A STUDY OF PERCEIVED ATTRIBUTES OF ASIAN FOODS: COMPARISON OF IMPLICIT AND EXPLICIT ATTITUDE MEASURES

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CHAPTER 1

INTRODUCTION

1.1 Background of the Study

Assume you are standing at a fork in your road. What is the best choice in the road? We presume that some people do not make the best decision in an uncertain situation due to individuals' unawareness of the attitudes on a choice context. In this sense, how do you make an effective and best decision? Recently, one of the big issues is how we can make decisions for something at the moment of truth. For 2000 years, the research in the social psychology has primarily focused on attitudinal issues (Petty, Fazio, & Brinol, 2009) as a way to examine influential factors that effect peoples' decision-making and behaviors (Fellows, 2006). Many social psychologists have examined individual's real feelings and thoughts to measure individual's attitudes, and have proposed that there are weakness of the traditional (explicit) attitude measurement (i.e., self-reported survey), such as midpoint synonyms (Petty, Fazio, & Brinol, 2009) in evaluating objects. Thus, one of the effective instruments in uncovering individual's real attitudes is to apply measures of implicit attitudes compared to measures of explicit (traditional) attitudes in a study of individual's attitudes (Wittenbrink & Schwarz, 2007). In this sense, the psychological studies have employed the new technique of Implicit Association Test (IAT) in measuring the implicit attitudes (Greenwald, McGhee, & Schwartz, 1998; Nosek, Greenwald, & Banaji, 2005).

Considering the features of the new technique (i.e., IAT) in measuring individual's implicit attitudes, it is assumed that an application of the new technique (i.e., IAT) could be applied to measure peoples' attitudes and expect their behaviors in decision-making process within the context of hospitality and tourism.

With the understanding of the decision-making process in various contexts (Connors, Bisogni, Sobal, & Devine, 2001), the focus of hospitality and tourism research is to predict customers' attitudinal behaviors in making better food choices in multi food-related attributes. The reason that potential customers have difficulties choosing foods in various contexts is because they have different perceptions of food attributes on food choices (Jang, Ha, & Silkes, 2009). In other words, food choice is a complex process because it is influenced by many internal and external factors to the person, and carries many different meanings in perception of diverse culture (Backman, Haddad & Lee, 2002). With regard to influential factors toward customer's behaviors of food choices in some food-related research, substantial studies proposed the importance of attitudes, taste for healthful foods, control beliefs, knowledge and availability in predicting food-choice intentions (Backman et al., 2002; Bredahl, Grunert, & Frewer, 1998). This reveals that the issue of food choices in the decision making process should be examined in psychological perspective in that the individual's explicit attitudes are usually inconsistent with their implicit attitudes (Abelson, Aronson, McGuire, Newcomb, Rosenberg, & Tannenbaum, 1968) due to the ambivalence (Armitage & Conner, 2000; van der Pligt., De Vries., Manstead, & van Harreveld, 2000) on options in making choice. In this sense, psychological approaches will broaden our understanding of how people's

perceived value of food-related attributes in personal food-choice systems and how people solved value conflicts in ambivalent situations

In social psychology, the change of attitudes varies depending on cognitive consistency and inconsistency, influencing individual's behavior (Armitage 2003; Armitage & Conner 2000; Conner, Sparks, Povey, Shepherd, & Armitage, 2002; Costarelli & Colloca 2004; Sparks., Harris, & Lockwood, 2004) and decision making (H¨anze, 2001) in ambivalent situations. More specifically, the attitudes in psychology research are a critical predictor of judgments, decisions, and behavior (Abelson, Aronson, McGuire, Newcomb, Rosenberg, & Tannenbaum, 1968) in terms of the cognitive decision making processes (Gawronski & Strack, 2004). Until recently, research investigating the relationship between cognitive consistency and attitudes focused primarily on explicit attitude measures toward a given object, which is evaluated by self-reported survey. With the recent development of implicit attitude measures (Fazio & Olson, 2003), research have become increasingly interested in the dynamics of cognitive consistency at the automatic level. The application of implicit attitude measures to investigating consistency phenomena is expected to improve our understanding of both implicit measures (Greenwald, Banaji, Rudman, Farnham, Nosek, & Mellott, 2002), and cognitive consistency in general (Gawronski & Strack, 2004).

More specifically, in regard to implicit measures of attitudes, it is most widely measured depending on reaction (or response) time measurement (Wittenbrink & Schwarz, 2007, p 4). The measures take advantage of the primary reliable observation

that is subsequent responses to related stimuli in multiple features that each implies a different response (Wittenbrink & Schwarz, 2007). Namely, the measures of reaction time are to identify the differences of implicit attitudes between two objects in psychological perspectives. As a result, the use of reaction time measurement is a critical issue in examining and predicting individual's behaviors. Despite the fact that attitudes have been a major issue in social psychology (Allport, 1935), some recent studies have revealed that people are sometimes unable or unwilling to reveal their feelings and attitudes. In related veins, a substantial amount of studies argue that it is theoretically impossible for a self-reported measurement of attitude to overcome such a significant drawback that an attitude to be measured may be non-measurable due to respondents' unwillingness or inability to express their true feelings (Karpinski & Hilton, 2001). This difficulty is increasingly calling on the use of alternative measures, which is supposed to be immune to the limitation of explicit measures (i.e., self-reported survey) in accessing attitudes (Wittenbrink & Schwarz, 2007).

Recent advances in social-psychology research on attitude measurement has alternative techniques for anticipating problems in approaching attitudes toward socially sensitive issues in competitive environment or topics that are irrelevant to individuals' everyday lives. These new measures are called implicit attitude measures (Greenwald, McGhee, & Schwartz, 1998; Nosek, Greenwald, & Banaji, 2005), in contrast to traditional explicit attitude measures (self-reported survey). These "implicit attitudes" are thought to shape peoples' automatic reactions to attitude objects and to thereby shape their subsequent interactions with them (Nosek et al., 2005). With the

recognition, this research explores the implicit measures of attitudes in tourism and hospitality fields by examining individuals' attitudes toward two Asian foods such as Chinese food and Japanese food. Consequently, the primary focus of this study is to apply the IAT of new techniques (Implicit Association Test (IAT)) to examine the differences of explicit and implicit attitude measures between the two Asian foods (i.e., Chinese food and Japanese food) in the food decision-making process.

1.2 Research Questions

Does the mean differ of between explicit attitudes (i.e., self-report survey) and implicit attitudes (i.e., reaction time (msec)) in two Asian foods (Chinese food and Japanese food)? What determinants (i.e., perceived attributes of Asian foods) influence explicit and implicit attitudes? Do interactions between the types of two Asian foods (Chinese food and Japanese food) and perceived food attributes (i.e., high and low) exist?

1.3 Purpose of Study

This study aims to examine the differences of perceived food attributes (PFAs) between Chinese food and Japanese food in Caucasians, and the differences of explicit attitude (i.e., self reported survey) and implicit attitude (i.e., reaction time) in evaluating perception on Asian foods (Chinese food and Japanese food). This study also examines

the influential factors on explicit and implicit attitudes in terms of PFAs. Furthermore, the interaction effects between PFAs (high vs. low) and the types of Asian foods (I.e., Chinese food vs. Japanese food) on explicit and implicit attitudes are examined within the context of the hospitality and tourism setting, as well as the correlations among salient factors in this study are examined. Understanding the results of this study will allow for theoretical and practical implications in the tourism and hospitality field.

1) Describe subjects' demographic information (i.e., gender, race, and grade level) and personal characteristics (handedness, the most preferred Asian food, frequency of visit to Asian restaurants, etc.)

2) Examine the differences of perceived attributes between the two Asian foods (Chinese food and Japanese food).

3) Identify individual's attitudes toward two Asian foods (Chinese and Japanese foods) applying both explicit and implicit measures

4) Compare the results of the explicit and implicit measures;

5) Determine the antecedent factors on two measures of attitudes (i.e., explicit and implicit attitudes);

6) Examine if there are correlations among perceived attributes, implicit/explicit attitudes, and food intentions of two Asian foods;

7) Identify if there are interactions between two Asian foods and perceived food attributes on explicit and implicit attitudes;

8) Describe further implications for the measurement of tourism and hospitality study.

1.4 Research Model and Hypotheses

The hypotheses were developed based on the review of literature regarding research of perceived attributes, implicit and explicit attitudes on Asian foods, intentions on Asian foods, and other studies that focused on reaction time, ambivalence, and Implicit Association Test (IAT). Perceived attributes of Asian foods consisting of four dimensions are employed as the dependent variable to determine the salient factors on explicit and implicit attitudes in this study. The following hypotheses were evaluated:

H1. There will be mean differences of perceived food attributes between Chinese food and Japanese food.

H2. There will be mean differences among explicit and implicit attitudes between Chinese food and Japanese food.

H2.1 There will be mean differences among explicit attitudes between the two Asian foods (i.e., Chinese food and Japanese food)

H2.2 There will be mean differences among implicit attitudes between the two Asian foods (i.e., Chinese food and Japanese food)

H3. There will be mean differences of intentions between Chinese food and Japanese food.

H3.1 There will be mean differences of intention to eat Asian foods in terms of Chinese food and Japanese food.

H3.2 There will be mean differences of intention to visit Asian destinations in terms of China and Japan.

H4. PFAs have a positive impact on explicit and implicit attitudes

H4.1 PFAs have a positive impact on explicit attitudes

H4.2 PFAs have a positive impact on implicit attitudes

H5. There will be correlations among perceived food attributes (PFAs), explicit attitude (EA), implicit attitude (IA), intention to eat Asian foods (IEAF), and intention to visit destination to eat Asian foods (IVDEAF) in each Asian food (i.e., Chinese food and Japanese food).

H5.1.1 PFAs will be positively related to EA in Chinese food

H5.1.2 PFAs will be positively related to EA in Japanese food

H5.2.1 PFAs will be negatively related to IA in Chinese food

H5.2.2 PFAs will be negatively related to IA in Japanese food

H5.3.1 PFAs will be positively related to IEAF in Chinese food

H5.3.2 PFAs will be positively related to IEAF in Japanese food

H5.4.1 PFAs will be positively related to IVDEAF in Chinese food

H5.4.2 PFAs will be positively related to IVDEAF in Japanese food

H5.5.1 EA will be negatively related to IA in Chinese food

H5.5.2 EA will be negatively related to IA in Japanese food

H5.6.1 EA will be positively related to IEAF in Chinese food

H5.6.2 EA will be positively related to IEAF in Japanese food

H5.7.1 EA will be positively related to IVDEAF in Chinese food

H5.7.2 EA will be positively related to IVDEAF in Japanese food

H6. There will be interactions between PFAs and the types of Asian foods on explicit and implicit attitudes.

H6.1 There will be interactions between PFAs and the types of Asian foods on explicit attitude.

H6.2 There will be interactions between PFAs and the types of Asian foods on implicit attitude.

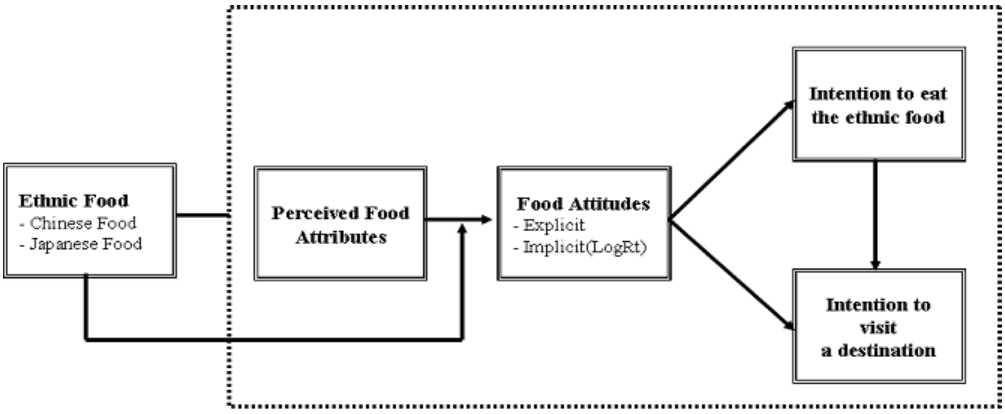


Figure 1. The Proposed Model of this Study

1.5 The Conceptualized Definition of Terms

This study mentioned perceived food attributes (PFA), explicit attitude, implicit attitude, and intentions on Asian foods. The perception of 23 items of PFAs is independent variables for explicit and implicit attitudes in the hypothesis. The PFAs refer to the characteristics of foods in Asian restaurants, consisting of various positive attributes in regard with Asian foods in this study based on Lewis's (1983) definition regarding attributes, which is defined as the product features that differ from those of competitors' products. It also utilizes determinant on people's attitudes. In terms of the explicit attitude, it can be defined by people's external feeling and thoughts on objects in the measurement by self-report survey based on the features of attitudes, indicating a set of feelings, beliefs, and behaviors dispositions directed towards specific persons, ideas, and objects (Hillriegel, Slocum, & Woodman, 1989). In contrast, implicit attitude refers to people's internal feelings and reaction. As new alternative measures of

attitude, implicit attitude can be measured by reaction time in psychological perspectives. Furthermore, intention to visit Asian restaurants and destinations to eat foods can be employed for potential succeeding variables of attitudes. Intention to visit restaurants and/or destination to eat foods is defined as feelings and willingness after an experience about each Asian food.

1.6 Significance of the Research

This study focuses on an application of the new techniques in order to examine people's mindset and feelings from psychological perspectives. Many studies in social psychology have attempted to identify the stereotype and prejudice on sensitive issues regarding racism (Olson & Fazio, 2003; Cunningham, Preacher, & Banaji, 2001; Dasgupta, McGhee, Greenwald, & Banaji, 2000), gender (Dasgupta & Asgari, 2004), sexuality (Bamse, Seise, & Zerbes, 2001), and etc. in the cognitive process. As a result, many have found people's real feelings and thoughts on objects through in the research by implementing IAT. In this sense, the theoretical and practical implications of the study will be beneficial to the tourism and hospitality industry, more specifically in promoting destination and/or ethnic food restaurants. It is shown that the results of the IAT can uncover consumers' attitudes toward foods that traditional measures can not detect. This research is anticipated to contribute to the realm of hospitality field by proposing an alternative approach to measure consumer's food attitudes through an experimental

design. Our elaboration on the literature and the experimental study permits several conclusions and recommendations.

In the world, healthy food has become an emerging trend in research due to people's interests in improving their health. A substantial study in regard with food-related attributes provides very critical implications for industrial practitioners in a successful operating system within the context of the restaurant settings, in particular focusing on Asian foods (Jang, Ha, & Silkes, 2009). In terms of examining the determinants on implicit and explicit attitudes in this study, industrial practitioners in the hospitality and tourism industry can understand customers' preferences and awareness on Asian foods. Thus, they will be able to apply the understanding of results to marketing strategies in predicting customers' decision-making of food choices. Understanding the prominent factors toward explicit and implicit attitudes can be employed to be specific marketing tools in promoting Asian food restaurants. This study suggests basic information pertinent to marketing strategies for positioning and product development for Asian food restaurants. This study is unique in the sense that it applies both explicit and implicit measures of attitudes in identifying differences of both measures, and in predicting the determinants on both the measures of attitudes in making choices of Asian foods.

1.7 Outline of Subsequent Chapters

The following chapters include the Literature Review, Methodology, Results, and Discussion. In the Literature Review, Chapter 2, previous studies and literature on

perceived attributes of Asian foods, implicit and explicit attitudes, implicit association test (IAT) and the salient factors toward implicit and explicit attitudes in this study are reviewed. The research methodology employed to complete the study is addressed in detail in Chapter 3. The results and data analysis of the study are presented and explained in Chapter 4. Chapter 5 includes a brief summary of the study and results, along with implications and suggestions for further research.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter reviews the literature on the perceived food attributes (PFAs), measures of explicit and implicit attitudes, and intentions to visit restaurants and/or certain destinations to eat Asian foods, along with a brief discussion of relevant issues and theories in the research framework. The influential factors on explicit attitude and implicit attitudes are also discussed.

2.2 Consumption of Asian Food

Asian foods have become part of the mainstream food in the U.S. (Kruse, 2004). Within a society, food has the ability of activity as a marketing tool in bridging people, showing social status, and expressing sentiments, including laughter and joy (Bessiere, 2001). In recent research, the food consumption is one of the most critical issues in marketing perspectives, as well as in promoting ethnic foods (Hamlett, Bailey, Alexander & Shaw, 2008) and other cultures (Mitchell & Hall, 2003; Bessiere, 2001). Within the behavioral complexity in consumer food choice, the understanding of the consumer approaches to food consumption (shopping) has become presumably more complete in recent research of food consumption (Hamlett et al., 2008). Specifically, Asian Food is a well-known aspect of Asian American culture. According to a substantial study that focused on the food attributes in the level of consumer's satisfaction among Asian foods

(Jang et al., 2009), it was observed that consumers' satisfaction on each ethnic food such as Japanese, Chinese, Thai, Korean food and etc. varies depending on different food attributes with high performance of foods in successful marketing. The results are consistent with other social and marketing research (Cui, 1997; Gren, 1999), indicating the positive views of ethnicity as a category of identity, and strongly influencing consumption decisions and consumers' behaviors.

In terms of the features of Asian foods, Chinese cuisine is very liberal and extensive in and is considered to be richest and most diverse culinary cuisine in the world (Halvorsen, 1999). Specifically, the features of Chinese food might be diverse, abundant, rich, spicy, oily and seasonal (Gu, Lee & Lee. 2006; Sen, 2004), revealing the attractiveness and popularity of Chinese food in Americans is because Americans prefer abundant and rich foods in food choice. On the other hand, the features of Japanese food include healthy ingredients (i.e., vegetables, mushrooms, beans, and fish), natural flavor, type of art (Barer-Stein, 1999), and beautiful food decorations which look delicious. This indicates that Japanese food would be unique, delicious, beautiful, colorful, and tasty as compared to other Asian foods.

2.3 Perceived Attributes of Foods

Food attributes has been regarded as an important factor in predicting consumers' perceptions in food choices decision complexity. According to Lewis (1983) suggestion, food Attributes are referred as to the product features in a distinction as compared to competitors' products. He has suggested distinctive and specific food

attributes regarding differentiated marketing strategies from other foods, involving various food attributes such as taste, healthiness, social status and cost. In a recent study of food attributes, the satisfaction levels of ethnic foods varies depending on diverse food attributes (i.e., taste, fresh, colorful, unique, healthy) (Jang et al., 2009). In related veins, in regard to the effectiveness of food attributes on consumer behavior, it was observed that oyster consumption was mainly influenced by five food attributes, including taste, nutritional value, freshness, cost and safety (Lin, 1991). Furthermore, health-related factors and visual differences were significant antecedents on satisfaction for the purchase of branded beef (Menkaus et al., 1988) and important characteristics or attributes can be classified into six categories: (1) energy content, (2) nutrient content/health properties, (3) taste, (4) status/prestige properties, (5) environmental, political, and ethical properties, (6) time/convenience attributes (Fischer, 2005; Mitchell, 2004).

In the hospitality and tourism industry, most of the attribute research has mainly attempted to examine the effects of destination image in developing marketing strategies (Gartner, 1989). That is, a study of the consumers' perception on food attributes is significantly important to define the most efficient food attributes in food image formation. With understanding the perception of food attributes in Asian foods, some studies focusing on food attributes suggested the importance of perceived food attributes (i.e., taste), perceived value (i.e., price and portion size), and perceived nutrition in food-choice decision making process (Glanz, Basil, Maibach, Goldberg, & Snyder, 1998). In similar veins, a significant study in evaluating six types of Asian foods

employed 20 items of perceived attitudes of Asian foods, including tasty, edible, quality, fresh, digestible, clean, aromatic, healthy, attractive, colorful, inexpensive, unique, traditional, neat, spicy, light, exotic, etc. in understanding the common and unique characteristics of the six Asian food categories. Furthermore, in terms of perception on food attributes, it is significantly observed that customer food preferences are based on nine food attributes: search (price, color, and appeal), experience (taste, spiciness, and convenience), and credence attributes (leanness, safety, and healthiness) (Verbeke & Lopez, 2005). This reveals that food attributes presumably consist of several dimensions, for example food attractiveness, taste, health, and popularity. With regards to food attributes in the hospitality and tourism industry, there is little literature in applying food attributes to examine the consumers' perception on Asian foods. In spite of the fact that there is the lack of literature in examining the consumers' perception on Asian foods using perceived food attributes, it is possible to apply perceived food attributes based on previous research of food attributes.

2.4 Significant Food Attributes in Attitude Formation

Attitude formation plays a significant role on food choices in the decision making process, which is regarded as a fundamental human behavior in choosing options between objects (Fellows, 2006). It is anticipated that people would hesitate on food choices between options in decision making process due to the ambivalence. Within the complexity of food choice in food restaurants, it is expected that the most influential food-related values are involved with health (physical well-being), taste (sensory

perceptions), cost (monetary considerations), convenience (time and effort), and managing relationships (inter- personal interactions) (Connors, Bisogni, Sobal, & Devine, 2001). One study of food-choices proposed general categories of food meaning, including: pleasure, health, tradition and convenience (Rappoport, Peters, Huff-Corzine & Downey, 1992), indicating managing values in personal food systems across various eating situations. Similarly, Jang et al. (2009) pointed out the importance of the food related values in a confliction among various food choices. They especially focused on broadening the understanding of people's perception on values in personal food systems, as well as solutions of value conflicts. People in post-industrial societies are faced with many food products and diverse eating situations that can make food-choice decision complexity (Connors et al., 2001). Thus, understanding the roles of preferred attitude toward the certain types of food in food-choice decision making process has important implications for theoretical conceptualizations of the attitude formation process.

Based upon the literature regarding the features of consumption of Asian foods, perceived attributes of foods, significant food attributes in attitude formation, this study suggests the following model (Figure 2).

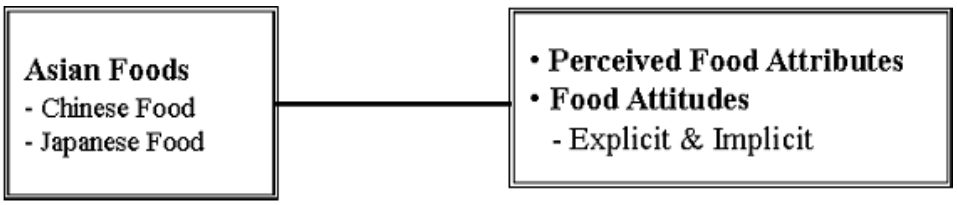


Figure 2. A Model of Differences of Perceived Food Attributes and Food Attitudes among Asian Foods

2.5 Antecedent Factors on Food Attitudes

In food marketing research, the effects of food marketing on consumers' preferences are significant in food choice behavior (Chernin, 2008). One of the significant reports (survey) in a study of consumer behaviors has employed preferences to measure food attitudes on behavior (Devine, Lloyd & Gray, 2006). This means that attitude can be an influential factor on behavior in food choice process. In this sense, it is necessary to examine the determinants of food attitudes in various choices of food attributes. According to Devine et al. (2006) in their final report, food attributes, such as diet and nutrition had Impacts on the change of food attitudes and behaviour. It is also argued that quality and price of food would be significantly considered when purchasing foods in the change of food attitudes.

With regards to consumption choices, consumers consider certain attributes that foods possess in food purchase. In other words, food attributes have great influence on consumption choices along with food attitudes in the sense that customers have differentiated perception on each product attribute (Keller, 2003; Kotler, 1988). With understanding of food consumption choices and food attitudes, it can be expected that consumers are concerned about nutritional content and food safety (Mitchell, 2004), within significantly influences consumer behavior (Knight, Worosz & Todd., 2007; Henson, Majowicz, Masakure, Sockett, Jones, Hart, Carr & Knowles, 2006; Kim, Nayga & Capps, 2001). Most consumer surveys regarding food-related issues indicated taste and healthy-related attributes (Chernin, 2008) as a dominant factor in food choice,

Expensive foods, origin-specific foods, and especially dining out in expensive restaurants convey the characteristics of status and prestige that consumers want to acquire through food consumption (Senauer, 2001). Considering the positive relationship between all food attributes and consumers' perception and behavior, it seems that food attributes would have impacts on food attitudes, such as explicit and implicit attitudes in decision-making systems.

With understanding of the literature in regard to antecedent factors on food attitudes, this study suggests the following model (Figure 3).

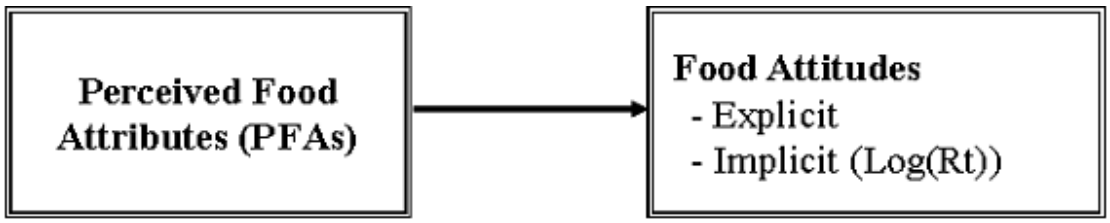


Figure 3. A Model of Perceived Food Attributes on Food Attitudes

2.6 The Relationship among Salient Concepts

Food marketing is considered a critical issue in examining food preferences and eating behavior (Hastings, Stead, McDermott, Forsyth, MacKintosh, Rayner, Godfrey, Caraher & Angus, 2003; Livingstone & Helsper, 2004). In spite of the importance of eating behavior (e.g., Auty & Lewis, 2004) in food marketing strategies, there is little research focusing on food behavior due to the limitations that does not examine the real behavior in food-related research. An attitude study in predicting behavior found

that attitudes were the most important predictor of choice intentions, control beliefs, knowledge and availability (Backman, Haddad, & Lee, 2002). In particular, the manner of measuring implicit and explicit attitudes (i.e., automatic and deliberative measures) matches the situations in predicting behavior (Vargas, 2004). Implicit attitudes are postulated to guide behavior in spontaneous situations when people are not engaged in much thought, whereas explicit attitudes are said to guide behavior when people are being reflective (Dovidio, Kawakami, Johnson, Johnson, & Howard, 1997; Davidio, Kawakami Smoak, & Gaertner, 2009). The research that examined the relationship between explicit-implicit attitudes proposed positive correlations of them, indicating that participants who explicitly reported preferring A to B tended to show a similar preference implicitly (Nosek, 2007). In a marketing study, attitudes and subjective norms measured before tasting were poor predictors of purchase intents after tasting, which imply the importance of taste and direct product experience in food choice. This indicates that attitudes are significantly related with food intentions and knowledge in food-choice process, as well in a destination choice (Quan & Wang , 2004). In terms of a psychological model based on attitude prediction for context-aware services, furthermore, the psychological research suggested that psychographic and demographic contexts were crucial for analyzing the user's potential needs. Thus, attitude can be employed to be a significant determinant of user intention for use and even actual usage of a service or purchase of a product (Kwon, 2010).

According to Devine, Lloyd and Gray (2006), people have different perceptions, experiences and knowledge on foods. Specifically, potential consumers in the food-

choice process rely heavily on prior attitude and knowledge in both positive and negative perspectives. Thus, personal attitude (knowledge) might be one of the critical predictors of food-choice intentions and behaviors in the decision making (Fife-Schaw & Rowe, 2006), reveling that knowledge is an influential factor toward individual's perception in decision-making process. In terms of the preference on foods, the attitude model of the theory of reasoned action (TRA) has been applied mainly to predicting the choice of familiar foods (Arvola, Lähteenmäki, & Tuorila, 1999). In social psychology, liking (preference) is measured by emotional reaction, which implies the positive impact to eating foods in eating behavior and enhancements from hedonic experience (Smith & Berridge, 2005). Consequently, the results indicated that the change of attitudes on foods varies depending on food familiarity.

Considering the literature regarding the relationship among salient concepts, this study suggests the following model (Figure 4).

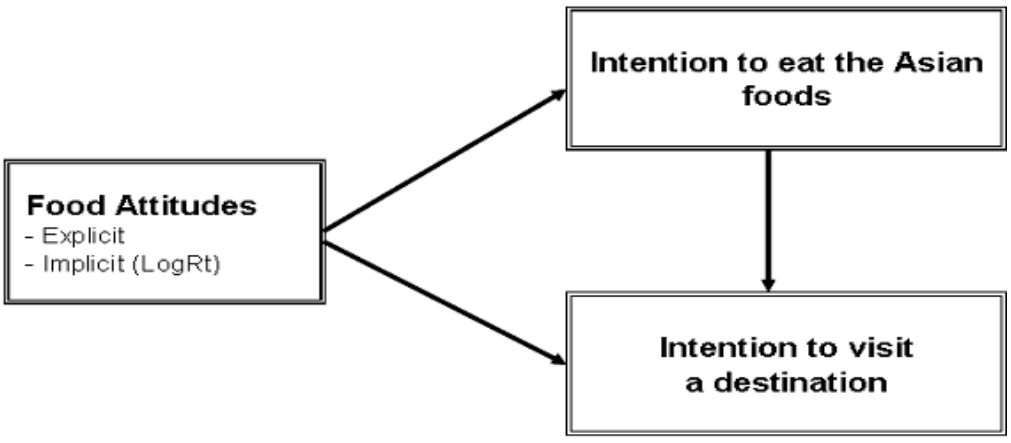


Figure 4. A Model of the Relationship among Salient Concepts

2.7 Psychological Approaches to Attitudes

2.7.1 Cognitive consistence

In social psychology, cognitive consistence has been assumed to be of crucial importance in research on attitudes (Petty et al. 2009) as a significant concept to examine people's minds and true feelings since the early 1950s (Petty, Fazio, & Brinol, 2009). Despite some fundamental differences between different theories of cognitive consistency (Abelson, Aronson, McGuire, Newcomb, Rosenberg, & Tannenbaum, 1968), the primary assumption that cognitive inconsistency causes aversive feelings indicates that cognitive consistency has a powerful influence on judgments, decisions, and behavior. In recent decades, research investigating the impact of cognitive consistency on attitudes has primarily employed explicit attitude measures (Petty et al., 2009). In regard to the explicit attitude-related studies, participants were simply asked to report their attitude toward a given object. In this sense, new paradigm should be utilized to examine the consistent impacts in people's intrinsic feelings and thoughts on certain objects. With the recent development of implicit attitude measures (Fazio & Olson, 2003), thus, researches have become increasingly interested in the dynamics of cognitive consistency at the automatic level. The application of implicit attitude measures is to investigate the consistency phenomena, and is expected to improve our understanding of both implicit measures (e.g., Greenwald et al., 2002), and cognitive consistency in general (Gawronski & Strack, 2004) based upon the reaction times.

2.7.2 Measure of Reaction Times

There is substantial amount of research regarding reaction time in measuring intrinsic feelings and thoughts in psychological perspectives (Wittenbrink & Schwarz, 2007). Implicit measures of attitudes that are most widely used depend on reaction (or response) time measurement. Several types of implicit measures have been developed, including reaction-time-based tasks such as the affective priming task (Fazio, Jackson, Dunton, & Williams, 1995), the implicit Association Test (IAT; Greenwald, McGhee, & Schwartz, 1998), and the (extrinsic) affective Simon task (De Houwer, 2003; De Houwer & Eelen,1998). In terms of the features in using psychology research, the reaction time-based measure takes advantage of one of two reliable observations; one is that the observation that exposure to a stimulus facilitates subsequent responses to related stimuli and second is that the observation that a stimulus is responded to more slowly when it contains multiple features that each imply a different response (Wittenbrink & Schwarz, 2007).

2.7.3 Ambivalence

The theoretical value of the ambivalence construct lies in its novel definition of attitudes in social psychology. Ambivalence has been treated mostly as a distinct aspect of attitude strength; both negative and positive (van der Pligt et al., 2000). In many empirical literature, the functions of ambivalence has been utilized as influential concepts on attitude-behavior consistency (Armitage 2003; Conner et al., 2002; Sparks

et al., 2004), attitude pliability (Armitage & Conner 2000), and decision making (H¨anze, 2001).

With the crucial importance of ambivalence in research of attitudes, ambivalence has been accessed by two concepts. First concept of ambivalent is explicit ambivalence; it has data supporting the idea that attitudes can be based on separate positive and negative components (Cacippo & Berntson, 1994; Thompson, Zanna, & Griffin, 1995). In terms of the notion of explicit ambivalence on attitudes, it should be determined by its strong positive and negative associations as compared to neutral attitudes, positive attitudes, and negative attitudes (de Liver, van der Pligt, & Wigboldus, 2007). With the understanding of the concept of explicit ambivalence, it appears that when people have both positive and negative reactions to an attitude object, they typically recognize that their attitudes are ambivalent or mixed (Petty et al., 2009). In regard to the implicit ambivalence, the concept has been employed in a more complicated perspective compared with the explicit ambivalence. An example of implicit ambivalence is a person who has eliminated ambivalence at the explicit level might still be ambivalent at the implicit level (Petty et al., 2009). Thus, implicit ambivalence occurs when people have both positive and negative associations to an attitude object, but one of these is not endorsed (Petty, Tormala, Brñol, & Jarvis, 2006). That is, the implicit ambivalence stems from the unrecognized conflict between the rejected old attitude and the endorsed new attitude. People may well recognize the discrepancy between their old and new attitudes (e.g., “I used to eat Asian food, but now I do not”), but it

may not recognize any conscious conflict or doubt with respect to the attitude object (Petty et al., 2009).

2.8 Measurement of attitudes

Attitudes have been described as hypothetical constructs at times, and at other times as real (Krosnick, Judd, & Wittenbrink, 2005). Attitudes are commonly defined as people's evaluations of a wide variety of objects, issues, and people, including the self, as well as It has been assumed to be conscious and unconscious (e.g., see Greenwald & Banaji, 1995), and referred to behavioral, cognitive, and/or emotional reactions (Zanna & Rempel, 1988).In terms of attitude models, there are various significant attitude models in social psychology, including single attitude model, dual attitudes model, meta-cognitive model (Petty, Briñol, & DeMarree, 2007). Among these attitude models, dual attitudes model can take on different values in examining explicit and implicit attitudes in this study.

Social psychologists more recently argue that people can hold separate explicit (conscious, deliberative) and implicit (unconscious, automatic) attitudes (Greenwald & Banaji, 1995; Wilson, Lindsey, & Schooler, 2000) in identifying different values on an object. Regarding this, implicit and explicit attitudes are viewed as distinct mental entities that are stored separately in different areas of the brain (DeCoster, Banner, Smith, & Semin, 2006). Thus, a person might have a deliberative (explicit) attitude toward an object of one valence but an automatic (implicit) attitude of a different valence. Implicit attitudes are assumed to stem from associative processes such as

evaluative conditioning, whereas explicit attitudes stem from propositional processes such as thinking about message arguments (Rydell, McConnell, Mackie, & Strain, 2006). When considering all of these assumptions together, the dual attitudes framework suggests that attitudes evaluated with automatic (implicit) and deliberative (explicit) measures are quite different. Dual attitude model is employed to examine the differences between explicit and implicit attitudes on objects in this study (see Figure 5)

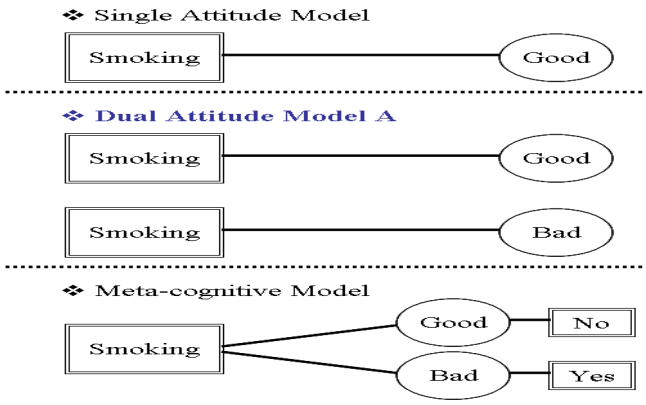


Figure 5. Structural Representation of the Attitude Models.

Note: Depiction of the attitude models from the perspective of the Meta-Cognitive Model (figure form Petty, Briñol, & DeMarree, 2007)

2.8.1 Explicit Measures of Attitudes

The explicit measures of attitudes are regarded as a significant issue in terms of measuring psychological feelings and consumers' behavior in the substantial psychology and marketing research. Understanding consumers' attitudes toward a certain brand has been one of the primary concerns in tourism and hospitality research. In regard to hospitality and tourism field, it is also not surprising that attitudes have been one of the

critical factors in evaluating brand equity (Gardner, 1985; Park, Jaworski, & Maclnnis, 1986). A majority of studies on tourist attitudes have utilized explicit measures of attitudes such as self-report survey methods (e.g, Likert-type scale), due to important psychometric criteria such as usefulness and efficiency (Brunel, Tietje, & Greenwald, 2004; Mischel, 1968). In regard to the limitations of explicit measures, however, there are several notable explanations: (1) people who have never been exposed to a certain topic are less likely to have a prior attitude, (2) prior formation of attitudes would not be easily accessible to the individual (Fazio, 1986), and (3) individuals tend to be unwilling to consciously admit, even to themselves, that they might have negative attitudes toward a certain object (LaPiere, 1934). For these reasons, an alternative approach to overcome the limited explicit measures of attitudes should exist and be evaluated.

2.8.2 Implicit Attitudes Measures

During the past decade, many new instruments that measure attitudes have been developed, several of which received the label “implicit measure”. The definition of implicit attitudes is “actions or judgments that are under the control of automatically activated evaluation, which is without the performer's awareness of that causation” (Greenwald & Banaji 1995, pp. 6-8). Implicit measures of attitude are designed to reflect the automatic impact of attitudes in order to not directly draw on attitude. In terms of the unique advantages of implicit measures, it can provide a special insight into the effects of the invisible attitude on the visible behavior (De Houwer, 2006). Regarding

this, social psychology researchers have suggested a variety of paradigms based on reaction-time including affective priming task (Fazio, Jackson, Dunton, & Williams 1995), the (extrinsic) affective Simon task (De Houwer, 2003), and the Implicit Association Test (IAT) (Greenwald, McGhee, & Schwartz, 1998) in developing a wide range of disciplines (De Houwer & Moors, 2007). Considering the unique insight into the effects of the implicit attitude, the applications of implicit attitude would lead to new paradigms in the tourism and hospitality research.

2.9 Implicit Association Test (IAT)

Initially, the IAT test was developed by Greenwald et al. (1998); the introduction of the IAT test shows a respondent's implicit attitude toward objects identified in terms of "willingness and ability" issues through the strength of mental associations between a target concept and its evaluative attribute. In regard to the response latencies, the strength of association in sorting adjectives into two combined categories represented: "the target concept or the consistent evaluative attribute" versus "the target concept or the inconsistent evaluative attribute". As a result, substantial research distinguishes three critical features of the IAT into implicitness, difference, and association (Haines & Sumner, 2006). In relation with IAT's features, (1) implicitness refers to the IAT's ability to tap on respondents' automatic processes rather than their conscious self-report, (2) difference refers to the bias to be detected in the strength of association between two target concepts and their two valences, respectively, and (3) association refers to the central construct of the IAT, that is, the variable strength of the mental connection

between a target concept and its evaluative attribute, which presumably sub-serve the formation of human attitude. Furthermore, compared to explicit measures of attitude, the IAT displays some meaningful qualities, such as (a) revealing more bias than the self-reported attitudes does, (b) weak correlation to the explicit attitude, and (c) yielding large effect sizes (i.e., $d > 1.0$).

As one of the alternative approaches to attitudes, implicit measures can be effectively applicable for a brand evaluation in that the IAT paradigm have achieved increasing recognition (Sheldon, King, Houser-Marko, Osbaldiston & Gunz, 2007). Due to the advantages of IAT instrument, it has been employed in areas of social psychology research measuring a series of social psychological variables such as implicit attitude (Hong, Dengfeng, & Ye, 2006; Karpinski & Hilton, 2001), stereotypes (Puertas, Rodriguez-Bailon, & Moya, 2002), self-esteem (i.e., Greenwald & Farnham, 2000) and self-concept (Asendorpf, Banse, & Mucke 2002). In regard to the IAT effects, it is shown to be immune to a series of factors such as the number of items used, the inter-trial interval, or handedness (Greenwald et al., 1998). Meanwhile, supporting evidence is steadily accumulating for the construct validity (Bosson, Swann, & Pennebaker, 2000; Brunel et al., 2004; Greenwald et al., 2002; Karpinski, 2004; Pinter & Greenwald, 2005), internal validity (Brunel et al. 2004; Greenwald et al., 1998; Nosek, Ottaway, Hayden & Oakes, 2001) and statistical conclusion validity (Blanton & Jaccard, 2006; Greenwald, Nosek, & Sriram, 2006; Greenwald, Rudman, Nosek, & Zayas, 2006) of the IAT in literature. Table 1 shows the procedure of Sequential Blocks of the IAT in this study.

Table 1.

The Understanding of Sequential Blocks of the IAT

Sequence	**1**	**2**	**3**	**4**	**5**
Task Description	Initial Target-Concept Discrimination	Evaluative Attribute Discrimination	Initial Combined Task	Reversed Target-Concept Discrimination	Reversed Combined Task
Task instruction	*"CF" vs. "JF"*	*"Appealing" "Unappealing"*	* "CF Or Unappealing" "JF OR Appealing"*	*"JF" vs. "CF"*	*"JF OR Unappealing" "CF OR Appealing"*
Stimulus photos	*CFRP (e.g., Dumpling), JFRP (e.g., Sushi) *	*PA (e.g., Tasty) vs. NA (e.g., Stingy)*	* CFRP (e.g., Dumpling) or NA (e.g., Stingy) OR JFRP (e.g., Sushi) or PA (e.g., Tasty) *	*JFRTP (e.g., Dumpling), CFRTP (e.g., Sushi) *	* JFRP (e.g., Sushi) or NA (e.g., Stingy) OR CFRP (e.g., Dumpling) or PA (e.g., Tasty) *

*Note: 1) CF= Chinese Food; JF= Japanese Food; CFRP= Chinese food related photos; JFRP= Japanese food related photos. 2) On the "task instruction" row, the phrase within the quotation marks defines a category for discrimination. With an asterisk on the left, the category name would appear on the upper left corner of the display. Similarly, with an asterisk on the right, the category name would be on the upper right corner of the display.; 3) On the "stimulus examples" row, a stimulus with an asterisk on the left suggests that the correct response to this stimulus is to press the left response key (the Q key); similarly, a stimulus with an asterisk on the right suggests that the correct response is to press the right response key (ithe P key)

2.10 Summary

This chapter presents the literature on the consumption of Asian food, perceived attributes of foods, influential food attributes in attitude formation, antecedent factors on food attitudes, the relationship among salient concepts, psychological approaches to attitudes, the measures of attitudes (i.e., explicit and implicit attitudes), and implicit association test (IAT). The literature review focused on eight main sections:

2.2 The consumption of Asian food

2.3 Perceived attributes of foods

2.4 Influential food attributes in attitude formation

2.5 Antecedent factors on food attitudes

2.6 The relationship among salient concepts

2.7 Psychological approaches to attitudes

2.8 The measures of attitudes (i.e., explicit and implicit attitudes)

2.9 Implicit association test (IAT)

CHAPTER 3

METHODOLOGY

3.1 Introduction

This chapter discusses the methodology used to examine the hypotheses developed in the proceeding chapter. The first section of this chapter addresses the research design including subject population, selection of characteristics for stimuli, and sample size. The second section of this chapter presents the pilot test of measurement for perceived food attributes. In the third, forth, and fifth sections, subject population, selection of characteristics for stimuli, and sample size are respectively presented. The sixth section presents Pilot test of measurement for perceived food attributes. The seventh section of this chapter presents the research Instrument. The procedures of implicit association test (IAT) are presented. The eighth section presents the data collection procedures. Finally, the ninth section discusses data analysis procedures.

3.2 Research Design

This study employed both an experimental research design and a survey method. An experimental research design is commonly utilized for social psychology. Thus, the experimental research design was developed based upon the psychological study method, and it is implemented in a room equipped with 15-inch LCD screens. Before

starting the actual experiment, pilot test was implemented in order to check the reliability and validity of the concepts used in this study.

This study discusses the differences of salient concepts (i.e., perceived food attributes (PFAs), explicit an implicit attitudes, intentions on foods), and addresses the influence of PTAs on explicit and implicit attitudes and moderating impact of the Asian food types (Chinese food vs. Japanese food) on the differences between PFAs (high PFA vs. low PFA) and explicit/implicit attitudes. In regard to the PFAs as the independent factors, specifically, PFAs were coded as the categorically “high (1)” and “low (0)” levels on the basis of the summated mean values of each dimension.

3.3 Subject Population

A total of 81 participants were recruited in this study. As participants in experimental design, 39 American (all Caucasian) undergraduate and graduate students were recruited from a university in the Mid-west region of the U.S. to serve as participants in both the experiment and the survey. They were native English speakers and participated in the study in exchange for research credit for a destination management course. In addition, 42 participants who are voluntarily participated in the survey were recruited from the same university mentioned above. They were also undergraduate and graduate students in the hospitality and English-related major.

3.4 Selection of Characteristics for Stimuli

In regard to the IAT classification tasks, this study consists of five classification tasks, which used 20 adjectives and 20 image stimuli, including 10 names and 10 accompanying pictures for characteristics of Chinese Food (i.e., dumpling, Chinese beef, etc.) and Japanese Food (i.e., sushi, roll, etc.), respectively, 10 appealing adjectives (i.e., exotic, colorful, popular, unique, etc.) and 10 unappealing adjectives (i.e., Horrible, stingy, untasty, dirty, and etc.) (Table 2). The characteristics for either food were selected based on responses from a prior survey given to the same set of subjects before the experiment. The authors and an evaluation group judged that these characteristics are generally positive and well known to the subject population.

Table 2

Awareness on Japanese Food and Chinese Food

Stimuli photos[a]	**% of Awareness**[b]	**Usability**	**Food types**
Photo1	93%	Selection	Japanese Food
Photo2	33%	Deletion	Japanese Food
Photo3	47%	Deletion	Chinese Food
Photo4	96%	Selection	Japanese Food
Photo5	84%	Deletion	Chinese Food
Photo6	93%	Selection	Chinese Food
Photo7	98%	Selection	Japanese Food
Photo8	91%	Deletion	Japanese Food
Photo9	98%	Selection	Japanese Food
Photo10	100%	Selection	Chinese Food

Table 2 continue

Stimuli photos[a]	% of Awareness[b]	Usability	Food types
Photo11	100%	Selection	Chinese Food
Photo12	98%	Selection	Japanese Food
Photo13	100%	Selection	Chinese Food
Photo14	96%	Selection	Chinese Food
Photo15	36%	Deletion	Chinese Food
Photo16	96%	Selection	Japanese Food
Photo17	100%	Selection	Chinese Food
Photo18	98%	Selection	Japanese Food
Photo19	98%	Selection	Japanese Food
Photo20	76%	Deletion	Chinese Food
Photo21	40%	Deletion	Japanese Food
Photo22	44%	Deletion	Japanese Food
Photo23	82%	Deletion	Chinese Food
Photo24	100%	Selection	Chinese Food
Photo25	100%	Selection	Chinese Food
Photo26	76%	Deletion	Chinese Food
Photo27	100%	Selection	Japanese Food
Photo28	80%	Deletion	Japanese Food
Photo29	87%	Selection	Chinese Food
Photo30	98%	Selection	Japanese Food

[a]Photos were selected by a researcher and professionals in hospitality and tourism
[b]The percentage was calculated based upon the formula (Awareness of "Yes"/total N)

3.5 Pilot Test of Measurement for Perceived Food Attributes (PFAs)

All survey items used in this study should be reviewed to establish validity. Thus a panel of experts consisting of three scholars and graduate students was employed to evaluate the questionnaire. Face validity and content validity were achieved through the expert's knowledge in the hospitality and tourism industry, information search channels, and a statistical background. The experts reviewed and evaluated the questionnaire and made recommendations to improve clarity, understanding and to ensure that questions actually measured what was being asked. After the corrections were made, the questionnaire was then distributed to 54 undergraduate and 5 graduate students (see Table 3) in the Hotel and Restaurant Program to provide further feedback and recommendations, then, final revisions were completed.

Table 3

Results of Demographic Characteristics of Respondents

Characteristic		**Undergraduate students N(%)**	**Graduate students N(%)**
Gender	Female	39 (72.7)	3 (60.0)
	Male	15(27.8)	2 (40.0)
	Total	54(100)	5(100)

3.5.1 Results of the Pilot test in Developing PFAs

A total 30 PFAs-related items in Asian foods such as Chinese and Japanese food were used to examine the reliability in the pilot study. Results of reliability test showed the item-total correlation and Cronbach's Alpha value if Item Deleted of the PFAs (Table 4). The scale of PFAs is developed based on the prior PFA-related studies (Jang et al., 2009). On completing the reliability test, response to 23 items appears to be reliable in the sense that the internal consistency reliability coefficient (Cronbach's Alpha if Item Deleted) ranges from .857 to .882 and item-total correlation ranges from .341 to .631 (Hair, et. al, 1998).

Table 4 shows the results of a pretest of measurement development for perceived food attributes. The results of descriptive test for PFAs present mean values of tasty (6.17), edible (6.08), delicious (6.02), pleasing (5.79), cultural (5.55), colorful (5.45), popular (5.43), unique (5.43), abundant (5.25), fresh (5.19), authentic (5.11), attractive (5.11), digestible (5.11), convenience (5.09), aromatic (4.92), speedy (4.92), exotic (4.87), clean (4.40), nourishing (4.32), nutritious (4.26), healthy (4.25), neat (4.23) and dietetic (3.72).

Table 4

A Pretest of Measurement Development for Perceived Food Attributes

Items of food attributes	Mean	Standard deviation	Item-Total Correlation	Cronbach's Alpha if Item Deleted
Exotic	4.87	1.373	.341	.882
Abundant	5.25	1.285	.652	.874
Colorful	5.45	1.218	.459	.879
Aromatic	4.92	1.426	.363	.882
Popular	5.43	1.421	.470	.879
Nutritious	4.26	1.508	.579	.875
Dietetic	3.72	1.419	.417	.880
Healthy	4.25	1.440	.519	.877
Nourishing	4.32	1.123	.505	.878
Pleasing	5.79	1.081	.483	.879
Delicious	6.02	1.083	.456	.879
Tasty	6.17	.995	.352	.882
Edible	6.08	1.035	.409	.880
Unique	5.43	1.152	.399	.880
Cultural	5.55	1.338	.397	.881
Fresh	5.19	1.345	.631	.874
Authentic	5.11	1.296	.378	.881
Neat	4.23	1.368	.542	.877
Attractive	5.11	1.325	.531	.877
Clean	4.40	1.419	.417	.880
Speedy	4.92	1.238	.506	.878
Convenience	5.09	1.260	.514	.877
Digestible	5.11	1.219	.455	.879

N=53, Cronbach's Alpha = .895

3.5.2 The Deleted Items of PFAs through a Pilot Test

As a result of the pretest 30 items, 7 items (Spicy, Traditional, Inexpensive, Qualitative, Light, Smelly, and Comfortable) were eliminated due to the lack of accuracy and reliability (Table 5).

Table 5

The Deleted Items of PFAs through a Pilot Test

Concept	**Measurement items**	**Reasons**	**Total deleted items**
Perceived Food attributes	Spicy, Traditional, Inexpensive, Qualitative, Light, Smelly, and Comfortable	Deletion based upon the limitation of Item-Total Correlation and validity of the items	7 items

Note: 7 point likert scale where 7 points is strongly agree

3.6 Research Instrument

3.6.1 Survey Questionnaire

After completing evaluation for validity of questionnaire, the questionnaire was finally developed based on a review of related research studies including 23 items on perceived food attributes (Fischer, 2005; Jang, Ha, and Silkes, 2009; Letarte, Dube, & Troche, 1997; Lewis ,1983; Menkaus et al., 1988; Mitchell, 2004; Rozin & Vollmecke, 2001), 5 items on explicit attitudes, 2 items on food intentions (Backman, Haddad and Lee, 2002; Quan & Wang , 2004). Respondents were asked to rate each item on the 5 dimensions on a scale from 1 “strongly disagree” to 7 “strongly agree.” The survey

instrument also included questions on demographic information and individual characteristics (Table 6).

More specifically, PFAs include 23 items of Exotic, Abundant, Colorful, Aromatic, Popular, Nutritious, Dietetic, Healthy, Nourishing, Pleasing, Delicious, Tasty, Edible, Unique, Cultural, Fresh, Authentic, Neat, Attractive, Clean, Speedy, Convenience, and Digestible. Explicit attitudes included 5 items: (1) “I like Chinese/Japanese food very much”, (2) “I would like to have Chinese/Japanese food in the near future”, (3) “I would like to recommend Chinese/Japanese food to my close friends and relatives”, (4) “I would like to talk about positive things of Chinese/Japanese food” and (5) “Overall, I have favorable preference about Chinese/Japanese food” in each Asian food (i.e., Chinese food and Japanese food). Intentions consist of 2 items: (1) I would like to eat Chinese/Japanese food in the near future” and (2) “I would like to visit China/Japan to eat Chinese/Japanese food”. Knowledge and Liking includes single item in each Asian food: “ the level of Knowledge about Chinese/Japanese food” and “the level of liking about Chinese/Japanese food”, respectively. In regard to Individual Characteristics, Frequency of visit to Asian restaurants, accompany types, Information sources, eat-out time, and experience to China and Japan was included in the questionnaire. Lastly, Demographic Characteristics consists of Gender, race, handedness and grade level.

Table 6

Survey Items included in Questionnaire

Factors	Measurements	Items (Chinese and Japanese food)	Scales
Perceived food attributes	23 items	Exotic, Abundant, Colorful, Aromatic, Popular, Nutritious, Dietetic, Healthy, Nourishing, Pleasing, Delicious, Tasty, Edible, Unique, Cultural, Fresh, Authentic, Neat, Attractive, Clean, Speedy, Convenience, and Digestible	7 points
Explicit attitudes	5 items	I like Chinese/Japanese food very much I would like to have Chinese/Japanese food in the near future I would like to recommend Chinese/Japanese food to my close friends and relatives I would like to talk about positive things of Chinese/Japanese food Overall, I have favorable preference about Chinese/Japanese food	7 points
Intentions	2 items	I would like to eat Chinese/Japanese food in the near future I would like to visit China/Japan to eat Chinese/Japanese food	7 points
Knowledge	1 item	The level of Knowledge about Chinese/Japanese food	7 points
Liking	1 item	The level of liking about Chinese/Japanese food	7 points
Individual Characteristics	8 items	Frequency of visit to Asian restaurants, accompany types, Information sources, eat-out time, and experience to China and Japan	Nominal
		Number of experience in last month, eat-out expenditure, and tipping sizes	Open
Demographic Characteristics	4items	Gender, race, handedness and grade level	Nominal

3.6.2 Implicit Association Test

Subjects were asked to start the IAT task in regard to implicit attitude on completing the explicit questionnaire. The subjects' reaction time was measured based on millisecond (ms) through E-Prime software. The IAT consisted of 5 sequential blocks based on the methods outlined by Greenwald et al. (1998) and Karpinski and Hilton (2001): (1) Stage 1, initial evaluative attribute discrimination (Chinese Food vs. Japanese Food), (2) Stage 2: initial target-concept discrimination (Unappealing vs. Appealing), (3) Stage 3, initial combined task (Japanese Food or Appealing vs. Chinese Food or Unappealing), (4) Stage 4, reversed target-concept discrimination (Japanese Food vs. Chinese Food), and (5) Stage 5, reversed combined task (Japanese Food or Unappealing vs. Chinese Food or Appealing). Two target concepts of the experiment were "McDonald" versus "Japanese Food" and two evaluative attributes were "Appealing" versus "Unappealing". Instructions were given at the beginning of each block, describing what two categories each stimulus was to be discriminated into and which response key (the left one is the "q" key; the right one is the "p" key) was for either decision. In addition, one category name remained at the upper left and right corner on the computer screen during each block, reminding subjects of which response key was assigned to which category. More specifically, the detailed IAT procedure conducted in the experiment follows (Table 7):

Step 1: Initial evaluative attribute discrimination. First, respondents sort item from two different concepts into their super ordinate categories (positive adjectives for

"appealing" and negative adjectives for "Unappealing"). Categorizations are mapped to the super ordinate categories (the left one is the "q" key; the right one is the "p" key) and stimulus items appear sequentially in the middle of the computer

Step 2: Initial target-concept discrimination. In Step 2, subjects perform the same task with the same two keys but now sort items representing two poles of an attribute dimension (clean, unique, and tasty for "Appealing" and untasty, dirty, and stingy for "Unappealing")

Step 3: Initial combined task. In the third stage, these two sorting tasks are combined such that, on alternating trials, respondents are identifying a food as Chinese Food or Japanese Food and then a word as Appealing or Unappealing. In this case, one key ("q") is the correct response for two categories (Chinese Food or Unappealing) and the other key ("p") is the correct response for the other two categories (Japanese Food or Appealing). Respondents perform a block of 40 trials with these sorting rules.

Step 4: Reversed target-concept discrimination. In the fourth stage of the task, only stimulus items for the target concepts (Japanese Food and Chinese Food) are sorted for 20 trails, but this time the key assignment is reversed. In the present example, appealing items would now require a "p" key response and unappealing items would require a "q" key response.

Step 5: Reversed combined task: In the fifth stage of the task, respondents sort items from both the attribute and target concept categories again, except that the response key assignments now require Chinese Food and Appealing items to be

categorized with one key and Japanese Food and Unappealing items to be categorized with the other key, the opposite association from the earlier block. Respondents sort stimulus items with this response assignment for 40.

The IAT effect is calculated using latency data from Steps 3 and 5. Greenwald et al. (2003) described the scoring algorithm for calculating the IAT effect in detail. In the above example, sorting the stimulus items faster when Japanese Food or Appealing (and Chinese Food or Unappealing) share a response key than the reverse pairings indicates a stronger association strength between Chinese Food or Appealing (and Chinese Food or Unappealing) compared to the reverse mapping, or an automatic preference for Chinese Food relative to Japanese Food.

Table 7

Items included in Implicit Association Test (IAT))

Sources	Measurements	Items	Scales[a]
Stimuli	20 adjectives	Tasty, Attractive, Delicious, Pleasing, Authentic, Colorful, Unique, Popular, Exotic, Fresh, Untasty, Unpleasing, Dirty, Unclean, Horrible, Smelly, Monotonous, Stingy, Unpopular, Rotten	RT
Stimuli	20 photos	10 Japanese-related photos 10 Chinese-related photos	RT
Associations (Relevant/irrelevant)	46 items	Chinese and perceived food attributes (23 items) Japanese and perceived food attributes (23 items)	Dichotomy RT
Black 1	20photos	Initial evaluative attribute discrimination	RT
Black 2	20adjectives	Initial target-concept discrimination	RT
Black 3	20photos /20adjective	Initial combined task	RT
Black 4	20adjectives	Reversed target-concept discrimination	RT
Black 5	20photos /20adjective	Reversed combined task	RT

[a]RT= Reaction Times

3.7 Data Collection

Data collection was conducted in a room equipped with computers at a university located in Columbia, Missouri, March 9 - 16, 2010 from 9 a.m. to 5 p.m. The survey was conducted after obtaining Institutional Review Board (IRB) consent. In order to protect participants' rights in participating in the survey, it is required to get an

approval from the IRB at the University of Missouri. This study was granted permission and was assigned the number 1163197.

Student respondents participated in an experiment and a survey, simultaneously. 43 participants out of a total 95 of participants in this study responded to both an experiment and a survey in exchange for research credit for a destination management course. The rest (N=52) participated in only a survey questionnaire. The reason that student sample was used in this study is because of the limitations that the study includes an experimental research design with a survey questionnaire. In order to overcome the limitation of sample sizes when using statistical analyses, such as factor analysis and multiple regression analysis, specifically, additionally 52 participants are voluntarily recruited from out of the class. In regard to the selection of experimental objects in this study, Asian foods of Chinese food and Japanese food are designated based on the two considerations. The first is that the two Asian foods are representative of the overall Asian foods in terms of participants' awareness and liking on Asian foods in this study. The second is that Chinese and Japanese restaurants are frequently found in the city on which this study focuses as compared to other Asian restaurants.

3.8 Data Analysis

The data analysis of the study followed several statistical procedures; Excel, E-prime, and SPSS 15.0 were utilized to complete the tasks. The descriptive data including frequencies, means, and standard deviations are obtained to examine the demographic

and personal characteristics of respondents. First of all, Paired-t test was employed to identify the differences between salient factors used in this study. A simultaneous multiple regression method was used to examine the relationship between PFAs and explicit and implicit attitudes, Furthermore, Two-way analysis of variance (ANOVA) was employed to examine the interaction effects between the types of Asian foods (Chinese food vs. Japanese food) and PFAs (High PFAs vs. Low PFAs) on explicit and implicit attitude.

3.9 Summary

This chapter discussed the methodology that was utilized to conduct this study. The second section of the chapter reviewed the purpose of the study. The third section presented the research design. Section four discussed the population and sampling procedures, followed by the review process required by the Campus Institutional Review Board in section five. Instrumentation was explained in section six, along with a discussion of measurement and validity. Data collection procedures were presented in section seven. Section eight presented the data collection procedures. Lastly, section nine discussed statistical procedures adopted for data analysis.

CHAPTER 4

ANALYSIS AND RESULTS

4.1 Introduction

This chapter addresses the statistical analysis of the data. The socio-demographic characteristics are presented in the second section of this chapter. The descriptive summary of variables, including mean and standard deviations comprise the third section. The fourth section tests the hypotheses and includes results from t-test, a one-way analysis of variance, and Duncan's Post hoc.

4.2 Socio-Demographic Characteristics of Subjects

4.2.1 Demographic Characteristics of Respondents

Table 8 presents respondent characteristics. Respondents consisted of 15 male (38.5%) and 24 female (61.5%). It was observed that more Caucasian students (89.7%) than African American ones (10.3%) participated in this study. In regard with current grade level, it was shown that there are about 51.3% of Junior, 33.3% of senior, and 10.3% of graduate students, respectively.

Table 8

Demographic Characteristics of Respondents

Characteristic	Category	Frequency	%
Gender	Male	15	38.5
	Female	24	61.5
Race	Caucasian	35	89.7
	African American	4	10.3
Grade level	Freshman	0	0
	Sophomore	2	5.1
	Junior	20	51.3
	Senior	13	33.3
	Graduate	4	10.3

4.2.2 Individual Characteristics of Respondents

Respondents' individual characteristics are shown in Table --. It was observed that about 87 % of respondents have right handedness, whereas left handedness accounts for about 12 %. A majority of respondents selected Chinese food (64%) and Japanese food (28%) as the most preferred Asian food, respectively. This shows that the validity of selecting two objectives (Chinese and Japanese food) is well reflected in the study. In terms of frequency of visit to Asian restaurants, "once a year" accounted for 41.0 % of respondents, and "2 to 4 times per month" accounted for 35.9 percentage of respondents. Moreover, about 74 % of respondents accompany friends to visit Asian restaurants, whereas "alone" accounted for only 2.3 % of respondents. About 77 % of

respondents have diner for eat-out, whereas about 23 % of respondents have lunch for eat-out.

In regard to number of visits to Asian restaurants in the last month, respondents visited Chinese restaurants and Japanese restaurants about 1.15 times and 0.85 times in the last month, respectively. In terms of eat-out expenditure, respondents spend 6.72 dollar for lunch and 9.44 dollar for diner in Chinese food, whereas 7.44 dollar and 13.78 dollar accounts for respondents' lunch and diner respectively in Japanese food with tip sizes of 16.08 dollar for lunch and 18.41 for dinner. As a result, it was observed that there were different perception and expenditures for two different Asian foods.

Table 9

Individual Characteristics of Respondents

Characteristic	Category	Frequency(n)	%
Handedness	Right	34	87.2
	Left	5	12.8
The most preferred Asian food	Chinese food	25	64.0
	Japanese food	11	28.2
	Korean food	1	2.6
	Thai food	1	2.6
	Vietnamese food	1	2.6
Frequency of visit to Asian Restaurants	Not more than once a year	2	5.1
	2 to 4 times per year	7	17.9
	Once a year	16	41.0
	2 to 4 times per month	14	35.9
Accompany types	Family/relatives	9	23.1
	Friends	29	74.3
	Alone	1	2.6
Dining-out	Lunch	9	23.1
	Dinner	30	76.9

Characteristic	Category		Mean	Demonstration
Number of visit to Asian restaurants in the last month	**Chinese restaurants**		1.15	Times
	Japanese restaurants		0.85	
Eat-out expenditure	**Chinese food**	Lunch	6.72	Dollar
		Diner	9.44	
	Japanese food	Lunch	7.44	
		Diner	13.87	
Tip	**Lunch**		16.08	Dollar
	Diner		18.41	

4.3 Information Sources for Asian food

Figure 6 represents the ratio of the sources when obtaining information of Asian foods in multiple choices. The results showed that the percentage of using information sources on Asian food was represented by relatives/colleagues/friends by 79.5%, followed by Asian restaurants by 48.7%, internet by .30.8%, food guidebooks by 15.4%, TV/radio by 12.8%, newspaper/magazine by 10.33% and other by 5.1%, respectively (see Figure 3). The results indicated that a majority of respondents tend to employ relatives, colleagues, and friends as the information sources for Asian food that is most preferred and most influential when obtaining Asian food-related information.

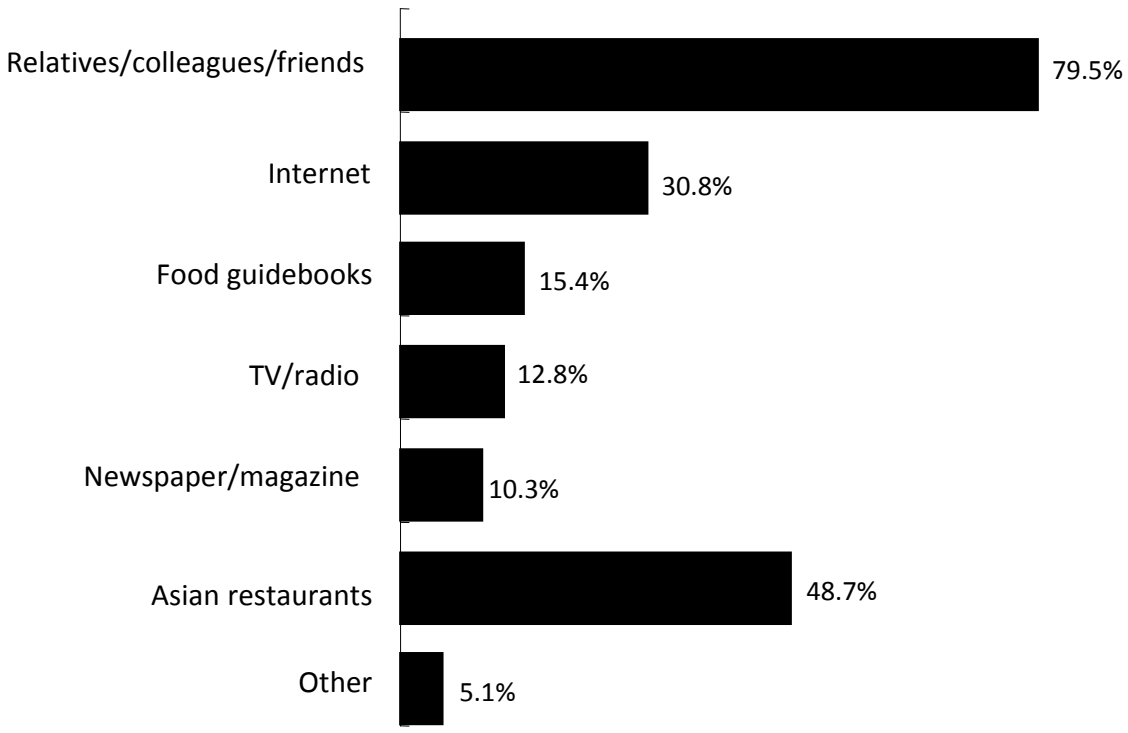


Figure 6. Sources to Obtain Information of Asian foods

4.4 Exploratory factor Analysis (EFA)

4.4.1 EFA of Perceived Food Attributes (PFAs)

This study conducted item-total correlation analyses and an exploratory factor analysis with the extraction method of eigenvalue greater than 1. Varimax rotation was also applied in order to check the adequacy of items included in the questionnaire. Based on the results, items, 'exotic', 'convenience', 'digestible' and 'exotic' were deleted by the cut-off factor loading score .50 considering the number of cases (n=78) (Hair, Anderson, Tatham, & Black, 1998). KMO measure of sampling adequacy (.865) and Bartlett's test of Sphericity (Approx. $\chi 2$ = 1446.570, df.=171, sig.=.000) indicate that correlation structure embedded in the data is adequate to apply factor analysis. Results shown in Table 10 indicate that 19 items are in four factors, and these 4 factors account for about 80% of the total variance. The resulting factor structure, in fact, corresponds to the hypothesized factor structure implying that respondents' response pattern can be also distinguished into 4 inter-related factors. Response to each factor appears to be reliable in the sense that the internal consistency reliability coefficient ranges from .857 to .941 (Hair et. al., 1998).

Table 10

Results of Exploratory Factor Analysis for Perceived Food Attributes

Item*	FL	CE	ITC	Mean	CA	% of variance	Eig.(%)	RC(%)
Attractiveness								
Neat	.874	0.84	.802	5.51	.929			
Attractive	.832	0.78	.780	5.71	.931			
Clean	.826	0.83	.851	5.49	.924			
Unique	.821	0.79	.754	5.38	.933	40.843	7.760	.938
Cultural	.804	0.78	.860	5.14	.923			
Fresh	.785	0.83	.739	5.44	.934			
Authentic	.717	0.70	.819	5.09	.927			
Taste								
Delicious	.923	0.90	.859	5.74	.923			
Tasty	.922	0.91	.917	5.82	.904	21.045	3.999	.941
Pleasing	.881	0.86	.926	5.82	.900			
Edible	.838	0.74	.742	5.74	.959			
Health								
Dietetic	.892	0.85	.849	4.65	.885			
Healthy	.877	0.91	.831	4.35	.891	10.152	1.929	.920
Nutritious	.841	0.86	.899	4.60	.867			
Nourishing	.759	0.72	.696	4.88	.934			
Popularity								
Popular	.783	0.73	.591	.591	.786			
Aromatic	.748	0.63	.609	.609	.777	7.823	1.486	.857
Abundant	.741	0.69	.655	.655	.756			
Colorful	.681	0.83	.682	.786	.744			

N=78, KMO (Kaiser-Meyer-Olkin Measure of Sampling Adequacy.) = .809(p=.000); FL= Factor Loading;; CE= Communalities Extraction; ITC= Corrected Item-Total Correlation; CA= Cronbach's Alpha if Item Deleted; Eig(%)= Eigenvalues; RC(%)= Cronbach's Alpha

4.4.2 EFA of the Explicit Attitude

As shown in Table 11, The same procedure has been applied to those items dealing with food attitudes. As the results of the factor analysis, KMO measure of sampling adequacy (.911) and Bartlett's test of Sphericity (Approx. $\chi 2$ = 536.272, df.=10, sig.=.000) indicates that correlation structure embedded in the data is adequate to apply factor analysis (Hair et. al., 1998). Results shown in Table 13 indicate that 5 items included in the analysis could be distinguished as a single factor, and the factor accounts for about 89% of the total variance. Response to the factor appears to be relatively reliable in terms of the internal consistency reliability coefficient of .970 (Hair et. al., 1998).

Table 11

Results of Exploratory Factor Analysis for Explicit Attitude

Item*	FL	CE	ITC	Mean	CA	% of variance	Eig.(%)	RC(%)
Attitude								
Attitude1	.969	.904	.869	5.68	.964			
Attitude2	.963	.927	.902	5.73	.959			
Attitude3	.951	.874	.810	5.50	.966	89.856	4.493	.970
Attitude4	.935	.849	.781	5.38	.970			
Attitude5	.921	.939	.917	5.65	.958			

N=78*KMO (Kaiser-Meyer-Olkin Measure of Sampling Adequacy.) = .911(p=.000); FL= Factor Loading;; CE= Communalities Extraction; ITC= Corrected Item-Total Correlation; CA= Cronbach's Alpha if Item Deleted; Eig(%)= Eigenvalues; RC(%)= Cronbach's Alpha

4.5 Paired t-test between Chinese food and Japanese food

Table 12 shows mean differences of perceived food attributes (PFAs) between Chinese food and Japanese food. Results of paired t-tests indicated that respondent's evaluation was significantly different between Chinese food and Japanese food in several perceived food attributes. Mean values of most attributes were found to be higher in the Japanese food than in the Chinese food. There are statistically significant mean differences of PFAs between Chinese food and Japanese food at significant level of .05 and .01 in 19 perceived food attributes except for Aromatic (t=1.04), Delicious (1.38), Tasty (t=1.03), Edible (t=1.46), and Digestible (t=-1.43), respectively. In particular, the negatively significant results of 13 items including exotic (t=-5.48), colorful (t=-4.40), nutritious (t=-6.22), dietetic (t=-3.96), healthy (t=-6.97), nourishing (t=-3.92), unique (t=-5.99), fresh (t=-4.39), cultural (t=-8.53), authentic (t=-6.71), neat (t=-7.06), attractive (t=-4.26), and clean (t=-6.82) indicates that respondents would be more positive perceptions to Japanese food than Chinese food. On the other hand, there are significantly positive differences of perceived food attributes between Chinese food and Japanese food in Abundant (t=2.51), Popular (t=2.69), Pleasing (t=2.16), Speedy (t=3.77), and Convenience (t=4.56), indicating that Chinese food would be a more positive food than Japanese food in satisfactory food attributes.

Table 12

Differences f Perceived Food Attributes between Chinese Food and Japanese Food

Food attributes	**MCF[a]**	**% (LogRT) [b]**	**MJF[a]**	**% (LogRT) [b]**	**(CF-JF)**	**Standard deviation**	**t-value**
Exotic	4.85	94.9(3.23)	6.15	84.6(3.08)	-1.30	1.49	-5.48**
Abundant	5.69	97.4(3.18)	5.05	97.4(3.16)	0.64	1.60	2.51**
Colorful	5.26	94.9(3.22)	6.05	87.2(3.17)	-0.79	1.13	-4.40**
Aromatic	5.26	92.3(3.17)	5.03	89.7(3.16)	0.23	1.39	1.04
Popular	5.95	76.9(3.16)	5.49	84.6(3.16)	0.46	1.07	2.69*
Nutritious	3.87	61.5(3.18)	5.44	82.1(3.23)	-1.57	1.57	-6.22**
Dietetic	3.72	61.5(3.24)	4.97	84.6(3.20)	-1.25	1.98	-3.96**
Healthy	3.77	84.6(3.20)	5.44	66.7(3.20)	-1.67	1.49	-6.97**
Nourishing	4.46	64.1(3.24)	5.31	46.2(3.28)	-0.85	1.35	-3.92**
Pleasing	5.92	66.7(3.20)	5.56	87.2(3.18)	0.36	1.04	2.16*
Delicious	5.95	59.0(3.27)	5.69	79.5(3.24)	0.26	1.16	1.38
Tasty	5.92	59.0(3.19)	5.72	82.1(3.20)	0.20	1.24	1.03
Edible	5.87	71.8(3.18)	5.62	79.5(3.31)	0.25	1.09	1.46
Unique	4.87	87.2(3.24)	6.15	51.3(3.18)	-1.28	1.34	-5.99**
Cultural	5.28	82.1(3.19)	6.13	43.6(3.22)	-0.85	1.20	-4.39**
Fresh	4.69	66.7(3.22)	6.28	64.1(3.24)	-1.59	1.16	-8.53**
Authentic	4.79	41.0(3.14)	5.97	74.4(3.21)	-1.18	1.10	-6.71**
Neat	4.31	46.2(3.19)	5.97	74.4(3.16)	-1.66	1.48	-7.06**
Attractive	4.85	71.8(3.23)	6.03	69.2(3.31)	-1.18	1.73	-4.26**
Clean	4.28	41.0(3.20)	5.90	66.7(3.19)	-1.62	1.48	-6.82**
Speedy	5.62	46.2(3.18)	4.64	59.0(3.19)	0.98	1.61	3.77**
Convenience	5.56	35.9(3.21)	4.49	69.2(3.23)	1.07	1.48	4.56**
Digestible	5.00	25.6(3.23)	5.28	56.4(3.22)	-0.28	1.23	-1.43

* $p < .05$, ** $p < .01$

[a] MCF(Mean of Chinese Food) and MJF (Mean of Japanese Food)

[b] % is ratio of association between ethnic foods (i.e., Chinese food and Japanese food) and food attributes. Specifically, () is mean value of log transformed reaction times of associations between ethnic foods (i.e., Chinese food and Japanese food) and food attributes.

In regard to the differences of summated factor mean scores between Chinese food and Japanese food (Table 13), it was found that there are statistically significant mean differences of two dimensions, such as taste (t=-.596, p<.01) and popularity (t=-7.96, p<.01), out of four between Chinese food and Japanese food. This reveals that respondents prefer Japanese food to Chinese food due to taste and popularity of Asian foods.

Table 13

Difference of PFA's Factor Mean between Chinese Food and Japanese Food

Factors	Mean		Difference (CF-JF)	Standard deviation	t-value
	CF	JF			
Attractiveness	5.54	5.40	0.14	0.79	1.07 [n]
Taste	3.95	5.29	-1.34	1.40	-5.96 [a]
Health	5.92	5.65	0.27	0.99	1.69 [n]
Popularity	4.73	6.06	-1.33	1.05	-7.96 [a]

[n]Non-significant, [*] p < .01, [a] CF(Mean of Chinese Food) and JF (Mean of Japanese Food) [**]

4.6 Differences of Explicit Attitudes between Chinese and Japanese food

Table 14 presents the descriptive mean scores and Paired t-test results of the food (explicit) attitudes between Chinese food and Japanese food. Explicit attitudes were measured using seven Likert-type scale questions for Chinese food and Japanese food, respectively. The results revealed there are no significant mean differences between two foods on all of them. In addition, the result of a summated mean

difference also reveals that there is no significant mean difference of food attitude between Chinese food and Japanese food at .05 level (Figure 7).

Table 14

Difference of Food Attitudes between Chinese Food and Japanese Food

Food attitudes	Mean		Difference (CF-JF)	Standard deviation	t-value
	CF	JF			
Attitude1	5.92	5.44	0.48	1.79	1.70 [n]
Attitude2	5.95	5.51	0.44	1.85	1.47 [n]
Attitude3	5.72	5.28	0.44	1.83	1.49 [n]
Attitude4	5.46	5.31	0.15	1.80	0.53 [n]
Attitude5	5.92	5.38	0.54	1.98	1.69 [n]
Total (Summated mean)	5.79	5.38	0.41	1.77	1.45 [n]

[n]Non-significant, [*] $p < .05$, [a] CF(Mean of Chinese Food) and JF (Mean of Japanese Food) [**]
Attitude1= I like Chinese/Japanese food very much, *Attitude2*= I would like to have Chinese/Japanese food in the near future, *Attitude3*= I would like to recommend Chinese/Japanese food to my close friends and relatives, *Attitude4*=I would like to talk about positive things of Chinese/Japanese food, and *Attitude5*=Overall, I have favorable preference about Chinese/Japanese food

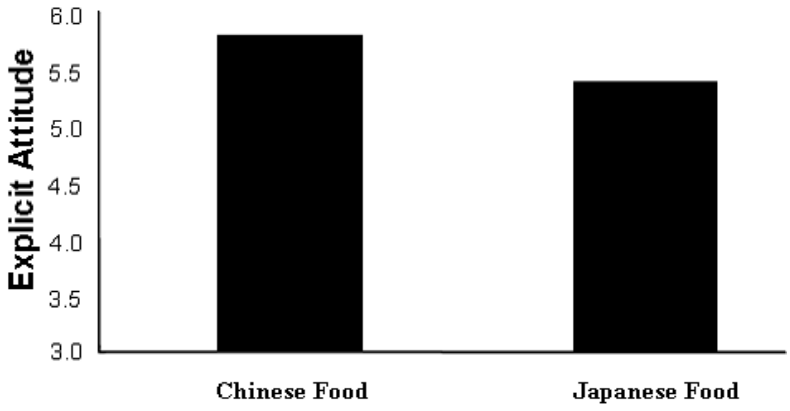


Figure 7. Summated Mean Difference of Explicit Attitude between Chinese food and Japanese food (7 point Likert-scale)

4.7 Differences of Food Intentions between the Two Types of Asian Foods

Paired t-test was carried out for the intention to examine whether significant differences between Chinese food and Japanese food in Asian restaurant setting exist. Table 14 shows that significant differences were not found for the intention1 ($t = 1.08$, $p > .05$) and intention2 ($t = -1.02$, $p > .05$). Results revealed that American respondents have similar intentions: intention to eat Asian foods and intention to visit destinations to eat Asian foods. Thus, Asian foods, such as Chinese food and Japanese food, might be popular in Americans.

Table 15

Differences of Food Intentions between Chinese Food and Japanese Food

Food intentions	**Mean**		**Difference (CF-JF)**	**Standard deviation**	**t-value**
	CF	**JF**			
Intention					
Intention1	5.64	5.26	0.38	2.22	1.08 [n]
Intention2	4.05	4.36	-0.31	1.89	-1.02 [n]

[n]Non-significant, [*] $p < .05$, [a] CF(Mean of Chinese Food) and JF (Mean of Japanese Food) [**]
Intention1= I would like to eat Chinese/Japanese food in the near future, *Intention2*= I would like to visit China/Japan to eat Chinese/Japanese food

4.8 Influential Factors toward Explicit and Implicit Attitudes

Table 16 shows the influential antecedents of perceived food attitudes on explicit and implicit attitudes in two Asian foods, a series of regression analyses were conducted to examine the impacts of perceived food attributes on explicit attitudes and implicit attitudes in both Chinese food and Japanese food. In regard with the influential factors in predicting the explicit attitudes, the results of regression analysis in Chinese food are statistically significant at .01 level (R2=.425, F=6.274, df=4, sig.=.001). Moreover, it appears that “health” (β:.385, t:2.618) and “popularity” (β:. .913, t: 2.616) have positive impacts on explicit attitudes. In case of the Japanese food, the results are statistically significant at .01 level (R2=.601, F=12.798, df=4, sig.=000), and only “health”(β:. 625, t: 4.791) has positive impacts on explicit attitudes out of four factors (See table 5). In terms of the results of the influential factors on implicit attitudes (Reaction time), it was observed that the dimension of attractiveness has marginally positive impacts on implicit attitudes (β:. .350, t: 2.022). (R2=.164, F=1.666, df=4, sig.=.181). The result in Chinese food was also not statistically significant at .05 level (R2=.183, F=1.904, df=4, sig.=.132)..

Table 16

The Influential Factors in Predicting Explicit and Implicit Attitudes

Dependent	Independent	Chinese food			Japanese food		
		B	T	R^2	*B*	T	R^2
Explicit Attitudes	Attractiveness	.071	0.488	.425	.311	1.982	.601
	Taste	-.112	-0.806		-.061	-.427	
	Health	.385	2.618*		.625	4.791*	
	Popularity	.391	2.616*		-.057	-.404	
Implicit Attitudes	Attractiveness	.350	2.022*	.183	.373	1.641	.164
	Taste	.185	1.115		.160	.772	
	Health	-.203	-1.160		-.315	-1.670	
	Popularity	.082	.459		-.099	-.481	

N=39, *p<0.05

4.9 Correlation Matrix among Variables in Asian Foods

4.9.1 Results of Correlations among Variables in Chinese Food

Tables 17 and 18 provide the correlation matrix for all of the variables in Chinese food and Japanese food. Given that one of the assumptions for the Pearson measure of correlation is normality, the Spearman rank correlation was used to measure the correlation between these dimensions.

The results of correlation among variables in Chinese food reveal that Dm1 is positively and significantly correlated with Dim3 (R=.40, p<.05), Dim4 (R=.31, p<.01), and EA (R=.33, p<.05). Taste has significantly positive correlation with Dim4 (R=.33, p<.05). In addition, Dim3 has positive correlation with Dim4 (R=.33, p<.05), EA (R=.54, p<.01). Dim4

is positively and significantly correlated with EA(R=.50, p<.01), Intention1(R=.45, p<.01) and Intention2(R=.45, p<.01). In terms of the EA, it is positively and significantly related to Intention1(R=.72, p<.01) and Intention2(R=.50, p<.01). In regard with intentions, intention1 has positive correlation with Intention2(R=.59, p<.01).

Table 17

Correlation Matrix among Variables in Chinese Food

Variables[a]	Dim1	Dim2	Dim3	Dim4	EA	IA	Int.1	Int.2
Dim1	1.00							
Dim2	.14	1.00						
Dim3	.40*	. 04	1.00					
Dim4	.31**	.33*	.33*	1.00				
EA	.33**	.03	.54**	.50**	1.00			
IA	.25	.09	-.05	.15	.05	1.00		
Intention1	.15	-.02	.30	.45**	.72**	-.01	1.00	
Intention2	.18	.11	.10	.45**	.50**	.10	.59**	1.00

*p<0.05, **p<0.01,

Note: Dim1(Attractiveness); Dim2(Taste); Dim3(Health); Dim4(Popularity), and intentions (intention1: willingness of eating Asian food; intention2: willingness of visit to a destination to eat food)

4.9.2. Results of Correlations among Variables in Japanese Food

The results of correlation among variables in Japanese food reveal that Dim1 is positively and significantly correlated with Dim2 (R=.61, p<.01), Dim3(R=.52, p<.01), Dim4 (R=.57, p<.01), EA (R=.57, p<.01), IA (R=.39, p<.05), and Intention1 (R=.52, p<.01).

Dims has significantly positive correlation with Dim4 (R=.54, p<.01) and IA (R=.43, p<.01). Furthermore, Dim3 has positive correlation with Dim4 (R=.45, p<.01), EA (R=.74, p<.01), Intention1 (R=.68, p<.01) and Intention2 (R=.44, p<.01). Dim4 is positively and significantly correlated with EA (R=.37, p<.05) and Intention1 (R=.33, p<.05). In regard to the EA, it is positively and significantly related to Intention1 (R=.94, p<.01) and Intention2 (R=.45, p<.01). In case of intentions, intention1 has positive correlation with Intention2 (R=.46, p<.01).

Table 18

Correlation matrix among variables in Japanese Food

Variables[a]	Dim1	Dim2	Dim3	Dim4	EA	IA	Int.1	Int.2
Attractiveness	1.00							
Taste	.61**	1.00						
Dim3	.52**	.30	1.00					
Dim4	.57**	.54**	.45**	1.00				
EA	.57**	.29	.74**	.37*	1.00			
IA	.39*	.43**	.01	.26	-.40	1.00		
Intention1	.52**	.31	.68**	.33*	.94**	-.14	1.00	
Intention2	.28	.05	.44**	.25	.45**	.07	.46**	1.00

*p<0.05, **p<0.01

Note: Dim1(Attractiveness); Dim2(Taste); Dim3(Health); Dim4(Popularity), and intentions (intention1: willingness of eating Asian food; intention2: willingness of visit to a destination to eat food)

4.10 Measures of Implicit Attitudes

Implicit attitude was assessed by comparing the reaction time difference in response to combined categories between two conditions. For instance, if a participant's reaction time is shorter in a condition with a combined category as "Chinese food Or Appealing" (along with the other category "Japanese food Or Unappealing) than in another condition with a combined category as "Chinese food Or Unappealing" (along with the other category "Japanese food Or Appealing"), people had stronger implicit preference toward Chinese food over England and vice verse. Data clarification followed a three-step procedure. (1) Outlying reaction time (RT) data in the category discrimination tasks are conventionally defined as those below 300 ms and above 3000 ms and they are recoded to 300 ms and 3000 ms, respectively, (2) logarithm transformation of reaction times (denoted as Log (RT)) was employed for the convenience of data processing and fulfillment of the assumptions in this study, and (3) RT data from error trials were excluded from the analysis because these data did not reflect the strength of association between target concepts and evaluative attributes measured by reaction time.

In order to check learning/familiarity effects, half of the participants took 1-2-3-4-5 order, and the other half took 1-2-5-4-3. The results showed that both orders are not significantly different. This indicated that there are no learning/familiarity effects between the two orders. The descriptive statistics of response time data for the implicit measures across five blocks are reported in Table 19.

Table 19

The Summary of Log Reaction Time in Five Blocks

Subject	Block ID	N[a]	Mean[b]	Minimum	Maximum	Std.Dev.
American	Block 1	39	2.89	2.60	3.14	0.10
	Block 2	39	3.01	2.68	3.29	0.14
	Block 3	39	2.95	2.41	3.20	0.12
	Block 4	39	3.00	2.77	3.26	0.11
	Block 5	39	3.02	2.63	3.29	0.15

Note:

[a]19 participants took 1-2-3-4-5 order, and 20 participants took 1-2-5-4-3, in order to check learning/familiarity effects, and both orders are not significantly different in Black 3 (t=.850, p> .05) and Black 5 (t=-.761, p>.05) (no learning/familiarity effects).

[b] The mean value of LogRt was 2.97 (Black3) and 2.94 (Black5) in 19 participants, and 3.00 (Black3) and 3.03 (Black5) in 20 participants.

4.11 Differences of Implicit Attitude between Chinese and Japanese Food

Figure 8 shows the difference of implicit attitudes between Chinese food and Japanese food. The result reveals that there is statistically significant mean difference of implicit attitude between Chinese food and Japanese food at .05 level. Specifically, respondents have more positive attitudes toward Japanese food (Log(RT) mean= 2.954) compared to Chinese food (Log(RT) mean= 3.017), SD=0.109 and p<.05.

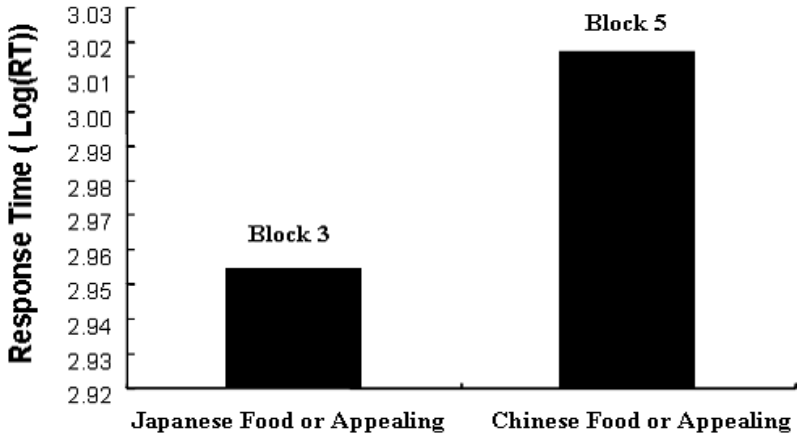


Figure 8. Mean Difference (Log(RT)) of Implicit Attitude between Chinese Food and Japanese Food

4.12 Results of Univariate Analysis of Variance (ANOVA)

All dependent measures were submitted to 2 x 2 analyses of variance with ethnic foods (Chinese food versus Japanese food) and antecedent dimensions including "Perceived food attributes (PFA)" as the independent variables. In terms of the independent variables, Perceived food attributes (PFA) was coded as the categorically "high (1)" and "low (0)" levels on the basis of the summated mean values of each dimension.

4.12.1 The Types of Asian Foods and Perceived Food Attributes on Explicit Attitude

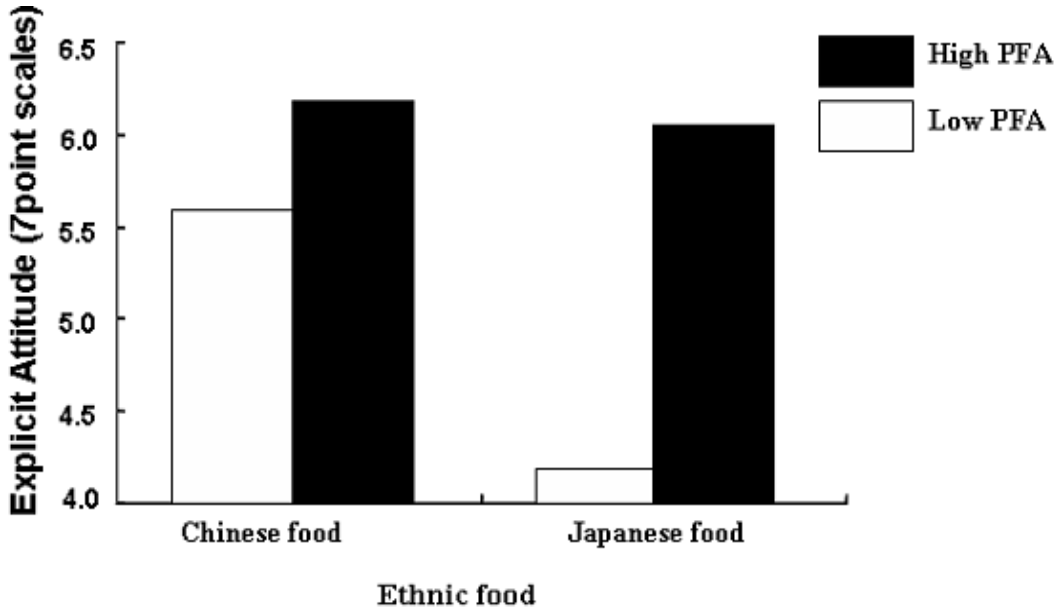
The explicit attitude data was submitted to a 2 x 2 ANOVA with the types of Asian foods (i.e., Chinese food and Japanese food) and perceived food attributes (PFAs) as the independent variables. In terms of the ethnicity foods and PFA on explicit attitude, the results show that there was significant main effect for the type of ethnic food (i.e., American versus Chinese), $F(1, 78)= 5.635$, $p<.05$. There was also a main effect of

perceived food attributes, F(1, 78)= 14.855, p>.01. In terms of effect of interaction, there was an expected interaction, F(1, 78)= 4.047, p<.05, indicating that the effect of ethnic food on explicit attitude was greater in high [Chinese food: Mean (Std. Deviation)= 6.17 (1.31); Japanese food: Mean (Std. Deviation)= 6.06(1.35), rather than low [Chinese food: Mean(Std. Deviation)= 5.58(.0.81); Japanese food: Mean (Std. Deviation)=4.19(2.03)] perceived food attributes (PFAs) condition.

Table 20

Results of Interaction effects between EF and PFAs on EA

Source [a]	df	Mean Square	F	P
EF	1	10.282	5.635	.020*
PFA	1	27.104	14.855	.000*
EF X PFA	1	7.385	4.047	.048*
Ethnic Food	(No)	Mean	Std. Deviation	
Chinese food	High PFA (14)	6.17	1.31	
	Low PFA (25)	5.58	0.81	
Japanese food	High PFA (25)	6.06	1.35	
	Low PFA (14)	4.19	2.03	



*p<0.05

[a] EF= Ethnic food and PFA= Perceived food attributes

R Squared = .219 (Adjusted R Squared = .187)

Note: PFA= Perceived Food Attributes

Figure 9. The Explicit Index influenced by Ethnic Food and PFAs

4.12.2 The Types of Asian Foods and Perceived Food Attributes on Implicit Attitude

We also analyzed the implicit attitude (IM) index influenced by using the type of ethnic food (EF) and perceived food attributes (PFA) as independence variables (Figure 10). Regarding the effect of ethnic food and PFA on implicit attitude, this analysis revealed the expected main effect for a type of ethnic food (Chinese food and Japanese food), $F(1,78)= 4.493$, $p<.05$, but there was not effect of perceived food attributes (PFA), $F(1, 78)= .826$, $p>.05$. In addition, it was observed that there was no a type of ethnic food x PFA interaction, $F(1, 78)= .247$, $p>.05$.

Table 21

Results of Interaction effects between EF and PFAs on IA

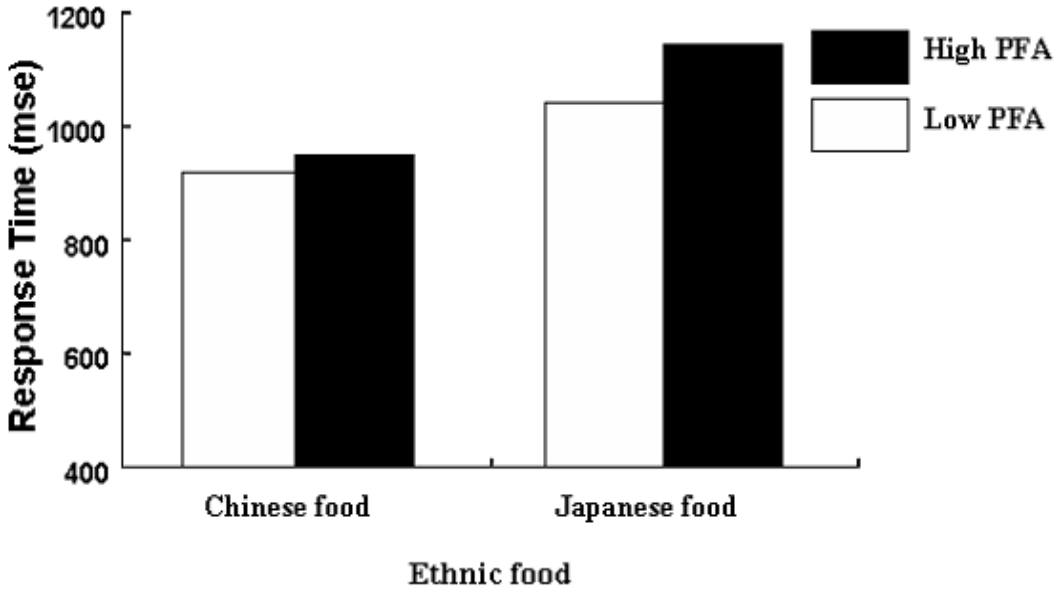
Source [a]	df	Mean Square	F	P
EF	1	429095.22	4.493	.037*
PFA	1	78917.71	.826	.366
EF X PFA	1	23628.24	.247	.620

Ethnic Food	(No)	Mean	Std. Deviation
Chinese food	High PFA (14)	948.96	229.19
	Low PFA (25)	918.56	208.19
Japanese food	High PFA (25)	1142.20	370.27
	Low PFA (14)	1027.28	390.38

*p<0.05 [a] EF=

Ethnic food and PFA= Perceived food attributes

R Squared = .092 (Adjusted R Squared = .054)



Note: PFA= Perceived Food Attributes

Figure 10. The Implicit Index influenced by Ethnic Food and PFAs

CHAPTER 5

DISCUSSION AND CONCLUSIONS

5.1 Introduction

This chapter includes the discussion about the findings, implications, and limitations of the study. The first section presents the summary of the study. The second section summarizes the results of each hypothesis. The third section of this chapter presents the general implications suggested by the findings of the study. The fourth section addresses the limitations of the study. Finally, the last section of this study presents several recommendations for future study.

5.2 Summary of the Study.

This study examined the differences of all prominent concepts used in this study between two Asian foods (Chinese food and Japanese food), including perceived food attributes (PFAs), explicit and implicit attitudes, and food intentions on Asian foods. The primary purpose of this study was to focus on measuring people's intrinsic feelings and thoughts on the Asian foods by applying psychological methodology. Moreover, influential factors on food attitudes and interaction between the types of Asian foods (Chinese and Japanese food) and PFAs on attitudes were examined in this study.

There were four main goals in this study. The first goal was to examine the differences of perception on Asian foods (Chinese and Japanese food) in terms of PCFs, explicit attitudes (measure of the self-report method), implicit attitude (reaction time), and food intentions on each ethnic food (Chinese food and Japanese food). This study

focused more on identifying the difference of explicit and implicit attitudes between Chinese food and Japanese food in Americans by employing psychological methodology. In spite of the fact that participants (Caucasians) have a positive perception on PFAs of Chinese food as compared to Japanese food, the results of the differences of perception between the two Asian foods in the implicit attitude indicate that Chinese food would be more appealing one than Japanese food in satisfaction level of Asian food attributes. Thus, it appears that even though Americans are well aware of the importance of food attributes in maintaining better health, actual preference on Asian food differs in terms of the implicit attitude, but not explicit attitude.

The second goal was to find the influential determinants on PFAs. In order to examine the antecedents on attitudes, four dimensions (attractiveness, taste, health, and popularity) were found by factor analysis in PFAs. First of all, it was assumed that PFAs had positive impacts on the explicit attitude measured by a self-reported survey. The results showed that the two dimensions of tastes and popularity out of four dimensions were influential factors toward the explicit attitude, indicating the positive change of external attitudes would be significantly determined by attributes of the taste and the popularity in Chinese food service. Whereas, only a dimension of health has a positive impact on explicit attitudes out of four factors in Japanese food service. That is, participants (Caucasian) had the different perception on PFAs in predicting explicit attitudes of each ethnic food (e.g., Chinese food vs. Japanese food) (Jang, Ha, and Silkes, 2009). In terms of the perception of PFAs on implicit attitudes, the implicit attitude varied depending on only the dimension of food attractiveness in Chinese food, but not

in Japanese food. This indicated that the change of implicit attitude was not determined by PFAs. With the understanding of the results of influential factors on attitudes in both Chinese and Japanese foods, it was assumed that external attributes did not influence on implicit attitudes in food service settings.

The third goal was to examine the correlation among PFAs, explicit and implicit attitudes, intention to eat Asian foods, and intention to visit destinations. In the hospitality and tourism industry, food marketing is a critical part of the successful operation of food restaurants (Hastings et al., 2003; Livingstone and Helsper, 2004). In order to predict the potential customers to visit actual restaurants and destinations in marketing of food services, it is important for industrial practitioners to understand the relationship among the theoretically prominent concepts into operation. The primary results of the relationships of the concepts used in this study showed that the four dimensions of PFAs were mostly positively related, with explicit attitude and the two food intentions in both Chinese food and Japanese food. When considering the results of the relationship among the salient concepts, it was recommended that an application of the model suggested in this study would be effective for industrial practitioners in the hospitality and tourism marketing.

The fourth goal was to examine the interaction effects between the types of Asian foods (Chinese food vs. Japanese food) and PFAs (high vs. low) on attitudes (explicit and implicit attitudes). Many research in social psychology have focused on the issues of dual complexity attitude measures (DeCoster, Banner, Smith, & Semin, 2006;

Wilson, Lindsey, & Schooler, 2000) due to ambivalence in making choices between certain options. It indicated that attitudes would be changed depending on various different features of objects. In this sense, the results of interaction effects between the types of the two Asian foods and PFAs on explicit and implicit attitude showed that the significant interaction effects were found in explicit attitude, but not in implicit attitude. Based on the above results, it appeared that external (explicit) attitudes would be changed by perception of PFAs and/or the types of Asian foods in new experience or knowledge on the foods. In other words, the change of explicit attitudes could be more flexible than implicit attitudes in the sense that the image would be formed by much virtual and/or actual experience toward certain products (food or destination) in peoples' intrinsic minds.

5.3 Discussion of Findings of the Study

Hypothesis 1. There will be mean differences of perceived food attributes (PFAs) between Chinese food and Japanese food (Supported).

Hypothesis 1 of this study sought to examine the mean differences of PFAs between Chinese food and Japanese food. Results indicated that mean values of most attributes were found to be higher in the Japanese food than in the Chinese food in terms of food attributes of exotic, colorful, nutritious, dietetic, healthy, nourishing, unique, fresh, cultural, authentic, neat, attractive, and clean. Whereas, food attributes of aromatic, delicious, tasty, edible, and digestible were more significantly and positively

evaluated in Japanese food as compared to Chinese food. The results were consistent with a study by Jang et al. (2009), focusing on differences of the perception in satisfaction and performance within the context of various Asian foods. The understanding of consumer's perception on food attributes would be effectively employed in order to gain insight into consumer needs and wants in a competitive hospitality and tourism marketing (Jang et al., 2009). Thus, a better understanding of the results of this study allows marketers to achieve differentiated marketing strategies in a competitive advantage, leading to higher satisfaction.

Hypothesis 2.1. There will be mean difference of explicit attitudes between the two Asian foods (Chinese food and Japanese food)

Hypothesis 2.1 was not supported by paired-t test of current data. Results of the difference of explicit attitudes between the two Asian foods (Chinese food and Japanese food) showed that no significant mean differences were found in terms of the explicit attitude. The results might be consistent with a study by LaPiere (1934) which indicates that even though people have negative attitudes toward a certain object, they do not evaluate an object in measuring explicit attitude such as by self-report method.

Hypothesis 2.2. There will be mean difference of implicit attitudes between the two Asian foods (Chinese food and Japanese food)

Hypothesis 2.2 was supported by current data. The results showed that there was a statistically significant mean difference of the implicit attitude between Chinese food and Japanese food. This study focused primarily on whether significant mean differences of the explicit attitude between the two Asian foods exist and whether significant mean differences of the implicit attitudes between the two Asian foods were found in this study. Results indicated that explicit attitudes which reveal the results of no significant mean differences were inconsistent with the implicit attitudes found in statistically significant mean differences. When considering the features of measures of the implicit attitude in predicting peoples' intrinsic minds (Greenwald & Banaji 1995, De Houwer, 2006), the better understanding of implicit attitudes might admit new paradigms to uncover intrinsic attitudes on an object in the hospitality and tourism industry.

Hypotheses 3.1 and 3.2. There will be mean differences of intention to eat Asian foods and visit Asian destination in terms of Chinese food and Japanese food.

Hypotheses 3.1 and 3.2 were not supported by current data. No significant differences of both intention to eat Asian foods and intention to visit each Asian destination between the two Asian foods were found in this study. In spite of the fact that there were significant mean differences of PFAs, which indicated that respondents had different perception of PFAs between Chinese food and Japanese food, the two intentions on Asian foods were almost similarly evaluated by respondents between

Chinese food and Japanese food. This revealed the limitations of a study which focused on differences of intention in an evaluation of food services.

Hypothesis 4.1 PFAs have a positive impact on explicit attitudes

Hypothesis 4.1 was partially supported by current data. The positive relationship between attributes and attitudes has been examined in many hospitality and tourism studies. Despite the importance of a study which examines the influential antecedents of PFAS, there is a lack of research focused on the relationships between PFAs and attitudes. Thus, this study attempted to find the determinants on explicit attitudes. The result revealed that the two determinants of tastes and popularity had positive impacts on explicit attitude in perception of Chinese food, whereas a food attribute of health had a positive impact on explicit attitudes in perception of Japanese food. The results implied that participants (Caucasian) had different perceptions on PFAs in terms of explicit attitudes of each ethnic food (Chinese food vs. Japanese food) (Jang et al., 2009). In hospitality and tourism marketing, it is recommended that food information should be provided to improve awareness of Asian foods.

Hypothesis 4.2 PFAs have a positive impact on implicit attitudes

Hypothesis 4.2 was partially supported by current data. CFAs had an only marginally positive impact on the implicit attitude measured by reaction time in

psychological methodology. Implicit attitudes have been regarded as a critical issue in psychological research in order to examine the peoples' intrinsic feelings and thoughts (Greenwald, McGhee, & Schwartz, 1998; Fazio & Olson, 2003). This indicated that the individuals' intrinsic feelings and mindsets could not be changed by external food attributes such as PFAs in food service industry.

Hypothesis 5.1 to 5.8. There will be correlations among perceived food attributes (PFAs), explicit attitude (EA), implicit attitude (IA), and intentions on Asian Foods.

Hypotheses 5.1 to 5.8 regarding the correlation among PFAs, EA, IA, and the two intentions on Asian Foods were partially supported. The results showed that PFAs which include the dimensions of tasty, health, and popularity are positively correlated with EA and the two intentions (intention to eat Asian foods and to visit destinations to eat Asian foods). In terms of EA, it has a positive correlation with the two intentions. More specifically, a dimension of PFAs is positively correlated with the two intentions (i.e., intention to eat Asian foods and to visit destinations to eat Asian foods).

Hypotheses 6.1 and 6.2. There will be interaction effects between PFA and the types of Asian foods (Chinese food and Japanese food) on explicit attitude.

Hypotheses 6.1 and 6.2 regarding the interaction effects between the types of the two Asian foods and PFAs on the explicit and implicit attitude were partially

supported. The results of interaction effects between the types of the two Asian foods and PFAs on explicit and implicit attitude revealed that there were the significant interaction effects between the types of the two Asian foods and PFAs on explicit attitude, but not in implicit attitude. With better understanding of the results of interaction effects among factors in this study, it seemed that the extrinsic attitudes would be influenced by perception of PFAs and/or the types of Asian foods in formation of new knowledge (information) on the foods. That is, it is assumed that the implicit attitudes would be fixable, whereas the explicit attitudes would be more flexible than implicit attitudes. The significant results of this study should be reflected to make marketing strategies in the hospitality and tourism industry.

Table 22

Summary of Hypotheses Test

Hypothesis	Contents	Supported
H1	There will be mean differences of perceived food attributes between Chinese food and Japanese food	Yes[a]
H2	There will be mean difference of explicit and implicit attitudes between the two Asian foods (i.e., Chinese food and Japanese food)	
H2.1	There will be mean difference of explicit attitudes between the two Asian foods (i.e., Chinese food and Japanese food)	No
H2.2	There will be mean difference of implicit attitudes between the two Asian foods (i.e., Chinese food and Japanese food)	Yes
H3	There will be mean differences of intentions between Chinese food and Japanese food	
H3.1	There will be mean differences of intention to eat Asian foods between Chinese food and Japanese food	No
H3.1	There will be mean differences of intention to eat Asian foods between Chinese food and Japanese food	No
H4	PFAs have a positive impact on explicit and implicit attitudes in Both Chinese food and Japanese food	
H4.1.1	PFAs have a positive impact on explicit attitudes in Chinese food	Yes[a]
H4.1.2	PFAs have a positive impact on implicit attitudes in Japanese food	Yes[a]
H4.2.1	PFAs have a positive impact on explicit attitudes in Chinese food	Yes[a]
H4.2.1	PFAs have a positive impact on implicit attitudes in Japanese food	No
H5	There will be correlations among perceived food attributes (PFA), explicit attitude (EA), implicit attitude (IA), intention to eat Asian foods (IEAF), and intention to visit destinations to eat Asian foods (IVDEAF)	
H5.1.1	PFA will be positively related to EA in Chinese food	Yes[a]
H5.1.2	PFA will be positively related to EA in Japanese food	Yes[a]
H5.2.1	PFA will be negatively related to IA in Chinese food	No
H5.2.2	PFA will be negatively related to IA in Japanese food	No

H5.3.1	PFA will be positively related to IEAF in Chinese food	Yes[a]
H5.3.2	PFA will be positively related to IEAF in Japanese food	Yes[a]
H5.4.1	PFA will be positively related to IVDEAF in Chinese food	Yes[a]
H5.4.2	PFA will be positively related to IVDEAF in Japanese food	Yes[a]
H5.5.1	EA will be negatively related to IA in Chinese food	No
H5.5.2	EA will be negatively related to IA in Japanese food	No
H5.6.1	EA will be positively related to IEAF in Chinese food	Yes
H5.6.2	EA will be positively related to IEAF in Japanese food	Yes
H5.7.1	EA will be positively related to IVDEAF in Chinese food	Yes
H5.7.2	EA will be positively related to IVDEAF in Japanese food	Yes
H6	There will be interaction effects between PFA and the types of Asian foods (i.e., Chinese food and Japanese food) on explicit and implicit attitudes	
H6.1	There will be interaction effects between PFA and the types of Asian foods on explicit attitude	Yes
H6.2	There will be interaction effects between PFA and the types of Asian foods on implicit attitude	No

Yes[a=] Partially supported

5.4 Theoretical and Practical Implications

The main purpose of the study was to examine whether or not there were differences of perceived food attributes (PFAs), explicit attitudes, implicit attitudes, and the two intentions (intention to eat Asian foods and to visit a destination to eat Asian foods) between Chinese food and Japanese food in Americans. Its second purpose was to find the influential factors on explicit and implicit attitudes. The third purpose was to examine the interaction effects between the two types of Asian foods (Chinese vs.

Japanese food) and the perception of PFAs (high vs. low) on explicit and implicit attitudes. Base on the results of this study, several theoretical and practical implications were discussed in the hospitality and tourism marketing.

In regard to the theoretical implications in this study, the research model used in this study would be effective in predicting customers' behavior, in particular in the food service industry and destination marketing. Specifically, measures of implicit attitudes were applied to examine the individuals' (Caucasians) real intrinsic feelings and thoughts on Asian foods in psychological methodology. The understanding of the concept of implicit attitudes is important to apply it to the future studies focusing on measuring on individual's intrinsic attitudes in the hospitality and tourism sector. A variety of the attitude measures that are related to ambivalent feeling are not clear in a traditional method such as by self reported survey. Thus, Implicit Association Test (IAT), one of the some alternative approaches to the attitudes, can be efficiently used and readily adopted for better understanding of tourist psychology. Furthermore, the utility of IAT method help to uncover implicit and explicit attitudes simultaneously. With this usefulness of IAT, it seems to be possible to identify implicit and explicit feelings and thoughts by selecting appropriate tourism research topics in certain issues.

This study also suggests practical implications. In order to improve customer perceptions of PFAs while raising awareness, industrial practitioners in Asian food services need to make efforts at individual levels. Asian food marketers should consider ways of creating a positive, unique image of their foods for American customers by

employing distinctively significant food attributes of their foods in various Asian food contexts. More specifically, the marketers could build their appealing food attributes (image) to attract potential customers to visit a certain Asian restaurant compared to other ethnic restaurants and/or other Asian restaurants. Furthermore, it is recommended that food information should be provided to improve awareness of Asian foods. Consequently, the results found that industrial practitioners should focus on individual's awareness of Asian foods and the importance of PFAs in the hospitality and tourism marketing.

5.5 Limitations of the Study and Recommendation for Future Study

In spite of the fact that the findings of this study have potential limitations, several limitations exist. In this study, college student participants are not representative of the whole food consumers. Thus, future studies are needed to determine whether these findings can be replicated in other non-student populations. Another possible limitation is this study's small sample size in using both an experiment (N=39) and survey questionnaire (N=84), simultaneously. Even though the sample size for an experiment meets the minimum requirement, the sample size for survey questionnaire does not meet the minimum requirement for a simultaneous mulitiple regression and analysis of variance (ANOVA). This study also selected only two Asian foods for research participants' evaluation due to the inability to control respondents' familiarity with the various types of Asian foods. Regarding this, future researchers

should consider diverse Asian foods in order to generalize the research framework. In addition, this study examined the relationships among the salient constructs on PFAs, explicit and implicit attitudes, food intentions in the two foods by using multiple regression analyses and correlation analysis. In terms of little empirical research which focuses on examining the determinants of the explicit and implicit attitudes in perception of Asian foods, it will be possible for future research to do similar studies considering PFAs, explicit attitudes, and implicit attitudes to validate the results of this study in the hospitality and tourism research.

APPENDIX A

Approval of Institutional Review Board

Your human subject research project entitled A study of "Perceived Food Attributes, Attitudes, and Intention" on Asian Foods (i.e., Chinese and Japanese foods). meets the criteria for EXEMPT APPROVAL and will expire on March 12, 2011. Your approval will be contingent upon your agreement to annually submit the "Annual Exempt Research Certification" form to maintain current IRB approval.

You must submit the Annual Exempt Research Certification form 30 days prior to the expiration date. Failure to timely submit the certification form by the deadline will result in automatic expiration of IRB approval.

Study Changes: If you wish to revise your exempt project, you must complete the Exempt Amendment Form for review.

Please be aware that all human subject research activities must receive prior approval by the IRB prior to initiation, regardless of the review level status. If you have any questions regarding the IRB process, do not hesitate to contact the Campus IRB office at (573) 882-9585.

Campus Institutional Review Board

APPENDIX B

Consent Form

You are invited to participate in a study investigating travelers' feeling and opinions about two countries, China and England. As a major part of the research, this study is designed to better understand customer reactions to destination image.

Your participation in this study is VOLUNTARY and you can withdraw at any time. **For those who do not want to participate in the study or feel uncomfortable with the study, there will be other alternative assignments that give exactly same bonus points.** Those who choose one of alternative assignments will be asked to turn in the one page short answer for the definition of the marketing term which they choose. As the alternative assignment, five marketing terms will be provided, and students will be expected to choose one of them. The amount of time for the both study participation and assignment will be virtually equal. I would like to ensure that **there will be no other effects on the grade of participating or choosing a different extra credit assignment no matter what extra credit assignment the student choose.**

This study is strictly for research purposes only. The information you provide will be kept CONFIDENTIAL and will NOT be disclosed. For absolute ANONYMITY the questionnaire has no ID number/identifier so your participation cannot be identified. No reference will be made in written or oral materials that could link you to this study. All records will be stored in a locked facility at University of Missouri for at most 3 years after completion of the study. After the storage time the information gathered will be destroyed.

Survey process is as below:

- **You will sit in the computer table and answer a series of questions in the computer monitor**

The study will take about 15 minutes to complete.
Your decision whether or not to participate will not prejudice your future relations with the University of Missouri. If you decide to participate, you are free to withdraw and discontinue participation at any given time without prejudice.
If you have any questions at any time, please do not hesitate to contact study coordinator, Kwangho Lee at e-mail: klk99@mail.missouri.edu, 111 Eckles Hall. This project has received approval by the University of Missouri-Columbia Campus Institutional Review Board (IRB) for Human Subjects. If you have further questions, you may contact the Campus IRB Compliance Office at 483 McReynolds Hall, tel: 882-9585.

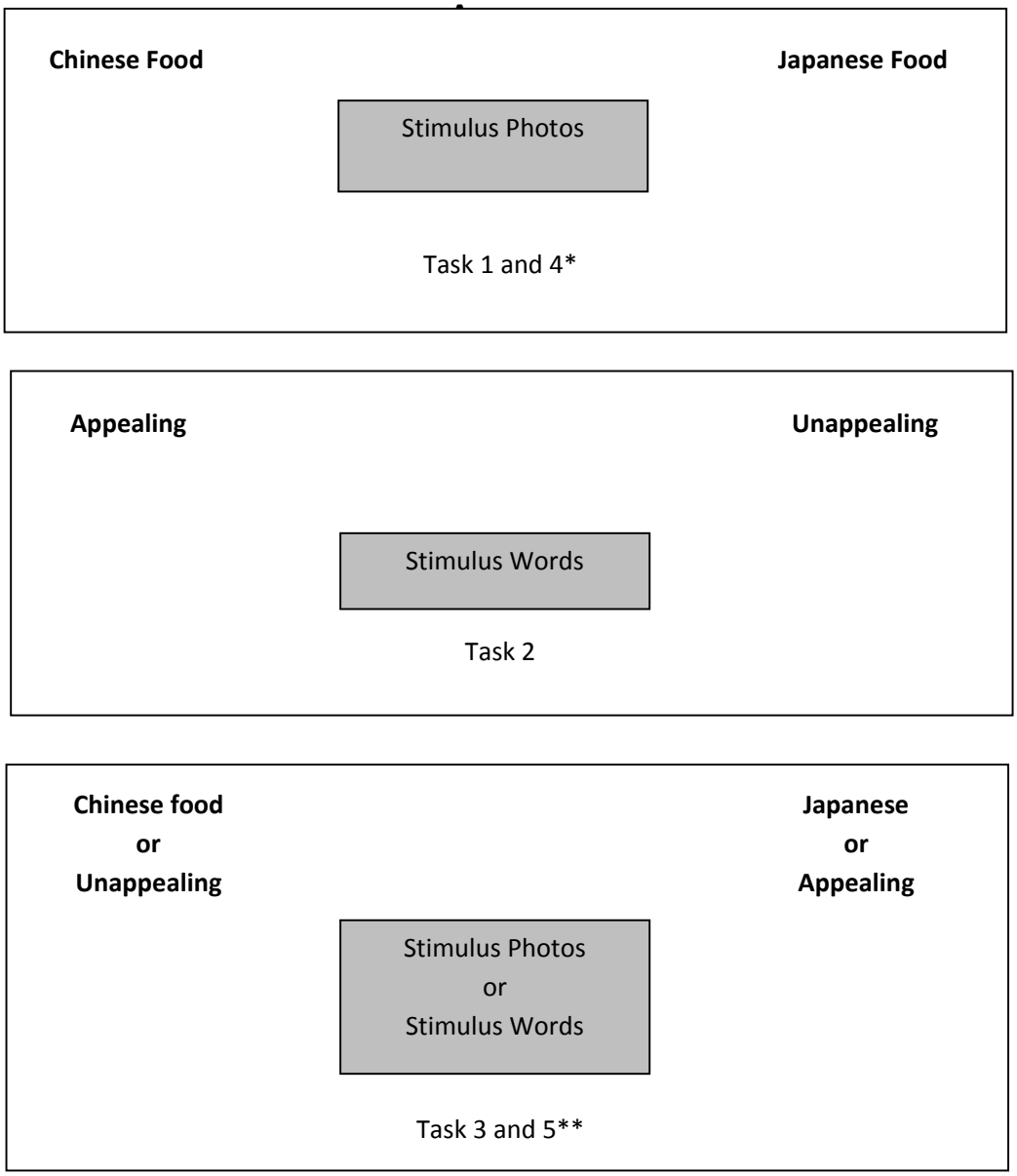
Please indicate your agreement to participate in this study by signing this consent form on the following page. Your signature indicates that you have thoroughly read and understood the information provided and that you have agreed to participate. You may withdraw at any time without prejudice after signing this form if you choose to do so. You will be given a copy of this form to keep for your records.
Thank you for your participation!

Name: _____

Signature: _____ **Date: _____**

Principal Investigator: _Kwangho Lee_ **Signature:_____**

APPENDIX C



Note:

*The position of two foods in Task 1 is reversed in Task 4.

**The association of "Chinese food or Unappealing, and "Japanese food or Appealing in Task 3 is reversed in Task 5.

*** The half of participants took 1-2-3-4-5 order, and the half took 1-2-5-4-3, in order to check learning/familiarity effects, and both orders are not significantly different (no learning/familiarity effects).

APPENDIX D

Questionnaire for Food Attributes

I.D:_____

Thank you for your participation in advance! The goal of this study is designed to understand "***Perceived Food Attributes, Attitudes, and Intention***" of Asian Foods (i.e., Chinese and Japanese foods). Please answer carefully about following questions.

A. Individual Characteristics

How frequently do you visit *Asian restaurants*?

❒ Not more than once a year ❒ 2 to 4 times per year ❒ Once a month ❒ 2 to 4 times per month ❒ 5 or more times per month

Who usually accompanies you to visit Asian restaurants ? (***Please check one***)

❒ Family/relatives ❒ Friends ❒ Business associates ❒ Alone

Which information sources did you use to obtain information about Asian foods ? (***Please check ALL that apply***)

❒ Relatives/colleagues/friends ❒ Internet ❒ Food guidebooks ❒ TV/radio
❒ Newspaper/magazine ❒ Asian Restaurants ❒ Other (Specify)_____

How many *Chinese and Japanese restaurants* have you visited in the last month ?
Chinese restaurants: (_____) times, *Japanese restaurants*: (_____) times

When do you usually dine out for Asian food? (***Please check one***)

❒ Lunch ❒ Diner ❒ Other (Specify)_____

How much do you usually spend per person when you dine out at Asian restaurants? (***Ex clude Tip***)

6-1. ***Chinese food***: Lunch:_____ dollar, Diner:_____dollar

6-2. ***Japanese food***: Lunch:_____ dollar, Diner:_____dollar

How much do you usually spend per person for tips at Asian restaurants?
(***Please write down % based on total payment***)

7-1. Lunch:_____ %, Diner:_____ %

Have ever visited ***China*** or ***Japan*** ?
China: ❒ Yes (____times) ❒ No ***Japan:*** ❒ Yes (___ times) ❒ No

B. Perceived Food Attributes on Asia Food

▣ The following questions ask you about your feelings regarding "***Perceived Attributes***" on ***Chinese Food***. Please rate from 1 to 7, with 1 "*Strongly disagree*" and 7 "*Strongly agree*"

Food Attributes	①-----②-----③-----④-----⑤-----⑥-----⑦ *Strongly disagree* ←----------*Neutral*----------> *Strongly agree*
Exotic	①-----②-----③-----④-----⑤-----⑥-----⑦
Abundant	①-----②-----③-----④-----⑤-----⑥-----⑦
Colorful	①-----②-----③-----④-----⑤-----⑥-----⑦
Aromatic	①-----②-----③-----④-----⑤-----⑥-----⑦
Popular	①-----②-----③-----④-----⑤-----⑥-----⑦
Nutritious	①-----②-----③-----④-----⑤-----⑥-----⑦
Dietetic	①-----②-----③-----④-----⑤-----⑥-----⑦
Healthy	①-----②-----③-----④-----⑤-----⑥-----⑦
Nourishing	①-----②-----③-----④-----⑤-----⑥-----⑦
Pleasing	①-----②-----③-----④-----⑤-----⑥-----⑦
Delicious	①-----②-----③-----④-----⑤-----⑥-----⑦
Tasty	①-----②-----③-----④-----⑤-----⑥-----⑦
Edible	①-----②-----③-----④-----⑤-----⑥-----⑦
Unique	①-----②-----③-----④-----⑤-----⑥-----⑦
Cultural	①-----②-----③-----④-----⑤-----⑥-----⑦
Fresh	①-----②-----③-----④-----⑤-----⑥-----⑦
Authentic	①-----②-----③-----④-----⑤-----⑥-----⑦
Neat	①-----②-----③-----④-----⑤-----⑥-----⑦
Attractive	①-----②-----③-----④-----⑤-----⑥-----⑦
Clean	①-----②-----③-----④-----⑤-----⑥-----⑦
Speedy	①-----②-----③-----④-----⑤-----⑥-----⑦
Convenience	①-----②-----③-----④-----⑤-----⑥-----⑦
Digestible	①-----②-----③-----④-----⑤-----⑥-----⑦

▣ The following questions ask you about your feelings regarding "***Perceived Attributes***" on ***Japanese Food***. Please rate from 1 to 7, with "1 *Strongly disagree*" and "7 *Strongly agree*"

Food Attributes	①-----②-----③-----④-----⑤-----⑥-----⑦ *Strongly disagree* ←----------*Neutral* ----------> *Strongly agree*
Exotic	①-----②-----③-----④-----⑤-----⑥-----⑦
Abundant	①-----②-----③-----④-----⑤-----⑥-----⑦
Colorful	①-----②-----③-----④-----⑤-----⑥-----⑦
Aromatic	①-----②-----③-----④-----⑤-----⑥-----⑦
Popular	①-----②-----③-----④-----⑤-----⑥-----⑦
Nutritious	①-----②-----③-----④-----⑤-----⑥-----⑦
Dietetic	①-----②-----③-----④-----⑤-----⑥-----⑦
Healthy	①-----②-----③-----④-----⑤-----⑥-----⑦
Nourishing	①-----②-----③-----④-----⑤-----⑥-----⑦
Pleasing	①-----②-----③-----④-----⑤-----⑥-----⑦
Delicious	①-----②-----③-----④-----⑤-----⑥-----⑦
Tasty	①-----②-----③-----④-----⑤-----⑥-----⑦
Edible	①-----②-----③-----④-----⑤-----⑥-----⑦
Unique	①-----②-----③-----④-----⑤-----⑥-----⑦
Cultural	①-----②-----③-----④-----⑤-----⑥-----⑦
Fresh	①-----②-----③-----④-----⑤-----⑥-----⑦
Authentic	①-----②-----③-----④-----⑤-----⑥-----⑦
Neat	①-----②-----③-----④-----⑤-----⑥-----⑦
Attractive	①-----②-----③-----④-----⑤-----⑥-----⑦
Clean	①-----②-----③-----④-----⑤-----⑥-----⑦
Speedy	①-----②-----③-----④-----⑤-----⑥-----⑦
Convenience	①-----②-----③-----④-----⑤-----⑥-----⑦
Digestible	①-----②-----③-----④-----⑤-----⑥-----⑦

C.Food Attitudes on Asia Food

▣ The following questions ask you about your views regarding "***Food Attitudes***" on ***Chinese and Japanese Food***. Please rate from 1 to 7, with "1 *Strongly disagree*" and "7 *Strongly agree*"

Food Attitudes	①-----②-----③-----④-----⑤-----⑥-----⑦ *Strongly disagree* <---------- *Neutral-* ----------> *Strongly agree*
Chinese Food	
I like Chinese food very much	①-----②-----③-----④-----⑤-----⑥-----⑦
I would like to have Chinese food in the near future	①-----②-----③-----④-----⑤-----⑥-----⑦
I would like to recommend Chinese food to my close friends and relatives	①-----②-----③-----④-----⑤-----⑥-----⑦
I would like to talk about positive things of Chinese food	①-----②-----③-----④-----⑤-----⑥-----⑦
Overall, I have favorable preference about Chinese food	①-----②-----③-----④-----⑤-----⑥-----⑦
Japanese Food	
I like Japanese food very much	①-----②-----③-----④-----⑤-----⑥-----⑦
I would like to have Japanese food in the near future	①-----②-----③-----④-----⑤-----⑥-----⑦
I would like to recommend Japanese food to my close friends and relatives	①-----②-----③-----④-----⑤-----⑥-----⑦
I would like to talk about positive things of Japanese food	①-----②-----③-----④-----⑤-----⑥-----⑦
Overall, I have favorable preference about Japanese food	①-----②-----③-----④-----⑤-----⑥-----⑦

D.Intention on Asia Food

▣ Please indicate how strongly you agree with the following statements about *"Chinese/Japanese Food"*

Intention	①-----②-----③-----④-----⑤-----⑥-----⑦ *Strongly disagree* <---------- *Neutral*----------> *Strongly agree*
After seeing the photos of each food...	
I am willing to eat ***Chinese food*** in the near future	①-----②-----③-----④-----⑤-----⑥-----⑦
I am willing to eat ***Japanese food*** in the near future	①-----②-----③-----④-----⑤-----⑥-----⑦
After seeing the photos of each food...	
I would like to visit ***China*** to eat ***Chinese Food***	①-----②-----③-----④-----⑤-----⑥-----⑦
I would like to visit ***Japan*** to eat ***Japanese Food***	①-----②-----③-----④-----⑤-----⑥-----⑦

▣ Please rate your level of ***knowledge*** about Asian foods?

Chinese Food: ①--------②--------③--------④--------⑤--------⑥--------⑦

Do not know very well — Neutral — Know very well

Japanese Food: ①--------②--------③--------④--------⑤--------⑥--------⑦

Do not know very well — Neutral — Know very well

▣ Please rate your level of ***liking*** about Asian foods ?

Chinese Food: ①--------②--------③--------④--------⑤--------⑥--------⑦

Strongly not liking — Neutral — Strongly liking

Japanese Food: ①--------②--------③--------④--------⑤--------⑥--------⑦

Strongly not liking — Neutral — Strongly liking

⊙ I appreciate your sincere responses to the questions included in the survey

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