Beliefs and Barriers to Food Safety Training at Chinese Restaurants

Pei Liu
Department of Hospitality Management and Dietetics
Kansas State University

and

Junehee Kwon
Department of Hospitality Management and Dietetics
Kansas State University

ABSTRACT

The purpose of this study is to assess beliefs of food safety training and examine relationships between attitudes, subjective norms, perceived behavior control, and behavior intention to implement food safety training at Chinese restaurants using the Theory of Planned Behavior (TpB) Model. A survey questionnaire will be developed based on TpB, literature review and an elicitation study, reviewed by an expert panel, and pilot-tested. The final questionnaire will be mailed to 500 randomly selected Chinese restaurant managers in the Midwestern U.S. Linear and logistic regression analyses and Structural Equation Modeling technique will be used to analysis the data using the SPSS for Windows Version 17.0 and Amos Version 17.0 with p<0.05. Based on the finding, recommendations will be made for food safety training strategies for Chinese restaurants.

Keywords: Food safety training, the Theory of Planned Behavior, Chinese restaurants, ethnic restaurants, behavior intention

INTRODUCTION

The racial/ethnic minority population in the U.S. has increased significantly during the recent decades with more than 25% of Americans belonging to an ethnic/racial minority group. Among these, Asian population has continually increased from 3.6% of the total population in 2000 to 4.4% in 2008 and is expected to reach over 10% of population by 2050 (U.S. Census Bureau, 2008).

As the ethnic minority population increases, more Americans have become exposed and interested in food from different cultures. Howell (2005) contended that demand for ethnic foods will increase by 50% over the next decades reaching $75 billion in sales. Among ethnic population, Asians and Hispanics own the most restaurants. As of 2009, 15% of total independent restaurant establishments were owned by Asians and 8% by Hispanics (NRA, 2009). Chinese food is considered as one of the America’s favorite ethnic cuisines evidenced by nearly 41,000 Chinese restaurants in the U.S., which is twice the number of McDonald’s restaurants in the U.S. (Chinese Restaurant News, 2007). Over 90% of Americans have tried Chinese food, and 63% eat Chinese food every month (George, 2001).
Liu and Jang (2008) found that food safety was one of top five attributes affecting customers’ restaurant choices. The majority of customers indicated that they would not return to a restaurant with poor hygiene, even if the quality and price were good (Mori, 2005; Worsfold, 2006). These findings suggest that ensuring food safety at a restaurant is essential not only for public health but for customer loyalty (Grindy, 1998).

Although progress has been made in reducing food safety risks in the U.S., foodborne illnesses remain as a common problem especially among ethnic foods. The U.S. Centers for Disease Control and Prevention (CDC) reported that foodborne outbreaks associated with ethnic foods rose from 3% to 11% from 1990 to 2000, mostly from Mexican, Italian and Asian foods (Simonne, Nille, Evans, & Marshall, 2004).

Improper food temperature control, cross-contamination, and employee hygiene were the top concerns in ethnic restaurant operations (Mauer et al., 2006). Environmental cleanliness was also identified as one area which Chinese restaurants need to improve (Liu & Jang, 2008). Although Rudder (2006) found that ethnic restaurant operators were willing to learn proper food safety practices, they didn’t completely understand the importance of food safety nor the relevance to their establishments.

Restaurant inspection results of ethnic restaurants also identified challenges (Kwon, Roberts, Shanklin, Liu, & Yen, 2010). Kwon et al. indicated that ethnic restaurants were more frequently inspected and had more critical and non-critical violations than non-ethnic restaurants. Time and temperature control for safety (TCS) foods, physical facility maintenance, protection from contamination, hand hygiene, proper use of utensils, and demonstrated knowledge have been identified as the most frequently violated. Kwon et al. contended that foods safety training for independent ethnic restaurants is needed.

Several food safety training programs are available for restaurants. ServSafe® developed by the National Restaurant Association Educational Foundation is the most widely used food safety training program. Roberts, Barrett, Howells, Shanklin, Pilling & Brannon (2008) confirmed that four-hour ServSafe® food safety training improved knowledge and food safety behavioral compliance associated with hand washing, use of thermometers, and handling of work surfaces, but improved knowledge alone did not increase behavior intention to handle food properly. Additionally, participants studied by Roberts et al. did not include any ethnic restaurateurs due to unwillingness to participate.

Few studies have been conducted to identify the beliefs and barriers to provide food safety training at Chinese Restaurants. The proposed study will determine what Chinese restaurants operators believe regarding food safety training and barriers to safe food handling. Therefore, the purpose of this study is to assess beliefs of food safety training and examine relationships between attitudes, subjective norms (SN), perceived behavior control (PBC), and behavior intention to implement food safety training at Chinese restaurants using the Theory of Planned Behavior (TpB) Model.

**METHODOLOGY**
The purpose of the study is to investigate the antecedents that impact Chinese restaurant owners to provide and implement food safety training in the foodservice establishments. A flow chart of the research procedures is presented in Figure 1.

Elicitation Study:

To identify the current beliefs and barriers of food safety training at Chinese restaurants, 10 to 15 Chinese restaurant owners in a Midwestern college town will be selected and interviewed. A convenience sample will be selected from the list of independent Chinese foodservice establishments. The interview questions will be developed based on literature review and research objectives, and results will be used to develop the survey questionnaire.

Instrument Development and Pilot Study:

A survey questionnaire will be developed based on TpB, literature review and the elicitation study. The questionnaire will include respondents’ beliefs of food safety training,
attitudes (how restaurant managers feel about providing food safety training), SN (perceived influences of other restaurant managers regarding providing food safety training), and PBC (situations and conditions allowing or interfering with managers’ intention to provide food safety training) at Chinese restaurants. The dependent variables, behavior intention to provide food safety training at the Chinese restaurants, and demographic information will also be included. All questions will use Likert-type scales.

The initial questionnaire will be reviewed by an expert panel to ensure content validity. The questionnaire then will be translated into traditional Chinese by bilingual researcher. To make sure the translation is correct; the Chinese version of the questionnaire will be back-translated into English and compared with the original instrument. Once translation is completed, the Chinese questionnaire will be pilot tested for reliability (Cronbach’s alpha > 0.80) and usability with 50 Chinese restaurant owners. The questionnaire will be revised based on pilot-test results as appropriate.

Sample Selection and Data Collection:

The target population is the owners of Chinese restaurants located in Midwestern states. Five hundred Chinese restaurants from different cities will be randomly selected from Yellowpages.com. A copy of the questionnaire with a cover letter and self-addressed, postage-paid envelope will be sent to randomly-selected Chinese restaurant owners. Two weeks later, a follow-up postcard will be sent to those who have not completed the survey. The expected rate of return is 30%.

Statistical Analyses:

Descriptive statistics will be calculated to summarize the data. Linear and logistic regression analyses will be applied to estimate the relationships between behavior intention and independent variables (e.g., attitudes, SN, & PBC). Structural equation modeling technique will be used to evaluate the model fitting as a confirmatory data analysis method (Byrne, 1994). Data will be analyzed using the SPSS for Windows Version 17.0 and Amos Version 17.0 (2007, SPSS Inc, Chicago, IL) with \( p < 0.05 \).

REFERENCES


