

HOMEBOUND HEALTHCARE:
THE CAUSES OF OCCUPATIONAL INJURIES AMONG DOMESTIC HOME HEALTH
AIDES IN NEW YORK CITY

A Thesis
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Master of Science in Industrial and Labor Relations

by
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ABSTRACT

Domestic home health aides have reported high occupational injury rates in the U.S. since 1995. This thesis investigates causes of occupational injuries among unionized domestic home health aides in New York City likely mirror the causes of domestic home health aides' occupational injuries nationally. Their incidence rates result from their short notice of inconsistent work shifts, low wages, dangerous job tasks, isolation from peers, limited access to client information and equipment, inadequate systems for reporting workplace hazards, and coercive client interactions. Sub-contracting and weakened union representation in the domestic home healthcare industry reinforce these employment conditions. Occupational safety and health interventions have not curtailed domestic home health aides' incidence rates because they prioritize low-level safety controls and underestimate the impact of domestic worksites on workplace hazards. Operating in domestic worksites increases the workplace hazards of domestic home health aides and in turn reduces how effectively their union can address their injury risks. Domestic home health aides who do not believe they can independently affect their workplace hazards report higher occupational injury rates than their peers because of higher psychosocial stress and use of safety workarounds. Overall, these workplace hazards, absent safeguards, cultural attitudes, and responses to occupational safety and health risks by individuals and organizations explain the persistently high occupational injury rates of domestic home health aides.

BIOGRAPHICAL SKETCH

Roselby Marie Sosa is in her 5th year of study at Cornell University's College of Industrial and Labor Relations. She received a Bachelor of Science degree in Industrial and Labor Relations in May 2015 and will receive a Master of Science degree in Industrial and Labor Relations in 2016. Most recently, she was employed as a teaching assistant at Cornell University from August 2015 to May 2016. She was previously a research fellow at the Worker Institute, an enforcement unit intern at the Manhattan district office of the Equal Employment Opportunities Commission, a student blogger for Cornell University, a tutor in Cornell University's REACH program for elementary school students, and an authorized company representative and manager for the Little y Theater Company during the 2013 New York International Fringe Festival. As a student, she volunteered actively in her local community, focusing on youth education programs through the Gamma Chapter of Alpha Phi Omega. She also participated in various student organizations on social and labor issues and spent several years as a food server at Cornell University Dining. She was born in December 1993 in New York City-Bronx, NY.

DEDICATION

This thesis is dedicated to my mother, Maria D. de la Torre, and to my family. With all of my heart, thank you for your continued support of my education and your unconditional love.

ACKNOWLEDGEMENTS

Many individuals contributed their time and expertise in order to help me complete this thesis. I am greatly appreciative of their guidance and for the opportunities and resources they afforded me. Their help was undoubtedly essential to maintaining the quality and timeliness of my included work.

I am especially grateful to the researchers and sociologists at the Worker Institute. Thank you, Maria C. Figueroa and Legna Cabrera, for allowing me to transcribe and analyze your focus group session with domestic home health aides in New York City. Thank you, Sanjay Pinto, for providing feedback on my methodology for my focus group session with domestic childcare workers and on my drafted survey, which may be useful in future research. Thank you, K.C. Wagner, for connecting me to researchers and organizations, who in turn connected me with the workers in this study. Thank you, as well, for your mentorship and many supportive phone calls.

I am also grateful to the domestic home health aides who participated in this study and to the members of the Beyond Care Childcare Cooperative in New York City for their time and patience in explaining their work experiences to me.

Finally, I am incredibly grateful to the professors who devoted countless hours to my academic development. Thank you, Professor James Gross, for exposing me to research in occupational safety and health through your undergraduate courses at Cornell University. The skills you taught me were invaluable in uncovering the issue I address in this thesis. Thank you, Professor William Sonnenstuhl, for introducing me to the best practices in qualitative research in labor and sociology studies. Your help not only broke down barriers to research in my later months of completing this thesis, but also gave me a foundation to continue qualitative research in the

future. Above all, thank you, Professor Ileen DeVault, for your many years of encouragement, especially as I transitioned from undergraduate study to graduate level work. Thank you for your unwavering commitment to reviewing my work, connecting me to researchers and academic resources, guiding me through my frustrations with the unexpected responsibilities of academic research, and overcoming barriers in time and language to understand my needs and interests.

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Chapter 1: Introduction

For several years, a domestic home health aide took care of my aging neighbor, who lived alone after the death of her husband. I only knew vaguely what she did there at the time, but even I understood that my neighbor greatly appreciated her help and company. It was obvious from their conversations and from my neighbor's loneliness after one day, suddenly, the domestic home health aide no longer worked for her. My neighbor passed away a few months later.

I remember their relationship not only for its warmth and abrupt end, but for what it taught me about domestic home health aides. I hadn't realized before that there were people whose families could not live by or take care of them when they aged or developed debilitating medical conditions. After all, I come from a family that has always taken care of our sick and elderly relatives internally. My maternal grandmother, for instance, has cared for her own mentally-disabled mother for decades. Now I am aware that that tradition can't be maintained by choice anymore. My mother can't take care of my grandmother in the old way because an economic recession in Puerto Rico drove them over 1,600 miles apart in the 1980s. I might not be able to take care of my mother, either. Even if I live close to her, her condition might require constant care that I can't give, either because my occupation doesn't afford me the necessary flexibility or because her condition is beyond my skills and comprehension. I became aware that domestic home health aides are critically important to families like mine and my neighbor's, who rely on them to take care of and provide company to our most precious loved ones when we can't do it ourselves.

So, when I learned that domestic home health aides commonly sustain workplace injuries—injuries severe enough to require time away from work or to threaten their ability to

work at all—I was frustrated. The Bureau of Labor Statistics found that domestic home health aides commonly sustain occupational injuries and have had high occupational injury rates since at least 1995 (U.S. Bureau of Labor Statistics, 2004; U.S. Bureau of Labor Statistics, 2014). I could not find a published explanation for these rates and could only guess from what I knew through academic studies of domestic workers, nursing aides, and registered nurses what these causes were. This ambiguity was disheartening but unsurprising. Despite their importance, domestic home health aides remain difficult to investigate because of their intimate work, their domestic workplaces, and their absence in the minds of people who haven't already needed them.

This thesis is an investigation into those causes that I could not find when I first discovered this issue. I narrowed my focus to domestic home health aides in New York City because of its similarities in work conditions for domestic home health aides to national averages. A local study also avoids certain logistical complications that would have made my investigation unfeasible. Chapter 2 will expand further on this decision. I analyzed focus group sessions with locally employed domestic home health aides and with comparable domestic childcare workers. From their results, I will both establish the likely causes of domestic home health aides' occupational injuries in New York City and recommend a plan for future research.

The subsequent chapters of this thesis will walk you through my investigation and its conclusions. Chapter 2 will provide background information on domestic home health aides nationally and in New York City. It will explain how this information informed the research question of this thesis and expand on the importance of this research to domestic home health aides and the U.S. healthcare industry. Chapter 3 will summarize my review of academic theories relevant to my research question and explain how they inspired my research hypotheses.

Chapter 4 will outline my methodology, and Chapter 5 is my analysis of the transcriptions generated from this study's focus group sessions. This thesis concludes with a theoretically model of what causes the occupational injury rates of New York City's domestic home health aides and a summary of my investigation and plans for future research.

Before diving into the details of my study, I want to acknowledge that this thesis depended heavily on the help of other researchers in my community. Maria C. Figueroa and Legna Cabrera conducted the focus group sessions with domestic home health aides in New York City that I transcribed and analyzed for this study. Sanjay Pinto reviewed my questions for the focus group sessions with domestic childcare workers and offered constructive feedback that strengthened their academic rigor. K.C. Wagner connected me to these researchers and to the workers and organizations with which I collaborated to make these sessions possible. She also offered ongoing advice on how to record my insights and improve my methodology as my study progressed. These researchers from The Worker Institute at Cornell University invested a generous amount of their time and effort to support my intellectual curiosity in this problem.

Furthermore, several professors from Cornell University aided me in discovering this issue and in developing the chapters you are about to read. Professor James Gross encouraged me to learn about occupational safety and health issues among American workers and to keep track of reports by the Center for Disease Control and Prevention and Bureau of Labor Statistics on occupational injuries. This behavior led me to find the reports on domestic home health aides that led to this thesis. Professor Ileen DeVault and Professor William Sonnenstuhl actively guide through the writing of this thesis. Professor Ileen DeVault also devoted hundreds of hours to ensuring that I had the resources I needed to complete this investigation. I stress my appreciation

for these individuals' commitment to my work. Without their support, the findings I will hereafter outline to you would have remained unknown.

Chapter 2: Background

Public reports on domestic home health aides in the U.S. summarize our public knowledge of domestic home health aides' work and their importance to American healthcare. Unfortunately, many reports are unserviceable to this study because they don't differentiate between domestic home health aides and other healthcare support occupations or because they are outdated. What remains collectively informs us of the conditions that most likely persist among domestic home health aides today. These predictions paint a problematic picture, in which domestic home health aides satisfy an ever-increasing demand for home healthcare services at the expense of their health and safety. Reducing their occupational injury rates would help domestic home health aides and prepare their industry for the influx of patients anticipated in the next 30 years. To do so requires research into the causes of domestic home health aides' continuously high occupational injury rates, which this thesis hopes to accomplish.

Demand for Home Healthcare Services

Domestic home health aides experience a unique segment of the U.S. healthcare system. Like many healthcare professionals, domestic home health aides assist patients with performing the necessary daily functions they need to maintain their health and safety, through the job tasks listed in Figure 2.1. Their clients rely on them because they can't perform these functions alone, due to disability, age, chronic illness, or cognitive impairment (U.S. Bureau of Labor Statistics, Home Health Aides, 2014-2015). Domestic home health aides also complete several hours of pre-employment and in-service training to maintain their license and serve patients responsibly. This mandated training demands a significant time commitment from domestic home health aides, as shown in Figure 2.2, but prepares them for aiding patients. It also enables advanced training, like the programs listed in Figure 2.2. Like other healthcare professionals, domestic

home health aides employ their specialized knowledge of common medical diagnoses, human behavior, and technical equipment to performing their work. However, unlike other healthcare professionals, domestic home health aides don't operate from traditional institutions. They don't operate out of clinics, hospitals, or nursing homes alongside other healthcare service providers. Instead, they work in patients' homes, alone or alongside patients' family and friends.

Domestic home health aides constantly grapple with contradicting depictions of their role in American healthcare. On the one hand, the system paints them as an important ally, managing a rapidly increasing demand for home healthcare services. In 2004, more than $\frac{3}{4}$ of American adults 65 years or older suffered from at least one chronic medical condition, and the average American of 75 years had three chronic conditions requiring 5 medications (Prevention & Health, 2004). By 2030, the national population of U.S. elderlies¹ will increase by 54% (U.S. Census Bureau, 2014). These elderlies, alone, will drive up demand for home-based healthcare. After all, many patients prefer home healthcare services because they are cheaper than nursing homes and hospitals and because they offer the comforts of remaining at home (U.S. Bureau of Labor Statistics, Home Health Aides, 2014-2015). Recent studies of home treatments further increase preference for home healthcare services since they conclude that home-based care can be more effective than institutional care for certain diagnoses (U.S. Bureau of Labor Statistics, Home Health Aides, 2014-2015). Changes in healthcare legislation may also continue increasing public access to health insurance and affordable home-based healthcare. Figure 2.3 supports this expectation by showing how recent healthcare legislation has already affected domestic home health aides. These predicted rises in potential patients, public access to health insurance, and preferences for home healthcare services makes domestic home health aides an important asset to the healthcare industry.

¹ The U.S. Census Bureau defines elderlies as individuals exceeding 65 years of age.

Figure 2.1: Job Tasks of Home Health Aides and Domestic Home Health Aides

Essential Job Functions of Home Health Aides – New York State:

- Preparation of meals in accordance with modified diets or complex modified diets;
- Administration of medications;
- Provision of special skin care;
- Use of medical equipment, supplies and devices;
- Change of dressing to stable surface wounds;
- Performance of simple measurements and tests to routinely monitor the patient’s medical condition;
- Performance of a maintenance exercise program;
- Care of an ostomy site after the bowel has achieved its normal function

Tasks Performed Conditionally by Home Health Aides – New York State:

- Administering pre-filled insulin injections;
- Setting or regulating oxygen flow rates;
- Assembling ventilator supplies and equipment.

Required Conditions:

- The recipient is self-directing;
- The recipient has need for assistance with the task or activity for routine maintenance of his or her health;
- The recipient can’t physically perform the task or activity because of his or her disability; and
- The recipient has no informal caregiver available at the time the task or activity must be performed.

(New York State Department of Health, 2009)

Tasks Commonly Performed by Home Health Aides - National:

- Helping clients in their daily personal tasks, such as bathing or dressing;
- Providing basic health-related services according to a client’s needs, such as checking vital signs or administering prescribed medication at scheduled times;
- Doing light housekeeping, such as laundry, washing dishes, and vacuuming in a client’s home;
- Organizing a client’s schedule and planning appointments;
- Arranging transportation to doctors’ offices or for other kinds of outings;
- Shopping for groceries and preparing meals to a client’s dietary specifications;
- Providing companionship.

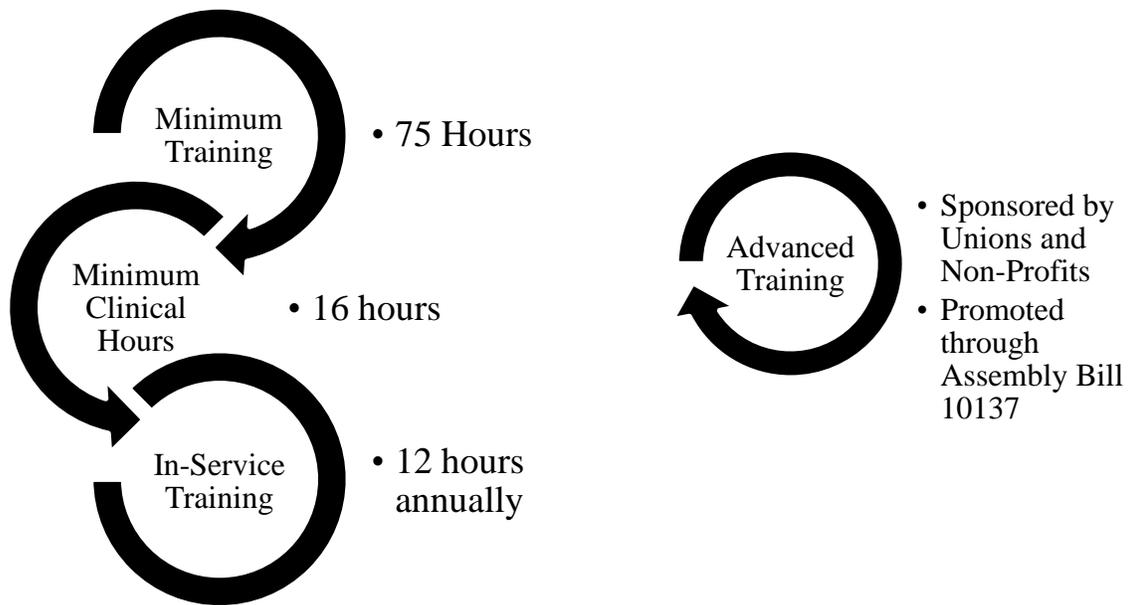
Figure 2.1 (Continued)

Tasks Sometimes Performed by Home Health Aides - National:

- Recording clients' medical condition and progress, as well as services rendered;
- Reporting changes in client's medical conditions to supervisors or case managers;
- Collaborating with a client's therapists or other medical staff;
- Performing basic health-related services, including checking a client's pulse, temperature, and respiration rate;
- Assisting with simple, prescribed exercises;
- Changing bandages or dressings;
- Administering massages and caring for skin;
- Assisting with braces and artificial limbs
- Assisting with medical equipment such as ventilators, if appropriately trained.

(U.S. Bureau of Labor Statistics, 2014-2015)

Figure 2.2: Training for Domestic Home Health Aides



(Rodat C. , 2010; New York State Department of Health, 2015)

Mandatory Training Requirements for Home Health Aides and Domestic Home Health Aides, New York State	
Pre-Employment Training	107 hours
Minimum Training Hours	75 hours
Home Care Curriculum	40 hours
Home Care Health Related Tasks Curriculum	35 hours
Practical Training Supervised by RN	16 hours
Classroom/Lab Setting	8 hours
Patient's Home/Healthcare Facility	8 hours
Minimum Clinical Hours (Includes Assessment)	16 hours
Annual In-service Training	12 hours

(New York State Department of Health, 2015)

Figure 2.2 (Continued)

Summary of Mandatory Pre-Employment Training Curriculum
Core Basics:
Personal Care Skills:
Pain Management
Toileting
Bathing
Grooming
Dressing
Toileting
Taking Care of the Client's Environment
Infection Control
Transferring, Turning, and Positioning the Client
Orientation to Health-Related Tasks:
Performing Simple Measurements and Tests
Preparing Food for Complex Modified Diets
Assisting with Prescribed Exercise Programs
Assisting with Medical Equipment
Assisting with Special Skin Care
Assisting with Dressing Changes
Ostomy Care

(New York State Department of Health, 2007 (Last Updated); New York State Department of Health, 2007 (Last Updated); Rodat C. , 2010)

Figure 2.3: Recent Legislation Affecting Domestic Home Health Aides, New York City and U.S.

New York State
Domestic Workers
Bill of Rights

Extends several labor protections to domestic workers, including home health aides

- Overtime pay
- Paid Time Off
- Coverage for Discrimination

Exemptions for part-time work



Assembly Bill 10137

Amends Nurse Practice Act to exclude home health aides

Authorizes advanced home health aides to perform advance healthcare tasks under supervision of RN or practitioner

- e.g. administering complex medication

Funds training and certification program to develop advanced home health aides

Medicaid HCBS
Reform



Wage parity for home health aides (wage increase by \$2/hour)

Transitions many community-based long-term care recipients into capitate care management models



Affordable Care Act

Impacts client base for home health aides services

Coverage for homecare services remain limited under Medicare, as compared to Medicaid

Medicare Eligibility

- Doctor-Approved Plan
- Must need intermittent skilled nursing care, physical therapy, speech-language pathology services, or continued occupational therapy
- Must be homebound
- Can only use Medicare-Certified Agencies

(Office of the Legislative Counsel & U.S. House of Representatives, 2010; The New York State Senate, 2010; New York State Division of the Budget, 2011; Paraprofessional Healthcare Institute National, 2011; The New York Statewide Senior Action Council & Long Term Care Community Coalition, 2011; The New York State Assembly, 2014; Services & Health, 2014; Medicare, 2015; Paraprofessional Healthcare Institute National Policy Group, 2015)

However, at the same time, domestic home health aides struggle to receive the financial security and career development afforded to other professionals in their industry. Among home health aides, generally, the mean hourly and annual wage was \$10.77 and \$22,400, respectively, in 2014 (U.S. Bureau of Labor Statistics, 2014; Phillips & Miltner, 2015). A third of home health aides were uninsured in 2007 (Center for Disease Control and Prevention, 2007), and public organizations believe that this rate has persisted (Paraprofessional Healthcare Institute National Policy Group, 2014; Paraprofessional Healthcare Institute National Policy Group, 2015). While domestic home health aides can advance into other healthcare occupations, such advancement is unlikely. In 2007, 91.3% of all employed home health aides had worked as home health aides for more than 2 years and ½ had worked for 11 years or more (Center for Disease Control and Prevention, 2007). This retention occurs in spite of home health aides' frequently-held aspirations to secure other healthcare-related or non-healthcare occupations (Rodat C. , 2010). The employment conditions common among domestic home health aides denies their supposed value to American healthcare.

On top of it all, domestic home health aides risk their own health routinely just to maintain the health of others. The Bureau of Labor Statistics and Center for Disease Control and Prevention recognize at least 8 categories of common occupational safety and health risks among home health aides, listed in Figure 2.4. Analysis of the last National Home Health Aides Survey supports these categories (Hamadi, Probst, Mahmud, Bellinger, & Porter, 2016). While most of these injuries are immediately non-fatal, they are often severe enough to prevent home health aides from working. For instance, in 2014, at least 8,190 aides sustained non-fatal occupational injuries severe enough to require days away from work, at a median of 11 days (U.S. Bureau of Labor Statistics, 2014). Otherwise, home health aides suffer from poorer long-term health from

sustaining repeated occupational injuries. These occupational injury rates aren't new or declining. The Bureau of Labor Statistics reported persistently high non-fatal occupational injury rates among home health aides from 1995 to 2004 (U.S. Bureau of Labor Statistics, 2004). In 2006, the Center for Disease Control and Prevention found that 11.5% of surveyed home health aides had sustained at least one work-related injury and 16.6% of those aides had sustained more than one injury (Center for Disease Control and Prevention, 2007). These trends show that not only are domestic home health aides likely to be injured at work, but that their likelihood of injury has been consistent for at least two decades.

These occupational injury rates are ironic in light of national pushes to protect the volume of available home health aides. Between 2012 and 2022, employment of home health aides will rise by 48%; faster than the average for all U.S. occupations combined (11%) and for all healthcare support occupations (28%) (U.S. Bureau of Labor Statistics, Home Health Aides, 2014-2015). The result is roughly 424,200 new jobs for home health aides by 2022 and an estimated total of 1,399,300 employed aides nationally (U.S. Bureau of Labor Statistics, Home Health Aides, 2014-2015). These projections have solicited panic over our inability to retain newly-hired domestic home health aides and our reliance on senior aides to meet increasing demands (Center for Disease Control and Prevention, 2007; National Institute of Occupational Safety and Health, 2010). Yet occupational injuries, which threaten the work ability of domestic home health aides, continue relatively unabated. Among home health aides, generally, workplace injuries even increase turnover (Lee & Jang, 2016). Whether in the interest of domestic home health aides or in the interest of their patients and industry, high occupational injury rates can't persist among domestic home health aides in the upcoming decade.



(U.S. Bureau of Labor Statistics, 1997; U.S. Bureau of Labor Statistics, 2004; Center for Disease Control and Prevention (CDC), 2007; U.S. Bureau of Labor Statistics, 2014; U.S. Bureau of Labor Statistics, 2014-2015)

<p>Other Known Hazards Dependent on Location and Work Assignments</p> <p>Falls Animals Un-hygienic Worksites Lack of Water Extreme Home Temperatures Severe Weather Automobile Collisions</p>

(National Institute of Occupational Safety and Health, 2010)

Figure 2.4: Categories of Common Occupational Injuries among Home Health Aides, U.S.

Requirements in Research

The first step in counteracting domestic home health aides' workplace injuries is to understand their causes, so we can address them. Unfortunately, recent studies of these causes don't exist. Instead, we have only studies of occupational injuries among nursing home aides (Collins, Wolf, Bell, & Evanoff, 2004; Lee & Jang, 2016; Hignett, Keen, & Otter, 2016; Zhang, Punnett, Mawn, & Gore, 2016; Stone, et al., 2016), and among registered nurses (Phillips & Miltner, 2015; Stimpfel, Brewer, & Kovner, 2015; Brown, Dally, Grimmond, & Good, 2016; Samur & Intepeler, 2016).

These studies are only somewhat useful in understanding the problems domestic home health aides face. Admittedly, nursing home aides and registered nurses are comparable non-domestic workers to domestic home health aides. They share similar job tasks, incidence rates, and types of occupational injury (U.S. Bureau of Labor Statistics, 2004; U.S. Bureau of Labor Statistics, Registered Nurses, 2014-2015; U.S. Bureau of Labor Statistics, Home Health Aides, 2014-2015). However, these similarities don't justify applying the conclusions of studies on occupational injury determinants for comparable healthcare workers onto domestic home health aides. These workers maintain important differences in employment conditions and occupational setting that could lead to similarly high occupational health and safety risks, derived from different sources. For instance, domestic home health aides operate in domestic work environments, within an industry that relies on sub-contracting (Rodat C. , 2010), and for a greater diversity of employers. Table 2.1 and Figure 2.5 show the extent of this diversity nationwide. Any of these conditions could potentially affect the occupational safety and health risks of domestic home health aides, and only empirical evidence from observations of domestic

home health aides' workplace injuries can confirm or refute definitively these potential instigators.

Table 2.1: Industries that Sub-contract Home Healthcare Services to Home Health Aides Nationally

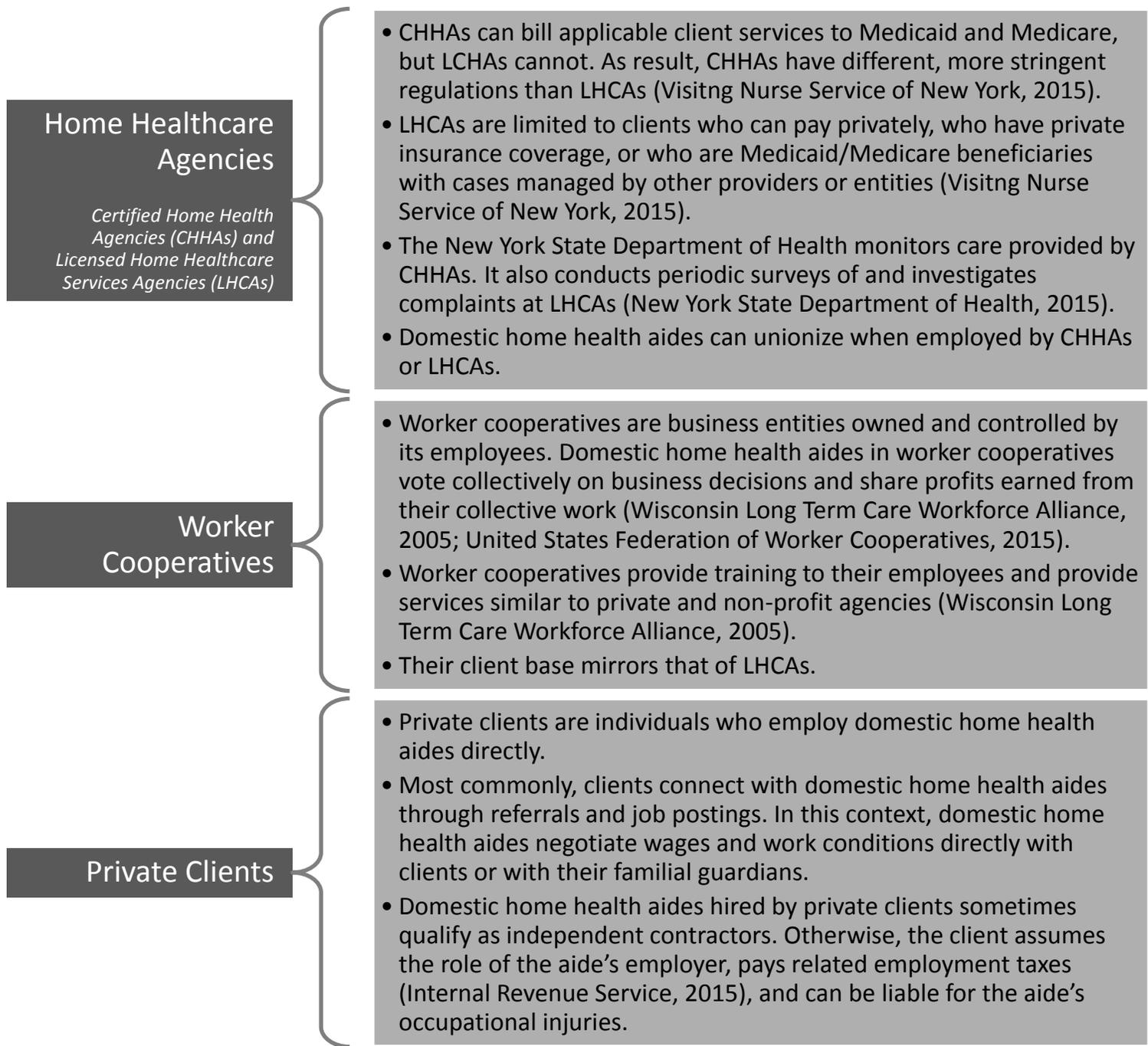
By Highest Concentration of Employment

Industry	Employment	Percent of Industry Employment	Hourly Mean Wage	Annual Mean Wage
Home Health Care Services	348,740	27.78	\$10.79	\$22,450
Residential Intellectual and Developmental Disability, Mental Health, and Substance Abuse Facilities	101,160	16.68	\$10.67	\$22,190
Continuing Care Retirement Communities and Assisted Living Facilities for the Elderly	93,280	11.11	\$10.75	\$22,360
Other Residential Care Facilities	15,780	10.16	\$10.90	\$22,670
Individual and Family Services	145,250	9.84	\$10.31	\$21,440

By Highest Wages

Industry	Employment	Percent of Industry Employment	Hourly Mean Wage	Annual Mean Wage
State Government (OES Designation)	6,510	0.30	\$13.77	\$28,650
Management of Companies and Enterprises	1,010	0.05	\$13.04	\$27,120
Grant-making and Giving Services	100	0.08	\$12.74	\$26,500
General Medical and Surgical Hospitals	11,690	0.22	\$12.66	\$26,330
Specialty (except Psychiatric and Substance Abuse) Hospitals	500	0.20	\$12.55	\$26,100

(U.S. Bureau of Labor Statistics, 2014)



(Wisconsin Long Term Care Workforce Alliance, 2005; Rodat C. , 2010; U.S. Bureau of Labor Statistics, 2014; Cooperative Home Care Associates, 2015; United States Federation of Worker Cooperatives, 2015; Internal Revenue Service, 2015; 1199SEIU, 2015; Visitng Nurse Service of New York, 2015; New York State Department of Health, 2015)

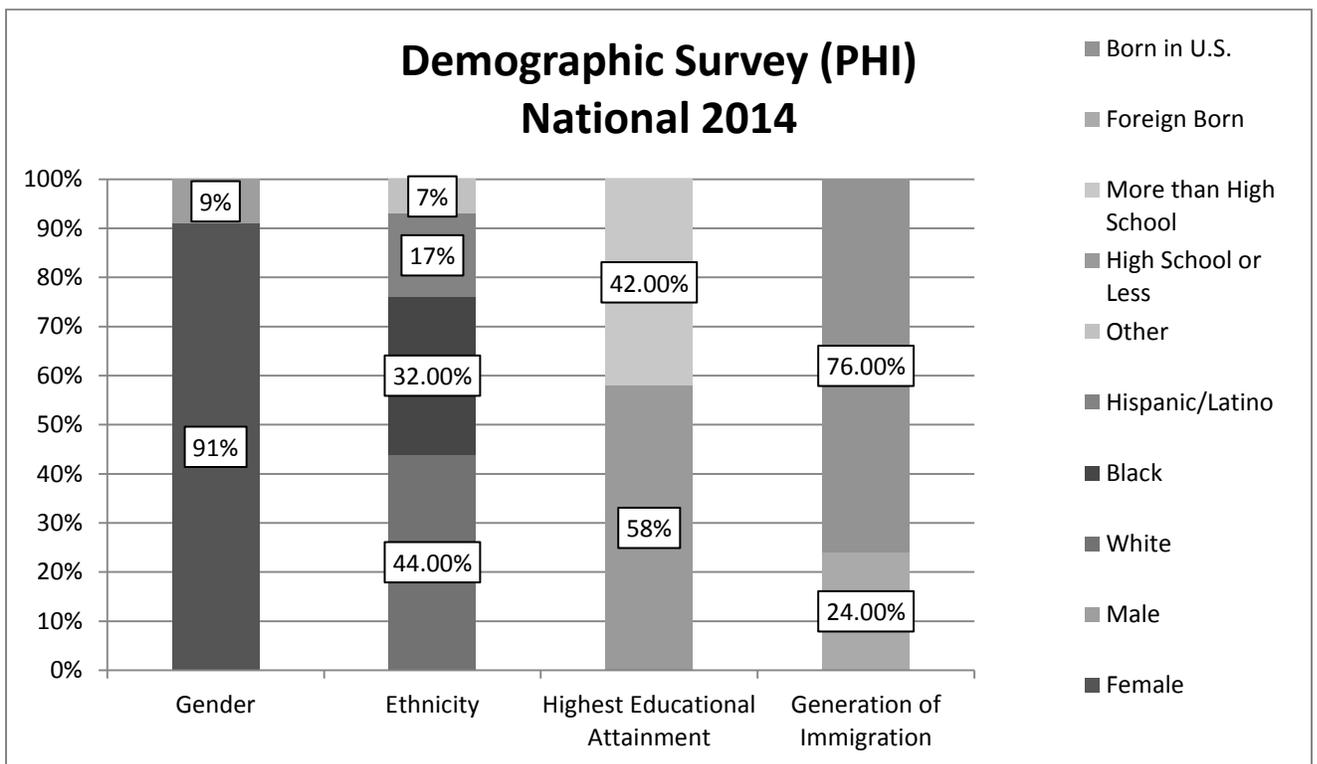
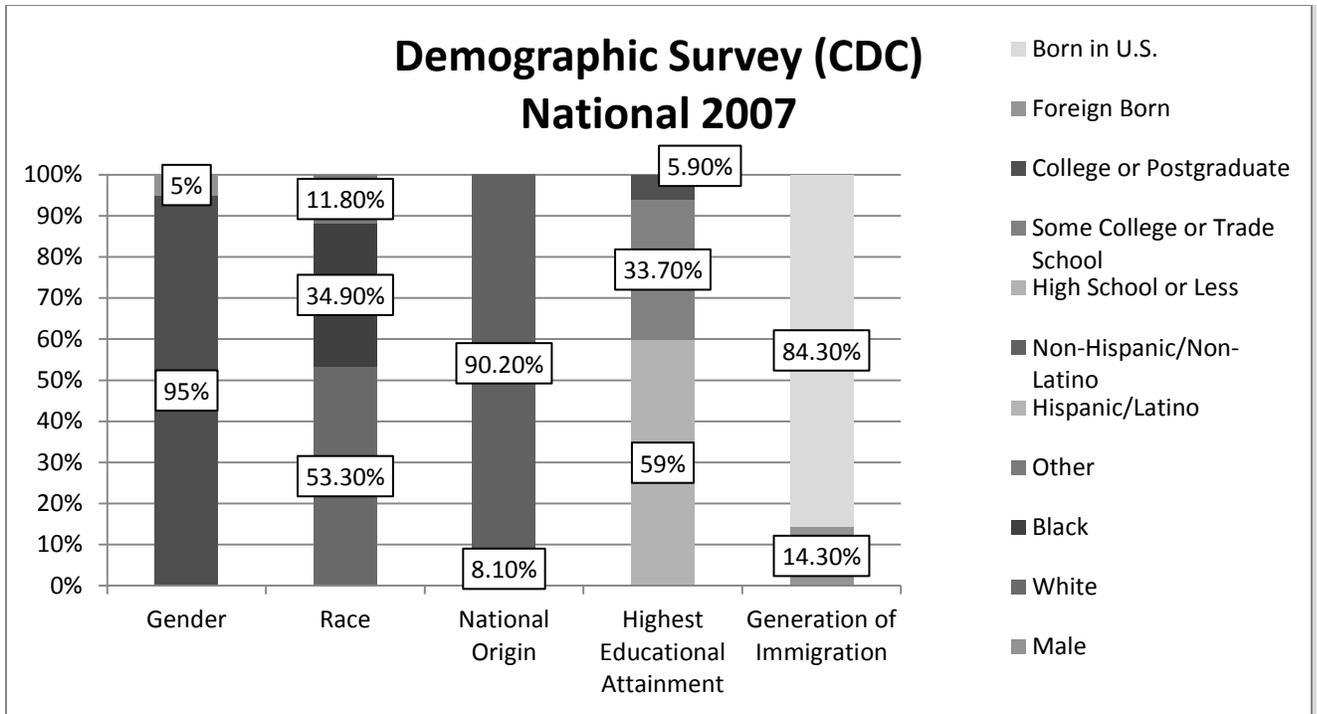
Figure 2.5: Employers of Domestic Home Health Aides

The absence of such empirical evidence is noteworthy. Research into the causes of domestic home health aides' national occupational safety and health risks requires a lot of resources, including time, money, and labor. Domestic home health aides' variable work schedules further complicate studies, and recruiting participants is especially demanding. Unlike studies of other healthcare workers, investigations of domestic home health aides require multiple methods of participant recruitment because domestic home health aides work for different kinds of employers and access separate spaces from one another. These and other complications may explain why researchers more commonly pursue research of other comparable worker groups, rather than domestic home health aides.

So, a smaller local study may be a more appropriate starting point than a national or even state-wide study. By hinting at potential national trends, a local study would clarify the value of continuing research on domestic home health aides' occupational safety and health risks on a larger scale. Areas like New York City are small enough to make research logistically feasible without compromising reflections of national conditions. For instance, the wages, benefits, opportunities for career advancement, and employee demographics, including concentrations of minority demographic groups, among New York City's home health aides parallel national averages, as shown in Table 2.2 and in Figures 2.6 and 2.7. Due to high certification rates and legislation supportive of the home healthcare industry, New York City and New York State also employ the most home health aides of any other metropolitan area or state. Figure 2.3 lists examples of this supportive legislation, and Table 2.3 compares the employment rates of New York City and New York State to other areas with high concentrations of employed home health aides. These similarities to national conditions make New York City a good site to begin research on domestic home health aides' occupational injuries.

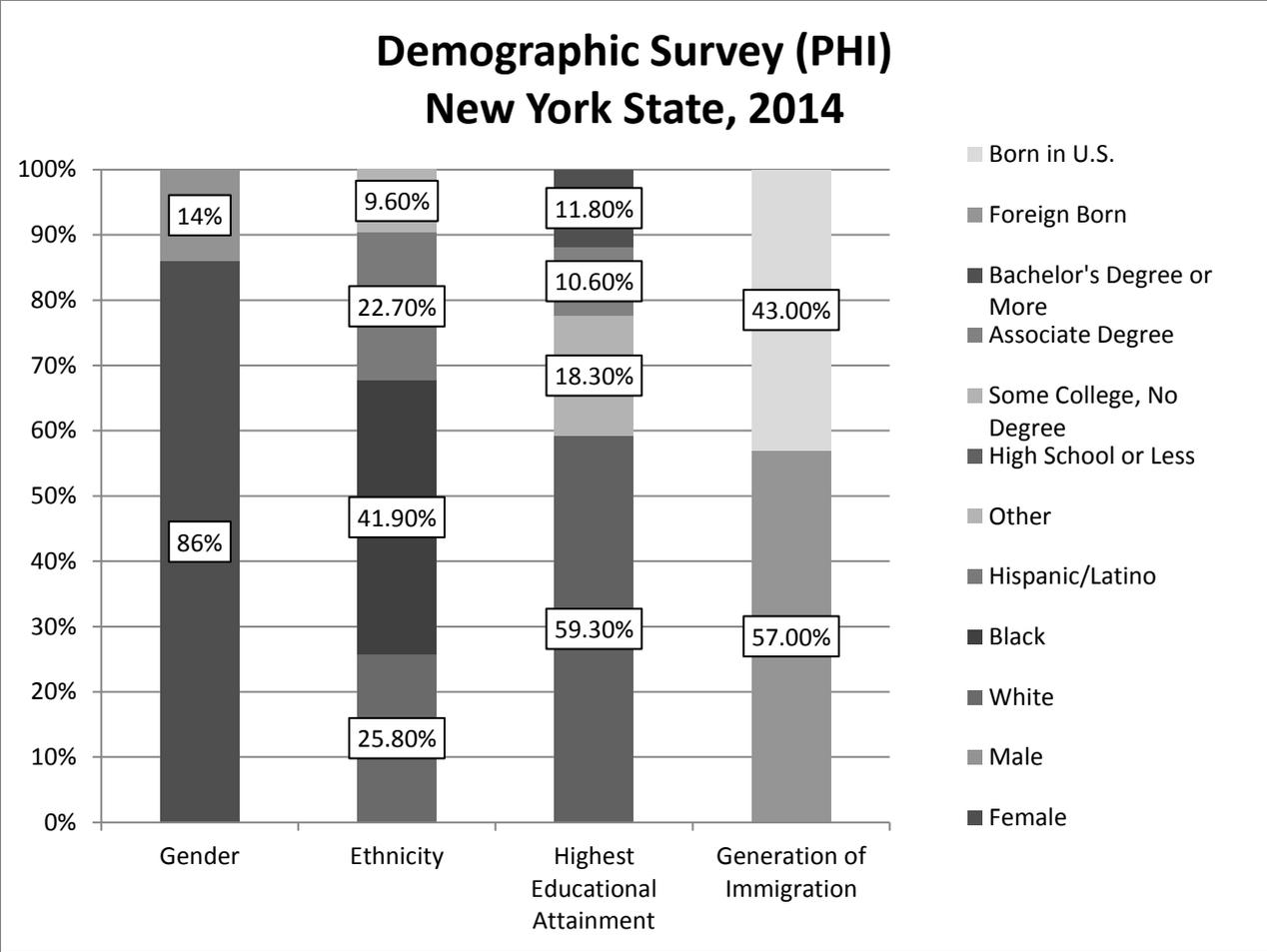
Table 2.2: Comparison of Employment Conditions among Home Health Aides in New York City and Nationally

Conditions	National	New York City
Wages	In 2014, the mean hourly and annual wage was \$10.77 and \$22,400, respectively (U.S. Bureau of Labor Statistics, 2014; Phillips & Miltner, 2015).	In 2014, the mean hourly and annual wage was \$10.39 and \$21,610, respectively (U.S. Bureau of Labor Statistics, 2014).
Benefits	1/3 of home health aides were uninsured in 2007 (Center for Disease Control and Prevention, 2007), and public organizations believe that this rate has persisted (Paraprofessional Healthcare Institute National Policy Group, 2014; Paraprofessional Healthcare Institute National Policy Group, 2015). Only a 1/4 - 1/3 had dental, vision, or other health benefits (Prevention & Health, 2004).	Home health aides are less likely to be insured than other New Yorkers because of restrictions on employer- and union-based healthcare plans by income, seniority, and annual medical expenses (Rodat C. , 2010). In 2015, 1/4 - 1/2 received public assistance benefits like Medicaid and Food and Nutrition Assistance (Paraprofessional Healthcare Institute National Policy Group, 2015).
Career Advancement	In 2007, 91.3% of all employed home health aides had worked as home health aides for more than 2 years and 1/2 had worked for 11 years or more (Center for Disease Control and Prevention (CDC), 2007). This retention occurs in spite of home health aides' frequently-held aspirations to secure other healthcare-related or non-healthcare occupations (Rodat C. , 2010).	The Paraprofessional Healthcare Institute reported similar seniority rates in New York City and attributed these rates to the certification system, which "undermines the ability of aides to move between similar occupations," and to the lack of "articulated pathways for skill-based career advancement" (Rodat C. , 2010).



(Center for Disease Control and Prevention (CDC), 2007; Paraprofessional Healthcare Institute National Policy Group, 2014)

Figure 2.6: National Employee Demographics for Home Health Aides, 2007 and 2014



(Rodat C. A., 2014)

Figure 2.7: Employee Demographics for Home Health Aides in New York City, 2014

Table 2.3: Employment Rates of Home Health Aides across U.S.

By Highest Employment Levels

Metropolitan Area	Employment
New York-White Plains-Wayne, NY-NJ Metropolitan Division	120,100
Chicago-Joliet-Naperville, IL Metropolitan Division	26,620
Philadelphia, PA Metropolitan Division	21,670
Minneapolis-St. Paul-Bloomington, MN-WI	17,300
Cleveland-Elyria-Mentor, OH	15,340

State	Employment
New York	146,550
Ohio	66,460
Pennsylvania	54,620
North Carolina	48,360
Texas	45,930

By Highest Concentration of Jobs and Location Quotients

Metropolitan Area	Employment per Thousand Jobs	Location Quotient
New York-White Plains-Wayne, NY-NJ Metropolitan Division	22.28	3.77
Springfield, OH	20.62	3.49
Greenville, NC	20.48	3.46
McAllen-Edinburg-Mission, TX	19.19	3.24
Hickory-Lenoir-Morganton, NC	18.23	3.08

State	Employment per 1000 Jobs	Location Quotient²
New York	16.63	2.81
Ohio	12.78	2.16
N. Carolina	12.00	2.03
Minnesota	11.05	1.87
Pennsylvania	9.66	1.63

(U.S. Bureau of Labor Statistics, 2014)

Nevertheless, certain logistical complications can't be avoided, even in a local study. A local study would need to prioritize certain sub-groups of domestic home health aides if limited to a smaller-than-desired sample size. Figure 2.5 hints at some of these sub-groups. For example,

² According to the Federal Bureau of Labor Statistics, the location quotient is the ratio of the area concentration of occupational employment to the national average concentration. A location quotient greater than one indicates the occupation has a higher share of employment than average, and a location quotient less than one indicates the occupation is less prevalent in the area than average.

research of domestic home health aides employed by certified or licensed agencies would be more indicative of national trends because these agencies employ the most home health aides nationwide (U.S. Bureau of Labor Statistics, 2014). While this fact doesn't prevent research on other domestic home health aides, it narrows the minimum requirements for our first study. Likewise, in New York City, many domestic home health aides employed by agencies are unionized, so a limited sample of domestic home health aides should at least include a sizeable representation of unionized aides. Non-unionized aides are harder to recruit, as well, because they have fewer common communication channels.

Another requirement is the inclusion of research on comparable domestic care workers to contrast against domestic home health aides. Domestic childcare workers are suitable for comparison since they share in common with domestic home health aides elements uncommon to non-domestic aides and registered nurses, such as domestic work environment and multiple employer types. They also don't share the same occupational injuries or occupational injury rates as domestic home health aides (U.S. Bureau of Labor Statistics, Childcare Workers, 2014-2015; U.S. Bureau of Labor Statistics, Home Health Aides, 2014-2015), although they do share their lack of research on the causes of their injuries. Of domestic childcare workers, domestic childcare workers from worker cooperatives are the most comparable sub-group. Since domestic childcare workers can't legally unionize, domestic childcare workers in worker cooperatives have the closest degree of employee representation at work as domestic home health aides. Comparing descriptions of occupational safety and health risks from domestic home health aides to descriptions from comparable domestic childcare workers and to prior research of non-domestic healthcare workers is important because it can isolate the role of employment characteristics like job tasks and domestic work environment in these narratives. Of course,

future studies could incorporate a wider diversity of domestic home health aides and comparable workers, if we establish a need for further investigation.

Conclusion

Given the high occupational injury rates among domestic home health aides, we need empirical data that clearly defines their workplace hazards in order to form potential solutions. In the absence of studies that observe domestic home health aides' occupational injuries specifically, we need to conduct an initial exploratory study that establishes some leads and assesses the value of committing future research. This thesis strives to satisfy that need by interviewing unionized domestic home health aides in New York City about their occupational injuries. These conditions are ideal for an initial study because of my resource constraints and because of the similarities between unionized domestic home health aides in New York City and nationally. This thesis also compares the responses of New York City's domestic home health aides to those of New York City's comparable domestic childcare workers to help with analysis. From these aims, I derived the following research question to guide this thesis:

Research Question

| What causes domestic home health aides' persistent and high occupational injury rates in New York City?

Chapter 3: Literature Review

Academic models of occupational injury determinants, domestic work, and occupational safety and health interventions may explain the incidence rates and compromised health of New York City's domestic home health aides. However, while these models are supported by empirical evidence from other worker groups, researchers haven't yet applied these theories collectively to domestic home health aides. The effects of domestic work on other occupational injury determinants may impact occupational safety and health risks in previously unexplored ways. Occupational safety and health interventions for domestic home health aides may not actually adhere to popular academic guidelines or may overlook the effects of domestic work. This thesis seeks to understand persistently high occupational safety and health risks among New York City's domestic home health aides by confirming or denying the hypotheses inferred from these models.

Models of Occupational Injury Determinants

By 1977, three paradigms dominated the academic literature of occupational injury determinants: normative prescriptive theories, theories of error, and cognitive science theories. Normative prescriptive theories were most popular originally (Rasmussen, 1997). Then, the literature expanded. Derivative models of earlier cognitive science theories, including labor market theories (Weber, 1978; Reskin, 1994; Catanzarite, 2003; Schultz, 1961; England, Herbert, Kilbourne, Reid, & Megdal, 1994; Brown, 1980), task demand-capability theories (Hinze & Parker, 1978; Hinze & Gordon, 1978; Threlfall, 2000; Scharf, et al., 2001; Saurin & Guimaraes, 2001; Fuller, 2005), and occupational stress theories (Karasek, 1979; Johnson & Hall, 1988; Siegrist, 1999; Hobfoll & Shirom, 2001; Mitropoulos, Cupido, & Namboodiri,

2009), became increasingly popular. These new theories shifted focus towards the cognitive science paradigm and make up the list of occupational injury determinants used in this study.

In his review of foundational occupational injury determinant models, Rasmussen identified normative prescriptive theories as most common (Rasmussen, 1997). These widespread theories identified employee work ability, or employee behavior, as an immediate occupational injury determinant and organizational support through training and behavioral reward systems as a mediatory determinant (Rasmussen, 1997). Immediate occupational injury determinants directly affect occupational health and safety risks, while mediatory determinants affect how strongly other occupational injury determinants influence occupational health and safety risks³. Normative prescriptive theories assumed that employee behavior most affected occupational injury rates and that direct manipulations of employee behavior most effectively reduced occupational safety and health risks (Rasmussen, 1997). They commonly recommended clear instructions to employees on how to safely perform job tasks, punishment or removal of incompetent personnel, promotion of competent personnel, and incentives for consistently safe conduct as occupational safety and health interventions (Rasmussen, 1997).

Second in popularity were theories of error, which also focused on employee behavior but introduced new mediatory determinants (Rasmussen, 1997). They identified managerial errors, resident pathogens, and ergonomics as mediatory determinants (Reason, 1990; Rasmussen, 1997). Unlike normative prescriptive theories, theories of error assumed a stronger impact on occupational safety and health risks by mediatory determinants (Rasmussen, 1997). This paradigm recommended both changes to employee behavior and changes to organizational

³ Among immediate occupational injury determinants, positively correlated determinants increase occupational health and safety risks and negatively correlated determinants decrease risks. Positive mediatory determinants amplify the effects of immediate determinants, while negative mediatory determinants limit them.

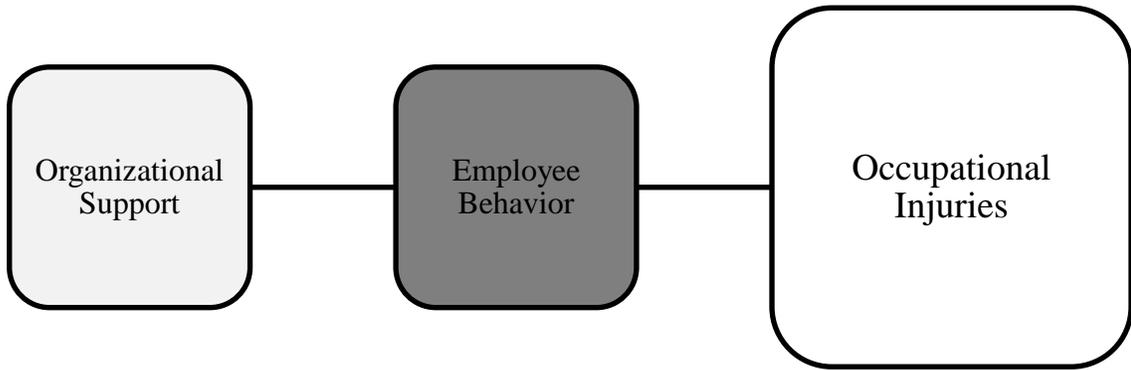
support and employment conditions for occupational safety and health interventions (Rasmussen, 1997).

The least common paradigm—cognitive science theories—ultimately surpassed its predecessors in popularity as the 20th century closed. It diverged dramatically from normative prescriptive theories by assuming that employee behavior wasn't the primary determinant of occupational injuries (Rasmussen, 1997). Instead, cognitive science theories assumed that organizational support, employment conditions, and organizational characteristics heavily mediated employee behavior (Rasmussen, 1997; Dekker, 2006). These mediatory determinants also doubled as immediate determinants themselves, and so had greater influence over occupational safety and health risks (Rasmussen, 1997; Dekker, 2006). Figure 3.1 summarizes these differences between cognitive science theories, normative prescriptive theories, and theories of error. As result of its differences, cognitive science theories discouraged compulsory employee behavior without complimentary structural change and recommended occupational safety and health interventions that adapted work systems to workers' skills and constraints (Flach, Tanabe, Monta, Vicente, & Rasmussen, 1988; Rasmussen, 1997).

Figure 3.1: Comparison of Foundational Models of Occupational Injury Determinants⁴

⁴ Among occupational injury determinants, darker tones indicate greater impact on connected elements closer to occupational injuries or on occupational injuries, if connected.

Normative Prescriptive Theories



Theories of Error

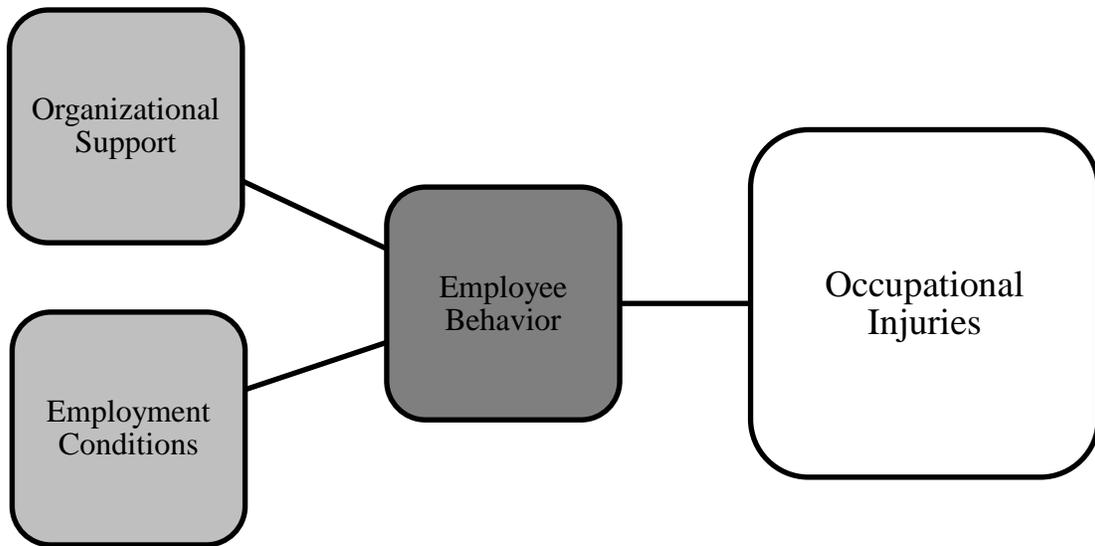
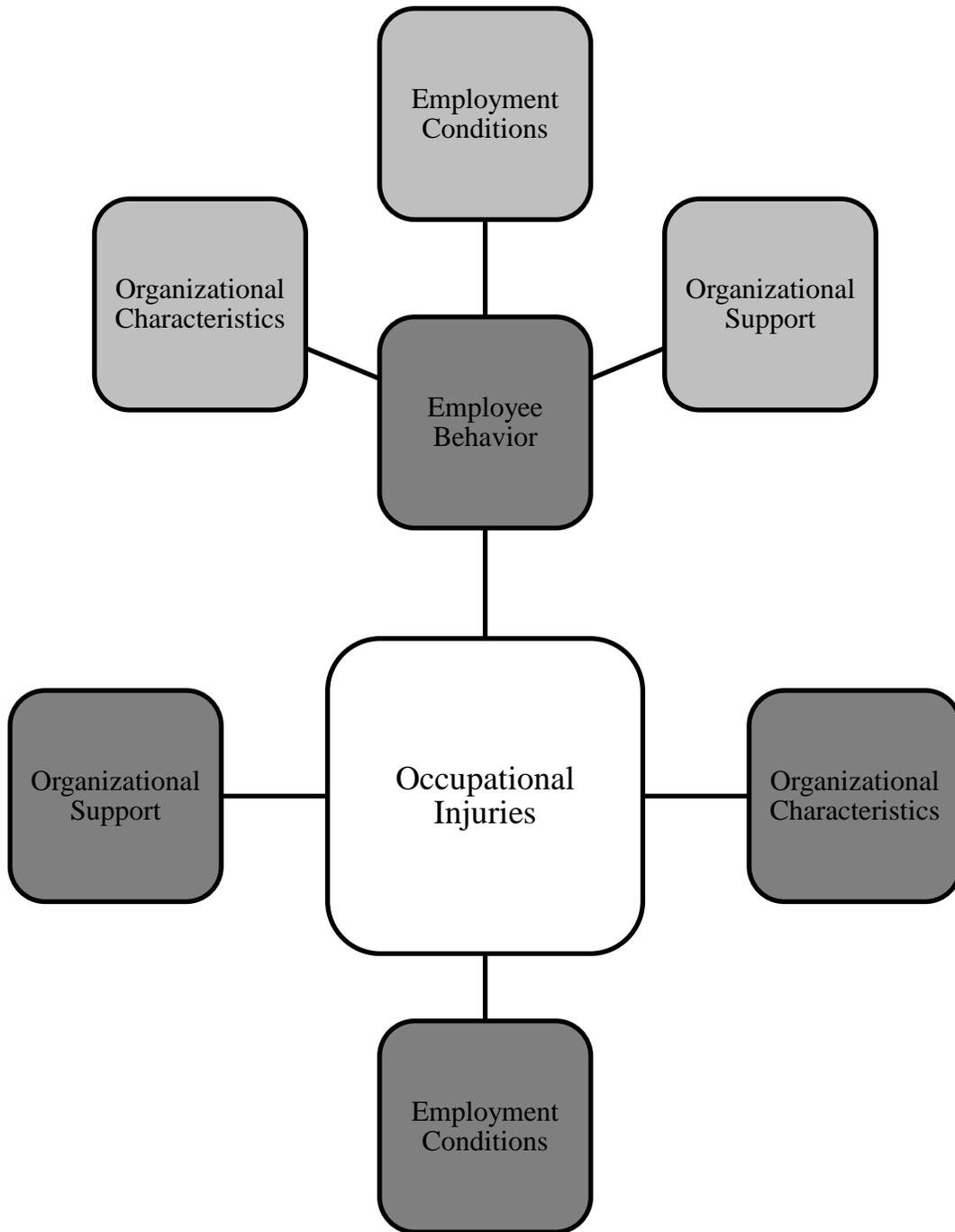


Figure 3.1 (Continued)

Cognitive Science Theories



Contemporary models of occupational injury determinants share in common with cognitive sciences theories complex interrelationships between determinants. They continue to diverge from normative prescriptive theories by introducing more occupational injury determinants and deemphasizing employee behavior. Most importantly, they pay additional attention to how individual determinants double as both immediate and mediatory determinants. As researchers increasingly recognize long-term health disorders, disabilities, and stress disorders as occupational injuries, the intricacy of contemporary models becomes more useful for predicting occupational safety and health risks. The contemporary models reviewed by this study include popular labor market theories, task demand-capability theories, and occupational stress theories.

Labor market theories identify the strong mediatory effects of employee demographics on other immediate occupational injury determinants like organizational support, organizational characteristics, and employment conditions (Berdahl, Berdahl, & McQuillan, 2008). The relationships between these determinants manifest as segregation and discrimination of workers according to their demographics, which places those individuals in more dangerous occupations (Berdahl, Berdahl, & McQuillan, 2008). These theories focus on structural causes of occupational safety and health risks, rather than on employee behavior. The labor market theories that most apply to this study are social closure (Weber, 1978), queuing (Reskin, 1994), poor market position (Catanzarite, 2003), human capital (Schultz, 1961), cultural devaluation (England, Herbert, Kilbourne, Reid, & Megdal, 1994), and compensating differentials theory (Brown C. , 1980).

Weber's theory of social closure posits that highly-valued workers in labor markets attempt to exclude others from the scarce resources that afforded them their value in order to

maintain their privilege (Weber, 1978). Scarce resources can be negatively correlated⁵ occupational injury determinants such as higher wages and benefits (Ridgeway & Correll, 2004; Purse, Work-Related Fatality Risks and Neoclassical Compensating Wage Differentials, 2004; Berdhal, Berdahl, & McQuillan, 2008), union representation (Kim & Fishback, 1993; Murphy, 2000; Wahl, Gunkel, & Sanchez, 2000; Berdhal, Berdahl, & McQuillan, 2008), assignments with less hazardous job tasks, industries or companies with low occupational injury rates, high-quality training, and access to safety information⁶ (Berdhal, Berdahl, & McQuillan, 2008). Methods of exclusion restrict workers according to their demographics. For instance, occupational credentialing and educational requirements regulate access to jobs according to employees' educational attainment and work history (Weeden, 2002). As result, employee demographics mediate immediate occupational injury determinants that highly-valued workers perceive as scarce resources (Robinson, 1984; Oh & Eui, 2003; Berdhal, Berdahl, & McQuillan, 2008).

Reskin's queuing theory is another process through which employee demographics mediate occupational injury determinants. Adapting Erlang's mathematical queuing theory (Erlang, 1909) to saturated labor markets, it assumes that employers divide workers into bands, or queues, according to their demographics and offer preferential access to jobs to those queues with demographics they value (Reskin & Roos, 1990; Reskin, 1994). Only after employers exhaust the labor supply in the highest-valued queues do lower-valued queues receive access, in descending order of value (Reskin & Roos, 1990; Reskin, 1994). Like social closure, the factors limited by queuing can be negatively correlated occupational injury determinants. The desirable jobs higher-queues occupy commonly have employment conditions, organizational

⁵ Positively correlated immediate occupational injury determinants increase occupational safety and health risks, while negatively correlated immediate occupational injury determinants decrease them.

⁶ These occupational injury determinants fall under the categories of employment conditions, organizational characteristics, and organizational support in Figures 3.3 and 3.4.

characteristics, and organizational support that decrease occupational injuries (Ridgeway & Correll, 2004; Berdhal, Berdahl, & McQuillan, 2008). So, through queuing, employee demographics mediate these determinants by driving differential access to jobs with negatively correlated determinants.

Social closure and queuing combine to exacerbate the effects of Catanzarite's poor market position theory and Schultz's human capital theory. Poor market position assumes that workers with less labor market mobility are more likely to work in industries that are downsizing or outsourcing, decreasing wages and benefits, increasing minimum work hours, or otherwise increasing positively correlated occupational injury determinants associated with organizational characteristics and employment conditions (Catanzarite, 2003; Huffman & Cohen, 2004). It builds these assumptions off of Bonacich's split labor market theory (Bonacich, 1972) and Baron and Bielby's labor market segmentation theory (Baron & Bielby, 1980). Human capital theory states that differential access to education and work experience pressures workers to cluster in hazardous occupations (Schultz, 1961). By restricting workers' labor market mobility, opportunities for education, and work experience, social closure and queuing sets the stage for poor market position and human capital to further segment workers and increase occupational safety and health risks according to demographics.

England et al.'s cultural devaluation explains how this segmentation can also increase occupational safety and health risks for workers who have favorable demographics. It predicts that, for occupations culturally associated with workers from undesirable demographic groups, resources will be restricted—even for workers with favorable demographics—because the resources are perceived as benefitting only low-value workers (England, Herbert, Kilbourne, Reid, & Megdal, 1994). Male and Caucasian workers who receive lower wages when in

occupations culturally associated with women and minority racial groups, respectively, exemplify cultural devaluation (Tomaskovic-Devey, 1993; England, Herbert, Kilbourne, Reid, & Megdal, 1994; Kmec J. A., 2002; Huffman & Cohen, 2004). It also affects the same resources limited by social closure (Berdhal, Berdahl, & McQuillan, 2008). Cultural devaluation thereby explains why occupational safety and health risks may persist across all workers even if only some workers have employee demographics that increase occupational injury rates.

As cultural devaluation spreads occupational safety and health risks across an occupation, Brown's compensating differentials theory widens the disparity in occupational injury rates between occupations. It proposes that workers only accept hazardous jobs when employers duly compensate them for their lost security (i.e. offer compensating differentials) (Brown C. , 1980). So, hazardous occupations should naturally attract higher wages and benefits (Brown C. , 1980; Purse, Work-Related Fatality Risks and Neoclassical Compensating Wage Differentials, 2004; Berdhal, Berdahl, & McQuillan, 2008). However, compensating differentials are a scarce resource affected by other labor market theories, above, and markets restrict them to preferred demographic groups (Berdhal, Berdahl, & McQuillan, 2008). The unequal distribution of compensating differentials accounts for differences in occupational injury rates between hazardous occupations culturally associated with favored demographic groups and hazardous occupations culturally associated with disfavored demographic groups (Berdhal, Berdahl, & McQuillan, 2008). Cultural devaluation and compensating differentials, when combined, illustrate the processes through which the mediatory effects of employee demographics on individuals translate into occupation-wide occupational safety and health outcomes and into disparate outcomes between similar occupations.

While labor market theories introduced employee demographics as a new category of mediatory occupational injury determinants, task demand-capability theories introduced even more immediate determinants. They identify heavy workloads (Hinze & Parker, 1978), poor employee-supervisor relationships (Hinze & Gordon, 1978), fatigue, negative psychosocial states like frustration and complacency (Hinze & Gordon, 1978), safety workarounds (Threlfall, 2000; Mitropoulos, Cupido, & Namboodiri, 2009), complex job tasks, unexpected changes in employment conditions (Scharf, et al., 2001), and unreliable access to equipment (Scharf, et al., 2001; Saurin & Guimaraes, 2001) as immediate occupational injury determinants that increase occupational safety and health risks. Fuller's Task Capability Interface Model (Fuller, Towards a General Theory of Driver Behavior, 2005) summarizes the common approach to all these theories: assessing tasks, task demands, and the applied capability of individuals in order to measure occupational safety and health risks. These theories also emphasize restructuring work systems in occupational safety and health interventions, as opposed to employee behavioral controls:

The cognitive perspective shifts the focus of accident prevention from conformance with rules to the issues of task demands and applied capabilities, and the factors affecting them—such as work design, workload, resource allocation, and team processes. (Mitropoulos, Cupido, & Namboodiri, 2009, p. 1)

Like labor market theories, task demand-capability theories depict the causes of occupational injuries as a complicated sum of multiple determinants, consistent with the cognitive science paradigm.

Occupational stress theories differ from task-demand capability and labor market theories because they focus on occupational injury determinants for occupational stress, specifically. However, they are similar in that they subscribe to the cognitive science paradigm and introduce several immediate and mediatory determinants (Gangster & Rosen, 2013). While specific in

scope, they are important to this study because of the many long-term health disorders associated with occupational stress that appear frequently in public surveys of domestic home health aides' occupational injuries. Musculoskeletal damage, cardiovascular disease, and psychological disorders are a few examples of injuries reported among domestic home health aides that can arise from stress. These injuries are found in the McEwen and Stellar's Allostatic Load Model, a comprehensive summary of academic research on health outcomes from occupational stress mapped according to the physiology of stress (McEwen & Stellar, 1993). The occupational stress theories most relevant to this study are Karasek's Job Demands-Control model (Karasek, 1979) and its derivative theories (Johnson & Hall, 1988; Siegrist, 1999; Hobfoll & Shirom, Conservation of Resources Theory, 2001).

Karasek's Job Demands-Control model asserts that job demands result in job strain, or occupational stress, when not counterbalanced by job control (Karasek, 1979). It defines job demand as employment conditions positively correlated with occupational stress, like unexpected job tasks or high workloads, and defines job control as an employees' ability to autonomously affect their employment conditions and organizational support (Karasek, 1979). Its successive theories followed suit and added other immediate determinants. Johnson and Hall's Job Demand-Control-Support model added increases in peer support as a negatively correlated determinant (Johnson & Hall, 1988), and Siegrist's Effort-Reward Imbalance Model added imbalanced employee-employer social reciprocity⁷ as a positively correlated determinant (Siegrist, 1999). Hobfoll and Shirom's Conservation of Resources Theory lists 74 specific resources, classified as objects, conditions, personal characteristics, and energy, as occupational

⁷ An example of imbalanced employee-employer reciprocity is workplace harassment, which is positively correlated with

stress determinants, alone (Hobfoll S. E., 1989; Hobfoll & Shirom, Conservation of Resources Theory, 2001).

Collectively, contemporary theories of occupational stress, task demand-capability theories, and labor market theories identify more than 24 reoccurring occupational injury determinants, which I categorize into five groups: employment conditions, organizational characteristics, organizational support, employee demographics, and employee behavior. Figure 3.2 shows how these classifications organize the various determinants that these theories identify. Figure 3.3 defines these classifications, and Figure 3.4 provides examples of how each determinant affects occupational injury rates or other occupational injury determinants. When combined, these immediate and mediatory determinants control increases or decreases in occupational safety and health risks among workers.

Employment Conditions	Job Tasks Scheduling & Assignments Workplace Environment Client Interactions Wages & Benefits
Organizational Characteristics	Industry Organizational Health Employee Representation
Organizational Support	Accessibility to Equipment Accessibility to Client Information Training Peer Support
Employee Demographics	Race & Level of Immigration Gender Age Educational Attainment Work Experience & Seniority History of Workplace Injuries

Employee Behavior Safety Workarounds
 Sleep Patterns
 Recovery Times
 Psychosocial

Figure 3.2: Cumulative List of Occupational Injury Determinants

Figure 3.3: Definitions of Occupational Injury Determinants and Categories

Employment Conditions	-----
Job Tasks	The activities performed in association with one's occupation
Scheduling & Assignments	The duration and frequency of one's work shifts and assignment to specific clients, series of job tasks, or locations
Workplace Environment	The geographical location where one performs work and the characteristics commonly associated with that location, as it affects work ability
Client Interactions	The duration and frequency of in-person interactions with clients and psychosocial qualities of one's professional relationship to clients
Wages & Benefits	-----
Organizational Characteristics	The private structural systems in which one works
Industry	The structural qualities and financial state of the industry in which one operates, based on the actions of its suppliers, distributors, and clients
Organizational Health	The structural qualities and financial state of one's employer
Employee Representation	The structures through which employees can communicate with management, document workplace hazards, and promote their interests in managerial decisions
Organizational Support	Available resources which enable safe employment conditions
Accessibility to Equipment	Reliability of access to equipment which enables the safe completion of job tasks
Accessibility to Client Information	Reliability of access to information regarding client which affect employment conditions

Training	Accessible training offered by employers, public, or other private organizations
Peer Support	Interactions with coworkers belonging to one's occupation
Employee Demographics	One's own demographic affiliations
Race & Level of Immigration	-----
Gender	-----
Age	-----
Educational Attainment	The amount of formal education one has completed
Work Experience & Seniority	The duration for which one has consecutively held a job
History of Workplace Injuries	Frequency and severity of prior occupational injuries, particularly when sustained in the same job as currently held
Employee Behavior	-----
Safety Workarounds	Shortcuts which ease completion of job tasks by circumventing workplace safety protocols
Sleep Patterns	-----
Recovery Times	The duration between sustaining an occupational injury and returning to work
Psychosocial	One's psychological and social associations with one's current work

Figure 3.4: Notable Correlations between Occupational Injuries and Injury Determinants

Injury Determinants	Risk of Occupational Injury Increases...	Mediatory Determinants
Employment Conditions		
Job Tasks	<ul style="list-style-type: none"> ➤ ...if job tasks are monotonous. ➤ ...if job tasks require a high workload of physical labor (physical overexertion). ➤ ...if job tasks require a high workload of affective labor (mental overexertion). ➤ ...if job tasks require exposure to blood and bodily fluids. ➤ ...if job tasks require the use of autonomous machines or sharp equipment (ex: needles). ➤ ...if job tasks require interactions with individuals who have severe cognitive or physical impairments which limit cooperation. 	<ul style="list-style-type: none"> Scheduling & Assignments Client Interactions Organizational Health Employee Representation Accessibility to Equipment Accessibility to Client Information Training Peer Support History of Workplace Injuries Employee Behavior
Scheduling & Assignments	<ul style="list-style-type: none"> ➤ ...as work shifts increase in length. ➤ ...when work shifts are scheduled consecutively, interfering with employees' domestic responsibilities and rest. ➤ ...when work shifts are scheduled inconsistently and/or with short notice to employees. ➤ ...during late night shifts. ➤ ...when scheduled work shifts oscillate between day and night too quickly. 	<ul style="list-style-type: none"> Job Tasks Client Interactions Organizational Characteristics Peer Support Sleep Patterns
Workplace Environment	<ul style="list-style-type: none"> ➤ ...when employees are isolated or overcrowded. ➤ ...as commute time increases. ➤ ...as control of workplace temperatures, air flow, or air quality decreases. ➤ ...as reliable access to food, water, and restrooms decreases. ➤ ...as freedom of movement through a worksite decreases. 	<ul style="list-style-type: none"> Scheduling & Assignments Organizational Characteristics Accessibility to Equipment

Figure 3.4 (Continued)

Client Interactions	<ul style="list-style-type: none"> ➤ ...when normative commitment to clients increases or expectations of such commitment increases. ➤ ...as clients' disregard for employees increase. 	Industry
		Occupational Health
		Psychosocial
Wages & Benefits	<ul style="list-style-type: none"> ➤ ...as wages and benefits (ex: health insurance, sick leave, workers' compensation, transportation assistance) decrease. ➤ ...as job security decreases. 	Scheduling & Assignments
		Organizational Characteristics
		Employee Demographics
Organizational Characteristics		
Industry	<ul style="list-style-type: none"> ➤ ...as sub-contracting increases across an industry. ➤ ...as the association of an industry or occupation to a minority demographic group increases. 	Organizational Health
		Employee Representation
		Employee Demographics
Organizational Health	<ul style="list-style-type: none"> ➤ ...when an organization downsizes or outsources labor. ➤ ...when an organization has a low-performance work system. 	Industry
		Employee Representation
		Employee Demographics
Employee Representation	<ul style="list-style-type: none"> ➤ ...in non-unionized workplaces without influential employee-led work councils or safety committees. ➤ ...when there are inadequate or inefficient systems for reporting workplace hazards. ➤ ...as employer retaliation for refusing hazardous work or safety workarounds increases. 	Industry
		Organizational Health
		Peer Support
		Employee Demographics
Organizational Support		
Accessibility to Equipment	<ul style="list-style-type: none"> ➤ ...as reliable access to equipment, particularly personal protective equipment, decreases. ➤ ...as dependence on non-ergonomic equipment increases. 	Employment Conditions
		Organizational Characteristics
		Accessibility to Client Information

Figure 3.4 (Continued)

Accessibility to Client Information	<ul style="list-style-type: none"> ➤ ...as reliable access to client information relevant to job tasks and other injury determinants decreases. ➤ ...when relevant client information is miscommunicated. 	Employment Conditions
		Organizational Characteristics
Training	<ul style="list-style-type: none"> ➤ ...as access to quality training on occupational health and safety decreases. ➤ ...as organizationally-provided incentives to attend occupational health and safety training decrease. ➤ ...when training on occupational health and safety isn't adapted to changing injury determinants, like job tasks or work environment. 	Employment Conditions
		Organizational Characteristics
		Employee Demographics
Peer Support	<ul style="list-style-type: none"> ➤ ...when employees are isolated from other employees of similar occupation. ➤ ...when coworkers engage in unsafe behaviors or otherwise increase other injury determinants. ➤ ...when there is low job satisfaction and high turnover among coworkers. 	Scheduling & Assignments
		Organizational Characteristics
		Employee Behavior
Employee Demographics		
Race & Level of Immigration	<ul style="list-style-type: none"> ➤ ...when an employee is of minority race (ex: African-American). ➤ ...when an employee is an undocumented immigrant or other minority immigrant group. ➤ ...if an employee operates in an occupation associated with racial minorities or minority immigrant groups, regardless of their race. 	Gender
		Age
		Educational Attainment
		Work Experience & Seniority
Gender	<ul style="list-style-type: none"> ➤ ...if an employee is male. ➤ ...if an employee operates in an occupation associated with feminized work, regardless of their gender. 	Job Tasks
		Race
		Age
		Educational Attainment
		Work Experience & Seniority

Figure 3.4 (Continued)

<p>Age</p>	<p>➤ ...as an employee ages, particularly if work ability decreases as symptom of aging.</p>	<p>Wages & Benefits Race Gender Educational Attainment Work Experience & Seniority History of Workplace Injuries</p>
<p>Educational Attainment</p>	<p>➤ ...when employees have low educational attainment and as access to additional education increases.</p>	<p>Wages & Benefits Race Gender Age</p>
<p>Work Experience & Seniority</p>	<p>➤ ...as an employee's work experience or seniority decreases.</p>	<p>Job Tasks Scheduling & Assessments Wages & Benefits Organizational Characteristics Race Gender Age Educational Attainment History of Workplace Injuries</p>
<p>History of Workplace Injuries</p>	<p>➤ ...immediately after an employee sustains a workplace injury. ➤ ...as an employee's record of workplace injuries increases.</p>	<p>Employment Conditions Organizational Characteristics Organizational Support Race Gender Age Educational Attainment Work Experience & Seniority Employee Behavior</p>

Figure 3.4 (Continued)

Employee Behavior		
Safety Workarounds	➤ ...as an employee's use of safety workarounds increases.	Employment Conditions
		Organizational Characteristics
		Organizational Support
		Sleep Behaviors
		Recovery Times
		Psychosocial
Sleep Patterns	<ul style="list-style-type: none"> ➤ ...when an employees is fatigued. ➤ ...when an employee operates with too few hours of restful or REM sleep. ➤ ...when an employee maintains an irregular sleep pattern (ex: varying start and/or end times, inconsistent duration) 	Employment Conditions
		Organizational Characteristics
		Organizational Support
		Safety Workarounds
		Recovery Times
		Psychosocial
Recovery Times	➤ ...when employees don't have appropriate recovery time between sustaining a workplace injury and resuming work.	Employment Conditions
		Organizational Characteristics
		Organizational Support
		Sleep Patterns
		Sleep Behaviors
		Psychosocial

Figure 3.4 (Continued)

Psychosocial	<ul style="list-style-type: none"> ➤ ...as an employee's job satisfaction decreases. ➤ ...as work-family interference, or inability to balance domestic and work responsibilities, increases. ➤ ...as workplace stress increases. 	Employment Conditions
		Organizational Characteristics
		Organizational Support
		Safety Workarounds
		Sleep Behaviors
		Recovery Times

If our models of occupational injury determinants comprehensively predict occupational safety and health risks, then they should also explain the occupational injury rates of domestic home health aides. According to these theories, domestic home health aides in New York City should have positively correlated occupational injury determinants that outweigh their negatively correlated determinants in impact. Public surveys of domestic home health aides support that aides had at least some positively correlated occupational injury determinants. For instance, Figures 2.6 and 2.7 showed high concentrations of demographic minorities in 2007 and 2014. However, to confirm that these determinants persist today among domestic home health aides in New York City and that they outweigh other negatively correlated determinants requires additional research. Additionally, our associations of domestic work with minority demographic groups suggest that labor market theories strongly affect domestic home health aides and increase their occupational safety and health risks. Yet academic studies of labor market theories don't explicitly mention domestic work as a mediated factor, unlike wages and other employment conditions. The relationship between labor market theories and domestic work needs to be explored since it may affect domestic home health aides' occupational safety and health risks. Together, these inferences construct the first hypothesis of this study and point our review toward academic theories of domestic work as an occupational injury determinant.

Hypothesis 1

Domestic home health aides in New York City have workplace hazards that outweigh their safeguards, explaining their persistently high occupational injury rates.

Models of Domestic Work

Surprisingly, there are no clearly-defined models of occupational injury determinants that explicitly label domestic work as an occupational injury determinant. Contemporary models do

identify aspects of workplace environment, as aforementioned, and those determinants can change according to where someone works. However, it's unclear if those determinants have the same effect in domestic workplaces as in traditional workplaces. Their supporting empirical data comes exclusively from observations of workers in traditional workplaces, and so we can't assume their conclusions apply to domestic workers.

This ambiguity called for a second hypothesis, but it was difficult to orient one on my review of occupational injury determinant models alone. Models of domestic work clarified my inquiry by exposing two important implications. First, they imply that models of occupational injury determinants underestimate the impact of domestic work on occupational safety and health risks because they ignore how it mediates other occupational injury determinants through labor market theories. Second, they imply that the extent to which occupational injuries among New York City's domestic home health aides differs from other comparable domestic workers occurs at least in part because of differences in how domestic work mediates their respective determinants. The models of domestic work from which I draw these inferences are embodied inequality theory (Casanova, 2013), public good theory (Samuelson, 1954; Samuelson, 1955; England, 2005), gender and racial bias devaluation (England & Folbre, 1999; Kmec, 2002), prisoner of love theory (Folbre, 2001), and the commodification of emotion framework (Hochschild, 1983; Wharton A. S., 1993; Wharton A. S., 1999; Hochschild, 2000; Hochschild, 2003).

Casanova's embodied inequality theory describes the effects of two sub-theories: body as resource and body as symbol theory (Casanova, 2013).

In this case, domestic workers' bodies are used as tools, and suffer the physical consequences [(body as resource theory)], yet they must also have an appearance acceptable to their employers and indicative of their socioeconomic position [(body as symbol theory)]. (Casanova, 2013, p. 564)

Both sub-theories imply that domestic work is a mediatory occupational injury determinant. Moreover, while neither sub-theory mentions labor market theories explicitly, they seem to affect and be affected by them in ways relevant to New York City's domestic home health aides.

Body as resource theory affects occupations that perform physical labor, with large labor supplies, and with cultural associations to minority demographic groups (Casanova, 2013). It asserts that workers' bodies are limited resources that can be damaged or deformed by work, and that occupations with high workloads of physical labor rely on expending workers' bodies unsustainably to maintain production and growth⁸ (Casanova, 2013). To justify this damage, employers and employees disassociate workers' bodies from workers, themselves, and perceive them as capital (Casanova, 2013). Domestic workers experience this disassociation because they perform physical labor, operate in saturated labor markets, and experience cultural devaluation (Casanova, 2013). The consequences of this theory on domestic workers are physically strenuous job tasks and assignments that increase occupational safety and health risks (Casanova, 2013). This process implies that domestic work mediates positively correlated occupational injury determinants, like heavy workloads and demanding job tasks.

Body as symbol theory states that how individuals present their bodies communicates status in social hierarchies and expectations of treatment⁹ (Casanova, 2013). So, employers can affect the social entitlement of employees by altering the presentation of worker's bodies (Casanova, 2013). Employers can restrict employees' dress, physical appearance, and movement

⁸ Body as resource theory builds off of the concepts of labor power as capital (Marx, *Economic and Philosophical Manuscripts of 1844*, 1978), symbolic interactionism (Erving, 1959), habitus as it applies to symbolic interactionism (Bourdieu, *The Logic of Practice*, 1990), embodied habitus (Skeggs, *Exchange, Value, and Affect: Bourdieu and the "Self"*, 2004; Skeggs, *Context and Background: Pierre Bourdieu's Analysis of Class, Gender, and Sexuality*, 2004), and occupational habitus (Wolkowitz, *Bodies at Work*, 2006).

⁹ Body as symbol theory builds off of the concept of body work (Shilling, 1993; Gimlin, 2007; Kang, 2010) and off of preceding studies of evaluating gender performance in gender-segregated service occupations (Hochschild, *The Managed Heart: Commercialization of Human Feeling*, 1983; McDowell, 1997; Freeman, 2000; Salzinger, 2003; Hall, Hockey, & Robinson, 2007).

to signal what interactions are or aren't appropriate towards workers (Casanova, 2013). Employers of domestic workers can retaliate against workers for displaying illness, deny them food or opportunities to eat, regulate workers to separate eating utensils or eating spaces, deny access to tools, mandate improper uniforms, or retaliate against workers for their appearance (Casanova, 2013). Again, while the theory doesn't explicitly state the connection to occupational injury, these consequences are increases in positively correlated occupational injury determinants from occupational injury determinant models. This connection implies that domestic work mediates those determinants. The theory also claims that these restrictions reinforce perceptions of domestic workers as low-class workers and encourage long-lasting social depreciation (Casanova, 2013):

Workplaces can be agents of socialization, building or reinforcing habitus, especially when workers begin at young ages, as in domestic employments. [...] Bodies also matter in terms of the symbolic distinctions drawn between "good," middle-class/elite bodies and "bad," lower-class/deviant bodies—between employers' and workers' bodies. (Casanova, 2013, p. 563)

By allowing employers to limit work and resources according to their biased preferences and by reinforcing negative cultural associations, body as symbol theory mirrors queuing, social closure, and cultural devaluation theories.

Applying labor market theories to embodied inequality explains the method through which domestic work mediates occupational safety and health risks. Body as symbol theory facilitates processes like social closure and queuing, which decreases domestic workers' human capital and reinforces their poor market position. As these consequences become more common, cultural devaluation of domestic work occupations through body as resource and body as symbol theory occurs and increases positively correlated occupational injury rates across all workers within the occupations. The social closure and queuing from body as symbol theory also

combines with compensating differential theory to widen the difference in occupational safety and health outcomes between these occupations and similar non-domestic occupations. So, while occupational injury determinant models and models of domestic work don't overtly label domestic work as a mediatory occupational injury determinant, together they infer this distinction and assign domestic work a strong influence over occupational safety and health risks.

Other models of domestic work support this conclusion and flesh out its origins and impact. Samuelson's public good theory, as applied by England, explains why domestic work was originally relegated to lower-valued workers. It claims that markets undervalue and undersupply public goods, or benefits that can't be restricted from individuals who don't pay for them, because they result in higher social returns than private returns (Samuelson, 1954; England, 2005). The market value of domestic work, particularly domestic care work, depreciates as result of this theory because it's a public good (England, 2005). State regulations can counterbalance this market failure, but the weakness of state labor regulations on domestic care work leave the market unchecked (Ferber & Nelson, 1993; Folbre, 1994; Himmelweit, 1995; Hewitson, 1999; Perez Orozco, 2004; Waring, 2004; Perez Orozco, 2010). Not only did this erode employment conditions and organizational support, it made domestic work less desirable as an occupation and highly valued workers exercised their privilege to avoid it. Lower-valued workers, through social closure, queuing, poor market position, and human capital theory, accepted domestic work in greater proportions because it was what was left for them.

Once public good theory established this funneling of lower-valued workers to domestic work, gender and racial bias devaluation sped up the cultural devaluation of that occupation. England and Folbre's gender bias-devaluation theory argues that gender bias and cultural

associations with the gendered role of mothering or with women who perform unpaid household labor for their families depreciate workers' market value (England & Folbre, 1999; Cancian & Oliker, 2000; England & Folbre, 2002; England, 2005). Kmec's racial bias-devaluation theory argues that a similar devaluation also occurs from racial bias and cultural associations to racial minorities (Kmec J. A., 2002). These processes apply to domestic care workers because their work invokes historically gendered household labor, "invisible work,"¹⁰ and racial segregation (England, 2005).

During the 19th century, domestic workers in the North were mostly Irish immigrant women; in the West, they were Asian or Latina; in the South, African American women—first as slaves and then as freed people—worked in the homes of white families. During World War I and World War II, African Americans left the segregation, violence, and declining agricultural sector of the South in search of better paying manufacturing jobs in the North and West. While a few African American women found unskilled work in factories, the vast majority were relegated to domestic service. They worked as housekeepers, nannies, cooks, and washerwomen. Until the 1960s, domestic work was one of the very few occupations open to them (Dill, 1993; Clark-Lewis, 1996; Hunter, 1997). (Nadasen & Williams, 2011, p. 3)

This history evidences the funneling of low-valued workers to domestic work—most likely through the process of social closure, queuing, poor market position, and human capital theory—after the effects of public good theory first devalued domestic occupations. Gender and racial bias devaluation then eroded the employment conditions of all workers in those occupations. For instance, their depreciation of domestic care workers results in lower wages and benefits for domestic care workers (Steinberg, Haignere, Possin, Chertos, & Trieman, 1986; England P. , 1992; Kilbourne, England, Farkas, Beron, & Weir, 1994; Petersen, 1995; England, Thompson, & Aman, 2001), even among workers with favorable demographic characteristics—an effect paralleling those of cultural devaluation theory (Steinberg, Haignere, Possin, Chertos, &

¹⁰ Invisible work is work that beneficiaries do not notice unless incomplete (Rollins, 1985).

Trieman, 1986; England P. , 1992; Kilbourne, England, Farkas, Beron, & Weir, 1994; Sorensen, 1994; Steinberg, 2001).

With this erosion underway, Folbre's prisoner of love theory and Hochschild's commodification of emotion framework further increases the inequality of occupational safety and health outcomes between domestic care workers and other occupations. The prisoner of love theory assumes self-fulfillment from altruism motivates most domestic care workers¹¹ and compensates in part for their poorer employment conditions, organizational characteristics, and organizational support (Folbre, 2001). The commodification of emotion framework argues that an employees' psychosocial state deteriorates when they perform affective labor with low organizational support (Hochschild, 1983; Wharton A. S., 1993; Wharton A. S., 1999; Hochschild, 2000; Hochschild, 2003). These theories, when combined, essentially apply compensating differentials theory to domestic care workers and point out a second mechanism for increasing occupational safety and health risks. Rather than receive other compensating differentials that social closure and queuing restricts, domestic care workers receive opportunities for altruism in exchange for increases in positively correlated occupational injury determinants. They then perform affective labor to cash out on these opportunities, exposing them to another positively correlated occupational injury determinant. This process explains different occupational safety and health outcomes between similar domestic and non-domestic occupations because, through it, domestic workers receive more compensating differentials that increase occupational injuries and fewer differentials that decrease injuries than non-domestic workers.

¹¹ Domestic care workers can enter their occupation with this motivation, or they can develop emotional attachments to the recipients of their care as they perform work (Himmelweit, *Caring Labor*, 1999; England & Folbre, *Contracting for Care*, 2003).

Altogether, embodied inequality, public good theory, gender and racial bias devaluation, the prisoner of love theory, and the commodification of emotion framework paint domestic work as a highly influential mediatory occupational injury determinant. While these domestic work theories aren't models of occupational injury determinants, their processes and consequences are so similar to labor market theories and affect the same conditions identified as occupational injury determinants by occupational injury determinant models that this potential conclusion shouldn't be ignored. It insinuates that domestic home health aides experience increased occupational safety and health risks in comparison to other similar non-domestic healthcare occupations because of their domestic work environment.

However, domestic home health aides also experience different occupational safety and health outcomes from other domestic workers. If domestic work environment plays a key role in determining domestic home health aides' notable incidence rates, then why don't other domestic workers experience similarly dramatic rates since they fall under the same theories of domestic work? This phenomenon may disprove that domestic work *significantly* affects occupational safety and health risks, or it may hint at factors that limit domestic work's mediatory effects. Differing occupational safety and health interventions among domestic workers, for instance, would explain their varying occupational safety and health outcomes. The implication that domestic work is a mediatory occupational injury determinant and the extent of its influence on occupational safety and health risks must be tested to ascertain its effects, if any, on New York City's domestic home health aides.

Models of occupational injury determinants don't mention domestic work. At best, they suggest that domestic work mediates occupational injury determinants associated with workplace environment. Even then, this connection lacks supporting empirical data from studies of

domestic workers and relies on commonsense assumptions, rather than explicit statements. Most importantly, these models don't acknowledge that domestic work mediates other occupational injury determinants aside from workplace environment, like job tasks, scheduling and assignment, or wages and benefits. Models of domestic work strongly insinuate that this relationship exists and affects domestic workers' occupational safety and health risks. Still, even among those models, the connection to occupational injuries isn't explicit and doesn't explain the different occupational safety and health outcomes between domestic occupations. From these inferences, I derived my second hypothesis for this study and began reviewing occupational safety and health interventions as a possible explanation for the different incidence rates between New York City's domestic home health aides and comparable domestic workers.

Hypothesis 2

Operating in domestic workplaces increases the workplace hazards among domestic home health aides in New York City because of its association with demographic minorities, public goods, and negative cultural norms, which encourages the employment of low-valued workers and restrictions on resources that improve employment conditions.

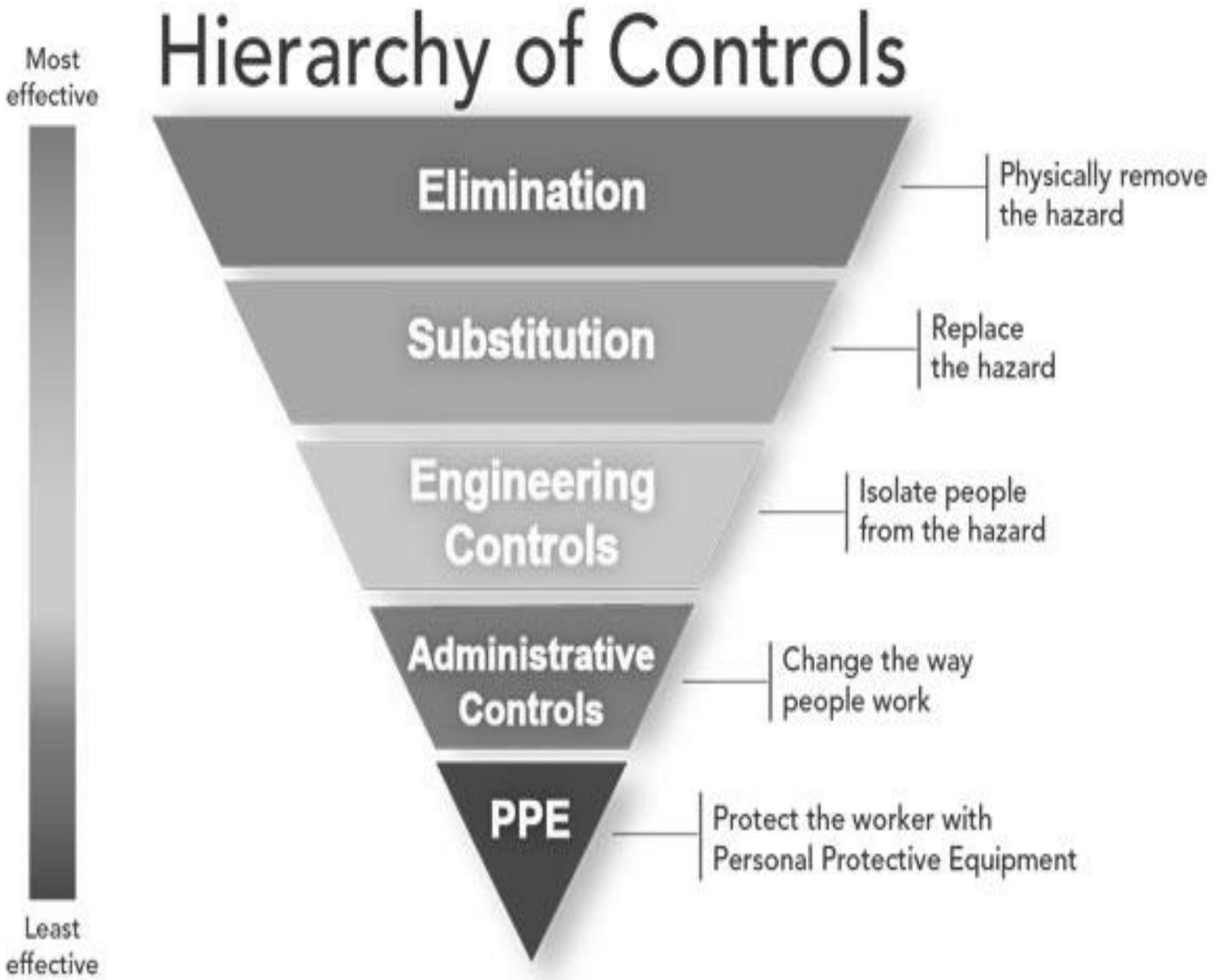
Occupational Safety and Health Interventions

Occupational safety and health interventions reduce occupational injuries by identifying occupational injury determinants among a specific group of workers and reducing their positively correlated determinants or strengthening their negatively correlated determinants. Employers, unions, and public organizations implement these interventions when they want to mitigate occupational injuries in a worksite or occupation and when their resources allow them. New York City's domestic home health aides benefit from a minimum set of annual occupational safety and health interventions organized by government, union, and other public organizations. For instance, they receive occupational safety and health training from the New York State

Department of Health as a requirement of employment. If they reduce occupational safety and health risks and occur disparately among New York City’s domestic workers, then occupational safety and health interventions may explain why domestic home health aides have different occupational injury rates than comparable domestic workers. To assess this possibility necessitated a review of predominating models of occupational safety and health interventions, including the hierarchy of hazards control (National Institute of Occupational Health and Safety, 2015; New York Committee for Occupational Safety and Health, 2016) and behavior-based safety models (Peterson, 1996; Geller, 1996; Geller, 2004).

The hierarchy of hazards control model currently prevails among models of occupational safety and health interventions. Figure 3.5 shows the National Institute of Occupational Health and Safety’s (NIOSH) rendition, which displays the most basic elements of the model. The hierarchy of hazards control recommends five levels of safety controls: elimination, substitution, engineering controls, administrative controls, and personal protective equipment¹². It reflects cognitive science theories by prioritizing system changes over employee behavioral controls and resources reliant on employee behavior. It also allows multiple methods of executing each level, permitting organizations to adapt its recommendations to their specific cases. The New York Committee for Occupational Safety and Health’s (NYCOSH) version, shown in Figure 3.6, exhibits some of these methods. It also suggests the prevalence of this model in publicly-organized occupational safety and health interventions for New York City workers and New York City’s domestic home health aides, specifically.

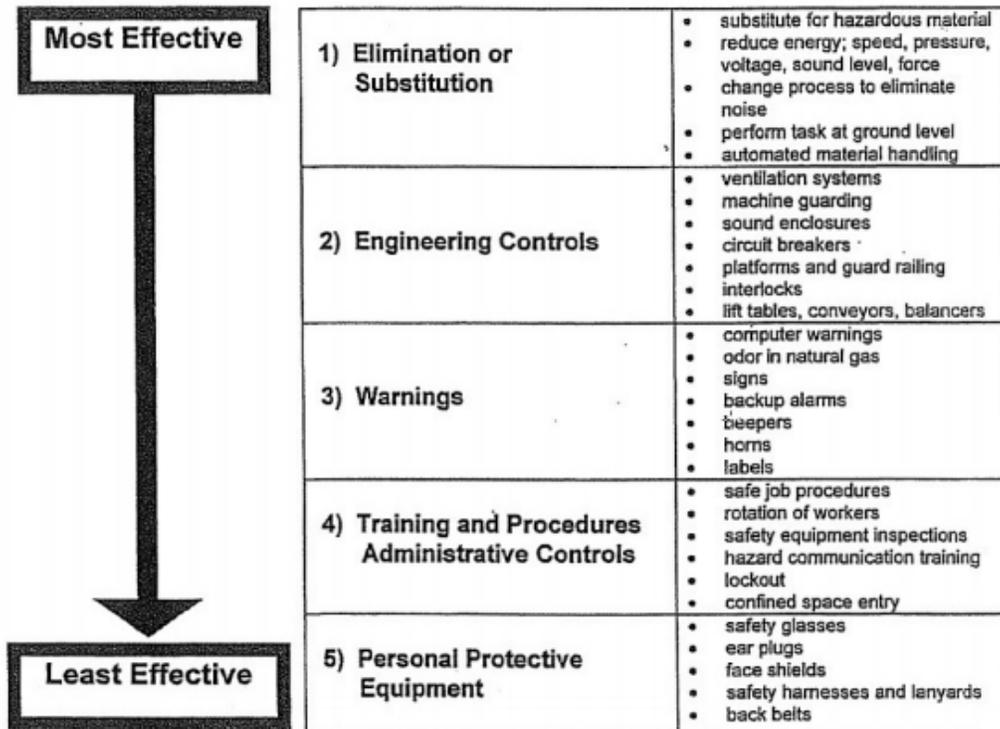
¹² Listed in descending order of effectiveness, according to the hierarchy of hazards control model



(National Institute of Occupational Health and Safety, 2015)

Figure 3.5: NIOSH's Hierarchy of Hazards Control

HIERARCHY OF CONTROLS OF HAZARDS



(New York Committee for Occupational Safety and Health, 2016)

Figure 3.6: The New York Committee of Occupational Safety and Health’s Hierarchy of Controls of Hazards

Behavior-based safety is a competing model of occupational safety and health interventions. Peterson and Geller created its foundational theories (Peterson, 1996; Geller, 1996; Geller, 2004), but at the time behavior-based safety was a non-exclusive model. It complemented the hierarchy of hazards control by providing a detailed method for executing lower-level safety controls (Peterson, 1996; Geller, 1996; Geller, 2004; Boyce, 2013). In some versions, it even advocated for the use of employee behavioral observations in identifying additional opportunities for higher-level safety controls (Cooper, 2009; Boyce, Focus on Behavior to Manage Rick the

Right Way, 2013). Over time, however, interventionists re-applied the model as a substitution for the hierarchy of hazards control, entirely (Mitchell, 2016). Alone, behavior-based safety inverts the hierarchy of hazards control and prioritizes control or responses to employee behavior.

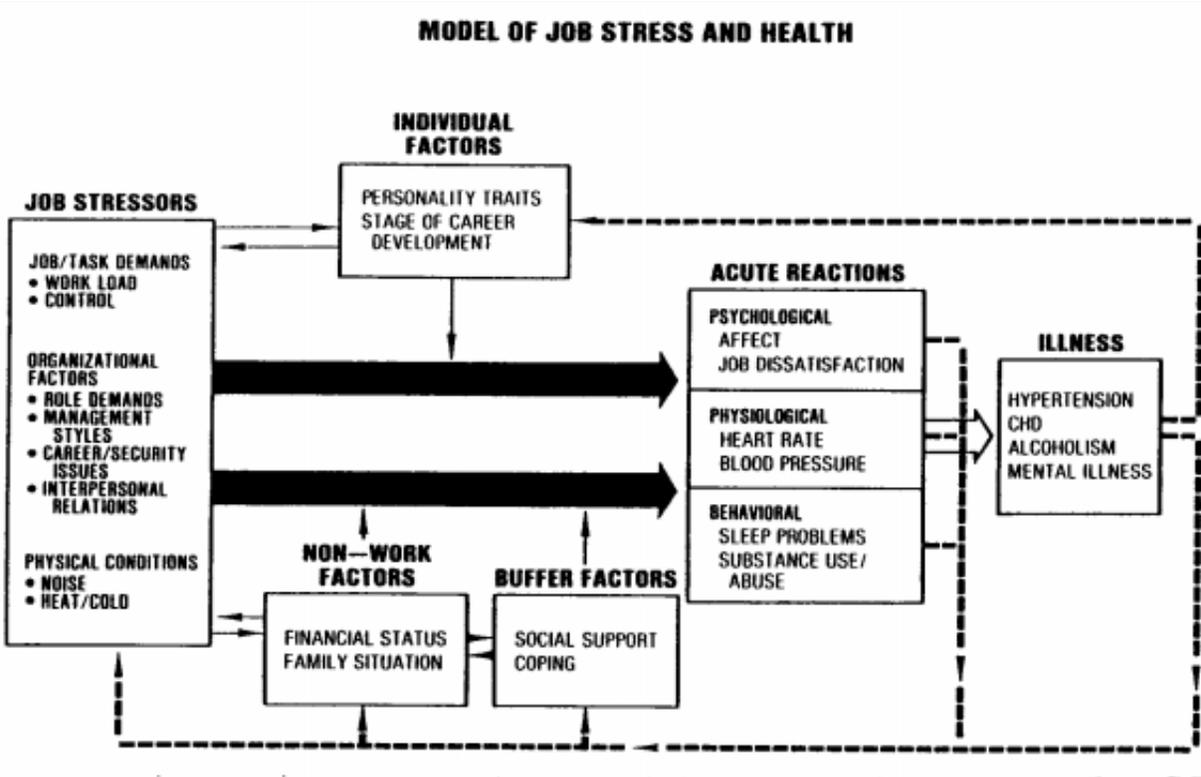
Using behavior-based safety in isolation is less effective than applying the hierarchy of hazards control or than applying both models together. Its flaws stem from its parallels to normative prescriptive theories of occupational injury determinants. Employee behavior isn't the only determinant of occupational injuries, and affecting only employee behavior caps control of occupational safety and health risks. Additionally, risk homeostasis predicts reductions in gains from low-level safety controls over time (Wilde, 1985; Reason, 1990; Fuller, 2004; Mahalingam & Levitt, 2007), especially if they don't equally affect all employees (Rasmussen, 1997). With each successful low-level safety control, workers perceive even riskier behavior as safe and adopt those behaviors (Wilde, 1985; Reason, 1990; Rasmussen, 1997; Fuller, 2004; Mahalingam & Levitt, 2007). As workers continually adopt riskier behavior, responding with new low-level safety controls becomes unsustainable (Wilde, 1985; Reason, 1990; Rasmussen, 1997; Fuller, 2004; Mahalingam & Levitt, 2007). So, even when employee behavior causes workplace injuries independently, behavior-based safety fails to maintain low occupational safety and health risks on its own.

It's more likely that occupational safety and health interventions for New York City's domestic home health aides apply the hierarchy of controls, rather than behavior-based safety alone, because of its widespread adoption by public institutions. However, that condition doesn't guarantee that the interventions in practice reduce occupational injuries. It's possible that interventionists don't properly apply the model in their interventions. Organizations are more likely to rely exclusively on low-level safety controls, despite the recommendations in the

hierarchy of hazards control, because they are quicker and cheaper to initiate than higher-level safety controls. The loss of sustainable reductions in incidence rates are then compensated by the immediacy and convenience of lower-level safety controls. Organizations may also commit this error because lower-level safety controls appeal to cultural assumptions about the relationship between employee behavior and workplace injuries. Rooted in 19th century concepts like “assumption of risk” and “fellow servant rules,” the persistent belief that employees most greatly shape their occupational injury risks continues to inform organizational policies (Rogers, 2009). If the organizations that coordinate the occupational safety and health interventions for New York City’s domestic home health aides don’t properly apply the hierarchy of hazards control, then their interventions won’t sustainably decrease incidence rates and would help explain the persistent rise in occupational injuries among aides. If they also apply occupational safety and health interventions differently for New York City’s domestic home health aides than for comparable domestic workers, then this difference would explain the disparities in their incidence rates between these groups.

Even if interventionists apply the hierarchy of hazards control as intended, their interventions may still be ineffective at reducing occupational safety and health risks. A key step in completing these interventions is accurately identifying workplace hazards. The hierarchy of hazards control and behavior-based safety models don’t expound on how to determine hazards, so interventionists rely on academic models of occupational injury determinants to define them. For example, NIOSH uses its Model of Job Stress and Health and Occupational Stress Evaluation Grid to identify causes of occupational stress that occupational safety and health interventions should target. The causes in these reference materials, as seen in Figures 3.7 and 3.8, repeat occupational injury determinants from theories of occupational stress determinants.

Yet, we suspect that academic theories of occupational injury determinants undervalue the impact of domestic work on workplace injuries. For domestic home health aides, if interventions rely on models that exclude domestic work and if domestic work mediates other hazards, then the interventions are unlikely to reduce occupational safety and health risks because they underestimate the amplified effects of these hazards.



(Hurrell, Jr., 1987)

Figure 3.7: NIOSH Model of Job Stress and Health

TABLE 1.1 OCCUPATIONAL STRESS EVALUATION GRID (OSEG)

Levels	Stressors	Interventions	
		Formal	Informal
Sociocultural	Racism; Sexism Ecological shifts Economic downturns Political changes Military crises	Elections Lobbying/political action Public education Trade associations	Grass roots organizing Petitions Demonstrations Migration Spouse employment
Organizational	Hiring policies Plant closings Layoffs, Relocation, Automation, Market shifts, Retraining Organizational priorities	Corporate decision Reorganization New management model Management consultant inservice/retraining	Social activities Contests; Incentives Manager involvement & ties with workers Continuing education Moonlighting
Work Setting	Task (time, speed, autonomy, creativity) Supervision Co-workers Ergonomics Participation in decision making	Supervisor meetings Health/safety meetings Union grievance Employee involvement Quality circles Job redesign Inservice training	Slow down/speed up Redefine tasks Support of other workers Sabotage, theft Quit, change jobs
Interpersonal	Divorce, Separation Marital discord Conflict, family/friend Death, illness in family Intergenerational conflict Legal/financial difficulties Early parenthood	Legal/financial services Leave of absence Counseling, Psychotherapy Insurance plans Family therapy Loans/Credit unions Day care	Seek social support/ advice Seek legal/financial assistance Self-help groups Vacation/sick days Child care
Psychological	Neurosis, Mental illness Disturbance of Affect, Cognition or Behavior Ineffective coping skills Poor self-image Poor communication Addictive behavior	Employee assistance (referral/in house) Counseling, Psychotherapy Medication Supervisory training Stress Management Workshop	Seek support from friends, family, church Self-help groups/books Self-medication Recreation, leisure Sexual activity "Mental health" days
Biological	Disease, Disability Sleep, Appetite disturbance Chemical dependency Biochemical imbalance Pregnancy	Preplacement screening Counseling Medical treatment Health education Employee assistance Maternity leave	Change sleep/wake habits Bag lunch Self-medication Cosmetics Diets, exercise Consult physician
Physical/ Environmental	Poor air, climate Noise exposure Toxic substance exposure Poor lighting Radiation exposure Poor equipment design Bad architecture	Protective clothing/ equipment Climate control Health/safety committee Interior decoration Muzak Union grievance	Own equipment, decoration Walkman, radio Consult personal physician Letters of complaint

(Singer, Neale, & Schwartz, 1987)

Figure 3.8: NIOSH Occupational Stress Evaluation Grid (OSEG)

Furthermore, the hierarchy of hazards control maintains shortcomings with its low-level safety controls. Just as it's problematic to overestimate the importance of employee behavior as an occupational injury determinant, failing to address it at all can also stunt interventions. Both the hierarchy of hazards control and behavior-based safety address employee behavior through administrative controls, like training or warnings, and personal protective equipment (PPE). However, recent studies conclude that these common administrative controls are unreliable in changing employee behavior under certain conditions. For instance, warnings are effective when employees are performing new tasks and already perceive high risks of injury and aren't effective when employees don't readily perceive these risks (McCarthy, Finnegan, Krumm-Scott, & McCarthy, 1984; Ayres, Wood, Schmidt, & McCarthy, Risk Perception and Behavioral Choice, 1998; Ayres, Wood, Schmidt, Young, & Murray, Effectiveness of Warning Labels and Signs: An Update on Compliance Research, 1998; Ayres, Facing a Pervasive Bias in Warnings Research, 2004).

By considering how the hierarchy of hazards control and behavior-based safety models apply to domestic home health aides, this review uncovered potential weakness in occupational safety and health interventions for New York City's domestic home health aides. Empirical evidence doesn't exist assessing the application of these academic models in domestic home health aides' occupational safety and health interventions. Nor does evidence exist in support or refutation of applying these models without consideration of domestic work's effects on hazards. If ineffective, occupational safety and health interventions would contribute to the high occupational injury rates of New York City's domestic home health aides. Disparate applications or outcomes of occupational safety and health interventions between New York City's domestic home health aides and comparable domestic workers would also explain their differing incidence

rates. If not, then these differences result from factors other than occupational safety and health interventions, like differences in immediate determinants. This implication drives the two final hypotheses of this study.

Hypothesis 3	Public and private occupational safety and health interventions for domestic home health aides in New York City are ineffective because they don't properly apply the hierarchy of hazards control model and don't address the mediatory effects of domestic workplaces.
Hypothesis 4	Domestic home health aides in New York City report higher, persistent incidence rates than comparable domestic care workers because they have more workplace hazards and fewer safeguards, refuting models of domestic work and occupational injury determinants.

Conclusions

Currently, academic models of occupational injury determinants, domestic work, and occupational safety and health interventions don't definitively explain the occupational injury rates of New York City's domestic home health aides. While cognitive science theories of occupational injury determinants provide a long list of potential causes, the similarities between theories of domestic work and labor market theories suggest that this list omits an important determinant we must consider: domestic work. However, differences in occupational injury rates between New York City's domestic home health aides and comparable domestic workers cloud our understanding of domestic work's potential impact. Theories of domestic work don't explain these differences or instruct us on how to measure domestic work in our understanding of aides' workplace injuries. Variable outcomes from occupational safety and health interventions may cause these disparities, but models of occupational safety and health interventions don't reveal much about the actual outcomes of occupational safety and health interventions for domestic home health aides in practice; only the potential for varying outcomes. Since labor market

theories and theories of domestic work paint domestic work as a mediatory determinant of positively correlated immediate occupational injury determinants, the disparities may also result from differences in immediate determinants. Without clear evidence to sort through these inferences, it's impossible to understand the occupational injury rates of New York City's domestic home health aides completely. This thesis seeks to confirm or deny these inferences by testing the hypotheses below, which should allow us to understand the causes of occupational safety and health risks among New York City's domestic home health aides.

Hypothesis 1	Domestic home health aides in New York City have workplace hazards that outweigh their safeguards, explaining their persistently high occupational injury rates.
Hypothesis 2	Operating in domestic workplaces increases the workplace hazards among domestic home health aides in New York City because of its association with demographic minorities, public goods, and negative cultural norms, which encourages the employment of low-valued workers and restrictions on resources that improve employment conditions.
Hypothesis 3	Public and private occupational safety and health interventions for domestic home health aides in New York City are ineffective because they don't properly apply the hierarchy of hazards control model and don't address the mediatory effects of domestic workplaces.
Hypothesis 4	Domestic home health aides in New York City report higher, persistent incidence rates than comparable domestic care workers because they have more workplace hazards and fewer safeguards, refuting models of domestic work and occupational injury determinants.

Chapter 4: Methodology

Testing my hypotheses required qualitative research methods that could tease out the attitudes, patterns, and perceived causes of occupational injury from work narratives of New York City's domestic home health aides and comparable domestic childcare workers. Focus group sessions best fit this need and the resources available during this study. Careful design of the focus group sessions, encoding, and analytical coding ensured that the experiences and language of domestic home health aides rooted our analysis. While applied to a thin sample, this methodology enabled analytical insights which remain informative independently and build a good foundation for future research.

Design and Execution

The hypotheses of this study required detailed observations of occupational safety and health risks among New York City's domestic home health aides and comparable domestic childcare workers. Focus group sessions were ideal for collecting these accounts. Qualitative research methods allow participants to comment more organically on research questions and to elaborate on how or why they generated their opinions. Both focus group sessions and interviews create this environment within guided questioning, but focus group sessions allow participants to compare and contrast their experiences immediately. Their comparisons reveal patterns and outliers in shared narratives. By soliciting comprehensive observations, guiding discussions through planned questions, and uncovering patterns in experiences and attitudes among participants, focus group sessions facilitate data that could confirm or deny my hypotheses.

Ideally, I could have employed a mixed methods design which included individual interviews and bulk surveys to complement data from focus group sessions. However, time constraints and limited access to domestic home health aides and comparable domestic childcare

workers prevented such a design¹³. The limitations of past surveys of domestic home health aides' occupational injuries and the added benefits of focus group sessions underlay my decision to prioritize focus groups. These resource limitations also explain the sample size of this study. While originally I intended to organize several more sessions, they didn't occur in time for inclusion in this thesis¹⁴.

Two focus groups made the cut. Researchers from The Worker Institute in Manhattan, New York¹⁵ conducted a focus group session with unionized domestic home health aides in March 2015. In November 2015, I conducted a second focus group session with comparable domestic childcare workers from the Beyond Care Childcare Cooperative in Brooklyn, New York. Despite their different facilitators, these focus group sessions retained analogous designs applicable to my research. The Worker Institute's focus group session originated as an assessment of occupational safety and health training among New York City's domestic home health aides, and so its questions overlap with the focus of my hypotheses. They inquire into the employment conditions, organizational support, and behavior of participating aides, as well as participants' history of workplace injuries and perceptions of occupational safety and health interventions. Using my preliminary analysis of this session, I then designed the questions for my focus group session with comparable domestic childcare workers. These questions underwent several revisions across three months with feedback from staff at The Worker Institute¹⁶. These revisions ensured comparable responses between the two sessions and responsible design.

¹³ One example is a drafted survey that was developed with feedback from Sanjay Pinto, a sociologist and Worker Institute Fellow, and was not distributed because of insufficient, timely access to domestic home health aides or domestic childcare workers.

¹⁴ Additional focus group sessions with comparable domestic childcare workers in collaboration with the New York Committee of Occupational Safety and Health and with domestic home health aides could not be completed due to unexpected logistical complications.

¹⁵ Maria C. Figueroa, Director of Labor and Policy Research, and Legna Cabrera, Research Specialist

¹⁶ K.C. Wagner, Director of Workplace Issues and Co-Chair of Equity at Work, and Sanjay Pinto, sociologist and Worker Institute Fellow

Facilitating the sessions and transcribing their results required a year of planning, recruitment, and execution. The Worker Institute and the Beyond Care Childcare Cooperative recruited domestic home health aides and comparable domestic childcare workers, respectively, for the two focus group sessions. The Worker Institute's session included 21 domestic home health aides. The aides operated within New York City at the time of the session and were members of SEIU1199. They all worked for certified home health agencies or licensed home healthcare services agencies, servicing patients across the city's 5 boroughs. They varied in seniority and age, but all were female. In comparison, the 7 domestic childcare workers who participated in the second focus group session had a similar demographic distribution: all female and all different ages and seniority. In their session, the domestic childcare workers alternated between English and Spanish as necessary. A member of the Beyond Care Childcare Cooperative assisted with in-time translations of focus group questions during the session to assure comprehension. I transcribed the recordings of both sessions and encoded the transcriptions to preserve participants' anonymity. "H1" through "H21" label the different participating aides, while "C1" through "C7" label the different childcare workers. This process altogether produced the data used in my analysis.

Coding Systems

Analyzing the transcriptions from these focus group sessions began with coding the workers' dialogue. The coding systems I applied not only record key insights and trends within qualitative data, but support grounded theory. They occurred across two cycles of coding. The first-cycle coding systems include structural, attribute, initial, in vivo, and process coding. The results from these systems helped develop my second-cycle coding systems. This cycle includes categories, themes, and participant personas.

The second-cycle codes organize the results of my focus group sessions. Categories identify the perceived relationships among all participants between their domestic work environment and a specific injury determinant or occupational safety and health safety control. Themes group together related categories and describe their relationship to a specific hypothesis of this study. Participant personas describe patterns of behavior or thought among certain participants. The responses of different participant personas within categories reveal how different participants believe the relationships between domestic work and occupational injury manifest. It also points out the similarities or differences among these opinions.

The development of these second-cycle codes relied heavily on the analysis of first-cycle codes. Structural codes divide transcriptions into discrete parts and assign each segment a content-based or conceptual phrase that represents the relevance of that segment to a specific research question from this study.

Structural Code: 14 SCHEDULING & ASSIGNMENTS: REASONS
FOR LOW HOURS: AVOIDING OVERTIME PAY
Structural Code: 27 ACCESS TO CLIENT INFORMATION
Structural Code: 31 TRAINING

By framing transcriptions according to my research questions, structural codes created the foundation for categories and themes. Attribute codes record the demographic characteristics of focus group participants and the setting of focus group sessions in a standardized format.

PARTICIPANT:	UNIONIZED DOMESTIC HOME HEALTH AIDE OPERATING IN NYC
DATA FORMAT:	TRANSCRIPTION OF AUDIO FILE
ACQUISITION TYPE:	FOCUS GROUP SESSION
SITE:	NEW YORK CITY-MANHATTAN, NY
TIME FRAME:	MARCH 2016
AGE CLASSIFICATION:	35-44
GENDER:	FEMALE
RACE/ETHNICITY:	AFRICAN-AMERICAN
SENIORITY CLASSIFICATION:	5-10
HIGHEST EDUCATIONAL ATTAINMENT:	HIGH SCHOOL (ASSOCIATE DEGREE IN-PROGRESS)

They informed my participant personas by isolating differences in opinion across age, gender, race and ethnicity, seniority, and educational attainment. Initial codes further divide segments from structural coding into discrete sub-parts that retain similar comments or long explanations by a single participant. These sub-divisions eased comparisons between responses and so exposed trends in their content. They also grouped together in-vivo and process codes within each sub-division. In-vivo codes record the specific technical or cultural language used by participants, and process codes record participants' physical and conceptual actions.

Sample In Vivo Codes

Technical “living caseload”
 “on-call”
 “permanent cases”
 “split-shifts”
 “sliding board”

Cultural “They squeeze us!”
 “under-direct”
 “part of the team”
 “greedy”

Sample Process Codes

RE-LIVING EXPERIENCE
 DISAGREEING WITH PEER
 INSTRUCTING PEERS
 SYMPATHIZING
 APPLAUDING
 ACCUSING EMPLOYERS
 CHALLENGING ETHICS
 EVOKING PARALYSIS
 PROPOSING SOLUTION

These codes informed my participant personas and analysis of their opinions by ensuring the language, culture, and experiences of participants, rather than my personal biases, rooted my interpretation of their statements.

The result was 8 themes from 26 categories and 6 participant personas. Figure 4.1 lists all of the themes and categories used, while Figures 4.2 and 4.3 list the participant personas for each

focus group session. This methodology set up the structure for my analysis. The design and execution of my focus group sessions provided relevant data for assessing my hypothesis. My analytical codes organized the responses of domestic home health aides and comparable domestic childcare workers for synthesis fixed within the perspective of these workers. This set-up enabled me to uncover potential causes for the rising, unexpected occupational injury rates of New York City's domestic home health aides.

Figure 4.1: List of Second-Cycle Themes and Categories

Hypothesis 1	Domestic home health aides in New York City have positively correlated occupational injury determinants that outweigh their negatively correlated occupational injury determinants.
Theme	Domestic home health aides have positively correlated employment conditions.
Category	Domestic home health aides in New York City have inconsistent work shifts.
Category	Domestic home health aides in New York City receive short notice of their work shifts.
Category	Domestic home health aides in New York City receive low wages.
Category	Domestic home health aides in New York City complete high workloads of physical and affective labor.
Category	Domestic home health aides in New York City have job tasks which require exposure to blood, bodily fluids, sharp equipment, and patients with severe cognitive or physical impairments that limit cooperation.
Category	Domestic home health aides in New York City are isolated from peers at work.
Category	Domestic home health aides in New York City are only sometimes respected by their patients and are otherwise disregarded by them.
Theme	Domestic home health aides have positively correlated employment conditions, despite the mediatory effects of their negatively correlated organizational characteristics.
Category	Domestic home health aides in New York City have limited access to health insurance, despite union representation.

Figure 4.1 (Continued)

Category	Domestic home health aides in New York City have limited access to education benefits, despite union representation.
Theme	Domestic home health aides have positively correlated organizational support.
Category	Domestic home health aides in New York City don't have sufficient access to information about their patients before beginning work shifts.
Category	Domestic home health aides in New York City receive insufficient occupational safety and health training.
Category	Domestic home health aides in New York City have inconsistent access to personal protective equipment.
Theme	Domestic home health aides have positively correlated organizational characteristics.
Category	Domestic home health aides in New York City face retaliation by employers for addressing occupational injury determinants.
Category	Domestic home health aides in New York City can't communicate reliably or effectively with supervisors or employers.
Theme	Domestic home health aides have positively correlated employee behavior.
Category	Domestic home health aides in New York City struggle to balance work, domestic, and personal responsibilities.
Category	Domestic home health aides in New York City sometimes engage in safety workarounds.

Figure 4.1 (Continued)

Hypothesis 2	Operating in domestic workplaces increases the workplace hazards among domestic home health aides in New York City because of its association with demographic minorities, public goods, and negative cultural norms, which encourages the employment of low-valued workers and restrictions on resources that improve employment conditions.
Theme	Theories of domestic work apply to domestic home health aides in New York City because they operate in domestic workplaces and amplify other positively correlated occupational injury determinants.
Category	Embodied inequality theory applies to domestic home health aides in New York City and amplifies their pre-existing disregard by patients, miscommunication with supervisors and employers, and high workloads of physical and affective labor.
Category	Racial-bias devaluation, gender-bias devaluation, the public good theory, and prisoner of love theory affect domestic home health aides in New York City and amplify the pre-existing deterioration of their employment conditions, employee representation, and organizational support.
Category	The commodification of emotion framework applies to domestic home health aides in New York City and amplifies pre-existing, unhealthy psychosocial behavior.
Hypothesis 3	Domestic home health aides in New York City report higher, increasing incidence rates than comparable domestic care workers because they have more positively correlated immediate occupational injury determinants that domestic workplaces amplify, according to the combined theories of domestic work and occupational injury determinants.
Theme	Theories of domestic work apply to comparable domestic childcare workers in New York City, but their negatively correlated organizational characteristics prevent the occupational injury determinants that these theories amplify.

Figure 4.1 (Continued)

Category	While embodied inequality theory applies to comparable domestic childcare workers in New York City, they don't have the pre-existing disregard by patients and miscommunication with supervisors and employers which would be amplified by this theory.
Category	While racial-bias devaluation, gender-bias devaluation, the public good theory, and prisoner of love theory apply to comparable domestic childcare workers in New York City, they don't have the pre-existing deterioration of employment conditions, employee representation, and organizational support which would be amplified by this theory.
Category	While the commodification of emotion framework applies to comparable domestic childcare workers in New York City, they don't have the pre-existing, unhealthy psychosocial behavior which would be amplified by this theory.
Hypothesis 4	Public and private occupational safety and health interventions for domestic home health aides in New York City are ineffective because they don't properly apply the hierarchy of hazards control model and don't address the mediatory effects of domestic workplaces.
Theme	Occupational safety and health training for domestic home health aides in New York City assumes the absence of certain positively correlated occupational injury determinants.
Category	Training for domestic home health aides in New York City assumes reliable access to client information, equipment, and peer support.
Category	Training for domestic home health aides in New York City assumes reliable access to equipment.

Figure 4.1 (Continued)

Category	Training for domestic home health aides in New York City assumes the absence of employer retaliation and favorable patient interactions.
Category	Training for domestic home health aides in New York City assumes sufficient communication between employees, employees and supervisors, and employees and employers.

Figure 4.2: List of Participant Personas: Applied to Domestic Home Health Aides

Types of Assignments¹⁷

Permanent

Aides who had caseloads with permanent assignments, or consistent clients they expected to continue servicing regularly

Example:

H12: Okay, like, most weeks, I work 36 hours and next week I work 60, because I work every other weekend [with an overnight patient].

Flexible¹⁸

Aides who didn't have caseloads with permanent assignments and rotated irregularly among many different clients

Example:

H1: I work with 2 patients just to make 34 hours. [...] I've got to look for 6 more hours and I'm still waiting [...] Because another lady got injured, that's why I'm like... filling in for her until she gets back.

Educational Attainment¹⁹

Continued

Aide who were continuing their formal education at the time of the session

Example:

H3: But on the same token, to better myself, I'm, I'm going back to school in September to finish out my degree.

Halted

Aides who weren't continuing their formal education at the time of the session

¹⁷ Among the participating comparable domestic childcare workers in the second focus group session, all participants' had permanent assignments and could accept on-call assignments when available as desired. They did not rely on on-call assignments like aides with flexible assignments.

¹⁸ While all participating domestic home health aides accepted call-ins, or on-call work, aides with flexible assignments relied on call-ins to comprise their entire caseload.

¹⁹ Among the participating comparable domestic childcare workers in the second focus group session, all participants' educational attainment was halted.

Figure 4.2 (Continued)

Preferred Agents of Change ²⁰	
Self-Initiated	<p>Aides who, when they identify a problem, habitually demand that their representatives, peers, or selves perform some specific action to resolve the problem before any other solution</p> <p><i>Example:</i> H21: But you should not, you know...allow the family member to help you. You have to request them to send you another aide [...].</p>
External	<p>Aides who, when they identify a problem, habitually demand change in the cultural perceptions of domestic home health aides among employers, clients, and other non-domestic healthcare workers to resolve the problem before any other solution</p> <p><i>Example:</i> H5: So, people should treat us as somebody. [...] We should be given all the benefits they are giving to those at the, at the top. [...] They should not be treating us inferior.</p>

²⁰ Among the participating comparable domestic childcare workers in the second focus group session, all participants preferred advocating for internal changes.

History of Workplace Injuries²¹	
Absent	Childcare workers who hadn't sustained occupational injuries while employed by the Beyond Care Childcare Cooperative by the time of the session
Present	Childcare workers who had sustained occupational injuries while employed by the Beyond Care Childcare Cooperative by the time of the session
Seniority²²	
High	Childcare workers who were employed by the Beyond Care Childcare Cooperative for more than two years by the time of the session.
Low	Childcare workers who were employed by the Beyond Care Childcare Cooperative for less than two years at the time of the session.

Figure 4.3: List of Participant Personas: Applied to Comparable Domestic Childcare Workers

Summary

The design and execution of my focus group sessions match the needs I identified in Chapter 2 for a local study. In light of resource constraints and a limited sample size, it prioritizes the representation of unionized domestic home health aides from home healthcare agencies. It also compares domestic home health aides to domestic childcare workers, a comparable domestic care group outside the American healthcare industry. Finally, it ensures comparable responses that are relevant to my hypotheses between the two focus group sessions.

My coding systems enable me to root my analysis in the observations of domestic home health aides and comparable domestic childcare workers. They not only focus on the language,

²¹ Among the participating domestic home health aides in the first focus group session, all participants' had sustained occupational injuries.

²² Among the participating domestic home health aides in the first focus group session, there were no consistent differences between the opinions of aides with high seniority and low seniority.

attitudes, and behaviors of participants during my focus group sessions, but also support grounded theory and the development of new hypotheses from workers' contributions. The themes, categories, and participant personas I developed through these systems demonstrate this focus.

Together, this methodology satisfies the minimal requirements for a local exploratory study on domestic home health aides and their occupational safety and health risks. It also promotes objective analysis of qualitative data, which would provide detailed insights we need in order to fully comprehend the causes of domestic home health aides' incidence rates. The next chapter explains the results of executing this methodology and demonstrates its value to this study.

Chapter 5: Analysis

The focus group sessions revealed what domestic home health aides and comparable domestic childcare workers in New York City believe are the causes of their occupational injury rates. The participants commented on their past occupational safety and health risks, on their occupational injury determinants, and on the effectiveness of recent occupational safety and health interventions. Analyzing their responses uncovered explanations for the different occupational injury rates between these two groups and for the consistent occupational injuries among domestic home health aides. This analysis summarizes those perceptions, explains why they confirm my original hypotheses, and derives from them additional hypotheses.

Workplace Hazards and Safeguards

My first hypothesis draws upon academic models of occupational injury determinants to propose one cause for the persistent workplace injuries among New York City's domestic home health aides.

Hypothesis 1

Domestic home health aides in New York City have workplace hazards that outweigh their safeguards, explaining their persistently high occupational injury rates.

The domestic home health aides in this study spoke extensively about their occupational safety and health risks and so compiled a list of occupational injury determinants that affect them. These determinants included inconsistent work shifts, short notice of work shifts, low wages, dangerous job tasks, isolation from peers, limited access to client information and equipment, inadequate systems for reporting workplace hazards, and coercive client interactions. These conditions are all known workplace hazards, seen in Figure 3.4. The participants also mentioned their union representation, which is a safeguard in Figure 3.4. They implied that this safeguard

doesn't lower their occupational injury rates because their workplace hazards sabotage its effects. These observations support my first hypothesis and describe what aides perceive as the immediate causes of their occupational injuries.

One of the causes they identified was inconsistent work shifts. Aides with flexible caseloads work inconsistently with multiple patients, and their work shifts vary in hours and frequency each week. Some aides work for multiple agencies in order to supplement their unstable, low hours with additional non-permanent cases.

R8²³: Now we have to have either 2 cases or work for 2 agencies to balance.

In comparison, aides with permanent cases have less variable work shifts. The frequency with which they are assigned to their patients is more consistent than for aides without permanent cases.

H4: [stuttering] If it's different cases, [vocalized pause] like they give you one week here and then another week, well, the hours may vary. But if you, on the case it tells you it's permanent, even though it may not be permanent, [vocalized pause] you keep doing a steady, regular hours.

Aides are more likely to retain permanent cases when their patient expresses a preference for them or requires specialized services.

H3: The reason I get 60 hours every other week is 'cause [vocalized pause] my client is very difficult, and I'm about the only one who knows how to deal with him.

H15: No. No, mine is somewhat because I have my patient since I started the agency...So, he told the agency, "I don't want no other aide but Ms. Adams, and I'm willing to work with her school schedule," because I've been with him for so long.

²³ As explained in Chapter 4, "H1" through "H21" label the different domestic home health aides who participated in the focus group sessions for this study.

However, their hours are similarly variable. Patients' hospital appointments and personal schedules shorten work shifts, and aides can't claim or reschedule those lost hours.

H4: You go. You don't know today is, is dialysis, or you know dialysis, but you go there. They just cut you off, or [*stuttering*] you getting 2 hours or just a 1 hour in...more than twice a week if they have to go...every time they go to the hospital with that, you lose hours.

H17: My patient goes to theater every two weeks. They used to cut me...because she want to go see the movie, or see the opera, you know? All this is something we're losing, and they don't care!

Shifts originally covered by one aide may be divided suddenly among two or more aides.

H10: Can you think it's fair, if you always be there, to send somebody to replace you and then you don't have even enough hours to do?...But that lady's coming to replace me on Tuesdays...She asked the supervisor for me to stay. But the supervisor, he felt, the supervisor [*pause*] sent somebody on that place to prevent a difficulty, according to him. That's fair?

Additionally, when permanent cases close²⁴, these aides transition into flexible caseloads. They may then wait weeks or months before receiving another permanent case or never receive another permanent case, at all.

H3: [*audience affirming*]²⁵ I was working 12 hours for 3 days! Monday, Wednesday, Friday, 9-1, for, like, almost 6 months ...and then, then I call my coordinator: "Do you have any more work? You have any 8 hours?" "Oh, but you have a case already." What do you mean I have a case? 12 hours a week; that's no case!" [*vocalized pause*] They wouldn't give you nothing...We're stuck.

H19: [*audience affirming*] When your patient dies, you don't have a case, and it could be [*vocalized pause*] 2 to 3 weeks, almost a month; even over a month. And then also, on top of that, you call them and, like you said, they give you 3-4 hour cases. And like this lady said here, I live in New Jersey also. Why would I go out just for those hours? It's not worth it.

²⁴ Permanent cases close when patients become healthier, when they can no longer afford home healthcare services, when they transition to non-domestic healthcare services, or when they die.

²⁵ "Audience affirming" indicates that other participants in the focus group vocalized affirmation throughout the statement or immediately after the statement.

In these ways, all of the domestic home health aides experience inconsistent work shifts, regardless of their caseload.

Alongside inconsistent work shifts, participating domestic home health aides also receive short notice of their work shifts. Most commonly, aides receive call-ins within one or two days of an assignment or on the same day that a case begins. They sometimes receive call-ins a week in advance of an assignment, but such notice is rare.

H4: It's same day [*vocalized pause*], day before; hardly, like, a week in advance schedule. [*interviewer clarifying*]²⁶ Hardly. [*interviewer clarifying*] Yeah. You, you get just a short notice.

H7: One or two days.

This same abruptness applies to notice of closed cases.

H4: Like they're telling you it's, "Oh, you had a Burbank²⁷ case," and then all of sudden...you're just dropped right there. No money. No more. That's it...And case closed without me knowing that it's closed. [*audience affirming*]

These short notices risk aides the loss of clients and inhibit financial planning.

H5: They [*my agency*] told me in the morning, 7 o'clock. I'm supposed to be there 9 o'clock. I get there 9:30...and the man [*the patient's husband*] say I'm not working. He called the agency...They [*the agency*] sent him another man for the wife.

H21: You can't plan your budget, and also the job is unpredictable...because you don't know whether you're getting money tomorrow or not.

While many aides need more hours, abrupt call-ins interfere with their domestic and personal responsibilities by requiring them to repeatedly reschedule other commitments. Aides can't reject these inconvenient call-ins because of employer retaliation.

H17: They don't tell you, but they have it in mind; next good case, not you.

²⁶ "Interviewer clarifying" indicates that an interviewer then interrupted the participant and asked for clarification of the participant's most recent statement.

²⁷ Burbank refers here to Burbank Avenue in Staten Island, New York.

H21: When you say no when they call you, they won't call you for something else. [*audience affirming*]

H4: You didn't ask for on-call, but they're going to tell, "Oh please, do this. Um, there's nothing else. We don't have anything. Um, this is all we've got." And [*vocalized pause*] sometimes, you better take it because you don't know when you can get another.

In addition to scheduling issues, the participating domestic home health aides receive low wages. On average, they earn \$7 - \$10 per hour depending on whether they work overnight shifts, which pays higher wages, and on which agency employs them. Agencies also distribute hours unevenly among their aides.

H5: I'm not making up to 40! Some people are making 80, 90 hours a week! They should try to adjust and make everybody equal! [*audience affirming*]

Gap shifts further depress wages. Aides don't receive compensation for the hours in between these cases, and compensated aids struggle to secure timely wages.

H9: ...there's a dialysis patient. When you go in, they prepare this person and help them get to the hospital center, and then you're left on your own! ...I said, "Where shall I go?" You know? And they like, "Walk along, shopping" and then come back...Now what are you going to do? They're not going to pay you for that time after they dropped them off and...I've never been to this place before, you know?

H5: Yes, I do that, for 2 days. [*interviewer clarifying*] They didn't pay me that same weekend, but until I pressurized them: "Why are you not paying me?"

Some assignments have higher wage rates because of their complexity, which increases stress and occupational safety and health risks for domestic home health aides. However, these supplementary wages don't always actualize. Cases with multiple patients or patients with diagnoses of HIV should pay higher wages, but aides don't receive additional compensation for them.

H4: They don't [*stuttering*] tell you exactly what the case is—you're going in blind—because certain cases they have to pay you more. They're supposed to. Like HIV supposed to pay you more... They're supposed to give you more money and they're not.

H17: You got to take care two people. They [*the agency*] going to charge them [*the patients*] for two persons, but you don't going to [*stuttering*] get paid that much... What they pay you, like, if they pay you, you make \$0.50 or \$1.60 more... They're going to charge \$20 or whatever to the husband, [*stuttering*] but you don't make any money.

While less common, administrative errors also delay wages or make wage schedules inconsistent.

H3: ...these agencies had that little crazy mix-up with that payroll system and messed up all these checks and overpaid people and now they want us to pay money back... They saying I got to pay them back 700-and-something dollars because they overpaid me. Now they're taking \$50 a week out of my check... So why are they making us pay back this money when they messed up, when they had this gaff? And then it took them like 5 or 6 months to even explain to people that they had this problem. You understand? ...I don't care if it wasn't our money. At the end of the day, that was your mistake and your fault or because y'all was trying to be greedy, because that system dished out the right money everybody was supposed to get. That, that new Samtrack system? Dished out that money we all was owed. And then, when they started seeing everybody's checks looking over that amount, they was like, "Oh no," and they had to take it back.

Aides struggle to survive off their low wages and variable work hours. Many aides need additional means of income to safeguard against poverty.

H5: Yeah. I'm working 30 hours per week. I'm not satisfied with that because I cannot pay my bills after everything at the end of the month. Because I have two children and I'm their mother. I have to give them some things and, for myself, 30 hours in the week is like \$250 outside of taking their taxes... I want to be 40. He said, every day, they can't find another 10 hours for me. There is nothing I can do [*mumbling*], and that is failing me. So I have to find something else to do outside the job on the side.

Even with other employment, the cost of maintaining two jobs and other debt impedes aides' progress.

H5: I tried to find another agency to compliment my hours to be 40. But when I heard from the [*vocalized pause*] union, they said you have to pay dues...That's why I just stayed back. I didn't go to this second agency...Because I won't be going from here to Bronx from Queens for the second job, and doing only 12 hours—just one day, 12 hours—and paying MetroCard [*stuttering*], doing all those stuff, and paying dues every month, too.

H15: Well, the only thing is, because of the short hours, it's just like it's not enough. I mean, New York itself is expensive...I always say I've got more money leaving my house than money coming in my house. I have student loans. I have this. I have that. I have to pay everything. I'm like, "What the hell I'm working for? Free?"

Other common workplace hazards include the job tasks aides perform and the conditions under which aides must perform these tasks. Aides perform all the job tasks identified by the Bureau of Labor Statistics and the New York State Department of Health, albeit at different frequencies. Their most common tasks are lifting patients, cleaning patients' blood and bodily fluids, and legally administering patients' medication. While cases can be divided among multiple aides, aides don't service patients at the same time. They work in isolation from their peers and may or may not work among the patient's family members or friends. The equipment and support they can access on-hand is limited to what they bring with them, what exists in the patient's home, and what they can secure by calling their supervisor.

Yet aides don't receive enough information about their patients in advance of work shifts to adequately prepare for them. They also have unreliable access to personal protective equipment in patients' homes. Without this equipment or information, aides commonly arrive to cases unprepared to safely perform their job tasks.

H3: ...they expected me to lift this lady up that was almost bed-bound and in a wheelchair, wearing a diaper, and I'm supposed to do this by myself and lift this lady and transfer her with a sliding board by myself! ...And we can't operate a toilet by ourselves. They need two people.

Their final recourse is reactionary: calling their supervisor. However, contacting supervisors is commonly infeasible.

H3: They got big phone problems down in the apartments... You can't get through to nobody on your phone. You can't get through.

Without this organizational support, aides must choose whether to refuse performing dangerous job tasks or to engage in safety workarounds.

Patient interactions can influence their decision. If present, patients' family members may offer to assist aides in lifting patients or using equipment requiring multiple aides, like hold-lifts for severely obese patients. Patients and their family members can retaliate against aides by requesting a new aide from their agency for refusing safety workarounds. Aides may also fear the immediate reactions of patients and their family members since they are isolated from peers and supervisors. These safety workarounds endanger patients, aides, and other participants, as well as expose aides to legal liability and retaliation.

H20: If anything goes wrong, the family member might be, you know [*pause*] carelessly and drop them, maybe on the floor...

H21: But you should not, you know [*pause*] allow the family member to help you. You have to request them to send you another aide, because anything can go wrong and they still blame you.

Aides can attempt to explain to patients and their family members the dangers of a job task or safety workaround, but success depends on perceptions of credibility. Not all patients or relatives of patients regard aides as healthcare professionals, and so they disregard aides' concerns or needs.

H5: Because even in the house that you are going, the client's family, the friends, they look you. They under-direct you. They talk to you anyhow as if you are [*stuttering*] don't have family in your whole [*stuttering*] life. [*audience affirming*]

Beyond compromising hazard prevention, this disregard by patients or relatives can also harm the psychosocial health of aides, increasing their stress at work.

Altogether, these poor employment conditions, lack of organizational support, problematic organizational characteristics, and destructive employee behavior facilitate occupational injuries. They also reinforce one another, solidifying occupational safety and health risks. These workplace hazards and their contributions to domestic home health aides' occupational injuries support predictions by contemporary models of occupational injury determinants.

Aside from workplace hazards, participating domestic home health aides also noted their union representation—a safeguard. Aides acknowledged that their union offers them access to health insurance and education benefits.

H15: Let's be serious. The good thing about it [*our jobs*] is because of the union and the benefits. That's a plus. [*stuttering*] The union teach you [*stuttering*] if you do your hundred hours or more. You have health benefits...they helped me with my education for college.

Health insurance could mitigate the consequences from sustaining an occupational injury and lower the probability of repeated injuries. With additional education, aides can advance their career and transition into other occupations with more stable schedules or lower incidence rates. They could also leverage their education to reduce workplace hazards as aides.

H3: I'm going back to school in September to finish out my degree. [*stuttering*] I didn't finish. And I say to everyone here: if you can, go back to school. That's the best thing to do...It's best to try to educate ourselves so we can do better, so we don't have to go through this to have a regular scheduled hours every week to work.

So, why doesn't union representation balance out their other workplace hazards? Even if union representation varied in recent years, it should create fluctuations in domestic home health

aides' occupational injury rates. In reality, the benefits aides could accrue through this representation are untenable because of aides' low hours and unpredictable work shifts. Aides must work a minimum number of hours per month to qualify for union health insurance, which is impossible to maintain without control of their caseload.

H14: When you look at the different hours, hours being cut here and there [*vocalized pause*] to cover [*vocalized pause*] your health coverage with the union, you have to have 100 hours. [*stuttering*] How can you working when hours are being cut to have, [*vocalized pause*] to keep up 100 hours for you to have your health [*vocalized pause*] insurance keep going, when it's usually the 8 hours per month and people struggling to keep that? ...If you go under that, you don't have a health insurance. [*audience affirming*]

Aides without permanent cases or with recently closed cases don't receive unemployment benefits, inflating financial barriers to independent health insurance when hours are most low.

H4: When you lose a case, you're out of money. [*audience affirming*] If you don't work, you don't get paid.

H7: You don't get employment.

H3: Anybody get unemployment when their patient dies? No!

H6: They don't allow you to do that!

When aides use the education benefits provided through their union, their inability to control their schedule or to communicate scheduling needs to their employers interferes with completing their education.

H15: However, sometimes with the agency, when I call them and I tell them my availability, I said, "Listen, I'm on Spring Break from college. I need extra work." I will call and harass them. Nothing is never available...I had a weekend case, and I said I was going to school on the weekends. And I was willing to work Saturdays...They let me know they put me off my weekend case because they just like, "You can't do Saturdays. You've got to do Saturdays and the Sundays." So they took me off my weekend case...Now they be trying to say, "Oh, well, you know, it's in your contract. It says it's mandatory that you have to do weekends." I said, "Sorry, no. My education is better." I said, "Because I'm not going to make this a living, doing a home attendant. Not at all."

So, while workplace hazards increase occupational safety and health risks, they also undermine any mediatory effect union representation could have on them through their severity.

Participating domestic home health aides indicated that this dynamic was what immediately caused occupational injuries. Their conclusion supports my first hypothesis and supports models of occupational injury determinants which state that workplace hazards must outweigh safeguards for occupational injuries to occur. This imbalance between workplace hazards and safeguards among domestic home health aides in New York City explains, at least in part, their persistent and high occupational injury rates. What it doesn't explain, however, are the origins of these workplace hazards.

Causes of Occupational Injury Determinants

My second hypothesis submits that the workplace hazards of domestic home health aides in New York City originate from their domestic workplace environment through processes resembling labor market theories in models of domestic work.

Hypothesis 2

Operating in domestic workplaces increases the workplace hazards among domestic home health aides in New York City because of its association with demographic minorities, public goods, and negative cultural norms, which encourages the employment of low-valued workers and restrictions on resources that improve employment conditions.

Participating domestic home health aides reported all the predicted effects of these domestic work theories. They also blamed these effects for their workplace hazards. Their statements support my second hypothesis and explain why domestic home health aides have conditions that facilitate occupational injuries.

Aides noted several workplace hazards that match the predicted consequences of domestic work theories on domestic care workers. For instance, domestic home health aides in New York City perform strenuous physical and affective labor. They can't communicate personal health and safety needs without retaliation, and both employers and clients can restrict

where, when, and how aides work or what equipment or resources aides have at work. Aides also have poor employment conditions, including low wages and access to benefits. These conditions match the consequences of embodied inequality, gender bias devaluation, and racial bias devaluation.

Aides also expressed attitudes about their work that result from prisoner of love theory, the commodification of emotion framework, and public good theory. They feel that developing a familial relationship with patients is inherent to their occupation and that others don't acknowledge them as professionals; echoing the historic cultural norms of gendered work, racially-segregated domestic work, and affective work.

H15: [*audience affirming*] I feel as a home healthcare worker, regardless whether you in here a long time or short time, I feel that we are no different from PCAs in the high schools. We no different from LPNs. When we're working with these clients, we do, we are a social worker. We are their friend. We become their family members. We take them to appointments. We, I think, they should give us more respect. Not only society, but I feel that the people in the industry that we work for should give us more respect, and I expect a better pay.[*audience applauding*]

Their emphasis on how society and their industry undervalue the services they provide to their communities conforms to expectations by public good theory. Their relationships with clients, lack of compensation for affective labor, and occupational stress reflect the prisoner of love theory and commodification of emotion framework. Not only do they demonstrate domestic work theories, statements like the one above connect aides' wages and other workplace hazards causally to their disrespect from employers, clients, and the public. These connections support that the cause of domestic home health aides' workplace hazards in New York City is domestic workplace environment.

However, there must also be an absence of effective occupational safety and health interventions for these workplace hazards to have continued unchanging. My third hypothesis

explains this absence by positing that current occupational safety and health interventions for domestic home health aides don't prevent the workplace hazards that domestic work produces.

Hypothesis 3

Public and private occupational safety and health interventions for domestic home health aides in New York City are ineffective because they don't properly apply the hierarchy of hazards control model and don't address the mediatory effects of domestic workplaces.

The experiences of domestic home health aides in my focus group session confirm this hypothesis. They commented on the effectiveness of different occupational safety and health interventions, including occupational safety and health training modules from the New York State Department of Health's required pre-employment and in-service training and workshops from SEIU1199, the New York Committee of Occupational Safety and Health, and local non-profit organizations. Overall, their accounts identify two issues with these interventions: reliance on one low-level safety control and underestimation of workplace hazards.

These interventions rely almost exclusively on training, an administrative control. We know from models of occupational safety and health interventions that administrative controls should complement other higher-level safety controls, like elimination or substitution of workplace hazards, and aren't appropriate for all workers. Yet, participating domestic home health aides noted no new higher-level safety controls. The interventions relied instead on changes in aides' behavior after training to address workplace hazards, regardless of the aides' capacity to implement their training. This design implements less effective intervention models than the hierarchy of hazards control model, like behavior-based safety, and welcomes risk homeostasis.

Reliance on training is understandably appealing because it's easier to implement immediately. The preexisting training requirements for and culture of attending training among

home health aides ease additional training and assure attendance. It also appeals to our cultural assumptions about the responsibility of workers to affect their workplaces and occupational safety. However, these assumptions ignore the reality that domestic home health aides experience: where their control over workplace hazards is limited and employee behavior didn't originate their workplace hazards.

These assumptions underlie the second weakness of these interventions: an underestimation of workplace hazards. Participating domestic home health aides understood the strategies they learned in occupational safety and health training interventions as methods of addressing workplace hazards stemming from job tasks and employee behavior. By changing how they perform job tasks and how they respond to occupational safety and health risks, these strategies would allow them to prevent the occupational injuries that occur because of these conditions. However, we know that many of the workplace hazards that domestic home health aides in New York City face actually stem from their domestic work environment. Even if job tasks and employee behavior later exacerbated these risks, addressing only the occupational determinants these two conditions mediate ignores the full extent of domestic home health aides' workplace hazards.

The consequence of these two weaknesses—reliance on training and misattribution of workplace hazards—is declining or nonexistent use of the strategies these interventions teach. Domestic home health aides continue to use safety workarounds when confronted with workplace hazards. When they do abstain from certain workarounds, they implement others in accordance with risk homeostasis. For example, aides learn to lift obese patients with sliding boards or hold-lifts and with the help of two or more aides. So, instead of lifting patients alone,

they accept help from patients' family members or friends. If untrained, these people can lift patients in ways that injure themselves, the patient, or the aide.

Even if aides abstain from safety workarounds, these strategies can't be implemented. Training curricula assume that, after training, aides will have reliable access to client information, equipment, and peer support, because job tasks and employee behavior would no longer limit these safeguards. They also assume that aides can request this access from supervisors when needed and can refuse dangerous work without retaliation from employers or patients. These assumptions render the skills that aides learn in these trainings unusable. After all, aides work alone at worksites and rarely receive notice of equipment needs before attending an assignment. If patients or supervisors fail to provide lifting equipment, for instance, then the aide must refuse to work until supervisors respond to their calls and send another aide, if contact to their supervisor can be made at all. In the meantime, they face retaliation from clients for refusing to work and rejecting those cases in the future incurs employer retaliation.

H3: ...why don't tell us the type of patient we're going to before we get there?
...They sent me this patient. She was like 300-and-something pounds...And she had a hospital bed, but lord have mercy! All that bed-making crap we learn in here [*pause*] that bed-making crap flew out the window! It's no such thing as rolling them over, rolling them back, then tucking them.

In these ways, relying on training alone and basing that training on assumptions that job tasks and employee behavior cause workplace hazards make occupational safety and health interventions ineffective. These problems support my third hypothesis and explain why occupational safety and health interventions haven't fettered occupational injury rates among New York City's domestic home health aides.

Together, my second and third hypotheses explain how domestic home health aides developed their workplace hazards in New York City. Being domestic care workers subjected

them to models of domestic work which instigated occupational injury determinants that increase occupational injuries, similar to labor market theories. Ineffective occupational safety and health interventions allowed these workplace hazards to develop and amplify one another, unchecked. Then, as proven through my first hypothesis, those workplace hazards reinforced one another until they overwhelmed domestic home health aides' few safeguards. These events resulted in the persistent and high occupational injury rates we witness among domestic home health aides in New York City.

Differences between Domestic Care Workers

The different occupational safety and health outcomes between domestic home health aides and comparable domestic childcare workers challenge the conclusions from my first, second, and third hypotheses. The domestic childcare workers who participated in my second focus group session didn't report the same consequences from models of domestic work as domestic home health aides. They also reported lower occupational injury rates and didn't attribute these rates to occupational safety and health interventions. My fourth hypothesis predicts these differences and contests that my earlier inferences don't comprehensively explain what drives domestic home health aides' occupational safety and health outcomes.

Hypothesis 4

Domestic home health aides in New York City report higher, persistent incidence rates than comparable domestic care workers because they have more workplace hazards and fewer safeguards, refuting models of domestic work and occupational injury determinants.

The responses of domestic childcare workers and domestic home health aides in my focus group sessions support this hypothesis, but also surprisingly posit an explanation for why these models don't affect their occupations in the same way.

If my first three hypotheses accurately and completely describe the causes of domestic home health aides' occupational injuries, then comparable domestic childcare workers should have similar occupational injury rates. From the public surveys in Chapter 2, we know that childcare workers in general don't experience the same occupational injury rates as home health aides, on average. This disparity could come from their different workplace environments and occupational injury determinants like job tasks and industry. However, domestic childcare workers should retain more comparable incidence rates to domestic home health aides because they both work in domestic workplaces. The effects of domestic work on their workplace hazards should be the same; increasing workplace hazards, eroding safeguards, and reinforcing this decline over time. After all, models of domestic work generally apply to domestic care workers who perform physical and affective labor, which both domestic home health aides and comparable domestic childcare workers perform. So, at minimum, domestic childcare workers should have a smaller gap between their occupational injury rates and those of domestic home health aides than childcare workers and home health aides, generally, if domestic work really instigates workplace hazards among domestic care workers.

For this reason, the different occupational safety and health outcomes reported by the domestic childcare workers in my second focus group session refute the comprehensiveness of these earlier hypotheses. All childcare workers reported a decline in occupational injuries²⁸ since they began domestic care work through their worker cooperative. Some childcare workers even claimed that they hadn't had a single workplace injury since joining their cooperative. Additionally, they didn't attribute their lack of injuries to occupational safety and health interventions or training, which would have kept their narratives in line with my early

²⁸ Physical injury by children, falls, and occupational stress were the most common occupational injuries among comparable domestic childcare workers in New York City.

hypotheses. Instead, they suggested that they don't experience the same consequences of domestic work models as New York City's domestic home health aides. Aside from lower incidence rates, they also have less variable work schedules, receive longer notice of assignments, and retain greater organizational support²⁹. Yet they perform physical and affective labor, perform care work subjected to historic cultural norms, and operate within a saturated labor market. They work with caseloads of permanent cases and call-ins, just like domestic home health aides. They even exhibit similar psychosocial behavior, in which they develop strong affective bonds to clients.

C1³⁰: When someone loves their work, they do it with all their heart...I love the children, and I work as a babysitter because, in reality, I love it.

So, these workers retain all the signs of domestic work theories but none of the expected consequences on occupational injury rates or occupational injury determinants.

These conditions support my fourth hypothesis, but more importantly the responses that revealed these conditions also expose their cause. Participating childcare workers pointed to employee representation when identifying what reduces their workplace injuries. From their attributions, I derived the following emergent hypothesis:

Hypothesis 5

Domestic home health aides in New York City have more workplace hazards and fewer safeguards than comparable domestic care workers because their employee representation can't address workplace hazards more quickly than workplace hazards undermine employee representation.

This hypothesis builds off of the examples participating childcare workers gave describing how their representation reduces their workplace injuries. Their narratives expand on the impact of

²⁹ Comparable domestic childcare workers in New York City had reliable access to client information, frequent employer-sponsored training, and solidarity among peers. They required less equipment for their work than domestic home health aides but did not report issues with accessing what equipment they needed.

³⁰ As explained in Chapter 4, "C1" through "C7" label the different domestic childcare workers who participated in the focus group sessions for this study.

employee representation not mediating workplace hazards on occupational safety and health outcomes between domestic care occupations.

Operating within a workers' cooperative allows domestic childcare workers greater employee representation that can respond more quickly to and resist erosion by workplace hazards. For instance, they can negotiate sick leave with clients when drafting contracts and reject cases if clients disregard their safety concerns.

C3: We always have a contract, and it says and *los padrones* [*the clients*] respect our sick leave. So, in reality, when we [*stuttering*] speak with the clients correctly, everything is fine; established... In all my years with the cooperative, I haven't had any kind of problem with respect [*pause*] towards my health, when I need it. And the clients are responsible with my sick days when I become sick.

C4: I had an experience when I was taking care of a 3 year old child... The women had a patio on the second floor. They were two women, the parents, and they told me: "After the child finishes breakfast, they can go out on the patio to play." But I took care of two; the infant of, I believe, 3 months and the 3-year old child. The baby would start to cry. I would give [*pause*] the pacifier to the baby and this other child would go up to the patio and onto the banister... I was always so scared. I put the baby on the floor and rushed to catch him. And I'll be honest: I renounced that job. I said, "I will not put myself in danger for him [*the child*]."

Negotiating work conditions and caseloads reliably minimizes occupational safety and health risks for notoriously hazardous cases, such as cases with multiple children, toddlers, or children who have mental or behavioral disorders³¹. These actions don't incur employer retaliation because employees control their future caseloads. Other employer retaliation and workplace hazards that could undermine employee independence are unlikely to develop because employees determine their cooperatives' production goals, labor practices, and other policies. So, the workplace hazards that traditionally reduce unions' leverage on safeguards don't appear among worker cooperatives. Furthermore, despite performing extensive affective labor, their

³¹ Participating domestic childcare workers identified these cases as the most hazardous assignments because of their comparatively higher incidence rates. They also mentioned cases with clients who don't reliably relieve workers at the end of shifts or who routinely dishonor contractual lunches as being affected.

improved employment conditions and organizational characteristics mitigate psychosocial stress by empowering workers to view themselves as professionals.

C4: With other people, I felt like I couldn't. The reasoning that I have with the cooperative is that now, when I am sick, I give them notice and know that there are many other well-trained people who can cover for me.

C1: In reality, I think that, yes, it [*the cooperative*] does help, because without it we would have all kinds of obstructions...what we're talking about in reality is learning how to take care of children and protecting them in whatever situation. Because we have to care for them at all times.

These observations suggest that comparable domestic childcare workers don't have the same workplace hazards or incidence rates as domestic home health aides in New York City because of their employee representation in worker cooperatives.

The experiences of comparable domestic childcare workers add a new element to the explanation of domestic home health aides' occupational injury rates. At first, they seemingly suggest that, since these childcare workers don't share the same incidence rates or consequences of domestic work models as domestic home health aides, the construction of occupational injury determinants through domestic work and imbalance of determinants don't determine occupational injury rates among domestic care workers alone. However, my emergent hypothesis clarifies why these models seem simultaneously supported and refuted by workers' accounts. The differences seen among participating childcare workers doesn't reflect a process outside of those established in my first three hypotheses, but rather explains *how* workplace hazards overcome safeguards. Certain qualities of employee representation make this safeguard more susceptible to short-term corrosion by workplace hazards and slow its mediatory effects. Domestic home health aides' employee representation through unionization retains these qualities, while comparable domestic childcare workers' representation through membership in worker cooperatives doesn't. This difference explains the disparate incidence rates between these

two groups. While they both experience the effects of domestic work on occupational injury determinants, only domestic home health aides in New York City have workplace hazards that outweigh their safeguards, resulting in more workplace injuries, because of the weaknesses of their employee representation.

Worker Solutions

Another unexpected discovery emerged from the solutions domestic home health aides presented for their persistent occupational safety and health risks. Although all aides agreed that cultural perceptions of their work instigated their workplace hazards, they disagreed about how to address these hazards in the future. Their varying recommendations divided participating aides into two groups: aides who preferred self-initiated solutions and aides who preferred external solutions. I didn't infer from models of occupational injury determinants, domestic work, or occupational safety and health interventions any processes that would explain how these two groups reached their different perspectives on solving their occupational injury rates. However, their attitudes do evoke Rotter's theory of internal and external loci of control (Rotter, 1966), and divisions of psychosocial stress and safety workarounds between these groups suggest that certain orientations are more susceptible to occupational injury.

For instance, the participating domestic home health aides disagreed on how much intent to attribute to employers for their disregard of aides' workplace hazards. Aides who prefer external change believe that employers deliberately maintain workplace hazards to increase profits. They pointed to continued hiring, stagnant wages across increasingly expensive services, and reductions in opportunities for overtime pay as evidence of this intent.

H17: The real problem we have with the agencies about hours is that [*pause*] they don't, they don't really think about us like human beings...They're hiring, like, a lot of people [*pause*] to cover their cases. So, they don't mind about me having 20 or 3 hours. That's not their problem...They want more people to cover their case, and they don't want to pay us! That's the problem.

H10: The agency, my agency charge night patients more money, but we have the, the same pay: \$10 an hour. They don't take, give us even one, one penny of our money. Charge your patient more money, and then for the same case [*what do they pay you?*]: \$10. [*pause*] [*audience affirming*] They squeeze us!

H9: They try to keep you down under 40 hours because they're looking now at the overtime pay. That's what they would say.

Aides who prefer self-initiated change believe that employers' disregard of their workplace hazards is reactionary; specifically, a reaction to industry changes, like fluctuations in Medicare and Medicaid.

H3: ...they cut Medicaid and Medicare 50%. So either, the patients is not getting no hours theyselves [*sic*]. Ya' think we're fighting. Ya' have to imagine how they feel. You understand? It's some of these patients that's only getting 2-3 hours *one week*. You understand? So they're stressing and struggling thereself [*sic*]. [*vocalized pause*] It doesn't matter how much work these agencies have. They're trying to even divide it, at least one patient, so three of us can go to this one patient; so everybody can get work.

In response, their counterparts voiced their disagreement immediately.

H4: [*stuttering*] I don't think it's just that [*vocalized pause*], like she says, the [*vocalized pause*] the Medicare and Medicaid. It's they're actually controlling [*pause*] on whatever they decide to give you out, the hours...If you put in for full-time, then you still get part-time hours. And even though you get part-time hours [*vocalized pause*] they may give you just a few days...Whatever they regulate, it's still equaling out to part-time.

Both groups agree that their employers devalue their work and perceive them negatively as workers or individuals, but aides who prefer external changes explicitly expressed feeling dehumanized by their employers' devaluation more often than aides who prefer self-initiated changes.

The two groups also disagreed on the effectiveness of demanding help from supervisors when confronted with hazardous situations at work. Aides who prefer self-initiated changes more strongly believe that demanding this would be productive.

H21: Because if you do not ask of the case, you end up over there seeing things you cannot handle and maybe they don't have somebody to send to you right away and then you're already taking them in a risk. So you have to ask what kind of case... If you cannot do it, then you say, "I can't take it." They will find somebody else... They have to tell you so that you know how to work. You have to ask.

Yet aides who prefer external changes doubt their supervisors would comply, citing unfruitful past experiences and frequent inability to contact supervisors at work.

H5: They never tell me. They don't tell me. They won't tell me.

H16: It's not that easy.

H4: They try to go around you.

While both groups experienced pressures to perform safety workarounds, the latter didn't share stories in which they refused to work instead of committing a safety workaround. Though infrequently, aides who prefer self-initiated changes did share such stories.

In both of these examples, aides who prefer self-initiated changes and aides who prefer external changes differed in how much faith they placed in others and themselves to deliberately change their work conditions. Rotter's theory of internal and external loci of control describes similar personality rifts. It states that individuals exist on a spectrum of internal and external loci of control, where a greater internal loci of control means an individual more heavily attributes what happens to them to their own actions and a greater external loci of control means an individual more heavily attributes these events to the actions of others, institutions, or luck (Rotter, 1966). Aides who prefer self-initiated changes may have greater internal loci of control, which would explain their de-emphasis of employers' intent and responsibility for workplace hazards and their focus on resolving issues through their self-effort. Aides who prefer external

changes, by contrast, may have greater external loci of control, explaining their opposing habits. These psychological personality differences could explain why they promote different solutions, despite facing the same occupational injury rates, occupational injury determinants, and causes of their determinants.

These different groups also experience slightly different occupational injury determinants than one another. Aides who prefer external changes more often expressed psychosocial stress and pressure to perform safety workarounds than aides who prefer self-initiated changes. These employee behaviors are workplace hazards in Figure 3.4. A comparative increase in these determinants' frequencies would result in at least slightly greater occupational stress and other occupational safety and health risks. Or, aides who prefer external changes simply express these occupational injury determinants that both groups share more freely. This alternative explanation predicts that aides who prefer self-initiated changes underreport certain occupational injury determinants associated with employee behavior. However, it's less likely true because aides who prefer self-initiated changes did comment on their psychosocial stress and safety workarounds.

From these patterns, I derived two more emergent hypotheses. My sixth hypothesis attributes the different attitudes between aides who prefer self-initiated changes and aides who prefer external changes to differences in loci of control. The parallels between aides' differing focus in problem-solving and Rotter's theory of loci of control support this hypothesis.

Hypothesis 6

Domestic home health aides in New York City who believe that self-initiated changes of their occupational injury determinants would be effective without complimentary changes in cultural perceptions of their work have a greater internal locus of control than those aides who don't.

My final hypothesis proposes that aides who prefer external changes have slightly higher occupational safety and health risks than their peers. Their declarations of psychosocial stress and disproportionate stories of using safety workarounds support this hypothesis.

Hypothesis 7

Domestic home health aides in New York City who don't believe that self-initiated changes of their occupational injury determinants would be effective without complimentary changes in cultural perceptions of their work have higher occupational safety and health risks than aides who do because their attitudes facilitate employee behaviors that are also workplace hazards.

While additional research is needed to confirm these hypotheses, they at least introduce that the psychology and personality of domestic home health aides in New York City influences their occupational safety and health risks through employee behavior and shapes the solutions they recommend.

Results

Through their observations, the participants in these focus group sessions exposed the causes of occupational injuries among domestic home health aides in New York City. Their workplace injuries stem from their short notice of inconsistent work shifts, low wages, dangerous job tasks, isolation from peers, limited access to client information and equipment, inadequate systems for reporting workplace hazards, and coercive client interactions. The organizational characteristics and support within the home healthcare industry reinforces these workplace hazards. For instance, sub-contracting and weakened union representation allow these hazards to continue unchecked. These occupational injury determinants are the immediate causes of domestic home health aides' occupational injuries in New York City.

Their determinants manifest differently than other healthcare workers because domestic home health aides operate in domestic worksites. Domestic work is associated with demographic minorities, public goods, and negative cultural norms, and this association encourages labor market segregation. For domestic home health aides, this segregation funneled low-valued workers into their occupation and restricted access to resources that would have prohibited their workplace hazards. This mediatory effect explains why domestic home health aides retain their current occupational injury determinants.

The responses of individuals and organizations to the incidence rates these determinants created explain the persistence of domestic home health aides' occupational injury risks. Occupational safety and health interventions for domestic home health aides are ineffective because they rely too heavily on low-level safety controls. They also underestimate the amplification of workplace hazards by domestic work. Domestic home health aides who do not believe they can independently resolve their workplace hazards experience increased psychosocial stress and use safety workarounds more frequently than their peers. As result, they have slightly higher incidence rates than other domestic home health aides. When combined, these responses allow the rate of workplace injuries among domestic home health aides to persist.

These conclusions support our contemporary academic models of occupational injury determinants, domestic work, and occupational safety and health interventions. However, these models do not independently explain the incidence rates of New York City's domestic home health aides. Instead, they must be combined in order to fully illustrate all the forces that contribute to domestic home health aides' risks. Figure 5.1 summarizes the cultural attitudes, workplace hazards, absent safeguards, and responses by individuals and organizations that

caused the occupational safety and health risks of New York City's domestic home health aides. As cultural attitudes towards domestic work created workplace hazards through labor market segregation, the inadequate responses to these hazards secured that their increases in domestic home health aides' occupational injury risks persisted. This same process likely applies to domestic home health aides nationally and to other domestic care workers, as modelled in Figures 5.2 and 5.3.

Due to the sample size of this study, I intend to conduct additional research to verify the applicability of these conclusions to other domestic home health aides. These results aren't found in the outdated surveys of domestic home health aides or studies of comparable non-domestic healthcare workers in Chapter 2. Yet it explains the incidence rates that public organizations report for these workers each year. By demonstrating the value of future research and uncovering the causes of workplace injuries among unionized domestic home health aides in New York City, this analysis satisfies the aims of this thesis.

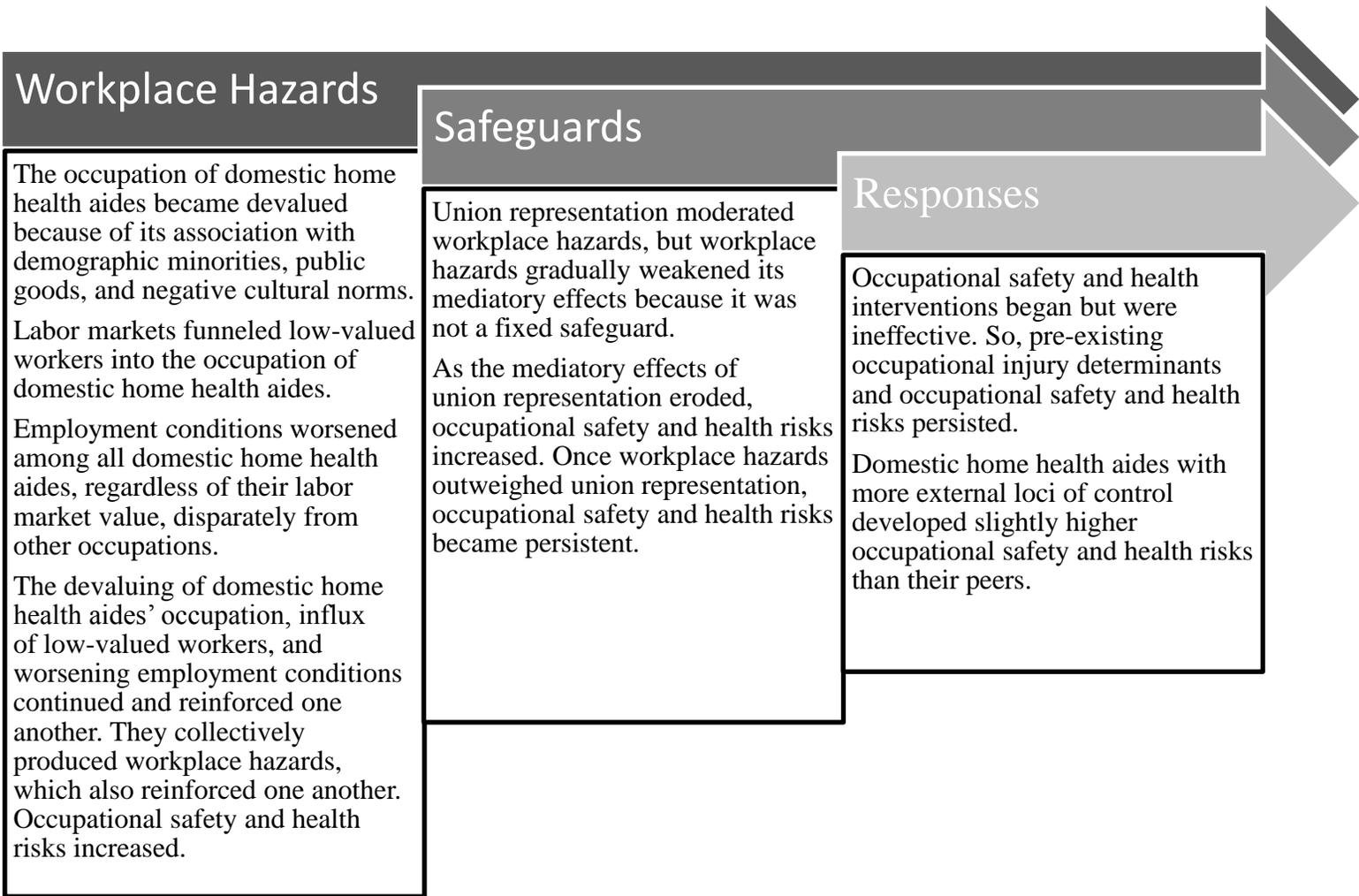


Figure 5.1: Development of Occupational Injuries among Unionized Domestic Home Health Aides in New York City - Overview

Figure 5.2: Development of Occupational Injuries among Domestic Home Health Aides

1. The occupation of domestic home health aides became devalued because of its association with demographic minorities, public goods, and negative social and cultural norms.

The processes through which this devaluation occurred include public good theory (Samuelson, 1954; Samuelson, 1955; England, 2005) and gender and racial bias devaluation (England & Folbre, 1999; Kmec, 2002).

2. Labor markets funneled low-valued workers into the occupation of domestic home health aides.

The processes through which this segregation occurred include social closure (Weber, 1978), queuing (Reskin, 1994), poor market position (Catanzarite, 2003), and human capital (Schultz, 1961).

3. Employment conditions worsened among all domestic home health aides, regardless of their labor market value, disparately from other occupations.

The processes through which these occupational outcomes occur include cultural devaluation (England, Herbert, Kilbourne, Reid, & Megdal, 1994), compensating differentials theory (Brown C. , 1980), prisoner of love theory (Folbre, 2001), and the commodification of emotion framework (Hochschild, 1983; Wharton A. S., 1993; Wharton A. S., 1999; Hochschild, 2000; Hochschild, 2003).

4. The devaluing of domestic home health aides' occupation, influx of low-valued workers, and worsening employment conditions continued and reinforced one another. They collectively produced workplace hazards, which also reinforced one another. Occupational safety and health risks increased.

The processes that reinforced each other include those processes listed above and embodied inequality theory (Casanova, 2013). Contemporary cognitive science theories of occupational injury determinants delineate how workplace hazards increased occupational safety and health risks and mediated one another. Figures 3.2, 3.3, and 3.4 summarize these relationships.

Figure 5.2 (Continued)

5. Union representation moderated workplace hazards, but workplace hazards gradually weakened the mediatory effect of union representation because it wasn't a fixed safeguard.

A fixed safeguard doesn't change as other occupational injury determinants change. Domestic home health aides' union representation isn't a fixed safeguard because its influence on other occupational injury determinants change as organizational characteristics, employment conditions, organizational support, employee behavior, and employee demographics change

6. As the mediatory effects of union representation eroded, occupational safety and health risks increased. Once workplace hazards outweighed union representation, occupational safety and health risks continued to increase and became persistent.
7. Occupational safety and health interventions began but were ineffective, so pre-existing occupational injury determinants and occupational safety and health risks persisted.

Occupational safety and health interventions were ineffective because they relied too heavily on training, a low-level safety control in the hierarchy of hazards control model, without complimentary engineering controls and because they underestimated domestic home health aides' workplace hazards due to a misunderstanding of their origins.

8. Domestic home health aides with more external loci of control developed slightly higher occupational safety and health risks than their peers.

Having an external locus of control increased psychosocial stress and safety workarounds, which are known workplace hazards.

Figure 5.3: Development of Occupational Injuries among Domestic Care Workers

1. A domestic care occupation becomes devalued because of its association with demographic minorities, public goods, and negative cultural norms.

The processes through which this devaluation occurs include public good theory (Samuelson, 1954; Samuelson, 1955; England, 2005) and gender and racial bias devaluation (England & Folbre, 1999; Kmec, 2002).

2. Labor markets funnel low-valued workers into the domestic care occupation after it's devalued.

The processes through which this segregation occurs include social closure (Weber, 1978), queuing (Reskin, 1994), poor market position (Catanzarite, 2003), and human capital (Schultz, 1961).

3. Employment conditions worsen among all workers of the domestic care occupation, regardless of their labor market value, disparately from other occupations.

The processes through which these occupational outcomes occur include cultural devaluation (England, Herbert, Kilbourne, Reid, & Megdal, 1994), compensating differentials theory (Brown C. , 1980), prisoner of love theory (Folbre, 2001), and the commodification of emotion framework (Hochschild, 1983; Wharton A. S., 1993; Wharton A. S., 1999; Hochschild, 2000; Hochschild, 2003).

4. The devaluing of the occupation, influx of low-valued workers, and worsening employment conditions continue and reinforce one another. They collectively produce workplace hazards, which also reinforce one another. Occupational safety and health risks increase.

The processes that reinforce each other include those processes listed above and embodied inequality theory (Casanova, 2013). Contemporary cognitive science theories of occupational injury determinants delineate how workplace hazards increase occupational safety and health risks and how they mediate one another. Figures 3.2, 3.3, and 3.4 summarize these relationships.

Figure 5.3 (Continued)

5. Remaining safeguards moderate workplace hazards, but workplace hazards gradually weaken their mediatory effects if the safeguards aren't fixed.

A fixed safeguard doesn't change as other occupational injury determinants change. Domestic home health aides' union representation isn't a fixed safeguard because its influence on other occupation injury determinants change as organizational characteristics, employment conditions, organizational support, employee behavior, and employee demographics change

6. As safeguards erode, occupational safety and health risks increase. When workplace hazards outweigh safeguards, occupational safety and health risks continue to increase and can become persistent.

7. Occupational safety and health interventions may begin. If effective, then they reduce occupational safety and health risks and establish or strengthen safeguards. If ineffective, pre-existing occupational injury determinants and occupational safety and health risks persist.

Occupational safety and health interventions were ineffective because they relied too heavily on training, a low-level safety control in the hierarchy of hazards control model, without complimentary engineering controls and because they underestimated domestic home health aides' workplace hazards due to a misunderstanding of their origins.

8. Workers in the occupation with more external loci of control develop slightly higher occupational safety and health risks than their peers.

Having an external locus of control increased psychosocial stress and safety workarounds, which are known workplace hazards.

Chapter 6: Conclusion

This thesis sought an explanation for the persistent and high occupational injury rates in recent years among New York City's domestic home health aides. It reviewed what information we already know about domestic home health aides, about their workplace injuries, and about the causes of occupational injuries, generally. It also summarized the results of my focus group sessions with domestic home health aides and comparable domestic childcare workers employed in New York City. My analysis exposed likely causes of the occupational safety and health risks among New York City's domestic home health aides. It concluded with a theoretical model of how these causes manifest, which may apply to domestic home health aides or domestic care workers elsewhere. By providing this model, this thesis improves our understanding of domestic home health aides' incidence rates in New York City and gives direction to future research.

Chapter 2 established the value of and requirements for an initial exploratory study. Reports by the Bureau of Labor Statistics predict significant increases in Americans' demand for home healthcare services and domestic home health aides across the next 30 years. Yet, surveys by the Bureau of Labor Statistics and Center for Disease Control and Prevention report persistently high occupational injury rates among domestic home health aides since 1995. These incidence rates represent a threat to aides' health and livelihood. They also threaten the retention of aides and management of demand for home-based healthcare services by the U.S. healthcare industry. Unfortunately, these reports don't explain the causes of these incidence rates thoroughly enough to address them. So, additional research on this issue was required.

The limitations of current research on domestic home health aides clarified what specifically was needed. There was a lack of timely data on domestic home health aides, in general, that didn't group them together indiscriminately with other domestic care or healthcare

professionals. Public surveys described the employment rates, employment conditions, training, employee demographics, unionization, industry characteristics, and employers of domestic home health aides nationally. However, it was unclear whether these conditions persist today or have an impact on domestic home health aides' occupational injuries. These conditions also increased the resource needs for national studies beyond what many researchers can afford. To justify that expense, a smaller exploratory study needed to demonstrate the value and ideal method of investigating domestic home health aides' workplace injuries first.

This thesis satisfied that need by conducting a local study in New York City that provided qualitative data on the causes of occupational safety and health risks among domestic home health aides. It included unionized domestic home health aides, who represent a large segment of nationally employed aides, and domestic childcare workers from a worker cooperative, who represent a comparable domestic worker group outside of healthcare. This comparable group ensured that outcomes caused by employment conditions unique to healthcare professions weren't misattributed to domestic work environment. New York City also shares similar work conditions for domestic home health aides as those reported nationally. These various parallels to national conditions assured that this study's results would produce predictions of national trends for future research to explore. Its local setting and smaller sample size made this study feasible by reducing resource demands. By identifying a need for this study, Chapter 2 led to the research question below, which guided my thesis.

Research Question	What causes domestic home health aides' persistent and high occupational injury rates in New York City?
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Chapter 3 established the original hypotheses of this study through a review of academic literature relevant to my research question. This literature included models of occupational injury determinants, domestic work, and occupational safety and health interventions. From

contemporary cognitive science theories of occupational injury determinants, I compiled 24 workplace hazards and safeguards relevant to domestic home health aides. I found that the data in Chapter 2 supported the determinants from these theories, but models of domestic work didn't. Instead, they attributed effects to domestic work environment that mirror the results of mediatory occupational injury determinants in labor market theories. This conclusion challenges contemporary models of occupational injury determinants, which don't identify domestic work as a mediatory determinant. However, it doesn't explain why surveys of domestic childcare workers' occupational injuries in Chapter 2 report lower incidence rates than domestic home health aides, despite sharing domestic work environments. Models of occupational safety and health interventions added another problem to this mix. They imply that successful interventions would curb occupational injury rates among domestic home health aides but are likely unsuccessful. While this statement matches the incidence rates found in Chapter 2, there is no empirical evidence to definitely prove that recent interventions are unsuccessful. These models didn't independently explain the causes of workplace injuries among domestic home health aides in New York City, but I inferred from them the following hypotheses to explain their gaps.

Hypothesis 1	Domestic home health aides in New York City have workplace hazards that outweigh their safeguards, explaining their persistently high occupational injury rates.
Hypothesis 2	Operating in domestic workplaces increases the workplace hazards among domestic home health aides in New York City because of its association with demographic minorities, public goods, and negative cultural norms, which encourages the employment of low-valued workers and restrictions on resources that improve employment conditions.
Hypothesis 3	Public and private occupational safety and health interventions for domestic home health aides in New York City are ineffective because they don't properly apply the hierarchy of hazards control model and don't address the mediatory effects

Hypothesis 4

of domestic workplaces.
Domestic home health aides in New York City report higher, persistent incidence rates than comparable domestic care workers because they have more workplace hazards and fewer safeguards, refuting models of domestic work and occupational injury determinants.

Chapter 4 outlined the methodology I enacted in this study to test my hypotheses. I relied on focus group sessions because their results would provide more thorough data on what causes domestic home health aides' occupational injuries and on how those causes manifest than earlier quantitative reports. With the help of researchers from The Worker Institute, I gathered data from these sessions and designed questions that guaranteed comparable responses between participating domestic home health aides and domestic childcare workers. My coding systems supported the application of grounded theory and objective analysis of my data. They enabled the formation of emergent hypotheses in my analysis and rooted my results in the experiences and observations of domestic home health aides. After developing 8 themes, 26 categories, and 6 participant personas, I examined my transcriptions for answers to my research question.

Chapter 5 presented the results of my analysis. The participating domestic home health aides in this study confirmed that the workplace hazards predicted by models of occupational injury determinants in Chapter 3 and by public reports in Chapter 4 persist today. They also connected these hazards to their occupational injuries. When describing why these hazards exist, domestic home health aides substantiated the mediatory effects of domestic work environment inferred from models of domestic work in Chapter 3. They also verified the ineffectiveness of current occupational safety and health interventions. Comparing the experiences of participating domestic home health aides and domestic childcare workers showed that the former did have higher incidence rates. It also showed that domestic home health aides had more workplace

hazards and fewer effective safeguards, causing these dissimilar rates. All these results supported my four original hypotheses.

In addition, my results explained variations in occupational injury determinants between participating domestic childcare workers and domestic home health aides and in occupational injury rates among participating aides. The domestic childcare workers could more quickly address workplace hazards through their worker cooperative than domestic home health aides through their union. Their employee representation also didn't fluctuate with the introduction of new workplace hazards. So, it continued to reduce hazards over the long-term no matter what workplace hazards arose. For domestic home health aides, their employee representation decreased as certain workplace hazards increased, like sub-contracting in their industry, part-time hours, irregular scheduling, poor organizational health, and poor client interactions. In other words, their employee representation eroded as a safeguard over time and decreasingly reduced workplace hazards in the long run, explaining their higher injury rates. Domestic home health aides experienced different occupational injury rates from one another according to their internal loci of control. Aides who expressed repeatedly that their behavior could not independently reduce their occupational safety and health risks demonstrated a greater external locus of control. They also reported using safety workarounds more often than their peers, higher levels of psychosocial stress, and slightly higher incidence rates. These two insights informed and supported the emergent hypotheses of my thesis, reproduced below.

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|--------------|---|
| Hypothesis 5 | Domestic home health aides in New York City have more workplace hazards and fewer safeguards than comparable domestic care workers because their employee representation can't address workplace hazards more quickly than workplace hazards undermine employee representation. |
| Hypothesis 6 | Domestic home health aides in New York City who believe that |

Hypothesis 7

self-initiated changes of their occupational injury determinants would be effective without complimentary changes in cultural perceptions of their work have a greater internal locus of control than those aides who don't.

Domestic home health aides in New York City who don't believe that self-initiated changes of their occupational injury determinants would be effective without complimentary changes in cultural perceptions of their work have higher occupational safety and health risks than aides who do because their attitudes facilitate employee behaviors that are also workplace hazards.

From my analysis, I composed a theoretical model of how occupational injury determinants manifest among domestic home health aides and domestic care workers, generally. My results identified the sociocultural institutions, economic markets, and responses by organizations and individual workers that led to the persistent occupational injury rates of domestic home health aides in New York City. Domestic work environment, as a mediatory occupational injury determinant, encouraged the development of workplace hazards that eventually undermined the unfixed employee representation of these aides and increased their occupational injury rates. These hazards continued to reinforce one another unabated because occupational safety and health interventions were unsuccessful in applying the Hierarchy of Hazards Control model and in reducing the mediatory effects of domestic work environment. Finally, for some domestic home health aides, an external locus of control discouraged self-initiated solutions to their occupational safety and health risks and promoted employee behavior that increased incidence rates. These same events could have easily occurred at the national level and explain the persistent occupational injury rates of nationally employed domestic home health aides or of other domestic care workers.

This thesis successfully initiated an investigation into the causes of occupational injuries among domestic home health aides in New York City. The next step is to test the theoretical model inferred from this study against a larger sample size in New York City. If these follow-up

studies replicate my results, then research on domestic home health aides across New York State would verify whether or not this model is unique to New York City. Finally, if that study also supports my model, then research in other states or nationwide would be required. I intend to continue this outlined agenda of research because of the value this thesis demonstrated in qualitative research of domestic home health aides. Hopefully, by testing this model in other contexts, we can better understand how to address the disturbing consequences these risks present for domestic home health aides and for the U.S. healthcare industry in the future.

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