

Final Report

"Occupational Experience of Immigrants Working in Restaurants"

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Abstract

Background and Purpose: The eating and drinking (E&D) industry is the third largest employment sector in the United States; and restaurant workers make up the largest proportion of E&D workers. It is estimated that E&D workers sustain more than 5 percent of reported nonfatal injuries nationwide. Washington State reports even higher rates with a 7.6% injury rate in 1999. The E&D industry, and in particular the restaurant industry, is one of the most common workplaces for Chinese immigrants; however, little is known about the specific work experiences of Chinese immigrant workers. This study used an ecological model to examine the experiences of Chinese immigrant restaurant workers and to identify factors that affect these workers' occupational health and safety. The ecological framework that guided this study consisted of four levels of influence: microenvironment, organizational, socio-community and macroenvironment.

Methods: The ethnographic approach used for this study consisted of individual interviews, participant observations in full-service restaurants, and questionnaires. Eighteen Chinese immigrant workers in the Greater Seattle area of Washington State meeting the following criteria were interviewed: (1) foreign-born Chinese, (2) age 18 or over, (3) Mandarin (Chinese) or English speaking, and (4) had at least 6 months work experience in restaurants at the time of interview. Half of the participants were from China, four from Hong Kong, and five from Taiwan. The mean age was 48.8 years (SD=13.5). The years of working in restaurants at the time of the interview ranged from 10 months to 25 years (Mean=6.3 years, SD=7.6). Their roles included busperson, waitperson, cashier, dishwasher, food preparation assistant, cook, and restaurant owner. Each participant was interviewed individually. Questionnaires were collected to obtain demographic and immigration information, health status, and perceived stress levels from demands of immigration. The principles of ethnographic content analysis guided qualitative data analysis. Means and frequency were used to summarize the questionnaire data.

Results: Adjustment to occupation and to language was the most stressful demands of immigration to the participants. Non-fatal injuries (e.g., cuts, small oil burns) or noticeable physical or psychological discomfort (e.g., pain in fingers, wrists, shoulders or knees; sore legs or back; sleep problems) were the primary occupation injury and illness experiences of the participants. Business volume, hierarchical worker structure, and needing to use English for communication with customers (psychosocial); extreme temperature, broken glasses or dishes, and noise from kitchen hoods (physical); slippery floor and repetitive motions from operating equipment (environmechanical); and bleach (chemical) were hazards emerged from the data. Psychosocial hazards were their biggest concern. No participant was aware of the material safety data sheets; neither did they receive formal safety training when they started the job. Factors influencing these workers' occupational safety and health included attitude towards the use of protective devices and attitudes about self-care (individual); nature of interactions with co-workers (microenvironment); level of management support and worker's roles (organizational); location of restaurant and existence of Chinese communities (socio-community) and racism and barriers to choice (macroenvironment).

Implications: Chinese immigrant restaurant workers face multiple hazards at work and experience an array of psychosocial and physical health problems as a result of their exposure to these hazards. Multiple factors, ranging from individual to macroenvironment, influence these workers' exposure to hazards and health outcomes. To effectively address the occupational safety and health of Chinese immigrant restaurant workers, multi-level approach is recommended. For instance, public health should work with policy makers to ensure that work safety training is provided to these workers and the employers and also work with the employers and workers to ensure that health and safety measures are always properly used in restaurants. Chinese communities and advocacy groups should also be invited to be part of the problem-solving process. The latter, or the community-partnered approach, is particularly critical to the worker populations, such as Chinese immigrant restaurant workers, who are unusually vulnerable to exposures to hazards.

Highlights/Significant Findings

This section of the report includes a brief description of the most important findings. The highlights for each specific aim are as follows:

Aim 1: Identify and describe the types of occupational injuries and illnesses that occur among Chinese immigrant workers.

Health concerns reported were non-fatal injuries (e.g., cuts, small oil burns) or noticeable physical or psychological discomfort (e.g., pain in fingers, wrists, shoulders or knees; sore legs or back; sleep problems).

Aim 2: Describe Chinese immigrant restaurant workers' perceptions about work-related hazards and risks.

The workers recognized physical, chemical, environmental, and psychosocial hazards. Psychosocial hazards were the most often mentioned; biological hazards were not mentioned at all. Most of the participants did not think that working in restaurant were "dangerous."

Aim 3: Examine these workers' occupational health and safety knowledge related to such things as regulatory requirements, worker protection, and safe work practices.

None of the workers was aware of the material safety data sheets. They were aware of food safety requirement and inspection for food safety and fire safety; some heard about the worker compensation system although none used it before. None of them received formal safety training. They were aware of protective measures such as individual protective devices (e.g., gloves, goggles, comfortable and anti-slippery shoes) and proper body mechanisms; however, they did not always practice them.

Aim 4: Identify individual and contextual factors influencing the occupational experiences of these workers.

Using the ecological framework, individual and four ecological levels of influence were identified. Factors included attitude towards the use of protective devices and attitudes about self-care (individual); nature of interactions with co-workers (microenvironment); level of management support and worker's roles (organizational); location of restaurant and existence of Chinese communities (socio-community); and racism and barriers to choice (macroenvironment).

Aim 5: Determine the optimal way to collect valid and reliable data about occupational hazards and risks among Chinese immigrant workers.

Personal connections were an important factor for successful recruitment. Rapport that the participants and the interviewer already had as a result of their prior association increased the participants' willingness to share their experiences. Participant-observation was a valuable method for confirming interview data and generating new questions for interviews.

Translation of Findings

Conducting Research with Special Population-at-Risk:

This ethnographic study resulted in an in-depth understanding of 18 Chinese immigrants who worked in the restaurant industry. Although we were able to enroll participants who had a range of work experiences, because of their busy schedule, it was challenging to recruit participants. Being flexible with our availability and being strategic with our interviews so that we would be able to obtain as much information as possible in the first interview were found critical.

Need Attend More to Psychosocial Hazards at Workplace and These Workers' Mental Health:

Hazards associated with restaurant work have been described and categorized in the literature as physical, chemical, biological, enviromechanical, and psychosocial. Among them, psychosocial hazards are the least studied. This study, however, found that psychosocial hazards (e.g., relationships among workers across job categories, business volume, communication with English-speaking customers) were the most often mentioned by the workers, and that psychosocial and physical health consequences, resulting from the identified psychosocial hazards, were most bothersome to the workers. More funding is needed for larger scale studies to enhance our understanding of the psychosocial hazards that Chinese immigrant workers face in restaurants and the effects of these hazards on the workers' mental health and work performance. Interventions need to address this area of concern to better promote these workers' psychosocial well-beings.

Need Consider Factors Beyond Workplace:

External social context, including location of restaurant, existence of Chinese communities, racism, and barriers to choice, were found influencing these workers' health and safety. Although it is important to address factors at the organizational level, the findings suggest that external social context needs to be considered and could be addressed through mechanisms such as advocacy, community involvement, and policies.

Integrate Safety Training with Food Safety Training:

Work-related safety training was not provided to the workers. Currently each worker is required to receive food safety training and obtain a permit in order to work in food services. A possible solution to deliver the safety training to the workers is to integrate safety training with the currently required food safety training. Thus, the workers will receive the information and be evaluated for their safety knowledge prior to their first day of work.

Outcomes/Relevance/Impact

To our best knowledge, this study was the first study that examined Chinese immigrant restaurant workers' occupational health and safety experiences and related factors. Restaurants have had a vital role in Chinese immigrants' economic survival and adaptation to the United States since the 1900's. Findings of this study offer insight into Chinese immigrant restaurant workers' occupational injuries and illness, hazards and risks, and factors influencing their health and safety. The PI has been contacted by two service providers in the community about the study findings and translation of the findings for the use in their service to the Chinese workers.

Scientific Report

Background and Specific Aims

As of 2006, the restaurant industry is the largest private employment sector in the U.S., employing an estimated 12.5 million people and expected to add 1.9 million jobs by 2016.¹ Most restaurant businesses are small, and lower-skilled workers represent the largest segment of the employees in this industry.² For many Chinese immigrants, restaurants are a primary source of their economic survival in the United States.³ Although the many hazards of this industry have been documented, little is known about the specific work experiences of Chinese immigrant workers. This study used an ecological model to examine the experiences of Chinese immigrant restaurant workers and to identify factors that affect these workers' occupational health and safety. The ecological framework that guided this study consisted of four levels of influence: microenvironment, organizational, socio-community and macroenvironment. The specific aims were to: (1) identify and describe the types of occupational injuries and illnesses that occur among Chinese immigrant workers; (2) describe Chinese immigrant restaurant workers' perceptions about work-related hazards and risks; (3) examine these workers' occupational health and safety knowledge related to such things as regulatory requirements, worker protection, and safe work practices; (4) identify individual and contextual factors influencing the occupational experiences of these workers; and (5) determine the optimal way to collect valid and reliable data about occupational hazards and risks among Chinese immigrant workers.

Methodology and Procedures

The ethnographic approach used for this study consisted of individual interviews, participant observation in full-service Chinese restaurants, and questionnaires. Snowball referral was used to recruit Chinese immigrants meeting the following criteria: foreign-borne Chinese, 18 years of age or older, spoke Chinese or English and worked in a restaurant for at least 6 months at the time of interview. Interviews were taped (with permission) and transcribed for data analysis.

Findings

Eighteen Chinese workers participated in the study. All of them completed a Demand of Immigration Scale, a General Health Questionnaire (GHQ), and a Demographic and Immigration Questionnaire. The PI also conducted participant-observations in eight Chinese-owned, full-service Chinese or Asian restaurants during lunch or dinner hours. The participants reported that adjustment to occupation and to language were the most stressful areas to them. None of their scores on the GHQ was below the cut-off score for psychopathology.

Aim 1: injuries and illnesses. None of the participants experienced injuries at work that required medical treatment. One reported that one of his co-workers went to hospital for a serious cut injury and subsequently took a few days off from work. Non-fatal injuries (e.g., cuts, small oil burns) or noticeable physical or psychological discomfort (e.g., pain in fingers, wrists, shoulders or knees; sore legs or back; sleep problems) were the primary occupational injury and illness experiences of the participants.

Aim 2: perceived hazards and risks. The workers recognized physical, chemical, environmechanical, and psychosocial hazards. Examples included business volume, hierarchical worker structure, and needing to use English for communication with customers (psychosocial); extreme temperature and broken glasses or dishes (physical); slippery floor and repetitive motions from operating equipment (environmechanical); and bleach (chemical). Noise from kitchen hoods and heat from stoves were noticed in the participant-observations; yet, no participant mentioned either of these two physical hazards. Psychosocial hazards were the most often mentioned; biological hazards were not mentioned at all. Most of the participants did not think that working in restaurant were "dangerous."

Aim 3: health and safety knowledge. None of the participants was aware of the material safety data sheets. They were familiar with the food safety training and permit requirement and the inspection for food and fire safety. For regulatory requirements, some knew about the worker compensation system. They were aware of protective measures such as gloves, gargles, comfortable and anti-slippery shoes, and proper body mechanisms; however, they did not always practice them.

Aim 4: individual and contextual factors. Using the ecological framework, individual and four ecological levels of influence were identified. Factors included attitude towards the use of protective devices and attitudes about self-care (individual); nature of interactions with co-workers (microenvironment); level of management support and worker's roles (organizational); location of restaurant and existence of Chinese communities (socio-community); and racism and barriers to choice (macroenvironment).

Aim 5: optimal way to collect valid and reliable data. Although it was challenging to recruit participants, once they agreed to participate, they were open to share their experiences with us. The participants were recruited through the PI's and the research assistant's networks. Rapport and trust were already in place and had a vital role in our abilities to collect valid and reliable data. Triangulation with other data collection methods was valuable for confirming interview data and generating new questions for interviews.

Discussion and Conclusions

Chinese immigrant restaurant workers face multiple hazards at work and experience a range of psychosocial and physical health problems as a result of their exposures to these hazards. Practitioners should routinely take occupational history to help differentiate work-related from non-work-related health concerns and identify work-related problems early. Among all hazards, psychosocial hazards were the workers' biggest concern. This study identified several sources affecting Chinese workers' stress, emotional strain, and interpersonal relationships at work. Studies with large samples and greater diversity in demographics, sources of data (e.g., worker's family), and outcome measures are needed for a comprehensive understanding of psychosocial hazards Chinese workers face in restaurants and the effects of these hazards on their health. Furthermore, the workers' exposure to hazards and risks for illnesses and injuries are influenced by individual and four ecological levels of influences. To effectively address the occupational safety and health of Chinese immigrant restaurant workers, multi-level approach is needed. Traditionally occupational safety and health interventions focus on working with employees, employers, service providers, and policy makers. Community-partnered approach is recommended and needed, especially for addressing the socio-community and macroenvironment factors for these workers who are unusually vulnerable to hazards.

References

1. National Restaurant Association. 2006 Restaurant industry fact sheet; 2006. <http://www.restaurant.org/pdfs/research/2005factsheet.pdf>. Accessed March 28, 2006.
2. Bureau of Labor Statistics. Food services and drinking places (Bulletin 2601): U.S. Department of Labor; 2005. Available at: <http://www.bls.gov/oco/cg/print/cgs023.htm>. Accessed March 18, 2006.
3. Wong B. *Ethnicity and entrepreneurship: The new Chinese immigrants in the San Francisco Bay area*. Boston, MA: Allyn & Bacon; 1998.

Publications

Aim 1:

Tsai, JHC: [in press] Chinese Immigrant Restaurant Workers' Injury and Illness Experiences. Archives of Environmental and Occupational Health: An International Journal.

[Note: This article is scheduled for publication in Summer, 2009]

Aim 1 and Aim 3:

Tsai, JHC, Salazar, MK: [2007] Restaurant Workers' Safety and Health: Chinese Immigrants' Experiences. Communicating Nursing Research, 40(15), 309.

Aim 2:

Tsai, JHC, Salazar, MK: [2005] Occupational Hazards Faced by Chinese Immigrants in the Restaurant Industry. Proc of 2005 Sigma Theta Tau International 16th International Nursing Research Congress, Big Island, Hawaii, July 14-16.

Tsai, JHC, Salazar, MK: [2007] Occupational Hazards and Risks in Restaurants Faced by Chinese Immigrant Workers. Family and Community Health, 30(2S): S71-S79.

Aim 4:

Tsai, JHC, Bruck, A: [2009] Sociocultural Contexts and Worker Safety and Health: A Study of Chinese Immigrant Restaurant Workers. AAOHN Journal, 57(2): 51-58.

Inclusion of Gender and Minority Study Subjects

Study Title: Occupational Experience of Immigrants Working in Restaurants
Total Enrollment: 18 **Protocol Number:** 20
Grant Number: R03 OH007840

PART A. TOTAL ENROLLMENT REPORT: Number of Subjects Enrolled to Date (Cumulative) by Ethnicity and Race

Ethnic Category	Sex/Gender			Total
	Females	Males	Unknown or Not Reported	
Hispanic or Latino	0	0	0	0 **
Not Hispanic or Latino	8	10	0	18
Unknown (individuals not reporting ethnicity)	0	0	0	0
Ethnic Category: Total of All Subjects*	8	10	0	18 *
Racial Categories				
American Indian/Alaska Native	0	0	0	0
Asian	8	10	0	18
Native Hawaiian or Other Pacific Islander	0	0	0	0
Black or African American	0	0	0	0
White	0	0	0	0
More Than One Race	0	0	0	0
Unknown or Not Reported	0	0	0	0
Racial Categories: Total of All Subjects*	8	10	0	18 *

PART B. HISPANIC ENROLLMENT REPORT: Number of Hispanics or Latinos Enrolled to Date (Cumulative)

Racial Categories	Females	Males	Unknown or Not Reported	Total
American Indian or Alaska Native	0	0	0	0
Asian	0	0	0	0
Native Hawaiian or Other Pacific Islander	0	0	0	0
Black or African American	0	0	0	0
White	0	0	0	0
More Than One Race	0	0	0	0
Unknown or Not Reported	0	0	0	0
Racial Categories: Total of Hispanics or Latinos**	0	0	0	0 **

* These totals must agree.
 ** These totals must agree.

Inclusion of Children

According to the NIH definition, a child is an individual under the age of 21. This definition covers the age range from birth to age 21 and spans the period when many individuals are still within the education system and are dependent on their families. No participant in this study was under age 21.

Materials Available for Other Investigators

De-identified interview transcripts and questionnaire data are available to other researchers. To access these materials, please address correspondence to the Principal Investigator, Dr. Jenny Hsin-Chun Tsai, Department of Psychosocial and Community Health, Box 357263, School of Nursing, University of Washington, Seattle, WA 98195-7263. She can also be contacted via E-mail at jennyt@u.washington.edu.

Additional Closeout Requirement

1. Financial Status Report

This report is being prepared and submitted by the University of Washington Grant and Contract Accounting Office.

2. Final Invention Statement (HHS Form 568)

The signed Final Invention Statement is included in this report on the following page.