Is There a Possible Relationship between a Child’s Environment and Child Maltreatment Allegations in Public Child Welfare?

by

Laura Flores Rios

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**ABSTRACT**

**Is There a Possible Relationship between a Child’s Environment and Child Maltreatment Allegations in Public Child Welfare?**

Environmental injustice is a worldwide problem that has been around since the early 1970’s. Previous research has found that hazardous industries are more likely to be placed in impoverished communities, thus, increasing the likelihood for children to develop health problems. The goal of this research is to understand the detrimental impacts environmental injustice can have on children and families residing in impoverished communities and the role this may play in children coming to the attention of the child welfare system. This study utilized four indicators which consist of: water quality, air quality, asthma, and child maltreatment allegations. The researcher compared these indicators in Fresno County through a secondary data analysis utilizing public data sets from the U.S. Census, the Center for Social Services Research at University of California, Berkeley, and the Department of Public Health, administrative county data, The California Environmental Protection Agency, and the Center for Disease Control and Prevention Agency. The results of the study demonstrated that communities in Fresno County with zip code 93706 and 93702 are more likely to live below the Federal poverty level, have to endure bad air and water quality, and have higher rates of substantiated child maltreatment allegations.

Author Name: Laura Flores Rios

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Chair: Dr. Salvador Montana

Reader: Dr. Kris Clarke

**Executive Summary**

Environmental injustice is a worldwide problem that has been around since the early 1970’s. Research has found that hazardous industries are more likely to be placed in impoverished communities, thus, increasing the likelihood for children to develop health problems (Waldfogel, 2005). Regardless of the vast amount of research conducted on the topic, there are still rural communities in California’s Central Valley that lack information regarding the environmental conditions they live under. This research study utilized a secondary data analysis to examine environmental injustice and detrimental health problems in California’s Central Valley and how environmental injustice may exacerbate health condition related to allegations of child neglect.

In this research study, environmental injustice is defined as an unequal placement of hazardous industries that may cause chronic health illnesses, malnourishment, infant mortality, cellular mutation, shorter life expectancy, cognitive developmental delays, premature births, high lead levels, pollution, and birth defects. Child maltreatment includes physical abuse, sexual abuse, emotional abuse, and neglect of a child under the age of eighteen. Child neglect is characterized by a parent’s failure to protect and provide a safe environment for their children.

The purpose of this research study is to further explore the relationship between environmental injustice and child maltreatment allegations, and to allow non-profit organizations, policy makers, and Child Protective Services to utilize this research as a tool to advocate for environmentally disadvantaged communities in California’s Central Valley. The intention of this study is to inform society members of the effect environmental injustice may possibly have on child neglect in local communities in California’s Central Valley, where a high number of agricultural businesses are placed.

Literature Review

Countless studies have found that exposing communities to hazardous toxins has an adverse effect on the psychological, emotional, and physiological wellbeing of children and their families. Wadfogel (2005), analyzed the relationship between income, family characteristics, and child maltreatment and found a strong correlation between family characteristics and child maltreatment across all family types. Ernest (2001) conducted a quantitative study utilizing the US Census and Montgomery County’s database to analyze the relationship between environmental factors and child maltreatment reports. His results found that economically and racially mixed communities had the highest rates of child maltreatment (Coulton, Korbin, Su & Chow, 1995). According to Hecht and Hansen (2001), one’s environment, which includes family, friends, neighborhood, socio-economic status, and ethnicity, can have a great impact on the psychopathology of children. Hecht and Hansen (2001), found that poverty is a chronic environmental condition that has a direct effect on children’s lives, and often contributes to the adverse effects that poor children are forced to face on a day to day basis. According to Hecht and Hansen (2001), caregivers and children who reside in low socio economic neighborhoods and are exposed to toxins are victims of their environment. As a result of their environment, individuals who reside in these communities tend to have higher stress levels than their wealthier counterparts. Coulton, Korbin, Su, &Chow (1995), furthermore, found environmental factors to be related to official reports of child maltreatment. Coulton et al.’s research study demonstrates the impact one’s environment can have on society’s perception of child neglect. Coulton’s research found that children who reside in neighborhoods that are characterized by poverty, racially mixed communities and concentration of female headed households are at a higher risk of reported child maltreatment.

One’s environment affects an individual’s psychological, emotional, and physiological health. Sze’s (2006) research study, conducted on low income, predominantly African American rural communities in New Orleans, found that cancer and respiratory illness rates in the region are among the highest in the United States. Her research found that over eight toxic waste dumps, in New Orleans, are placed primarily in impoverished communities, making them more likely to be exposed to persistent organic pollutants (POPs) that are extremely toxic, long lasting, and can travel long distances. The exposure of POP’s can lead to higher rates of infectious diseases and immune dysfunction, which can in turn have a negative impact on the intellectual development of newborns (Boerner & Lambert, 1995).This, in turn, can be misinterpreted by governmental agencies, such as hospitals, as child neglect. For example, children with immune dysfunctions and developmentally delayed newborns can be perceived as resulting from substance abuse or child neglect by hospitals thus generating a report of suspected child abuse to Child Protective Agencies.

Gaps in the Literature

Although former research studies have provided a strong foundation on the concept of environmental injustice, there is still need for more local research on the matter in California’s Central Valley. The majority of the research conducted incorporates an international perspective and, although the research is beneficial to our society, environmental injustices that rural communities have to endure in California’s Central Valley are left unknown. Much of the previous research was conducted in already impoverished communities however there was no comparison of these results with communities from different socioeconomic classes. Previous research also failed to state any advantages that the placement of hazardous industries can have on the communities. For example, Payne (1997), states that the placement of hazardous industries provides residents with employment and educational attainment opportunities, thus outweighing the environmental harm these industries cause.

Methodology

The researcher conducted an exploratory secondary research study by comparing publicly available data sets from the U.S. Census, the Center for Social Services Research at University of California, Berkeley, and the Department of Public Health, administrative county data, The California Environmental Protection Agency, and the Center for Disease Control and Prevention Agency. The researcher compared the public available data from the above-mentioned sources from 2007 to 2012 for Fresno County. De-identified county administrative data of children and families who have been referred for child maltreatment, specifically child neglect allegations, was also utilized for this research study. Furthermore, the researcher utilized four sets of zip codes in Fresno County from different socioeconomic classes; zip codes 93702 and 93706 are lower socioeconomic communities and zip codes 93611 and 93720 are more affluent communities. The purpose of the four sets of zip codes was to compare poorer communities against more affluent communities using these indicators: the number of child neglect allegations, the number of children with chronic illnesses, and air and water quality measures. For Fresno County, the researcher utilized zip code 93706 versus 93720 and zip code 93702 versus 93611.

 Abundant research has been conducted on the detrimental effects environmental injustice has on residents residing in communities where the establishment of hazardous industries is prevalent. Very little research, however, has been conducted on whether one’s environment plays a role in child neglect allegations. This research study will, therefore, attempt to determine if environmental injustice might possibly affect allegations of child maltreatment in the form of child neglect in California’s Central Valley.

Results

The researcher used descriptive analysis comparing and contrasting the statistics gathered from the U.S. Census, the Center for Social Services Research at University of California, Berkeley, and the Department of Public Health, administrative county data, The California Environmental Protection Agency, and the Center for Disease Control and Prevention Agency.

*Poverty*

 The researcher gathered poverty rates, specifically for Fresno County zip code 93706, 93702, 93711, and 93720 from the U.S. Census. One’s socioeconomic class may have an impact in the resources available for individuals residing in impoverished communities to deal with poor environmental conditions, thus possibly increasing the life stressors of parents who reside in communities with high poverty levels. Increased life stressors and higher poverty, in turn, can possibly lead to increased child maltreatment allegations in these impoverished communities, especially in the area of child neglect allegations. This is because parents with little resources often do not have an ability to seek treatment for their children for medical conditions such as asthma and other health conditions cause by poor air or water quality. Their inability to seek appropriate timely treatment for their children may be construed as neglect by some authorities in a community. The following tables will illustrate the poverty levels and child maltreatment allegations for four Fresno County zip codes from communities of different socioeconomic class. The researcher compared four zip codes in Fresno County that represent West Fresno, South Fresno, Clovis, and North Fresno.

Table 1 represents the percentage of individuals who live below the poverty level for four zip codes in Fresno County in 2010.

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| **Table 1****Percent Below Poverty Level for Zip Codes in Fresno County** |
|  | **93706****(%)** | **93702****(%)** | **93611****(%)** | **93720****(%)** |
| **Under 18** | 7,362(46.49) | 10,010(47.25) | 1,303(35.86) | 949(26.51) |
| **18 to 64** | 7,787(49.17) | 10,486(49.49) | 2,033(55.96) | 2,445(68.30) |
| **65 and over** | 687(4.34) | 691(3.26) | 297(8.18) | 186(5.19) |
| **Total Population** | 15,836(100) | 21,187(100) | 3,633(100) | 3,580(100) |

Source: United States Census Bureau, 2010

Table 1 demonstrates that children who resided in communities with zip code 93706 and 93702 were more likely to live below poverty levels when compared to children who resided in communities with zip code 93611 and 93702. Children who resided in communities with zip code 93720 were the least likely to live below the poverty level out of the four zip codes. Poverty rates as a whole in Fresno County as higher than the overall California poverty rate of 15.3% (United States Census Bureau, 2010).

*Child Maltreatment*

 The researcher included child maltreatment rates for years 2010 to 2013 by utilizing secondary data from the Center for Social Service Research at University of California, Berkeley and county administrative data. The Center for Social Service Research at University of California, Berkeley is a California Child Welfare Indicators Project that was established to engage in ongoing research projects and to influence the use of administrative county data for research purposes (Needell et al., 2013). The researcher attempted to discover if there may be a possible relationship between one’s socioeconomic class and child maltreatment allegations by comparing poverty statistics and child maltreatment allegations from Fresno County through administrative county data. The researcher, furthermore, compared Fresno County’s child maltreatment allegations to the state of California in order to detect any differences between the two.

Table 2 represents the total child maltreatment allegations for the State of California and Fresno County from 2011 and 2012.

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| **Table 2** |
| **Child Maltreatment Allegations for the State of California and Fresno County from 2011 and 2012** |
|  |  **California 2011****n (%)** |  **California 2012****n (%)** | **Fresno County 2011** **n (%)** | **Fresno County 2012****n (%)** |
| **Sexual Abuse** | 40,608(8.55) | 42,010(8.36) | 876(4.58) | 1,001(5.25) |
| **Physical Abuse** | 91,495(19.25) | 93,786(18.67) | 3,059(15.96) | 2,993(15.70) |
| **General Neglect** | 214,647(45.17) | 223,082(44.40) | 9,572(49.95) | 9,373(49.15) |
| **Emotional Abuse** | 44,611(9.39) | 43,275(8.61) | 1,405(7.33) | 1,284(6.73) |
| **At Risk Sibling** | 68,280(14.37) | 68,865(13.71) | 4,148(21.65) | 4,344(22.78) |
| **Other** | 15,540(3.27) | 31,405(6.25) | 101(0.53) | 74(0.39) |
| **Total** | 475,181(100) | 502,423(100) | 19,161(100) | 19,069(100) |

Source: Needell et al., 2013

Table 2 illustrates that from 2011 and 2012, general neglect child maltreatment allegations were by far the most common type of child maltreatment allegation reported in the state of California and Fresno County, with approximately forty-five percent of all reported child maltreatment allegations falling under this category. Physical abuse child maltreatment allegations were the second most common reported child maltreatment allegations in the state of California and Fresno County from 2011 and 2012, with approximately nineteen percent of all reported child maltreatment allegations categorized in this department.

Table 3 represents the total number of substantiated child maltreatment referrals per zip code in 2013 in Fresno County

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| **Table 3****Substantiated Child Maltreatment Referrals by Zip Code** |
|  | **Total Substantiated Referrals** |
| 93706 | 172 |
| 93702 | 255 |
| 93720 | 36 |
| 93611 | 48 |

Source: Administrative County Data

Table 3 demonstrates that communities with zip code 93702 had the highest number of substantiated child maltreatment referrals, while communities with zip code 93720 had the least substantiated child maltreatment referrals out of the four zip codes in 2013.

*Air Quality*

The researcher utilized The California Environmental Protection Agency publicly available data to determine if there was a possible relationship between environmental factors such as one’s air quality and child maltreatment rates in Fresno County. The following tables compare the total number of unhealthy particular matter smaller than 2.5 micrometers (PM 2.5) between the State of California and Fresno County. The researcher is attempting to demonstrate the possible role air quality can play in child maltreatment allegations by illustrating the total number of days in which unhealthy particular matters smaller than 2.5 micrometers were present in Fresno County.

Table 4 represents the number of days in a year with unhealthy levels of particular matter smaller than 2.5 micrometers (PM 2.5) collected at monitoring sites in Fresno County and the State of California from 2007 to 2012.

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| **Table 4****Number of Unhealthy days with PM 2.5 for Fresno County** |
|  | **2007** | **2008** | **2009** | **2010** | **2011** | **2012** |
| **Fresno to 1st Street** | 98 | 99 | 98 | 97 | 100 | 29 |
| **Fresno to Hamilton** | 98 | 97 | 99 | 98 | 80 | 97 |
| **State of California** | 85 | 88 | 78 | 70 | 75 | 72 |

Source: The California Environmental Protection Agency, 2014

Table 4 illustrates that collected monitoring sites in Fresno County have a higher number of unhealthy days with PM 2.5 when compared with the State of California.

*Water Quality*

 The researcher utilized publicly available data from the State Water Resource Control Board to determine if there is a possible relationship between the water quality in one’s community and child maltreatment allegations. The researcher could not sort out the total average sewer overflow of toxic chemicals in Fresno County by zip code. The following table will, therefore, demonstrate the exposure of toxic chemicals Nitrate (NO3) and Multifunctional Cationic Surfactant (FC12) that all residents in Fresno County are exposed to.

Table 5 represents the average sewer overflow of Nitrate (NO3) and Multifunctional Cationic Surfactant (FC12) in Fresno County from 2007 to 2012.

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| **Table 5****Average Sewer Overflow of Toxic Chemicals in Fresno County** |
|  | **2007****(mg/l)** | **2008****(mg/l)** | **2009****(mg/l)** | **2010****(mg/l)** | **2011****(mg/l)** | **2012****(mg/l)** |
| **NO3** | 27.46 | 26.10 | 26.19 | 30.16 | 23.08 | 24.29 |
| **FC12** | 0.57 | 0.54 | 0.29 | 0.18 | 0.42 | 0.25 |

Source: The State Water Resource Control Board, 2009

Table 5 demonstrates that in 2010, communities in Fresno County were exposed to the highest exposures of NO3 in their water system. This table, furthermore, demonstrates that in 2007, communities in Fresno County were exposed to the highest exposure of FC12 in their water system.

Discussion

The researcher found that a disproportionate number of Latino and African American children under the age of 18 are more likely to live below poverty level in communities with zip codes 93706 and 93702 in Fresno County (United States Bureau, 2010). Children under the age of eighteen composed 46.49% of the population who live below the poverty level in communities with zip code 93706. For communities with zip code 93702, children under the age of eighteen composed 47.25% of the population who lived below the poverty level. Communities with zip code 93706 and 93702, furthermore, have a higher percentage of individuals residing below poverty levels when compared to the rest of Fresno County and the State of California.

The results also suggests that Fresno County’s highest percentage of substantiated child maltreatment allegations from 2010-2012 consisted of general neglect. Although this category of child maltreatment allegations is also the most common for the State of California as a whole, the rate at which it occurred in Fresno County is higher than the rate at which it occurred in the State of California; general neglect in Fresno County averaged 49.70% of all child maltreatment allegations from 2010-2012, while general neglect in the State of California averaged 44.81% in the same time period. Likewise, the second highest category of child maltreatment allegations for both Fresno County and the State of California from 2010-2012, at risk sibling, follows the same trend, with the average rate in Fresno County being 22.13% of all allegations and the average rate in the State of California being 14.09% of all allegations. Generally, the siblings who reside in the same household of children who had a child maltreatment allegation substantiated fall into the category of at risk sibling. The researcher, therefore, hypothesizes that children who fall into the at risk sibling category are likely to be due to child maltreatment allegations of general neglect.

The researcher also found that communities with zip codes 93706 and 93702 had by far more substantiated child maltreatment referrals than communities with zip codes 93720 and 93611. Zip code 93706 had 172 substantiated child maltreatment referrals in 2013, while zip code 93702 had 255 substantiated referrals. Meanwhile, zip codes 93720 and 93611 had 36 and 48 substantiated child maltreatment referrals, respectively. From the above-mentioned results, it can therefore be theorized that a large percentage of the substantiated child maltreatment allegations are likely to be due to general neglect.

*Relationships to Environmental Factors*

These results indicate that children of Latino and African American descent who reside in communities with zip code 93706 and 93702 are most likely to live below poverty levels and are at a higher risk of substantiated child maltreatment allegations. Poverty can lead to higher stress levels, lower educational attainment, less ideal housing situations, and fewer employment opportunities. Individuals who reside in communities with poor environmental factors, such as communities with zip code 93706 and 93702, have to furthermore endure bad air and water quality that can lead to respiratory illnesses such as bronchitis, shortness of breath, and asthma. Consequently, these parents are most likely to be employed in blue collar jobs that are not flexible with hourly schedules, thus potentially not allowing parents to follow up with doctor appointments for children who have chronic respiratory illnesses. These parents are thus left with an ultimatum of either losing one day’s pay or missing a doctor’s follow up appointment for a child with chronic respiratory illness. In the eyes of medical professionals, however, the medical concern is a priority that must be attended. From their perspective, missing a follow up appointments for a child who is suffering from asthma, shortness of breath or bronchitis, which can lead to premature deaths, is a priority.

Conclusion/Policy Implications

Poverty and equal distribution of resources is a societal problem that everyone must engage in order to create a just environment for everyone. As social workers, we must then advocate for policy changes and preventative programs that can alleviate the disparities between the poor and the wealthy. One’s environment can influence an individual’s educational attainment, health, life expectancy, conflict resolution, development, and behavior (Waldfogel, 2005). One’s environment may also, unfortunately, lead to child maltreatment allegations which can have a detrimental impact on the life of a child. Social workers must therefore understand these implications and advocate on behalf of our clients who are often residing in impoverished communities with bad air and water quality.

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