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Transcending the Model Minority Myth: A Comprehensive Analysis of Asian Americans' Experiences in California Child Welfare System

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Transcending the Model Minority Myth: A Comprehensive Analysis of Asian Americans' Experiences in California Child Welfare System

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Doctor of Philosophy in Social Welfare

by

Jianchao Lai

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ABSTRACT OF THE DISSERTATION

Transcending the Model Minority Myth: A Comprehensive Analysis of Asian Americans' Experiences in California Child Welfare System

by

Jianchao Lai

Doctor of Philosophy in Social Welfare

University of California, Los Angeles, 2023

Professor Todd M. Franke, Chair

Over the past several decades, research has demonstrated that minoritized groups, such as Black and Indigenous communities, disproportionately experience adverse child welfare outcomes. However, there is a significant gap in understanding the experiences of Asian American families involved with the child welfare system, which hinders a comprehensive assessment of maltreatment issues and the effectiveness of prevention and intervention practices in this diverse community. This dissertation employs data from the California Child Welfare Services/Case Management System (CWS/CMS) between 2014 and 2020 and used logistic regression and survival analysis to examine racial disproportionality and disparities in disposition and recidivism outcomes, along with the predictors thereof, among various Asian ethnic groups. The findings reveal that Asian American children generally experience fewer prior

referrals and recidivism incidents related to maltreatment. Their dispositions are also more likely to be determined with the 30-day timeframe compared to specific racial/ethnic groups. Nonetheless, disparities persist among different Asian subgroups, particularly among Southeast Asian groups such as Laotians, Hmong, and Cambodians. The density of the Asian American population serves as a protective factor that reduces the risk of substantiation and re-report for Asian American families, although it does not impact case recurrence. This study challenges the model minority myth by revealing ethnic disparities among Asian subgroups and their unique positions in relation to other racial groups. The insights gained aim to inform policymakers and practitioners in developing culturally sensitive interventions and policies tailored to the specific needs of each racial and ethnic group within the child welfare system.

Keywords: Asian Americans, Child Abuse and Neglect, Child Protective Services, Racial and Ethnic Disparities

The dissertation of Jianchao Lai is approved.

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University of California, Los Angeles

2023

DEDICATION

To my grandparents, who did not live to see this day. Love you, always have, always will.

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ACKNOWLEDGEMENTS

"*The mystery of life isn't a problem to solve, but a reality to experience.*"

― Frank Herbert

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Introduction

In the United States, administrative data from child protective service (CPS) agencies suggests that referrals of child maltreatment cases are not proportionally distributed across racial groups (U.S. Children's Bureau, 2019). Data indicate that children of minority racial and ethnic groups, such as Black and Native American children, are subjected to maltreatment referral and substantiation at disproportionality higher rates (Putnam-Hornstein et al., 2013; Smith & Devore, 2004; Dettlaff & Boyd, 2020; Drake et al., 2011). An extensive amount of research has also focused on the disproportionately adverse child welfare outcomes of Black/African American, Hispanic/Latinx, and Indigenous populations, compared to the White population. However, little research has examined the adequacy of access to services for the Asian American population in the child welfare system. Probably due to the low representation of this population among the child protective agency referrals, few studies have empirically examined the mechanisms underlying this phenomenon and the experience of Asian American families in the child welfare system (Cheung & LaChapelle, 2011; Zhai & Gao, 2009). The scarcity of empirical studies on child welfare services provided to Asian American families hinders a comprehensive understanding of the child maltreatment problems in the Asian community and the effectiveness of current prevention and intervention practices.

This dissertation attempts to address the research gap by using the California Child Welfare Services/Case Management System (CWS/CMS) data to 1) explore the inter- and intra-group disparities in maltreatment disposition and recidivism in relation to the Asian populations, and 2) examine the potentially unique predictors of such disparities among Asian ethnic groups. Generalized Linear Models (GLM) will be used to analyze the racial and ethnical differences in various child welfare stages up to allegation disposition. Additionally, survival analysis will be

employed to explore the length of time to disposition and recurrence, as well as the predictors of those events. The proposed research aims to explore the unique characteristics and service outcomes of Asian American families involved in the system and the variances across Asian ethnicities in relation to risk and protective factors of child maltreatment.

Chapter One: Literature Review

Terminology

Child Maltreatment and Mandated Reporting

The World Health Organization (WHO) defines child maltreatment as "the abuse and neglect that occurs to children under 18 years of age. It includes all types of physical and/or emotional ill-treatment, sexual abuse, neglect, negligence, and commercial or other exploitation, which results in actual or potential harm to the child's health, survival, development, or dignity in the context of a relationship of responsibility, trust or power." (WHO, 2020). Within this broad definition, five subtypes can be distinguished: physical abuse, sexual abuse, neglect and negligent treatment, emotional abuse, and exploitation. There are also some variations between U.S. state statutes, but all versions highlight the inclusion of both physical and emotional/mental maltreatment. Among those categories, neglect is the most common type of maltreatment, which accounted for 74.9% of the total substantiated cases in 2019 (The National Child Abuse and Neglect Data System (NCANDS), 2019).

In all American states and territories, professionals, including social workers, teachers, healthcare workers, childcare providers, and law enforcement officers, are mandated to report any suspicion of child maltreatment (American Child Welfare Information Gateway, 2019). Individuals not working in these professions are still encouraged to report if they suspect child maltreatment cases. These voluntary reporters of abuse are often referred to as "permissive

reporters" (American Child Welfare Information Gateway, 2019). Under California's "mandatory reporting law," it is a crime if certain professionals do not report instances of actual or suspected child abuse and neglect (Child Abuse and Neglect Reporting Act, 1980).

Data collected by the U.S. Department of Health and Human Services (DHHS) show that 68.6% of the initial reports were made by professionals (U.S. DHHS, Administration for Children and Families (ACF), Administration on Children, Youth and Families, Children's Bureau, 2021). Some professions with the highest rates of reporting include education personnel (21.0%), legal and law enforcement personnel (19.1%), and medical personnel (11.0%). Among the reports made by non-professionals, parents (5.9%), other relatives (5.9%), and friends and neighbors (3.5%) are three of the most prominent reporter groups (U.S. DHHS, ACF, Administration on Children, Youth and Families, Children's Bureau, 2021).

Child Welfare Mission and Process

There are two significant missions for child welfare services: to ensure children's safety and strengthen the family to care for their children (American Child Welfare Information Gateway, 2017). The service is not provided singularly by the children and family services. Instead, the department works collaboratively with other public or private agencies and organizations. The services include in-home family programs, foster care, mental health care, parenting skills classes, domestic violence services, employment assistance, and financial or housing assistance (American Child Welfare Information Gateway, 2016). The process of child welfare service includes referrals, initial screening, investigation, substantiation, and follow-up services determined by the case characteristics (Figure 1). Referrals do not involve concerning actions that meet the state's statutory definition of child maltreatment are screened out or diverted to other community agencies (American Child Welfare Information Gateway, 2017).

The screen-in referrals, called reports, need to be examined using a tool named the Structured Decision Making (SDM) system during the investigation phase (Evident Change, 2021). The investigation conclusion will be used to determine the disposition level (e.g., substantiation, unfounded, inconclusive) of the reports. After disposition, agency workers will provide services to the families based on their needs and the disposition level. The various child welfare terminologies used in this dissertation proposal are listed in Table 1.

Table 1

Child Welfare Terminology[1]

Terminology	Definitions
Referral vs Report vs Case	A referral is recorded when certain party contacts child protective agencies for suspected child abuse or neglect incidents. A referral turns into a report when the referral is screened-in for investigation. When caseworkers substantiated the report after investigation, an official case will be opened for future services.
Allegation	A referral, report, or case can have multiple allegations. Each allegation reflects a reported type of child maltreatment (e.g., physical abuse, emotional abuse, neglect).
Screening	After a referral is received, hotline staff determines if the referral will be screened in or out, based on the available evidence and the state definition of child maltreatment.
Investigation	After screening, a multidisciplinary team (e.g., child protective services staff, the police) will initiate an in-depth investigation to determine if a child has been harmed or is at risk of harm. The investigation is required to complete with 30 days of the initial contact.
Disposition Types	Appropriate disposition is made for each allegation of a report after the investigation. Usually, each allegation will have one of the following dispositions: unfounded, substantiated, or inconclusive. When a report is substantiated, children involved in the report will be deemed as child victims.
Recurrence of Referrals	A referral was made for suspect child abuse or neglect following a prior referral that involved the same child or family
Recurrence of Child Maltreatment	A substantiated report of child abuse or neglect following a prior substantiation that involved the same child victim or family

[1] Child welfare laws and related terminologies may vary by states. The definitions listed in this table are based on California.

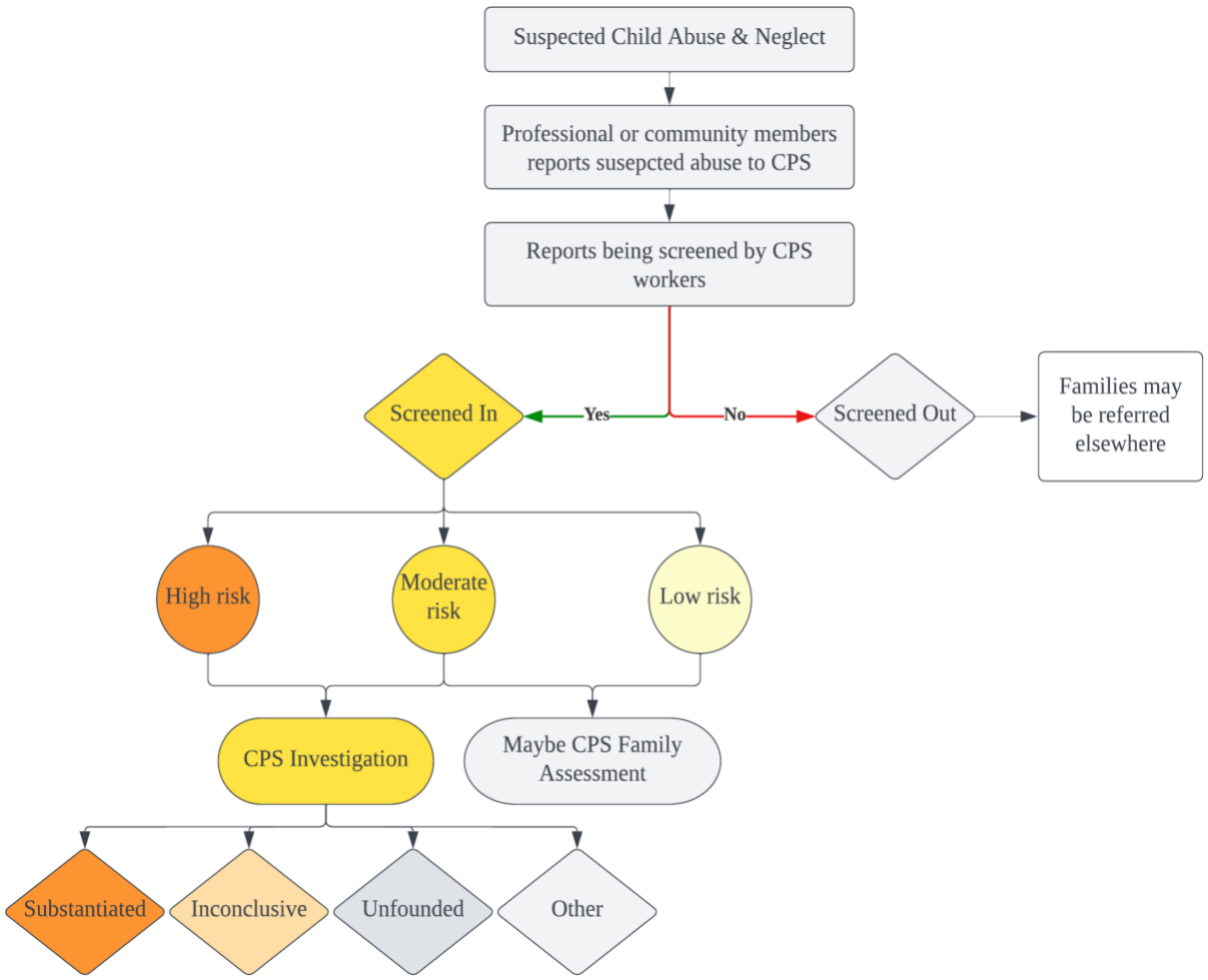
Terminology	Definitions
Permanency	A child in foster care achieves permanency when they are either reunified with the original family, living with other relatives or legal guardian (long-term), or legally adopted.

In fiscal year 2019, nearly 4.4 million child maltreatment referrals reached CPS agencies in the United States (U.S. DHHS, ACF, Administration on Children, Youth and Families, U.S. Children's Bureau, 2021). In California alone, there were 343,126 referrals made during that year. On average, each year around 55% of the referrals are screened in for investigation. Out of the investigated referrals, around 9.1% of the cases were substantiated, and further actions are taken (U.S. DHHS, ACF, Administration on Children, Youth and Families, U.S. Children's Bureau, 2021). It is worth noting that the recurrence of reports has been a significant marker of the ineffectiveness of the child welfare services (Perrigo et al., 2018). Statistics show that though on average 80.6 % of the referrals are first-time reports, 8% of the cases include re-referrals into the system within the 12-month marker, and 11% of the children are getting re-reported to the system after 12-month marker (U.S. Children's Bureau, 2019).

Following substantiation, the social worker needs to decide whether the child is safe at home or needs to be removed and enter the foster care system. The ideal result of the service is the reunification of the family and their children. When that is not possible, the goal will be helping children find permanency with kin or adoptive families. In 2019, a national estimate of 89.7% of the children exiting foster care was discharged to a permanent home, including both adoption and reunification (U.S. Children's Bureau, 2019).

Figure 1

Flowchart of Child Protective Service Procedures [2]



In the past decades, research has shown adverse outcomes when placing children in foster homes or group homes, which includes mental health issues, social withdrawal, and risks associated with frequent transitioning between homes and aging out of the system without permanency (Simms, Dubowitz & Szilagy, 2000; Curry & Abrams, 2015; Lockwood, Friedman & Christian, 2015). These concerns have pushed the child welfare system to shift to kinship care or

[2] This figure is adapted from the original flowchart developed by Child Welfare Information Gateway (2020). The scope of this study focuses on the area framed by the dashed border.

alternative services. From 2010 to 2019, there was approximately an 11 % decline in young children entering California's foster care system (Webster et al., 2021). Yet still, the median length of staying in foster care varies drastically from state to state, ranging from 8.6 months in Wyoming to almost 19.2 months in Illinois (U.S. Children's Bureau, 2019).

The Asian Population in the United States

The U.S. Census defines "Asian" heritage as a person having origins in any of the original peoples of the Far East, Southeast Asia, or the Indian subcontinent, including Cambodia, China, India, Japan, Korea, Malaysia, Pakistan, the Philippine Islands, Thailand, and Vietnam. In practice, the term "Asian American" is commonly used to refer to all Asians permanently living in the United States, including both foreign-born and American-born Asians (Ramakrishnan & Ahmad, 2014). More than 20 Asian ethnic groups (Uba, 2003) originated from East Asia, South Asia, and Southwest Asia. Some of the largest Asian-origin populations in the United States are Chinese, Asian Indians, Filipinos, Vietnamese, Korean and Japanese (Frey, 2018). Most states' child welfare agencies use the Census's definition of Asian American when collecting the children's races. However, the subgroups listed in the agency's racial checklist may not cover all Asian American subgroups, which may increase the risk of frequently misclassified when physical appearance, surname, or country of origin other than an Asian country determines their race or ethnicity (Lee & Lee, 2002).

Currently, Asian Americans consist of 5.7% of the current American population and have become the fastest-growing race group in the past two decades (U.S Census, 2019). Data from the American Community Survey indicated that nearly 57% of Asians in the United States are foreign-born (Lopez, Ruiz & Patten, 2017). With its fast-growing rate, the Pew Research

Center (2021) has projected that by 2055, Asians will comprise the largest share of foreign-born American citizens in the United States.

California has the largest Asian American population and the second-highest proportion of Asian American residents in the U.S., following the state of Hawaii. According to the U.S. Census (2020) data, there are over 6 million Asian Americans in California, which consist 15.5% of the state's population, excluding the multi-racial population who are partial of Asian ancestry. Nearly 26% of the state's Asian population resides in Los Angeles County, followed by San Diego County (8.5%) and Orange County (8%) (U.S. Census Bureau, 2020). Some of the counties with the highest Asian population densities are Santa Clara (38.3%), San Francisco (35.9%), Alameda (31.8%), and San Mateo (30.1%) (U.S. Census Bureau, 2020).

This research project will include all referrals involving children who identify as Asians, including domestic and foreign-born, and exclude multi-race children with Asian ancestry. For de-identification reasons, the data will only include children who meet the above criteria and reside in the following 20 selected counties with the highest Asian population density: Santa Clara, San Francisco, Alameda, San Mateo, Orange, Contra Costa, San Joaquin, Sutter, Sacramento, Solano, Los Angeles, Yolo, San Diego, Fresno, Napa, Merced, Ventura, Yuba, San Bernardino, and Monterey.

Disparity versus Disproportionality

The discussion surrounding racial disparity and disproportionality in child welfare has been going on for decades. It is widely acknowledged that racial disproportionality and disparity are evident at almost all decision points of the child welfare system, including case referral, substantiation, service provision, foster care, and reunification (Fluke, Harden, Jenkins & Ruehrdanz, 2011; Harris & Hackett, 2008; Williams-Mbengue & Christian, 2007; Hines, Lemon,

Wyatt & Merdinger, 2004). However, there are still debates with conflicting evidence on the fundamental cause of this issue. In this section, I will first review the definitions of racial disparity and racial disproportionality. Then I will discuss the literature on these two topics stratified by racial groups to provide a comprehensive overview of the racial disparity and disproportionality in the child welfare system. The related risk and protective factors will be explored in detail in the second chapter as part of the theoretical framework.

Definitions. Disparity and disproportionality are observed in the child welfare system in several decision points (e.g., investigation, disposition), treatment, and services outcomes. Hill (2006) defines disparity as "the unequal treatment when comparing a racial or ethnic minority to a non-minority." On the other hand, Hill (2006) describes the phenomenon of disproportionality in child welfare as "the differences in the percentage of children of a certain racial or ethnic group in the country compared to the percentage of the children of the same group in the child welfare system." While disproportionality emphasizes the proportional differences comparing the same group in child welfare and the general population, disparity highlights the unequal treatment of child maltreatment cases and are often compared across racial groups.

Wulczyn and Lery (2007) also detailed these concepts and tied disproportionality to a relative rate of certain child welfare decisions to the population percentage. For example, to describe the disproportional rate of child removal between Asians, researchers need to compare the removal rate per 1,000 Asian children to the same rate per 1,000 children of another race. Myers (2010) further highlighted that the reference group in studies of both disparity and disproportionality could be the overall population (unconditional) of that specific racial group or the people who experienced a particular decision point in the child welfare system (conditional).

It is worth noting that though there are slight differences between the two definitions, the underlying mechanisms are often examined together. Two main explanations are usually given from the following perspectives: 1) from family's perspective, this phenomenon could be caused by the disproportionate needs of families from different levels of social and economic backgrounds; 2) from the child welfare system's perspective, the racial biases and disproportionate availability of the services could negatively impact the outcomes of certain racial groups.

African American and Black Population. The disproportionality and disparity that Black families experience in the child welfare system are probably one of the most discussed topics in this field. Overrepresentation of Black children in the child welfare system has been long documented, and this trend seems to perpetuate almost all stages of the child welfare process (Ards, Chung & Myers, 1998; Harris & Hackett, 2008; Williams-Mbengue & Christian, 2007; Knott & Donovan, 2010). Comparing Black children with White children, research has found that Black children are more likely to be reported for maltreatment (Putnam-Hornstein et al. 2013), more likely to be investigated after reporting (Fluke et al. 2003), more likely to be substantiated, and more likely to be removed from their homes and placed in foster care (Maguire-Jack, Font, & Dillard, 2020). Those disproportionalities and disparities are in large ratios as well. As of 2020, Black children composed 23% of the total foster care population, although they only represent 14% of the child population in the United States (KIDS Count, 2020). African American children have the second-highest substantiation rate at 13.7 per 1,000 children of the same race or ethnicity. This population's rate of child fatalities related to child maltreatment is 5.06 per 100,000 children, which is 2.32 times greater than that of the White

population (U.S. Department of Health & Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau, 2021).

Despite the strong evidence from recent decades, the overrepresentation of Black children in the system is not always the narrative. Initially excluded from the child welfare system, their representation only grew as the system develops in later years (Smith & Devore, 2004). During the 1920s and 1930s, social workers in Boston, Chicago, and Philadelphia became aware of the disproportionate needs of Black families. They started to advocate for separate public child welfare agencies for Black children (Hegar & Scannapieco, 1995). Following this advocacy effort, the number of children of color in the system has increased drastically, while the number of white children has decreased over the decades.

With the history of racism and the racial justice movement, it is easy to assume that disparities and disproportionalities simply reflect the racially biased nature of the child welfare system. Systematic efforts to address racial inequality, such as staff trainings and policy reformations, have been implemented during the past decades based on this belief (Bartholet, 2009; Wulczyn, 2009). Yet, the mechanisms underlying this observed racial inequality in child welfare remains inconclusive due to the complex factors of children and families interacting with the macro scale of social, political, and economic contexts. First, the child maltreatment data that most of the researchers were using include only reported cases. It is unclear how the differential rates of underreporting or overreporting may affect child welfare service outcomes. Second, studies found that some of the racial differences in referral or substantiation can be explained by other factors such as families' social-economic status, parental age, parental substance use, domestic violence history, and marital status (Maloney et al., 2017; Fix & Nair, 2020). For example, Dworsky et al. (2010) used two datasets from the Midwest Evaluation of the Adult

Functioning of Former Foster Youth and the Northwest Foster Care Alumni Study to examine the racial differences in foster youth outcomes. The authors found that 39% of the difference between racial groups can be explained by the controlled variables (i.e., placement history, demographics, family background). Similarly, Putnam-Hornstein et al. (2013)'s study utilized the California Department of Social Services data and 2002 birth records from the California Department of Public Health and suggested that when controlling for risk factors such as low social-economic status, young maternal age, and absent father, Black children are *less likely* to be referred, substantiated, or enter foster care, compared to White children.

Another hypothesized explanation of the overrepresentation of Black families in child welfare is the surveillance bias theory, which argues that families with low socio-economic status are more likely to interact with mandated reporters and are constantly under the "surveillance" of the social service programs (Drake et al., 2021). Therefore, Black families who are often involved in the social welfare programs are more likely to be biasedly reported to the child protective services. However, Drake et al. (2021) contest that this argument largely dismissed other associations, such as the relationship between child maltreatment and poverty. Recent national-level data shows that poorer families are *less likely* to be reported by mandated reporters, which opposites the surveillance bias theory (Kim, Drake, & Jonson-Reid, **2018**). A range of other studies has also shown similar evidence against this theory by comparing children reported for maltreatment with children without reports from similar socioeconomic backgrounds (Jonson-Reid, Drake, & Kohl, **2009**; Stouthamer-Loeber, Loeber, Homish, & Wei, **2001;** Slack, Holl, McDaniel, Yoo, & Bolger, 2004).

Native American and Alaska Native population. The percentages of child victims with Native Indian and Alaska Native heritage varies drastically by state, ranging from 0.1% in states

like Florida and Illinois to 49% in Alaska. Following Alaska, South Dakota (41.1%), North Dakota (20.8%), Montana (13.2%), and New Mexico (9.8%) also have relatively high percentages of Native Indian and Alaska Native child victims (Children's Bureau, 2019). These rates are two to three times higher than the Native American/Alaska Native population density within the state (U.S. Census, 2019). This is especially an outstanding issue in Alaska, where 49% of the child victims are Native American or Alaska native, yet this minority only constitutes 27.9% of the state population. This disproportional ratio exists even in states where Native Indians and Alaska Native tribes are not densely populated. As an example, only 1.1% of the population in North Carolina identified as American Indian or Alaska Native, yet 3.9% of the state's child victims are of this racial group (U.S. Census, 2019; Children's Bureau, 2019). National report on child maltreatment also highlighted that American Indian or Alaska Native children have the highest rate of victimization at 14.8 per 1,000 children in the population of the same race or ethnicity (U.S. Department of Health & Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau, 2021)

It is imperative to acknowledge the decades of political disruption and cultural oppression forced upon Native Americans and Alaska Natives. Many tribes view these social problems in their community as the legacy of colonialism and discriminatory policies (DeBruyn, Chino, Serna, & Fullerton-Gleason, 2001). Although research on American Indian and Alaska Natives' experiences of child maltreatment is growing, it remains limited. Much existing literature either focuses on theoretical frameworks with little empirical evidence or utilizes unreliable samples (Kim & Drake, 2019). Due to the differential rules and process of tribal child protective agencies reporting the incidents to state agencies, the reported child abuse incidence may be significantly

lower than the incidence in the community due to underreporting (Kim, Wildeman, Jonson-Reid & Drake, 2017). Fox (2003) estimated that only about 42% to 61% of child maltreatment incidents involving American Indian/Alaska Native children reached federal reporting systems (i.e., NCANDS).

Retrospective studies based on self-report exist, but the results vary significantly across locations and demographics. Research conducted among 234 American Indian women attending a clinic in New Mexico found that over 75% of the participants reported some type of childhood abuse or neglect, and over 40% reported exposure to severe maltreatment (Duran et al., 2004). Another study recruited 582 enrolled Southwestern American Indian tribal members and found that 47% of the female participants and 14% of the male participants have experienced at least one episode of child abuse involving direct physical contact before age 15. Perpetrators from immediate or extend families account for 78% of the child abuse reports (Robin et al., 1997). Those statistics further support Kim et al. (2017) and Fox's (2003) argument that child maltreatment incidents may be significantly undercounted, and this social problem may be more severe than the national agency data presents.

In addition to the high prevalence of child maltreatment of this population, some evidence suggests that current child welfare agencies also fail to provide effective services (DeBruyn, Chino, Serna & Fullerton-Gleason, 2001). The child welfare system was not designed to accommodate the cultural identity of the tribes. Risk and protective factors unique to the tribal community have not been adequately examined (DeBruyn, Chino, Serna & Fullerton-Gleason, 2001). The Stress and Coping Model proposed by Walters and Simoni (2002) highlighted that some of their unique individual and community-level characteristics might significantly increase vulnerability in child maltreatment and mental health. The authors call for future research to

attend to the external oppression and internalized stressors, including racism, sexism, and homophobia, which continue to victimize indigenous American families if not properly intervened.

Latinx/Hispanic Population. As the largest minority population in the United States (U.S. Census Bureau, 2019), the number of Latinx/Hispanic families involved in the child welfare system has increased over the last several years (Children's Bureau, 2019). The proportion of Latinx/Hispanic child victims of maltreatment has doubled from 1997 to 2018 (U.S. DHHS, 1997, 2018). Approximately 55.2% of the child victims in California are Latinx/Hispanic (Children's Bureau, 2019). In addition, the percentage of Latinx/Hispanic children in foster care has also risen over the last decade (Child Welfare Information Gateway, 2019).

Despite the increasing representation of Latinx/Hispanic children in the child welfare system, Latinx/Hispanic children are still slightly underrepresented in the child welfare system compared to general population statistics nationwide (Child Welfare Information Gateway, 2016). However, heightened evidence shows regional differences as overrepresentation in some states and underrepresentation in others (Hines et al., 2004; Maguire-Jack, Lanier, Johnson-Motoyama, Welch, & Dineen, 2015). In states like California and Texas, Latinx/Hispanic children are involved in more than 50% of the child maltreatment allegations (Children's Bureau, 2019; Webster et al., 2021), which is nearly 10% more than their general population percentages in those two states (U.S. Census, 2019). Yet, similar to the arguments of underreporting in Native American communities, national CPS records may not accurately reflect the incidence in the Latinx/Hispanic communities and thus need to be interpreted critically. Factors such as

neighborhood fear, mistrust with the authorities, and the closed-up neighborhood norms may contribute to the underreporting (Perrigo et al., forthcoming).

In addition to the regional variances of reported maltreatment involving Latinx/Hispanic children, studies have also demonstrated disparities in substantiation and service outcomes when comparing Latinx/Hispanic and non-Hispanic White children. A longitudinal study used case files from the Utah Department of Children and Family Services (DCFS) concluded that although referrals are proportionate across Latinx/Hispanic and non-Hispanic children, substantiated cases are more likely to occur with Latinx/Hispanic children. Furthermore, Latinx/Hispanic child victims are more likely to be removed from their homes sooner and stay longer in foster care than their White non-Hispanic peers (Church, Gross & Baldwin, 2005).

As of 2017, 33% of the Latinx/Hispanic population in the United States are foreign-born, and 21% of this population are non-citizens (American Community Surveys, 2017). Whether Latinx/Hispanic children and their parents are immigrants impacts several aspects of their reported experience in the welfare system. Studies suggest that Latinx/Hispanic children with immigrant parents were more likely to be the victims of emotional abuse (Dettlaff & Johnson, 2011) and more likely to have a substantiated report of sexual abuse compared to Hispanic children with nonimmigrant parents (Dettlaff, Vidal de Haymes, Velazquez, Mindell, & Bruce, 2009). Dettlaff & Johnson (2011) argues that the cultural acceptance of corporal disciplines among Hispanic immigrant families may cause this differential vulnerability to certain types of maltreatment. In contrast, with the evidence supporting parental immigrant status as a risk factor, opposing evidence argues a different story. A study in California has shown that Latinx/Hispanic children with U.S.-born mothers were referred, substantiated, and receive out-of-home placement

at roughly 1.55 times the rate of White children. In contrast, Latinx/Hispanic children with foreign-born mothers were involved with the CPS system at .20 to .65 the rate of White children (Putnam-Hornstein, Needell, King & Johnson-Motoyama, 2013). When controlled for socio-economic factors, Latinx/Hispanic children were less likely to be referred, substantiated, or enter foster care than White children, especially for Latinx/Hispanic children of foreign-born mothers (Putnam-Hornstein, Needell, King & Johnson-Motoyama, 2013).

As for child maltreatment outcomes, Latinx/Hispanic children show more favorable trends than Black children. Drake et al. (2011) utilized the Fourth National Incidence Study of Child Abuse and Neglect (NIS-4) data to compare African American children and Latinx/Hispanic children with White Children, respectively. The findings indicate that though Latinx/Hispanic children and African American children experience a similar ratio of poverty rate compared to White children, Latinx/Hispanic children's adverse health outcomes (e.g., infant mortality, low birth weight, premature birth) and total child maltreatment victims per 10,000 children is similar to White children, and they are significantly lower than African American children. This result is consistent with the "Hispanic Health Paradox", which argues that despite the significantly lower socio-economic status, Latinx/Hispanic population presents similar health outcomes to the White population, especially foreign-born Latinx/Hispanics. The possible explanation for this "paradox" is inconclusive, though many researchers think it is related to cultural norms in Latinx/Hispanic communities. The emphasis on familism and strong social support in their origin cultures serves as a protective factor to this population (Grant et al., 2004; McGuire & Miranda, 2008). Some common cultural practices, including nutritious diet, less substance use, and strong social network, erode with their time spent in the United States, thus the beneficial health-related practices of immigrants may weaken over time (Landale, Oropesa &

Gorman,1999). This potentially explains the differential child maltreatment outcomes among Latinx/Hispanic population with foreign-born mothers, as presented in Putnam-Hornstein, Needell, King & Johnson-Motoyama (2013)'s study.

Asian American Population. According to government agencies' data, child maltreatment referrals among Asian Americans has always been disproportionately low. Asian Americans have the lowest proportional representation of child maltreatment allegations and substantiated cases in child welfare services among all major racial groups. California has the largest Asian American population who constitute 15.5% of state residents (U.S. Census, 2019) but only comprise 2.1% of child maltreatment allegations (Webster et al., 2021). Hawaii, Minnesota, and New York states have the highest percentage of Asian children in the child welfare system with substantiated cases, 8%, 3.1%, and 2.6%, respectively (Children's Bureau, 2019). Nevertheless, all the above-mentioned rates are disproportionally lower than the general Asian population rate in these states.

It is important to note that, similar to American Indians/Alaska natives and Latinx/Hispanics, relying solely on the child welfare agency data to determine the prevalence of child maltreatment within one ethnic community can be problematic (Lau et al., 2003). Studies using retrospective community samples demonstrated a higher prevalence of childhood abusive experience among the Asian American communities, which is inconsistent with their disproportionately low representation in the official record. Lau et al.'s (2003) study used self-report measure of maltreatment history with a sample of 1,045 youth in public sectors of care between the ages of 12 to 17 in San Diego County. The study showed an unexpected similarity in youth-reported maltreatment between Asians, European Americans, African Americans, and Hispanics (Lau et al., 2003). These findings are largely inconsistent with studies of racial and

ethnic differences in maltreatment reported to CPS, which usually indicate that African Americans and Native Americans are at higher risk than European Americans and Hispanic Americans, who are at far higher risk than Asian Americans. A similar result was also shown in a study using self-reported data of female college and graduate students in California and the Midwest. Maker and colleagues (2005) used an 8-item questionnaire and measured the prevalence of various types of maltreatment including slap, spank with objects, punch/hit hard with objects, burn/cut, break bones/internal bleeding, and deprive of food or water for extended period of time. The result found that 65% of the East Asian students had experienced at least one type of childhood physical abuse before the age of 16, and there are significant differences in terms of their relationship to the perpetrators and the abuse types between South Asian and East Asian participants (Maker, Shah & Agha, 2005).

Arguably, most studies regarding the prevalence of child maltreatment among Asian Americans is limited to small sample sizes drawn from one specific geographical region, which may not be representative of the general experience of Asian population in the United States (Maker, Shah & Agha, 2005). Additionally, self-reported data may also induce biases caused by memory distortion and willingness to disclosure (Williams, 1994). Without rigorous evidence on the magnitude of the child maltreatment problem in Asian communities, it is difficult to inspect service adequacy for the Asian children and families. Nonetheless, the high rate of self-reported childhood abuse raises concerns about the paucity of child welfare studies on this group.

Previous studies have attempted to investigate the child maltreatment risk among various Asian subgroups and identified significant differences. For example, research has shown that Southeast Asian and Pacific Islander children are at higher risk for experiencing child

maltreatment compared to East Asian groups (Finno-Velasquez et al., 2017). However, the existing literature on child welfare outcomes among Asian subgroups remains limited and lacks evidence on many important aspects of child welfare services, such as disposition and recidivism outcomes.

To summarize, previous literature examining racial minorities' experience in the child welfare system has highlighted that there are significant disproportionality and disparity among racial minorities in almost all decision points of the child maltreatment services. However, each racial or ethnic minority may experience it at different rates (underrepresented or overrepresented). Most importantly, there are various risk and protective factors in terms of child maltreatment incidence and outcomes, which can be easily confounded with race itself. Researchers need to take the precaution of differentiating those factors when discussing racial disparity and disproportionality instead of simply contributing those to biases and racism within the child welfare system. Some of those factors are universal (e.g., socioeconomic status) across the general population, while some are unique to certain racial groups (e.g., immigration status, cultural norms). In the next chapter, related literature will be reviewed to examine the child maltreatment risk and protective factors and theorizing the mechanisms underlying the underrepresentation of Asian American families in the child welfare system.

Chapter Two: Analyzing the Origins of Racial Disparity in Child Welfare

Evidence supporting the existence of racial disproportionality and disparity is well-documented, although the causes have been debated over the years and are still inconclusive. Numerous well-established correlations of child maltreatment, such as low socioeconomic status and child disabilities, have been found to exist. The disproportionate distribution of individual and family-level risk factors associated with maltreatment among racial groups may explain these two phenomena, other than racial bias itself (Drake et al., 2011).

Theoretical Framework

The factors contributing to the prevalence of child maltreatment and child welfare disparities and disproportionalities are incredibly complicated when put in the broader social-economic context. Bronfenbrenner's ecological systems theory (1979), which has been one of the most classic and widely applied theories in the field of social welfare, has inspired decades of research in understanding the causes of child maltreatment and child victims' developmental outcomes. Developed in the 1970s, the ecological model views children's development as a holistic system with multiple environmental factors that directly or indirectly affect the individuals (Bronfenbrenner, 1979; Bronfenbrenner, 1979). Those levels range from micro-level such as immediate family, to mezzo-level such as school and peer, then to the broader social, cultural, political, and economic contexts. Based on this theory, risk factors are considered part of an overall picture rather than a single factor. Though much research in the last century demonstrated significance using singular factor models, the largely undercounted variance in the model is not discussed fully (Sameroff et al., 1998). The ecological model helps to shift the narrative towards recognizing the numerous factors in environmental settings nested outside of individuals.

In addition to recognizing the various factors within each level of the system, there is a good reason to believe that those risk factors are not simply having one-directional relationships with the children and families. The transactional theory developed by Sameroff (1975) emphasized the importance of recognizing reciprocal relationships between two contextual factors. This theory believes that everything is interacting with each other. Therefore, those factors in the different system levels, as seen in Bronfenbrenner's ecological model (1979), may interact with each other throughout the child's development (Sameroff, 1975). In other words, the applied transactional model views the different levels of factors, such as caregiver characteristics and child characteristics to reciprocally influence each other and contribute to children's developmental outcomes throughout time (Sameroff & Chandler, 1975). Evidence has been discovered to support the idea of the reciprocal relationship between the child and parental factors. For example, a child's disability may increase the need for additional parenting and increase parental stress. The exhausted parents may become less patient and less responsive to the children's needs (Quine & Pahl, 1991; Haspel, Benyamini &Ginzburg, 2020). In line with these results, Crockenberg's (1981) experiment also supported the reciprocal nature. It demonstrated that irritable infants are more likely to develop insecure attachment relationships, which is caused by the bidirectional relationship between unresponsive mothers and child irritability.

Interrelating the ecological theory (Bronfenbrenner,1979) and the transactional theory (Sameroff, 1975), this dissertation project recognizes the importance of discussing multiple levels of risk factors (child, family, and county level), as well as examining the interactions between risk factors to consider the bidirectional relationship when interpreting the results. This lens will also be applied when thinking about the future application of these results.

Risk Factors of Child Maltreatment

Previous literature has provided a significant amount of evidence supporting those racial disparities and disproportionalities can occur at various stages of the child maltreatment report. In the past few decades, researchers have discovered various factors that may be associated with child maltreatment incidence, case substantiation, and the reoccurrence of the referrals. This section will discuss those factors in the order of micro-level (e.g., child's age and gender), mezzo level (e.g., neighborhood factors), to the macro-level (e.g., racism and discriminative policies).

Child Factors

Child Age. Data derived from the National Child Abuse and Neglect Data System (NCANDS) indicates that children in the age group of birth to 1 year had the highest rate of victimization (25.7 per 1,000 children) of the same age in the national population, and the rate declines as children's ages increase (Children's Bureau & Child Welfare Information Gateway, 2019). When controlling for case characteristics such as sex and allegation types, many studies found that Age can increase the probability of substantiation, and also on rereports of maltreatment (Bartelink, Yperen & Ingrid, 2015; Cross & Casanueva, 2009; Scannapieco & Connell-Carrick, 2005; Williams et al., 2011). This positive relationship is decently consistent across existing literature.

However, some research presents an indifferent impact of a child's age on recurrence (Thompson & Wiley, 2009; Kohl, Jonson-Reid, & Drake, 2009). For example, Dubowitz et al. (2011) conducted a multivariant survival analysis on a prospective, longitudinal dataset of 332 low-income families recruited from urban pediatric clinics. The participants were followed over ten years until the children were approximately 12 years old. Their results show that age's impact on having a CPS report throughout 10-years is indifferent (RR=1.00, CI (0.78–1.28), p=0.99).

Granted, this is a relatively small sample size. However, the longitudinal nature of this cohort study still provides some sound evidence. It provides an additional perspective to the large body of cross-sectional research that uses a national-level dataset.

Child Gender. Overall, the rate of females (51.4%) involved in the child welfare system is higher than that of males (48.3%) (Children's Bureau & Child Welfare Information Gateway, 2019). However, the self-reported data of child maltreatment experience disclosed a different narrative. Hussey, Chang, and Kotch's study (2006) extracted the third wave of computer-assisted interview data from the National Longitudinal Study of Adolescent Health, completed by 15,197 young adults between 2001-2002, and analyzed the self-reported data on maltreatment experience. The results found that gender differences in terms of child maltreatment incidence vary by maltreatment type. When controlling for age and other socioeconomic confounders, the adjusted odds of physical neglect are higher among males than females (Adjusted OR=1.25, p<=0.001). The adjusted odds for supervision neglect (OR=1.66, p<=0.001) is higher for males when compared to females. Interestingly, the authors reported no statically significant gender difference regarding physical assault or sexual abuse. However, since this retrospective dataset heavily relies on the participants' willingness to disclose childhood maltreatment experiences, it is possible that the actual incidences are underreported for certain groups.

As for the association between a child's gender and recurrence, White et al. (2015) did a systematic review of cohort studies published between 2003 and 2009 and found contradictory findings among studies that examined a child's gender as a risk factor for recurrence. Some studies found the relationship not to be significant (Bae, Soloman & Gelles, 2009; Connell et.al., 2009; Fuller & Neito, 2009; Thompson & Wiley, 2009; Yampolskaya & Banks, 2006; Lipien & Forthofer, 2004; Kohl, Jonson-Reid & Drake, 2009; Dorsey et al., 2008; Drake, Jonson-Reid &

Sapokaite, 2006; Connell et al., 2007), while other studies found increased rates of maltreatment recurrence in females (Jonson-Reid, 2003; Fluke, Shusterman, Hollinshead & Yuan, 2008). There is no significant difference in data quality, length of follow-up, sample size between these two groups of studies (White et al., 2015).

Child Disabilities and Developmental Challenges. Child disabilities is a term with a broad spectrum. Previous research has examined different types of child disabilities and developmental challenges, and in general, this factor increased the risk of re-report, though its impact varies in magnitude. Fluke, Shusterman, Hllinshead, and Yuan (2008) found that "indicated child disability" increased the risk of maltreatment recurrence. This study used 2-year cohort data (2001-2002) of children reported to state CPS agencies from eight states, derived from the National Child Abuse and Neglect Data system (NCANDS). The selected eight states were statistically comparable to the national population on various demographic indicators such as sex, child maltreatment rate, racial group representation, and average child poverty rate. The "indicated child disability" was defined as having at least one indicator of child mental retardation, child emotional disturbance, child visual impairment, child learning disability, child physical disability, child behavioral problems, or child with other medical problems. The findings based on a Cox regression model show that a child with indicated disability is 1.47 times as likely to have a re-report (RR=1.47, CI=(1.38, 1.57), $p<0.001$) and 1.53 times as likely to have a substantiated re-report (RR=1.53, CI=(1.38, 1.69), $p<0.001$) within 2-year of study period when compared to children who do not have any of the abovementioned indicators of disability.

A similar result was obtained by a study (Kohl, Jonson-Reid & Drake, 2009) that used the National Survey of Child and Adolescent Well-Being (NSCAW) dataset, a longitudinal study of

children and families investigated for child maltreatment between1999 and 2000. However, the risk ratio is slightly higher than what is found by Fluke et al. (2008). Cases with children having developmental problems, defined by a score of 2 standard deviations below the mean on the Battelle, Bayley, K-BIT, or the Vineland evaluation scales, were much more likely to have a substantiated rereport (Hazard Ratio (HR) = 2.4, $p < .01$) and are more likely to be placed in foster care (Hazard Ratio (HR) = 2.2, $p < .01$).

Not only for recurrence, but a small number of studies also examined child disabilities' impact on maltreatment incidence (Westat, 1993; Sullivan & Knuston, 2000) and found a positive link between them. Based on the National Incidence Study of Child Abuse and Neglect (NIS-2) data, children with disabilities are two times as likely to be maltreated as children without disabilities (Westat, 1993). Retrospective research was carried out by Embry (2001) on 770 congenitally deaf adults, and the self-reported child maltreatment incidence is 45%, of which caregiver physical abuse was reported by 19% of respondents, sexual abuse by 18% of respondents.

Family Factors

Parental Substance Use and Domestic Violence. Parental substance use and the presence of domestic violence often co-exist. It is estimated that 17% of the caregivers who experienced domestic violence also have substance use issue (Ogbonnaya & Kohl, 2018). Based on data from the National Survey of Child and Adolescent Well-Being, active domestic violence was identified by the child welfare worker in 14% of the families investigated for child maltreatment, and history of DV was found in 19% of the families (Kohl et al., 2005). The rate increased to 28% when looking at families that received in-home services and a notable 60% among the families that received foster care services (Kohl et al., 2005).

Using state-level data, Victor et al. (2018) examined 501,060 substantiated cases from two state agencies in Michigan and Illinois between 2009 and 2013 and found that parental substance misuse and the presence of domestic violence increased the probability of substantiation by 21.7%. Similarly, Berger, Slack, Waldfogel, and Bruch (2010) also found that the marginal likelihood of substantiation increased by 18% when parental drug abuse was recognized as a family risk factor. In addition, compared with families without domestic violence and substance abuse issues, families with these issues present are more likely to have their children placed in foster care (Kohl, Edleson, English, & Barth, 2005; Testa & Smith, 2009).

Family Poverty. Families' experiences of child maltreatment are consistently impacted by poverty, one of the most influential factors in almost all social science research. Children from low-income families and low-income neighborhoods are more likely to be reported to child welfare services and to be placed in foster care (Pelton, 1978; Garbarino & Sherman, 1980; Garbarino & Kostelny, 1992; Lindsey,1994; Coulton, Korbin, Su & Chow, 1995; Waldfogel, 2000). A large body of research has found that family poverty was significantly related to a higher risk of maltreatment recurrence (Khol, Jonson-Reid, and Drake, 2009; Barth, Gibbons and Guo, 2006; Connell et.al., 2007; Levy et al., 1995). Interestingly, poverty in both individual and community levels is coincidentally associated with the recurrence of child maltreatment (Drake, Jonson-Reid, Way, & Chung, 2003; Wolock, Sherman, Feldman, & Metzger, 2001).

Berger (2004) used the National Longitudinal Survey of Youth to explore income on several forms of child abuse and neglect. The data contains 17,871 complete observations of children between 0 and 9 years old with six follow-up assessments from 1986 to 1998. The result suggests that income affects a family's overall risk of child maltreatment, measured by six indicators that fall into three domains: routine medical care, housing environment, and spanking

behaviors. Another study using the National Child Abuse and Neglect Data System (NCANDS) also found similar results, where family poverty was the strongest predictor of re-referral (Connell et.al., 2007). Though both studies are not definitive about the direct causal relationship between poverty and child maltreatment risk, it is tentatively acceptable to be aware of the strong association between family poverty and maltreatment risk.

Multiple mechanisms may explain how poverty impacts maltreatment and child outcomes. According to researchers like Berger (2004) and Rosenfeld et al. (1997), poverty moderated the parents' access to resources, such as health care, shelter, food, and clothing. Therefore, they are more prone to maltreat their children. McGuinness and Schneider (2007) discussed a similar pathway. They highlighted the specific risk of child neglect due to the parental struggle with homelessness, history of incarceration, HIV positivity, and substance abuse, all highly correlated with poverty. Another theory proposes that poverty and low socioeconomic status is a factor that significantly contributes to the levels of stress in daily life, leading to tougher parenting (Waldfogel, 2000).

Prior Involvement with the Child Welfare System

An abundance of research has used national or regional datasets to examine the relationship between prior system involvement and child welfare outcomes. Evidence has been consistently supporting that prior reports or prior investigation with the child welfare system are positively associated with the probability of substantiation, even when case severity was statistically controlled (English et al., 2002; King et al., 2003; Trocmé, Knoke, Fallon, & MacLaurin, 2006; Cross & Casanueva, 2009).

Fuller and Neito (2009) performed a propensity score matching approach using a subset of data derived from the administrative database of the Illinois Department of Children and

Family Services (1999-2004). The propensity score accounted for other factors such as child age, gender, geographic location, type of maltreatment, number of allegations, and number of other children in the household, which are likely to differ between the initially substantiated cases and those that are not substantiated. The propensity score of each substantiated case in the sample was then matched to that of an unsubstantiated case to create a matched sample. Then a Cox regression was conducted on the matched sample to determine the association between initial substantiation disposition and maltreatment re-reporting within one year. The authors found that children with prior substantiated reports were 1.7 times more likely to have another report within the study period (Risk Ratio=1.71, $p<0.0001$).

Using a more representative dataset, Kim and Drake (2019) merged Child Protective Services records (2003-2016) from 28 states with the Census data. They analyzed the probability of having maltreatment re-reports with or without prior reports. The risk of re-reports increased from 42.31% when having one prior report to 64.01% when having five prior reports, and that this risk increases consistently with the number of prior reports. These findings are consistent with other previous research on regional, smaller-scale data (Helton, 2016; Kahn & Schwalbe, 2010; Dorsey, Mustillo, Farmer & Elbogen 2008).

In addition to the general effect of prior reports, the results of previously substantiated reports on rereports, substantiated rereports, and foster care placement was examined by Drake et al. (2003) using survival analysis over 4.5 years of study time. The findings revealed an interaction between the recidivism of substantiated report and the types of maltreatment (e.g., physical abuse, sexual abuse, or neglect) recorded in the prior report, where sexual abuse shows no significant difference, physical abuse shows a minor difference (15.44% vs. 13.03%, $p < .0007$), and neglect shows a more meaningful difference (27.06% vs. 17.55%, $p < .0001$).

As previously discussed, child younger than 2 years old is at the highest risk of child maltreatment. Research focuses on this particular age group also found similar results. The highest rate of re-reporting was observed among infants whose initial allegation was substantiated and who had a case opened for in-home services (Putnam-Hornstein, Simon, Eastman & Magruder, 2015). The authors argue that the high rates of re-reporting among previously involved families underscore the challenge of service delivery and effectiveness (Putnam-Hornstein, Simon, Eastman & Magruder, 2015).

Neighborhood and Community Factors

In addition to the case-level and family-level factors mentioned above, there are a lot of factors at the neighborhood level that may influence the self-reporting prevalence and the substantiation, re-reports of child maltreatment incidents (Beatriz, Salhi, Griffith & Molnar 2018). Coulton et.al. (2007) has summarized the two traditions in terms of analyzing the ecological factors of child maltreatment: 1) examination the impact of geographical concentrations of specific socioeconomic variables, and 2) exploring how child development and parental factors interact with environmental elements under the ecological-transactional paradigm, which emphasizes the reciprocal link between children's experiences of maltreatment and community violence as well as parental variables.

One of the community factors that has been studied is urbanicity. Evidence supporting the differential rates of prevalence of child maltreatment between urban and rural areas is provided by multiple studies using nationally representative datasets (Beatriz, Salhi, Griffith & Molnar 2018; Sedlak et al., 2010; Brown, Cohen, Johnson & Salzinger, 1998). One of the studies used the most recent wave of The National Incidence Study of Child Abuse and Neglect (NIS-4) and found that while controlling for maltreatment types, children living in rural areas were 1.5 times

more likely to experience physical abuse, 1.5 times more likely to experience sexual abuse, 2.3 times more likely to experience emotional abuse, and 2.8 times more likely to experience physical neglect compared to children living in metropolitan areas (Sedlak et al., 2010).

It has been shown by social welfare researchers and sociologists for decades that there is a link between the socioeconomic features of households and where social issues occur. Some of the neighborhood-level socioeconomic indicators used in the field of child welfare research are: average income level (Deccio, Horner, & Wilson, 1994; Garbarino & Crouter, 1978), average rate of unemployment (Freisthler, Midanik, & Gruenewald, 2004; Freisthler, Needell, & Gruenewald, 2004), percentage of female-led households (Freisthler, Needell & Gruenewald, 2008; Gillham et al., 1998), housing stress/housing instability (Ernst, 2001; Freisthler, Merritt & LaScala, 2006). Generally speaking, the more socioeconomically disadvantaged a neighborhood, the higher risk of child maltreatment a family will face. Still, in some neighborhoods, the prevalence of child maltreatment remains disproportionality high even after controlling for socioeconomic characteristics. This unexplained variance may indicate the existence of other hidden neighborhood factors other than socioeconomic status (Finno-Velasquez et al., 2021).

Race, Immigration, and Political Contexts

Regarding child welfare inequalities, the most significant concern is whether the observed racial disproportionalities and disparities are attributable to racial prejudice within child welfare systems or the reality that children and families from racial minority groups have distinct needs. As described in the previous chapter, Black families have been overrepresented in the system for decades. Bartholet (2009) argues that the observed differences between the child welfare involvement rate of Black children and other races are caused by the high prevalence of maltreatment among Black children and their disproportionate exposure to risk factors linked

with maltreatment, such as poverty, substance misuse, and single parenting. Over time, more and more research evidence provided supporting evidence for this argument has found that when controlling for poverty and other risk factors, the racial disparity between certain races disappears (Fluke et al., 2011; Dworsky et al., 2010; Putnam-Hornstein et al., 2012; Kim & Drake, 2019).

However, one must acknowledge that race is a complicated concept that interacts with many other social factors. The insufficient evidence on the racial bias and prejudice in the child welfare system does not mean that child maltreatment prevalence and outcomes are not impacted by racial discrimination in society. Macro-level factors such as immigration and housing policies may directly or indirectly influence child maltreatment. For example, Coulton and colleagues contend that children and families are not randomly distributed across all neighborhoods and that "family and child characteristics, often unmeasured, may place them at high risk of living in disadvantaged neighborhoods and of engaging in behaviors that result in child maltreatment" (Coulton et al., 2007). This can be linked to research that reveals racial discrimination in the housing market, which may be one of the causes of persistent neighborhood disadvantage for certain races (Boustan, 2011, Dawkins, 2004). Similarly, the disadvantaged social context of immigrant neighborhoods, including segregation and the inadequate resources, may also disproportionately impact the reporting and service provision of child maltreatment cases among populations with a high percentage of immigrants (Coulton et al., 2007; Finno-Velasquez et al., 2021).

Other Factors

Within the scope of this study, factors linked to child maltreatment are not explored exhaustively. It is nonetheless crucial to recognize that many other factors also play a part in the

ecological model that children and families thrive in, though less thoroughly discussed in the literature. Those factors include and are not limited to family structure, parenting skills, marital status, children's academic achievement, and family social support. Nesting in the same ecological model, evidence shows that many of those factors are expected to interact and are linked with the factors discussed above. For example, family income impacts routine medical and dental care, the quality of the caregiving environment, and spanking behaviors (Berger, 2004). Meanwhile, single-parent families and families with a biological mother and non-biological father also have an increased risk of child maltreatment (Berger, 2004). These factors and their interaction with the highly researched elements require further study to provide a whole picture of child abuse and neglect.

Asian Americans and the Model Minority Myth

The Model Minority Myth

Since the 1960s, Asian Americans are commonly portraited as the "model minority," implying that Asians immigrants have achieved success in the United States on their own (Wong & Halgin, 2006). However, many researchers have argued that this term is used as an umbrella term for these heterogeneous peoples to mask the challenges they faced during the Civil Rights Movement and has negatively affected Asian Americans in many institutional settings (Osajima, 2005; Wong & Halgin, 2006; Kawai, 2005; Wing, 2007).

There are two significant fallacies of this oversimplified stereotype. First, although the term "model minority" highlights the population's educational achievements and traditional family values, research has provided evidence indicating the inapplicability of this label to all social aspects of Asian Americans. For example, with the same level of education degree, Asian Americans earn substantially less from their jobs when compared with Whites (Suzuki, 2002).

Meanwhile, nearly 12% of the Asian population is below the poverty line (Frey, 2018). A newly released report by the Pew Research Center concludes that Asian Americans have surpassed African Americans to become the group with the highest income inequality in the United States (Kochhar & Cilluffo, 2018). Second, this stereotype has largely ignored the complexity of diverse ethnic characteristics and immigration histories of the Asian population in the United States. There are different immigration processes for the Asian people, such as immigrating voluntarily for employment opportunities and seeking refuge from war. Historically, the Asian population entered America in several waves and concentrated in different regions in the United States. This results in a variety of socio-economic statuses between Asian ethnicities. Based on U.S. Census data, the poverty rates of Chinese (13.4%), Vietnamese (14.7%), and Koreans (15%) are significantly higher than Japanese (8.2%) (Macartney, Bishaw & Fontenot, 2013). Some researchers also suggested that the differences in colonial and immigration history resulted in different involvement levels with the social service system among Asian ethnicities (Fong & Mokuau, 1994). For example, Vietnamese immigrants are more adapted to the culture and education system due to long-term colonization and acculturation than other Southeast Asian immigrants such as the Hmong people. Thus, Vietnamese refugees may experience less barriers when transitioning to the U.S. education system after immigration (Fong & Mokuau, 1994; Trueba et al., 1990). While Hmong refugees, whose traditional oral-based education style was very different from the system in the States, have significantly less utilization of educational resources than other Asian immigrants (Fong & Mokuau, 1994).

Some of the most damaging consequences of the "model minority" stereotype are that Asian Americans are often viewed as an advantaged group without any need for social assistance, nor do they suffer from racial discrimination as other minority groups. A considerable

body of literature highlighted the low utilization of external support such as social service programs among the Asian population, even when the need is present. For instance, despite the prevalent mental health issues this population faces (Takeuchi, Alegria, Jackson & Williams, 2007), Asian Americans are less likely to seek out mental health services and adhere to treatment (Matsuoka, Breaux, & Ryujin, 1997; Leong & Lau, 2001). Another study by Rao et al. (1992), using a retrospective chart review of 2,007 sexual abuse cases involving Hispanics, African Americans, Caucasians, and Asians at the San Francisco General Hospital, further supports the argument that Asian families were less likely to utilize social resources assisting families in which child sexual assault had occurred and are more likely to be in denial of the sexual abuse incidents.

Studies on Asian American's low utilization of social services often highlight cultural and individual traits as the contributing factors, yet failed to position the Asian communities in the social and political contexts in the United States. Lee (2013) argues that United States' systematic inequality of social service provision further perpetuated this issue in Asian communities. The researcher's study on Asian survivors of domestic violence revealed that due to the public and private organizations' failure to recognize the significance of domestic violence among the Asian population, those culturally appropriate support programs are "systematically devalued and underfunded". This further contributed to the structural barriers to Asian women seeking to escape domestic violence. Research has also documented the inadequate service provision and outreach to the Asian population in other social aspects. Examining Southeast Asian children with developmental disabilities and their access to special education and health care, Baker et al. (2021) found that structural barriers, such as the lack of program outreach and language-specific services, have prevented those families from accessing the services they need.

Similarly in higher education, Asian Americans are also less likely to be referred to appropriate services considering their culture and language skills (Suzuki, 2002).

Collective evidence suggests that the unmet service needs in Asian American communities are associated with a combination of personal, cultural, and systemic factors (Liang, Li& Kim, 2004; Lee & Hadeed, 2009; Huisman,1996; Burman, Chantler & Batsleer, 2002). Nevertheless, with numerous studies revealing the low service utilization and provision among Asian Americans in the field of public health, community violence, and education, there is a limited body of research that examined Asian American families' experience with child welfare services. While there are a few studies focusing on exploring the Asian cultural practices and their impact on child maltreatment, the use of administrative data from Child Protective Services (CPS) to explore the Asian American population's experiences post-CPS involvement remains an underexplored area, indicating a significant research gap.

Especially, the existence and the magnitude of racial disproportionalities and disparities in the field of child welfare remain unclear for Asian Americans. Though not sufficiently discussed, some studies suggest that racial preferences can influence case worker's estimation of harm and vulnerability of minority groups (Mguire-Jack, Font & Dillard, 2018). Considering the prevalence of the model minority stereotype in almost all social aspects, it is possible that child welfare caseworkers, similar to professionals in education and public health, may have underestimated the vulnerability and needs of the Asian American families because of the positive image attached to this racial group. Therefore, it is possible that referrals involving Asian American children are less likely to be substantiated and less likely to be provided need-matching services.

The Social and Political Context of Model Minority Myth: Racial Triangulation Theory

Racism was often discussed in intellectual circles using "black and white" comparisons. Many scholars are slowly expanding their focuses to the Hispanic and Native American populations. Still, before the recent surge in anti-Asian hate crimes during the epidemic, only a limited fraction of the conversation included Asian Americans' experiences (Yellow Horse et al., 2022; Yellow Horse et al., 2021).

The exclusion of Asian Americans from the research effort on racial disparities is not a coincidence. Claire Jean Kim (1999) has developed the conceptual framework of racial triangulation in response to the question of what it looks like to go “beyond black and white.” Before, some researchers would use monolithic examples to summarize the racial issues as “Native Americans faced genocide, blacks were subjected to racial slavery, Mexicans were invaded and colonized, and Asians were excluded” (Omi & Winant, 1994). Kim’s (1999) multi-dimensional framework addressed the previously over-simplified association between certain racial groups and their prevalent social issues. She describes the concept of racial triangulation as that Asian Americans are “triangulated within a field of race relations based on their position relative to blacks and whites” (Kim,1999; Xu & Lee, 2003). There are two elements to the racial triangulation of Asian Americans: racial valorization and civic marginalization (Kim, 1999; Xu & Lee, 2003). In this context, racial valorization identifies as the act of the white population (dominant group) validates one particular minority group (Asian population) out of other racial groups to ultimately dominate all minorities. On the other hand, civic ostracism occurs when the dominant race (White population) excludes a minority group (Asian population) from prospering and fitting into society, both socially and politically. The theory provides a lens for understanding how the dominant white population can manipulate racial dynamics among minority groups. This dynamic is evident in racial valorization, where the white population

validates one particular minority group, such as Asian Americans, over others like Black Americans. This validation often highlights the successes of Asian Americans while implying deficiencies of Black Americans, creating a hierarchy among minorities to maintain dominance. Concurrently, civic ostracism also plays a significant role. Asian Americans were intentionally the socio-political excluded from fully integrating into society. Despite their successes, Asian Americans are positioned on the "Insider/Outsider (Foreigner)" continuum in a manner that persistently perceives them as "perpetual foreigners". Regardless of their accomplishments or contributions, Asian Americans are often viewed as alien and unassimilable, highlighting the complexities of their experiences within the broader racial dynamics. All these acts function as a pre-planned, assigned role play for each racial minorities and the ultimate goal is to maintain the White privileges in the society (Kim, 1999).

Kim (1999) also argues that the mainstream intentionally disseminates the belief that Asian Americans have succeeded without social assistance programs such as affirmative action and bilingual education. This belief has been used to accuse Latinx/Hispanic, and African Americans of being “lazy” and “dependent” and has distracted public opinions from focusing on the impact of historical racism. Kim (1999) argues that being used to triangulate between the white population and other racial minority groups is dangerous for Asian Americans, especially if they do not understand what this position means within the larger racial and political context. Consequentially, the public views Asians as the “model minority” while still marginalizes them as “outsiders” or “foreigners.” Some researchers even argue that model minority is just a “complementary, benign image” of the yellow peril (Okihiro, 1994).

This argument has become especially relevant against the backdrop of recent reported racist acts against the Asian population in the U.S., reaching a historical high since the

coronavirus outbreak. Around 45 percent of Asian adults reported at least one racially offensive incident since the pandemic (Pew Research Center, 2021). This further supports the concerning idea that from the late 1700s up till today, Asian Americans continue to face racism and xenophobia on both individual and societal levels, despite being hailed as the "model minority"(Ancheta, 2006; Man, 2020; Chou & Feagin, 2010).

Aside from Kim and other researchers' efforts on dismantling racial triangulation and model minority myths, much remains unknown about its implication in child welfare. With the rapid increase of the Asian immigrant population in the United States since the 1970s (U.S. Census,2019; Pew Research Center, 2021), child welfare workers need to be well-versed in the Asian Americans' unique characteristics such as family structure, parenting ideology, and prevalent community problems, to better assist those families and to prevent the occurrence and re-occurrence of child maltreatment among the Asian population.

Asian Americans and Child Welfare

The discussion concerning child maltreatment in Asian communities in the United States has been inadequate (Zhai & Gao,2009). However, there are still some pioneering efforts in this field and are valuable to the discussion. This section presents a review of contemporary literature on some distinguished characteristics of reported child maltreatment incidents involving Asian families and the impact of Asian culture on the prevalence of maltreatment and service utilization.

Characteristics of Child Maltreatment among Asian Americans

There are some differences between child maltreatment case characteristics of Asian Americans compared to other races. Overall, Asian Americans tend to have a higher incidence rate of physical abuse and a lower incidence of reports of sexual abuse and neglect than other

races (Futa, Hsu, & Hansen, 2001; Zhai & Gao, 2009). Asian child maltreatment victims tend to be older than other racial and ethnic groups. For instance, Rao et al. (1992) found that Asian children (mean age 11.5) reported as sexual abuse victims in San Francisco were 2.5 years and 2.8 years older than the White and African American victims, respectively.

Despite the commonality across races that child maltreatment perpetrators are usually members of their immediate families, Asian American child victims also tend to be living with both of their parents when the incident occurs. Using 221 Chinese case files from the Department of Children and Family Services (DCFS) in Los Angeles County, Chinese child victims were found to be most likely abused by their biological mother (41%), biological father (30%), or both (16%) (Rhee, Chang, Weaver & Wong, 2008). Another study by Chang and colleagues (2006) found similar results using Korean families in Los Angeles County DCFS data. Among all the Korean child cases, 68.8% of the children lived with their biological parents when the incident occurred. Perpetrators, in this case, were also most likely to be either their biological father (38.2%) or mother (31.2%) (Rhee, Chang, Weaver & Wong, 2008; Chang, Rhee & Weaver, 2006). Rhee et al.'s (2008) and Chang et al.'s (2006) results also indicated that 76.5% of the Chinese child victims and 74.1% of the Korean child victims did not show any behavioral problems at the point of the maltreatment report. This lack of observable behavioral problems is consistent with Asian children being more likely to internalize the trauma than to externalize it in the form of behavioral problems. Rao et al. (1992) found that, compared to Hispanics, African Americans, and Caucasians, Asians express significantly less inappropriate sexual behaviors, less anger, and fewer urinary symptoms, but Asians are almost twice as likely to attempt suicide following an experience of sexual abuse compared to other races. These unique characteristics may make detecting and identifying child maltreatment among Asian Americans more difficult

for professionals and community members. However, since those findings mostly derive from a small regional dataset, the generalizability of these case characteristics among Asian Americans and child maltreatment incidents is questionable.

Asian Culture and Child Maltreatment

Asian cultural norms can serve as both protective factors and risk factors for child maltreatment in Asian communities. Some Asian cultural factors (e.g., strong family ties, fear of "losing face") may prevent the abusive child-rearing practices and provide more family support from extended families. Yet, some other cultural factors may increase the probability of abusive child-rearing practices and prohibit incident disclosure (Zhai & Gao, 2009).

One of the key virtues of Asian culture, Filial Piety, stemmed from Confucianism and emphasizes a hierarchical family structure where parents unconditionally own the children's obedience and loyalty (Chang, Rhee & Weaver, 2006; Hahm & Guterman, 2001; Maker, Shah, & Agha, 2005). This custom is widely adopted by Asian cultures (Zhai & Gao, 2009). The belief that physical punishment is a form of expressing affection and ensuring parental authority is also accepted by most Asian parents. The children were expected to tolerate this expression of "concern" and "care" (Meston et al., 1999; Park, 2001; Lee, Rha & Fallon, 2014). Together with the traditionally high expectations of Asian parents regarding their children's academic and career advancement (Hahm & Guterman, 2001), those cultural norms may lead to a higher incidence of abusive child-rearing practice. Compared to other racial and ethnic groups, Asian parents tend to use more physical punishment on their children, potentially increasing the chance of physical child abuse within the community (Maker, Shah & Agha, 2005; Park, 2001; Larsen, Kim-Goh, & Nguyen, 2008).

In addition to Filial Piety, harmony within the family is also highly valued. Family

members are expected to sacrifice their individual needs for the collective benefits of the family. Actions that may cause the family to "lose face" or "bring shame to the family" are highly discouraged (Kenny & McEachern, 2000; Lau, Takeuchi & Alegria, 2006). The shame, stigma, and risk of being ostracized may make victims less likely to disclose the family conflict to medical professionals, teachers, and social workers. For a close comparison, domestic violence has a high prevalence in Asian communities with a significant underreporting issue (Tjaden & Thoennes, 2000; Lee & Hadeed, 2009). Abused women had to carry the burden of protecting the family's reputation and therefore chose not to disclose their experience (Mckelvey & Webb, 1995; Ho, 1990). Due to the high correlation between domestic violence and child maltreatment (Morewitz, 2004), the prevalent issue of domestic violence among the Asian communities may be another alarming component of the understudied Asian child maltreatment problem. The reluctance to disclose and report abuse, both to family members and external authorities, may likely result in underreporting of all forms of family violence by Asian American families, including child maltreatment (Futa, Hsu & Hansen, 2001; Okamura, Heras, & Wong-Kerberg, 1995; Rao et al., 1992; Yoshioka, Dinola, & Ullah, 2001).

Contrary to the glossy "model minority" stereotype, previous research has found that Asian Americans suffer from undertreated mental health issues, intergenerational family conflict, and domestic violence, which significantly jeopardize the welfare of Asian American children (Sue et al., 2012; Spencer et al., 2010; Kim et al., 2007; Choi, 2022). On the other hand, Asian culture's emphasis on family support and education may reduce the risk of child maltreatment among Asian children. Most studies on child maltreatment incidence and child welfare services either excluded Asian Americans or combined them with other underrepresented minorities such as Pacific Islanders. Thus, despite decades of research on child welfare disproportionalities and

disparities, our knowledge about child welfare and Asian Americans remains limited. In addition, with most of the literature using unrepresentative datasets or focusing on a non-empirical theoretical framework, there is a lack of large-scale empirical examination for child maltreatment in Asian American communities. Empirical studies examining the patterns of child welfare agencies' response to Asian American cases in the United States are especially scarce (Rhee, Chang, Weaver & Wong, 2008). To this date, it remains inconclusive whether Asian American's low representation in the child welfare system is due to their differential needs or due to the inadequate reporting and service provision.

Specific Aims

Just as concerning as the overestimation of risks, which can lead to excessive intervention in families' lives, the underestimation of risk can leave children and families unprotected (Gambrill & Shlonsky, 2000). Understanding the experiences of Asian families in the child welfare system is crucial for determining whether changes in policy and practice are necessary to ensure that the system meets the unique needs of Asian families. This dissertation project aims to address the gaps in the literature by investigating the following questions in the California context:

1. How do referral disposition and recidivism in child welfare services differ across *racial groups*?

2. How do referral disposition and recidivism in child welfare services differ across various *Asian subgroups*?

3. What is the impact of child-level, referral-level, and zipcode-level predictors on disposition and recurrence among maltreatment reports involving Asian American children?

Chapter Three: Methods

Research Design

This study utilized a longitudinal dataset derived from the Child Welfare Services Case Management System (CSW/CMS). The California Child Welfare Indicators Project (CCWIP) provided the dataset. It included all child maltreatment referrals made between 2014 and 2020 for 20 selected counties with the highest Asian population densities in California. Each case contained masked unique referral and child IDs, in addition to the outcome variables (i.e., disposition level, time to disposition, number of prior referrals, re-report, and case recurrence) and covariates (i.e., allegation type, child gender, child age, prior contact with child welfare, and race/ethnicity). The dataset was analyzed through a Design-Based Method (DBM)[3] to test the potential racial disparities and their predictors among Asian American families involved in California's child welfare system, considering the data's clustered nature.

Data Source

When it comes to child abuse and neglect, counties are the major governmental entities that engage with children and families. Counties are responsible for delivering the services necessary to protect children's well-being and support the involved families, whether directly or via external providers. California's child welfare services are managed by each of the state's 58 counties. According to state and federal standards, each county can develop and implement its child welfare program based on localized needs and requirements.

The CWS/CMS is an online client datamanagement system that monitors each referral from the time of the first contact until its termination, regardless of the disposition level.

Caseworkers use the system to track client demographics, family background, agency

[3] An alternative approach for examining clustering data could involve utilizing hierarchical linear models (HLM) or a multilevel approach using SEM.

contacts, services provided, and placement information. The CWS/CMS dataset used in this project was derived from the original data system and cleaned by the CCWIP. This state-level dataset included information collected during the "front-end" of the referral process, which happened between first contact and the disposition of a referral.

Sample

The sample consisted of referrals received in any child protective agency in the following 20 selected California counties with the highest Asian population density. The 20 included counties were Santa Clara, San Francisco, Alameda, San Mateo, Orange, Contra Costa, San Joaquin, Sutter, Sacramento, Solano, Los Angeles, Yolo, San Diego, Fresno, Napa, Merced, Ventura, Yuba, San Bernardino, and Monterey (See Table 2).

Referrals were included if they involved children aged 17 and under, and the receive dates are between January 1st, 2014, to December 31st, 2020. Referrals made before 2014 were used to construct the variable that indicates if the child had prior contact with the child welfare system, which was a hypothesized predictor of substantiation. In addition, the CWS/CMS dataset was linked with the American Community Survey (ACS) 5-year estimates (2015-2019) and the ADI Measurement Dataset to include neighborhood (based on zip codes) variables that measured Asian population density, income and education disparities, and level of socioeconomic disadvantage. A total of 2,310,593 referrals and 1,312,449 children were included in the longitudinal dataset.

Table 2

Asian Population Density and CWS/CMS Sample Size by Counties

County Name	Asian American Population (%)[4]	Total Sample	Asian Sample
Santa Clara	38.3	92,552	12,445
San Francisco	35.9	21,711	2,514

[4] Source: U.S. Census Bureau, Population Estimates Program (PEP) 2019. The definition of Asian American population used in this table excluded the population fall under multi-race category.

County Name	Asian American Population (%)[4]	Total Sample	Asian Sample
Alameda	31.8	54,503	4,901
San Mateo	30.1	21,598	2,018
Orange	21.4	166,799	9,822
Contra Costa	18.0	46,903	2,486
San Joaquin	17.0	49,465	2,414
Sutter	17.0	3,941	119
Sacramento	16.9	111,641	5,055
Solano	16.2	27,651	1,204
Los Angeles	15.4	913,843	23,027
Yolo	15.0	11,664	256
San Diego	12.6	303,640	10,171
Fresno	11.0	129,924	4,875
Napa	8.8	7,870	145
Merced	7.9	33,911	806
Ventura	7.9	60,079	858
Yuba	7.5	5,508	95
San Bernardino	7.8	226,000	2,742
Monterey	6.8	21,390	304

Human Subject Guidelines

Only the regions with a large enough Asian population to meet the California Department of Social Services Data De-Identification Guide (2019) were included in this study. The data de-identification guide required the removal of direct personal information (i.e., names, contact information) and masking any numbers in cells representing fewer than 11 individuals. This study was approved by UCLA IRB (IRB#21-001611) and California Health and Human Services Agency IRB.

Measures

Dependent Variables

The first part of the outcomes relating to disposition was examined using logistic regression and generalized ordered logistic models. The disposition level variable in CWS/CMS data contained five unique values: substantiated, unfounded, inconclusive, unknown at

conversion, and enter in error. The analysis focused on the first three categories of "substantiated," "unfounded," and "inconclusive." Five primary outcomes were generated: if a referral was substantiated, if a referral was unfounded, if a referral was inconclusive, time to disposition, and the number of prior referrals before the first substantiation. The substantiation variable was coded as 1(= substantiated) and 0 (= not substantiated). The unfounded variable was coded as 1(= founded) and 0 (= unfounded). The inconclusive variable was coded as 1(=inconclusive) and 0 (=not inconclusive). Time to disposition was defined as the days between referral receipt date and disposition date (if substantiated/if unfounded/if inconclusive). Based on California child welfare regulation, disposition should be made within 30 days of the initial contact. Thus, this variable was recoded into a binary variable that indicated whether the referral was dispositioned within 30 days (=0) or over 30 days (=1), to address violation of assumptions of normality. For the same reason, the variable of prior referrals was also coded to four categories: 0 (=no prior referral before study period), 1 (=one or two prior referrals before study period), 2 (=three to five prior referrals before study period), 3(=six and above prior referrals before study period).

Another primary outcome of this study is the recurrence and the time to recurrence. Recurrence was calculated as a binary variable (0=No, 1=Yes) at the child's level using the unique child ID. Two outcome variables were generated for logistic regression analyses: if any screened-in re-referrals after the first referral of the same child in the study period, and any substantiated cases after the first substantiated case of the same child in the study period. For the survival analysis, the time to re-referral and the time to case recurrence were calculated using the two referral/case received dates of the first and the second referrals/cases of the same child during the study period.

Independent Variables

To examine the contributing factors to referral substantiation and recurrence, both ZIP Code Tabulation Area (ZCTA) level and referral level predictors were included. For referral-level factors, the impact of variables including client and case characteristics (e.g., allegation type, age, gender, race, and ethnicity, if prior contact with the child welfare system, etc.) on the outcomes was examined. At the ZCTA-level, the Asian population density, Concentration at the Extreme (ICE) Index of income and education, and Area Deprivation Index (ADI) were analyzed in relation to the child maltreatment outcomes.

Referral-level indicators.

Child age at the referral. This continuous variable measured the child's age when the referral was received and was calculated using the referral receive date and the birth date included in the CWS/CMS dataset.

Gender. This variable indicated the gender that was ascribed to the children. The original CWS/CMS dataset included four values for this variable: female, intersex, male, and unknown. In this study, "female" was coded as 1, "male" was coded as 0. Due to the small sample size, the values of "unknown" and "intersex" were both coded as missing.

Race/Ethnicity. This variable measured children's race and included values of Black /African American, Non-Hispanic White, Hispanic, Asian, Native American, and Native Hawaiian/Other Pacific Islander. The variable of Hispanic was used to excluded Hispanic Whites[5].

[5] For the purpose of maintaining consistency in this paper, the Latinx/Hispanic population discussed in the methods and results sections will be referred to as 'Hispanics.' This terminology aligns with the descriptors and coding utilized in the dataset under study.

Asian ethnicity. The CWS/CMS dataset identified a limited number of Asian ethnicities, including Cambodian, Chinese, Filipino, Japanese, Korean, Laotian, Hmong, Vietnamese, and Asian Indian. A separate category of "other Asian" was also included in the analysis.

Allegation type. CWS/CMS dataset included sixty-five unique codes representing the different types of allegations. For this study, these codes were collapsed into larger categories such as neglect, physical abuse, sexual abuse, and emotional abuse. For example, code 1056 (failure to Provide Adequate, Safe Shelter), code 1057 (Failure to Provide Clothing), code 1058 (Failure to Provide Food), code 1059 (Failure to Provide General Medical Care), and code 1060 (Lack of Supervision) were grouped under child neglect category. In addition, code 1370 (Asphyxiation, Suffocation), code 1371 (Bite Marks), code 1372 (Bruises, Welts, Abrasions, Scratches), code 1373 (Burns), code 1374 (Cuts, Gashes, Stab Wound, Puncture Wound), code 1375 (Fracture(s)), code 1376 (Gunshot Wound), code 1377 (Retinal Bleeding), code 1378 (Sprain, Dislocation), and code 1379 (Subdural Hematoma, Internal Bleeding) were coded as physical abuse.

Prior contact with child welfare. Except the models examining prior referrals as the outcome, all other models included a covariate indicating if there was any prior referral of the same child before the study period. The covariate was generated using the CSW/CMS data (1996 - 2013). Referrals before 2014 were grouped under each child ID, and if there was any referral made between January 1st, 1996 and December 31st, 2013 for the same child, this variable was coded as 1 (= has prior referral(s)), otherwise 0 (= has no prior referral(s)).

Neighborhood-level indicators. The neighborhood-level indicators were calculated at the ZIP Code Tabulation Area (ZCTA), which was linkable with the ZIP codes used by the United States Postal Office. To create the ZCTA codes, the Census Bureau first listed all

addresses inside each census block. The most frequently occurring ZIP Code within each census block was then assigned as the preliminary ZCTA code to the entire census block. Then Census blocks were combined by the preliminary ZCTA codes to form bigger regions that mostly overlay with areas covered by ZIP code. This study included three main measurements at the ZCTA level: Asian population density, Concentration at the Extreme (ICE) Index, and Area Deprivation Index (ADI). These variables were merged with the CWS/CMS data using the ZIPcode of residence as the unique identifier.

Asian population density. This variable represented the estimated percentage of the Asian population compared to the overall population in a single ZCTA region (0 to 100 percent). It was calculated using the total Asian population estimates (code: B02001_005E) divided by the total population estimates (code: B02001_001E), both derived from the 2019 American Community Survey 5-year estimates (Table B02001).

Concentration at the Extreme (ICE) Index*:* The ICE index was introduced into sociology by Massey (2001) to measure socioeconomic polarization. The ICE quantifies the extent to which persons in a specified area are concentrated into the top versus the bottom extremes of a specified social resource distribution. The ICE ranges from -1 (all population concentrated in most deprived category) to 1 (all population concentrated in most privileged category). This study used the ICE index for education and income to examine the impact of neighborhood education and income disparities on substantiation and recurrence of child maltreatment referrals. The ICE index of income was calculated using the following formula[6]: (Population (Over US$100k) – Population (under US $25K))/Total Population_household

[6] The formula is developed based on Massey's original formula: ICE=(A*i*-P*i*)/T*i*, A*i* represents the number of persons belonging to the privileged extreme, while P*i* is the number of persons who belong to the deprived extreme in the *i*th ZCTA area. T*i* is the total population in the *i*th ZCTA area.

income); The ICE for education[7] was calculated using the following formula: (Population (4 years college or more) – Population (less than high school))/Total Population_education). ACS table B19001 and B15002 will be extracted to calculate the ICE index.

Area Deprivation Index (ADI). The ADI is an index first developed by Singh (2003) using Census data from 1990, which was then refined and validated by Kind et al. (2014) using more recent data at the Census block level. The updated index used American Community Survey (ACS) 5-year estimates at the Census block level, containing 17 socioeconomic indicators. It evaluates the multi-dimensional socioeconomic disadvantages of neighborhoods. It includes factors for the theoretical domains of income, education, employment, and housing quality. The ADI scoring incorporates Census block education measurements (percent with a degree of less than nine years; percent with a degree at least), jobs (percent with a white-collar vocation; unemployment rates), income (median family income; income disparity; percent below the poverty level; percent below 150 percent of poverty level), housing (median home value; median gross rent; median monthly mortgage; homeownership rate), household structure (percent of single-parent households), and household resources (percent without a car; percent without a telephone; percent without complete plumbing; percent of housing units with more than one person per room). The national ADI ranks census blocks from 1 to 100, with the lowest number indicating the most advantaged neighborhood. The most recent ADI dataset (2019) is accessible through the Neighborhood Atlas website (Kind & Buckingham, 2018). It offers matched ZIPcode information for each Census block, which was merged with the CWS/CMS data. If a ZCTA contained multiple ADI rankings due to the multiple Census block included, the average of the ADI ranks was calculated for that particular ZCTA area.

[7] The ICE income cutoffs represent the 20th verse 80th percentile of household income in the United States.

Table 3

California CWS/CMS Dataset Information

	California CWS/CMS dataset (Provided by CDSS/CCWIP)
Sampling Frame	All referrals made between 2014 to 2020 in 20 selected counties in California
County	Santa Clara, San Francisco, Alameda, San Mateo, Orange, Contra Costa, San Joaquin, Sutter, Sacramento, Solano, Los Angeles, Yolo, San Diego, Fresno, Napa, Merced, Ventura, Yuba, San Bernardino, and Monterey
Sample Size	2,310,593 referrals (2014-2020)
Race	Black/African American, Non-Hispanic White, Hispanic/Latinx, Asian, Native American, Native Hawaiian/Other Pacific Islander
Gender	Male/Female
Child Age	0 to 17 years old
Asian Ethnicity	Cambodian, Chinese, Filipino, Japanese, Korean, Laotian, Hmong, Vietnamese, Asian Indian, other Asian
Masked Referral ID	Included
Masked Child ID	Included
Disposition Type	Substantiated, Unfounded, Inconclusive, other (unknown at conversion, and enter in error)
Allegation Type	General neglect, Severe neglect, Physical abuse, Sexual abuse, Emotional abuse, Exploitation, Caretaker Absence/Incapacity, Sibling Abused
Referral Receive Date	Included
Disposition date	Included
Total number of prior referrals	Calculated using 1996-2013 CWS/CMS data (0~X)
If prior involvement with CPS	Calculated using 1996-2013 CWS/CMS data (Yes/No)
Neighborhood Factors	Asian population density, Concentration at the Extreme (ICE) Indices, Area Deprivation Index (ADI)
ZIPCode/ZCTAcode	Included

Research Questions and Hypotheses

- ***RQ 1:*** Are referrals involving Asian American children substantiated at different rates than those involving children from other races?

  Hypothesis 1a: Asian American children are less likely to be substantiated while controlling for referral-level confounding factors (e.g., types of allegations, child's age, if prior involvement with CPS, etc.) compared to children from other races (e.g., White, Black/African American, Latinx/Hispanic).

  Hypothesis 1b: Asian American children from historically less-advantaged Asian ethnicities (e.g., Cambodian, Vietnamese) are more likely to be substantiated than some historically advantaged Asian ethnicities (e.g., Korean, Japanese).

  Hypothesis 1c: Time to disposition (e.g., substantiated, unfounded, inconclusive) will be shorter for referrals involving Asian American children while controlling for referral-level confounding factors (e.g., types of allegations, child's age, if prior involvement with CPS, etc.) compared to children from other races.

  Hypothesis 1d: Substantiated referrals involving Asian American families may have more prior referrals than other racial groups before being investigated and substantiated.

- ***RQ 2*****:** Do Asian American children experience maltreatment recurrence at different rates than children from other races?

  Hypothesis 2a: Asian American children are less likely to have re-referrals or case recurrence while controlling for intake-level confounding factors (e.g., types

of allegations, child's age, if prior involvement with CPS, etc.) compared to children of other races.

Hypothesis 2b Asian American children from historically less-advantaged Asian ethnicities (e.g., Cambodian, Vietnamese) are more likely to have re-referrals or case recurrence compared to some historically advantaged Asian ethnicities (e.g., Korean, Japanese).

Hypothesis 2c: Time to re-referral or case recurrence is shorter for of referrals involving Asian American children while controlling for intake-level confounding factors (e.g., types of allegations, child's age, if prior involvement with CPS, etc.) compared to children of other races.

- ***RQ 3*:** Do neighborhood-level factors (e.g., income disparity, education disparity, Asian American population density) impact the substantiation and recurrence of referrals involving Asian American children?

  Hypothesis 3a: Asian American children who live in areas with a high density of Asian population are less likely to be substantiated and will experience a lower likelihood of recurrence of referrals, while controlling for case characteristics, compared to Asian American children who reside in areas with a low density of Asian population.

  Hypothesis 3b: Asian American children residing in communities with smaller income and education disparities (measurements: ICE Index_income, ICE Index_education) are less likely to be substantiated and will experience a lower likelihood of recurrence of referrals, while controlling for case characteristics,

than Asian American children who reside in areas with larger income and education disparities.

Hypothesis 3c: Asian American children who live in socioeconomically advantaged areas (measurement: ADI) are less likely to be substantiated and will experience a lower likelihood of recurrence of referrals, while controlling for case characteristics, compared to Asian American children residing in socioeconomically disadvantaged areas.

Analytical Plan

The first part of the outcomes, the probabilities of substantiation and recurrence, was examined using Generalized Linear Model (GLM). Using a general linear model (GLM) and associated link functions provided a flexible means of developing numerous different models depending on the nature of the dependent variable. Approaches applicable to GLM include, but are not limited to, analysis of variance and covariance models, correlation/regression models (including logistic and Poisson regression models), and multiple regression models. These models allowed for the inclusion of main effects as well as higher-order interactions. The analysis utilized the logistic link function for dichotomous outcomes (e.g., if substantiated, if allegation unfounded, if recurrence, etc.). In addition, a Receiver-operator characteristic (ROC) analysis was performed to evaluate the accuracy of a statistical model (e.g., logistic regression, linear discriminant analysis) that classifies subjects into 1 of 2 categories (e.g., substantiated, non-substantiated). Due to the unmet statistical assumption of normality, the outcome of prior referrals will be analyzed using generalized ordered logistic models.

The second part of the research used survival analysis to examine the recurrence of screened-in referrals and substantiated cases across racial and ethnic groups. Survival analysis

is a collection of statistical procedures for data analysis where the outcome variable of interest is time until an event occurs. For these analyses, a cox proportional hazard model was utilized. For the analysis of recurrence, the "event" was defined as the second screened-in referral of the same family during the study period, and the survival time was calculated as the days between the first and the second screened-in referral for the same child across the study period.

All the comparisons between racial groups were conducted in two parts: first, using Whites as the reference group, and second, using Asians (or Asian subgroups) as the reference group. Considering the clustering nature of the data, the design-based methods (DBM) was applied to the analysis, where the clustering variances was accounted. The DBM method is similar to the multi-level modeling (MLM) method where they all acknowledge that the variances are clustered. However, DBM models treat the model as a single-level model but apply statistical corrections to account for the clustering. The benefit of DBM, compared to MLM, is that there are fewer assumptions to be met since there are no random effect terms. Model diagnostics and quality of fit were evaluated for each submitted model. To minimize the risk of Type I error when conducting marginal comparisons across different racial groups, the Bonferroni correction using Holm's sequential method (Holm, 1979) was employed. All described analysis procedures will be conducted using Stata MP/17 (StataCorp, 2020).

Chapter Four: Results

Overview

This study examines the disparities in child welfare outcomes for Asian American children and families compared to other racial and ethnic groups in the United States. The study uses administrative data from Child Welfare Services Case Management System (CSW/CMS) to investigate the substantiation rate of referrals involving Asian American children, experience of recurrence of maltreatment, and other referral-related issues. The results suggest that, when controlling for referral-level, child-level, and zipcode-level confounding factors, Asian American children generally have less prior referral(s) before substantiation and experience less recurrence of referral or case. Compared to certain racial/ethnical groups, Asians are also less likely to be substantiated and take shorter time to disposition. Nonetheless, disparities continue to exist among various Asian subgroups. For example, some specific subgroups, such as Laotians and Hmong, face heightened disposition and recidivism outcomes in comparison to both Whites and East Asian groups like Chinese.

This chapter initially provides an overview of the descriptive analysis of outcome variables and covariates. Subsequently, the statistical results are demonstrated in the following sequence: first, disposition findings related to research question 1; second, recidivism outcomes for research question 2; and finally, neighborhood-level results concerning research question 3. The analysis of each research question involves two separate groups of models that use Whites and Asians as reference groups, respectively. These distinct models are discussed separately to examine the differences in outcomes when using Whites versus Asians as the reference group. While the study included referrals from all available racial and ethnic groups in its disposition and recidivism outcomes analysis, the statistical models solely focused on Asian American

samples when exploring the impact of neighborhood factors. This approach allowed for a more nuanced understanding of the neighborhood-level risk and protective factors that Asian Americans face within their unique socioeconomic context.

Descriptive Analysis

Outcome Variables

This study uses seven outcome variables: disposition levels, time to disposition, number of prior referrals, if re-reported, if case-recurred, time to re-report, and time to case recurrence. Disposition levels, time to disposition, if re-report, and if case-recurred outcomes were binarily coded and used for logistic regressions. The number of prior referrals before substantiation was coded as categorical variables and was analyzed using generalized ordered logistic regression. Time to re-report and time to case recurrence were calculated as continuous variables in measurement of days and were analyzed using survival models (Table 4).

Table 4

Descriptive Table of Outcome Variable

Survival Outcomes	**N(Mean)**	**SD**	**Range**	**Missing**
Time to Re-report	469,348(445.08)	465.00	(0, 2536)	0%
Time to Case Recurrence (substantiated)	56,082 (482.72)	506.70	(0, 2515)	0%

Logistic Outcomes	**N**	**%**	**Missing**
Disposition level			0%
Substantiated	402,655	17.43	
Unfounded	1,071,293	46.36	
Inconclusive	836,645	36.21	
If Re-reported			0%
Yes	1,467,492	63.51%	

No	843,101	36.49%	
If Case-recurred			0%
Yes	128,033	31.80%	
No	274,622	68.20%	
Time to disposition			0%
Within 30 days	952,439	41.22%	
Over 30 days	1,358,154	58.78%	
Number of Prior Referrals			0%
No prior referral	1,399,259	60.56	
One or two	343,326	14.86	
Three to five	253,842	10.99	
Six and above	314,166	13.60	

Across samples of all race and ethnicity groups, a total of 17.43% of cases were substantiated (N=402,655). Nearly 46.36% and 36.21% were deemed unfounded (N=1,071,293) and inconclusive (N=836,654), respectively. Of the total referrals, 63.51% had at least one follow-up referral within the study period (2014-2020). Of the 402,655 substantiated cases, 31.8% had at least one more substantiated case after the initial case within the study period. The survival analysis outcomes have a similar distribution with a mean of 445 and 482 days for re-report and case-recurrence, respectively. The Standard Deviation for time to rereport was smaller than that of time to case recurrence, which means the spread of time to re-report has a smaller variability than the time to recurrence. All outcome variables have missing data of less than 0.01%.

Covariates

The covariates include categorical variables of child's gender, allegation type, race/ethnicity, and whether a prior referral was reported, along with continuous variables

such as age, ICE education index, ICE economic index, Asian Density by zipcodes, and California-specific Mean ADI Score (Table 5).

Table 5

Descriptive Table of Covariates

Continuous Variables	N/Mean	S.D.	Range	Missing
Age	2,310,537(8.51)	5.09	(0,18)	0.11%
ICE Education Index	2,099,584(0.01)	0.28	(-1, 1)	9.13%
ICE Economic Index	2,099,584(0.10)	0.22	(-1, 1)	9.13%
Asian Density	2,099,584(0.12)	0.12	(0, 0.75)	9.13%
Mean ADI Score (State)	2,101,306(6.46)	2.15	(1, 10)	9.06%
Categorical Variables	N	%		Missing
Child's Gender				**0.13%**
Male	1,154,645	50.04		
Female	1,152,793	49.96		
Allegation Type				**0%**
Physical Abuse	422,355	18.28		
Sexual abuse	152,379	6.59		
Severe neglect	42,423	1.84		
General Neglect	961,180	41.60		
Exploitation	2,418	0.10		
Emotional Abuse	284,978	12.33		
Caretake Absence/Incapacity	35,342	1.53		
Sibling abused	409,518	17.72		
If Prior Referral				**0%**
Yes	911,334	39.44		
No	1,399,259	60.56		
Race / Ethnicity				**6.79%**

Black	369,643	17.16
White	429,391	19.94
Hispanic	1,247,837	57.94
Native American	9,769	0.45
Pacific Islander	10,832	0.5
Asian (N=94,369, 4.38%)		
Other Asian	7,143	0.33
Asian Indian	9,112	0.42
Southeast Asian (N=47,419, 2.20%)		
Cambodian	4,419	0.21
Filipino	22,021	1.02
Laotian	2,215	0.10
Hmong	4,877	0.23
Vietnamese	13,887	0.64
East Asian (N=22,583 1.05%)		
Chinese	15,056	0.70
Japanese	2,701	0.13
Korean	4,826	0.22

For child-level covariates, the average age of the children involved in referrals was 8.51 years old (range = 0 to18; S.D.=5.09). The gender of these children was evenly distributed between male (50.04%) and female (49.96%). More than half (57.94%) of the children involved with California's CPS system were identified as Hispanic/Latinx, followed by Non-Hispanic White (19.94%) and Black (17.16%). Approximately 0.45% of the children identified as Native Americans and 0.5% as Pacific Islanders. The target population of this study, Asian children, contributes to 4.38% of the total referrals (N=94,369), of which 2.20% were Southeast Asians

(i.e., Cambodian, Filipino, Laotian, Hmong, and Vietnamese), 1.05% were East Asians (i.e., Chinese, Japanese, Korean), 0.42% were Asian Indians, and 0.33% were identified as "other Asian". A more detailed Asian ethnicity breakdown is included in Table 5.

At the referral level, the most common allegation type is general neglect (41.6%), followed by physical abuse (18.28%), risk due to sibling being abused (17.72%), and emotional abuse (12.33%). Sexual abuse composes 6.59% of the total referrals in the study sample. The three least common allegation types are several neglects (1.84%), caretaker absence/incapacity (1.53%), and exploitation (0.1%). Nearly 40% of the referrals had a prior referral before the study period start date of January 1st, 2014, out of which 14.86% of them had one to two prior referrals, 10.99% of them had three to five prior referrals, and 13.6% of them had six or more prior referrals.

In terms of zipcode-level covariates, Asian American density, which was calculated using the total Asian population divided by total population at the zipcode level, ranges from 0% to 75% with a mean of 12%. The means of both the ICE Education index and ICE Economic index was on the lower end of the spectrum, meaning the general population, in most zipcode areas, concentrated at lower income and lower education levels. The ADI scores were calculated at the state level and showed a mean of 6.46, which means in average, the zipcode zones in the 20 counties included in this study were experiencing lower socio-economic levels. However, all the zipcode level socio-economic measurements have a relatively large range, meaning certain zipcodes in the study sample were in either the highest or the lowest level of ICE and ADI indices.

Statistical Analysis

Disposition Outcomes

Disposition Levels. Using Whites as the reference group, neither Asians as a collective racial group nor any of the Asian ethnic groups is significantly different from Whites in terms of substantiation rate (Appendix I-III). Using Asian as the reference group, referrals involving Hispanic children are more likely to be substantiated (OR=1.07). However, the odds ratio of substantiation is not statistically different between Asians and the rest of the racial groups (Table 6). When disaggregating Asian group into regional or ethnic groups, the odds of being substantiated did not differ when comparing Southeast Asian to East Asian groups (Table 7), nor did it differ when comparing Chinese with other Asian ethnicities (e.g., Koreans, Japanese, Cambodian, etc.) (Table 8).

Table 6

Substantiation Rate by Racial Groups

	Odds Ratio	**S.E.**	**[Conf. Interval]**
Age	0.96***	0.00	(0.95, 0.96)
Gender			
Male (Reference)	1.00		
Female	1.09***	0.00	(1.08, 1.10)
Allegation Type			
Physical Abuse (Reference)	1.00		
Sexual abuse	1.95*	0.06	(1.81, 2.11)
Severe neglect	6.83*	0.24	(6.22, 7.50)
General Neglect	4.19*	0.14	(3.84, 4,57)
Exploitation	11.17*	0.73	(9.37, 13.31)
Emotional Abuse	0.90	0.04	(0.81, 1.01)
Caretake Absence/Incapacity	11.58*	0.42	(10.50, 12.78)
At risk, sibling abused	0.89*	0.03	(0.82, 0.97)
If Prior Referral			
Yes	0.99	0.01	(0.97, 1.01)
No (Reference)	1.00		
Race / Ethnicity			
Asian (Reference)	1.00		
White	0.95	0.02	(0.91, 1.01)
Black	0.95	0.02	(0.09, 1.01)
Hispanic	1.07*	0.02	(1.01, 1.12)

	Odds Ratio	S.E.	[Conf. Interval]
Native American	1.07	0.05	(0.95, 1.20)
Pacific Islander	1.07	0.05	(0.96, 1.20)
ICE Education Index	0.78**	0.07	(0.65, 0.93)
ICE Economic Index	0.56***	0.06	(0.45, 0.70)
Asian Density	1.06	0.12	(0.84, 1.33)
Mean ADI Score (State)	0.95***	0.01	(0.93, 0.97)

Note: p<0.05* (significant after adjusted by Bonferroni Corrections) p<0.01** p<0.001***

Table 7

Substantiation Rate by Racial/Asian Regional Groups

	Odds Ratio	Std. Err.	[Conf. Interval]
Race / Ethnicity			
Black	0.97	0.04	(0.88, 1.08)
White	0.98	0.04	(0.89, 1.08)
Hispanic	1.10	0.04	(0.99, 1.21)
Native	1.10	0.06	(0.95, 1.27)
Pacific Islander	1.02	0.06	(0.87, 1.20)
Other Asian	1.07	0.07	(0.89, 1.28)
Asian Indian	0.85	0.05	(0.71, 1.01)
Southeast Asian	1.01	0.04	(0.89, 1.12)
East Asian (reference)	1.00		
Age	0.96***	0.00	(0.95, 0.96)
Gender			
Female	1.09***	0.00	(1.08, 1.10)
Male (reference)	1.00		
If Prior Referral			
No (reference)	1.00		
Yes	0.99	0.01	(0.97, 1.01)
Allegation Type			
Sexual abuse	1.95*	0.06	(1.80, 2.11)
Physical Abuse (reference)	1.00		
Severe neglect	6.83*	0.24	(6.22, 7.50)
General Neglect	4.19*	0.13	(3.84, 4.57)
Exploitation	11.16*	0.73	(9.36, 13.30)

Emotional Abuse	0.90	0.04	(0.80, 1.01)
Caretake Absence/Incapacity	11.57*	0.42	(10.48, 12.77)
Sibling abused	0.89*	0.03	(0.82, 0.97)
Asian Density	1.07	0.12	(0.85, 1.35)
ICE Education Index	0.78**	0.07	(0.65, 0.93)
ICE Economic Index	0.56***	0.06	(0.45, 0.70)
Mean ADI Score (State)	0.95***	0.01	(0.93, 0.97)

Note: p<0.05* (significant after adjusted by Bonferroni Corrections) p<0.01** p<0.001***

Table 8

Substantiation Rate by Racial/Asian Ethnical Groups

	Odds Ratio	**Std. Err.**	**[Conf. Interval]**
Race / Ethnicity			
Black	1.00	0.05	(0.87, 1.14)
White	1.00	0.05	(0.88, 1.14)
Hispanic	1.12	0.05	(0.98, 1.28)
Native	1.12	0.07	(0.94, 1.33)
Pacific Islander	1.05	0.07	(0.86, 1.37)
Other Asian	1.09	0.08	(0.89, 1.33)
Asian Indian	0.86	0.06	(0.71, 1.05)
Cambodian	1.15	0.12	(0.85, 1.55)
Chinese (Reference)	1.00		
Filipino	0.99	0.05	(0.85, 1.15)
Japanese	0.98	0.08	(0.77, 1.25)
Korean	1.10	0.08	(0.89, 1.36)
Laotian	1.14	0.13	(0.83, 1.57)
Hmong	1.28	0.13	(0.94, 1.74)
Vietnamese	0.91	0.05	(0.77, 1.07)
If Prior Referral			
No (Reference)	1.00		
Yes	0.99	0.01	(0.97, 1.01)
Age	0.96***	0.00	(0.95,0.96)
Gender			

Female	1.09***	0.00	(1.08, 1.10)
Male (Reference)	1.00		
Allegation Type			
Sexual abuse	1.95*	0.06	(1.80, 2.11)
Physical Abuse (Reference)	1.00		
Severe neglect	6.82*	0.24	(6.22, 7.49)
General Neglect	4.19*	0.14	(3.84, 4.57)
Exploitation	11.14*	0.73	(9.35, 13.28)
Emotional Abuse	0.90	0.04	(0.80, 1.01)
Caretake Absence/Incapacity	11.57*	0.42	(10.49, 12.77)
Sibling abused	0.89*	0.03	(0.82, 0.97)
ICE Education Index	0.78*	0.07	(0.65, 0.93)
ICE Economic Index	0.57***	0.06	(0.45, 0.71)
Asian Density	1.08	0.13	(0.86, 1.35)
Mean ADI Score (State)	0.95***	0.01	(0.93, 0.97)

Note: $p<0.05$* (significant after adjusted by Bonferroni Corrections) $p<0.01$** $p<0.001$***

Regarding unfounded and inconclusive outcomes, Black and "Other Asian" groups are both approximately 20% less likely to be deemed as unfounded and 20% more likely to be deemed as inconclusive when compared to Whites (Appendix XI). Black families also exhibit a reduced likelihood (OR=0.85) of having dispositions deemed unfounded, whereas White families display an increased probability (OR=1.05) of receiving such outcomes, when compared to Asians (Appendix IV). Meanwhile, Black families (OR=1.22) are more likely to be founded as inconclusive while Hispanic families (OR=0.92) and Native American families (OR=0.88) are less likely to be concluded as inconclusive, all compared to Asians (Appendix VII).

When disaggregating Asians as regional groups, Black families (OR=0.81) and "Other Asian" families (OR=0.80) are less likely to be dispositioned as unfounded, compared to White families (Appendix XI). Similar outcomes can be found when using East Asians as the reference

group (Appendix V). However, Black families (OR=1.24), "Other Asian" families (OR=1.19), and Asian Indians (OR=1.11), together with Asian Indian families (OR=1.11) are *more* likely to be concluded as inconclusive, compared to East Asians (Appendix VIII). Using Chinese as reference, both other Asians (OR=1.24) and Blacks (OR=1.29) are more likely to be concluded as inconclusive, while these two groups are both less likely to be concluded as unfounded (Blacks: OR=0.78; Other Asians: OR=0.78). Significance between other racial/ethnical groups when compared to Asian, East Asian, or Chinese subgroups is not found (Appendix IV-IX).

Time to Disposition. For the outcome variable, logistic regression was used with dichotomously coded days between the referral date and the disposition date as outcome: within 30 days and over 30 days. Based on California regulations, the disposition of a referral should be made within 30 days of the initial report date. Following the regulations, a binary variable was constructed with 0 meaning 30 days and 1, meaning 31 days and above.

In comparison to White families, Asian Indian and East Asian families demonstrate a roughly 14% decreased odds of having dispositions exceeding 30 days, whereas no significant disparity exists between Southeast Asian and White groups (Appendix XVII). Among the Asian ethnic groups, only Asian Indian, Korean, and Hmong subgroups exhibit a lower likelihood of surpassing the 30-day threshold when compared to Whites, while other Asian ethnic groups do not present any statistically significant deviation from Whites (Appendix XVIII).

When using Asians as the reference group, dispositions of referrals involving Hispanics are 10% more likely to go over the 30-day limit. There is no difference in terms of time to disposition between Asians and other races (Table 9). When using East Asian as the reference group, dispositions are more likely to take longer than 30 days for almost all other racial/ethnic groups, including Other Asians (OR=1.20) and Southeast Asians (OR=1.21). The only exception

is the Asian Indian group, which is not statistically different from the East Asian group (Table 10). When breaking down the Asian race into ethnic groups and using Chinese as the reference group, dispositions are more likely to take longer than 30 days for Filipinos (OR=1.26) and Other Asians (OR=1.18), along with Hispanics (OR=1.22), Native Americans (OR=1.26), and Pacific Islanders (OR=1.24) (Table 11).

Table 9

Time to Disposition Outcome by Racial Groups

Time to Disposition	Odds Ratio	Std. Err.	[Conf.	Interval]
Race/Ethnicity				
Black	1.04	0.03	0.97	1.12
White	1.02	0.02	0.97	1.08
Hispanic	1.10*	0.02	1.04	1.16
Asian (Reference)	1.00			
Pacific Islander	1.11	0.06	0.98	1.27
Native	1.13	0.06	0.98	1.31
If prior referral				
No (Reference)	1.00			
Yes	1.07***	0.01	1.05	1.09
Age	1.02***	0.01	1.01	1.02
Gender				
Female	0.99	0.01	0.98	1.01
Male (Reference)	1.00			
Allegation Type				
Sexual abuse	1.25*	0.01	1.21	1.29
Physical Abuse (Reference)	1.00			
Severe neglect	0.78*	0.01	0.74	0.81
General Neglect	1.01	0.01	0.99	1.04
Exploitation	0.60*	0.04	0.50	0.73
Emotional Abuse	1.49*	0.02	1.43	1.55
Caretake Absence/Incapacity	0.40*	0.01	0.38	0.43
At risk, sibling abused	1.10*	0.01	1.06	1.13

ICE Education Index	1.23	0.14	0.99	1.53
ICE Economic Index	0.95	0.14	0.71	1.26
Asian Density	0.44	0.07	0.32	0.61
Mean ADI Score (State)	1.00	0.01	0.97	1.03

Note: p<0.05* (significant after adjusted by Bonferroni Corrections) p<0.01** p<0.001***

Table 10

Time to Disposition Outcome by Racial/Asian Regional Groups

Time to Disposition	**Odds Ratio**	**Std. Err.**	**[Conf.**	**Interval]**
Race/Ethnicity				
Black	1.18*	0.05	1.04	1.34
White	1.15*	0.05	1.03	1.29
Hispanic	1.24*	0.05	1.10	1.39
Native	1.28*	0.08	1.07	1.53
Pacific Islander	1.25*	0.08	1.05	1.50
Other Asian	1.20*	0.06	1.04	1.38
Asian Indian	0.99	0.05	0.87	1.14
Southeast Asian	1.21*	0.07	1.03	1.41
East Asian (Reference)	1.00			
If prior referral				
No (Reference)	1.00			
Yes	1.07***	0.01	1.05	1.09
Age	1.02***	0.01	1.01	1.02
Gender				
Female	0.99	0.01	0.98	1.01
Male (Reference)	1.00			
Allegation Type				
Sexual abuse	1.25*	0.01	1.21	1.29
Physical Abuse (Reference)	1.00			
Severe neglect	0.78*	0.01	0.74	0.81
General Neglect	1.01	0.01	0.99	1.04
Exploitation	0.60*	0.04	0.49	0.73
Emotional Abuse	1.49*	0.02	1.43	1.54
Caretake Absence/Incapacity	0.40*	0.01	0.38	0.43

At risk, sibling abused	1.10*	0.01	1.06	1.13
ICE Education Index	1.24	0.14	0.99	1.54
ICE Economic Index	0.95	0.14	0.71	1.26
Asian Density	0.44***	0.07	0.32	0.61
Mean ADI Score (State)	1.00	0.01	0.97	1.03

Note: p<0.05* (significant after adjusted by Bonferroni Corrections) p<0.01** p<0.001***

Table 11

Time to Disposition Outcome by Racial/Asian Ethnical Groups

Time to Disposition	Odds Ratio	Std. Err.	[Conf.	Interval]
Race/Ethnicity				
Black	1.16	0.06	0.99	1.36
White	1.13	0.06	0.98	1.31
Hispanic	1.22*	0.06	1.05	1.41
Native	1.26*	0.09	1.02	1.55
Pacific Islander	1.24*	0.09	1.01	1.52
Other Asian	1.18*	0.07	1.01	1.41
Asian Indian	0.98	0.05	0.83	1.16
Cambodian	1.16	0.11	0.88	1.54
Chinese (Reference)	1.00			
Filipino	1.26*	0.08	1.04	1.52
Japanese	1.13	0.08	0.92	1.40
Korean	0.88	0.06	0.73	1.07
Laotian	1.06	0.12	0.75	1.50
Hmong	0.84	0.08	0.64	1.09
Vietnamese	1.27	0.13	0.94	1.72
If prior referral				
No (Reference)	1.00			
Yes	1.07***	0.01	1.05	1.07
Age	1.02***	0.01	1.01	1.02
Gender				
Female	0.99	0.01	0.98	1.01
Male (Reference)	1.00			
Allegation Type				
Sexual abuse	1.25*	0.01	1.21	1.29

Physical Abuse (Reference)	1.00			
Severe neglect	0.78*	0.01	0.74	0.81
General Neglect	1.01	0.01	0.99	1.04
Exploitation	0.60*	0.04	0.50	0.73
Emotional Abuse	1.49*	0.02	1.43	1.54
Caretake Absence/Incapacity	0.40*	0.01	0.38	0.43
At risk, sibling abused	1.10*	0.01	1.06	1.13
ICE Education Index	1.24	0.14	1.00	1.55
ICE Economic Index	0.94	0.14	0.71	1.25
Asian Density	0.44***	0.07	0.32	0.61
Mean ADI Score (State)	1.00	0.01	0.97	1.03

Note: p<0.05* (significant after adjusted by Bonferroni Corrections) p<0.01** p<0.

Number of Prior Referral. Compared to Whites, all four Asian regional groups generally have fewer prior referrals before substantiation (Appendix XX). Among these groups, Asian Indian (RRR=0.35) and East Asian (RRR=0.62) are the least likely to have more prior referrals. Nonetheless, when examining disaggregated Asian ethnic groups in relation to Whites, only "other Asian," Asian Indian, Chinese, Filipino, Korean, and Vietnamese demonstrate a lower likelihood of having increased prior referrals. In contrast, the remaining Asian ethnic groups exhibit no significant difference from Whites in terms of this outcome (Appendix XXI).

In the meantime, substantiated cases with Black, White, Hispanic, Pacific Islander, and Native American families are more likely to have more prior referrals before the substantiation when compared to Asians (Table 12). Southeast Asians are also 69% more likely to have more referrals before the substantiation when compared to East Asians (Table 13). Yet the difference was not found between East Asian and other Asian regional groups (i.e., Other Asian, Asian Indian). When disaggregating Asians into ethnic groups, substantiated cases involving Cambodian, Filipino, Laotian, and Hmong families are more likely to have more prior referrals when compared to Chinese (Table 14).

Table 12

Number of Prior Referrals for Substantiated Cases by Racial Groups

Number of Prior Referral	Model 0			Model 1			Model 2		
	RRR	**S.E.**	**[C.I.]**	**RRR**	**S.E.**	**[C.I.]**	**RRR**	**S.E.**	**[C.I.]**
Race/Ethnicity									
Black	2.80*	0.14	(2.47, 3.19)	3.12*	0.19	(2.67, 3.65)	3.64*	0.30	(2.94, 4.51)
White	1.80*	0.09	(1.59, 2.05)	2.08*	0.12	(1,78. 2.42)	2.48*	0.20	(2.01, 3.05)
Hispanic	1.88*	0.09	(1.67, 2.12)	2.03*	0.11	(1.76, 2.34)	2.28*	0.18	(1.86, 2.81)
Asian (Reference)	1.00			1.00			1.00		
Pacific Islander	1.56*	0.18	(1.16, 2.10)	1.54*	0.19	(1.11, 2.13)	1.98*	0.32	(1.32, 2.99)
Native	3.03*	0.35	(2.25, 4.08)	3.53*	0.50	(2.45, 5.07)	4.64*	0.87	(2.87, 7.52)
Age	1.21***	0.00	(1.21, 1.22)	1.20***	0.00	(1.20, 1.20)	1.21***	0.00	(1.20, 1.21)
Gender									
Female	0.96***	0.01	(0.94, 0.98)	0.96***	0.01	(0.94, 0.98)	0.96***	0.01	(0.94, 0.98)
Male (Reference)	1.00			1.00			1.00		
Allegation Type									
Sexual abuse*	0.60*	0.02	(0.55, 0.66)	0.59*	0.02	(0.53, 0.65)	0.54*	0.03	(0.47, 0.62)
Physical Abuse (Reference)	1.00			1.00			1.00		
Severe neglect*	0.81*	0.04	(0.71, 0.92)	0.75*	0.04	(0.64, 0.87)	0.76*	0.06	(0.62, 0.94)
General Neglect	1.04	0.03	(0.97, 1.13)	1.08	0.03	(0.99, 1.18)	1.11*	0.04	(1.01, 1.23)
Exploitation*	0.35*	0.06	(0.23, 0.54)	0.47*	0.08	(0.29, 0.75)	0.46*	0.10	(0.25, 0.85)
Emotional Abuse	1.01	0.04	(0.91, 1.13)	1.01	0.05	(0.89, 1.14)	0.99	0.06	(0.85, 1.15)
Caretake Absence/Incapacity*	1.45*	0.06	(1.28, 1.63)	1.65*	0.07	(1.46, 1.87)	1.78*	0.09	(1.54, 2.05)

At risk, sibling abused*	1.33*	0.04	(1.22, 1.46)	1.25*	0.05	(1.12, 1.39)	1.20*	0.06	(1.04, 1.38)
ICE Education Index*	1.38*	0.11	(1.18, 1.62)	1.38*	0.11	(1.18, 1.62)	1.38*	0.11	(1.18, 1.62)
ICE Economic Index*	0.50*	0.04	(0.42, 0.60)	0.50*	0.04	(0.42, 0.60)	0.50*	0.04	(0.42, 0.60)
Asian Density	1.01	0.12	(0.79, 1.28)	1.01	0.12	(0.79, 1.28)	1.01	0.12	(0.79, 1.28)
Mean ADI Score (State) *	1.06*	0.01	(1.04, 1.07)	1.06*	0.01	(1.04, 1.07)	1.06*	0.01	(1.04, 1.07)

Note1*: The variable indicating the number of prior referrals has been recoded into 4 categories (0=no prior referral, 1= one or two prior referral(s), 2= three to five prior referrals, 3=six and above prior referrals). Model 0 compares category 0 with the combined categories of 1, 2 and 3. Model 1 compares the combined categories of 0 and 1 with the combined categories of 2 and 3. Model 2 compares the combined categories of 0, 1, and 2 with the category of 3.*
Note2*: p<0.05* (significant after adjusted by Bonferroni Corrections) p<0.01** p<0.001****

Table 13

Number of Prior Referrals for Substantiated Cases by Racial/Asian Regional Groups

Number of Prior Referral	**Model 0**			**Model 1**			**Model 2**		
	RRR	**S.E.**	**[C.I.]**	**RRR**	**S.E.**	**[C.I.]**	**RRR**	**S.E.**	**[C.I.]**
Race/Ethnicity									
Black	4.22*	0.40	(3.24, 5.48)	5.91*	0.74	(4.19, 8.34)	6.89*	1.30	(4.12, 11.52)
White	2.70*	0.25	(2.09, 3.49)	3.92*	0.49	(2.79, 5.52)	4.67*	0.87	(2.81, 7.77)
Hispanic	2.83*	0.26	(2.20, 3.65)	3.84*	0.47	(2.74, 5.37)	4.33*	0.81	(2.60, 7.21)
Pacific Islander	4.55*	0.64	(3.10, 6.68)	6.66*	1.19	(4.09, 10.86)	8.78*	2.22	(4.39, 17.53)
Native American	2.17*	0.33	(1.44, 3.28)	2.55*	0.45	(1.57, 4.14)	3.19*	0.79	(1.62, 6.26)
Other Asian	1.13	0.19	(0.72, 1.77)	1.43	0.34	(0.75, 2.75)	0.85	0.31	(0.31, 2.27)
Asian Indian	0.94	0.16	(0.58, 1.51)	1.00	0.23	(0.53, 1.87)	1.14	0.37	(0.47, 2.75)
Southeast Asian	1.69*	0.19	(1.24, 2.30)	2.19*	0.31	(1.49, 3.23)	2.18*	0.46	(1.22, 3.89)
East Asian (Reference)	1.00			1.00			1.00		
Age	1.22***	0.00	(1.21, 1.22)	1.20***	0.00	(0.94, 0.98)	1.21***	0.00	(1.20, 1.21)

Gender									
Female	0.96***	0.01	(0.94, 0.98)	0.96***	0.01	(0.94, 0.98)	0.96***	0.01	(0.94, 0.98)
Male (Reference)	1.00			1.00			1.00		
Allegation Type									
Sexual abuse	0.60*	0.02	(0.55, 0.66)	0.58*	0.02	(0.53, 0.65)	0.54*	0.03	(0.47, 0.61)
Physical Abuse (Reference)	1.00			1.00			1.00		
Severe neglect	0.81*	0.04	(0.71, 0.92)	0.75*	0.04	(0.64, 0.87)	0.76*	0.06	(0.62, 0.94)
General Neglect	1.04	0.03	(0.96, 1.12)	1.08	0.03	(0.99, 1.18)	1.11*	0.04	(1.01, 1.23)
Exploitation	0.35*	0.05	(0.23, 0.54)	0.46*	0.08	(0.29, 0.74)	0.46*	0.10	(0.25, 0.85)
Emotional Abuse	1.01	0.04	(0.91, 1.13)	1.01	0.05	(0.89, 1.14)	0.99	0.06	(0.85, 1.15)
Caretake Absence/Incapacity	1.44*	0.06	(1.28, 1.63)	1.65*	0.07	(1.46, 1.86)	1.77*	0.09	(1.54, 2.05)
At risk, sibling abused	1.33*	0.04	(1.21, 1.46)	1.24*	0.05	(1.12, 1.38)	1.19*	0.06	(1.03, 1.38)
ICE Education Index	1.40*	0.11	(1.20, 1.64)	1.40*	0.11	(1.20, 1.64)	1.40*	0.11	(1.20, 1.64)
ICE Economic Index	0.50*	0.04	(0.42, 0.59)	0.50*	0.04	(0.42, 0.59)	0.50*	0.04	(0.42, 0.59)
Asian Density	1.04	0.13	(0.82, 1.33)	1.04	0.13	(0.82, 1.33)	1.04	0.13	(0.82, 1.33)
Mean ADI Score (State)	1.06*	0.01	(1.04, 1.07)	1.06*	0.01	(1.04, 1.07)	1.06*	0.01	(1.04, 1.07)

Note1*: The variable indicating the number of prior referrals has been recoded into 4 categories (0=no prior referral, 1= one or two prior referral(s), 2= three to five prior referrals, 3=six and above prior referrals). Model 0 compares category 0 with the combined categories of 1, 2 and 3. Model 1 compares the combined categories of 0 and 1 with the combined categories of 2 and 3. Model 2 compares the combined categories of 0, 1, and 2 with the category of 3.*

Note2*: p<0.05* (significant after adjusted by Bonferroni Corrections) p<0.01** p<0.001****

Table 14

Number of Prior Referrals for Substantiated Cases by Racial/Asian Ethnical Groups

Number of Prior Referral	Model 0			Model 1			Model 2		
	RRR	**S.E.**	**[C.I.]**	**RRR**	**S.E.**	**[C.I.]**	**RRR**	**S.E.**	**[C.I.]**
Race/Ethnicity									
Black	4.18*	0.48	(2.99, 5.84)	6.18*	0.92	(4.01, 9.52)	7.56*	1.81	(3.76, 15.20)
White	2.68*	0.30	(1.93, 3.72)	4.10*	0.61	(2.66, 6.31)	5.12*	1.23	(2.55, 10.29)
Hispanic	2.81*	0.31	(2.02, 3.89)	4.01*	0.59	(2.61, 6.16)	4.74*	1.13	(2.36. 9.52)
Pacific Islander	4.51*	0.70	(2.88, 7.07)	6.97*	1.36	(3.95, 12.30)	9.63*	2.82	(4.10, 22.61)
Native American	2.15*	0.35	(1.34, 3.44)	2.66*	0.51	(1.51, 4.67)	3.49*	1.00	(1.52, 8.02)
Other Asian	1.12	0.19	(0.67, 1.85)	1.49	0.37	(0.72, 3.09)	0.92	0.36	(0.29, 2.90)
Asian Indian	0.93	0.17	(0.54, 1.59)	1.04	0.25	(0.52, 2.09)	1.24	0.43	(0.45, 3.43)
Cambodian	2.05*	0.40	(1.15, 3.63)	3.40*	0.81	(1.70, 6.81)	3.65*	1.27	(1.32, 10.09)
Filipino	1.67*	0.24	(1.10, 2.54)	2.43*	0.43	(1.45, 4.08)	2.78*	0.79	(1.22, 6.34)
Japanese	1.69	0.41	(0.83, 3.43)	1.96	0.62	(0.77, 4.96)	2.00	0.97	(0.49, 8.17)
Korean	0.69	0.15	(0.36, 1.31)	0.77	0.22	(0.33, 1.80)	0.94	0.39	(0.27, 3.19)
Laotian	2.45*	0.56	(1.27, 4.75)	1.95	0.60	(0.80, 4.77)	1.82	0.92	(0.41, 7.89)
Hmong	2.32*	0.49	(1.26, 4.27)	3.31*	0.79	(1.65, 6.65)	3.52*	1.22	(1.29, 9.65)
Vietnamese	1.17	0.20	(0.72, 1.90)	1.33	0.27	(0.74, 2.42)	0.98	0.34	(0.35, 2.71)
Chinese (Reference)	1.00								
Age	1.22***	0.00	(1.21, 1.22)	1.20***	0.00	(1.20, 1.20)	1.21***	0.00	(1.20, 1.21)
Gender									
Female	0.96***	0.01	(0.94, 0.98)	0.96***	0.01	(0.94, 0.98)	0.96***	0.01	(0.94, 0.98)
Male (Reference)	1.00			1.00			1.00		
Allegation Type									
Sexual abuse	0.60*	0.02	(0.54, 0.66)	0.58*	0.02	(0.53, 0.65)	0.54*	0.03	(0.47, 0.61)

Physical Abuse (Reference)	1.00								
Severe neglect	0.80*	0.04	(0.71, 0.91)	0.75*	0.04	(0.64, 0.87)	0.76*	0.06	(0.61, 0.94)
General Neglect	1.04	0.03	(0.96, 1.12)	1.08	0.03	(0.99, 1.18)	1.11*	0.04	(1.01, 1.22)
Exploitation	0.35*	0.05	(0.23, 0.53)	0.46*	0.08	(0.29, 0.74)	0.46*	0.1.	(0.25, 0.85)
Emotional Abuse	1.01	0.04	(0.91, 1.13)	1.01	0.05	(0.89, 1.14)	0.99	0.06	(0.84, 1.15)
Caretake Absence/Incapacity	1.44*	0.06	(1.28, 1.63)	1.65*	0.07	(1.46, 1.87)	1.77*	0.09	(1.54, 2.05)
At risk, sibling abused	1.33*	0.04	(1.21, 1.45)	1.24*	0.05	(1.12, 1.38)	1.19*	0.06	(1.03, 1.37)
ICE Education Index	1.39*	0.11	(1.19, 1.62)	1.39*	0.11	(1.19, 1.62)	1.39*	0.11	(1.19, 1.62)
ICE Economic Index	0.50*	0.04	(0.42, 0.60)	0.50*	0.04	(0.42, 0.60)	0.50*	0.04	(0.42, 0.60)
Asian Density	1.06	0.13	(0.84, 1.35)	1.06	0.13	(0.84, 1.35)	1.06	0.13	(0.84, 1.35)
Mean ADI Score (State)	1.05*	0.01	(1.04, 1.07)	1.05*	0.01	(1.04, 1.07)	1.05*	0.01	(1.04, 1.07)

Note1*: The variable indicating the number of prior referrals has been recoded into 4 categories (0=no prior referral, 1= one or two prior referral(s), 2= three to five prior referrals, 3=six and above prior referrals). Model 0 compares category 0 with the combined categories of 1, 2 and 3. Model 1 compares the combined categories of 0 and 1 with the combined categories of 2 and 3. Model 2 compares the combined categories of 0, 1, and 2 with the category of 3.*

Note2*: p<0.05* (significant after adjusted by Bonferroni Corrections) p<0.01** p<0.001****

Covariate Results for Disposition Outcomes. Child demographic covariates, including age and gender, were consistently significant in most of the models examining disposition related outcomes, with a few exceptions. When substantiation is the outcome, one year increase in age decreases the rate of substantiation by 4% (Table 6-8). Children identifying as females are 9% more likely to be substantiated than males when holding the other covariates constant (Table 6-8). Additionally, one year increase in age also increases the risk of taking over 30 days to disposition by 2%, and gender was not a significant predictor. In the ordered logit models, females are 4% less likely to have more prior referrals. In the same models, one year increase in age increases the likelihood of having more prior referrals by 21 to 22%, when holding other covariates constant.

As for case characteristics, allegation types have a varying effect on the disposition outcomes. Using physical abuse as the reference group. Sexual abuse (OR=1.95), severe neglect (OR=6.83), general neglect (OR=4.19), exploitation (OR=11.17), and caretaker absence (OR=11.58) increase the odds of substantiation. Among these allegation types, sexual abuse (OR=1.25), emotional abuse (OR=1.49), and sibling abuse (OR=1.10) increase the odds of taking more than 30 days to disposition, compared to physical abuse. Meanwhile, referrals with severe neglect (OR=0.78), exploitation (OR=0.60), or caretaker absence (OR=0.40) as the primary allegation type and incapacity tend to stay within the 30 days marker compared to physical abuse. In the models examining the number of prior referrals, referrals with allegations of sexual abuse (OR=0.60), severe neglect (OR=0.81), or exploitation (OR=0.35) are more likely to have fewer prior referrals compared to physical abuse. On the contrary, referrals of siblings being abused (OR=1.33) and caretaker absence / incapacity (OR=1.45) are more likely to have more prior referrals before substantiated, compared to physical abuse.

Interestingly, with the three models using different recoded categories of number of prior referrals as the outcomes, general neglect was not significantly different for the first two models, compared to physical abuse, until the third model. The statistical interpretation was that general neglect are more likely to have 6 and more referrals when compared to physical abuse. As a covariate, whether a referral has prior referral(s) seems to not impact the substantiation rate when controlling for other covariates. However, prior referral significantly increases the odds of taking more than 30 days to disposition by 7%.

A higher ICE_economic (OR=0.56) or ICE_education (OR=0.78) scores lower the rate of substantiation by nearly 44% and 22%, respectively, while holding other covariates constant. However, these indices are not significant in predicting the time to disposition outcome. Interestingly, the two indices have opposing effects in terms of the number of prior referral outcome: an area that has a concentration of high education level population has 38% higher odds of having more prior referrals before substantiation, an area that has a concentration of high-income population has 50% higher odds of having more prior referrals before substantiation. A higher ADI score, meaning an area is more disadvantaged in socio-economic measures, lowers the substantiation rate by 5% while it increases the odds of having more prior referrals by 6%.

Recidivism Outcomes

The outcome of recidivism is defined as having a re-report or case recurrence for the same child during the study period. Re-report is recorded when the child has a second referral, whether substantiated or not, after their first referral within the study period. Similarly, a case recurrence is recorded when a child has a second substantiated case after their first substantiated case since the study period. This section will start with the re-report outcomes using logistic and

survival models with the different racial categories and then present the same models with case recurrence as the outcome.

Re-report Outcomes. After controlling for whether having prior referral(s), child age, child gender, allegation types, and zip code level characteristics, the logistic regression model reveals that Asians as a single racial group are less likely than all other races to experience re-report (Table 15). However, the rate of re-report also differs among Asian subgroups. When dividing Asians into Southeast Asian, East Asian, Asian Indian, and other Asian, all of these regional groups are approximately 42% to 28% less likely to experience re-report when compared with Whites (Appendix XXIII). When comparing across these Asian groups, Southeast Asians are 22% more likely to experience re-report than East Asians (Table 16). Black (OR=2.00), White (OR=1.68), Hispanic (OR=1.72), Native American (OR=2.10), and Pacific Islander (OR=1.26) are also more likely to have re-report compared with East Asians. When further disaggregating Asian regional groups into ethnic groups, except Laotians and Koreans, all Asian ethnic groups are less likely to have re-reports compared to Whites (Appendix XXIV). Cambodians (OR=1.33), Filipinos (OR=1.35), and Laotians (OR=1.58) are more likely to experience re-report compared to Chinese. Japanese (OR=1.44) is the only East Asian group that is also more likely to, when compared to Chinese, experience re-report. (Table 17).

Table 15

Logistic Model for Re-report by Racial Groups

Re-report	Odds Ratio	Std. Err.	[Conf. Interval]
Race / Ethnicity			
Black	1.66*	0.03	(1.59, 1.75)
White	1.41*	0.03	(1.34, 1.47)
Hispanic	1.43*	0.02	(1.37, 1.49)
Asian (Reference)	1.00		

Pacific Islander	1.16*	0.05	(1.04, 1.29)
Native	1.75*	0.09	(1.53, 2.01)
If Prior Referral			
No (Reference)	1.00		
Yes	2.90*	0.02	(2.85, 2.94)
Age	0.92***	0.00	(0.92, 0.92)
Gender			
Female	1.06***	0.00	(1.05, 1.07)
Male (Reference)	1.00		
Allegation Type			
Sexual abuse	0.76*	0.01	(0.74, 0.79)
Physical Abuse (Reference)	1.00		
Severe neglect	0.74*	0.02	(0.69, 0.78)
General Neglect	1.06*	0.01	(1.04, 1.08)
Exploitation	1.07	0.11	(0.81, 1.41)
Emotional Abuse	0.96*	0.01	(0.93, 0.99)
Caretake Absence/Incapacity	1.08*	0.03	(1.02, 1.16)
Sibling abused	1.00	0.01	(0.97, 1.02)
ICE Education Index	1.13***	0.04	(1.05, 1.21)
ICE Economic Index	0.64***	0.03	(0.59, 0.70)
Asian Density	0.82***	0.04	(0.74, 0.91)
Mean ADI Score (State)	1.00	0.00	(0.99, 1.01)

Note: p<0.05* (significant after adjusted by Bonferroni Corrections) p<0.01** p<0.001***

Table 16

Logistic Model for Re-report by Racial/Asian Regional Groups

Re-report	Odds Ratio	Std. Err.	[Conf. Interval]
Race / Ethnicity			
Black	2.00*	0.06	(1.83, 2.18)
White	1.68*	0.05	(1.54, 1.84)
Hispanic	1.72*	0.05	(1.58, 1.87)
Native	2.10*	0.12	(1.79, 2.47)

Pacific Islander	1.26*	0.07	(1.09, 1.46)
Other Asian	0.96	0.06	(0.82, 1.13)
Asian Indian	1.08	0.06	(0.94, 1.24)
Southeast Asian	1.22*	0.04	(1.10, 1.35)
East Asian (reference)	1.00		
Age	0.92***	0.00	(0.92, 0.92)
Gender			
Female	1.06***	0.00	(1.05, 1.07)
Male (reference)	1.00		
If Prior Referral			
No (reference)	1.00		
Yes	2.89***	0.02	(2.85, 2.93)
Allegation Type			
Sexual abuse	0.76*	0.01	(0.74, 0.78)
Physical Abuse (reference)	1.00		
Severe neglect	0.73*	0.02	(0.69, 0.78)
General Neglect	1.06*	0.01	(1.04, 1.08)
Exploitation	1.06	0.11	(0.80, 1.41)
Emotional Abuse	0.96*	0.01	(0.93, 0.99)
Caretake Absence/Incapacity	1.08*	0.03	(1.01, 1.15)
Sibling abused	0.99	0.01	(0.97, 1.02)
ICE Education Index	1.14***	0.04	(0.76, 0.93)
ICE Economic Index	0.64***	0.03	(1.06, 1.22)
Asian Density	0.84***	0.04	(0.59, 0.70)
Mean ADI Score (State)	1.00	0.00	(0.99, 1.01)

Note: p<0.05* (significant after adjusted by Bonferroni Corrections) p<0.01** p<0.001***

Table 17

Logistic Model for Re-report by Racial/Asian Ethnical Groups

Re-report	**Odds Ratio**	**Std. Err.**	**[Conf. Interval]**	
Race / Ethnicity				
Black	2.08*	0.08	1.86	2.33

White	1.76*	0.07	1.57	1.96
Hispanic	1.79*	0.07	1.61	2.00
Native	2.19*	0.13	1.83	2.62
Pacific Islander	1.31*	0.08	1.11	1.55
Other Asian	1.00	0.06	0.83	1.21
Asian Indian	1.12	0.06	0.95	1.32
Cambodian	1.33*	0.11	1.05	1.68
Chinese (reference)	1.00			
Filipino	1.35*	0.06	1.18	1.54
Japanese	1.44*	0.13	1.11	1.86
Korean	0.98	0.07	0.80	1.20
Laotian	1.58*	0.15	1.20	2.08
Hmong	1.19	0.13	0.86	1.63
Vietnamese	1.13	0.05	0.98	1.30
If Prior Referral				
No(reference)	1.00			
Yes	2.89***	0.02	2.85	2.93
Age	0.92***	0.00	0.92	0.92
Gender				
Female	1.06***	0.00	1.05	1.07
Male(reference)	1.00			
Allegation Type				
Sexual abuse	0.76*	0.01	0.74	0.78
Physical Abuse(reference)	1.00			
Severe neglect	0.73*	0.02	0.69	0.78
General Neglect	1.06	0.01	1.04	1.08
Exploitation	1.06	0.11	0.80	1.41
Emotional Abuse	0.96*	0.01	0.93	0.99
Caretake Absence/Incapacity	1.08*	0.03	1.01	1.15
At risk, sibling abused	0.99	0.01	0.97	1.02
ICE Education Index	1.13***	0.04	1.06	1.22
ICE Economic Index	0.64***	0.03	0.59	0.70
Asian Density	0.85***	0.04	0.77	0.94
Mean ADI Score (State)	1.00	0.00	0.99	1.01

Note: $p<0.05$* (significant after adjusted by Bonferroni Corrections) $p<0.01$** $p<0.001$***

A more sophisticated survival analysis on the re-report rate also presents a similar outcome as Asians are less likely to have a re-report compared with other racial groups (Table 18). Interestingly, Japanese and Laotians are not different from Whites in terms of re-report

(Appendix XXVIII). The graph based on the model shows that by around 1100 days after the first referral, 25% of the Asian children will likely have a re-report. As a comparison, 32% of the Pacific Islanders and 42% of Blacks will likely have a re-report by the same time (Figure 2). When disaggregating the Asian racial group to ethnic groups (Figure 3), 25% of Chinese will have a re-report happening by 1900 days, while for Laotians and Hmong, it only takes approximately 500 and 800 days, respectively.

Table 18

Survival Analysis for Re-report by Racial Groups

Re-report	Haz. Ratio	Std. Err.	[Conf. Interval]
Race / Ethnicity			
Black	1.49*	0.02	(1.44, 1.55)
White	1.33*	0.02	(1.27, 1.38)
Hispanic	1.32*	0.02	(1.27, 1.37)
Asian (reference)	1.00		
Pacific Islander	1.13*	0.04	(1.03, 1.23)
Native	1.56*	0.06	(1.42, 1.72)
If Prior Referral			
No (reference)	1.00		
Yes	1.93***	0.01	(1.91, 1.95)
Age	0.94***	0.00	(0.94, 0.94)
Gender			
Female	1.04***	0.00	(1.04, 1.05)
Male (reference)	1.00		
Allegation Type			
Sexual abuse	0.83*	0.01	(0.80, 0.85)
Physical Abuse (reference)	1.00		
Severe neglect	0.81*	0.01	(0.77, 0.84)
General Neglect	1.09*	0.01	(1.07, 1.10)

Exploitation	1.18	0.10	(0.94, 1.50)
Emotional Abuse	1.03*	0.01	(1.01, 1.05)
Caretake Absence/Incapacity	1.06*	0.02	(1.01, 1.12)
Sibling abused	1.00	0.01	(0.98, 1.02)
ICE Education Index	1.14***	0.03	(1.08, 1.20)
ICE Economic Index	0.73***	0.02	(0.68, 0.78)
Asian Density	0.86***	0.04	(0.79, 0.93)
Mean ADI Score (State)	1.00	0.00	(1.00, 1.01)

Note: p<0.05* (significant after adjusted by Bonferroni Corrections) p<0.01** p<0.001***

Figure 2

Survival Curve of Re-report by Racial Groups

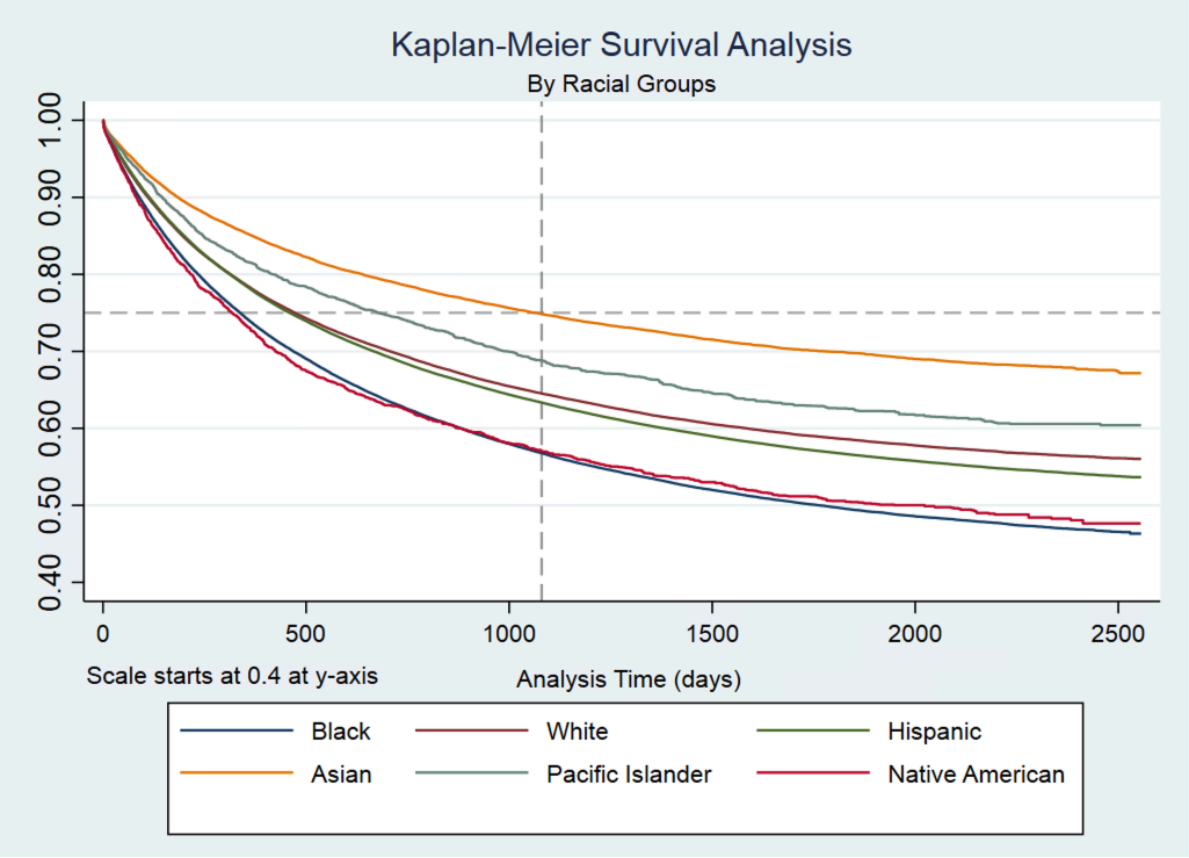
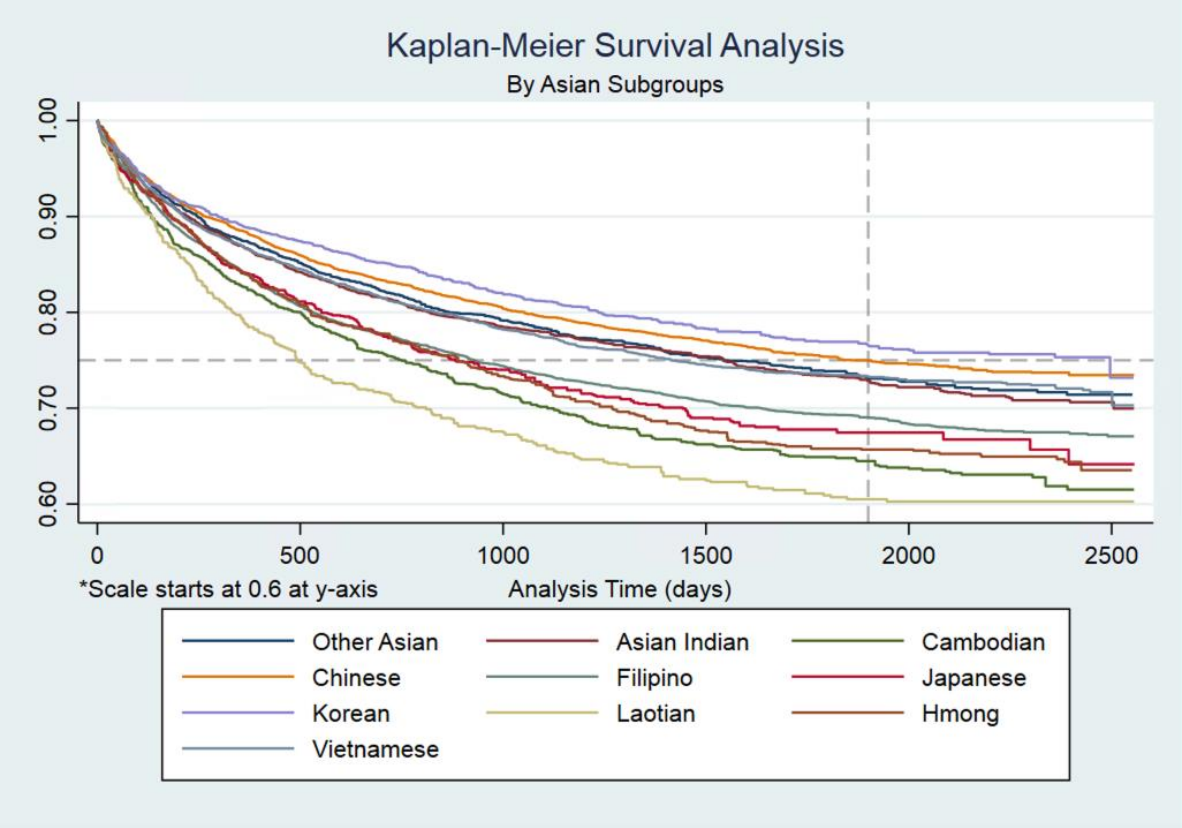


Figure 3

Survival Curve of Re-report by Asian Subgroups



Case-Recurrence Outcomes. After controlling for covariates, the logistic regression model reveals that all other races are, on average, 44% more likely to experience case recurrence than Asians (Table 19). When using East Asian as the reference group, Southeast Asians are 53% more likely to have at least one case recurrence, while the odds are even higher for other racial groups (Table 20). After disaggregating the Asian subgroups, Laotian and Hmong children are nearly 2.5 times more likely to experience case recurrence than Chinese families (Table 21). Using Whites as the reference group, Koreans, Laotians, Hmong, Cambodians, Asian Indians and the "Other Asian" group are not statistically different from Whites in terms of case recurrence, while Chinese, Japanese, Filipino, and Vietnamese are less likely to experience case recurrence (Appendix XXVIII).

Table 19

Logistic Model for Case Recurrence by Racial Groups

Case-recurrence	Odds Ratio	Std. Err.	[Conf. Interval]
Race / Ethnicity			
Black	1.59*	0.07	(1.41, 1.80)
White	1.36*	0.06	(1.21, 1.53)
Hispanic	1.38*	0.06	(1.24, 1.55)
Asian (Reference)	1.00		
Pacific Islander	1.35*	0.14	(1.04, 1.75)
Native	1.52*	0.15	(1.17, 1.97)
If Prior Referral			
No (Reference)	1.00		
Yes	2.23***	0.04	(2.16, 2.31)
Age	0.94***	0.00	(0.93, 0.94)
Gender			
Female	1.07***	0.01	(1.05, 1.10)
Male (Reference)	1.00		
Allegation Type			
Sexual abuse	0.77*	0.03	(0.70, 0.85)
Physical Abuse (Reference)	1.00		
Severe neglect	0.71*	0.03	(0.64, 0.80)
General Neglect	1.11*	0.03	(1.04, 1.20)
Exploitation	2.18*	0.28	(1.55, 3.08)
Emotional Abuse	1.19*	0.05	(1.08, 1.33)
Caretake Absence/Incapacity	1.99	0.04	(0.89, 1.11)
Sibling abused	1.11*	0.04	(1.01, 1.22)
ICE Education Index	1.13*	0.04	(1.05, 1.21)
ICE Economic Index	0.64***	0.03	(0.59, 0.70)
Asian Density	0.82	0.04	(0.74, 0.91)
Mean ADI Score (State)	1.00	0.00	(0.99, 1.01)

Note: p<0.05* (significant after adjusted by Bonferroni Corrections) p<0.01** p<0.001***

Table 20

Logistic Model for Case Recurrence by Racial/Asian Regional Groups

Case Recurrence	Odds Ratio	Std. Err.	[Conf. Interval]
Race / Ethnicity			
Black	2.44*	0.24	(1.87, 3.19)
White	2.07*	0.20	(1.59, 2.71)
Hispanic	2.12*	0.21	(1.63, 2.77)
Native	2.32*	0.32	(1.60, 3.37)
Pacific Islander	1.93*	0.28	(1.30, 2.87)
Other Asian	1.38	0.25	(0.85, 2.25)
Asian Indian	1.57	0.31	(0.92, 2.70)
Southeast Asian	1.53*	0.18	(1.11, 2.11)
East Asian (reference)	1.00		
Age	0.94***	0.00	(0.93, 0.94)
Gender			
Female	1.07***	0.01	(1.05, 1.10)
Male (reference)	1.00		
If Prior Referral			
No (reference)	1.00		
Yes	2.23***	0.04	(2.15, 2.30)
Allegation Type			
Sexual abuse	0.77*	0.03	(0.69, 0.85)
Physical Abuse (reference)	1.00		
Severe neglect	0.71*	0.03	(0.64, 0.80)
General Neglect	1.11*	0.03	(1.03, 1.20)
Exploitation	2.17*	0.28	(1.54, 3.06)
Emotional Abuse	1.20*	0.05	(1.08, 1.33)
Caretake Absence/Incapacity	0.99	0.04	(0.89, 1.11)
Sibling abused	1.11*	0.04	(1.01, 1.21)
Asian Density	1.00	0.09	(0.84, 1.18)
ICE Education Index	1.16*	0.07	(1.03, 1.30)
ICE Economic Index	0.68***	0.05	(0.59, 0.79)
Mean ADI Score (State)	1.00	0.01	(0.99, 1.01)

Note: p<0.05* (significant after adjusted by Bonferroni Corrections) p<0.01** p<0.001***

Table 21

Logistic Model for Case Recurrence by Racial/Asian Ethnical Groups

Case recurrence	Odds Ratio	Std. Err.	[Conf. Interval]	
Race / Ethnicity				
Black	2.66*	0.31	1.89	3.75
White	2.26*	0.27	1.61	3.19
Hispanic	2.32*	0.27	1.64	3.27
Native	2.54*	0.38	1.64	3.94
Pacific Islander	2.11*	0.33	1.33	3.34
Other Asian	1.51	0.28	0.88	2.59
Asian Indian	1.71	0.36	0.93	3.15
Cambodian	1.53	0.31	0.86	2.75
Chinese (reference)	1.00			
Filipino	1.53	0.23	0.99	2.38
Japanese	1.08	0.29	0.50	2.36
Korean	1.37	0.34	0.67	2.80
Laotian	2.46*	0.60	1.21	4.99
Hmong	2.23*	0.52	1.13	4.41
Vietnamese	1.49	0.23	0.94	2.35
If Prior Referral				
No(reference)	1.00			
Yes	2.23***	0.04	2.15	2.30
Age	0.94***	0.00	0.93	0.94
Gender				
Female	1.07***	0.01	1.05	1.10
Male(reference)	1.00			
Allegation Type				
Sexual abuse	0.77*	0.03	0.69	0.85
Physical Abuse(reference)	1.00			
Severe neglect	0.71*	0.03	0.64	0.79
General Neglect	1.11*	0.03	1.03	1.20
Exploitation	2.17*	0.28	1.54	3.05
Emotional Abuse	1.20*	0.05	1.08	1.33
Caretake Absence/Incapacity	0.99	0.04	0.89	1.11
At risk, sibling abused	1.11*	0.04	1.01	1.21
Asian Density	1.00	0.09	0.84	1.18
ICE Education Index	1.15*	0.07	1.03	1.29

ICE Economic Index	0.68***	0.05	0.59	0.79
Mean ADI Score (State)	1.00	0.01	0.99	1.01

Asian group remains to be less likely to have case recurrence than the other racial groups in the survival model (Table 22). The survival curve (Figure 4) shows that by 2000 days after the first substantiated case, 25% of Asians will likely experience another substantiated case, meaning a survival rate of 85%. However, the survival rate is 75% for Black children and 80% for White children by the 2000-day marker. When comparing to Whites, similar to re-report rate, only Chinese, Filipino, Japanese and Vietnamese are less likely to experience case recurrence, while the other Asian ethnic groups are not exhibiting statistical differences (Appendix XXIX). The graph (Figure 5) demonstrated that by day 1400, Laotians will have a survival rate of 80%, while the rate was higher for other Asian subgroups, with the highest being Chinese (=92%), Japanese (=90%), and Korean (=90%).

Table 22

Survival Analysis for Case Recurrence by Racial Groups

Case Recurrence	**Haz. Ratio**	**Std. Err.**	**[Conf. Interval]**
Race / Ethnicity			
Black	1.55*	0.06	(1.39, 1.72)
White	1.32*	0.05	(1.19, 1.46)
Hispanic	1.35*	0.05	(1.22, 1.49)
Asian (reference)	1.00		
Pacific Islander	1.35*	0.12	(1.08, 1.70)
Native	1.44*	0.13	(1.15, 1.80)
If Prior Referral			
No (reference)	1.00		
Yes	1.67***	0.02	(1.48, 1.57)
Age	0.95***	0.00	(0.95, 0.96)

Gender			
Female	1.06***	0.01	(1.04, 1.08)
Male (reference)	1.00		
Allegation Type			
Sexual abuse	0.81*	0.03	(0.75, 0.89)
Physical Abuse (reference)	1.00		
Severe neglect	0.79*	0.03	(0.72, 0.87)
General Neglect	1.19*	0.03	(1.12, 1.27)
Exploitation	2.20*	0.25	(1.61, 3.00)
Emotional Abuse	1.13*	0.04	(1.04, 1.24)
Caretake Absence/Incapacity	0.99	0.04	(0.89, 1.09)
Sibling abused	1.11*	0.03	(1.03, 1.21)
ICE Education Index	1.21*	0.06	(1.09, 1.33)
ICE Economic Index	0.69*	0.05	(0.61, 0.79)
Asian Density	1.01	0.07	(0.87, 1.16)
Mean ADI Score (State)	0.98	0.01	(0.84, 1.02)

Note: p<0.05* (significant after adjusted by Bonferroni Corrections) p<0.01** p<0.001***

Figure 4

Survival Curve of Case Recurrence by Racial Groups

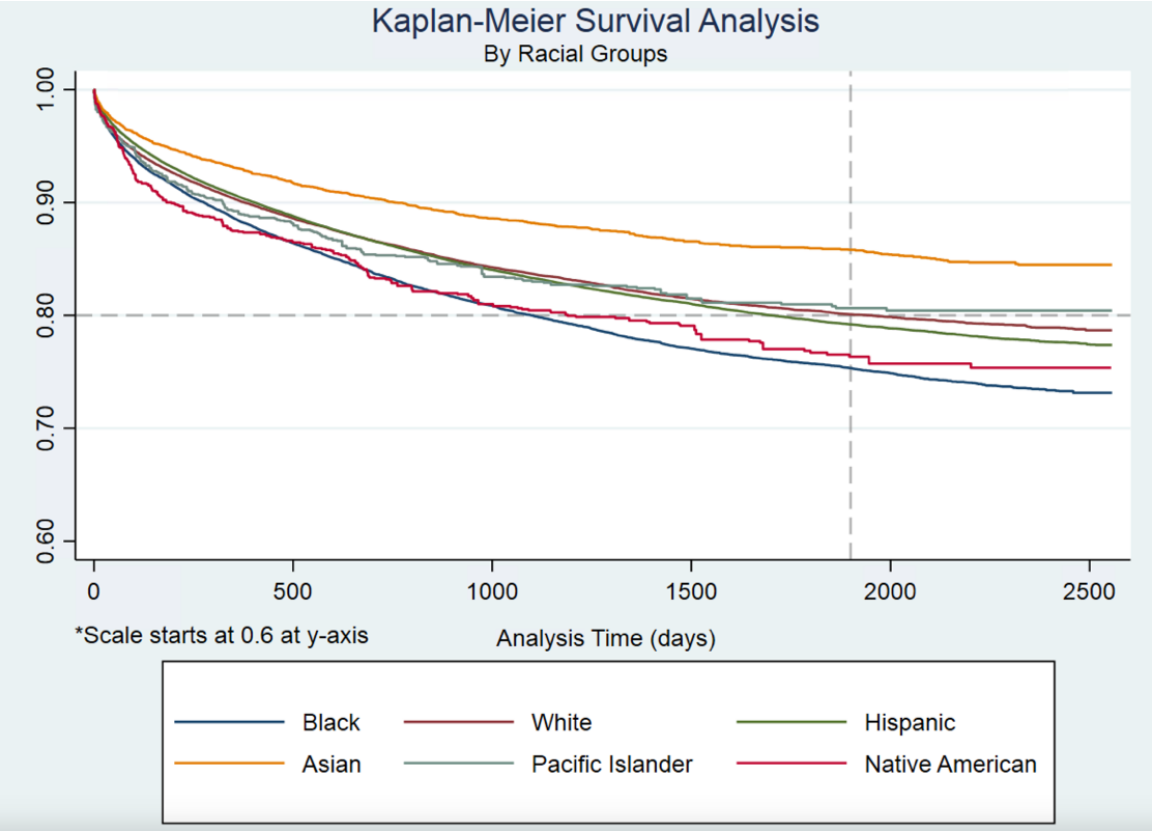
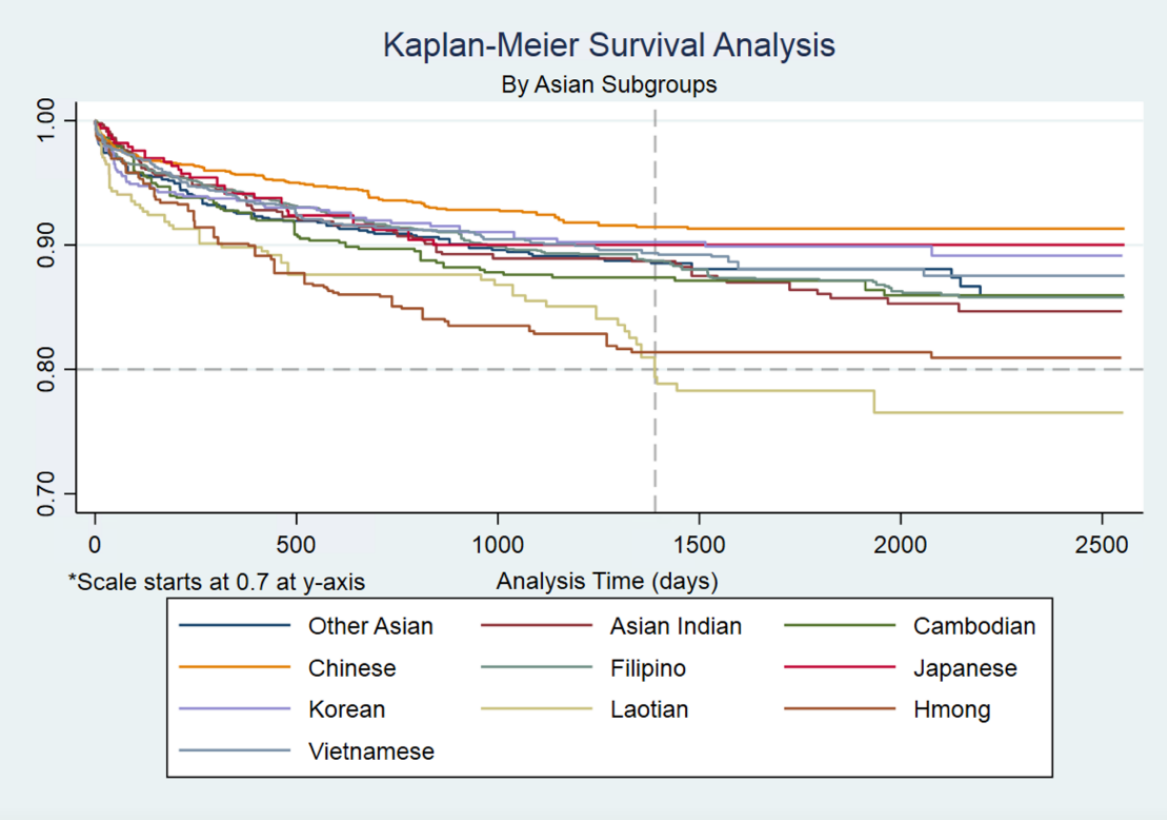


Figure 5

Survival Curve of Case Recurrence by Asian Subgroups



Covariate results for recidivism outcomes. In logistic models using re-report as the outcome, age has consistently been a protective factor, with a one-year increase in age reducing the likelihood of re-report by 6% to 8%. Compared to children that identify as males, females are more likely to experience re-reports (OR=6%~7%). Similar effects of age and gender can also be observed in the survival model. One-year increase in age decreases the hazard ratio by 6%, and females are 4% more likely to have a re-report than males. Whether having prior referral(s) has also been a significant predictor that increases the odds ratio of re-report by almost three times. In survival model, its effect has been slightly smaller (OR=1.93) yet remained significant statistically. In logistic models using case recurrence as the outcome, the odds ratio for age and

gender are very similar compared to the models of re-reports. However, the impact of prior referral(s) (OR=2.23; HR=1.67) on case recurrence was slightly smaller than in the re-report models (OR=2.89; HR=1.93).

In terms of allegation types, when using physical abuse as the reference group, sexual abuse, severe neglect, and emotional abuse are predicting a lower chance of re-report by nearly 24%, 26%, and 4%, respectively. Meanwhile, general neglect (OR=1.06) and caretaker abuse/incapacity (OR=1.08) increase the odds of having a re-report within the study period, controlling for other covariates. In the survival model, sexual abuse and severe neglect continue to lower the hazard ratio of having a re-report, yet emotional abuse increases the hazard ratio of re-reporting by 3%. This pattern can also be observed in terms of case recurrence outcome. Sexual abuse and severe neglect decrease the odds ratio of case recurrence by 23% and 29%, respectively, while general neglect (OR=1.11), exploitation (OR=2.18), emotional abuse (OR=1.19), and sibling abuse (OR=1.11) increase the odds ratio of case recurrence. In the corresponding survival model, sexual abuse and severe neglect decrease the hazard ratio by 19% and 21%, while general neglect (OR=1.19), exploitation (OR=2.20), emotional abuse (OR=1.13), and sibling abuse (OR=1.11) increases hazard ratio of case recurrence. Caretake absence/incapacity remains insignificant for all models that examine case recurrence.

Though the ADI score is not significant in all models of recidivism, other zipcode-level measures show some interesting results. One unit increase in the ICE_education index (a higher concentration of residents with high education level) seems to increase the odds of re-report by 14% on average, yet one unit increase in the ICE_economic index (a higher concentration of residents with high income) index decreases the odds of re-report by nearly 26%. Similarly, a unit increase in ICE_education index increases the odds of case recurrence by 15% to 21%

across logistic and survival models, while ICE_economic index decreases it by approximately 22%.

Neighborhood-level Outcomes

Asian American Density. Asian population density at the zipcode-level serves as a protective factor for both substantiation and re-reporting for Asian families. A one-unit increase in Asian density (i.e., the percentage of the Asian population contributing to the total population) results in a 54% reduction in the odds of substantiation for Asians (Table 23). The re-report model also reflects similar results, with a high Asian density leading to a 37% decrease in re-report likelihood, as presented in Table 24. However, Asian American density does not emerge as a significant predictor of case recurrence, as indicated by an insignificant p-value (Table 25), despite a 14% decrease in the odds ratio for case recurrence when Asian density rises from 0% to 100%.

Table 23

Substantiation Rate for Asian-Only Sample by Asian Regional Groups

Substantiation	Odds Ratio	Std. Err.	[Conf.	Interval]
Ethnicity				
Other Asian	0.98	0.06	0.85	1.14
Asian Indian	0.82*	0.05	0.70	0.94
Southeast Asian	0.90*	0.03	0.83	0.99
East Asian (reference)	1.00			
Age	0.96***	0.00	0.95	0.96
Gender				
Female	1.06**	0.02	1.02	1.10
Male(reference)	1.00			
If Prior Referral				
No (reference)	1.00			

Yes	1.10**	0.04	1.02	1.19
Allegation Type				
Sexual abuse	2.43*	0.17	2.02	2.93
Physical Abuse (reference)	1.00			
Severe neglect	6.07*	0.51	4.83	7.62
General Neglect	4.34*	0.24	3.73	5.05
Exploitation	7.82*	2.83	2.95	20.70
Emotional Abuse	0.91	0.06	0.75	1.09
Caretake Absence/Incapability	9.78*	0.96	7.52	12.72
At risk, sibling abused	0.78*	0.05	0.66	0.94
ICE Education Index	1.21	0.14	0.96	1.53
ICE Economic Index	1.06	0.14	0.81	1.38
Asian Density	0.47***	0.08	0.34	0.65
Mean ADI Score (State)	1.01	0.02	0.98	1.05

Note: p<0.05* (significant after adjusted by Bonferroni Corrections) p<0.01** p<0.001***

Table 24

Re-report Rate for Asian-Only Sample by Asian Regional Groups

If re-report	Odds Ratio	Std. Err.	[Conf.	Interval]
Ethnicity				
Other Asian	0.95	0.06	0.83	1.10
Asian Indian	1.07	0.05	0.95	1.20
Southeast Asian	1.19*	0.04	1.09	1.30
East Asian (reference)	1.00			
Age	0.94***	0.00	0.93	0.95
Gender				
Female	1.06**	0.02	1.02	1.10
Male(reference)	1.00			
If Prior Referral				
No(reference)	1.00			
Yes	2.82**	0.10	2.64	3.02

Allegation Type				
Sexual abuse	0.80	0.05	0.68	0.94
Physical Abuse(reference)	1.00			
Severe neglect	0.66	0.07	0.51	0.86
General Neglect	1.06	0.03	0.97	1.16
Exploitation	4.74*	2.62	1.07	20.94
Emotional Abuse	0.95	0.04	0.85	1.05
Caretake Absence/Incapability	1.03	0.13	0.73	1.44
At risk, sibling abused	0.95	0.03	0.86	1.04
ICE Education Index	1.06	0.11	0.86	1.31
ICE Economic Index	0.73*	0.10	0.56	0.95
Asian Density	0.63*	0.06	0.52	0.77
Mean ADI Score (State)	0.99	0.01	0.97	1.02

Note: p<0.05* (significant after adjusted by Bonferroni Corrections) p<0.01** p<0.001***

Table 25

Case Recurrence Rate for Asian-Only Sample by Asian Regional Groups

If case recurrence	Odds Ratio	Std. Err.	[Conf.	Interval]
Ethnicity				
Other Asian	1.32	0.24	0.86	2.03
Asian Indian	1.53	0.30	0.96	2.45
Southeast Asian	1.44*	0.19	1.05	1.98
East Asian (reference)	1.00			
Age	0.94***	0.01	0.93	0.96
Gender				
Female	1.09	0.07	0.97	1.24
Male(reference)	1.00			
If Prior Referral				
No(reference)	1.00			
Yes	2.66**	0.27	2.18	3.23
Allegation Type				

Sexual abuse	0.67	0.14	0.37	1.19
Physical Abuse(reference)	1.00	(base)		
Severe neglect	0.60	0.15	0.31	1.18
General Neglect	1.08	0.15	0.75	1.55
Exploitation	8.60*	5.14	1.72	42.96
Emotional Abuse	1.11	0.24	0.61	1.99
Caretake Absence/Incapability	0.90	0.23	0.44	1.81
At risk, sibling abused	0.95	0.19	0.55	1.65
ICE Education Index	1.55	0.49	0.83	2.90
ICE Economic Index	0.52	0.20	0.25	1.12
Asian Density	0.86	0.26	0.48	1.56
Mean ADI Score (State)	1.02	0.04	0.95	1.10

Note: $p<0.05$* (significant after adjusted by Bonferroni Corrections) $p<0.01$** $p<0.001$***

ICE Indices. The results show that neither the ICE_economic Index nor the ICE_education Index was significant predictor of substantiation or case recurrence, as indicated in Table 23 and Table 25. Nonetheless, the ICE_economic Index emerged as a protective factor against re-reporting, with one-unit increase in the index resulting in a 27% reduction in the odds of re-reporting, as shown in Table 24.

ADI Score. In all three statistical models utilizing Asian-only samples, the ADI score does not demonstrate statistical significance.

Chapter Five: Discussion

Overview

Indisputably, previous research on the racial and ethnical disparities in child welfare has documented the significant differences in outcomes for children from different racial backgrounds. Minoritized groups, such as African American and Native American, are overrepresented in the child welfare system, and they are more likely to experience prolonged stays in foster care, less likely to be reunified with their families, and more likely to experience poor educational and health outcomes compared to their white counterparts (Dettlaff & Rycraft, 2010; Harris & Hackett, 2008; Roberts, 2002; Ganasarajah et al., 2017). Conversely, Asian American children are underrepresented in the child welfare system, and the scarcity of existing research on this community makes their experience of accessing services and resources largely underexplored.

A crucial question concerning the racial disparities in the child welfare system concerns whether these disparities stem from differential needs across the racial groups, or biases within the system itself, or a combination of both. Several scholars postulate that the most significant attribution may be heterogeneous risk factors and distinct needs among children of disparate racial backgrounds. For instance, Native American and African American children experience increased risks of parental substance misuse, mental health issues, and poverty, leading to their elevated odds of child welfare involvement (Drake et al., 2009; Sedlak et al., 2010; Huang et al., 2017). On the other hand, Asian American families can face particular challenges such as immigration status and linguistic disparities that could make it difficult for them to utilize the child welfare system efficiently. Consequently, these factors may contribute to the underrepresentation of Asian American

children in the system and hinder service providers' understanding of the specific needs of this population.

An alternative argument is that the racial disparities arise from the explicit and implicit biases in the child welfare system. Systemic racism is deeply pervasive in social entities and engendered long-term consequences for marginalized communities, including those involved in the child welfare system. Studies have indicated that child welfare workers are more prone to perceive African American and Native American families as lacking and at higher risk. The outcome is manifested in their overrepresentation in the child welfare system (Font & Maguire-Jack, 2013; Roberts, 2008). Moreover, the child welfare system may inadvertently reinforce racial disparities by failing to provide culturally competent services that address the needs and challenges faced by minoritized groups (Harris, 2020). For instance, the lack of language services and culturally appropriate interventions may hinder access to essential resources for non-English speaking families or those with distinct cultural practices. In light of this argument, Asian American families may be subjected to racial stereotypes that portray them as model minorities who do not require or seek assistance. This misconception of the model minority may obscure the distinct adversities and obstacles encountered by different subpopulations within the Asian American community (Chou & Feagin, 2008), which may lead to their underrepresentation in the child welfare system, consequently impeding the availability and accessibility of culturally sensitive family preservation services.

Previous research that explores the underlying mechanisms of racial disparities in child welfare raises important questions. Nevertheless, Dettaff et al. (2011) noted that disparity in the child welfare system is a complicated phenomenon that "cannot be explained by a single component". While differential needs and systemic racism likely contribute to the disparities

through different pathways, more research is needed to disentangle the nuanced effects and inform transformative efforts that promote equity in the child welfare system. Especially, with most of the inquiries focusing on child welfare racial disparity has excluded Asian children and families, the scarcity of the evidence regarding disaggregated Asian ethnic groups' experience in the child welfare system is glaring.

To address the gaps in the existing literature, this study employs a representative dataset from California to comparatively analyze the experiences of Asian families within the child welfare system, both in relation to other racial groups and across various Asian subgroups. The ensuing sections begin by outlining the similarities and differences between the primary findings of this study and preceding literature, focusing on the nuances of racial and ethnic group distinctions. Subsequently, the interpretations of the results are expounded upon in the context of three prevailing arguments: differential needs, systemic biases, and Asian community cohesion. Finally, the study acknowledges its limitations and explores the potential implications for future research endeavors and practice improvements.

Intergroup Racial Disparities

The overall results when viewing Asian as a racial group show that Asians children and families in general exhibit more favorable disposition and recidivism outcomes than other groups. This section discusses the results by the two outcome categories and focuses on the racial comparisons.

Disposition Outcomes

Previous studies have demonstrated that substantiation rates are elevated among Black families, followed by other racially minoritized groups (Fluke et al., 2003; Sabol et al., 2004). The present study differs from the previous literature and reveals no notable disparities in

substantiation rates between Black and White families or other racial groups, with the exception of Hispanics and Native Americans. In comparison to Asian families, the only significant difference is observed with the Hispanic population, which exhibits a 7% higher substantiation rate than Asian families. However, some unanticipated findings emerge regarding other disposition levels. Referrals involving White families show a greater probability of being deemed unfounded compared to Asian families. Conversely, referrals concerning Black families display a higher likelihood of being categorized as inconclusive in comparison to Asians.

Previous research has also found that certain minority families experience longer referral processing times than White families. The authors attributed these disparities to various factors, including implicit biases among child welfare workers, lack of cultural competence, and systemic racism in the child welfare system (Jackson et al., 2016). The current study result partially supported the previous research, showing that referrals involving Hispanics are more likely to take over 30 days to disposition compared to Asians or Whites. However, similar to the substantiation outcome, there is no difference between Asians or Whites and other racial groups.

In general, past research indicates that minoritized families tend to experience a higher number of referrals before substantiation compared to White families. This phenomenon could be partially attributed to structural inequalities, including poverty, insufficient housing, and limited healthcare and social services access. (Sedlak et al., 2014; Kim & Drake, 2016). Evidence from the current study further supports that Black and Native American families tend to have more prior referrals before substantiation. The results also show that all other racial groups (i.e., White, Black, Hispanics, Native Americans, Pacific Islanders) experience an elevated propensity to have more prior referrals before substantiation compared to Asians. The

highest discrepancy presents between Native Americans and Asians. The result demonstrates consistency with the perception that Asian groups are at a lower risk in child welfare.

Recidivism Outcomes

Hypotheses of the second research question, which posited that odds for both case recurrence and re-report are the lowest for Asian groups in the context of child welfare, was confirmed by the results obtained. This disparity is most evident between Native American and Asian populations, with Blacks ranking as the second most pronounced group regarding case recurrence and re-report. Compared to White families, Black and Native American families consistently face a heightened risk of recidivism. On the other hand, Pacific Islander and Asian families tend to have a lower likelihood of experiencing recidivism. Previous literature has documented similar observations (Waid et al., 2021; Kim & Drake, 2019; Holbrook & Hudziak, 2020). In addition, the time to disposition and time to report also showed a lower risk for Asian families.

In contrast to prior literature, which has often combined the categories of Asian and Pacific Islanders (Eastman et al., 2016; Casanueva et al., 2015) in racial comparisons, the present study enriches the existing research by treating Asian and Pacific Islander populations as distinct entities. This approach allows for a comparative analysis of racial differences between Asians and other racial groups, employing representative data. Notably, the racial comparison reveals a subtle discrepancy with earlier literature regarding substantiation level outcomes, as no differences between Black and White families were observed in the current study. Such findings warrant further investigation in future research to better understand the underlying factors.

Intragroup Ethnical Disparities

The primary objective of this dissertation is to bridge the existing gap by not only disaggregating Asian with other groups such as Pacific Islanders, but also carefully examining the child welfare outcomes across the various Asian subgroups. While Asians appear to experience more positive child welfare outcomes when assessed as a single racial category, statistical evaluations with Asians subdivided by regions or ethnic classifications reveal notable differences among the various Asian groups. The following section will explore disparities among Asian regional and ethnic groups in disposition and recidivism outcomes. The discussion addresses both the comparison of Asian subgroups to one another and Asian subgroups to Whites.

Disposition Outcomes

In the context of child welfare research, although no differences in substantiation rates are observed across Asian regional subgroups, the "other Asian" category and Asian Indians exhibit a higher likelihood of being classified as unfounded or inconclusive when compared to the White racial group. Additionally, Asian Indian tend to be more frequently deemed as inconclusive when compared to East Asian referrals. Also using East Asians as the reference group, apart from Asian Indians, all racial and ethnic categories are more likely to experience disposition times exceeding 30 days, including Southeast Asians and “other Asians”. A similar outcome was presented for number of prior referrals, as Southeast Asians are also more likely to have higher number of prior referrals before substantiation than East Asians. A deeper examination of the data exposes further trends when using the Chinese group as the reference for disposition time comparisons. The discrepancies in disposition time are notably significant between Chinese and Hispanic, Native American, Pacific Islanders, other Asians, and Filipino

populations. These insights highlight the existing disparities within the child protective system across different Asian subgroups in disposition related outcomes.

Recidivism Outcomes

Asian ethnicities are also found to be strongly associated with the recidivism outcomes. In comparison to Whites, Asian subgroups exhibit lower risk of recidivism, although the degree of reduction varies across subgroups. For instance, East Asians are 41% less likely to experience recidivism, while Southeast Asians are 28% less likely. Conversely, Hmong and Laotians do not differ significantly from Whites regarding case recurrence rates. Furthermore, when comparing across Asian groups, it was observed that Southeast Asians are more prone to re-referral and case recurrence compared to East Asians. Additionally, certain ethnicities, such as Japanese, Filipino, Cambodian, Laotian, and Hmong, are associated with an increased risk of either re-reporting or case recurrence. The findings also revealed some interesting misalignments between the significance for re-referral and case recurrence models. For example, Cambodian, Filipino, and Japanese subgroups were associated with a higher likelihood of re-reporting of maltreatment, but not of case recurrence, compared to the Chinese subgroup. Conversely, the Hmong subgroup displayed a higher likelihood of experiencing case recurrence, while not showing a significant difference in re-referral rate, compared to Chinese. Although the reasons for such inconsistencies in Asian ethnicities and their varying recidivism outcomes remain unclear, one possible explanation could be the differing risk levels of general referrals and substantiated cases, and how the different Asian subgroups respond to such incidents.

The study provides evidence to enhance the understanding of intragroup ethnic disparities in the child welfare system by disaggregating Asians from other racial groups and examining differences in outcomes across various Asian subgroups, revealing existing disparities within the

child protective system. The findings also reveal interesting misalignments between re-referral and case recurrence models, with certain Asian ethnicities being associated with a higher likelihood of re-reporting of maltreatment or experiencing case recurrence.

Based on the findings of intergroup and intragroup comparisons, several areas for future research can be identified. First, the reasons for the disparities in disposition outcomes observed across different Asian subgroups require further investigation. Specifically, research is needed to explore the factors contributing to the higher likelihood of "other Asian" and Asian Indian referrals being classified as unfounded or inconclusive compared to the White racial group. Secondly, future studies should explore the factors contributing to the Asian ethnicities' differential outcomes in terms of re-referral and case recurrence. Thirdly, future research should examine the factors contributing to the higher risk of re-referral and case recurrence observed among certain Asian subgroups, such as Cambodian, Filipino, and Japanese populations. The exploration could emphasize roles of cultural factors, institutional biases, and social determinants of health in shaping these disparities.

Neighborhood Factors

Neighborhood factors have been studied to examine the impact child welfare outcomes intersectionally across racial groups (Klein & Merritt, 2014; Freisthler et al., 2007). Specifically for the Asian population, though there is no known research examining density of Asian American co-residence and its impact on child welfare outcomes, studies in other fields have pointed to the positive effect of Asian American population density in improving mental health and physical health conditions (Zhang & Ta, 2009). The current findings suggest that living in neighborhoods with higher levels of Asian American population density may have a protective effect on the substantiation rate and recidivism outcome of Asian American children. It is worth

noting that the Asian population density measure utilized in this study treated Asian as a single ethnic group. However, Asian is an umbrella term that encompasses more than 30 distinct Asian subgroups, each with their own unique cultures and languages. Therefore, it would be valuable to investigate how living in neighborhoods with individuals from the same Asian ethnic community would affect the outcomes, given the potential differences in cultural, social values, and languages among the various Asian subgroups.

Interestingly, the ICE indices and the ADI scores are not significantly contributing to the disposition or recidivism outcomes involving Asians. The ICE indices are designed to capture the social, economic, and environmental factors within communities that may influence child welfare outcomes. Similarly, the ADI scores represent a measure of neighborhood-level socioeconomic deprivation. In the context of child welfare outcomes for Asians, it is possible that the lack of significant influence from these indices and scores suggests that other factors, such as cultural, familial, local agency, or individual factors, may be more prominent in shaping these outcomes. Moreover, it is important to recognize the heterogeneity within the Asian community, as different subgroups may experience varying levels of adversity or have distinct resources and support systems even living in the same neighborhood. As a result, the ICE indices and ADI scores, which are measurements of the zipcode-level socioeconomics for the general population, may not adequately capture the nuances present within the Asian community that contribute to child welfare outcomes.

Contextualization of the Findings

Building on the existing framework that examines disparities in child welfare, this section explores the potential mechanisms behind the differences observed among Asian subgroups by focusing on three primary factors: varying socioeconomic and immigration

backgrounds across Asian subgroups, racial biases and colorism within the child welfare system, and the influence of Asian neighborhood dynamics. By further contextualizing the abovementioned findings, this section offers a deeper understanding of the experiences faced by Asian families involved with the child welfare system.

Differential Needs among Asian Subgroups

Following the argument of differential needs presented at the beginning of the discussion, Asian subgroups also each possess unique narratives about their socioeconomic and immigration backgrounds. Those differential needs across Asian subgroups can be attributed to factors such as immigration policies, birth nativity, poverty rate, neighborhood crime rate, presence of biological father, language proficiency and community sizes. First, drawing upon immigration backgrounds, Chinese, Koreans, and Japanese have a long migration history compared to other Asian groups. These groups' immigration history was often driven by economic opportunities, political upheaval, or other social factors. The first wave of Chinese immigrants arrived in the mid-19th century, followed by Korean immigrants in the early 20th century, and Japanese immigrants in the late 19th and early 20th centuries (Lee, 2015). Their immigration patterns were often characterized as chain migration and the establishment of "ethnic enclaves" (Xie & Gough, 2011; Liu & Geron, 2008; Paik et al., 2014). As for Southeast Asians, Laotian and Hmong immigrants have a relatively shorter history of migration, primarily driven by conflicts and political instability in their home countries. Most Laotian and Hmong immigrants arrived as refugees after the Vietnam War and the Secret War in Laos, which occurred in the mid-to-late 20th century (Hamilton-Merritt, 1993). As a result, their immigration experiences are more likely to involve forced displacement and resettlement in host countries, resulting in disadvantages in socioeconomic status (Niedzwiecki & Duong, 2018). These differences can be traced back to the

unique historical contexts, reasons for migration, and experiences of each subgroup upon arrival in the United States.

Due to the differences in educational attainment, occupational opportunities, and social capital, Asian subgroups including Chinese, Korean, and Japanese immigrants often have higher levels of education, English proficiency, professional skills, which can lead to better-paying jobs and upward socioeconomic mobility (Hanna & Batalova, 2015; Hoeffel et al., 2012). In contrast, certain immigrant groups may face greater challenges in overcoming poverty due to their refugee background, limited education, and lack of professional experience. However, it is essential to note that there are significant variations in socioeconomic status within each regional subgroup, which can be influenced by factors such as gender, age, countries of origin, and generation.

For instance, despite being one of the major East Asian groups, Japanese families that reside in California are more likely to experience re-report when compared with Chinese. This could be attributed to the profound and long-term impact of the Japanese Americans' experience during World War II, with the internment camps separating their families and remove them from business and employment. It is plausible that such historical traumas have resulted in intergenerational mental health issues and mistrust of governmental authorities, potentially influencing child maltreatment patterns (Heart et al., 2016; Nagata & Cheng, 2003; Nagata & Kim, 2019; Yakeuchi et al., 2007).

Language has been identified as a significant contributing factor in the processing time within the child welfare system (Maschi et al., 2014). Notably, there is substantial variation in language proficiency among diverse Asian subgroups. East Asian immigrants, particularly those from recent migration waves, tend to have a higher proficiency in their host country's language, attributable to their educational backgrounds and language exposure in their home countries

(Chiswick & Miller, 2001). In contrast, Southeast Asian immigrants, specifically Laotians and Hmong, may encounter more substantial language barriers due to their refugee backgrounds, limited educational opportunities, and the linguistic distance between their native languages and those of their host countries (Feuerherm & Ramanathan, 2016). When child welfare workers struggle to find suitable language interpreters, it naturally takes longer to make a disposition and provide necessary and appropriate services. This consideration is particularly crucial when interpreting the results of time to disposition (Stith et al., 2009). The extended time to disposition referrals involving Southeast Asian families could be due to the relative rarity and limited study of certain Southeast Asian languages, making interpretation services more difficult to find.

The population size of specific Asian subgroups also plays a critical role in their child welfare outcomes. In the United States, some Asian subgroups are more populous, such as Chinese, Indian, and Filipino communities, whereas others like Hmong and Laotian communities represent smaller populations. Larger communities often benefit from increased visibility and access to culturally relevant resources, potentially contributing to improved child welfare outcomes. In contrast, less populous Asian subgroups may experience greater challenges navigating the child welfare system due to limited access to resources tailored to their unique cultural and linguistic needs. As a result, these smaller communities may be at a higher risk of negative child welfare outcomes, such as increased rates of child maltreatment recidivism. Recognizing these disparities and addressing the specific needs of different Asian subgroups is essential for promoting equitable child welfare practices and ensuring that all children and families receive the support they require.

Besides factors such as socioeconomic status, immigration background, and language proficiency that may contribute to higher recidivism rates and increased prior referrals among

Southeast Asian groups, colorism, a prevalent issue in the Asian community, could also play a role in the varying needs of these groups. Colorism is described as the prejudice or discrimination based on skin color, and in the Asian context, it is often associated with the history of colonization (Hunter, 2007). For instance, research shows that Southeast Asians, who typically have darker skin compared to East Asian families, are more often discriminated against by their skin color than East Asian communities, and lighter-skinned Asians may have better social and economic opportunities than their darker-skinned counterparts in fields such as education (Ryabov, 2016). Despite the scarcity of research on this topic within the child welfare domain, given the abundant evidence of colorism and racism and their impact on child maltreatment rate, it is reasonable to assume that such discrimination could also manifest among Asian subgroups, resulting in exacerbated outcomes among Southeast Asians, and even Asian Indians.

However, it's important to note that these child welfare outcomes can be influenced by a variety of factors, with the aforementioned factors (e.g., historical context, languages, etc.) being only a few aspects. More proximate variables, such as mental and behavioral health issues within the family and community, may also play a significant role. Therefore, while we can speculate the macro-level impact such as potential historical influences, it's crucial not to overstate these findings without acknowledging the complexity of the issue. Future research is needed to further examine the statistical significance of such factors.

Systemic Bias and Model Minority

The worker's racial bias in the child welfare system refers to the tendency of child welfare workers to view and assess families through a racial lens. This can lead to implicit biases and assumptions that can impact the way child welfare workers interact with families from

different racial backgrounds, including Asian American families. Worker's bias and systemic racism have significantly negatively impacted racial minority families in the child welfare system. This can lead to the overrepresentation of racial minority families in the child welfare system and disparities in child welfare outcomes.

One of the most significant impacts of worker's bias and systemic racism on racial minority families is the disproportionate involvement of these families in the child welfare system. Research has consistently shown that Black, Indigenous, and Latinx families are more likely to be reported to child welfare agencies, investigated for abuse or neglect, and have their children removed from their homes compared to white families (Drake & Jonson-Reid, 2014; Magruder & Shaw, 2008; Ganasarajah et al., 2017). These disparities can be partially attributed to explicit or implicit biases and assumptions held by child welfare workers, such as stereotypes about the parenting abilities of racial minority families Roberts, 2002; Fluke et al., 2011). Moreover, systemic racism and worker's bias can lead to incorrect assessments and interventions that harm the well-being of racial minority families. Child welfare workers may not fully understand the cultural practices and beliefs of families from different racial backgrounds, leading to unnecessary interventions that do not align with the family's cultural values (Fontes, 2005). For example, a child welfare worker may view a parent's decision to discipline their child with physical punishment as abusive, not weighing in the fact that this is a culturally accepted practice in some communities (Lansford & Deater-Deckard, 2012; Lau, 2010).

Asians are generally underrepresented in the child welfare system, which may lead some to believe that systemic biases do not impact this population. However, it can be argued that these biases manifest differently for Asian families, potentially affecting them in opposite pathways. For example, the model minority myth, which portrays Asian Americans as successful,

high-achieving individuals, can also impact child welfare outcomes for Asian American families. Child welfare workers may assume that Asian American families have the resources and support they need to address any issues, leading to underestimation of their needs and overlooking the barriers and challenges they may face. As a result, these workers may overlook or downplay signs of abuse or neglect, which can limit service provision. The present study finds that despite the lack of differences in substantiation rate among Asian subgroups, there is a noticeable disparity in recidivism. This may be explained by a possible bias among workers who are influenced by the model minority myth. This bias may cause workers not to substantiate cases with Asian families or even fail to provide necessary services when they are required. In other words, the model minority myth can lead workers to assume that Asian families do not need help or are capable of handling situations on their own, which can result in a lack of support for these families.

Another aspect of worker bias might be inadequate knowledge and understanding of the Asian community's diversity. Research has shown that East Asians have been the "face" of Asians and therefore, resulting in the "invisibility" of certain subgroups (i.e., Southeast and South Asians). This perception is partially due to the manner and the frequency of East Asians being portrayed in the media and the historical significance of nations like China, Japan, and South Korea in international affairs (Taylor & Stern, 1997; Goh et al, 2023). As a result, other Asian subgroups (e.g., South Asians and Southeast Asians)
are socially overlooked, and the diversity of the broader Asian community is not acknowledged (Goh et al, 2023). This lack of holistic understanding of the diverse Asian communities among child welfare workers may lead to unintentional biases and misjudgments when working with Asian families, contributing to the observed disparities between Asian subgroups in this study.

Nevertheless, systemic bias in the child welfare system may not fully explain the disparities observed in the length of time it takes to disposition cases involving Southeast Asian families compared to East Asian families, nor the higher number of prior referrals for southeast Asians. Other factors, such as socio-economic status of the family, cultural distinctions, and language barriers, may have a more substantial impact on shaping these outcomes. It is crucial to highlight that systemic bias is merely one possible explanation for the observed disparities. As this study's model does not directly measure the worker's attitudes towards Asian families, additional research is necessary to better comprehend the intricate interplay of factors contributing to the experiences of Asian families within the child welfare system. This may involve directly measuring both explicit and implicit biases in the system.

"Protective" Effect of Asian Density on Child Maltreatment

Since the beginning of Asian's immigration history to the United States in the early nineteenth century, one of the adaptive strategies for Asian communities to form an "ethnic enclave" that serves as "self-policing community" by "keeping others out and maintaining order within" (Lowe, 2018). This practice has helped the Asian immigrant community solve community disputes internally and serves as a collective liaison to the American society (Matsuoka et al.,1997). In this study context, Asian American density statistically serves as a protective factor that reduces the likelihood of re-report and substantiation for Asian families. Several underlying mechanisms could potentially account for these findings, both positively and negatively.

One potential explanation for the protective role of Asian American density by zip code is the availability of culturally and linguistically appropriate services. Higher concentrations of Asian American populations in a given area can lead to increased demand for and availability of

services tailored to Asian cultures and languages. Geographical accessibility to these services may enhance the likelihood of service utilization and adherence. Therefore, Asian families living in those areas may benefit from these services and reduce their risk of recidivism.

Another possible explanation is that areas with higher Asian American density may be more likely to have Asian social workers in the local child protective services offices. Ethnicity matching between families and child welfare workers has been shown to foster better rapport, cultural understanding, and overall service quality, leading to improved family outcomes (Lee et al., 2011). It is also possible that local child protective services offices may tend to recruit Asian social workers who are fluent in the relevant languages. This, in turn, could lead to improved communication, better understanding of cultural nuances, and ultimately, more positive outcomes for Asian American families involved in the child welfare system (Kwong et al., 2014).

However, the protective role of Asian American density only in relation to re-reporting, but not case recurrence, might be partially explained by cultural practices and stigma of external authorities. Asian communities may be more likely to accept harsh discipline as a cultural practice and exhibit mistrust towards the child welfare system (Lau et al., 2003). This could result in reduced reporting or re-reporting of child maltreatment incidents, with the community avoiding the involvement of external authorities. Meanwhile, the stigma associated with involvement in child welfare services might also contribute to the protective effect of Asian American density. The initial child maltreatment report may be stigmatizing for Asian families, leading community members to avoid involving external services in subsequent incidents. Instead, communities may rely on informal networks, such as kinships, religious institutions, or other community groups, to address and resolve child maltreatment concerns internally (Zhai & Gao, 2009; Johnson, 2007).

Overall, though some previous literature in Asian American social issues have warned about the disparities across Asian subgroups, there is little research using representative data to further explore the topic especially in child welfare The current study's findings align with the literature that Asians as a group tend to have better child welfare outcomes than other minority groups. However, with its unique focus on disaggregated Asian subgroups, this study has provided additional evidence to uncover the magnitude of disparities among Asian subgroups. The findings show that among Asian children reported to CPS, those from certain subgroups, such as Southeast Asian children, tend to have exacerbated outcomes than others, such as East Asian children. This disparity has been consistent across outcomes such as time to disposition, count of referrals before substantiation, re-report, and case recurrence. The findings suggest that further attention should be given to addressing disparities within Asian subgroups to ensure equitable child welfare outcomes for all minority groups.

Limitations

The research has constraints that warrant attention. First, the study only included 20 counties possessing the highest precents of Asian American density, omitting the data of Asian Americans in less populated areas. Even though the sample covers a fairly large portion of the population (78% of the general population and 93% of the Asian population) in California, this selection may limit the generalizability of the findings to geolocations with alternative demographic compositions. Future research should examine the child welfare involvement of Asian families in counties with low Asian American density, which might imply an even more severe lack of resources for those Asian families.

Second, the child welfare system is a complex system that comprises multiple levels of factors that can influence disposition and recidivism outcomes. Though the study included

influential covariates such as prior referrals, allegation type, and child age, future research may include additional components such as worker's ethnicity, service provision, number of children in the household, and Structured Decision Making (SDM) assessments.

Third, it should be noted that the dataset used in the study did not account for variations in agency characteristics, such as the varying caseloads, work atmosphere, supervision adequacy, and agency culture. These distinctions could potentially cause varying child welfare outcomes across the counties and even zip code areas. Consequently, future research could examine agency-level factors and their influence on child welfare outcomes, using measurements such as the Collaborative Organizational Health Assessment (COHA) (Capacity Building Center for States, 2019).

Finally, the American Community Survey (ACS) 5-year estimates used to compute neighborhood-level variables were based on data from 2015 to 2019, not aligning precisely with the research timeframe of 2014-2020. Considering the repercussions of COVID-19 starting in early 2020 and its socio-economic consequences, the interpretation of neighborhood factors should be interpreted with circumspection. Despite these constraints, this research provided preliminary insights into the lived experiences of Asian American families as they navigate the complexities of the child welfare system.

Implications for Child Welfare Policy and Practices

As the Asian population rapidly grows in the U.S., it is essential to tailor social services and policies to accommodate their specific experiences and needs. States and local agencies need to develop and implement policies that promote services that are both culturally and linguistically appropriate for diverse Asian subgroups, particularly Southeast Asian communities. This may entail locating specialized fundings for resources, services, and programs tailored to

Asian populations. Another recommendation is to encourage and support recruiting and hiring child welfare workers from diverse cultural backgrounds, focusing on matching workers with families from similar ethnic backgrounds. By prioritizing the alignment of workers with families of similar ethnic origins, this approach can enhance cultural and linguistic comprehension, ultimately fostering stronger relationships and improve family outcomes.

Despite the widespread recognition of the importance in requiring child welfare workers to receive ongoing training in cultural competence, more could be accomplished by undermine the Asian panethnicity concept and train workers about the varying historical and immigration experiences of Asian subgroups. This is especially important for non-East Asians who are often ignored by the public under the model minority myth (Yamashita, 2022; Kang, 2004; Lee et al., 2017). There is a pressing need to establish and execute training initiatives for child welfare professionals that enhance their cultural sensitivity and awareness concerning their clientele's varied backgrounds and experiences. This is particularly crucial for underrepresented populations, such as the Hmong and Laotian communities, that experience disparities in disposition and recidivism outcomes relative to East Asian groups.

In addition to agency-based approaches, it is vital to acknowledge the significance of resilience within Asian communities and the contribution of existing ethnic networks, cultural, and social capital in promoting positive outcomes for youth (Zhou, 2004). Child welfare practitioners and the system itself should collaborate with community-based organizations, such as the Asian American Federation (AAF), Asian Americans Advancing Justice (AAAJ), Asian Pacific Islander Legal Outreach (API Legal Outreach), National Asian Pacific American Women's Forum (NAPAWF), and the South Asian Network (SAN), to support and strengthen these networks, thereby enhancing the well-being of children and families. Given the limited

knowledge regarding the Asian community's experience in child welfare, it is essential to encourage research and policy briefs incorporating community voices. This would entail highlighting community-initiated efforts in addressing violence, child abuse, domestic violence, and children's well-being. Such research can help inform policy and practice, empowering community-led endeavors to improve outcomes for Asian families within the child welfare system. In all, it is crucial for researchers, policymakers, and practitioners to carefully consider these complex dynamics to develop culturally sensitive interventions and policies that address the unique needs of each racial and ethnic group within the child welfare system, ultimately reducing disparities and ensuring fair access to resources and services for all children and families in need.

Appendices

Appendix I

Substantiation Rate by Racial Groups Using Whites as Reference

	Odds Ratio	S.E.	[Conf. Interval]
Age	0.96***	0.00	(0.95, 0.96)
Gender			
Male (Reference)	1.00		
Female	1.09***	0.00	(1.08, 1.10)
Allegation Type			
Physical Abuse (Reference)	1.00		
Sexual abuse	1.95*	0.06	(1.81, 2.11)
Severe neglect	6.83*	0.24	(6.22, 7.50)
General Neglect	4.19*	0.14	(3.84, 4,57)
Exploitation	11.17*	0.73	(9.37, 13.31)
Emotional Abuse	0.90	0.04	(0.81, 1.01)
Caretake Absence/Incapacity	11.58*	0.42	(10.50, 12.78)
At risk, sibling abused	0.89*	0.03	(0.82, 0.97)
If Prior Referral			
Yes	0.99	0.01	(0.97, 1.01)
No (Reference)	1.00		
Race / Ethnicity			
White (Reference)	1.00		
Asian	1.05	0.02	(0.99, 1.10)
Black	0.99	0.02	(0.94, 1.05)
Hispanic	1.12*	0.02	(1.08, 1.16)
Native American	1.12*	0.05	(1.01, 1.25)
Pacific Islander	1.12*	0.05	(1.01, 1.25)
ICE Education Index	0.78**	0.07	(0.65, 0.93)
ICE Economic Index	0.56***	0.06	(0.45, 0.70)
Asian Density	1.06	0.12	(0.84, 1.33)
Mean ADI Score (State)	0.95***	0.01	(0.93, 0.97)

Note: $p<0.05$* (significant after adjusted by Bonferroni Corrections) $p<0.01$** $p<0.001$***

Appendix II

Substantiation Rate by Racial/Asian Regional Groups Using Whites as Reference

	Odds Ratio	Std. Err.	[Conf. Interval]
Race / Ethnicity			
Black	0.99	0.02	(0.94, 1.05)
White (reference)	1.00		
Hispanic	1.12*	0.02	(1.08, 1.16)
Native	1.12*	0.05	(1.01, 1.25)
Pacific Islander	1.05	0.05	(0.92, 1.19)
Other Asian	1.09	0.06	(0.94, 1.27)
Asian Indian	0.87	0.05	(0.74, 1.02)
Southeast Asian	1.02	0.03	(0.95, 1.09)
East Asian (reference)	1.02	0.04	(0.93, 1.13)
Age	0.96***	0.00	(0.95, 0.96)
Gender			
Female	1.09***	0.00	(1.08, 1.10)
Male (reference)	1.00		
If Prior Referral			
No (reference)	1.00		
Yes	0.99	0.01	(0.97, 1.01)
Allegation Type			
Sexual abuse	1.95*	0.06	(1.80, 2.11)
Physical Abuse (reference)	1.00		
Severe neglect	6.83*	0.24	(6.22, 7.50)
General Neglect	4.19*	0.13	(3.84, 4.57)
Exploitation	11.16*	0.73	(9.36, 13.30)
Emotional Abuse	0.90	0.04	(0.80, 1.01)
Caretake Absence/Incapacity	11.57*	0.42	(10.48, 12.77)
Sibling abused	0.89*	0.03	(0.82, 0.97)
Asian Density	1.07	0.12	(0.85, 1.35)
ICE Education Index	0.78**	0.07	(0.65, 0.93)
ICE Economic Index	0.56***	0.06	(0.45, 0.70)
Mean ADI Score (State)	0.95***	0.01	(0.93, 0.97)

Note: $p<0.05$* (significant after adjusted by Bonferroni Corrections) $p<0.01$** $p<0.001$***

Appendix III

Substantiation Rate by Racial/Asian Ethnical Groups Using Whites as Reference

	Odds Ratio	Std. Err.	[Conf. Interval]
Race / Ethnicity			
Black	1.00	0.02	(0.94, 1.06)
White (reference)	1.00		
Hispanic	1.12*	0.02	(1.08, 1.17)
Native	1.12	0.05	(0.99, 1.26)
Pacific Islander	1.05	0.05	(0.91, 1.20)
Other Asian	1.09	0.06	(0.93, 1.28)
Asian Indian	0.86	0.05	(0.73, 1.03)
Cambodian	1.14	0.11	(0.87, 1.50)
Chinese	1.00	0.05	(0.88, 1.14)
Filipino	0.99	0.03	(0.90, 1.08)
Japanese	0.98	0.07	(0.79, 1.22)
Korean	1.10	0.07	(0.92, 1.32)
Laotian	1.14	0.11	(0.85, 1.52)
Hmong	1.28	0.12	(0.97, 1.68)
Vietnamese	0.91	0.04	(0.81, 1.02)
If Prior Referral			
No (Reference)	1.00		
Yes	0.99	0.01	(0.97, 1.01)
Age	0.96***	0.00	(0.95,0.96)
Gender			
Female	1.09***	0.00	(1.08, 1.10)
Male (Reference)	1.00		
Allegation Type			
Sexual abuse	1.95*	0.06	(1.80, 2.11)
Physical Abuse (Reference)	1.00		
Severe neglect	6.82*	0.24	(6.22, 7.49)
General Neglect	4.19*	0.14	(3.84, 4.57)
Exploitation	11.14*	0.73	(9.35, 13.28)

Emotional Abuse	0.90	0.04	(0.80, 1.01)
Caretake Absence/Incapacity	11.57*	0.42	(10.49, 12.77)
Sibling abused	0.89*	0.03	(0.82, 0.97)
ICE Education Index	0.78*	0.07	(0.65, 0.93)
ICE Economic Index	0.57***	0.06	(0.45, 0.71)
Asian Density	1.08	0.13	(0.86, 1.35)
Mean ADI Score (State)	0.95***	0.01	(0.93, 0.97)

Note: $p<0.05$* (significant after adjusted by Bonferroni Corrections) $p<0.01$** $p<0.001$***

Appendix IV

Unfounded Rate by Racial Groups Using Asian as Reference

	Odds Ratio	S.E.	[Conf. Interval]
Age	1.02***	0.00	(1.01, 1.02)
Gender			
Male (Reference)	1.00		
Female	0.93***	0.00	(0.93, 0.94)
Allegation Type			
Physical Abuse (Reference)	1.00		
Sexual abuse	0.89*	0.02	(0.85, 0.94)
Severe neglect	0.42*	0.01	(0.39, 0.45)
General Neglect	0.55*	0.01	(0.53, 0.58)
Exploitation	0.19*	0.01	(0.15, 0.23)
Emotional Abuse	0.41*	0.01	(0.39, 0.43)
Caretake Absence/Incapacity	0.42*	0.01	(0.39, 0.46)
At risk, sibling abused	1.72*	0.05	(1.59, 1.86)
If Prior Referral			
Yes	1.06***	0.01	(1.04, 1.08)
No (Reference)	1.00		
Race / Ethnicity			
Asian (Reference)	1.00		
White	1.05*	0.02	(1.00, 1.11)
Black	0.85*	0.03	(0.78, 0.92)
Hispanic	1.04	0.02	(0.99, 1.10)
Native American	1.09	0.05	(0.96, 1.23)
Pacific Islander	0.99	0.04	(0.88, 1.11)
ICE Education Index	1.55**	0.26	(1.12, 2.14)
ICE Economic Index	3.72***	0.71	(2.56, 5.41)
Asian Density	1.37	0.24	(0.97, 1.93)
Mean ADI Score (State)	1.16***	0.02	(1.12, 1.21)

Note: $p<0.05$* (significant after adjusted by Bonferroni Corrections) $p<0.01$** $p<0.001$***

Appendix V

Unfounded Rate by Racial /Asian Regional Groups Using East Asian as Reference

	Odds Ratio	Std. Err.	[Conf.Interval]
Race / Ethnicity			
Black	0.83*	0.04	(0.74. 0.93)
White	1.03	0.04	(0.92, 1.14)
Hispanic	1.01	0.04	(0.90, 1.14)
Native	1.06	0.07	(0.89, 1.26)
Pacific Islander	1.00	0.06	(0.85, 1.18)
Other Asian	0.82*	0.04	(0.71, 0.94)
Asian Indian	0.97	0.05	(0.84, 1.11)
Southeast Asian	1.04	0.05	(0.92, 1.17)
East Asian (reference)	1.00		
Age	1.02***	0.01	(1.02, 1.02)
Gender			
Female	0.93***	0.01	(0.93, 0.94)
Male (reference)	1.00		
If Prior Referral			
No (reference)	1.00		
Yes	1.06*	0.01	(1.04, 1.08)
Allegation Type			
Sexual abuse	0.89*	0.02	(0.86, 0.92)
Physical Abuse (reference)	1.00		
Severe neglect	0.42*	0.01	(0.40, 0.44)
General Neglect	0.55*	0.01	(0.53, 0.58)
Exploitation	0.19*	0.01	(0.16, 0.22)
Emotional Abuse	0.41*	0.01	(0.40, 0.43)
Caretake Absence/Incapacity	0.42*	0.01	(0.40, 0.45)
Sibling abused	1.72*	0.05	(1.62, 1.82)
Asian Density	1.35	0.24	(0.96, 1.92)
ICE Education Index	1.54**	0.26	(1.12, 2.13)
ICE Economic Index	3.72***	0.71	(2.55, 5.42)
Mean ADI Score (State)	1.16***	0.02	(1.12, 1.21)

Note: $p<0.05$* (significant after adjusted by Bonferroni Corrections) $p<0.01$** $p<0.001$***

Appendix VI

Unfounded Rate by Racial/Asian Ethnical Groups Using Chinese as Reference

	Odds Ratio	Std. Err.	[Conf. Interval]
Race / Ethnicity			
Black	0.78*	0.04	(0.68, 0.90)
White	1.97	0.05	(0.85, 1.12)
Hispanic	0.96	0.05	(0.83, 1.11)
Native	1.01	0.07	(0.82, 1.23)
Pacific Islander	0.95	0.06	(0.78, 1.15)
Other Asian	0.78*	0.04	(0.66, 0.92)
Asian Indian	0.92	0.05	(0.78, 1.08)
Cambodian	0.98	0.09	(0.76, 1.28)
Chinese (Reference)	1.00		
Filipino	0.95	0.05	(0.82, 1.10)
Japanese	0.86	0.06	(0.71, 1.05)
Korean	0.85	0.05	(0.72, 1.01)
Laotian	1.08	0.12	(0.78, 1.50)
Hmong	0.90	0.11	(0.63, 1.28)
Vietnamese	1.06	0.06	(0.89, 1.27)
If Prior Referral			
No (Reference)	1.00		
Yes	1.06***	0.01	(1.04, 1.08)
Age	1.02***	0.00	(1.02, 1.02)
Gender			
Female	0.93***	0.00	(0.93, 0.94)
Male (Reference)	1.00		
Allegation Type			
Sexual abuse	0.89*	0.02	(0.85, 0.94)
Physical Abuse (Reference)	1.00		
Severe neglect	0.42*	0.01	(0.39, 0.45)
General Neglect	0.55*	0.01	(0.53, 0.58)
Exploitation	0.19*	0.01	(0.15, 0.23)

Emotional Abuse	0.41*	0.01	(0.39, 0.43)
Caretake Absence/Incapacity	0.42*	0.01	(0.39, 0.46)
Sibling abused	1.72*	0.05	(1.59, 1.87)
ICE Education Index	1.55*	0.26	(1,12, 2.14)
ICE Economic Index	3.72***	0.71	(2.55, 5.41)
Asian Density	1.34	0.24	(0.95, 1.90)
Mean ADI Score (State)	1.16**	0.02	(1.12, 1.21)

Note: p<0.05* (significant after adjusted by Bonferroni Corrections) p<0.01** p<0.001***

Appendix VII

Inconclusive Rate by Racial Groups Using Asian as Reference

	Odds Ratio	S.E.	[Conf. Interval]
Age	1.01***	0.00	(1.01, 1.01)
Gender			
Male (Reference)	1.00		
Female	1.02***	0.00	(1.01, 1.03)
Allegation Type			
Physical Abuse (Reference)	1.00		
Sexual abuse	0.85*	0.02	(0.81, 0.90)
Severe neglect	0.65*	0.02	(0.60, 0.69)
General Neglect	0.82*	0.02	(0.77, 0.86)
Exploitation	0.92	0.07	(0.75, 1.13)
Emotional Abuse	2.49*	0.05	(2.36, 2.63)
Caretake Absence/Incapacity	0.35*	0.01	(0.32, 0.38)
At risk, sibling abused	0.58*	0.02	(0.54, 0.63)
If Prior Referral			
Yes	0.95***	0.01	(0.94, 0.97)
No (Reference)	1.00		
Race / Ethnicity			
Asian (Reference)	1.00		
White	0.98	0.02	(0.93, 1.02)
Black	1.22*	0.03	(1.14, 1.31)
Hispanic	0.92*	0.02	(0.88, 0.97)
Native American	0.88*	0.04	(0.78, 0.99)
Pacific Islander	0.97	0.04	(0.87, 1.09)
ICE Education Index	0.73*	0.11	(0.55, 0.97)
ICE Economic Index	0.36***	0.05	(0.27, 0.49)
Asian Density	0.69*	0.11	(0.51, 0.94)
Mean ADI Score (State)	0.88***	0.01	(0.85, 0.91)

Note: $p<0.05$* (significant after adjusted by Bonferroni Corrections) $p<0.01$** $p<0.001$***

Appendix VIII

Inconclusive Rate by Racial /Asian Regional Groups Using East Asian as Reference

	Odds Ratio	Std. Err.	[Conf. Interval]
Race / Ethnicity			
Black	1.24*	0.05	(1.14, 1.34)
White	0.99	0.04	(0.92, 1.07)
Hispanic	0.95	0.04	(0.87, 1.02)
Native	0.89	0.05	(0.79, 1.01)
Pacific Islander	0.99	0.06	(0.88, 1.11)
Other Asian	1.19*	0.05	(1.09, 1.30)
Asian Indian	1.11*	0.06	(1.01, 1.22)
Southeast Asian	0.97	0.04	(0.87, 1.05)
East Asian (reference)	1.00		
Age	1.01***	0.01	(1.01, 1.01)
Gender			
Female	1.02***	0.01	(1.01, 1.03)
Male (reference)	1.00		
If Prior Referral			
No (reference)	1.00		
Yes	0.95***	0.01	(0.94, 0.97)
Allegation Type			
Sexual abuse	0.85*	0.01	(0.83, 0.88)
Physical Abuse (reference)	1.00		
Severe neglect	0.65*	0.02	(0.61, 0.68)
General Neglect	0.82*	0.02	(0.78, 0.85)
Exploitation	0.92	0.07	(0.79, 1.07)
Emotional Abuse	2.49*	0.05	(2.39, 2.59)
Caretake Absence/Incapacity	0.34*	0.01	(0.33, 0.37)
Sibling abused	0.59*	0.02	(0.56, 0.62)
Asian Density	0.70*	0.11	(0.51, 0.95)
ICE Education Index	0.73*	0.11	(0.55, 0.97)
ICE Economic Index	0.36***	0.05	(0.27, 0.49)
Mean ADI Score (State)	0.88***	0.01	(0.85, 0.91)

Note: $p<0.05$* (significant after adjusted by Bonferroni Corrections) $p<0.01$** $p<0.001$***

Appendix IX

Inconclusive Rate by Racial /Asian Ethnical Groups Using Chinese as Reference

	Odds Ratio	Std. Err.	[Conf. Interval]
Race / Ethnicity			
Black	1.29*	0.06	(1.13, 1.49)
White	1.03	0.05	(0.90, 1.18)
Hispanic	0.98	0.05	(0.85, 1.13)
Native	0.93	0.06	(0.77, 1.12)
Pacific Islander	1.03	0.07	(0.86, 1.25)
Other Asian	1.24*	0.06	(1.07, 1.45)
Asian Indian	1.15	0.06	(0.98, 1.36)
Cambodian	0.95	0.08	(0 74, 1.21)
Chinese (Reference)	1.00		
Filipino	1.06	0.05	(0.91, 1.23)
Japanese	1.17	0.08	(0.97, 1.43)
Korean	1.11	0.07	(0.93, 1.33)
Laotian	0.85	0.09	(0.62, 1.16)
Hmong	0.97	0.11	(0.70, 1.33)
Vietnamese	0.99	0.06	(0.82, 1.19)
If Prior Referral			
No (Reference)	1.00		
Yes	0.95***	0.01	(0.93, 0.97)
Age	1.01***	0.01	(1.01, 1.01)
Gender			
Female	1.02***	0.01	(1.01, 1.03)
Male (Reference)	1.00		
Allegation Type			
Sexual abuse	0.85*	0.02	(0.81, 0.90)
Physical Abuse (Reference)	1.00		
Severe neglect	0.65*	0.02	(0.60, 0.69)
General Neglect	0.82*	0.02	(0.77, 0.86)
Exploitation	0.92	0.07	(0.75, 1.13)

Emotional Abuse	2.49*	0.05	(2.36, 2.63)
Caretake Absence/Incapacity	0.35*	0.01	(0.32, 0.38)
Sibling abused	0.58*	0.02	(0.55, 0.63)
ICE Education Index	0.73*	0.11	(0.55, 0.97)
ICE Economic Index	0.36***	0.05	(0.28, 0.05)
Asian Density	0.70*	0.11	(0.51, 0.95)
Mean ADI Score (State)	0.88***	0.01	(0.85, 0.91)

Note: p<0.05* (significant after adjusted by Bonferroni Corrections) p<0.01** p<0.001***

Appendix X

Unfounded Rate by Racial Groups Using Asian as Reference

	Odds Ratio	S.E.	[Conf. Interval]
Age	1.02***	0.00	(1.01, 1.02)
Gender			
Male (Reference)	1.00		
Female	0.93***	0.00	(0.93, 0.94)
Allegation Type			
Physical Abuse (Reference)	1.00		
Sexual abuse	0.89*	0.02	(0.85, 0.94)
Severe neglect	0.42*	0.01	(0.39, 0.45)
General Neglect	0.55*	0.01	(0.53, 0.58)
Exploitation	0.19*	0.01	(0.15, 0.23)
Emotional Abuse	0.41*	0.01	(0.39, 0.43)
Caretake Absence/Incapacity	0.42*	0.01	(0.39, 0.46)
At risk, sibling abused	1.72*	0.05	(1.59, 1.86)
If Prior Referral			
Yes	1.06***	0.01	(1.04, 1.08)
No (Reference)	1.00		
Race / Ethnicity			
Asian (Reference)	1.00		
White	1.05*	0.02	(1.00, 1.11)
Black	0.85*	0.03	(0.78, 0.92)
Hispanic	1.04	0.02	(0.99, 1.10)
Native American	1.09	0.05	(0.96, 1.23)
Pacific Islander	0.99	0.04	(0.88, 1.11)
ICE Education Index	1.55**	0.26	(1.12, 2.14)
ICE Economic Index	3.72***	0.71	(2.56, 5.41)
Asian Density	1.37	0.24	(0.97, 1.93)
Mean ADI Score (State)	1.16***	0.02	(1.12, 1.21)

Note: $p<0.05$* (significant after adjusted by Bonferroni Corrections) $p<0.01$** $p<0.001$***

Appendix XI

Unfounded Rate by Racial /Asian Regional Groups Using Whites as Reference

	Odds Ratio	Std. Err.	[Conf. Interval]
Race / Ethnicity			
Black	0.81*	0.03	(0.73, 0.89)
White (reference)	1.00		
Hispanic	0.99	0.02	(0.95, 1.03)
Native	1.03	0.05	(0.91, 1,17)
Pacific Islander	0.98	0.04	(0.87, 1.10)
Other Asian	0.80*	0.03	(0.71, 0.89)
Asian Indian	0.94	0.05	(0.82, 1.09)
Southeast Asian	1.01	0.02	(0.95, 1.08)
East Asian	0.97	0.04	(0.88, 1.08)
Age	1.02***	0.01	(1.02, 1.02)
Gender			
Female	0.93***	0.01	(0.93, 0.94)
Male (reference)	1.00		
If Prior Referral			
No (reference)	1.00		
Yes	1.06*	0.01	(1.04, 1.08)
Allegation Type			
Sexual abuse	0.89*	0.02	(0.86, 0.92)
Physical Abuse (reference)	1.00		
Severe neglect	0.42*	0.01	(0.40, 0.44)
General Neglect	0.55*	0.01	(0.53, 0.58)
Exploitation	0.19*	0.01	(0.16, 0.22)
Emotional Abuse	0.41*	0.01	(0.40, 0.43)
Caretake Absence/Incapacity	0.42*	0.01	(0.40, 0.45)
Sibling abused	1.72*	0.05	(1.62, 1.82)
Asian Density	1.35	0.24	(0.96, 1.92)
ICE Education Index	1.54**	0.26	(1.12, 2.13)
ICE Economic Index	3.72***	0.71	(2.55, 5.42)
Mean ADI Score (State)	1.16***	0.02	(1.12, 1.21)

Note: $p<0.05$* (significant after adjusted by Bonferroni Corrections) $p<0.01$** $p<0.001$***

Appendix XII

Unfounded Rate by Racial/Asian Ethnical Groups Using Whites as Reference

	Odds Ratio	Std. Err.	[Conf. Interval]
Race / Ethnicity			
Black	0.81*	0.03	(0.73, 0.89)
White (Reference)	1.00		
Hispanic	0.99	0.02	(0.94, 1.03)
Native	1.03	0.05	(0.91, 1.18)
Pacific Islander	0.98	0.04	(0.86, 1.11)
Other Asian	0.80*	0.03	(0.71, 0.90)
Asian Indian	0.95	0.05	(0.81, 1.10)
Cambodian	1.01	0.07	(0.82, 1.24)
Chinese	1.03	0.05	(0.90, 1.18)
Filipino	0.97	0.03	(0.89, 1.06)
Japanese	0.89	0.06	(0.74, 1.06)
Korean	0.88	0.05	(0.75, 1.02)
Laotian	1.11	0.11	(0.83, 1.48)
Hmong	0.92	0.09	(0.69, 1.24)
Vietnamese	1.09	0.05	(0.96, 1.25)
If Prior Referral			
No (Reference)	1.00		
Yes	1.06***	0.01	(1.04, 1.08)
Age	1.02***	0.00	(1.02, 1.02)
Gender			
Female	0.93***	0.00	(0.93, 0.94)
Male (Reference)	1.00		
Allegation Type			
Sexual abuse	0.89*	0.02	(0.85, 0.94)
Physical Abuse (Reference)	1.00		
Severe neglect	0.42*	0.01	(0.39, 0.45)
General Neglect	0.55*	0.01	(0.53, 0.58)
Exploitation	0.19*	0.01	(0.15, 0.23)

Emotional Abuse	0.41*	0.01	(0.39, 0.43)
Caretake Absence/Incapacity	0.42*	0.01	(0.39, 0.46)
Sibling abused	1.72*	0.05	(1.59, 1.87)
ICE Education Index	1.55*	0.26	(1,12, 2.14)
ICE Economic Index	3.72***	0.71	(2.55, 5.41)
Asian Density	1.34	0.24	(0.95, 1.90)
Mean ADI Score (State)	1.16**	0.02	(1.12, 1.21)

Note: p<0.05* (significant after adjusted by Bonferroni Corrections) p<0.01** p<0.001***

Appendix XIII

Inconclusive Rate by Racial Groups Using Whites as Reference

	Odds Ratio	S.E.	[Conf. Interval]
Age	1.01***	0.00	(1.01, 1.01)
Gender			
Male (Reference)	1.00		
Female	1.02***	0.00	(1.01, 1.03)
Allegation Type			
Physical Abuse (Reference)	1.00		
Sexual abuse	0.85*	0.02	(0.81, 0.90)
Severe neglect	0.65*	0.02	(0.60, 0.69)
General Neglect	0.82*	0.02	(0.77, 0.86)
Exploitation	0.92	0.07	(0.75, 1.13)
Emotional Abuse	2.49*	0.05	(2.36, 2.63)
Caretake Absence/Incapacity	0.35*	0.01	(0.32, 0.38)
At risk, sibling abused	0.58*	0.02	(0.54, 0.63)
If Prior Referral			
Yes	0.95***	0.01	(0.94, 0.97)
No (Reference)	1.00		
Race / Ethnicity			
White (Reference)	1.00		
Asian	1.03	0.02	(0.98, 1.08)
Black	1.25*	0.03	(1.17, 1.34)
Hispanic	0.95*	0.01	(0.91, 0.98)
Native American	0.90	0.04	(0.80, 1.01)
Pacific Islander	1.00	0.04	(0.90, 1.10)
ICE Education Index	0.73*	0.11	(0.55, 0.97)
ICE Economic Index	0.36***	0.05	(0.27, 0.49)
Asian Density	0.69*	0.11	(0.51, 0.94)
Mean ADI Score (State)	0.88***	0.01	(0.85, 0.91)

Note: $p<0.05$* (significant after adjusted by Bonferroni Corrections) $p<0.01$** $p<0.001$***

Appendix XIV

Inconclusive Rate by Racial /Asian Regional Groups Using Whites as Reference

	Odds Ratio	Std. Err.	[Conf. Interval]
Race / Ethnicity			
Black	1.25*	0.03	(1.16, 1.35)
White (reference)	1.00		
Hispanic	0.95*	0.01	(0.91, 0.99)
Native	0.90	0.04	(0.80, 1.01)
Pacific Islander	1.00	0.04	(0.89, 1.12)
Other Asian	1.20*	0.05	(1.09, 1.33)
Asian Indian	1.12	0.06	(0.97, 1.28)
Southeast Asian	0.98	0.02	(0.92, 1.04)
East Asian	1.01	0.04	(0.91, 1.12)
Age	1.01***	0.01	(1.01, 1.01)
Gender			
Female	1.02***	0.01	(1.01, 1.03)
Male (reference)	1.00		
If Prior Referral			
No (reference)	1.00		
Yes	0.95***	0.01	(0.94, 0.97)
Allegation Type			
Sexual abuse	0.85*	0.01	(0.83, 0.88)
Physical Abuse (reference)	1.00		
Severe neglect	0.65*	0.02	(0.61, 0.68)
General Neglect	0.82*	0.02	(0.78, 0.85)
Exploitation	0.92	0.07	(0.79, 1.07)
Emotional Abuse	2.49*	0.05	(2.39, 2.59)
Caretake Absence/Incapacity	0.34*	0.01	(0.33, 0.37)
Sibling abused	0.59*	0.02	(0.56, 0.62)
Asian Density	0.70*	0.11	(0.51, 0.95)
ICE Education Index	0.73*	0.11	(0.55, 0.97)
ICE Economic Index	0.36***	0.05	(0.27, 0.49)
Mean ADI Score (State)	0.88***	0.01	(0.85, 0.91)

Note: $p<0.05$* (significant after adjusted by Bonferroni Corrections) $p<0.01$** $p<0.001$***

Appendix XV

Inconclusive Rate by Racial /Asian Ethnical Groups Using Whites as Reference

	Odds Ratio	Std. Err.	[Conf. Interval]
Race / Ethnicity			
Black	1.25*	0.03	(1.15, 1.35)
White	1.00	(base)	
Hispanic	0.95*	0.01	(0.91, 0.99)
Native	0.90	0.04	(0.79, 1.02)
Pacific Islander	1.00	0.04	(0.88, 1.03)
Other Asian	1.20*	0.05	(1.08, 1.34)
Asian Indian	1.12	0.06	(0.96, 1.30)
Cambodian	0.92	0.06	(0.75, 1.12)
Chinese (Reference)	0.97	0.04	(0.85, 1.11)
Filipino	1.03	0.03	(0.94, 1.12)
Japanese	1.14	0.07	(0.95, 1.35)
Korean	1.07	0.06	(0.91, 1.26)
Laotian	0.82	0.08	(0.63, 1.07)
Hmong	0.93	0.09	(0.72, 1.22)
Vietnamese	0.95	0.04	(0.84, 1.09)
If Prior Referral			
No (Reference)	1.00		
Yes	0.95***	0.01	(0.93, 0.97)
Age	1.01***	0.01	(1.01, 1.01)
Gender			
Female	1.02***	0.01	(1.01, 1.03)
Male (Reference)	1.00		
Allegation Type			
Sexual abuse	0.85*	0.02	(0.81, 0.90)
Physical Abuse (Reference)	1.00		
Severe neglect	0.65*	0.02	(0.60, 0.69)
General Neglect	0.82*	0.02	(0.77, 0.86)
Exploitation	0.92	0.07	(0.75, 1.13)

Emotional Abuse	2.49*	0.05	(2.36, 2.63)
Caretake Absence/Incapacity	0.35*	0.01	(0.32, 0.38)
Sibling abused	0.58*	0.02	(0.55, 0.63)
ICE Education Index	0.73*	0.11	(0.55, 0.97)
ICE Economic Index	0.36***	0.05	(0.28, 0.05)
Asian Density	0.70*	0.11	(0.51, 0.95)
Mean ADI Score (State)	0.88***	0.01	(0.85, 0.91)

Note: $p<0.05$* (significant after adjusted by Bonferroni Corrections) $p<0.01$** $p<0.001$***

Appendix XVI

Time to Disposition Outcome by Racial Groups Using Whites as Reference

Time to Disposition	Odds Ratio	Std. Err.	[Conf.	Interval]
Race/Ethnicity				
Black	1.02	0.02	0.97	1.08
White (Reference)	1.00			
Hispanic	1.07*	0.02	1.03	1.12
Asian	0.98	0.02	0.93	1.03
Pacific Islander	1.09	0.05	0.97	1.22
Native	1.11	0.06	0.97	1.27
If prior referral				
No (Reference)	1.00			
Yes	1.07***	0.01	1.05	1.09
Age	1.02***	0.01	1.01	1.02
Gender				
Female	0.99	0.01	0.98	1.01
Male (Reference)	1.00			
Allegation Type				
Sexual abuse	1.25*	0.01	1.21	1.29
Physical Abuse (Reference)	1.00			
Severe neglect	0.78*	0.01	0.74	0.81
General Neglect	1.01	0.01	0.99	1.04
Exploitation	0.60*	0.04	0.50	0.73
Emotional Abuse	1.49*	0.02	1.43	1.55
Caretake Absence/Incapacity	0.40*	0.01	0.38	0.43
At risk, sibling abused	1.10*	0.01	1.06	1.13
ICE Education Index	1.23	0.14	0.99	1.53
ICE Economic Index	0.95	0.14	0.71	1.26
Asian Density	0.44	0.07	0.32	0.61
Mean ADI Score (State)	1.00	0.01	0.97	1.03

Note: p<0.05* (significant after adjusted by Bonferroni Corrections) p<0.01** p<0.001***

Appendix XVII

Time to Disposition Outcome by Racial/Asian Regional Groups Using Whites as Reference

Time to Disposition	Odds Ratio	Std. Err.	[Conf.	Interval]
Race/Ethnicity				
Black	1.02	0.02	0.97	1.08
White (Reference)	1.00			
Hispanic	1.07*	0.02	1.03	1.12
Native	1.11	0.06	0.96	1.28
Pacific Islander	1.09	0.05	0.95	1.25
Other Asian	1.04	0.04	0.93	1.17
Asian Indian	0.86*	0.04	0.76	0.98
Southeast Asian	1.05	0.04	0.96	1.15
East Asian	0.87*	0.04	0.78	0.97
If prior referral				
No (Reference)	1.00			
Yes	1.07***	0.01	1.05	1.09
Age	1.02***	0.01	1.01	1.02
Gender				
Female	0.99	0.01	0.98	1.01
Male (Reference)	1.00			
Allegation Type				
Sexual abuse	1.25*	0.01	1.21	1.29
Physical Abuse (Reference)	1.00			
Severe neglect	0.78*	0.01	0.74	0.81
General Neglect	1.01	0.01	0.99	1.04
Exploitation	0.60*	0.04	0.49	0.73
Emotional Abuse	1.49*	0.02	1.43	1.54
Caretake Absence/Incapacity	0.40*	0.01	0.38	0.43
At risk, sibling abused	1.10*	0.01	1.06	1.13
ICE Education Index	1.24	0.14	0.99	1.54
ICE Economic Index	0.95	0.14	0.71	1.26
Asian Density	0.44***	0.07	0.32	0.61
Mean ADI Score (State)	1.00	0.01	0.97	1.03

Note: p<0.05* (significant after adjusted by Bonferroni Corrections) p<0.01** p<0.001***

Appendix XVIII

Time to Disposition Outcome by Racial/Asian Ethnical Groups Using Whites as Reference

Time to Disposition	Odds Ratio	Std. Err.	[Conf.	Interval]
Race/Ethnicity				
Black	1.02	0.02	0.96	1.09
White (Reference)	1.00			
Hispanic	1.07*	0.02	1.03	1.12
Native	1.11	0.06	0.95	1.29
Pacific Islander	1.09	0.05	0.95	1.26
Other Asian	1.04	0.04	0.93	1.18
Asian Indian	0.87*	0.04	0.76	0.99
Cambodian	1.03	0.08	0.81	1.29
Chinese	0.88	0.04	0.76	1.02
Filipino	1.11	0.04	0.99	1.24
Japanese	1.00	0.06	0.83	1.21
Korean	0.78*	0.05	0.66	0.92
Laotian	0.94	0.10	0.69	1.26
Hmong	0.74*	0.06	0.59	0.92
Vietnamese	1.12	0.10	0.87	1.44
If prior referral				
No (Reference)	1.00			
Yes	1.07***	0.01	1.05	1.07
Age	1.02***	0.01	1.01	1.02
Gender				
Female	0.99	0.01	0.98	1.01
Male (Reference)	1.00			
Allegation Type				
Sexual abuse	1.25*	0.01	1.21	1.29
Physical Abuse (Reference)	1.00			
Severe neglect	0.78*	0.01	0.74	0.81
General Neglect	1.01	0.01	0.99	1.04
Exploitation	0.60*	0.04	0.50	0.73
Emotional Abuse	1.49*	0.02	1.43	1.54
Caretake Absence/Incapacity	0.40*	0.01	0.38	0.43
At risk, sibling abused	1.10*	0.01	1.06	1.13

ICE Education Index	1.24	0.14	1.00	1.55
ICE Economic Index	0.94	0.14	0.71	1.25
Asian Density	0.44***	0.07	0.32	0.61
Mean ADI Score (State)	1.00	0.01	0.97	1.03

Note: p<0.05* (significant after adjusted by Bonferroni Corrections) p<0.01** p<0.001***

Appendix XIX

Number of Prior Referrals for Substantiated Cases by Racial Groups Using Whites as Reference

Number of Prior Referral	Model 0			Model 1			Model 2		
	RRR	S.E.	[C.I.]	RRR	S.E.	[C.I.]	RRR	S.E.	[C.I.]
Race/Ethnicity									
Black	1.55*	0.05	(1.44, 1.68)	1.50*	0.05	(1.38, 1.64)	1.47*	0.06	(1.32, 1.64)
White (Reference)	1.00			1.00			1.00		
Hispanic	1.04	0.03	(0.98, 1.11)	0.97	0.03	(0.91, 1.05)	0.92	0.03	(0.85, 1.01)
Asian	0.55*	0.03	(0.49, 0.63)	0.48*	0.03	(0.41, 0.56)	0.40*	0.03	(0.33, 0.50)
Pacific Islander	0.86	0.09	(0.65, 1.14)	0.74*	0.09	(0.55, 0.99)	0.80	0.11	(0.56, 1.15)
Native	1.68*	0.18	(1.27, 2.23)	1.70*	0.22	(1.21, 2.37)	1.88*	0.32	(1.21, 2.92)
Age	1.21***	0.00	(1.21, 1.22)	1.20***	0.00	(1.20, 1.20)	1.21***	0.00	(1.20, 1.21)
Gender									
Female	0.96***	0.01	(0.94, 0.98)	0.96***	0.01	(0.94, 0.98)	0.96***	0.01	(0.94, 0.98)
Male (Reference)	1.00			1.00			1.00		
Allegation Type									
Sexual abuse*	0.60*	0.02	(0.55, 0.66)	0.59*	0.02	(0.53, 0.65)	0.54*	0.03	(0.47, 0.62)
Physical Abuse (Reference)	1.00			1.00			1.00		
Severe neglect*	0.81*	0.04	(0.71, 0.92)	0.75*	0.04	(0.64, 0.87)	0.76*	0.06	(0.62, 0.94)
General Neglect	1.04	0.03	(0.97, 1.13)	1.08	0.03	(0.99, 1.18)	1.11*	0.04	(1.01, 1.23)
Exploitation*	0.35*	0.06	(0.23, 0.54)	0.47*	0.08	(0.29, 0.75)	0.46*	0.10	(0.25, 0.85)
Emotional Abuse	1.01	0.04	(0.91, 1.13)	1.01	0.05	(0.89, 1.14)	0.99	0.06	(0.85, 1.15)
Caretake Absence/Incapacity*	1.45*	0.06	(1.28, 1.63)	1.65*	0.07	(1.46, 1.87)	1.78*	0.09	(1.54, 2.05)

At risk, sibling abused*	1.33*	0.04	(1.22, 1.46)	1.25*	0.05	(1.12, 1.39)	1.20*	0.06	(1.04, 1.38)
ICE Education Index*	1.38*	0.11	(1.18, 1.62)	1.38*	0.11	(1.18, 1.62)	1.38*	0.11	(1.18, 1.62)
ICE Economic Index*	0.50*	0.04	(0.42, 0.60)	0.50*	0.04	(0.42, 0.60)	0.50*	0.04	(0.42, 0.60)
Asian Density	1.01	0.12	(0.79, 1.28)	1.01	0.12	(0.79, 1.28)	1.01	0.12	(0.79, 1.28)
Mean ADI Score (State) *	1.06*	0.01	(1.04, 1.07)	1.06*	0.01	(1.04, 1.07)	1.06*	0.01	(1.04, 1.07)

Note1*: The variable indicating the number of prior referrals has been recoded into 4 categories (0=no prior referral, 1= one or two prior referral(s), 2= three to five prior referrals, 3=six and above prior referrals). Model 0 compares category 0 with the combined categories of 1, 2 and 3. Model 1 compares the combined categories of 0 and 1 with the combined categories of 2 and 3. Model 2 compares the combined categories of 0, 1, and 2 with the category of 3.*

Note2*: p<0.05* (significant after adjusted by Bonferroni Corrections) p<0.01** p<0.001****

Appendix XX

Number of Prior Referrals for Substantiated Cases by Racial/Asian Regional Groups Using Whites as Reference

Number of Prior Referral	Model 0			Model 1			Model 2		
	RRR	S.E.	[C.I.]	RRR	S.E.	[C.I.]	RRR	S.E.	[C.I.]
Race/Ethnicity									
Black	1.56*	0.05	(1.44, 1.69)	1.51*	0.05	(1.37, 1.65)	1.47*	0.06	(1.32, 1.65)
White (reference)	1.00			1.00					
Hispanic	1.05	0.03	(0.98, 1.22)	0.98	0.03	(0.91, 1.06)	0.93	0.03	(0.84, 1.01)
Native American	1.68*	0.18	(1.25, 2.27)	1.70*	0.22	(1.19, 2.43)	1.88*	0.32	(1.17, 3.00)
Pacific Islander	0.80	0.10	(0.57, 1.14)	0.65*	0.09	(0.45, 0.93)	0.68	0.11	(0.44, 1.06)
Other Asian	0.42*	0.06	(0.29, 0.61)	0.37*	0.07	(0.21, 0.64)	0.18*	0.06	(0.08, 0.42)
Asian Indian	0.35*	0.05	(0.23, 0.52)	0.25*	0.05	(0.14, 0.45)	0.24*	0.07	(0.11, 0.52)
Southeast Asian	0.62*	0.04	(0.52, 0.75)	0.56*	0.04	(0.45, 0.69)	0.47*	0.05	(0.35, 0.63)
East Asian	0.37*	0.03	(0.29, 0.48)	0.25*	0.03	(0.18, 0.36)	0.21*	0.04	(0.13, 0.36)
Age	1.22***	0.00	(1.21, 1.22)	1.20***	0.00	(0.94, 0.98)	1.21***	0.00	(1.20, 1.21)
Gender									
Female	0.96***	0.01	(0.94, 0.98)	0.96***	0.01	(0.94, 0.98)	0.96***	0.01	(0.94, 0.98)
Male (Reference)	1.00			1.00			1.00		
Allegation Type									
Sexual abuse	0.60*	0.02	(0.55, 0.66)	0.58*	0.02	(0.53, 0.65)	0.54*	0.03	(0.47, 0.61)
Physical Abuse (Reference)	1.00			1.00			1.00		
Severe neglect	0.81*	0.04	(0.71, 0.92)	0.75*	0.04	(0.64, 0.87)	0.76*	0.06	(0.62, 0.94)
General Neglect	1.04	0.03	(0.96, 1.12)	1.08	0.03	(0.99, 1.18)	1.11*	0.04	(1.01, 1.23)
Exploitation	0.35*	0.05	(0.23, 0.54)	0.46*	0.08	(0.29, 0.74)	0.46*	0.10	(0.25, 0.85)

Emotional Abuse	1.01	0.04	(0.91, 1.13)	1.01	0.05	(0.89, 1.14)	0.99	0.06	(0.85, 1.15)
Caretake Absence/Incapacity	1.44*	0.06	(1.28, 1.63)	1.65*	0.07	(1.46, 1.86)	1.77*	0.09	(1.54, 2.05)
At risk, sibling abused	1.33*	0.04	(1.21, 1.46)	1.24*	0.05	(1.12, 1.38)	1.19*	0.06	(1.03, 1.38)
ICE Education Index	1.40*	0.11	(1.20, 1.64)	1.40*	0.11	(1.20, 1.64)	1.40*	0.11	(1.20, 1.64)
ICE Economic Index	0.50*	0.04	(0.42, 0.59)	0.50*	0.04	(0.42, 0.59)	0.50*	0.04	(0.42, 0.59)
Asian Density	1.04	0.13	(0.82, 1.33)	1.04	0.13	(0.82, 1.33)	1.04	0.13	(0.82, 1.33)
Mean ADI Score (State)	1.06*	0.01	(1.04, 1.07)	1.06*	0.01	(1.04, 1.07)	1.06*	0.01	(1.04, 1.07)

Note1*: The variable indicating the number of prior referrals has been recoded into 4 categories (0=no prior referral, 1= one or two prior referral(s), 2= three to five prior referrals, 3=six and above prior referrals). Model 0 compares category 0 with the combined categories of 1, 2 and 3. Model 1 compares the combined categories of 0 and 1 with the combined categories of 2 and 3. Model 2 compares the combined categories of 0, 1, and 2 with the category of 3.*

Note2*: p<0.05* (significant after adjusted by Bonferroni Corrections) p<0.01** p<0.001****

Appendix XXI

Number of Prior Referrals for Substantiated Cases by Racial/Asian Ethnical Groups Using Whites as Reference

Number of Prior Referral	Model 0			Model 1			Model 2		
	RRR	S.E.	[C.I.]	RRR	S.E.	[C.I.]	RRR	S.E.	[C.I.]
Race/Ethnicity									
Black	1.56*	0.05	(1.43, 1.70)	1.51*	0.05	(1.36, 1.67)	1.48*	0.06	(1.31, 1.66)
White (Reference)	1.00			1.00			1.00		
Hispanic	1.05	0.03	(0.97, 1.13)	0.98	0.03	(0.90, 1.06)	0.93	0.03	(0.84, 1.02)
Native	1.68*	0.18	(1.22, 2.32)	1.70*	0.22	(1.16, 2.49)	1.88*	0.32	(1.14, 3.10)
Pacific Islander	0.80	0.10	(0.55, 1.16)	0.65*	0.09	(0.44, 0.95)	0.68	0.11	(0.42, 1.09)
Other Asian	0.42*	0.06	(0.28, 0.62)	0.36*	0.07	(0.20, 0.66)	0.18*	0.06	(0.07, 0.45)
Asian Indian	0.35*	0.05	(0.23, 0.53)	0.25*	0.05	(0.14, 0.46)	0.24*	0.07	(0.11, 0.55)
Cambodian	0.76	0.13	(0.46, 1.26)	0.83	0.16	(0.47, 1.45)	0.71	0.18	(0.35, 1.46)
Chinese	0.37*	0.04	(0.27, 0.52)	0.24*	0.04	(0.16, 0.38)	0.20*	0.05	(0.10, 0.39)
Filipino	0.63*	0.06	(0.48, 0.82)	0.59*	0.06	(0.44, 0.80)	0.54*	0.08	(0.35, 0.83)
Japanese	0.63	0.14	(0.33, 1.20)	0.48	0.14	(0.21, 1.11)	0.39	0.16	(0.12, 1.33)
Korean	0.26*	0.05	(0.15, 0.45)	0.19*	0.05	(0.09, 0.40)	0.18*	0.07	(0.06, 0.53)
Laotian	0.92	0.18	(0.51, 1.65)	0.48	0.13	(0.22, 1.05)	0.35	0.16	(0.10, 1.29)
Hmong	0.87	0.16	(0.51, 1.46)	0.81	0.16	(0.46, 1.43)	0.69	0.19	(0.31, 1.51)
Vietnamese	0.44*	0.05	(1.31, 0.62)	0.33*	0.05	(0.22, 0.49)	0.19*	0.05	(0.09, 0.42)
Age	1.22***	0.00	(1.21, 1.22)	1.20***	0.00	(1.20, 1.20)	1.21***	0.00	(1.20, 1.21)
Gender									
Female	0.96***	0.01	(0.94, 0.98)	0.96***	0.01	(0.94, 0.98)	0.96***	0.01	(0.94, 0.98)
Male (Reference)	1.00			1.00			1.00		
Allegation Type									

Sexual abuse	0.60*	0.02	(0.54, 0.66)	0.58*	0.02	(0.53, 0.65)	0.54*	0.03	(0.47, 0.61)
Physical Abuse (Reference)	1.00								
Severe neglect	0.80*	0.04	(0.71, 0.91)	0.75*	0.04	(0.64, 0.87)	0.76*	0.06	(0.61, 0.94)
General Neglect	1.04	0.03	(0.96, 1.12)	1.08	0.03	(0.99, 1.18)	1.11*	0.04	(1.01, 1.22)
Exploitation	0.35*	0.05	(0.23, 0.53)	0.46*	0.08	(0.29, 0.74)	0.46*	0.1.	(0.25, 0.85)
Emotional Abuse	1.01	0.04	(0.91, 1.13)	1.01	0.05	(0.89, 1.14)	0.99	0.06	(0.84, 1.15)
Caretake Absence/Incapacity	1.44*	0.06	(1.28, 1.63)	1.65*	0.07	(1.46, 1.87)	1.77*	0.09	(1.54, 2.05)
At risk, sibling abused	1.33*	0.04	(1.21, 1.45)	1.24*	0.05	(1.12, 1.38)	1.19*	0.06	(1.03, 1.37)
ICE Education Index	1.39*	0.11	(1.19, 1.62)	1.39*	0.11	(1.19, 1.62)	1.39*	0.11	(1.19, 1.62)
ICE Economic Index	0.50*	0.04	(0.42, 0.60)	0.50*	0.04	(0.42, 0.60)	0.50*	0.04	(0.42, 0.60)
Asian Density	1.06	0.13	(0.84, 1.35)	1.06	0.13	(0.84, 1.35)	1.06	0.13	(0.84, 1.35)
Mean ADI Score (State)	1.05*	0.01	(1.04, 1.07)	1.05*	0.01	(1.04, 1.07)	1.05*	0.01	(1.04, 1.07)

Note1*: The variable indicating the number of prior referrals has been recoded into 4 categories (0=no prior referral, 1= one or two prior referral(s), 2= three to five prior referrals, 3=six and above prior referrals). Model 0 compares category 0 with the combined categories of 1, 2 and 3. Model 1 compares the combined categories of 0 and 1 with the combined categories of 2 and 3. Model 2 compares the combined categories of 0, 1, and 2 with the category of 3.*

Note2*: p<0.05* (significant after adjusted by Bonferroni Corrections) p<0.01** p<0.001****

Appendix XXII

Logistic Model for Re-report by Racial Groups Using Whites as Reference

Re-report	Odds Ratio	Std. Err.	[Conf. Interval]
Race / Ethnicity			
Black	1.18*	0.02	(1.14, 1.23)
White (Reference)	1.00		
Hispanic	1.02	0.01	(0.99, 1.04)
Asian	0.71*	0.01	(0.68, 0.75)
Pacific Islander	0.82*	0.03	(0.74, 0.91)
Native	1.25*	0.06	(1.10, 1.41)
If Prior Referral			
No (Reference)	1.00		
Yes	2.90*	0.02	(2.85, 2.94)
Age	0.92***	0.00	(0.92, 0.92)
Gender			
Female	1.06***	0.00	(1.05, 1.07)
Male (Reference)	1.00		
Allegation Type			
Sexual abuse	0.76*	0.01	(0.74, 0.79)
Physical Abuse (Reference)	1.00		
Severe neglect	0.74*	0.02	(0.69, 0.78)
General Neglect	1.06*	0.01	(1.04, 1.08)
Exploitation	1.07	0.11	(0.81, 1.41)
Emotional Abuse	0.96*	0.01	(0.93, 0.99)
Caretake Absence/Incapacity	1.08*	0.03	(1.02, 1.16)
Sibling abused	1.00	0.01	(0.97, 1.02)
ICE Education Index	1.13***	0.04	(1.05, 1.21)
ICE Economic Index	0.64***	0.03	(0.59, 0.70)
Asian Density	0.82***	0.04	(0.74, 0.91)
Mean ADI Score (State)	1.00	0.00	(0.99, 1.01)

Note: p<0.05* (significant after adjusted by Bonferroni Corrections) p<0.01** p<0.001***

Appendix XXIII

Logistic Model for Re-report by Racial/Asian Regional Groups Using Whites as Reference

Re-report	Odds Ratio	Std. Err.	[Conf. Interval]
Race / Ethnicity			
Black	1.19*	0.02	(1.14, 1.23)
White (reference)	1.00		
Hispanic	1.02	0.01	(0.99, 1.05)
Native	1.25*	0.06	(1.09, 1.42)
Pacific Islander	0.75*	0.03	(0.66, 0.84)
Other Asian	0.57*	0.03	(0.50, 0.66)
Asian Indian	0.64*	0.03	(0.57, 0.72)
Southeast Asian	0.72*	0.02	(0.68, 0.77)
East Asian	0.59*	0.02	(0.54, 0.65)
Age	0.92***	0.00	(0.92, 0.92)
Gender			
Female	1.06***	0.00	(1.05, 1.07)
Male (reference)	1.00		
If Prior Referral			
No (reference)	1.00		
Yes	2.89***	0.02	(2.85, 2.93)
Allegation Type			
Sexual abuse	0.76*	0.01	(0.74, 0.78)
Physical Abuse (reference)	1.00		
Severe neglect	0.73*	0.02	(0.69, 0.78)
General Neglect	1.06*	0.01	(1.04, 1.08)
Exploitation	1.06	0.11	(0.80, 1.41)
Emotional Abuse	0.96*	0.01	(0.93, 0.99)
Caretake Absence/Incapacity	1.08*	0.03	(1.01, 1.15)
Sibling abused	0.99	0.01	(0.97, 1.02)
ICE Education Index	1.14***	0.04	(0.76, 0.93)
ICE Economic Index	0.64***	0.03	(1.06, 1.22)
Asian Density	0.84***	0.04	(0.59, 0.70)
Mean ADI Score (State)	1.00	0.00	(0.99, 1.01)

Note: p<0.05* (significant after adjusted by Bonferroni Corrections) p<0.01** p<0.001***

Appendix XXIV

Logistic Model for Re-report by Racial/Asian Ethnical Groups Using Whites as Reference

Re-report	Odds Ratio	Std. Err.	[Conf. Interval]	
Race / Ethnicity				
Black	1.19*	0.02	1.14	1.23
White (reference)	1.00			
Hispanic	1.02	0.01	0.99	1.05
Native	1.25*	0.06	1.08	1.44
Pacific Islander	0.75*	0.03	0.65	0.85
Other Asian	0.57*	0.03	0.49	0.67
Asian Indian	0.64*	0.03	0.56	0.73
Cambodian	0.76*	0.05	0.61	0.93
Chinese	0.57*	0.02	0.51	0.64
Filipino	0.77*	0.02	0.71	0.83
Japanese	0.82	0.07	0.65	1.04
Korean	0.56*	0.04	0.46	0.67
Laotian	0.90	0.08	0.70	1.16
Hmong	0.67*	0.07	0.50	0.91
Vietnamese	0.64*	0.02	0.58	0.72
If Prior Referral				
No(reference)	1.00			
Yes	2.89***	0.02	2.85	2.93
Age	0.92***	0.00	0.92	0.92
Gender				
Female	1.06***	0.00	1.05	1.07
Male(reference)	1.00			
Allegation Type				
Sexual abuse	0.76*	0.01	0.74	0.78
Physical Abuse(reference)	1.00			
Severe neglect	0.73*	0.02	0.69	0.78
General Neglect	1.06	0.01	1.04	1.08
Exploitation	1.06	0.11	0.80	1.41
Emotional Abuse	0.96*	0.01	0.93	0.99
Caretake Absence/Incapacity	1.08*	0.03	1.01	1.15
At risk, sibling abused	0.99	0.01	0.97	1.02
ICE Education Index	1.13***	0.04	1.06	1.22
ICE Economic Index	0.64***	0.03	0.59	0.70
Asian Density	0.85***	0.04	0.77	0.94
Mean ADI Score (State)	1.00	0.00	0.99	1.01

Note: p<0.05* (significant after adjusted by Bonferroni Corrections) p<0.01** p<0.001***

Appendix XXV

Logistic Model for Case Recurrence by Racial Groups Using Whites as Reference

(Case-recurrence)	Odds Ratio	Std. Err.	[Conf. Interval]
Race / Ethnicity			
Black	1.17*	0.03	(1.10, 1.26)
White (Reference)	1.00		
Hispanic	1.02	0.02	(0.97, 1.08)
Asian	0.74*	0.03	(0.66, 0.83)
Pacific Islander	0.99	0.09	(0.78, 1.27)
Native	1.12	0.11	(0.88, 1.43)
If Prior Referral			
No (Reference)	1.00		
Yes	2.23***	0.04	(2.16, 2.31)
Age	0.94***	0.00	(0.93, 0.94)
Gender			
Female	1.07***	0.01	(1.05, 1.10)
Male (Reference)	1.00		
Allegation Type			
Sexual abuse	0.77*	0.03	(0.70, 0.85)
Physical Abuse (Reference)	1.00		
Severe neglect	0.71*	0.03	(0.64, 0.80)
General Neglect	1.11*	0.03	(1.04, 1.20)
Exploitation	2.18*	0.28	(1.55, 3.08)
Emotional Abuse	1.19*	0.05	(1.08, 1.33)
Caretake Absence/Incapacity	1.99	0.04	(0.89, 1.11)
Sibling abused	1.11*	0.04	(1.01, 1.22)
ICE Education Index	1.13*	0.04	(1.05, 1.21)
ICE Economic Index	0.64***	0.03	(0.59, 0.70)
Asian Density	0.82	0.04	(0.74, 0.91)
Mean ADI Score (State)	1.00	0.00	(0.99, 1.01)

Note: p<0.05* (significant after adjusted by Bonferroni Corrections) p<0.01** p<0.001***

Appendix XXVI

Logistic Model for Case Recurrence by Racial/Asian Regional Groups Using Whites as Reference

Case Recurrence	Odds Ratio	Std. Err.	[Conf. Interval]
Race / Ethnicity			
Black	1.18*	0.03	(1.10, 1.26)
White (reference)	1.00		
Hispanic	1.02	0.02	(0.97, 1.08)
Native	1.12	0.11	(0.87, 1.45)
Pacific Islander	0.93	0.10	(0.69, 1.26)
Other Asian	0.67	0.11	(0.43, 1.03)
Asian Indian	0.76	0.13	(0.47, 1.23)
Southeast Asian	0.74*	0.05	(0.62, 0.88)
East Asian	0.48*	0.05	(0.37, 0.63)
Age	0.94***	0.00	(0.93, 0.94)
Gender			
Female	1.07***	0.01	(1.05, 1.10)
Male (reference)	1.00		
If Prior Referral			
No (reference)	1.00		
Yes	2.23***	0.04	(2.15, 2.30)
Allegation Type			
Sexual abuse	0.77*	0.03	(0.69, 0.85)
Physical Abuse (reference)	1.00		
Severe neglect	0.71*	0.03	(0.64, 0.80)
General Neglect	1.11*	0.03	(1.03, 1.20)
Exploitation	2.17*	0.28	(1.54, 3.06)
Emotional Abuse	1.20*	0.05	(1.08, 1.33)
Caretake Absence/Incapacity	0.99	0.04	(0.89, 1.11)
Sibling abused	1.11*	0.04	(1.01, 1.21)
Asian Density	1.00	0.09	(0.84, 1.18)
ICE Education Index	1.16*	0.07	(1.03, 1.30)
ICE Economic Index	0.68***	0.05	(0.59, 0.79)
Mean ADI Score (State)	1.00	0.01	(0.99, 1.01)

Note: $p<0.05$* (significant after adjusted by Bonferroni Corrections) $p<0.01$** $p<0.001$***

Appendix XXVII

Logistic Model for Case Recurrence by Racial/Asian Ethnical Groups Using Whites as Reference

Case recurrence	Odds Ratio	Std. Err.	[Conf. Interval]	
Race / Ethnicity				
Black	1.18*	0.03	1.09	1.27
White (reference)	1.00			
Hispanic	1.02	0.02	0.96	1.09
Native	1.12	0.11	0.85	1.48
Pacific Islander	0.93	0.10	0.68	1.28
Other Asian	0.67	0.11	0.42	1.06
Asian Indian	0.76	0.13	0.45	1.27
Cambodian	0.68	0.11	0.43	1.07
Chinese	0.44*	0.05	0.31	0.62
Filipino	0.68*	0.07	0.51	0.90
Japanese	0.48*	0.12	0.23	0.99
Korean	0.60	0.13	0.32	1.13
Laotian	1.09	0.24	0.58	2.04
Hmong	0.99	0.20	0.55	1.76
Vietnamese	0.66*	0.07	0.47	0.92
If Prior Referral				
No(reference)	1.00			
Yes	2.23***	0.04	2.15	2.30
Age	0.94***	0.00	0.93	0.94
Gender				
Female	1.07***	0.01	1.05	1.10
Male(reference)	1.00			
Allegation Type				
Sexual abuse	0.77*	0.03	0.69	0.85
Physical Abuse(reference)	1.00			
Severe neglect	0.71*	0.03	0.64	0.79
General Neglect	1.11*	0.03	1.03	1.20
Exploitation	2.17*	0.28	1.54	3.05
Emotional Abuse	1.20*	0.05	1.08	1.33
Caretake Absence/Incapacity	0.99	0.04	0.89	1.11
At risk, sibling abused	1.11*	0.04	1.01	1.21
Asian Density	1.00	0.09	0.84	1.18
ICE Education Index	1.15*	0.07	1.03	1.29

ICE Economic Index	0.68***	0.05	0.59	0.79
Mean ADI Score (State)	1.00	0.01	0.99	1.01

Note: p<0.05* (significant after adjusted by Bonferroni Corrections) p<0.01** p<0.001***

Appendix XXVIII

Survival Analysis for Re-report by Racial Groups Using Whites as Reference

Re-report	Haz. Ratio	Std. Err.	[Conf. Interval]
Race / Ethnicity			
Black	1.13*	0.01	(1.10, 1.16)
White (reference)	1.00		
Hispanic	1.00	0.01	(0.98, 1.03)
Native	1.18*	0.04	(1.07, 1.30)
Pacific Islander	0.77*	0.03	(0.69, 0.86)
Other Asian	0.64*	0.03	(0.56, 0.73)
Asian Indian	0.70*	0.03	(0.62, 0.78)
Cambodian	0.80*	0.05	(0.66, 0.95)
Chinese	0.63*	0.02	(0.57, 0.69)
Filipino	0.78*	0.02	(0.73, 0.84)
Japanese	0.83	0.06	(0.68, 1.01)
Korean	0.59*	0.03	(0.50, 0.70)
Laotian	0.90	0.07	(0.73, 1.12)
Hmong	0.70*	0.06	(0.56, 0.89)
Vietnamese	0.69*	0.02	(0.63, 0.75)
If Prior Referral			
No (reference)	1.00		
Yes	1.93***	0.01	(1.91, 1.95)
Age	0.94***	0.00	(0.94, 0.94)
Gender			
Female	1.04***	0.00	(1.04, 1.05)
Male (reference)	1.00		
Allegation Type			
Sexual abuse	0.83*	0.01	(0.80, 0.85)
Physical Abuse (reference)	1.00		
Severe neglect	0.81*	0.01	(0.77, 0.84)
General Neglect	1.09*	0.01	(1.07, 1.10)
Exploitation	1.18	0.10	(0.94, 1.50)
Emotional Abuse	1.03*	0.01	(1.01, 1.05)

Caretake Absence/Incapacity	1.06*	0.02	(1.01, 1.12)
Sibling abused	1.00	0.01	(0.98, 1.02)
ICE Education Index	1.14***	0.03	(1.08, 1.20)
ICE Economic Index	0.73***	0.02	(0.68, 0.78)
Asian Density	0.86***	0.04	(0.79, 0.93)
Mean ADI Score (State)	1.00	0.00	(1.00, 1.01)

Note: p<0.05* (significant after adjusted by Bonferroni Corrections) p<0.01** p<0.001***

Appendix XXIX

Survival Analysis for Case Recurrence by Racial Groups Using Whites as Reference

Case Recurrence	Haz. Ratio	Std. Err.	[Conf. Interval]
Race / Ethnicity			
Black	1.17*	0.03	(1.09, 1.25)
White (reference)	1.00		
Hispanic	1.01	0.02	(0.96, 1.07)
Native	1.09	0.09	(0.85, 1.39)
Pacific Islander	0.94	0.09	(0.70, 1.26)
Other Asian	0.69	0.10	(0.44, 1.06)
Asian Indian	0.77	0.13	(0.47, 1.24)
Cambodian	0.68	0.10	(0.44, 1.05)
Chinese	0.48*	0.05	(0.35, 0.66)
Filipino	0.68*	0.06	(0.52, 0.88)
Japanese	0.48*	0.12	(0.24, 0.98)
Korean	0.62	0.13	(0.34, 1.22)
Laotian	1.06	0.21	(0.60, 1.88)
Hmong	0.98	0.18	(0.58, 1.66)
Vietnamese	0.67*	0.07	(0.49, 0.91)
If Prior Referral			
No (reference)	1.00		
Yes	1.67***	0.02	(1.48, 1.57)
Age	0.95***	0.00	(0.95, 0.96)
Gender			
Female	1.06***	0.01	(1.04, 1.08)
Male (reference)	1.00		
Allegation Type			
Sexual abuse	0.81*	0.03	(0.75, 0.89)
Physical Abuse (reference)	1.00		
Severe neglect	0.79*	0.03	(0.72, 0.87)
General Neglect	1.19*	0.03	(1.12, 1.27)
Exploitation	2.20*	0.25	(1.61, 3.00)
Emotional Abuse	1.13*	0.04	(1.04, 1.24)

Caretake Absence/Incapacity	0.99	0.04	(0.89, 1.09)
Sibling abused	1.11*	0.03	(1.03, 1.21)
ICE Education Index	1.21*	0.06	(1.09, 1.33)
ICE Economic Index	0.69*	0.05	(0.61, 0.79)
Asian Density	1.01	0.07	(0.87, 1.16)
Mean ADI Score (State)	0.98	0.01	(0.84, 1.02)

Note: $p<0.05$* (significant after adjusted by Bonferroni Corrections) $p<0.01$** $p<0.001$**

References

Ancheta, A. N. (2006). Race, rights, and the Asian American experience. Rutgers University Press. https://doi.org/10.36019/9780813540078

Ards, S., Chung, C., & Myers Jr, S. L. (1998). The effects of sample selection bias on racial differences in child abuse reporting. *Child Abuse & Neglect*, 22(2), 103-115.

Bae H-O, Soloman PL, & Gelles R. J (2009). Multiple child maltreatment recurrence relative to single recurrence and no recurrence. *Child Youth Serv Rev*, 31: 617–624

Baker, D. L., Miller, E., Dang, M. T., Yaangh, C. S., & Hansen, R. L. (2010). Developing culturally responsive approaches with Southeast Asian American families experiencing developmental disabilities. *Pediatrics*, 126(Supplement 3), S146-S150.

Bartelink, C., Van Yperen, T. A., & Ingrid, J. (2015). Deciding on child maltreatment: A literature review on methods that improve decision-making. *Child Abuse & Neglect*, 49, 142-153.

Barth, R. P., Gibbons, C., & Guo, S. (2006). Substance abuse treatment and the recurrence of maltreatment among caregivers with children living at home: A propensity score analysis. *Journal of Substance Abuse Treatment,* 30(2), 93-104

Bartholet, E. (2009). The racial disproportionality movement in child welfare: False facts and dangerous directions. *Ariz. L. Rev*., 51, 871.

Beatriz, E. D., Salhi, C., Griffith, J. L., & Molnar, B. E. (2018). Urbanicity matters in self-reported child maltreatment prevalence: Findings from a nationally representative study. *Child Abuse & Neglect*, 79, 371-383.

Berger, L. M. (2004). Income, family structure, and child maltreatment risk. *Children and Youth Services Review*, 26(8), 725-748.

Berger, L. M., Slack, K. S., Waldfogel, J., & Bruch, S. K. (2010). Caseworker-perceived caregiver substance abuse and child protective services outcomes. *Child Maltreatment,* 15(3), 199-210.

Boustan, L.P. (2011). Racial Residential Segregation in American Cities In Brooks N, Donaghy K & Knaap G (Eds). *Handbook of Urban Economics and Planning* (pp. 318–339), Oxford University Press.

Bronfenbrenner, U. (1979). Contexts of child rearing: Problems and prospects. *American Psychologist,* 34(10), 844.

Bronfenbrenner, U. (1979). The ecology of human development: Experiments by nature and design. Harvard university press.

Brown, J., Cohen, P., Johnson, J. G., & Salzinger, S. (1998). A longitudinal analysis of risk factors for child maltreatment: Findings of a 17-year prospective study of officially recorded and self-reported child abuse and neglect. *Child Abuse & Neglect,* 22(11), 1065-1078.

Burman, E., Chantler, K., & Batsleer, J. (2002). Service responses to South Asian women who attempt suicide or self-harm: challenges for service commissioning and delivery. *Critical Social Policy,* 22(4), 641-668.

Capacity Building Center for States. (2019). Becoming a family-focused system: Assessing culture and climate. https://capacity.childwelfare.gov/sites/default/files/media_pdf/BFFS_Assessing_Culture_Climate_final_508.pdf

Casanueva, C., Tueller, S., Dolan, M., Testa, M., Smith, K., & Day, O. (2015). Examining predictors of re-reports and recurrence of child maltreatment using two national data

sources. *Children and Youth Services Review*, 48, 1–13. https://doi.org/10.1016/j.childyouth.2014.10.006

Chang, J., Rhee, S., & Weaver, D. (2006). Characteristics of child abuse in immigrant Korean families and correlates of placement decisions. *Child Abuse & Neglect*, 30(8), 881-891.

Cheung, M., & LaChapelle, A. (2011). Disproportionality from the other side: The underrepresentation of Asian American children. In D. K. Green, K. Belanger, R. G. McRoy, & L. Bullard (Eds.), Challenging racial disproportionality in child welfare: *Research, Policy, and Practice* (pp. 131–139). CWLA Press.

Child Abuse and Neglect Reporting Act (CANRA). (1980). Penal Code sections 11164-11174.4.

Child Welfare Information Gateway. (2016). Definitions of child abuse and neglect. Washington, DC: U.S. Department of Health and Human Services, Children's Bureau. Retrieved from https://www.childwelfare.gov/pubPDFs/define.pdf

Child Welfare Information Gateway. (2017). Child maltreatment prevention: Past, present, and future. Washington, DC: U.S. Department of Health and Human Services, Children's Bureau. Retrieved from https://www.childwelfare.gov/pubPDFs/cm_prevention.pdf

Child Welfare Information Gateway. (2019). Mandatory Reporters of Child Abuse and Neglect. Washington, DC: U.S. Department of Health and Human Services, Children's Bureau. Retrieved from https://www.childwelfare.gov/topics/systemwide/laws-policies/statutes/manda/

Child Welfare Information Gateway. (2020). How the Child Welfare System Works. Washington, DC: U.S. Department of Health and Human Services, Children's Bureau. Retrieved from https://www.childwelfare.gov/pubPDFs/cpswork.pdf#page=9%26view=Appendix

Chiswick, B. R., & Miller, P. W. (2001). A model of destination-language acquisition: Application to male immigrants in Canada. *Demography*, 38(3), 391. https://doi.org/10.2307/3088354

Choi, L. M. (2022). Intergenerational Family Conflict among Asian American Families: An Exploration of Its Dynamics, Effects, and Therapeutic Interventions. Pepperdine University.

Chou R. S., & Feagin, J. R. (2017). The Myth of the Model Minority: Asian Americans Facing Racism. Routledge. https://doi.org/10.4324/9781315090634

Church II, W. T., Gross, E. R., & Baldwin, J. (2005). Maybe ignorance is not always bliss: The disparate treatment of Hispanics within the child welfare system. *Children and Youth Services Review,* 27(12), 1279-1292.

Connell, C. M., Bergeron, N., Katz, K. H., Saunders, L., & Tebes, J. K. (2007). Re-referral to child protective services: The influence of child, family, and case characteristics on risk status. *Child Abuse & Neglect,* 31(5), 573-588.

Connell, C. M., Vanderploeg, J. J., Katz, K. H., Caron, C., Saunders, L., & Tebes, J. K. (2009). Maltreatment following reunification: Predictors of subsequent child protective services contact after children return home. *Child Abuse & Neglect*, 33(4), 218-228.

Coulton, C. J., Crampton, D. S., Irwin, M., Spilsbury, J. C., & Korbin, J. E. (2007). How neighborhoods influence child maltreatment: A review of the literature and alternative pathways. *Child Abuse & Neglect*, 31(11-12), 1117-1142.

Coulton, C. J., Korbin, J. E., Su, M., & Chow, J. (1995). Community level factors and child maltreatment rates. *Child Development*, 66(5), 1262-1276.

Crockenberg, S. B. (1981). Infant irritability, mother responsiveness, and social support influences on the security of infant-mother attachment. *Child Development*, 857-865.

Cross, T. P., & Casanueva, C. (2009). Caseworker judgments and substantiation. *Child Maltreatment,* 14(1), 38-52.

Curry, S. R., & Abrams, L. S. (2015). Housing and social support for youth aging out of foster care: State of the research literature and directions for future inquiry. *Child and Adolescent Social Work Journal,* 32(2), 143-153.

Dawkins CJ (2004), Recent Evidence on the Continuing Causes of Black-White Residential Segregation. *Journal of Urban Affairs*, 26, 379–400.

DeBruyn, L., Chino, M., Serna, P., & Fullerton-Gleason, L. (2001). Child maltreatment in American Indian and Alaska Native communities: Integrating culture, history, and public health for intervention and prevention. *Child Maltreatment*, 6(2), 89-102.

Deccio, G., Horner, W. C., & Wilson, D. (1994). High-risk neighborhoods and high-risk families: Replication research related to the human ecology of child maltreatment. *Journal of Social Service Research*, 18(3-4), 123-137.

Dettlaff, A. J., & Boyd, R. (2020). Racial disproportionality and disparities in the child welfare system: Why do they exist, and what can be done to address them?. *The ANNALS of the American Academy of Political and Social Science*, 692(1), 253-274.

Dettlaff, A. J., & Johnson, M. A. (2011). Child maltreatment dynamics among immigrant and US born Latino children: Findings from the National Survey of Child and Adolescent Well-being (NSCAW). *Children and Youth Services Review*, 33(6), 936-944.

Dettlaff, A. J., de Haymes, M. V., Velazquez, S., Mindell, R., & Bruce, L. (2009). Emerging issues at the intersection of immigration and child welfare: results from a transnational research and policy forum. *Child Welfare*, 88(2).

Dettlaff, A., & Rycraft, J. R. (2010). Factors contributing to disproportionality in the child welfare system: views from the legal community. *Social Work*, 55(3), 213–224. https://doi.org/10.1093/sw/55.3.213

Dorsey, S., Mustillo, S. A., Farmer, E. M., & Elbogen, E. (2008). Caseworker assessments of risk for recurrent maltreatment: Association with case-specific risk factors and re-reports. *Child Abuse & Neglect*, 32(3), 377-391.

Drake, B., Jolley, J. M., Lanier, P., Fluke, J., Barth, R. P., & Jonson-Reid, M. (2011). Racial bias in child protection? A comparison of competing explanations using national data. *Pediatrics*, 127(3), 471-478.

Drake, B., Jonson-Reid, M., & Dvalishvili, D. (2022). Poverty and child maltreatment. In Handbook of Child Maltreatment (pp. 239–257). Springer International Publishing.

Drake, B., Jonson-Reid, M., & Sapokaite, L. (2006). Rereporting of child maltreatment: Does participation in other public sector services moderate the likelihood of a second maltreatment report?. *Child Abuse & Neglect*, 30(11), 1201-1226.

Drake, B., Jonson-Reid, M., Kim, H., Chiang, C. J., & Davalishvili, D. (2021). Disproportionate need as a factor explaining racial disproportionality in the CW system. In A. J. Dettlaff (Ed.), Racial Disproportionality and Disparities in the Child Welfare System (pp. 159-176). Springer.

Drake, B., Jonson-Reid, M., Kim, H., Chiang, C. J., & Davalishvili, D. (2021). Disproportionate need as a factor explaining racial disproportionality in the CW system. In A. J. Dettlaff

(Ed.), Racial Disproportionality and Disparities in the Child Welfare System (pp. 159-176). Springer. https://doi.org/10.1007/978-3-030-54314-3_9

Drake, B., Jonson-Reid, M., Way, I., & Chung, S. (2003). Substantiation and recidivism. *Child Maltreatment,* 8(4), 248-260.

Dubowitz, H., Kim, J., Black, M. M., Weisbart, C., Semiatin, J., & Magder, L. S. (2011). Identifying children at high risk for a child maltreatment report. *Child Abuse & Neglect*, 35(2), 96-104.

Duran, B., Malcoe, L. H., Sanders, M., Waitzkin, H., Skipper, B., & Yager, J. (2004). Child maltreatment prevalence and mental disorders outcomes among American Indian women in primary care. *Child Abuse & Neglect*, 28(2), 131-145.

Dworsky, A., White, C. R., O'Brien, K., Pecora, P., Courtney, M., Kessler, R., Sampson, N., & Hwang, I. (2010). Racial and ethnic differences in the outcomes of former foster youth. *Children and Youth Services Review*, 32(6), 902–912. https://doi.org/10.1016/j.childyouth.2010.03.001

Eastman, A. L., Mitchell, M. N., & Putnam-Hornstein, E. (2016). Risk of re-report: A latent class analysis of infants reported for maltreatment. *Child Abuse & Neglect*, 55, 22–31. https://doi.org/10.1016/j.chiabu.2016.03.002

Embry, R. (2001, July). Examination of risk factors for maltreatment of deaf children: Findings from a national survey. In 7th International Family Violence Research Conference, Portsmouth, NH.

English, D. J., Marshall, D. B., Coghlan, L., Brummel, S., & Orme, M. (2002). Causes and consequences of the substantiation decision in Washington State Child Protective Services. *Children and Youth Services Review*.

Ernst, J. S. (2001). Community-level factors and child maltreatment in a suburban county. *Social Work Research*, 25(3), 133-142.

Evident Change. (2021). The SDM Model in Child Protection. Retrieved from https://www.evidentchange.org/assessment/sdm-structured-decision-making-systems/child-welfare

Feuerherm, E. M., & Ramanathan, V. (Eds.). (2016). Refugee resettlement in the United States: Language, policy, pedagogy. Multilingual Matters.

Finno-Velasquez, M., Palmer, L., Prindle, J., Tam, C. C., & Putnam-Hornstein, E. (2017). A birth cohort study of Asian and Pacific Islander children reported for abuse or neglect by maternal nativity and ethnic origin. *Child Abuse & Neglect*, 72, 54-65.

Finno-Velasquez, M., Villamil Grest, C., Perrigo, J. L., White, M., & Hurlburt, M. S. (2021). An exploration of the socio-cultural context in immigrant-concentrated neighborhoods with unusual rates of child maltreatment. *Journal of Ethnic & Cultural Diversity in Social Wor*k, 30(3), 232-252.

Fix, R. L., & Nair, R. (2020). Racial/ethnic and gender disparities in substantiation of child physical and sexual abuse: Influences of caregiver and child characteristics. *Children and Youth Services Review,* 116, 105186. https://doi.org/10.1016/j.childyouth.2020.105186

Fluke, J. D., Harden, B. J., Jenkins, M., & Ruehrdanz, A. (2011). Research synthesis on child welfare disproportionality and disparities. In Disparities and Disproportionality in Child Welfare: Analysis of the Research.

Fluke, J. D., Shusterman, G. R., Hollinshead, D. M., & Yuan, Y. Y. T. (2008). Longitudinal analysis of repeated child abuse reporting and victimization: Multistate analysis of associated factors. *Child Maltreatment*, 13(1), 76-88.

Fluke, J. D., Yuan, Y. Y. T., Hedderson, J., & Curtis, P. A. (2003). Disproportionate representation of race and ethnicity in child maltreatment: Investigation and victimization. *Children and Youth Services Review*.

Fluke, J. D., Yuan, Y.-Y. T., Hedderson, J., & Curtis, P. A. (2003). Disproportionate representation of race and ethnicity in child maltreatment: investigation and victimization. *Children and Youth Services Review,* 25(5–6), 359–373. https://doi.org/10.1016/s0190-7409(03)00026-4

Fluke, J., Harden, B. J., Jenkins, M., & Ruehrdanz, A. (2011). Research synthesis on child welfare: Disproportionality and disparities. Disparities and disproportionality in child welfare: Analysis of the research, 1.

Fong, R., & Mokuau, N. (1994). Not simply "Asian Americans": Periodical literature review on Asians and Pacific Islanders. *Social Work,* 39(3), 298-305.

Font, S. A. (2015). Is higher placement stability in kinship foster care by virtue or design? *Child Abuse & Neglect,* 42, 99–111. https://doi.org/10.1016/j.chiabu.2015.01.003

Font, S. A., & Maguire-Jack, K. (2015). Decision-making in child protective services: Influences at multiple levels of the social ecology. *Child Abuse & Neglect*, 47, 70–82. https://doi.org/10.1016/j.chiabu.2015.02.005

Fontes, L. A. (2005). Child abuse and culture: Working with diverse families. Guilford Press.

Fox, K. A. (n.d.). Collecting Data on the Abuse and Neglect of American Indian Children. *Child Welfare*, 21.

Freisthler, B., Bruce, E., & Needell, B. (2007). Understanding the geospatial relationship of neighborhood characteristics and rates of maltreatment for Black, Hispanic, and White children. *Social Work,* 52(1), 7–16. https://doi.org/10.1093/sw/52.1.7

Freisthler, B., Gruenewald, P. J., Ring, L., & LaScala, E. A. (2008). An ecological assessment of the population and environmental correlates of childhood accident, assault, and child abuse injuries. *Alcoholism: Clinical and Experimental Research*, 32(11), 1969-1975.

Freisthler, B., Merritt, D. H., & LaScala, E. A. (2006). Understanding the ecology of child maltreatment: A review of the literature and directions for future research. *Child Maltreatment,* 11(3), 263-280.

Freisthler, B., Midanik, L. T., & Gruenewald, P. J. (2004). Alcohol outlets and child physical abuse and neglect: applying routine activities theory to the study of child maltreatment. *Journal of Studies on Alcohol*, 65(5), 586-592.

Freisthler, B., Needell, B., & Gruenewald, P. J. (2005). Is the physical availability of alcohol and illicit drugs related to neighborhood rates of child maltreatment?. *Child Abuse & Neglect,* 29(9), 1049-1060.

Frey, W. H. (2018). Diversity explosion: How new racial demographics are remaking America. Brookings Institution Press.

Fuller, T., & Nieto, M. (2009). Substantiation and maltreatment rereporting: A propensity score analysis. *Child Maltreatment*, 14(1), 27-37.

Futa, K. T., Hsu, E., & Hansen, D. J. (2001). Child sexual abuse in Asian American families: An examination of cultural factors that influence prevalence, identification, and treatment. *Clinical Psychology: Science and Practice*, 8(2), 189.

Gambrill, E., & Shlonsky, A. (2000). Risk assessment in context. *Children and Youth Services Review.* 22(11-12).

Ganasarajah, S., Siegel, G., Sickmund, M. (2017). Disproportionality rates for children of color in foster care (fiscal year 2015). National Council of Juvenile and Family Court Judges

(NCJFCJ). https://www.ncjfcj.org/wp-content/uploads/2017/09/NCJFCJ-Disproportionality-TAB-2015_0.pdf

Garbarino, J., & Crouter, A. (1978). Defining the community context for parent-child relations: The correlates of child maltreatment. *Child Development,* 604-616.

Garbarino, J., & Kostelny, K. (1992). Child maltreatment as a community problem. *Child Abuse & Neglect*, 16(4), 455-464.

Garbarino, J., & Sherman, D. (1980). High-risk neighborhoods and high-risk families: The human ecology of child maltreatment. *Child Development*, 188-198.

Gillham, B., Tanner, G., Cheyne, B., Freeman, I., Rooney, M., & Lambie, A. (1998). Unemployment rates, single parent density, and indices of child poverty: Their relationship to different categories of child abuse and neglect. *Child Abuse & Neglect*, 22(2), 79-90.

Goh, J. X., Lei, R., & Zou, L. X. (2023). Positioning Asian Americans in social cognition. In Social and Personality Psychology Compass. https://doi.org/10.31234/osf.io/a69tz

Grant, B. F., Stinson, F. S., Hasin, D. S., Dawson, D. A., Chou, S. P., & Anderson, K. (2004). Immigration and lifetime prevalence of DSM-IV psychiatric disorders among Mexican Americans and non-Hispanic whites in the United States: results from the national epidemiologic survey on alcohol and related conditions. Archives of general psychiatry, 61(12), 1226-1233.

Hahm, H. C., & Guterman, N. B. (2001). The emerging problem of physical child abuse in South Korea. *Child Maltreatment*, 6(2), 169-179.

Hanna, M., & Batalova, J. (2021, March 9). Immigrants from Asia in the United States. Migration Policy Instutitue. https://www.migrationpolicy.org/article/asian-immigrants-united-states

Hamilton-Merritt, J. (1993). Tragic mountains: The Hmong, the Americans, and the secret wars for Laos, 1942-1992. Indiana University Press.

Harris, M. S., & Hackett, W. (2008). Decision points in child welfare: An action research model to address disproportionality. *Children and Youth Services Review*, 30(2), 199–215. https://doi.org/10.1016/j.childyouth.2007.09.006

Heart, M. Y. H. B., Chase, J., Elkins, J., & Altschul, D. B. (2011). Historical trauma among Indigenous Peoples of the Americas: concepts, research, and clinical considerations. *Journal of Psychoactive Drugs*, 43(4), 282–290. https://doi.org/10.1080/02791072.2011.628913

Hegar, R., & Scannapieco, M. (1995). From family duty to family policy: The evolution of kinship care. *Child Welfare*, 74(1), 200.

Helton, J. J. (2016). Food neglect and maltreatment re-report. *Children and Youth Services* Review, 71, 77-83.

Hill, R. (2006). Synthesis of research on disproportionality in child welfare: An update. Seattle,WA: Casey Family Programs.

Hines, A. M., Lemon, K., Wyatt, P., & Merdinger, J. (2004). Factors related to the disproportionate involvement of children of color in the child welfare system: A review and emerging themes. *Children and Youth Services Review*, 26(6), 507–527.

Ho, C. K. (1990). An analysis of domestic violence in Asian American communities: A multicultural approach to counseling. *Women & Therapy*, 9(1-2), 129-150.

Hoeffel, E. M., Rastogi, S., Kim, M. O., & Shahid, H. (2012). The Asian Population: 2010 (2010 Census Briefs C2010BR-11). United States Census Bureau. Retrieved from https://www.census.gov/prod/cen2010/briefs/c2010br-11.pdf.

Holbrook, H. M., & Hudziak, J. J. (2020). Risk factors that predict longitudinal patterns of substantiated and unsubstantiated maltreatment reports. *Child Abuse & Neglect*, 99(104279), 104279. https://doi.org/10.1016/j.chiabu.2019.104279

Huisman, K. A. (1996). Wife battering in Asian American communities: Identifying the service needs of an overlooked segment of the US population. *Violence Against Women*, 2(3), 260-283.

Hunter, M. (2007). The persistent problem of colorism: Skin tone, status, and inequality: The persistent problem of colorism: Skin tone, status, and inequality. *Sociology Compass*, 1(1), 237–254. https://doi.org/10.1111/j.1751-9020.2007.00006.x

Hussey, J. M., Chang, J. J., & Kotch, J. B. (2006). Child maltreatment in the United States: Prevalence, risk factors, and adolescent health consequences. *Pediatrics*, 118(3), 933-942.

Lee, J., & Lee, L. (2002) Crossing the Divide: Asian American Families and the Child Welfare System. Coalition for Asian American Children and Families, New York. Retrieved from https://files.eric.ed.gov/fulltext/ED464163.pdf

Johnson, M. A. (2007). The social ecology of acculturation: Implications for child welfare services to children of immigrants. *Children and Youth Services Review*, 29(11), 1426-1438.

Jonson-Reid M. (2003). Foster care and future risk maltreatment. *Children and Youth Services Review*. 25: 271–294.

Jonson-Reid, M., Drake, B., Chung, S., & Way, I. (2003). Cross-type recidivism among child maltreatment victims and perpetrators. *Child Abuse & Neglect*, 27(8), 899-917.

Kahn, J. M., & Schwalbe, C. (2010). The timing and risk factors associated with child welfare system recidivism at two decision-making points. *Children and Youth Services Review*, 32(7), 1035-1044.

Kawai, Y. (2005). Stereotyping Asian Americans: The dialectic of the model minority and the yellow peril. *The Howard Journal of Communications*, 16(2), 109-130.

Kenny, M. C., & McEachern, A. G. (2000). Racial, ethnic, and cultural factors of childhood sexual abuse: A selected review of the literature. *Clinical Psychology Review*, 20(7), 905-922.

KIDSCount. (2020). KIDSCount Data Book. The Annie E. Casey Foundation. Retrieved from https://www.aecf.org/resources/2020-kids-count-data-book

Kim, C. J. (1999). The racial triangulation of Asian Americans. *Politics & Society*, 27(1), 105-138.

Kim, H., & Drake, B. (2019). Cumulative prevalence of onset and recurrence of child maltreatment reports. *Journal of the American Academy of Child and Adolescent Psychiatry*, 58(12), 1175–1183. https://doi.org/10.1016/j.jaac.2019.02.015

Kim, H., Drake, B., & Jonson-Reid, M. (2018). An examination of class-based visibility bias in national child maltreatment reporting. *Children and Youth Services Review*, 85, 165-173.

Kim, H., Wildeman, C., Jonson-Reid, M., & Drake, B. (2017). Lifetime prevalence of investigating child maltreatment among US children. *American Journal of Public Health*, 107(2), 274-280.

Kim, I. J., Lau, A. S., & Chang, D. F. (2007). Family violence among Asian Americans. *Handbook of Asian American Psychology*, 2, 363–378.

Kind, A.J.H., Jencks, S., Brock, J., Yu, M., Bartels, C., Ehlenbach, W., Greenberg, C., Smith, M.A. (2014). Neighborhood socioeconomic disadvantage and 30-day rehospitalization: a retrospective cohort study. *Ann Intern Med*. 161(11):765-74.

Kind, A. J., & Buckingham, W. R. (2018). Making neighborhood-disadvantage metrics accessible—the neighborhood atlas. *The New England Journal of Medicine*, 378(26), 2456.

King, B., Fallon, B., Boyd, R., Black, T., Antwi-Boasiako, K., & O'Connor, C. (2017). Factors associated with racial differences in child welfare investigative decision-making in Ontario, Canada. *Child Abuse & Neglect*, 73, 89-105.

Klein, S., & Merritt, D. H. (2014). Neighborhood racial & ethnic diversity as a predictor of child welfare system involvement. *Children and Youth Services Review*, 41, 95–105. https://doi.org/10.1016/j.childyouth.2014.03.009

Knott, T., & Donovan, K. (2010). Disproportionate representation of African American children in foster care: Secondary analysis of the National Child Abuse and Neglect Data System. *Children and Youth Services Review*, 32(5), 679-684.

Kochhar, R., & Cilluffo, A. (2018). Income inequality in the US is rising most rapidly among Asians. Pew Research Center.

Kohl, P. L., Edleson, J. L., English, D. J., & Barth, R. P. (2005). Domestic violence and pathways into child welfare services: Findings from the National Survey of Child and Adolescent Well-Being. *Children and Youth Services Review*, 27(11), 1167-1182.

Kohl, P. L., Jonson-Reid, M., & Drake, B. (2009). Time to leave substantiation behind: Findings from a national probability study. *Child Maltreatment*, 14(1), 17-26.

Landale, N. S., Oropesa, R. S., & Gorman, B. K. (1999). Immigration and infant health: Birth outcomes of immigrant and native-born women. *Children of Immigrants: Health, Adjustment and Public Assistance*, 244-285.

Landale, N. S., Oropesa, R. S., Llanes, D., & Gorman, B. K. (1999). Does Americanization have adverse effects on health?: stress, health habits, and infant health outcomes among Puerto Ricans. *Social Forces*, 78(2), 613-641.

Lansford, J. E., & Deater-Deckard, K. (2012). Childrearing discipline and violence in developing countries: Childrearing discipline and violence. *Child Development*, 83(1), 62–75. https://doi.org/10.1111/j.1467-8624.2011.01676.x

Larsen, S., Kim-Goh, M., & Nguyen, T. D. (2008). Asian American immigrant families and child abuse: Cultural considerations. *Journal of Systemic Therapies*, 27(1), 16-29.

Lau, A. S. (2010). Physical discipline in Chinese American immigrant families: An adaptive culture perspective. *Cultural Diversity & Ethnic Minority Psychology*, 16(3), 313–322. https://doi.org/10.1037/a0018667

Lau, A. S. McCabe, K. M., Yeh, M., Garland, A. F., Hough, R. L., & Landsverk, J. (2003). Race/ethnicity and rates of self-reported maltreatment among high-risk youth in public sectors of care. *Child Maltreatment*, 8(3), 183-194.

Lau, A. S., Takeuchi, D. T., & Alegría, M. (2006). Parent-to-child aggression among Asian American parents: Culture, context, and vulnerability. *Journal of Marriage and the Family*, 68(5), 1261–1275. https://doi.org/10.1111/j.1741-3737.2006.00327.x

Lee, B., Rha, W., & Fallon, B. (2014). Physical abuse among Asian families in the Canadian child welfare system. Journal of Aggression, *Maltreatment & Trauma,* 23(5), 532-551.

Lee, E. (2021). The making of Asian America: A history. Simon & Schuster.

Lee, E., Esaki, N., & Greene, R. (2009). Collocation: Integrating child welfare and substance abuse services. *Journal of Social Work Practice in the Addictions*, 9(1), 55-70. https://doi.org/10.1080/15332560802533612

Lee, M. (2013). Breaking barriers: Addressing structural obstacles to social service provision for Asian survivors of domestic violence. *Violence Against Women*, 19(11), 1350-1369.

Lee, S., Xiong, C., Pheng, L. M., & Vang, M. N. (2017). The model minority maze: Hmong Americans working within and around racial discourses. *Journal of Southeast Asian American Education and Advancement,* 12(2). https://doi.org/10.7771/2153-8999.1153

Lee, Y. S., & Hadeed, L. (2009). Intimate partner violence among Asian immigrant communities: Health/mental health consequences, help-seeking behaviors, and service utilization. *Trauma, Violence, & Abuse*, 10(2), 143-170.

Leong, F. T., & Lau, A. S. (2001). Barriers to providing effective mental health services to Asian Americans. *Mental health Services Research,* 3(4), 201-214.

Levy, H. B., Markovic, J., Chaudhry, U., Ahart, S., & Torres, H. (1995). Reabuse rates in a sample of children followed for 5 years after discharge from a child abuse inpatient assessment program. *Child Abuse & Neglect,* 19(11), 1363-1377.

Liang, C. T., Li, L. C., & Kim, B. S. (2004). The Asian American racism-related stress inventory: Development, factor analysis, reliability, and validity. *Journal of Counseling Psychology*, 51(1), 103.

Lindsey, D. (1994). Mandated reporting and child abuse fatalities: Requirements for a system to protect children. *Social Work Research*, 18(1), 41-54.

Lipien, L. & Forthofer, M.S. (2004). An event history analysis of recurrent child maltreatment reports in Florida. *Child Abuse & Neglect.* 28: 947–966.

Liu, M., & Geron, K. (2008). Changing Neighborhood: Ethnic Enclaves and the Struggle for Social Justice. *Social Justice*, 35(2 (112)), 18–35. http://www.jstor.org/stable/29768486

Lockwood, K. K., Friedman, S., & Christian, C. W. (2015). Permanency and the foster care system. *Current Problems in Pediatric and Adolescent Health Care*, 45(10), 306-315.

Lopez, G, Ruiz, N.G., Patten, E. (2017). "Key facts about Asian Americans, a diverse and growing population". FactTank. Pew Research Center. Retrieved from https://www.pewresearch.org/fact-tank/2021/04/29/key-facts-about-asian-americans/

Lowe, E. (2018). An Exclusion and an Agreement: Comparing the Chinese and Japanese Immigrant Experiences, 1870–1942. *History in the Making*, 11(1), 6.

Macartney, S. E., Bishaw, A., & Fontenot, K. (2013). Poverty rates for selected detailed race and Hispanic groups by state and place: 2007-2011. US Department of Commerce, Economics and Statistics Administration, US Census Bureau.

Magruder, J., & Shaw, T. V. (2008). Children ever in care: an examination of cumulative disproportionality. *Child Welfare,* 87(2), 169–188.

Maguire-Jack, K., Font, S. A., & Dillard, R. (2020). Child protective services decision-making: The role of children's race and county factors. *American Journal of Orthopsychiatry,* 90(1), 48.

Maguire-Jack, K., Lanier, P., Johnson-Motoyama, M., Welch, H., & Dineen, M. (2015). Geographic variation in racial disparities in child maltreatment: The influence of county poverty and population density. *Child Abuse & Neglect,* 47, 1–13.

Maker, A. H., Shah, P. V., & Agha, Z. (2005). Child physical abuse prevalence, characteristics, predictors, and beliefs about parent-child violence in South Asian, Middle Eastern, East Asian, and Latina women in the United States. *Journal of Interpersonal Violence,* 20(11), 1406-1428.

Maloney, T., Jiang, N., Putnam-Hornstein, E., Dalton, E., & Vaithianathan, R. (2017). Black–White differences in child maltreatment reports and foster care placements: A statistical decomposition using linked administrative data. *Maternal and Child Health Journal,* 21(3), 414-420. https://doi.org/10.1007/s10995-016-2242-3

Man, S. (2020). Anti-Asian violence and US imperialism. *Race & Class*, 62(2), 24–33. https://doi.org/10.1177/0306396820949779

Maschi, T., Baer, J., Morrissey, M. B., & Moreno, C. (2013). The aftermath of childhood trauma on late life mental and physical health: A review of the literature. *Traumatology, 19*(1), 49–64. https://doi.org/10.1177/1534765612437377

Massey, D. (2001). The Prodigal Paradigm Returns: Ecology Comes Back to Sociology. Does it Take a Village? *Community Effects on Children, Adolescents, and Families.*

Matsuoka, J. K., Breaux, C., & Ryujin, D. H. (1997). National utilization of mental health services by Asian Americans/Pacific Islanders. *Journal of Community Psychology*, 25(2), 141–145. https://doi.org/10.1002/(sici)1520-6629(199703)25

McGuinness, T. M., & Schneider, K. (2007). Poverty, child maltreatment, and foster care. *Journal of the American Psychiatric Nurses Association,* 13(5), 296-303.

McGuire, T. G., & Miranda, J. (2008). New evidence regarding racial and ethnic disparities in mental health: Policy implications. *Health Affairs,* 27(2), 393-403.

McKelvey, R. S., & Webb, J. A. (1995). A pilot study of abuse among Vietnamese Amerasians. *Child Abuse & Neglect,* 19(5), 545-553.

Meston, C. M., Heiman, J. R., Trapnell, P. D., & Carlin, A. S. (1999). Ethnicity, desirable responding, and self-reports of abuse: A comparison of European-and Asian-ancestry undergraduates. *Journal of Consulting and Clinical Psychology*, 67(1), 139.

Morewitz, S. J. (2004). Domestic violence and maternal and child health: new patterns of trauma, treatment, and criminal justice responses. *Springer Science & Business Media.*

Myers, S. L., Jr. (2010). Response to Research Synthesis on Child Welfare Disproportionality and Disparities.

N. G. Ruiz, K.Edwards & M. H. Lopez. (2021). One-third of Asian Americans fear threats, physical attacks and most say violence against them is rising. Retrieved from https://www.pewresearch.org/fact-tank/2021/04/21/one-third-of-asian-americans-fear-threats-physical-attacks-and-most-say-violence-against-them-is-rising/

Nagata, D. K., & Cheng, W. J. Y. (2003). Intergenerational communication of race-related trauma by Japanese American former internees. *The American Journal of Orthopsychiatry,* 73(3), 266–278. https://doi.org/10.1037/0002-9432.73.3.266

Nagata, D. K., Kim, J. H. J., & Wu, K. (2019). The Japanese American wartime incarceration: Examining the scope of racial trauma. *The American Psychologist,* 74(1), 36–48. https://doi.org/10.1037/amp0000303

Niedzwiecki, M., & Duong, T. C. (2012). Southeast Asian American journeys of resilience: Vietnam, Laos, and Cambodia. In P. G. Min (Ed.), Asian Americans: Contemporary trends and issues (2nd ed., pp. 191–214). SAGE Publications.

Nwabuzor Ogbonnaya, I., & Kohl, P. L. (2018). Profiles of child-welfare-involved caregivers identified by caseworkers as having a domestic violence problem: Then and now. *Journal of Interpersonal Violence*, 33(18), 2802-2825.

Okamura, A., Heras, P., & Wong-Kerberg, L. (1995). Asian, Pacific Island, and Filipino Americans and sexual child abuse. In L. A. Fontes (Ed.), *Sexual abuse in nine North American cultures: Treatment and prevention* (pp. 67–96). Sage Publications, Inc. https://doi.org/10.4135/9781452243337.n4

Okihiro, G. Y. (1994). Is yellow black or white?. Margins and mainstreams: Asians in American history and culture, 31, 33.

Omi, M., & Winant, H. (1986). Racial Formation in the United States. First Edition. Routledge.

Osajima, K. (2005). Asian Americans as the model minority: An analysis of the popular press image in the 1960s and 1980s. A companion to Asian American studies, 1(1), 215-225.

Paik, S. J., Kula, S. M., Saito, L. E., Rahman, Z., & Witenstein, M. A. (2014). Historical perspectives on diverse Asian American communities: Immigration, incorporation, and education. Teachers College Record (1970), 116(8), 1–45. https://doi.org/10.1177/016146811411600804

Palmor Haspel, S., Benyamini, Y., & Ginzburg, K. (2020). Transactional Model of Parental Adjustment and Caregiving Burden Following a Children's Acquired Disability. *Journal of Pediatric Psychology*, 45(10), 1177-1187.

Park, M. S. (2001). The factors of child physical abuse in Korean immigrant families. *Child Abuse & Neglect*, 25(7), 945-958.

Pelton, L. H. (1978). Child abuse and neglect: the myth of classlessness. *American Journal of Orthopsychiatry,* 48(4), 608.

Perrigo, J. L., Berkovits, L. D., Cederbaum, J. A., Williams, M. E., & Hurlburt, M. S. (2018). Child abuse and neglect re-report rates for young children with developmental delays. *Child Abuse & Neglect*, 83, 1-9.

Perrigo, J. L., Molina, A. P., Hurlburt, M. S., Palinaks, L. A., and Finno-Velasquez, M. (forthcoming). A qualitative approach to understand neighborhood-level child maltreatment under- and over-reporting drivers.

Pew Research Center. (2021). Asian Americans are the fastest-growing racial or ethnic group in the U.S. Retrieved from https://www.pewresearch.org/fact-tank/2021/04/09/asian-americans-are-the-fastest-growing-racial-or-ethnic-group-in-the-u-s/

Putnam-Hornstein, E., Needell, B., King, B., & Johnson-Motoyama, M. (2013). Racial and ethnic disparities: A population-based examination of risk factors for involvement with child protective services. *Child Abuse & Neglect*, 37(1), 33–46. https://doi.org/10.1016/j.chiabu.2012.08.005

Putnam-Hornstein, E., Simon, J. D., Eastman, A. L., & Magruder, J. (2015). Risk of re-reporting among infants who remain at home following alleged maltreatment. *Child Maltreatment,* 20(2), 92-103.

Quine, L., & Pahl, J. (1991). Stress and coping in mothers caring for a child with severe learning difficulties: A test of Lazarus' transactional model of coping. *Journal of Community & Applied Social Psychology*, 1(1), 57-70.

Ramakrishnan, P., Karimah, A., Kuntaman, K., Shukla, A., Ansari, B. K. M., Rao, P. H., ... & Murthy, P. (2015). Religious/spiritual characteristics of Indian and Indonesian physicians and their acceptance of spirituality in health care: A cross-cultural comparison. *Journal of Religion and Health*, 54(2), 649-663.

Rao, K., DiClemente, R. J., & Ponton, L. E. (1992). Child sexual abuse of Asians compared with other populations. *Journal of the American Academy of Child & Adolescent Psychiatry*, 31(5), 880-886.

Rhee, S., Chang, J., Weaver, D., & Wong, D. (2008). Child maltreatment among immigrant Chinese families: Characteristics and patterns of placement. *Child Maltreatment*, 13(3), 269-279.

Roberts, D. (2009). Shattered bonds: The color of child welfare. Hachette.

Roberts, D. E. (2008). The racial geography of child welfare: toward a new research paradigm. *Child Welfare*, 87(2), 125–150.

Robin, R. W., Chester, B., Rasmussen, J. K., Jaranson, J. M., & Goldman, D. (1997). Prevalence, characteristics, and impact of childhood sexual abuse in a Southwestern American Indian tribe. *Child Abuse & Neglect*, 21(8), 769-787.

Rosenfeld, A. A., Pilowsky, D. J., Fine, P., Thorpe, M., Fein, E., Simms, M. D., N.Halfon, M.Irwin, J. Alfaro, R. Saletsky & Nickman, S. (1997). Foster care: An update. *Journal of the American Academy of Child & Adolescent Psychiatry,* 36(4), 448-457.

Ryabov, I. (2016). Colorism and educational outcomes of Asian Americans: evidence from the National Longitudinal Study of Adolescent Health. *Social Psychology of Education: An International Journal,* 19(2), 303–324. https://doi.org/10.1007/s11218-015-9327-5

Sabol, W., Coulton, C., & Polousky, E. (2004). Measuring child maltreatment risk in communities: a life table approach. *Child Abuse & Neglect*, 28(9), 967–983. https://doi.org/10.1016/j.chiabu.2004.03.014

Sameroff, A. (1975). Transactional models in early social relations. Human development, 18(1-2), 65-79.

Sameroff, A. J., & Chandler, M. J. (1975). Reproductive risk and the continuum of caretaking casualty. *Review of Child Development Research*, 4, 187-244.

Sameroff, A. J., Bartko, W. T., Baldwin, A., Baldwin, C., & Seifer, R. (1998). Family and social influences on the development of child competence.

Scannapieco, M., & Connell-Carrick, K. (2005). Focus on the first years: Correlates of substantiation of child maltreatment for families with children 0 to 4. *Children and Youth Services Review,* 27(12), 1307-1323.

Sedlak, A. J., Mettenburg, J., Basena, M., Peta, I., McPherson, K., & Greene, A. (2010). Fourth national incidence study of child abuse and neglect (NIS-4). Washington, DC: US Department of Health and Human Services, 9, 2010.

Simms, M. D., Dubowitz, H., & Szilagyi, M. A. (2000). Health care needs of children in the foster care system. *Pediatrics*, 106(Supplement 3), 909-918.

Singh GK. Area deprivation and widening inequalities in US mortality, 1969-1998. (2003). *American Journal of Public Health*. 93:1137-1143.

Slack, K. S., Holl, J. L., McDaniel, M., Yoo, J., & Bolger, K. (2004). Understanding the risks of child neglect: An exploration of poverty and parenting characteristics. *Child Maltreatment,* 9(4), 395-408.

Smith, C. J., & Devore, W. (2004). African American children in the child welfare and kinship system: From exclusion to over inclusion. *Children and Youth Services Review*, 26(5), 427-446.

Spencer, M. S., Chen, J., Gee, G. C., Fabian, C. G., & Takeuchi, D. T. (2010). Discrimination and Mental Health–Related Service Use in a National Study of Asian Americans. *American Journal of Public Health*, 100(12), 2410–2417. https://doi.org/10.2105/ajph.2009.176321

Stith, S. M., Liu, T., Davies, L. C., Boykin, E. L., Alder, M. C., Harris, J. M., Som, A., McPherson, M., & Dees, J. E. M. E. G. (2009). Risk factors in child maltreatment: A meta-analytic review of the literature. *Aggression and Violent Behavior, 14*(1), 13–29. https://doi.org/10.1016/j.avb.2006.03.006

Stouthamer-Loeber, M. A. G. D. A., Loeber, R., Homish, D. L., & Wei, E. (2001). Maltreatment of boys and the development of disruptive and delinquent behavior. *Development and Psychopathology,* 13(4), 941-955.

Sue, S., Cheng, J. K. Y., Saad, C. S., & Chu, J. P. (2012). Asian American Mental Health: A Call to Action. *American Psychologist*, 67(7), 532–544. https://doi.org/10.1037/a0028900

Sullivan, P. M., & Knutson, J. F. (2000). Maltreatment and disabilities: A population-based epidemiological study. *Child Abuse & Neglect*, 24(10), 1257-1273.

Suzuki, B. H. (2002). Revisiting the model minority stereotype: Implications for student affairs practice and higher education. *New Directions for Student Services*, 2002(97), 21-32.

Takeuchi, D. T., Alegría, M., Jackson, J. S., & Williams, D. R. (2007). Immigration and mental health: Diverse findings in Asian, Black, and Latino populations.

Takeuchi, D. T., Hong, S., Gile, K., & Alegría, M. (2007). Developmental contexts and mental disorders among Asian Americans. *Research in Human Development*, 4(1 & AMP), 49. https://doi.org/10.1080/15427600701480998

Testa, M. F., & Smith, B. (2009). Prevention and drug treatment. *The Future of Children*, 147-168.

The National Child Abuse and Neglect Data System. (2019). Retrieved from https://www.ndacan.acf.hhs.gov

Thompson, R., & Wiley, T. R. (2009). Predictors of re-referral to child protective services: A longitudinal follow-up of an urban cohort maltreated as infants. *Child Maltreatment*, 14(1), 89-99.

Tjaden, P., & Thoennes, N. (2000). Prevalence and consequences of male-to-female and female-to-male intimate partner violence as measured by the National Violence Against Women Survey. *Violence Against Women*, 6(2), 142-161.

Trocmé, N., Knoke, D., Fallon, B., & MacLaurin, B. (2009). Differentiating between substantiated, suspected, and unsubstantiated maltreatment in Canada. *Child Maltreatment, 14*(1), 4-16.

Trueba, H., Jacobs, L., & Kirton, E. (1990). Cultural conflict and adaptation. New York: Falmer Press.

U.S. Census Bureau. (2019). State Population by Characteristics: 2010-2019. Retrieved from https://www.census.gov/data/tables/time-series/demo/popest/2010s-state-detail.html

U.S. Census Bureau. (2020). Race by Decennial Census. Retrieved from https://data.census.gov/cedsci/table?q=race%20&tid=DECENNIALPL2020.P1

U.S. Children's Bureau (2019). Child Welfare Outcomes Report Data. Retrieved from https://cwoutcomes.acf.hhs.gov/cwodatasite/childrenReports/index

U.S. Children's Bureau & Child Welfare Information Gateway. (2019). Child Maltreatment 2019: Summary of Key Finding. Retrieved from https://www.childwelfare.gov/pubpdfs/canstats.pdf

U.S. Department of Health & Human Services, Administration for Children and Families, Administration on Children, Youth and Families, Children's Bureau. (2021). Child Maltreatment 2019. Retrieved from https://www.acf.hhs.gov/cb/research-data-technology/ statistics-research/child-maltreatment.

U.S. Department of Health and Human Services. (2019). Data & Research. Retrieved from https://www.acf.hhs.gov/cb/data-research

Uba, L. (2003). Asian Americans: Personality patterns, identity, and mental health. Guilford Press.

Victor, B. G., Grogan-Kaylor, A., Ryan, J. P., Perron, B. E., & Gilbert, T. T. (2018). Domestic violence, parental substance misuse and the decision to substantiate child maltreatment. *Child Abuse & Neglect*, 79, 31-41.

Waid, J., Jeanie Santaularia, N., Piescher, K., & LaLiberte, T. (2021). A latent class analysis of modifiable risk factors associated with child maltreatment re-reporting and recurrence. *Child Abuse & Neglect*, 120(105249), 105249. https://doi.org/10.1016/j.chiabu.2021.105249

Waldfogel, J. (2000). Reforming child protective services. *Child Welfare*, 79(1).

Walters, K. L., & Simoni, J. M. (2002). Reconceptualizing Native women's health: An "indigenist" stress-coping model. *American Journal of Public Health*, 92(4), 520-524.

Webster, D., Lee, S., Dawson, W., Magruder, J., Exel, M., Cuccaro-Alamin, S., Putnam-Hornstein, E., Wiegmann, W., Saika, G., Chambers, J., Hammond, I., Ayat, N., Gomez, A., Misirli, E., Hoerl, C., Yee, H., Flamson, T., Gonzalez, A., & Ensele, P. (2021). CCWIP reports. Retrieved Oct 5, 2021, from University of California at Berkeley California Child Welfare Indicators Project website. URL: https://ccwip.berkeley.edu

Westat, Inc. (1993). A report on the maltreatment of children with disabilities. Washington, DC: National Center on Child Abuse and Neglect.

White, O. G., Hindley, N., & Jones, D. P. (2015). Risk factors for child maltreatment recurrence: An updated systematic review. Medicine*, Science and the Law*, 55(4), 259-277.

Williams-Mbengue, N., & Christian, S. (2007). The color of care: Legislators are seeking answers to difficult questions about race and child welfare. State Legislatures, 33(4), 30-32.

Williams, G., Tonmyr, L., Jack, S. M., Fallon, B., & MacMillan, H. L. (2011). Determinants of maltreatment substantiation in a sample of infants involved with the child welfare system. *Children and Youth Services Review*, 33(8), 1345-1353.

Williams, L. M. (1994). Recall of childhood trauma: A prospective study of women's memories of child sexual abuse. *Journal of Consulting & Clinical Psychology*, 62, 1167-1176

Wing, J. Y. (2007). Beyond black and white: The model minority myth and the Invisibility of Asian American students. *The Urban Review*, 39(4), 455-487.

Wolock, I., Sherman, P., Feldman, L. H., & Metzger, B. (2001). Child abuse and neglect referral patterns: A longitudinal study. *Children and Youth Services Review*, 23(1), 21-47.

Wong, F., & Halgin, R. (2006). The "model minority": Bane or blessing for Asian Americans?. *Journal of Multicultural Counseling and Development,* 34(1), 38-49.

World Health Organization. (2020). Child Maltreatment. Retrieved from https://www.who.int/news-room/fact-sheets/detail/child-maltreatment

Wulczyn, F. (2009). Epidemiological perspectives on maltreatment prevention. *The Future of Children,* 39-66.

Wulczyn, F., & Lery, B. (2007). Racial disparity in foster care admissions. Center for Children.

Xie, Y., & Gough, M. (2011). Ethnic enclaves and the earnings of immigrants. *Demography,* 48(4), 1293–1315. https://doi.org/10.1007/s13524-011-0058-8

Xu, J., & Lee, J. C. (2013). The marginalized "model" minority: An empirical examination of the racial triangulation of Asian Americans. *Social Forces*, 91(4), 1363-1397.

Yamashita, L. (2022). "I just couldn't relate to that Asian American narrative": How Southeast Asian Americans reconsider panethnicity. *Sociology of Race and Ethnicity*, 8(2), 250–266. https://doi.org/10.1177/23326492221078953

Yampolskaya, S., & Banks, S.M. (2006). An assessment of the extent of child maltreatment using administrative databases. *Assessment.* 13: 342–355.

Yang, K. (2004). Southeast Asian American children: Not the "model minority." *The Future of Children, 14*(2), 127. https://doi.org/10.2307/1602799

Yellow Horse, A.J., Jeung, R., & Matriano, R. (2022, March 4). National report (Through December 31, 2021). Stop AAPI Hate. https://stopaapihate.org/2022/03/04/national-report-through-december-31-2021/\

Yellow Horse A. J., Jeung, R., Lim,R., Tang, B., Im M., Higashiyama L., Schweng L., Chen, M., (2021). National report (Through June 30, 2021). Stop AAPI Hate. https://stopaapihate.org/wp-content/uploads/2021/08/Stop-AAPI-Hate-Report-National-v2-210830.pdf

Yoshioka, M. R., Dinola, J., & Ullah, K. (2001). Attitudes toward marital violence: An examination of four Asian communities. *Violence Against Women*, 7, 900-926.

Zhai, F., & Gao, Q. (2009). Child maltreatment among Asian Americans: Characteristics and explanatory framework. *Child Maltreatment*, 14(2), 207-224.

Zhang, W., & Ta, V. M. (2009). Social connections, immigration-related factors, and self-rated physical and mental health among Asian Americans. *Social Science & Medicine*, 68(12), 2104–2112. https://doi.org/10.1016/j.socscimed.2009.04.012

Zhou, M. (2020). 15. Are Asian Americans becoming white? In Contemporary Asian America (third edition) (pp. 378–388). New York University Press.