 1.96). Therefore it can be concluded that H2 is rejected.

On This discussion found that there is a negative influence between lifestyle and behavior to prevent food waste and loss. With certain planning and lifestyle, you can raise awareness about food waste and loss prevention behavior in the restaurant environment of star hotels in the city of Padang. This finding is also in accordance with research conducted by Kimata & Takahsi (2022) where this research shows that lifestyle and cultural factors can influence people's willingness to be involved in efforts to reduce food waste.

The influence of eating behavior on food waste and loss prevention behavior

The results of the H3 test show that eating behavior has a positive and significant effect on food waste and loss prevention behavior with valueβthe value is 0.776. This means that a positive path coefficient value of 0.776 indicates that if the value of the lifestyle variable increases by one standard deviation unit, the value of food waste and loss prevention behavior will increase by 0.776 standard deviation units. The findings of the data analysis also show that lifestyle has a significant effect with a p-value of 0.000 (smaller than 0.05) and the t statistic is 9.127 (greater than 1.96). Therefore it can be concluded that H3 is accepted.

In this discussion, it was found that eating behavior has a positive, and statistically significant, influence on food waste and loss prevention behavior. These results indicate that the existence of good eating behavior among the consumers sampled in this study can have a positive impact in reducing food waste or wasted food. In this context, good eating behavior includes values and practices such as respecting food, avoiding waste, and making efficient use of food resources.

The influence of eating behavior on food waste and loss prevention behavior is statistically significant in this study, this means that eating behavior has an important role in reducing food waste. In real situations, the influence of eating behavior may be greater than that seen in statistical data.

This finding also received support from other research, such as that conducted by Sheen et al. in 2020. This research also shows the positive influence of eating behavior on reducing food waste and loss prevention behavior. Therefore, we can consider the statistically significant influence of eating behavior in this study as an indication that good eating behavior can contribute positively to efforts to reduce food waste in society.

The influence of environmental awareness on food waste and loss prevention behavior

The results of the H4 test show that environmental awareness has a positive and significant effect on food waste and loss prevention behavior with valueβthe value is 0.582. This means that a positive path coefficient value of 0.582 indicates that if the value of the lifestyle variable increases by one standard deviation unit, the value of food waste and loss prevention behavior will increase by 0.582 standard deviation units. The findings of the data analysis also show that environmental awareness has a significant effect with a p-value of 0.000 (smaller than 0.05) and the t statistic is 8.316 (greater than 1.96). Therefore it can be concluded that H4 is accepted.

Observations of the relationship between environmental awareness and food waste and loss prevention behavior among consumers of star hotel restaurants in Padang City show that there is a positive influence, and it is statistically significant.

The Influence of Pro-Environmental Behavior, Lifestyle and Eating Behavior of Consumers on Food Waste and Loss Prevention Behavior Mediated by Environmental Awareness of Star Hotel Consumers in Padang City

This means that environmental awareness among hotel restaurant customers has the potential to help reduce behavior to prevent food waste and loss.

This finding is in line with research by Agarwal (2018), which also supports the idea that there is a positive influence between environmental awareness and preventive behavior food waste and loss. Based on the explanation above, it can be assumed that there are several supporting variables that can explain things that have a significant influence.

The influence of pro-environmental behavior on food waste and loss prevention behavior is mediated by environmental awareness

The results of the H5 test show that pro-environmental behavior has no effect on food waste and loss prevention behavior which is mediated by environmental awareness and values β The value is 0.106, which means a positive path coefficient value of 0.106 indicates that if the value of the pro-environmental behavior variable increases by one standard deviation unit, when mediated by environmental awareness the value of food waste and loss prevention behavior will increase by 0.106 standard deviation units. . The findings of the data analysis results also show that the pro-environmental behavior variable mediated by environmental awareness has no significant effect with a p-value of 0.250 (greater than 0.05) and the t statistic is 1.150 (less than 1.96).). Therefore it can be concluded that H5 is rejected.

On The findings in this research show that there is a positive influence between pro-environmental behavior on food waste and loss prevention behavior which has been mediated by environmental awareness. This is interesting because environmental awareness which acts as mediation can change the negative influence of pro-environmental behavior on food waste and loss prevention behavior directly into a positive but not significant influence. With environmental awareness, environmentally friendly behavior has a positive influence on behavior of throwing away and not wasting food.
Wang et al. (2020) found that environmental awareness and pro-environmental behavior have a significant positive relationship with food waste and loss prevention behavior avoidance (avoiding food waste). This research also shows that perceptions of resource availability and the ability to utilize leftover food can moderate the relationship between these variables.

The influence of lifestyle on food waste and loss prevention behavior is mediated by environmental awareness

The results of the H6 test show that lifestyle has no effect on food waste and loss prevention behavior which is mediated by environmental awareness and values β The value is 0.168, which means a positive path coefficient value of 0.168 indicates that if the value of the lifestyle variable increases by one standard deviation unit, when mediated by environmental awareness the value of food waste and loss prevention behavior will increase by 0.168 standard deviation units. The findings of the data analysis also show that when the lifestyle variable is mediated by environmental awareness it has no significant effect with a p-value of 0.066 (greater than 0.05) and the t statistic is 1.839 (smaller than 1.96). Therefore it can be concluded that H6 is rejected.

In the results of the analysis of the influence of lifestyle on food waste and loss prevention behavior mediated by environmental awareness, findings were found that showed a positive but not significant influence. This is quite contradictory to previous research, namely by Li et al (2021) and Mana et al (2018) where previous research showed that there was a positive and significant influence that occurred between lifestyle and food waste and loss prevention behavior which was mediated by environmental awareness.

Li et al. (2021) shows that an environmentally friendly lifestyle has a significant positive relationship with food waste and loss prevention behavior avoidance (avoiding food waste), and that environmental awareness mediates this relationship. In other words, people who have a more environmentally friendly lifestyle tend to avoid food waste, and this happens through the positive influence of environmental awareness. Mena et al. (2018) shows that a health-oriented lifestyle and environmental awareness have a significant positive relationship with reducing food waste. This research also found that the influence of factors such as food preferences, food expenditure, and cutting and packaging actions can moderate the relationship between lifestyle and food waste and loss prevention behavior.

The influence of eating behavior on food waste and loss prevention behavior is mediated by environmental awareness

The results of the H7 test show that eating behavior has a positive and significant effect on food waste and loss prevention behavior which is mediated by environmental awareness and values β The value is 0.289, which means a positive path coefficient value of 0.289 indicates that if the value of the eating behavior variable increases by one standard deviation unit, when mediated by environmental awareness the value of food waste and loss prevention behavior will increase by 0.289 standard deviation units. The findings from the data analysis also show that the eating behavior variable mediated by environmental

awareness has a significant effect with a p-value of 0.000 (smaller than 0.05) and the t statistic is 3.743 (greater than 1.96). Therefore it can be concluded that H7 is accepted.

The research results show that there is a positive and significant influence between eating behavior on food waste and loss prevention behavior which is mediated by environmental awareness. Good eating behavior and awareness about environmental friendliness can have a positive influence on behavior to prevent food waste and loss, this is also supported by previous research conducted by Kim et al (2021) and Liu et al (2020) which found that eating behavior and Environmental awareness has a positive and significant effect on reducing food waste and loss prevention behavior.

Kim et al. (2021) found that the culture of consuming fast food and ready-to-eat food is positively related to food waste and loss prevention behavior in South Korean society. However, this research also shows that environmental awareness can mediate the relationship between fast and ready-to-eat food consumption culture and food waste and loss prevention behavior. Research by Hartmann and Siegrist (2017) found that a culture that emphasizes savings and efficiency in food management has a negative relationship with food waste and loss prevention behavior in Swiss society. This research also shows that environmental awareness mediates the relationship between a culture of savings and efficiency in food management and food waste and loss prevention behavior.

V. CONCLUSIONS

Based on the description of the previous chapters, the following conclusions are obtained:

1. Pro-environmental behavior has a negative and significant effect on food waste and loss prevention behavior
2. Lifestyle has no effect on food waste and loss prevention behavior
3. Eating behavior has a positive and significant effect on food waste and loss prevention behavior
4. Environmental awarenesshas a positive and significant effect on food waste and loss prevention behavior
5. pro-environmental behavior has no effect on food waste and loss prevention behavior which is mediated by environmental awareness
6. A positive lifestyle has no effect on food waste and loss prevention behavior which is mediated by environmental awareness
7. Eating behavior has a positive and significant effect on food waste and loss prevention behavior which is mediated by environmental awareness

The following are several implications that can be put forward in this research

1. Pro-environmental behavior has a negative effect on food waste and loss prevention behavior. Therefore, stakeholders need to increase knowledge and awareness about pro-environmental behavior in consumers who have sustainable behavior and environmental preservation, reducing the use of single-use materials, reducing waste and minimizing resources, being consistent in sorting waste types, and buying food. as needed, in order to have a positive impact on food waste and loss prevention behavior.
2. Eating behavior has a positive influence on food waste and loss prevention behavior. The way consumers buy, cook and consume food can influence the extent to which food waste occurs. Wise consumers can also choose and buy food to help prevent food waste. This includes purchasing food based on needs, planning the shopping list well, and choosing quality products that suit the family size or individual needs. Then, choosing food portions that suit an individual's appetite can avoid unused food waste. Consumers who are accustomed to managing their food portions can reduce waste
3. Environmental awareness has a positive influence on food waste and loss prevention behavior. Environmental awareness often motivates individuals to take more sustainable actions in managing their food. Such as reducing excessive purchasing, where consumers who care about the environment tend to be more careful in purchasing food and avoid excessive purchasing. They plan their shopping better to minimize waste. Consumers who care about the environment also tend to prefer foods that are higher quality and last longer. They may prefer organic foods or locally produced, sustainably produced products. Therefore, it is necessary to increase environmental awareness in order to minimize behavior to prevent food waste and loss.
4. Environmental awareness can mediate the positive influence of eating behavior on food waste and loss prevention behavior. Eating behavior includes a person's habits, preferences and food consumption patterns. This includes whether a person eats healthily, chooses certain types of food (for example, organic or local foods), and how they manage food in everyday life. Therefore, it is necessary to increase environmental awareness in order to strengthen the positive influence of eating behavior on food waste and loss prevention behavior. This can be done through education and outreach

campaigns about the importance of environmental awareness in strengthening the positive influence of eating behavior on food waste and loss prevention behavior.

Based on hypothesis testing and the limitations of researchers, several suggestions are put forward that can be applied for the benefit of further research

1. The government can play a role in increasing awareness about food waste among hotel owners, management and employees. This can be done through outreach campaigns, training and education programs. In this case, the government can help the UN to achieve the SDGswhich aims for the Zero Hunger goal (SDG number 2), sustainable water management (SDG number 6), and other SDG indicators (FAO 2019).

2. The government could also consider developing regulations that require hotels to report the amount of food wasted every month. This can help gauge the extent of the problem and encourage hotels to be more careful in managing food supplies. Encourage hotels to work with local non-profit organizations or charities to donate food that is still fit for consumption rather than throwing it away. The government may provide incentives or tax breaks to hotels that participate in food donation programs.

3. It is recommended for the star hotel industry in Padang City to be more vocal about the importance of maintaining food waste and loss prevention behavior, as well as to further improve hotel marketing by means of green marketing, where green marketing in hotels refers to marketing practices that emphasize the hotel's commitment to sustainable practices and the environment. . This includes the hotel's efforts to communicate the sustainable practices they employ to guests, potential customers, and the public in general with the aim of promoting the hotel's image as a place that cares about the environment, minimizes negative impacts on nature, and supports sustainable practices.

4. The variables pro-environmental consumer behavior, consumer lifestyle and eating behavior of star hotel consumers in the city of Padang contribute to the variable food waste and loss prevention behaviors amounting to 97.4% while the remaining 2.6% is influenced by other variables outside the variables in this research . Therefore, it is recommended that future researchers explore other variables that can optimize food waste and loss prevention behavior among star hotel consumers in the city of Padang.

5. It is recommended that future research use data analysis techniques that are more complex than this research in order to obtain more accurate data analysis results.

6. This research only focuses on a sample of hotel restaurant consumers in two star hotels in Padang City, West Sumatra. It is hoped that in the future researchers can expand the samples and research objects.

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