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**GENDER, RACE, AND CLASS AS PREDICTORS  
OF FEMICIDE RATES:  
A PATH ANALYSIS**

by

**JO-ANN DELLA-GIUSTINA**

**A dissertation submitted to the Graduate Faculty in Criminal  
Justice in partial fulfillment of the requirements for the degree  
of Doctor of Philosophy, the City University of New York**

**2005**

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## Abstract

### GENDER, RACE, AND CLASS AS PREDICTORS OF FEMICIDE RATES:

#### A PATH ANALYSIS

by

Jo-Ann Della-Giustina

Adviser: Dr. Maureen O'Connor

This research is designed to examine social structural variables related to femicide (murder of women), particularly gender, race, class, and population structure. It explores gender, race, and class as potential predictors of the variation in femicide rates and population structure as a possible mediator between the predictors and the femicide rates. To analyze these relationships, the femicide rates of black women and white women victims are gathered for 106 medium and large U.S. cities for the years 1998 to 2001.

Path analysis is employed to test whether the intersectionality theory (Crenshaw, 1991) can be used to empirically predict variations in the femicide rates. It is one of many efforts to develop a complex view of violence against women grounded in the feminist perspective that women's lives are shaped by the interconnection of the multiple oppressions of gender, race, and class.

The findings of this study support the tenets of intersectionality theory – that the interlocking oppressions of gender, race, and class inequalities influence

women's lives. The results indicate that intersectional inequality predicts high femicide rates for both black women and white women. When gender, race, and class are examined separately, however, there are significant differences between the predictors of the race-based femicide rates. In particular, high overall femicide rates and black femicide rates are predicted by a city's high level of racial inequality, but low level of gender inequality. For the white femicide rate, only a city's class inequality is a predictor. The greater a city's class inequality, the higher the femicide rate of white women. Moreover, a city's population structure mediates the predictive effect of gender inequality on the white femicide rate.

## ACKNOWLEDGEMENTS

This dissertation is dedicated to Jaclyn Dowaliby and Victoria Munsell Sleeper. Jaclyn's murder started me on this journey fourteen years ago. She was a beautiful little girl who was never allowed to grow into a woman. Her murder has never been solved, but her guiding spirit is ever-present. Vicky was killed by her estranged husband, whom she met when Vicky and I were in high school together. Jaclyn and Vicky are only two of many females whose lives have been cut short by their brutal murder. Although Vicky was murdered by her intimate partner and we do not know who killed Jaclyn, other women have been slaughtered by family members, friends, acquaintances, and strangers. This research is part of growing body of research that attempts to explain the complicated causes and risks for femicide so that fewer women will be murdered in the future.

Many thanks to my adviser, Dr. Maureen O'Connor, for agreeing to guide me through this project, for being consistently supportive, and for giving valuable advice. She has been indefatigable in helping me shape this project from the beginning and has continued to encourage me at every step of the way. Through the process I have also gained a friend and colleague. I'm also thankful to the other members of my committee. To Dr. Natalie Sokoloff, thank you for being a mentor, a colleague, and a friend for the last six years. Dr. Sokoloff has inspired in me a deep commitment to understand better the roles that gender, race, and class oppressions play in violence against women. I also want to thank Dr. Jennifer Groscup for guiding me through the statistical maze of this project.

Without the many colleagues, friends, and family who listened to my complaints and frustrations, this process would have been much more difficult. I especially want to thank my parents, Joseph and Jennie Della-Giustina, my sister, Marsha Della-Giustina, my brother, Joe Della-Giustina, and my niece, Joey Nicole Della-Giustina, who have stood steadfastly behind me through my entire doctoral educational process. They listened to endless hours of eagerness, frustration, disappointment, and triumph as I navigated the way.

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## CHAPTER 1 - INTRODUCTION

The ultimate form of violence against women is femicide, which is the homicide<sup>1</sup> of women (Frye & Wilt, 2001; Grana, 2001; McFarlane, Campbell, Wilt, Sachs, Ulrich, & Xu, 1999; Moracco, Runyan, & Butts, 1998; Sharps, Campbell, J., Campbell, D., Gary, & Webster, 2001). Each year thousands of women are murdered around the world. In the United States, femicide is the fourth leading cause of death for all women under the age of 45 and the leading cause of death for black women<sup>2</sup> aged 15 to 34 years old (Moracco, Runyan & Butts, 1998; Oliver, 2000). American women face a higher risk of being murdered than women from any other industrial country except Russia. During the 1990s, the femicide rate for U.S. women was 4.2 per 100,000 women. For European women, the femicide rates ranged from 0.5 to 2.4 per 100,000 women depending on the country (Salfati, 2001), and the Russian femicide rate was 12 to 15 per 100,000 women (Barker, n.d.; Cherayakov, Shkolnikov, Pridemore & McKee, 2002; Human Rights Watch, 1997; The Moscow Center for Gender Studies, 1996).

Early research on violence against women examined a limited set of non-lethal crimes against women, such as battering, rape, incest, and pornography, while general homicide research has primarily focused on men, as both offenders and victims. Because men comprise approximately three-fourths of all homicide

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<sup>1</sup> Homicide includes murder and non-negligent manslaughter.

<sup>2</sup> The term "black" is used instead of "African American" because not all black women in the United States are American. Many are immigrants who do not hold U.S. citizenship. African American is a political term first used by the Reverend Jesse Jackson in the 1980's to emphasize that Americans whose ancestors came from Africa lack political power in this country. Thus, the term African American presupposes that the woman is an American citizen able to participate in electoral politics. Accordingly, I describe a woman of African descent who

victims, the overwhelming number of male homicide victims can obscure any unique gendered patterns or differences between male and female victims (Moracco et al., 1998). When male homicide victims are examined separately from female homicide victims, some differing patterns emerge, including that most male victims are killed by strangers and most female victims are killed by someone they know. Also, men are more at risk of being killed by a friend or acquaintance whereas women are at a higher risk of being killed by an intimate partner<sup>3</sup> (Johnson, 1994). According to government statistics, from 1976 to 1999, approximately 30 percent of all femicide victims were killed by their intimate partner in contrast to 6 percent of all male homicide victims and 11 percent of overall homicide victims being killed by an intimate partner (Greenfeld, Rand, Craven, Klau, Perkins, Ringel, Warchol, Maton & Fox, 1998).<sup>4</sup>

Because of gendered homicide patterns and the focus on male homicide victims, we have limited knowledge about female homicide victims. We cannot assume that the factors associated with homicide against men affect women in the same manner. It is important to study women homicide victims separately to begin to determine whether the risk factors leading to femicide are different from the risk factors involved in the homicide of men. Moreover, femicide research needs to go beyond the study of intimate partner femicide. While women are 75

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is murdered as a black woman, regardless of her citizenship status.

<sup>3</sup> Intimate partners include current or former husbands, legal and common-law, boyfriends and former boyfriends, and same-sex partners.

<sup>4</sup> There is some disagreement about the percent of female homicide victims who are murdered by an intimate partner, depending on the data used. While the Federal Bureau of Investigation's Supplementary Homicide Reports (SHR) statistics have consistently shown that an intimate partner kills approximately 30% of all femicide victims, other homicide studies, using more complex data, indicate that the percent is higher (e.g., Greenfeld et al., 1998; Mercy & Salzman, 1989; Moracco et al., 1998; Rennison & Welchans, 2000; Rosenfeld, 1997).

percent of the victims of intimate partner homicide, many femicide victims, maybe a majority, are killed by someone who is not an intimate partner (Fox & Zawitz, 1997; Rennison, 2001, 2003; Rennison & Welchans, 2000).

This study addresses femicide as a social phenomenon by examining the macro-social structural factors associated with the femicide rate in medium and large cities in the United States (with a population of 170,000 or more) for the years 1998 to 2001. It includes the murder of women over the age of 15 years old by both men and women regardless of the motive or the relationship between the victim and the offender. Moreover, it disaggregates the femicide rates by the race of the victim. Disaggregation of homicide into more specific and homogenous subgroups improves our understanding of significant factors related to homicide victimization (Flewelling & Williams, 1999). Since women of diverse races are differently situated in society, the social conditions leading to their murders cannot be assumed to be the same. Thus, the femicide rates in this study are disaggregated by race, using the categories of black women and white women. While it would be optimal to also investigate the femicides of Latinas, that data are not readily available for many of the cities in the sample, including Philadelphia, Chicago, and New York.<sup>5</sup> Women of other races are not included because their numbers are too few to be included in this aggregate-level study.

Only in the last decade has research on femicide begun to appear to any significant extent. Much of the empirical research has centered on individual-

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<sup>5</sup> Because disaggregation of victim characteristics is important (Parker & Smith, 1979; Smith & Parker, 1980, Williams & Flewelling, 1988, 1999) and Latinas are the largest minority group in the U.S. (U.S. Census, 2004), future research is needed on the femicide rates of Latinas. One way

level characteristics and risk factors, such as the age, race, ethnicity, education, financial status, and emotional or mental state of the individual offender and victim, as well as the circumstances surrounding the incident (Block, 2000; Campbell, Webster, Koziol-McLain, Block, Campbell, Curry, Gary, Glass, McFarlane, Sacks, Sharps, Ulrich, Wilt, Manganello, Yu, Schollengerger, Frye, & Laughon, 2003). While it is important to recognize individual characteristics, to fully understand femicide we must view the homicide of women in larger social contexts. Individuals do not live in a vacuum. Their attitudes and behavior are a response to their specific situation within a community so that the community's characteristics and structures affect the individual's actions.

For that reason, this study investigates the relationship between the femicide rates and the intersection of the social structural factors of gender, race, and class as possible predictors of the variance in the femicide rate in U.S. cities with a population of 170,000 or more. This approach differs from previous macro-social structural research on femicide, which has studied the effect of gender inequality alone or gender inequality in conjunction with social disorganization. Women are affected not only by their gender, but by all aspects of their lives, including their race and their socio-economic class. To focus on only one area of a woman's life ignores her as a full human being. This study also examines whether a city's population structure, measured by population size and population density, mediates the predictive effects of gender inequality, racial inequality, and class inequality on the femicide rates.

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of doing this is to use more comprehensive homicide data sets, such as the Chicago Homicide Data Set, which includes comprehensive information on the ethnicity of homicide victims.

Macro-level social structural analysis is the process of studying the patterns of society as a whole instead of individuals or small groups of people (Andersen & Taylor, 2001). It focuses on social structural determinants as the explanation for crime patterns, which differs from the traditional American philosophy of individualism. Social structure is the pattern of social relationships and social institutions through which individual behavior is expressed. It holds a society together to form the collective reality and is greater than the sum of its individuals (Anderson & Taylor, 2001; Durkheim, 1951; Hess, Markson, & Stein, 1996). In that way, the structure of society influences trends, including femicide trends. Whereas individual-level factors may explain a single femicide, social structural factors affect the femicide rate, that is, the level of femicide in society.

Robert Sampson (1985:647) describes this approach:

Rather than seeking to explain individual involvement in criminal behavior, proponents of the structural perspective have attempted to isolate characteristics of macro social units that lead to high rates of criminality. The genesis of the social ecological model is that community structure has independent effects on crime that are not strictly disaggregable to [the] individual level...

Gender, race, and class are integral to the behavioral influences, role expectations, and life experiences that structure people's lives and responses to their surroundings. A person's actions emanate from the totality of his or her life experiences. In the U.S., very different life experiences shape men and women, whites and blacks, the rich and the poor. In that context, a person's gender, race, and class influence the possibility of becoming a homicide victim.

During the 19<sup>th</sup> century, black feminists explained their lives as being a combination of racial and gender oppressions (St. Pierre Ruffin, 2004; Truth, 1972). That perspective re-emerged in the 1960s and 1970s when feminists of color (black, Latina, Asian, and Native American feminists) analyzed their oppression as the multiple oppressions of gender, race, class, and sexuality (Beale, 1970; Cade, 1970; Combahee River Collective, 1983; Davis, 1983; hooks, 1989; Lindsay, 1970; Lorde, 1984; Reid, 1976; Vidal, 1971). That approach was applied to violence against women of color by Crenshaw (1991) in her intersectionality theory. Fine and Weis (1998) later extended the intersectionality theory to white women.

In accordance with the intersectionality construct, this dissertation analyzes the femicide rates of black women and white women in relation to the junction of gender, race, and class across medium and large cities in the United States for the years 1998 to 2001. The overall and race-specific femicide rates are gathered from the Federal Bureau of Investigation's Supplementary Homicide Reports (SHR) (Federal Bureau of Investigation, 1998 – 2001) and the National Center for Health Statistics of the Centers for Disease Control (CDC) (Centers for Disease Control, 1998 – 2001) data. The SHR contains femicide data for all of the cities in the sample except for Washington, D.C., which is reported in the CDC data. Both of these sources include data for black female and white female victims of homicide. The data on the structural factors of gender, race, class, and population structure are gathered from the U.S. Bureau of Census, Small Business Administration, and city internet websites.

Cities are the units of analysis because they are more homogenous social units than are larger units such as states, counties, or Standard Metropolitan Statistical Areas (SMSA's), which can vary widely from one area to another. Moreover, there is a significant intercity variation in the femicide rates, which enables a more complete analysis.

Path analysis, a form of multiple regression, is used to identify the context of femicides in the United States. Path analysis is particularly suited to study macro-level social structural factors because it examines entire predictive models that show the relations and interrelations among several factors. This research uses a path analysis to investigate the relationship between femicide rates and gender inequality, racial inequality, and class inequality, with the city's population structure as a potential mediator. The analysis answers various questions about how gender, race, and class inequalities predict variations in the femicide rates of black women and white women. Further, the predictive effect of these factors on black women is compared to their predictive effect on white women. The disaggregation by race allows for a multidimensional analysis of the effect of these macrostructural factors on the homicide victimization of women.

This study tests whether Crenshaw's (1991) intersectionality theory explains the variances in the femicide rates for black women and white women. The intersectionality theory argues that gender, race, and class intersect to form the structural determinants of violence against women. Although this theory was developed in the context of women of color, it has been extended to include white women. Race is part of the lives of white women, who experience

privileges based on their race (Fine & Weis, 1998). For that reason, this study analyzes whether gender, race, and class inequalities predict the femicide rates of both black women and white women.

Developments in both theory (e.g., intersectionality) and method (e.g., path analysis) allow a more layered and integrated approach to studying femicide. The answers generated by this research supplement the existing literature and contribute to a more complete understanding of the complexity of femicide as a social phenomenon. This analysis finds that intersectionality predicts the variances in the femicide rates of both black women and white women, but when the structural factors are considered separately, the factors predicting the femicide rates of black women and white women differ significantly. Cities with higher levels of intersectional inequality have higher overall femicide rates, black femicide rates, and white femicide rates. When gender inequality, racial inequality, and class inequality are analyzed individually, the black femicide rates are higher in cities with higher levels of racial inequality and lower levels of gender inequality. This suggests that more black women are murdered as women (as a gender) gain power in society but black people (as a group) remain without power. In contrast, class inequality is the only significant predictor of a higher femicide rate for white women. In cities with greater overall class disadvantage, the white femicide rate is higher.

The remaining chapters are arranged in the following manner. Chapter 2 is a statement of the problem of femicide. It includes discussions of violence against women, intimate partner homicide, and femicide. Chapter 3 explains the

theoretical framework for this study, which include gender inequality theory, gender backlash theory, economic inequality theory, racial inequality theory, and social ecology theory. Chapter 4 discusses the previous empirical research on violence against women and the relevant social structural factors. Chapter 5 outlines the methodology used in this study, and chapter 6 reports the results. Finally, chapter 7 analyzes and discusses the results.

## CHAPTER 2 – STATEMENT OF PROBLEM

### Historical Perspective of Violence Against Women

As the most severe form of violence against women, femicide is situated within the continuum of gendered violence, which is a serious problem in the United States and around the world. Millions of women around the world and tens of thousands of women in the United States have been physically abused, devastating individuals and communities, destroying health, and impeding national development (Women's International News, 2003).

In the late 19<sup>th</sup> century, Protestant social reformers joined with feminists to establish shelters for battered wives, such as the Chicago-based Protective Agency for Women and Children. Those shelters generally disappeared in the 20<sup>th</sup> century (Cohen, 1992). It was not until into the 1970s that violence against women again became a focal concern of social agencies and feminists. The women's liberation movement in the 1960s and early 1970s was centered largely on consciousness-raising groups, women's property and legal rights, employment-related issues, educational issues, and the right to birth control and abortion, instead of violence against women. An indication of the lack of focus on violence against women is that the Whole Woman Catalog, a 1971 feminist publication that lists hundreds of women's organizations and services in 37 states, does not once mention violence against women. Moreover, woman battering was a misdemeanor in many states and marital rape was excluded from criminal statutes (Russell, 1974).

Soon, that lack of concern changed as women began to speak out against rape and other sexual assault. Women, non-feminists and feminists, worked to heighten public awareness of rape and to establish rape crisis centers. Women who came to the crisis centers for help spoke of widespread sexual and physical violence by intimate partners as well as their physical and sexual victimization as children (Browne & Williams, 1993; Ferraro, 1996; Martin, 1983). Grassroots feminist activists linked the individual stories with an analysis of male domination, which led to the development of the grassroots battered women's shelter movement (Ferraro, 1996; Pagelow, 1992).

Feminist activists and non-feminist mainstream social service organizations, such as the YWCA and Salvation Army, established battered women's shelters (Cohen, 1992; Schneider, 2000). In the early stages, safe houses for battered women were offered to women seeking refuge. Those safe houses were private homes where the occupants were willing to provide a safe haven for a woman escaping an abusive partner. A porch light of a particular color would indicate its status as a refuge.<sup>6</sup> Other than those private homes, the first free-standing battered women's shelter in modern-day United States was probably Women's House, started in 1973 in St. Paul, Minnesota, by the Women's Advocates collective (Berk, Newton & Berk, 1986; Schneider, 2000). In 1975, the National Organization for Women adopted wife abuse as a priority issue and established a National Task Force of Battered Women/Household

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<sup>6</sup> For example, in parts of Massachusetts, a home with a lit blue porch light meant that a battered woman could knock on the door to get help (J. D. Della-Giustina, personal communication, September 15, 2002). In Baltimore, the color of the porch light was green (N. Sokoloff, personal communication, October 24, 2004).

Violence (Stout, 1987). The National Coalition Against Domestic Violence was established in 1978 (Martin, 1983). Slowly, shelters were established around the country. There were only 30 shelters in the United States in 1977 (National Commission on the Observance of the International Women's Year, 1978), but by 1983, there were almost 500 shelters (Martin, 1983). Three years later, there were well over 700 shelters and by 1995, there were more than 1,200 shelters (Berk et al., 1986; Donnelly, Cook, & Wilson, 1999).

The early battered women's movement was committed to women's self-determination, self-organization, and democratic participation. Its strategies for change focused on the battered women, their experiences, and their need for safety, refuge, social resources, and economic resources (Schneider, 2000). Believing that battering occurs because a social hierarchy condones male violence against women, feminists argued that the logical response was social transformation. There were debates within the feminist movement between those who focused on legal and service reform and those who were committed to a radical transformation of the patriarchal system, which emphasized the connection between the male-dominated nuclear family and woman battering (Ferraro, 1996).

Due to pressure from activists in the shelter movement, researchers, and others, policymakers began to focus on domestic violence as a national problem, which led to police responsiveness, domestic violence legislation, and public health responses to intimate partner violence against women. In 1978, the United States Commission on Civil Rights held a two-day "Consultation on

Battered Women," which was organized in anticipation of the passage of a national Domestic Violence Prevention and Treatment Act. Ultimately, the bill did not pass, but in the interim, President Jimmy Carter established an Office of Domestic Violence in the Department of Justice.<sup>7</sup>

Government awareness of the seriousness of domestic violence grew under President Ronald Reagan. Law enforcement officials, prosecutors, judges, victim assistance advocates, health providers, and educators testified before the Attorney General's Task Force on Family Violence, which made several recommendations, including treating assaults within the family as seriously as assaults between strangers and coordinating efforts between the criminal justice system, victim assistance agencies, and the entire community (Attorney General's Task Force on Family Violence, 1984). Almost every state had some type of domestic violence law by 1980, and by 1990, 12 states mandated arrests based on probable cause of domestic violence (International Women's News, 2003). In 1994, Congress passed the Violence Against Women Act (VAWA) as part of the Violent Crime Control and Law Enforcement Act (Crowell & Burgess, 1996). VAWA has been important for a myriad of reasons that include its support for law enforcement interventions and funding to develop programs that respond to violence against women, including intimate partner violence. Today, mandatory arrest and pro-arrest policies are commonplace.<sup>8</sup>

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<sup>7</sup> That office has since been closed.

<sup>8</sup> See O'Connor (1998) for a discussion of the history of mandatory arrest and pro-arrest policies, which were instituted after the U.S. Attorney General issued a report recommending that arrest be the standard law enforcement response to cases of misdemeanor domestic violence. That report followed the 1984 Minneapolis Domestic Violence Experiment, the first scientifically controlled experiment to test the effect of arrest on incidents of domestic violence, which concluded that mandatory arrest was the foremost deterrent against future domestic violence

Also important in changing consciousness was the influence of international women who argued that violence against women is a violation of basic human rights. A dialogue between international women concerned with violence against women and women from the United States began at the 1975 United Nations Conference on International Women's Year, the first of its kind. The International Tribunal on Crimes Against Women met in Brussels, Belgium, the following year. At that conference, over 2,000 women from 33 countries heard testimony by women who had been battered by intimate partners. A resolution calling for the establishment of battered woman shelters, economic aid, and legal protection for battered women was sent to governments in every country (Russell, 1983). International organizations such as the United Nations and the World Health Organization have made violence against women a focal concern (Hanser, 2001). The Declaration on the Elimination of Violence Against Women, adopted by the United Nations General Assembly in 1993, recognizes violence against women as an unacceptable violation of basic human rights. It declares that violence against women (in society and in the family) is an obstacle to achieving equality, development, and peace. It states, in part:

violence against women is a manifestation of historically unequal power relations between men and women...and...is one of the crucial social mechanisms by which women are forced into a subordinate position compared to men (U.N., 1993).

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incidents. Subsequent replication studies have had varying results. Nevertheless, by 1989, 84% of all urban police agencies had mandatory or pro-arrest policies for domestic violence cases. There is a continuing debate on the efficacy of these policies. Also see Sherman (1984), Sherman (1992), Berk (1993), and Maxwell, Garner, & Fagan (2002).

## Scope of Intimate Partner Violence Against Women

As awareness of intimate partner violence grew, researchers gathered information about the scope of the problem. One out of four women in the United States has been victimized by an intimate partner during her lifetime (Tjaden & Thoennes, 2000). Several terms are used to describe violence against women in the family – wife battering, woman battering, domestic violence, and intimate partner violence, among others. Except when discussing the work of authors who use one or more of these terms, I will use the term “intimate partner violence” to describe violence against women by current or former husbands, legal and common-law, boyfriends and former boyfriends, and same-sex partners.<sup>9</sup> Because this study focuses on women as homicide victims, I will limit my discussion to intimate partner violence against women as an important context for investigating femicide.<sup>10</sup>

Early research in the 1970s and 1980s involved gathering information about the prevalence and characteristics of intimate partner violence in an effort to understand the scope of the problem. Researchers faced many political obstacles to conducting research on intimate partner violence because it was widely believed that violence against women did not occur within the family (Straus & Gelles, 1995). Some reviewers regarded the topic as trendy and theoretically unimportant. Questions about the extent of the problem dominated

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<sup>9</sup> Early research on violence against women centered on heterosexual women. However, the data on intimate partner homicide includes same-sex partners. This study includes all women homicide victims regardless of the motivation or relationship with the murderer.

<sup>10</sup> Some domestic violence research indicates that 5% to 15% of victims of intimate partner violence are men. See Rennison & Welchans (2000). Different types of domestic violence can

the research and policy agenda. The goal for researchers was to convince policymakers, opinion leaders, and the public that the various forms of intimate partner violence were extensive enough to be considered legitimate social problems that affected a significant number of people (Straus & Gelles, 1995). Eventually, through the efforts of researchers and political activists, there was widespread recognition of the pervasive problem of intimate partner violence against women in the United States. Despite this growing public awareness of violence against women, concern for murdered women remained in the background until recently.

#### Intimate Partner Homicide

The late 1980s saw the beginning of research on homicide and women, but it was primarily limited to intimate partner homicide, focusing on women as perpetrators. At that time, research of non-lethal intimate partner violence was increasing and the battered woman's syndrome had emerged as an important psychological explanation of why battered women use violence against their abusers.

Three main approaches in this area of research have been: 1) qualitative studies of battered women who kill or use violence against their abusers, which focus on either the psychological, legal, or micro-social factors related to lethal violence by battered women (e.g., Browne, 1987; Jones, 1994; Leonard, 2002; Walker, 1989); 2) descriptive studies of intimate partner homicide, which generally give statistics about both individual incidents and trends (e.g., Browne

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affect men and women differently. See Johnson & Ferraro (2000), Saunders (2002), and Tjaden & Thoennes (2000) for a discussion on different types of intimate partner violence.

& Williams, 1989; Mercy & Salzman, 1989; Smith, 2000; Smith, Moracco, & Butts, 1998; Websdale, 1999); and 3) studies of risk factors for intimate partner homicide (e.g., Aldrich & Browne, 2003; Block, 2003; Browne, Williams, & Dutton, 1999; Campbell et al., 2003; Decker, Martin, & Moracco, 2004; Faar, 2002; Frye, Wilt, & Schomburg, 2002; McFarlane et al., 1999; Moracco et al., 1998; Sharps et al., 2001). Those studies that do not disaggregate the victims of intimate partner homicide by gender and race may mask differences among the victims. For example, there has been much focus and publicity on the recent decline in intimate partner homicides. Yet, this decline mostly affects men, especially black men, whereas the number of intimate partner femicides against white women girlfriends has increased slightly (Greenfeld et al., 1998).

While not all femicides involve intimate partner perpetrators, women are disproportionately more affected by intimate partner homicide than are men. However, there are conflicting statistics about the percent of female homicide victims who are murdered by an intimate partner. In an early study of victim-perpetrated homicides, Wolfgang (1958) found that 41% of femicide victims in Philadelphia were killed by their husbands from 1948 to 1952. Since that time, most studies show that the proportion of intimate partner femicide victims to all femicide victims has been between 29% and 50% (Greenfeld et al., 1998; Mercy & Salzman, 1989; Moracco et al., 1998; Rennison & Welchans, 2000; Rosenfeld, 1997). Government statistics during that same period show that a constant one-third of all women murdered in the United States were killed by a current or former intimate partner (Fox & Zawitz, 1997). In contrast, the percent of male

homicide victims who were murdered by an intimate partner has declined from 10% in 1976 to 3.7% in 2000 (Rennison, 2003).

In the last three decades, the number of intimate partner homicides has declined from 2,725 (16.5% of all homicides) to 1,642 (11% of all homicides) (Greenfield et al., 1998; Rennison, 2001; Rennison & Welchans, 2000). The decline in intimate partner homicides has been greater for male victims (Greenfield et al., 1998). Not only have the number of men murdered by an intimate partner declined by 68% while the number of women murdered by an intimate partner dropped by only 22%, but women are an increasing majority of intimate partner homicide victims. In 1976, women were half of all intimate partner homicide victims. By 1999, three-fourths of all intimate partner homicide victims were women (Rennison, 2001, 2003; Rennison & Welchans, 2000).

Further, there have been racial differences in the prevalence of intimate partner homicides.<sup>11</sup> From 1976 to 1996, the number of black male victims decreased by 77%, black female victims decreased by 46%, white male victims decreased by 55%, and white female victims decreased by 14% (Fox & Zawitz, 1997; Greenfield et al., 1998). The trend changed for white women between 1997 and 1998 when the number of white women killed by any intimate partner increased by 15% (Rennison & Welchans, 2000). White women remain the majority of intimate partner homicide victims (Dugan, Nagin, & Rosenfeld, 1999; Greenfield et al., 1998).

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<sup>11</sup> Because this study examines black femicide rates and white femicide rates, this discussion of racial differences in intimate partner levels is limited to black victims and white victims.

For intimate partner homicide victims between the ages of 20 and 44, the black victimization rate declined from 14 per 100,000 blacks to fewer than 4 per 100,000 blacks, and the homicide rate for white intimate partners decreased from 1.3 per 100,000 whites to 0.85 per 100,000 whites. As is evident from these statistics, however, the homicide rate for black intimate partners remains almost five times higher than for white intimate partners (Fox & Zawitz, 1997; Greenfeld et al., 1998). In 1996, the black male victimization rate was eight times higher than for white men, and black women were killed by an intimate partner at a rate three times higher than that of white women (Oliver, 2000.)

Despite the large number of intimate partner femicide victims, most femicide victims are killed by someone who is not an intimate partner. For that reason, this study involves all femicide victims, and is not limited to victims of intimate partner femicide.

### Femicide

Femicide is the ultimate form of violence against women. The term "femicide" has only recently been used. Although the term "uxoricide" has long been used to describe the murder of a wife by her husband, there was no term to describe the murder of other women. Russell (1974: xiv-xi) was the first person in the early 1970s to use the term "femicide," which she defined as the "killing of women by men because they are women" or the "misogynist killing of women by men." Radford and Russell (1992) explain femicide as an extreme form of male sexual violence rooted in the patriarchal system. They argue that the power of "patriarchal ideology seeks to control women, to punish those who resist

violence, and to blame women for provoking that violence” (Radford & Russell, 1992: xiii). By using a feminist approach to femicide, they link this extreme form of male sexual violence “with the more routine forms of harassment, abuse and violence around which many women’s lives are structured” (Radford & Russell, 1992: xiii).

Since the beginning of Russell’s use of the term “femicide,” it has been adopted and used more broadly to mean the murder of women, whether by men or by other women, for any reason. While certainly not all murders of women, even all those by male perpetrators, are misogynist, femicides need to be studied within the larger realm of violence against women. This study refers to all homicide of women as femicide, regardless of the motive or perpetrator status.

Femicide is a leading cause of death of women in the United States. In 1997, it was the leading cause of death for African American women between the ages of 15 and 34, the second leading cause of death for all women aged 15 to 24, the fourth leading cause of death for all women under 45 years of age, and the leading cause of on-the-job deaths for all women. Since femicide victims tend to be relatively young, more than 35 years of potential life is lost for every woman murdered (Frye & Wilt, 2000; Moracco et al., 1998). From 1976 to 1996, 105,175 women were murdered, representing 23.7% of all homicide victims (Greenfeld et al., 1998). Similarly, in 2002, 23.1% of all homicide victims were women (1,905 white women and 1,184 black women) (Federal Bureau of Investigation, 2004).

The femicide rate in the United States increased from 2.6 per 100,000 women in 1965 to 3.8 per 100,000 women in 1974 to 4.5 per 100,000 women in 1995 (Moracco et al., 1998; Smith & Kuchta, 1995). The femicide rate in the United States far exceeds the femicide rate in all other industrialized nations, except Russia. The United States accounts for 32% of the female population in 25 high income countries, but 70% of all femicides in those countries combined. A woman in the United States is three times more likely to be murdered than a woman in Canada, five times more likely to be murdered than a woman in Germany, and eight times more likely to be murdered than a woman in England and Wales. In fact, the U.S. femicide rate is five times that of all the other high income countries combined (Hemenway, Shinoda-Tagawa & Miller, 2002). The only exception is Russia, which has a femicide rate that is three times that of the United States (Barker, n.d.; Cherayakov et. al., 2002; Human Rights Watch, 1997; The Moscow Center for Gender Studies, 1996).

Yet, until recently, just as the homicide of women was not a priority for feminists, femicide was not a focus of criminologists who researched homicide. Homicide research has largely ignored women, instead focusing on men as offenders and victims. Since men are approximately three-fourths of all homicide victims, any unique patterns or characteristics of homicide against women are overshadowed by the statistics on male homicide victimization.

Overall, homicide rates in the United States have declined since the early 1990s after rising dramatically from 1965 to the mid-1970s, and then fluctuating until reaching their peak in the early 1990s. The U.S. murder rate rose from 5

per 100,000 people in the early 1960s to 10.2 in 1980, and then fell to 7.9 in 1985, again rising to 9.8 in 1991. After 1991, the homicide rate sharply declined to 5.5 in 2000 (Fox & Zawitz, 2003; Price, Thompson & Dake, 2004). Not all homicide trends have been similar. For teenagers and young adults, homicide victimization rates increased sharply in the late 1980s and fell sharply after 1993 whereas rates for people over 35 years old steadily declined during that time (Fox & Zawitz, 2003).

When homicide rates are disaggregated by gender and race, patterns have not affected all groups in the same way (Zahn & McCall, 1999). For example, the decrease in overall homicide rates has been similar for men and women (28% and 25%, respectively), but male intimate partner homicide victimization has decreased by 68% while female intimate partner homicide victimization has dropped by only 22% (Rennison, 2003; Rennison & Welchans, 2000). Although black men have consistently had higher rates of homicide victimization than black women, white men, and white women, that rate has fluctuated widely from 42.3 per 100,000 black men in 1960 to 78.2 in 1970, 69.4 in 1980, 63.1 in 1990, with a high of 72 per 100,000 black men in the early 1990s. Since that time, the homicide rate for black men has declined to 36.2 per 100,000 black men in 2001 (Center for Disease Control, 2004; Federal Bureau of Investigation, 2004; Rennison & Welchans, 2000; Zahn & McCall, 1999).

The homicide rate for white men has not fluctuated as greatly. White males were murdered at a rate of 3.9 in 1960, 7.2 in 1970, 10.4 in 1980, 5.6 in 1990, 4.8 in 1995, and 5.6 in 2001 (Centers for Disease Control, 2004; Federal

Bureau of Investigation, 2004; Zahn & McCall, 1999). The homicide rate for black women has ranged from 11.4 per 100,000 black women in 1960, 14.7 in 1970, 13.2 in 1980, 12.5 in 1990, and 7.4 per 100,000 black women in 2001. White women have had the lowest femicide rate (1.5 in 1960, 3.2 in 1980, 2.5 in 2001), although they represent the highest number of femicide victims (Federal Bureau of Investigation, 2004; Fox & Zawitz, 2003).

In an effort to understand femicides more thoroughly, this theoretically-grounded study examines the social structural factors that may predict the fluctuation in femicide rates. The next chapter discusses the theoretical framework of this study, which is the basis for selecting the factors employed here.

## CHAPTER 3 – THEORETICAL FRAMEWORK

This is a theoretically based study of the social structural predictors of variances in the femicide rate. Not only does it derive from feminist theory on violence against women as an explanation for femicide, but it also draws from social structural homicide theories that explain how structural factors, such as race and socio-economic inequality, affect homicide rates. This chapter will present several theories on violence against women, including feminist social structural theory, psychological theory, family conflict theory, and multiple oppressions theory. Several social structure homicide theories that are applicable to this study will also be discussed. These include economic deprivation theory, racial inequality theory, and social ecology theory.

### Theories on Violence Against Women

Various theories of the causes of violence against women, including intimate partner violence, have emerged. Not all research on violence against women is theoretically compatible, which has led to stringent debate among researchers. The theoretical perspectives that have been most influential in explaining violence against women are: 1) the social structural gender inequality perspective; 2) the individual/psychological perspective; 3) the micro-social family violence perspective; and 4) the multiple oppressions perspective.

#### Gender Inequality Perspective

Gender inequality theory of violence against women has its roots in feminist theory. While not all feminist theories are alike, most are based, at least in part, on the belief that patriarchal society supports the inequality of women

through its legal, economic, social, and political institutional structures as well as with a belief system that makes unequal gender relationships seem natural and morally just (Bograd, 1990; Brownmiller, 1975; Dobash & Dobash, 1979; Martin, 1983; Radford & Russell, 1992).

Patriarchy is both a structure and an ideology (Smith, 1990). Ruby (2003:38) describes patriarchy as:

[a] form of society where men's needs, concerns, and interests are central; where a family's children are named after the father, not the mother, and the authority of the father/husband over both wife and children is revered. In more extreme cases, men are seen to "own" women and children, and they materially control women's bodies and lives. Perhaps as an extension of the father's authority within the family, other father figures such as male bosses and male political leaders are to be unquestioningly obeyed, and further, patterns of hierarchy or dominance by one (usually male) person or group over others are preferred to more egalitarian forms of social structure.

The literature suggests that the roots of male violence against women lie within the gendered power relations of patriarchal society (Russell, 1990). This system of gender stratification establishes a social climate within which violence against women is a manifestation of the unequal and oppressive power relations between men and women. These structures of gender inequality result in high levels of violence against women by encouraging male aggression as a way to assert and maintain power and control over women.

This perspective argues that the sanctioning and institutionalization of intimate partner violence is an extension of the historically and socially constructed power and control of husbands over their wives (Dobash & Dobash,

1979). Becoming a wife in a patriarchal society has meant becoming the husband's property, taking a secondary position in the marital hierarchy of power and worth, being legally and morally bound to obey the husband's wishes, and being subject to the husband's control even to the point of physical chastisement or murder. Arguing that husbands use violence against their wives because of possessiveness, domination, and a sense of rightful control, Dobash and Dobash (1979) suggest violence in marriage will decline when the hierarchical family structure is transformed so that the subordination, isolation, and devaluation of women will end.

This analysis of wife beating within legal marriage has been broadened to include other types of intimate partner violence. As more and more couples choose not to marry and a significant number of marriages end in divorce, the marriage and divorce rates become less of a measure of family-type relationships and the breakup of those unions.

Based on the concept that socially constructed masculinity involves using violence to maintain hegemony, some feminists argue that intimate partner violence against women is a way to socially control all women and that all men benefit from the intimate partner violence perpetrated by some men (Bograd, 1990; Radford & Russell, 1992). Thus, gender inequality theory argues that the elimination of gender disparities will eliminate violence against women. In other words, an increase in women's equality will be associated with lower levels of violence against women (Bograd, 1990; Dobash & Dobash, 1979; Martin, 1983; Russell, 1990; Whaley, 2001; Whaley & Messner, 2002; Yllö, 1983).

## Backlash Theory

Although feminist theorists widely accepted the women's inequality theory as the explanation for violence against women, several theorists raised a more complicated relationship. Backlash theory, which developed in connection with rape studies,<sup>12</sup> argues that, instead of reducing violence against women, increased gender equality could result in more violence due to men feeling threatened by the growing equality of women (Whaley & Messner, 2002).

With the increase in the rape rates in the 1970s and empirical testing of macro-social variables in relation to rape resulting in significant findings in an opposite direction than expected, a gender backlash theory emerged (Russell, 1974). The gender backlash theory argues that, instead of reducing violence against women, increased equality could result in increased violence as a result of men fearing that the improvement in women's status would threaten their own social power. Moreover, men could increasingly use violence to maintain dominance over women who want to be more independent of men. According to Russell (1974:14):

Rape is the way some men express their hostility to women. More threatened male egos may mean more rape. In the short run, the more women who break out of the traditional female role and assert themselves in new ways, the more threatened male egos there are.

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<sup>12</sup> Most of the studies cited used the F.B.I.'s Uniform Crime Reports, which defines rape as "the carnal knowledge of a female forcibly and against her will" (F.B.I., 2004). A few of the studies use the National Crime Victim Survey, which defines rape as "forced sexual intercourse where the victim may either be male or female" (Rennison & Welchans, 2000).

Since theory suggests that some men achieve masculinity by sexually assaulting women, this increase in men's perceived threat may result in the increase in the rape rate (Whaley, 2001). Whaley (2001:533) explains:

The achievement of hegemonic masculinity by individual men may become particularly important when structural changes (e.g., increased levels of female labor force participation) foster the perception of a threatened status quo (i.e., men's status as the dominant group).

Backlash can also be explained as the response to increased stress and conflict created by pro-woman policies and programs. When a man's normative goal of power and control is threatened, his frustrated attempts to achieve those goals may lead to severe and sometimes lethal, attempts to regain control (Dugan, Nagin, & Rosenfeld, 2000; Wells & DeLeon-Granados, 2004).

#### Individual/Psychological Perspective

During the 1970s and 1980s, psychological studies primarily focused on the individual pathologies of batterers and women who use violence against their batterers. The inquiry into women victims of intimate partner violence largely focused on the question, "Why doesn't she leave?" One of the most important theories to develop is the battered woman's syndrome, where Walker (1979, 1984, 2000) explains why women kill or injure their abusers instead of leaving the violent relationship. Prior to the 1970s, women who remained in abusive relationships were thought to be insane or have a serious pathology that included a masochistic need to be hurt and punished. One study (Snell, Rosenwald, & Robey, 1964) concluded that battered wives were frigid and had other personality characteristics that made them undesirable as wives while another study (Rosewater, 1982) found that battered women's MMPI psychological profiles

were similar to those of other emotionally disturbed women, particularly those with schizophrenia and borderline personalities.

Walker's (1979, 1984, 1993, 2000) battered woman syndrome is a combination of two concepts, learned helplessness and the cycle of violence. Walker has variably described learned helplessness as an early response reinforcement that teaches what can and cannot be controlled and the subsequent passive behavior (1979), a cluster of psychological outcomes women develop from living in a violent relationship (1984), a psychological condition that causes women to feel powerless to effect positive control over their lives (1984), and a process by which organisms learn that they cannot predict whether their actions will result in a particular outcome (1993). Recently, Walker (2000) described learned helplessness as a subcategory of post-traumatic stress disorder, which develops from prolonged or severe trauma. Walker now focuses on the physiological and structural changes in the midbrain from autonomic nervous system biochemicals secreted during high stress.

Walker (1979, 1984) also theorizes that battering is neither random nor constant, but occurs in repeated cycles, each having three phases: tension building stage, acute battering stage, and honeymoon stage. The tension-building stage is comprised of minor battering incidents that may be handled by the woman through nurturing, compliance, anticipation of the batterer's whims, or staying out of the way. If he explodes, she accepts responsibility for his actions. She uses denial and rationalizations because anger would escalate the harm (Walker, 1979). The acute battering incident occurs when the woman's coping

techniques fail, the woman withdraws from the batterer due to exhaustion, and the batterer reacts with an uncontrollable discharge of tension. Both the man and woman minimize and rationalize the seriousness of the attack. The third stage, kindness and contrite behavior, occurs immediately after the acute battering incident ends. This last stage is not necessarily one in which the man expresses regret and promises to change. Instead, it may simply be a time when violence and the threat of violence are absent (Walker, 1979).

The battered woman's syndrome has been criticized because it tends to blame the woman for her own victimization and fails to explain why some women finally act and strike back. Among those who have criticized the battered woman's syndrome are Gondolf and Fisher (1988), who developed the Survivor Theory, and Callahan (1994), whose Survivor Theory II combines Walker's learned helplessness with Gondolf and Fisher's Survivor Theory.

Gondolf and Fisher's (1988) survivor theory emphasizes the battered woman's strengths and help-seeking behaviors while simultaneously recognizing some of the barriers that can impede help seeking. The survivor theory posits that severe abuse prompts innovative coping strategies and efforts to seek informal and formal help, but the failure of the help sources to intervene in a comprehensive and decisive way allows the abuse to continue and escalate (Gondolf & Fisher, 1988).

Callahan's (1994) Survivor Theory II combines elements of Walker's learned helplessness theory with Gondolf and Fisher's survivor theory. Although both theories expect the woman to try to change her partner's behavior instead of

ending the relationship, learned helplessness focuses on the woman's inability to escape her situation and her passive acceptance of abuse whereas the survivor theory focuses on the woman's substantial efforts, both informal and formal, to escape her abuse and society's inability to assist her in doing so. Survivor Theory II recognizes that the battered woman may experience low self-esteem, self-blame, guilt, depression, and anxiety as the violence worsens, but, nevertheless, the woman actively begins to seek help. Despite her efforts, society's general disinterest and inadequate resources routinely force her to return to the batterer. The failure of society to provide the woman with a viable alternative and society's lack of active intervention on her behalf allows the abuse to continue and even to escalate (Callahan, 1994).

Other psychologically-based research, some combined with legal approaches, have included trauma studies, batterer treatment studies, and hostage syndrome theories (Dutton, 1992; Gondolf, 1997; Stark & Flitcraft, 1992). All of these approaches center on the individual as the cause of the abuse. In contrast, the family violence perspective looks to micro-sociological theories to explain violence in the home.

#### Micro-Social Family Violence Perspective

Also in the 1970s and 1980s, sociologists Straus and Gelles were searching for societal causes of violence within the family. Differently from the theories that focus on individual pathology or the patriarchal system, the sociologically-based family violence theories look to micro-social conflict theories

to explain the relationship between the balance of power within marriages and non-gendered spousal violence (Gelles, 1977, 1993; Straus & Gelles, 1995).

Family violence researchers combine structural theory with cultural theory and general systems theory to explain violence in the family. They argue that family violence is systemic, rather than a result of individual pathology or a patriarchal system. Its multiple causes include cultural norms tolerating violence, male dominance in the family and society, and stresses created by unemployment, poverty, occupational stress, and racism (Steinmetz, 1980). This approach is primarily concerned with ending all physical violence, and does not focus on the well-being of women (Straus, 1999).

This perspective has been criticized for its controversial findings that women use as much violence in the family as do men. Statistics from these studies differ significantly from crime and clinic-based studies, which indicate that 95% of the victims of family violence are women (Bachman, 2000). Straus (1999) explains this difference by contrasting the types of violence measured. Family conflict studies involve minor and infrequent violence that do not usually involve weekly or daily assaults and injury whereas crime studies and clinical studies measure chronic and severe violence that often involves injuries that need medical attention.

#### Multiple Oppressions Perspective

Also in the 1970s and 1980s, theoretical perspectives by feminists of color (black women, Latinas, Asian women, and Native American women) emerged as a response to the inability of mainstream feminist and racial inequality theories to

address the oppression of women of color. Historically, both the feminist and anti-racist movements suppressed the ideas of women of color. Antiracist strategies tended to flow from the racism experienced by men of color, and the sexism experienced by white women tended to set the agenda of the feminist movement. Due to the exclusion of women of color in the leadership, those movements failed to reflect the ideas and lives of women of color, who experience racism differently than do men of color and sexism differently than do white women (Beale, 1970; Cade, 1970; Combahee River Collective, 1983; Collins, 1990; Crenshaw, 1991; Davis, 1983; hooks, 1989; Lindsay, 1970; Lorde, 1984; Reid, 1976; Richie, 2000; Vidal, 1971).

The multiple oppressions perspective (also known as multicultural feminism, Third World feminism, multiplicative identity, multiple consciousness, among others), rejects the idea that women of color must decide whether they are more discriminated by racial oppression or gender inequality. Instead, a combination of gender, race, and class, and not gender alone, race alone, or class alone, forms a woman's identity, status, and circumstance (Beale, 1970; Cade, 1970; Collins, 1990; Crenshaw, 1991; Davis, 1983; hooks, 1989; Lindsey, 1970; Mansbridge, 1999; Richie, 2000; Wing, 2003). Focusing exclusively on patriarchal domination, as traditional feminist thought does, obscures the reality of the lives of these women, who are differently situated in the economic, social, and political worlds than are white women (Beale, 1970; Cade, 1970; Collins, 1990; Crenshaw, 1991; Davis, 1983; hooks, 1989; Lindsey, 1970; Mansbridge, 1999; Richie, 2000). A woman's social context is created by interconnecting

systems of power (e.g., patriarchy, race subordination, capitalism) and oppression (racism, sexism, classism) (Bograd, 1999; Wing, 2003). Wing (2003) suggests that the identities of women of color must be multiplied together to create a holistic identity when analyzing discrimination against them.

Any analysis of violence against black women in the United States must consider this country's racial history. Black feminists locate their critical analysis of the oppression of black women in the United States in their long history of sexual abuse, racial oppression, class exploitation, and social control, which situates them differently from white women (and other women of color). For black feminists, a feminist critique of rape, incest, and battering necessarily includes an analysis of racist oppression rooted in the slave system, lynchings of black men, and the Jim Crow legal system (Mansbridge, 1999). The history of African-American women is the history of slavery, which brought the vast majority of the ancestors of American black women to this country to work as slaves (Collins, 1990). Slave women suffered violence at the hands of their husbands, other slave men, and slave owners. Raping a slave woman was legal whereas raping a white woman was a crime (White, 1985).

The traditional feminist analysis of wife beating focuses on marriage as the institution in which the wife is the property of her husband and the husband dominates over his wife on the basis of male ownership, property distribution, and control of subsistence goods (Dobash & Dobash, 1979). That type of marriage did not exist for slave women, who were the property of the slave owner. Since the slave husband had no property of his own to control, any

power or control he had over his wife could not be based on his providing food, clothing, or shelter, which came from the slave owner. Moreover, intrafamily relationships had to conform to the work and social patterns of the slave system, including the sale and separation of husbands from their families (White, 1985).

This feminist theoretical construct has been applied to violence against women of color in Crenshaw's (1991) intersectionality theory, which diverges from the narrow feminist emphasis on gender inequality as the primary factor responsible for intimate partner violence against women. Intersectionality goes beyond the gender inequality theory by arguing that gender inequality intersects with other structures of power and oppression, such as racial oppression and class exploitation, to prompt intimate partner violence (Bograd, 1999; Collins, 1990; Crenshaw, 1991; Davis, 1983; hooks, 1989; Richie, 2000; Wing, 2003).

Racialized violence, classed violence, and state violence may be integrated into the lives of many marginalized women (e.g., women of color, poor women, immigrant women) who also experience intimate partner violence (Crenshaw, 1991). These women often experience multilayered and routinized forms of domination that converge to obstruct their ability to create alternatives to the abusive relationships. For example, poor women may experience chronic violence in their community, which may result from the strains of class inequality (Messner & Rosenfeld, 1999; Oliver, 2000). Lacking the economic means to escape an unsafe neighborhood can be considered a form of violence against women so that ending intimate partner violence may not necessarily end the violence in the lives of these women.

In addition, Crenshaw (1991) suggests that the link between patriarchy and racism may contribute to the cycle of intimate partner violence. She argues that the violence of men of color against their intimate partners may be a reaction to being denied the power and privilege white men have throughout all spheres of their lives.

Intersectionality theory is located within the critical race feminist perspective, which is a legal theoretical construct that has recently emerged to emphasize the legal concerns of women of color (Wing, 2003). Critical race feminism developed from the legal theoretical perspectives of critical legal studies, critical race theory, and feminist legal theory. These legal perspectives challenge the law as neutral and objective. Critical legal studies was organized in law schools in the late 1970s as a challenge to "orthodox ideas about the inviolability and objectivity of laws that oppressed minorities and white women for centuries" (West, 1995: xii). Because the perspectives of people of color and white women were often excluded by segments of the critical legal studies movement, critical race theory and feminist legal theory developed as separate entities although they remain in accordance with the critical legal studies perspective (Bartlett & Kennedy, 1991; West, 1995). Critical race feminism is an extension of those concepts in that it is a feminist intervention in race discourse and a race intervention in feminist discourse (Wing, 2003).

This intersectionality perspective is changing how researchers are approaching the study of violence against women (see e.g., Sokoloff, 2005). There is an increasing focus on disaggregating victims by race and ethnicity as

well as investigating how class status affects the prevalence of the violence. Not all women are similarly situated so that treating them in the same way may obscure important distinctions that could help to explain the causes of violence against them. Although this theory was originally developed in the context of women of color, race is also part of the lives of white women, who experience privileges based on their skin color. For that reason, this study analyzes whether the intersectionality theory predicts the variations in the femicide rates of both black women and white women.

### Social Structural Factors of Homicide

This research, which addresses femicide as a social phenomenon by examining the macro-social structural factors that predict femicide rates, draws on a long history of empirical study of the relationship between homicide and social structures, such as the economy, the family, the political system, and the city's social structure (Blau & Blau, 1977; Messner & Rosenfeld, 1999; Pridemore, 2002; Reiss & Roth, 1990; Skogan, 1990; Smith & Brewer, 1993). Macro-level social structural analysis is the process of studying the patterns of society as a whole, instead of individuals or small groups of people, and focuses on social structural determinants as the explanation for crime patterns (Anderson & Taylor, 2001; Durkheim, 1951; Hess, Markson, & Stein, 1996). Homicide rates vary in relation to the social structure regardless of personal characteristics or cultural values (Pridemore, 2002). While it is important to recognize individual characteristics, to fully understand femicide we must understand the social context in which individuals make choices. Individuals do not live in a vacuum.

Their attitudes and behavior are a response to their specific situation within a community, whose characteristics and structures affect the individual's actions. In that way, the structure of society influences crime trends, including femicide trends.

Zahn (1989) argues that homicide may be best understood by establishing the impact of structural factors on the rates of specific population groups. Flewelling and Williams (1999) have suggested that the inconsistent findings in homicide research may result from the failure to disaggregate the total homicide rate into subgroups (also see Parker & Smith, 1979; Pridemore, 2002; Smith & Parker, 1980). When homicide rates are disaggregated by race and gender, the trends in patterns have not affected all groups equally (Zahn & McCall, 1999). In accordance with those views, this dissertation analyzes the femicide rates of black women and white women in relation to the social structural factors of gender, race, and class, which are integral to the role expectations, behavioral influences, and life experiences that structure women's lives and responses to their surroundings. A woman's actions emanate from the totality of her life experiences.

Discussed in this section are the social structural homicide theories, other than gender inequality theory, that are relevant to this study, which include theories of economic deprivation, racial inequality, and social ecology. Although research using these theories has primarily focused on male victims, they are relevant to this research because they form the components of intersectionality.

Several researchers have applied a social structural approach to femicide, finding that several gender inequality factors relate to the variances in the femicide rates (Avakame, 1999a, 1999b; Bailey & Peterson, 1995; Brewer & Smith, 1995; Dugan et al., 2000; Gartner, Baker & Pampel, 1990; Gauthier & Bankston, 1997; Smith & Brewer, 1995; Whaley & Messner, 2002; Vieraitis & Williams, 2002). Studies have also found some support for the relationship between femicide and non-gendered socio-economic inequality (Bailey & Peterson, 1995; Dugan et al., 2000; Frye & Wilt, 2001; Gartner, 1990; Marvell & Moody, 1999; Whaley & Messner, 2002) and social disorganization (Avakame, 1999a; Brewer & Smith, 1995; Breault & Kposawa, 1997; Grana, 2001; Frye & Wilt, 2001; Smith & Brewer, 1992; Whaley & Messner, 2002). This study differs, however, because none of the previous studies examined gender, race, and class as predictors of the femicide rate in a single model. The approach of this research allows for a multilayered analysis that investigates the multiple oppressions women face in their lives.

#### Theory of Economic Deprivation

Messner and Rosenfeld (1999) suggest that the value of money in American society is associated with power and success. It is a measure of achievement beyond its utility for buying goods for consumption. As a result, attaining money is an ongoing goal in of itself. A large body of research has examined the relationship between homicide and economic deprivation, both absolute deprivation and relative deprivation (Bailey, 1984; Blau and Blau, 1982; Golden & Messner, 1987; Kovandzic, Vierietis & Yeisley, 1998; Land, McCall &

Cohen, 1990; Messner, 1982; Messner & Tardiff, 1986; Patterson, 1991; Smith & Parker, 1980; Williams, 1984; Williams & Flewelling, 1988). That research has been diverse and complex, often with inconclusive results, which has led to an ongoing debate about the theoretical and empirical connections between economic deprivation and homicide.

One view maintains that increased poverty, or absolute economic deprivation, produces high rates of homicide because the struggle to obtain basic life necessities likely produces strain that may encourage hostilities escalating into lethal violence. The deprivation associated with limited economic resources can also weaken social controls because extreme economic deprivation is demoralizing, leading to a decline in confidence in conventional order and social controls (Bailey, 1984; Kovandzic, et al., 1998; Messner & Rosenfeld, 1999; Parker, 1989).

Others argue that greater relative deprivation, or economic inequality, is responsible for conflict and hostilities that may lead to violent crime. The income inequality approach focuses on the differences of income distribution within a community (Blau & Blau, 1982; Messner & Rosenfeld, 1999). This approach suggests that some people measure their economic position in relation to others so that their absolute poverty is not as important to them. According to this view, frustration, which leads to violence, occurs when an individual believes that other people have more desired social and economic resources (Parker, 1989).

The relationship between homicide rates and economic deprivation, both absolute and relative, remains unclear. Parker (1989) suggests that the

inconsistent findings result from treating all homicides as one type instead of disaggregating homicide into different types. Empirical studies have found that poverty is positively related to violence rates (Bailey, 1984; Messner & Tardiff, 1986; Parker, 1989; Patterson, 1991; Williams, 1984); absolute poverty is inversely related to homicide rates (Messner, 1982); economic inequality, but not poverty, is positively associated with violent crime (Blau & Blau, 1982); poverty, but not economic inequality, is significant (Bailey, 1984); both absolute poverty and relative economic inequality are significantly associated with homicide rates (Kovandzic et al., 1998); and no significant association exists between economic inequality and homicide (Messner, 1982; Messner & Tardiff, 1986; Patterson, 1991; Williams, 1984).

The inconsistencies in the studies and the lack of definitive patterns warrant further empirical research. Land et al. (1990) suggest that the inconsistencies result from multicollinearity and measurement errors. To correct for those errors, they incorporated principal components analysis to combine absolute deprivation and relative deprivation into a single construct. They found that this combined economic deprivation measure helps to explain the variation in homicide rates.

#### Racial Inequality Theory

Racial inequality has been a focus of much homicide research finding that black people, especially black men, are overrepresented as both homicide offenders and victims (Hawkins, 1995b; Messner & Rosenfeld, 1999). One of the most influential explanations of the racial inequality hypothesis is by Blau and

Blau (1982), who argue that the variation in homicide rates is due to the economic advantage of one racial group over another racial group. However, subsequent studies using similar methodology have had mixed results (Balkwell, 1990; Golden & Messner, 1987; also see Messner & Golden, 1992, for review of cases). Several studies of black violence have emphasized its connection to economic inequality (Parker, 2001; Parker & McCall, 1997) while others have found that race has an effect on murder independent of any economic deprivation (Bailey, 1984; Logan & Messner, 1988; Parker & Johns, 2002; Peterson & Krivo, 1993).

Since research shows that most homicide is intra-racial (Blau & Blau, 1982; Parker, 2001; LaFree, 1999; Moracco et al, 1998), race-based disadvantage that affects black offending can also relate to the murder of black women. Mann (1995) argues that crime may be an adaptive response of black people to institutionalized racism, which continues to be prevalent in American society. Racial disadvantage variables that represent a measure of institutional racial discrimination include unemployment, underemployment, and marginal employment as well as opportunities to acquire the education needed to become gainfully employed (Crutchfield, 1995; Mann, 1995; Oliver, 2000).

Joblessness (unemployment and unstable employment), poverty, and forced reliance on a punitive welfare system have caused havoc among black people in the form of family disruption, community chaos, and disintegrating public schools (Bell, 1992; Mann, 1995; Sampson, 1987). A person's lifestyle may be affected by the nature of his/her work or lack of work. Within a

disadvantaged group, those who achieve professional status have the best chance to attain economic security, occupational autonomy, and power, which are pathways to success (Crutchfield, 1995; Sokoloff, 1992). Moreover, stable, substantial employment is important not only for the "perquisites" associated with a middle-class income, but also for the dignity and pride that comes with being able to be responsible and to support oneself and one's family (Mann, 1995). Thus, blocked access to education and employment opportunities created by racial discrimination has produced a chronic frustration syndrome among many black men, who may direct their anger against society toward their intimate partners by using violence (Bell, 1992; Mann, 1995; Oliver, 2000).

Education is an important indicator of a community's level of racial inequality. Education, especially college education, is an essential requirement for entry into high-status, high-paying jobs. In addition, education provides the means to explore social realities and to challenge traditional gendered role and power differences (Mann, 1995).

Despite the necessity of education for high-status employment, the average black man with a college degree earns significantly less than the average white man with a college education (Mann, 1995). Therefore, it is necessary to look at median income levels as well as educational levels to ascertain the level of racial inequality.

Racial inequality is not limited to socio-economic inequality. Parker and McCall (1997) suggest that racial residential segregation is related to racial economic inequality and homicide rates. Also important is political inequality

since low black elected representation helps to maintain racial inequality in all spheres of society. Mann (1995) argues that political power is necessary to change the destiny of black people. Institutional improvements of social programs, the legal system, and the criminal justice system are necessary for equal justice for black people. Yet, political power continues to be concentrated in white men. The Congressional Black Caucus (CBC), an organization of African American members in the U.S. House of Representatives, presents alternative platforms and the annual budgets for social programs needed by people of color and the poor. Unfortunately, the small number of African American representatives, lack of meaningful support from other congressional members, and a small budget have hampered the CBC goals (Mann, 1995).

In summary, studies that have examined the relationship between violent crime and racial inequality have had highly inconsistent results. While most of the research shows that racial inequality does not have strong, positive effects on violence, several studies have contrary findings (Messner & Golden, 1992).

#### Social Ecology Theories

Social ecology theories suggest that crime is not rooted in the individual, but springs from the physical, social, and cultural context of human activity (Einstadter & Henry, 1995). These theories derive from the early work of social ecologists Shaw and McKay (1942), who sought to understand a person's relationship to his/her social and physical environment. Their social disorganization theory limited its focus to poverty, racial/ethnic heterogeneity, and residential mobility as the measures of deteriorating neighborhoods.

Contemporary social ecologists have reanalyzed this approach to reflect a changing society so that an expanded social disorganization/social ecology model broadly defines the internal dynamics of a community and its ability to regulate behavior (Bursik & Grasmick, 1993). These expanded measures have included population size (Bailey, 1984; Brewer & Smith, 1995; Grana, 2001; Parker & McCall, 1997; Peterson & Bailey, 1992; Peterson & Krivo, 1993), population density (Bailey, 1984; Brewer & Smith, 1995; Land et al., 1990; Messner, 1983), percent of the population aged 15-29 years old (Baron & Straus, 1987; Brewer & Smith, 1995; Land et al., 1990; Logan & Messner, 1988; Marvell & Moody, 1999; Messner & Golden, 1992), percent of the population that is black (Blau & Blau, 1982; Peterson & Bailey, 1992), percent of the population that is divorced (Blau & Blau, 1982; Brewer & Smith, 1995; Land et al., 1990; Messner & Golden, 1992; Parker & McCall, 1997; Peterson & Bailey, 1992; Peterson & Krivo, 1993; Williams & Flewelling, 1988), percentage of households that are headed by females (Messner & Sampson, 1991; Miles-Doan, 1998; Ousey, 2000), mobility of the population (percentage of people who live in the same house for the previous five years) (Avakame, 1999; Gauthier & Bankston, 1997; Whaley, 2001; Whaley & Messner, 2002), and percent of housing units that are vacant (Frye & Wilt, 2001). In a review of the literature on social disorganization variables, Land et al. (1990) concluded that the social structural constructs that show strong and consistent relationships with homicide are 1) a resource deprivation and/or affluence index (median family income, percent below poverty rate, the GINI index of income inequality, percent black population, percent

children under 18 years old, and percent children not living with both parents); 2) a population structure index (population density and population size); and 3) percent divorced.

Instead of considering numerous social disorganization factors, which are both economic and non-economic measures, this study uses Land et al.'s (1990) population structure index as a potential mediator of the predictive effects of gender inequality, racial inequality, and class inequality on the variance in the femicide rates.

### Summary

The theoretical framework of this study derives from the intersectionality theory of violence against women as a possible explanation for femicide. Intersectionality explains that violence against women emerges from the interconnecting oppressions experienced by women, including gender oppression, racial oppression, and class oppression. For that reason, the analysis in this research draws from theories that help to explain the relationship between multiple oppressions and femicide, which include gender inequality theory, gender backlash theory, race inequality theory, economic inequality theory, and social ecology theory.

The next chapter focuses on those studies that have analyzed violence against women in the context of macro-social structural covariates. These studies examined rape, violence against wives, and femicide.

## CHAPTER 4 – EMPIRICAL STUDIES OF VIOLENCE AGAINST WOMEN AND MACRO-SOCIAL STRUCTURAL COVARIATES

Several social structural empirical studies on violence against women have tested gender inequality theory, non-gendered socio-economic theory, and social disorganization theory. Although the factors related to the incidence of rape may be different from those related to the femicide rate, violence against women is rooted in society's attitudes towards women so that understanding one form of gender violence can guide our inquiry into another form of gender violence. Table 2 at the end of this chapter summarizes these studies. They are city-level, metropolitan-level, and state-level rape studies, state-level studies of violence against wives, and city-level, metropolitan-level, state-level, and nation-level femicide studies based on data from the years 1970 through 2000. Most of the studies employ individual variables although a few use indices. Among the variables considered, in varying combinations, are gender inequality factors, non-gendered economic inequality factors, racial inequality factors, social disorganization factors, demographic factors, military factors, criminal justice factors, cultural factors, and domestic violence resource availability factors.

### Rape Studies

A number of studies have focused on the relationship between social structural factors and rape, testing socioeconomic inequality and gender inequality as possible explanations for the variance in the rape rates. The social structural rape studies (Avakame, 1999; Bailey, 1999; Baron & Straus, 1984, 1987; Ellis & Beattie, 1983; Peterson & Bailey, 1988, 1992; Venable, 2001)

investigated whether gender status disparities, non-gendered economic inequality, and social disorganization were associated with the variance in the rape rates. Depending on the years studied, the units of analysis (total U.S., states, SMSAs (Standard Metropolitan Statistical Areas), and cities), and the measures used, they produced inconsistent findings. Although gender backlash theory was not the focus of these studies, some researchers acknowledged its relevance when the results occurred in the opposite direction than expected (Ellis & Beatty, 1983).

Several studies tested gendered socioeconomic factors as individual variables. Ellis and Beatty (1983) found that the 1970 rape rates were not significantly related to gender disparities in income, employment, or education. In contrast, Peterson and Bailey (1992) concluded that greater gender income inequality, measured as the ratio of male to female median income, was associated with higher rape rates in 1980, but gender education inequality and gender occupational inequality had no effect. Bailey (1999) found that lower rape rates were associated with higher women's median income in both 1980 and 1990, giving support to the gender inequality theory. In contrast, lower rape rates were associated with greater occupational inequality in 1980 as well as greater income inequality and educational inequality in 1990. Those results indicate a gender backlash against women gaining a higher status. Whaley (2001) discovered a more complicated relationship between gender inequality and the rape rates. She concluded that higher levels of gender employment inequality were associated with lower rape rates in 1970, 1980, and 1990 (backlash

theory), but higher rape rates between 1980 and 1990 (inequality theory). Likewise, increased gender inequality in education was associated with lower rape rates in 1980 (backlash theory), but increased rape rates from 1970 to 1980, 1980 to 1990, and 1970 to 1990 (inequality theory). She also found that those cities with fewer pro-women laws had lower rape rates in 1970 (backlash theory), but higher rates in 1980 and 1990 (inequality theory). Whaley (2001) also determined that more female participation in the labor force participation was related to lower rape rates in 1990 (inequality theory). Similarly, Avakame (1999) found that unemployed women were more likely to be raped than were employed women (inequality theory).

Baron and Straus (1984, 1987) used indices of gender equality measures instead of individual variables. Using an index that combines several variables helps to eliminate problems of multicollinearity (Land et al., 1990). They found that higher levels of gender equality, as measured by a combined index of 24 gender socio-economic, legal, and political equality, were associated with higher rape rates (Baron & Straus, 1984). Those findings support the backlash theory. After changing the measures in the indices, a subsequent Baron and Straus (1987) study showed that an increase in women's equality resulted in lower rape rates, which supports the gender inequality theory. The latter study eliminated educational measures, measured economic and political inequality as ratios between men and women, and slightly altered the legal measures.

Several of the rape studies considered the effect of general economic equality (as opposed to gendered economic equality) on rape rates. Peterson

and Bailey (1988, 1992) found that rape rates were higher with higher levels of general income inequality (GINI Index) and racial income inequality (black-white income gap), but poverty was not significantly related. In contrast, Bailey (1999) and Baron and Straus (1984, 1987) found that rape rates were higher when poverty rates were higher.

Baron and Straus (1987) also determined that social disorganization was a stronger predictor of rape than were gender inequality, economic inequality, or the unemployment rate. In accord, Peterson and Bailey (1999) found that greater social disorganization (measured by population size, percentage of young men, percentage of black population, and divorce rate) was associated with higher rape rates.

#### Violence Against Wives

Similar to the approach of the rape studies, Yllö (1983) and Yllö and Straus (1990) tested whether structural gender inequality explains the level of violence against wives on the state-level. They found a curvilinear relationship between women's status and the level of violence against legal wives. The level of violence against wives was highest in those states where the status of women was the lowest, then the level dropped and rose again in those states where the status of women was highest (almost as high as in the lowest states). This supports the gender inequality theory for low status states and the gender backlash theory for high status states. No similar studies on intimate partner violence and structural gender inequality have been published.

## Femicide Studies

Because femicide is the ultimate form of violence against women, the research on rape and violence against wives has served as a guide for the small, but growing, number of empirical studies that have investigated the relationship between femicide and socio-structural factors, including women's status in society. The femicide studies primarily have examined women's socioeconomic status and social disorganization, but some have also considered women's legal and political inequality as well as non-gendered economic inequality and domestic violence resource availability.

The results of these studies have been inconsistent, depending on the variables, the units of analysis, and the years studied. This section is divided by the factors used. First, the effect of gender inequality variables is examined. Next, non-gendered economic inequality factors are considered, and finally, the importance of the social disorganization variables is discussed.

### Femicide and Gender Inequality

Most of the gender equality/inequality studies have focused on gendered socio-economic factors without considering legal or political inequality factors. Only one researcher has examined women's rights legislation, political rights, and femicide. Stout (1987, 1992) found that there were fewer intimate partner femicides when there was more women's rights legislation and more women in the state legislatures. Avakame (1998) investigated women's rights legislation and women's political equality in a study that compared intimate partner homicide

to stranger homicide, but he did not disaggregate the homicide victims by gender.<sup>13</sup>

Using an index of socio-economic gender equality, Whaley and Messner (2002) found there were higher rates of femicides by male perpetrators in Southern cities with high levels of gender equality (measured by an index comprised of the ratio of men to women in median income, employment levels, occupation as executives, managers, and administrators, and college education). Stated differently, more women were murdered in cities where women enjoyed a greater status, which supports the gender backlash theory. In contrast, overall femicides were higher when gender-specific economic disadvantage was higher (as measured by sex-specific measures using the GINI Index of Income Inequality and percent under the poverty level), which supports the gender inequality theory.

When women's median income was considered, either as an absolute measure or as a measure relative to men, most studies found no significant association with overall femicides (Bailey & Peterson, 1995; Brewer & Smith 1995; Dugan et al., 1999; Smith & Brewer, 1995). However, Vieraitis and Williams (2002) found that overall femicide rates and white femicide rates were higher when the ratio of women's median income to men's median income was greater (backlash theory), but there was no significant relationship with the black femicide rates. Yet, some studies measuring median income levels support the gender inequality theory. When disaggregated by victim-offender relationships, Bailey and Peterson (1995) found higher rates of felony (usually stranger)

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<sup>13</sup> His methodology has been criticized. See Schwartz & Ackerman (2001).

femicides and killings of women friends/acquaintances with a greater gap in median income levels of men and women. When women's unemployment rate was tested separately, the rate of wife killings increased as gender inequality in unemployment increased (Bailey & Peterson, 1995).

In studies that considered women's participation in the labor force separately from other factors, some found that more women in the labor force resulted in a higher femicide rate (Avakame, 1999a; Gartner, 1990) while others found no significant effect (Marvell & Moody, 1999; Smith & Brewer, 1995). Gartner et al. (1990) concluded that in countries where women had a low educational status, the risk of femicide increased when women's participation on the labor force increased, but decreased when women's share of college education increased. Gender status was not significant in countries where women had a high educational status. Vieraitis and Williams (2002) found that the overall femicide and white femicide rates were higher in cities that had a higher percent of women employed, but there was no significant effect on black femicide rates.

Avakame (1999a) suggests an indirect link between women's labor force participation and the femicide rate. His study showed that more female labor force participation reduced the poverty rate, which in turn increased the intimate partner femicide rate. He also found that more female labor force participation decreased the femicide rate when family stability, poverty rate, and population heterogeneity were controlled, but there was no significant relationship to the intimate partner femicide rate without the controls.

When the ratio of women employed full-time to men employed full-time was considered, Brewer and Smith (1995) found that femicides declined as women's employment increased relative to men's employment, but there was no significant effect when social disorganization variables were controlled. In contrast, Vieraitis and Williams (2002) found that overall femicide and white femicide rates increased as the ratio of women employed full-time to men employed full-time increased.

When women's participation in professional, executive, managerial, and administrative occupations was considered, the research also had inconsistent results. When measured as the percent of women who were employees in these occupations, there was no significant effect (Bailey & Peterson, 1995; Vieraitis & Williams, 2002), but when measured as the percent of employees in these occupations who were women, inconsistent results occur. As women held a greater share of the elite occupations, femicides against women friends and acquaintances were higher (Bailey & Peterson, 1995), but declined in cities where women had a low educational status (Smith & Brewer, 1995). When measured as a ratio of women to men in the elite occupations, Vieraitis and Williams (2002) found that the overall femicide rate was higher, but there was no significant effect when disaggregated by race.

Generally, research suggests that education has a lesser effect on the femicide rate than does economics. Although there was no significant effect in most of the studies (Breault & Kposowa, 1997; Brewer & Smith, 1995; Dugan et al., 1999; Smith & Brewer, 1995; Vieraitis & Williams, 2002), Bailey and Peterson

(1995) found that the femicide rate of wives increased with greater gender inequality in college education, and Dugan et al. (2000) found that unmarried black women were killed more often as their relative education level increased. Gartner et al. (1990) found that in their 15-year lagged model, an increase in women's college enrollment led to a lower femicide rate.

As this analysis of the relevant literature shows, there is considerable inconsistency in the results. This may be due to differences in how gender equality is measured, the units of analysis used, and the year studied. As Table 1 shows, no two studies measured gender inequality with the same variables, which may be why the results from one study to the next are in conflict. Because of the dizzying inconsistencies, no conclusive analysis of the literature is possible. Only Whaley and Messner (2002) used an index of several gender inequality measures. That approach may alleviate any collinearity problems that can occur when using several inequality measures.

**Table 1. Gender Equality Variables in Femicide Studies**

Independent variables	Study	Outcome
<u>Gender Inequality Variables Index:</u> 1. ratio of male:female median income 2. % of males 16 years old and over:% of females 16 years old and over employed in civilian labor force 3. % of those employed who are male 4. % of executives, managers, and administrators who are male 5. ratio of men aged 25 years old and over:women aged 25 years old and over with 4 or more years of college education	Whaley and Messner (2002)	As gender inequality increases, femicides by male perpetrators increase in Southern cities
<u>Economic disadvantage variables index – sex-specific</u> 1. GINI Index of income inequality % under poverty line	Whaley and Messner (2002)	As gender economic disadvantage increases, femicide increases
Women’s median annual income	Bailey and Peterson (1995)	No significant effect
Median income for women 15 years old and over employed full-time	Vieraitis and Williams (2002)	No significant effect
% of women’s to men’s median income (full-time employees)	Smith and Brewer (1995)	No significant effect
Proportion of men:women median income for full-time employees	Brewer and Smith (1995)	No significant effect
Male-female differential in median income	Bailey and Peterson (1995)	Higher felony femicide and killings of women friends/acquaintances with increase in gender median income gap

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Table 1. Gender Equality Variables in Femicide Studies (continued)

Ratio of women's median income:men's median income for people 15 years old and over employed full-time	Vieraitis and Williams (2002)	Total femicides increase and white women femicide as ratio of women:men median income increases
Ratio of female labor force participation multiplied by women's median income to male labor force participation multiplied by men's median income (the larger the ratio, the greater the income of women relative to men)	Dugan et al (1999)	No significant effect
Women's unemployment rate	Bailey and Peterson (1995)	No significant effect overall
Female-male differential in unemployment rate	Bailey and Peterson (1995)	Rate of wife killings increase with greater gender inequality in unemployment rate
% of women below poverty line	Smith and Brewer (1995)	Increase in % of women below poverty line decreases femicide in countries where women have high educational status
% of women:men living below poverty line	Brewer and Smith (1995)	As women's poverty increases, femicides increase (no significant effect when social disorganization variables controlled)
% of women employed in managerial, professional, and administrative positions	Bailey and Peterson (1995)	No significant effect
% of employees in managerial/professional occupations who are women	Bailey and Peterson (1995)	Killings of women friends/acquaintances increase with greater % of professional occupations held by women (backlash)
% of employees in professional occupations who are female	Smith and Brewer (1995)	Increase in % of women in professional occupations decreases femicide in cities where women have a low educational status

Table 1. Gender Equality Variables in Femicide Studies (continued)

% of women 16 years old and over employed in executive, managerial, and administrative positions	Vieraitis and Williams (2002)	No significant effect
Difference in % of employees who are men:women in managerial, professional occupations	Brewer and Smith (1995)	As women become more equal in professional occupations, femicides increase (backlash) No significant effect when social disorganization variables controlled
Ratio of women:men 16 years old and over employed in executive, managerial, and administrative positions	Vieraitis and Williams (2002)	Total femicide rate is higher in cities with higher percent of women in executive, managerial, and administrative positions No significant effect when disaggregated by race
Ratio of total number of women labor force participants to total households	Gartner (1990)	Increase in female labor force participation increases femicide
Female participation in labor force	Gartner et al (1990)	In countries where women have low educational status, increase in female share of workforce increases femicide rate (does not apply to countries where women have high educational status)
% of labor force that is female	Smith and Brewer (1995)	No significant effect
% of women 16 y.o.+ in civilian labor force	Avakame (1999)	Increase in female labor force participation decreases poverty rate, which increases IP femicide rate (indirectly supports backlash) Increase in female labor force participation decreases femicide rate when family stability, poverty rate, and population heterogeneity controlled (equality hypothesis)  Female labor force participation not significantly related to IP femicide rate without controls

Table 1. Gender Equality Variables in Femicide Studies (continued)

Female participation in labor force	Marvell and Moody (1999)	No significant effect
% of women 15 years old and over employed full-time year round	Vieraitis and Williams (2002)	Total femicide rate and white women's femicide rate is higher in cities with higher percent of employed women No significant effect for Black women
Difference in percentage of men: women participating in labor force as full-time employees	Brewer and Smith (1995)	As differences increase (more female inequality) femicides decrease (backlash) No significant effect when social disorganization variables controlled
Ratio of women: men 15 years old and over employed full-time year round	Vieraitis and Williams (2002)	Total femicides increase and white women femicides increase as ratio of women: men employed full time increases
Segregated occupations (index)	Gartner et al. (1990)	In countries where women have low educational status, increase in occupational desegregation increases femicide rate (does not apply to countries where women have high educational status)
Education	Gartner et al. (1990)	In countries where women have low educational status, increase in female share of college enrollment decreases femicide rate (does not apply to countries where women have high educational status)
Educational status	Breault and Kposowa (1997)	No significant effect
Women's college enrollment	Gartner et al. (1990)	In 15-year lagged model, increase in women's college enrollment leads to lower femicide rate
% of men to women high school graduates	Smith and Brewer (1995)	No significant effect

Table 1. Gender Equality Variables in Femicide Studies (continued)

Difference in percentage of men:women who have completed 4 years of high school	Brewer and Smith (1995)	No significant effect
% of college-educated who are female	Smith and Brewer (1995)	No significant effect
% of women 25 years of age and over who have completed 4 or more years of college	Bailey and Peterson (1995)	No significant effect
% of women 25 years old and over who completed B.A.	Vieraitis and Williams (2002)	No significant effect
Difference in percentage of men:women who have completed 4 years of college	Brewer and Smith (1995)	No significant effect
Male-female differential for 4 or more years of college	Bailey and Peterson (1995)	Rate of wife killings increase with greater gender inequality in college education
Ratio of women 25 y.o.+ to men 25 y.o.+ with 4 years college	Dugan et al (1999)	No significant effect
Women's relative education	Dugan et al (2000)	Unmarried Black women killed more as relative education of Black women increases
Women's non-traditional family role variables 1. Divorce rate 2. Illegitimate birth rate 3. Female share of unmarried population 15-24 years old	Gartner et al (1990)	Non-traditional roles increase relative increase of femicide in countries where women have not obtained fair degree of educational attainment
% of women who are married	Bailey and Peterson (1995)	Overall femicide and felony femicides increase as % of women married increases
Marriage rate	Dugan et al (1999)	As marriage rate decreases, homicide of married women decreases, but increases for unmarried women

Table 1. Gender Equality Variables in Femicide Studies (continued)

Marriage rate	Dugan et al (2000)	Unmarried Black women and married white women killed less as marriage rate increases
% of people divorced/separated	Smith and Brewer (1995)	No effect
Divorce rate	Gartner et al (1990)	In countries where women have high educational status, increase in divorce rate lowers femicide
% of married women who are separated	Bailey and Peterson (1995)	Overall femicide increases and killing of wives decreases as % of married women who are separated increases
Divorce rate	Dugan et al (1999)	As divorce rate increases, femicide of unmarried women increases (no significance for married women)
Divorce/separated rate	Dugan et al (2000)	Unmarried white women killed more as divorce/separated rate increases
Divorce/separated rate	Vieraitis and Williams (2002)	White women femicide rate increases as divorce/separated rate increases
% divorced males positively associated with men killing women in South	Whaley and Messner (2002)	Femicide by men increases as men's divorce rate increases
<u>Legislative measures (statutes)</u> 1. civil injunction relief for abuse 2. temporary injunction during divorce/separation 3. physical abuse defined as a crime 4. arrests without warrant in domestic violence cases 5. required reports of domestic violence cases 6. provide funds or set standards for battered women's shelters	Stout (1992)	Femicides lower in states that have more legislative protection

### Femicide and Non-Gendered Socio-Economic Factors

There is some evidence that the femicide rate is related to non-gendered socio-economic factors. Studies that examined absolute economic deprivation (Gartner, 1990; Frye & Wilt, 2001) and relative deprivation (as measured by the GINI Inequality Index) (Bailey & Peterson, 1995) give support to the conclusion that a city's greater economic deprivation is related to a higher femicide rate. A recent study found that an upsurge in economic deprivation (absolute and relative) was associated with higher femicide rates for both black women and white women (Vieraitis & Williams, 2002). In addition, Bailey and Peterson (1995) found that the rate of wife killings was highest when the percentage of families living under the poverty level was greatest. Marvell and Moody (1999) found that a higher overall unemployment rate was associated with a higher white femicide rate, but not a higher black femicide rate. Dugan et al. (2000) concluded that married black women were killed less often by an intimate partner when welfare benefits were higher. Frye and Wilt (2001) found that a socioeconomic status index (percent employed, percent in administrative and professional occupations, percent with more than 12 years of education, and percentage of families not receiving public aid) was a significant predictor of non-intimate partner femicide, but not intimate partner femicide.

Instead of considering the relationship between socioeconomic status of women and femicide, Gartner and her colleagues (1990, 1991) studied the opportunity and routine activity theories in relation to femicide from 1950 to 1980. These cross-national times-series studies found that female participation in the

labor force was associated with women's homicide victimization rates in 18 Western countries. Femicide was positively and significantly associated with the female share of the unmarried population, the divorce rate, the illegitimacy rate, the level of female participation in the labor force, and the level of gender occupational segregation, but negatively and significantly related with the percentage of enrolled college students who were female. Moreover, Gartner et al. (1990) found that overall poverty and income inequality explained femicide rates in 18 Western countries. Bailey and Peterson (1995) found that overall femicides increased as the gap between white and black family income declined (as black family income increased).

#### Femicide and Social Disorganization.

Several femicide studies have found a relationship between the level of social disorganization and the femicide rate (Brewer & Smith, 1995; Frye & Wilt, 2001; Smith & Brewer, 1992). Frye and Wilt (2001) found that in New York City from 1990 to 1997, social disorganization was a more important predictor of non-intimate partner femicide than of intimate partner femicide. However, when socio-economic variables were controlled, social disorganization was not significant for intimate partner femicide. Brewer and Smith (1995) concluded that 60% of the variance in the femicide rate was due to social disorganization as measured by Land et al.'s (1990) social structural variables. Moreover, when social disorganization variables were controlled, no gender equality variable was significant. Avakame (1999) found that intimate partner femicides declined with greater family stability, but increased with more racial/ethnic heterogeneity in the

population. In another study, Avakame (1998) found that social disorganization was positively associated with both intimate partner homicide and stranger homicide, but the homicides were not disaggregated by gender.

### Summary

Table 2 gives an overview of the violence against women studies, the variables employed, and any significant findings. As the results of these studies indicate, none of these studies used the same variables measured in the same way. By changing the variables, even slightly, the outcomes differed. Moreover, none of these studies considers the interconnections between gender inequality, racial inequality, and class inequality. Even those studies that focus on gender inequality most often used limited socio-economic variables to the exclusion of political or legal variables to measure women's status in society. These conflicting studies highlight the problem of compartmentalizing women's lives. Focusing on a small slice of gender equality distorts the bigger picture. To begin to alleviate this problem, this study uses both gendered socio-economic and political variables, which measure different aspects of women's lives. It also utilizes measures of socio-economic and political racial inequality as well as class inequality in an effort to integrate several areas of women's lives.

Table 2. Empirical Studies of Violence Against Women and Macro-Social Factors

Study	Years	Sample	Dependent Variable	Independent Variables	Significant Findings
Ellis and Beatty (1983)	1970	26 cities/ 25 SMSAs	Rape	<p><u>Gender Equality Variables</u>                      Male to female difference in median income (16 y.o. +)                      male to female difference in mean education (25 y.o. +)                      male to female difference in % of professional and managerial occupations                      % of judges and lawyers who are women                      % of police and detectives who are women</p> <p><u>Control Variables</u>                      population size                      % Black                      mean family income                      % of families below poverty line                      % of family heads employed                      % of labor force in professional and managerial occupation</p> <p><u>Special control Variables</u>                      age risk adjustment                      marital status risk adjustment</p>	<p>Rape rates not significantly related to gender disparities in earnings, education, occupational prestige or employment (but increased equality in these areas slightly increases rape rates – backlash)</p> <p>Suggests that pornography and prostitution related to rape rates</p> <p>Results differed with data source – FBI city, FBI state, victimization survey</p>
Baron and Straus (1984)	1979	50 states	Rape	<p><u>Economic Dimension (Economic Status of Women Index)</u>                      % of women in the labor force                      % of women in the professional and technical occupations                      % of women in managerial and administrative occupations                      Unemployment: male rate as % of female rate                      Median income: female as % of male, for full-time workers</p> <p><u>Educational Dimension (Educational Status of Women Index)</u>                      High school graduation: Female rate as % of male rate                      Post-secondary enrollment: % female                      High school interscholastic athletes: % female                      High school administrators: % female</p>	<p>Higher women's status results in higher rape rates (backlash hypothesis)</p> <p>Higher Sex Magazine Index, murder rate, aggravated assault rate, % residents in SMSAs, % below poverty income level, sex ratio of 15-24 years olds results in higher rape rates</p> <p>Higher % Black, and % young male population results in lower rape rates</p>

Table 2. Empirical Studies of Violence Against Women and Macro-Social Factors (continued)

<p>Baron and Straus (1984) (cont'd)</p>			<p><u>Political Dimension (Political Status of Women Index)</u>  Members in U.S. Congress: % female  Members of state senate: % female  Members of state house: % female  Judges on major appellate and trial courts: % female</p> <p><u>Legal Dimension (Legal Status of Women Index)</u>  No occupation barred to women  Fair employment practice act  Equal pay laws  No maximum hour restrictions on women  Proof of resistance no required for rape conviction  Corroborating testimony not required for rape conviction  Husband/ wife jointly responsible for family support  Husband/ wife have equal right to sue for personal injury  Husband/ wife have equal right to sue for loss of consortium  Wife's property rights unrestricted  Wife's right to use maiden name unrestricted  Wife's right to maintain separate domicile unrestricted  Ratified Equal Rights Amendment  Passed a state Equal Rights Amendment</p> <p><u>Sex Magazine Circulation Index</u>  Number of copies of 8 sexually explicit magazines (weighted according to their factor scores)  Nonsexual violence variables  Murder rate  Robbery rate  Assault rate</p> <p><u>Control variables</u>  % living in Standard Metropolitan Statistical Areas  % Black  % with incomes below federal poverty level  % aged 18-24  sex ratio for 15-24 year olds</p>	<p>UCR - May have reporting problems</p>
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Table 2. Empirical Studies of Violence Against Women and Macro-Social Factors (continued)

<p>Baron and Straus (1987)</p>	<p>1980 - 1982</p>	<p>50 states</p>	<p>Rape</p>	<p><u>Economic Status Index</u>                  % of women relative to % of men in civilian labor force (16+)                  % of women relative to % of men who are managers and administrators (16 y.o.+)                  % of women relative to % of men in labor force who are employed (16 y.o. +)                  Women relative to men - median income (full-time employees)                  % of Small Business loans given to women relative to SBA loans given to men                  % of SBA money loaned to women relative to SBA money loaned to men                  % of female-headed households with incomes above poverty level relative to male-headed households above poverty level  <u>Political Equality Index</u>                  % of state senate members who are women relative to % of state senate members who are men                  % of state representatives who are women relative to % of state representatives who are men                  % of mayors who are women relative to % of mayors who are men                  % of local governing boards who are women relative to % of local governing board members who are men  <u>Legal Equality Index</u>                  state passed fair employment practice act                  women may file fair employment lawsuit personally                  state passed equal pay laws                  women may file equal pay lawsuit personally                  sex discrimination law in the area of public accommodation                  sex discrimination law in the area of housing                  sex discrimination law in the area of financing                  sex discrimination law in the area of education                  statutes provide for civil injunction relief for victims of abuse                  statutes define physical abuse of a family member as crime                  statutes permit warrantless arrest in domestic violence cases                  statutes that require data collection and reporting of family violence by agencies that serve these families                  statutes that provide funds for family violence shelters or established standards of shelter operations</p>	<p>As women's equality increases, rape rates decrease (equality hypothesis) – different indices used from 1984 study</p> <p>Social disorganization is stronger predictor of rape than economic inequality, unemployment or gender inequality</p> <p>Rape rate increases as social disorganization increases (% residing in SMSAs, GINI index, and % unemployed)</p> <p>Rape rate increases as sex magazine circulation increases</p>
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Table 2. Empirical Studies of Violence Against Women and Macro-Social Factors (continued)

<p>Baron and Straus (1987) (cont'd)</p>				<p><u>Sex Magazine Circulation Index</u> Rate of number of copies of 8 sexually explicit magazines sold per 100 males aged 15 and older</p> <p><u>Legitimate Violence Index</u> 12 indicators of noncriminal violence – use of violence for socially approved ends, including the following: corporal punishment in schools circulation rates of magazines with violent content violent television viewing index executions per 100 murders expenditures by the National Guard</p> <p><u>Social Disorganization Index</u> geographic mobility divorce lack of religious affiliation female headed households households headed by males with no females present ratio of tourists to residents in each state</p> <p><u>Control Variables</u> % residing in SMSAs % aged 18-24 % Black % male of population aged 15-24 GINI Index of Income Inequality % single males aged 15 and older % unemployed</p>	
<p>Peterson and Bailey (1988)</p>	<p>1979 - 1981</p>	<p>243 SMSAs</p>	<p>Rape</p>	<p>3 dimensions of economic deprivation GINI Index (general income inequality) Black-White gap in average earnings (racial income inequality)</p>	<p>Rape increases with general income equality (Gini Index) and racial income inequality (black-white gap in average family income).</p> <p>Chance only association between level of poverty and rape</p>

Table 2. Empirical Studies of Violence Against Women and Macro-Social Factors (continued)

<p>Peterson and Bailey (1992)</p>	<p>1980</p>	<p>263 SMSAs</p>	<p>Rape</p>	<p><u>Socioeconomic Variables</u>          % of families below poverty line (absolute economic deprivation)          GINI Index (general income inequality)          Black-white family income gap (racial economic inequality)</p> <p><u>Gender Socioeconomic Variables</u>          male-female ratio in median income for              - all persons with incomes              - persons who have complete 4 years of high school              - those who have completed 4 or more years of college          male-female gap in education          % of adult males versus females who have completed              - 4 years of high school              - 4 years of college              - 5 or more years of college          male-female gap in occupations          % of employed persons (16 years old and older) in managerial, professional, scientific, administrative, engineering, health field, teachers occupations who are female          female-male gap in poverty for individuals</p> <p><u>Control variables</u>          divorce rate          % of male population in crime-prone years (16-34 years old)          % of population that is Black          size of metropolitan population, naturally log because of skew</p>	<p>Higher gender income inequality related to higher rape rates (equality hypothesis)</p> <p>Gender socioeconomic inequality in education and occupation do not contribute significantly to rape rate</p> <p>Increase in population size, % male population that is young, % Black and divorce rate increases rape rate</p> <p>Increase in GINI Index inequality increases rape rate, but poverty variable not significant</p> <p>Increase in Black-white income gap increases rape rate when gender inequality defined by high school graduation and occupational status</p>
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Table 2. Empirical Studies of Violence Against Women and Macro-Social Factors (continued)

<p>Bailey (1999)</p>	<p>1980 - 1990</p>	<p>192 cities</p>	<p>Rape</p>	<p><u>Gender socioeconomic status (absolute)</u>          women's annual median income          % of women with 4 or more years of college (educational attainment)          % of women in professional and managerial occupations</p> <p><u>Gender socioeconomic inequality (relative)</u>          contrast median income of males versus females for all persons with incomes          % of men (25 years old and older) minus adult females with 4 years or more of college          % of employed persons (16 years old and older) in professional and managerial occupations who are men</p> <p><u>Socioeconomic deprivation and inequality as control variables</u>          % of families below poverty level (absolute economic deprivation)          GINI Index (general income inequality)          Black-white income gap (racial socioeconomic inequality)</p> <p><u>Demographic variables as control variables</u>          Population size          % Black population          % of women married          overall divorce rate</p>	<p>Change from 1980 to 1990</p> <ol style="list-style-type: none"> <li>rapes decrease as total population increases and median income decreases</li> <li>rapes increase as % of families living below poverty level increases</li> </ol> <p>In 1980,</p> <ol style="list-style-type: none"> <li>higher rape rates with higher % Black population and % divorced</li> <li>lower rape rates with higher female median income and higher % male professionals</li> </ol> <p>In 1990,</p> <ol style="list-style-type: none"> <li>higher rape rates with higher % Black population and total population</li> <li>lower rape rates with higher % of women married</li> <li>lower rape rates with higher women's median income (inequality)</li> <li>lower rape rates with higher gender income and educational inequality (backlash)</li> </ol>
<p>Avakam (1999)</p>	<p>1992 - 1994</p>	<p>All rapes in NCVS</p>	<p>Rape</p>	<p><u>Gender Inequality Variable</u>          Women's employment status (dummy variable)</p> <p><u>Control variables</u>          victims' age/gender/race          offender's age/gender/race          victim-offender relationship (spouse/non-spouse)          household income          educational attainment          drugs and alcohol use          weapons use          urban/suburban/rural location</p>	<p>Unemployed women are more likely to be raped than employed women (equality hypothesis)</p> <p>Poor, older, unmarried, white, suburban women more likely to be raped</p>

Table 2. Empirical Studies of Violence Against Women and Macro-Social Factors (continued)

<p>Whaley (2001)</p>	<p>1970 - 1990</p>	<p>109 cities</p>	<p>Rape</p>	<p><u>Gender economic inequality variables (relative)</u>  ratio of male to female median income  % of males age 16 or older who were employed in the civilian labor force relative to % of females 16 or older employed in civilian labor force  % of those employed in the labor force who are male  % of executives, managers, and administrators who were male</p> <p><u>Gender educational inequality variables:</u>  % of men age 25 and older relative to women 25 and older whose highest level of education was 5 or more years of college</p> <p><u>Gender legal inequality</u>  Each state got a code of 1 for the absence of each of the 9 pro-woman laws considered  fair employment practices act  women may file lawsuit personally under fair employment practice act  equal pay laws  women may file lawsuit personally under equal pay laws  sex discrimination law in the area of public accommodation  sex discrimination law in the area of housing  sex discrimination law in the area of financing  sex discrimination law in the area of education  law requiring name change at marriage (reserve-coded)  Disorganization variables  % of people who lived in a different house 5 years prior (population instability)  % of families that lived under the poverty line  ethnic heterogeneity (<math>1 - \sum p_i^2</math>, where <math>p_i</math> is the fraction of the population in each group)  % of males who are divorced</p> <p><u>Control variables:</u>  logged population size  total % of the population between the ages of 15 and 24  ratio of men to women age 16 and older</p>	<p>Moderate support for refined theory</p> <p>Backlash hypothesis supported from 1970 to 1975</p> <p>Increase in % of male executives decreases rape rates in 1970, 1980, 1990 (backlash), but increases rape rates between 1980 and 1990 (refined theory)</p> <p>Legal inequality – decrease in pro-women laws results in rape decrease in 1970 (backlash), but increases rape rate from 1980 to 1990 (refined theory)</p> <p>Increased gender inequality in education lowers rape rate in 1980 (backlash), but increases rape rates from 1970 to 1980, 1980 to 1990, and 1970 to 1990 (refined theory)</p> <p>Increase in gender inequality in labor force participation and % of labor force that is male lowers rape rate in 1990 (backlash)</p> <p>Feminist equality and refined theory supported for change from 1970 to 1990 and from 1980 to 1990</p>
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Table 2. Empirical Studies of Violence Against Women and Macro-Social Factors (continued)

Yllö (1983)	1976	30 states	Violence Against Wives	<p><u>Gender Equality (economic, political, legal)</u> Same as Baron and Straus (1984)</p> <p><u>Control Variables</u> Urbanization – proportion of population residing in large urban areas Per capita income - Educational level – proportion of adult residents who have completed high school Overall level of violent crime – number of violent crimes per 100,000 population</p>	<p>1. Curvilinear pattern – level of wife beating is highest in states where overall status of women is lowest, then drops, and rises again in states where overall status of women is highest (almost as high as low states)</p> <p>2. In low status states, wives do not fight back (abuse against wives is double rate of violence by wives) but in high status states, wives fight back (abuse against wives is comparable to violence by wives)</p> <p>3. Urbanization, violent crime, and state educational levels not significant</p>
Yllö and Straus (1990)	1980	50 states	Violence Against Wives	<p><u>Gender Equality (economic, political, legal)</u> Same as Yllö (1983)</p> <p>Also measured patriarchal norms held by state residents (whether thought husband was final authority in family)</p>	<p>Rate of violence against wives is curvilinear</p> <p>1. highest where structural inequality is highest and lowest</p> <p>2. supports equality theory in low status states/backlash hypo in high status states</p> <p>3. no relationship between institutional gender inequality and patriarchal norms held by state residents</p> <p>4. the more patriarchal norms about marital power, more wife abuse in high status states</p> <p>5. more violence against wives when high support for husband's dominance, but no consistent relationship between patriarchal norms and wife beating in low or moderate women's status states</p>

Table 2. Empirical Studies of Violence Against Women and Macro-Social Factors (continued)

Gartner (1990)	1950 - 1980	18 nations	Femicide	<u>Absolute deprivation variables</u> social security expenditures as % of GNP <u>Relative deprivation variables</u> GINI Index of household income inequality <u>Integrative variables</u> number of divorces per 1,000 marriages % of significant ethnic and linguistic groups (intergroup integration) <u>Demographic variables</u> % young (15-29 years old) ratio of total number of women labor force participants to total households <u>Cultural variables</u> existence of death penalty number of international and civil wars in which country participated from 1900-1980 total battle deaths (per million population) incurred during wars	Absolute deprivation, divorce rate, ethnic heterogeneity, and official violence positively associated with homicides of men and women  Increase in female labor force participation increases femicide, but not homicides of men
Gartner et al. (1990)	1950 - 1980	18 nations	Femicide	<u>Women's non-traditional role variables</u> divorce rate illegitimate birth rate female share of unmarried population 15-24 years old  <u>Gender stratification in labor</u> female share of labor force index of occupational segregation  <u>Gender differences in roles and status</u> female share of population female share of labor force female share of college enrollments female share of unmarried population occupational desegregation	1. In nations with low female educational status, femicide risk increases as non-traditional female roles increase (backlash) 2. In nations with low female educational status, femicide risk decreases as women's college enrollment and share of population increase (equality) 3. In nations where women have high educational status, risk of femicide increases only with illegitimacy rate increase 4. In nations with high female educational status, risk of femicide decreases only with increase in divorce rate

Table 2. Empirical Studies of Violence Against Women and Macro-Social Factors (continued)

Stout (1990)	1980	50 states	IP Femicide	<p><u>Availability of services</u> (per 1 million people over 16 years old)  number of rape crisis centers  number of battered women's shelters  number of batterer programs</p> <p><u>Legislative measures (statutes)</u>  civil injunction relief for abuse  temporary injunction during divorce/separation  physical abuse defined as a crime  arrests without warrant in domestic violence cases  required reports of domestic violence cases  provide funds or set standards for battered women's shelters</p>	Decreased IP femicide in states with more battered women's shelters, rape crisis centers, and women's rights legislation
Smith and Brewer (1992)	1979 - 1981	269 cities	Homicide (disaggregated by gender)	<p><u>Social disorganization variables</u> –  Land et al's set of structural variables  <u>Index of population structure</u> (size and density)  <u>Resource deprivation/affluence</u>  - index of highly-correlated indicators related to economic distress  - percentage of persons below poverty level  - percentage of persons who are black  - percentage of children under age of 18 not living with parents  percentage of population ages 15-29  family disruption (divorce rates) – percentage of pop. divorced  percentage of civilian population unemployed  regional variable (South and non-South)</p>	Femicide is related to social disorganization factors (but, better predictor of male homicide victimization)
Smith and Brewer (1995)	No dates	176 cities	Homicide (gender gap)	<p><u>Gender inequality (employment, education, income)</u>  % divorced/separated  % of labor force that is female  % of professional occupations that are female  % of women's to men's median income (full-time employees)  % of men to women high school graduates  % of college-educated who are female  % of women below poverty line  sex ratio (males: 100 females)  number of homicides (logged)</p>	<ol style="list-style-type: none"> <li>1. Generally, women's status does not affect relative risk of femicide (gender gap between men and women victims)</li> <li>2. In low education cities, the increase in % of women in professional occupations lowers femicide risk</li> <li>3. In high education cities, increase in % of women below poverty line lowers femicide risk</li> </ol>

Table 2. Empirical Studies of Violence Against Women and Macro-Social Factors (continued)

<p>Brewer and Smith (1995)</p>	<p>1980</p>	<p>177 cities</p>	<p>Femicide</p>	<p><u>Sociodemographic variables (Land et al. social disorganization variables)</u>          index of population structure          resource deprivation/affluence index              - index of highly-correlated indicators related to economic distress              - percentage of persons below poverty level              - percentage of persons who are black              - percentage of children under age of 18 not living with 2 parents          % of population ages 15-29          Family disruption (divorce rates) – percentage of pop. divorced or separated, logged to base          % of civilian population unemployed          regional variable (South and non-South)</p> <p><u>Relative gender inequality variables</u>          Difference in percentage of men:women who have completed 4 years of high school          Difference in percentage of men:women who have completed 4 years of college          Difference in percentage of men:women participating in labor force as full-time employees          Proportion of men:women median income for full-time employees          Difference in % of employees who are men:women in managerial, professional occupations          % of women:men living below poverty line (logged due to skewness)</p>	<p>60% of variance in femicide rate due to social-disorganization variables – inequality measures do not add explanation to social disorganization model</p> <p>As social disorganization increases, femicides increase</p> <p>No single gender equality variable significant when social disorganization variables are controlled</p> <p>As population size, resource deprivation, and divorce rate increase, femicide increases</p> <p>As % young increases, femicide decreases</p> <p>As women's poverty increases, femicides increase</p> <p>As women's inequality in full-time employment and professional occupation, femicides decrease (backlash)</p>
<p>Bailey and Peterson (1995)</p>	<p>1980</p>	<p>138 cities</p>	<p>Femicide (Disaggregated by victim-offender relationship)</p>	<p><u>Gender socioeconomic (absolute)</u>          Level of female educational attainment as percentage of women 25 years of age and over who have completed 4 or more years of college          Women's economic status measured by median annual inc.          Occupational status measured by percentage of women employed in managerial, professional, and administrative positions          Women's unemployment rate</p>	<p>No significant associations with absolute gender socioeco. Killings of women friends/acquaintances, argument-related, and felony murders increase with greater male:female income gap (inequality) and % of professional occupations held by women (backlash)</p>

Table 2. Empirical Studies of Violence Against Women and Macro-Social Factors (continued)

<p>Bailey and Peterson (1995) (cont'd)</p>				<p><u>Relative socioeconomic status of women</u></p> <p>For income and education, gender inequality is measured as male-female differential in income and 4 or more years of college          Inequality in employment status measured as female-male differential in unemployment rate          Percentage of employees in managerial/professional occupations who are women          Marital status factors as control variables          percentage of women 15 years and older who are married          percentage of married women who are separated from their husbands</p> <p><u>Demographic and socioeconomic control variables</u></p> <p>Population size, log transformed to avoid skew          Percentage of the population that is black          Dummy variable differentiating nonsouthern from southern cities          Divorce rate, an indicator of social disorganization          Percentage of families with incomes below the poverty level          the Gini Index of general income inequality          Gap between white and black family income (racial socioeconomic inequality)</p>	<p>Rate of wife killings increase with gender inequality in college education and unemployment rate (inequality)</p> <p>Rate of wife killings increases with rise in % of families with incomes below poverty level</p> <p>Increases in % Black population (all types), GINI Index (overall and argument), and divorce rate (overall, felony, friends/acq, argument) increase in femicides</p> <p>Gap between white/Black income negatively associated (as Black income rises, overall femicides increase)</p> <p>Increase in % of women married results in higher overall, felony, and argument-related femicides</p> <p>Increase in % of married women separated from husband results in higher overall femicide, but lower femicide by husbands</p> <p>Lower felony femicide in Southern cities</p> <p>Higher felony femicide with increase in % women married and gender median income gap</p>
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Table 2. Empirical Studies of Violence Against Women and Macro-Social Factors (continued)

<p>Gauthier and Bankstn (1997)</p>	<p>1990</p>	<p>191 cities</p>	<p>IP Homicide Sex Ratio of Killing</p>	<p><u>Gender inequality Independent Variable</u> Sex ratio of employment as measure of level of gendered economic equality – women:men in labor force</p> <p><u>Contextual Variables</u> mean per capita income South/Non-South location</p> <p><u>Control Variables</u> % persons 15-34 years old population size residential density - % of housing units in attached units of 5 or more residential stability – living in same household for last 5 years  % Black % Latino Relative size of police force – full-time officers per 1,000 population Mean public assistance payments % female population aged 18-64 below poverty (controls for gender equality)  sex ratio of employment</p>	<p>Higher levels of gender equality: greater increased rate of men killing IP women relative to women killing IP men only in high economic status cities and southern cities (backlash)</p> <p>High economic status cities: - more women kill men relative to men killing women with increase in residential density, % Black, and % women below poverty level - less women kill men relative to men killing women with increase in mean public assistance payments and sex ratios in employment</p> <p>Low economic status cities: less women kill men relative to men killing women with increase in mean public assistance payments</p> <p>South: as residential density increases, more women kill men relative to men killing women, but as % Latino and sex ratio of employment increase, less women kill men</p> <p>Non-South: as % black increases, more women kill men relative to men killing women, but as mean public assistance payments and mean per capita income increase, less women kill men</p>
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Table 2. Empirical Studies of Violence Against Women and Macro-Social Factors (continued)

Breault and Kposow (1997)		U.S.	Femicide	Gender employment Educational status Domesticity – marital status Region	<p>Risk of femicide increases</p> <ol style="list-style-type: none"> <li>1. or divorced/separated (compared to married women)</li> <li>2. African American women and Asia-Pacific women (compared to white women)</li> <li>3. cities over 1 million (compared to cities under 100,000)</li> <li>4. west, midwest, and south regions (compared to northeast)</li> <li>5. service occupations (compared to professional/managerial occupations)</li> </ol> <p>Risk of femicide decreases</p> <ol style="list-style-type: none"> <li>1. widowed (compared to married)</li> <li>2. born in U.S. (compared to those born in other countries)</li> </ol> <p>No educational significance</p> <p>Married women and single women face higher risks than married men</p>
Avakam (1998)	1980 - 1982	All U.S. IP and stranger homicide	IP and stranger Homicide (not disaggregated by gender)	<p><u>Level 1 model (within states):</u> SHR homicide frequency = VICAGE + VICSEX + VICRACE + OFFENDERAGE + OFFENDERSEX + OFFENDERRACE + WEAPON USED for both stranger and IP homicide</p> <p><u>Level 2 model (between states) Variables:</u> Index of resource deprivation (GINI Index (relative poverty), proportion population below poverty level (absolute poverty), % Black) Legitimate violence Index (Baron and Straus) – culture of poverty measure</p>	<p>Social disorganization positively associated with IP homicide and stranger homicide</p> <p>IP homicide decreases as gender inequality increases (backlash)</p> <p>As legitimate violence increases, IP homicide decreases</p>

Table 2. Empirical Studies of Violence Against Women and Macro-Social Factors (continued)

<p>Avakam (1998) (cont'd)</p>			<p><u>Economic gender inequality index</u>          - % of women relative to men in civilian labor force          - % of women relative to men in professional and technical occupations          - % of women relative to men in administrative occupations          - women's median income compared to men's median income          - % Small Business Administration loans to women relative to men's loans          - % of SBA loan money lent to women relative to men's loans          - % female-headed households above poverty level compared to male-headed households above poverty  <u>Legal gender inequality index (Baron and Straus -1989)</u>          (presence/absence of statutes protecting women's rights)          - fair employment practices law          - fair employment personal lawsuits          - equal pay laws          - equal pay personal lawsuits          - public accommodations law          - equal housing laws          - equal opportunity for credit laws          - equal educational opportunity laws          - name change not required at marriage          - civil injunctions for abuse cases          - injunction relief during divorce/separation          - physical abuse defined as crime          - warrantless arrest for domestic violence          - mandatory report of domestic violence          - statutory provision for battered women's shelters  <u>Political gender inequality index</u>          - % of U.S. Congress members who are women          - % state senators who are women          - % state representatives who are women          - % major trial and appellate court judges who are women          - % of mayors who are women          - % of municipal governing boards who are women</p>	<p>Black victims of stranger homicide not affected differently from white victims of stranger homicide for South location, % population in SMSAs, unemployment rate, legitimate violence, gender inequality, social disorganization, and resource deprivation</p> <p>Black victims of IP homicide not affected differently from white victims of IP homicide for % population living in SMSAs, unemployment rate, legitimate violence, gender inequality, social disorganization, and resource deprivation (same as stranger homicide except that whites more affected for South Region)</p> <p>Both stranger homicide and IP homicide more likely to occur in urban areas than rural areas</p> <p>Fewer IP homicides in South than non-South</p> <p>Schwartz and Ackerman question methodology (in <u>Criminology</u> article)</p> <p>Only femicide study (besides Stout) that measures gender inequality other than socioeconomic variables</p>
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Table 2. Empirical Studies of Violence Against Women and Macro-Social Factors (continued)

Avakam (1999)	1990 - 1994	All U.S.	IP Femicide	<p><u>Level 1 Covariates (within states)</u> victim's age victim's race weapon uses urban vs. rural</p> <p><u>Level 2 Covariates (between states)</u> Female labor force participation operationalized as % of women 16 year old+ in civilian labor force</p> <p><u>Control variables</u> Sex ratio of population (control) Number of males per 100 adult women Social ecology – social integration (Bursik and Grasmick – formal/informal ties) Family stability - % of households with married couples Population heterogeneity - % Black, % white, % other Population mobility - % of population living in different house than in 1985</p> <p><u>Economic deprivation</u> proportion of families who earned less than \$15,000 in 1989 Age structure of population proportion of population aged 18-25</p>	<p>Increase in female labor force participation decreases poverty rate, which increases IP femicide rate (indirectly supports backlash)</p> <p>IP femicide decreases with family stability</p> <p>IP femicide increases with population heterogeneity</p> <p>Increase in female labor force participation decreases femicide rate when family stability, poverty rate, and population heterogeneity controlled (equality hypothesis)</p> <p>Women of color more likely to be killed than white women</p>
Avakam (1999)	1990 - 1994	All U.S.	IP Femicide	<p>Female labor force participation and sex ratios</p> <p><u>Level 1 (within states) – individual level</u> victim's age victim's race offender's age offender's race offender's sex weapon used urban vs. rural year of femicide</p> <p><u>Level 2 (between states)</u> sex ratio of population (men per 100 women) % of females 16 y.o.+ in civilian labor force family stability - % of households with single parents % of families earning below \$15,000 in 1989 (absolute economic deprivation) average number of hours people travel to work (lifestyle/routine activities)</p>	<p>Younger women more at risk than older women</p> <p>White women more likely than women of color to be killed as result of increases in poverty and female labor force participation most femicides occur in urban areas by non-IP perpetrator</p> <p>Increase in distance traveled to work (routine activity) and a high sex ratio (more men than women) increases femicide</p>

Table 2. Empirical Studies of Violence Against Women and Macro-Social Factors (continued)

Dugan et al. (1999)	1976-1992	29 cities	IP Homicide	<p><u>Domestic Violence Resource Variables</u>  hotlines  shelters – bed capacity  legal advocacy  counseling</p> <p><u>Domesticity Variables</u>  marriage rate – gender –specific  divorce rate – gender-specific</p> <p><u>Women’s economic status</u>  relative education attainment – ratio of women 25 y.o.+ to men 25 y.o.+ with 4 years college  ratio of female labor force participation multiplied by women’s median income to male labor force participation multiplied by men’s median income (the larger the ratio, the greater the income of women relative to men)</p> <p><u>Control Variables</u>  % Black (controls for racial composition of city)  Adult homicide rate minus IP homicide rate for victims 25 y.o.+</p>	<p>Decline in IP homicide explained by exposure reduction due to declining domesticity measures by shifts in marriage, divorce, etc., improved economic status of women, and increases in availability of domestic violence resources</p> <p>Married women victims - as marriage rate decreases, femicides decrease</p> <p>Unmarried women victims – femicide increases as counseling services, marriage rate, divorce rate, and adult homicide rate increase</p> <p>Unmarried women victims – femicide decreases as % Black increases</p> <p>Married men victims – homicide increases as counseling and % Black increase</p> <p>Married men victims – homicide declines as hotlines, legal advocacy, marriage rate, and divorce rate increase</p> <p>Unmarried men victims – homicide decreases as women’ relative education increases (only gender equality variable that is significant)</p>
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Table 2. Empirical Studies of Violence Against Women and Macro-Social Factors (continued)

Marvell and Moody (1999)	1930 - 1995	U.S.	Homicide (disaggregated by gender)	<p><u>Economic variables</u>  unemployment  real per capita income  inflation  public assistance</p> <p><u>Self-control variables</u>  % of population 15-17 years old  % of population 18-24 years old  % of population 25-34 years old</p> <p><u>Military variables</u>  number of military personnel  dummy variable for 1942-1945 (war years)  dummy variable for 1943-1944 (heaviest war years)</p> <p><u>Social control variables</u>  prison population (average of current and past year)  death penalty – average executions in current and past year</p> <p>Women's status  Female labor force participation</p> <p><u>Other variables</u>  Divorce rate  Gun murders related to crack distribution</p>	<p>Non-white women  - prison population (negative)  - military personnel (negative)  - 1943-44 (negative)  - crack murders (positive)</p> <p>White women  - prison population (negative)  - unemployment rate (positive)  - consumer price index (positive)</p> <p>Non-white men  - prison population (negative)  - consumer price index (positive)  - public assistance (positive)  - female labor force participation (negative) (supports equality theory)  - 1943-44 (negative)  - crack murders (positive)</p> <p>White men  - prison population (negative)  - 18-24 year olds (positive)  - unemployment (positive)  - 1943-44 (negative)  - crack murders (positive)</p>
Dugan et al. (2000)	1976-1992	29 cities	IP Homicide (disaggregated by gender, race, marital status)	<p><u>11 measures of DV resources</u>  warrantless arrest when p.o. violated  mandatory arrest when p.o. violated  state violation index (violating p.o.)  - contempt (civil or criminal)  - misdemeanor  - felony  exposure reduction index  - no-contact order in protective order  - temporary custody relief in protective order (for woman)</p>	<p>55% of significant findings support exposure reduction theory</p> <p>45% of significant findings support backlash</p> <p>Married Black women killed less with state violation, exposure reduction, and increased AFDC benefits</p>

Table 2. Empirical Studies of Violence Against Women and Macro-Social Factors (continued)

<p>Dugan et al. (2000) (cont'd)</p>				<p>legal advocacy – number of funded agencies that have police commitment index          - domestic violence unit          - domestic violence in-service training          police arrest index          - pro-arrest policy for p.o. violation          - mandatory arrest for p.o. violation          - mandatory arrest for domestic assault          D.A. Willingness index          DA specialization index          Hotlines          No drop policy  <u>Domesticity Measures</u>          Marriage rate (3-yr. Average) – race-specific          divorce/separated rate (3-yr. Average)    <u>Economic measures</u>          relative education (3 yr. Average of 4 yrs or more) – race-specific          (1970, 1980, 1990 – other years interpolated and then averaged)          AFDC benefits (3 yr. Average) – 1983 dollars    <u>Control Measures</u>          Homicide adjustment (due to non-reporting in some months)          Adult homicide (3-yr. Average of non-intimate partner homicide)-gender-specific          % Black (only in racially aggregated models)</p>	<p><u>Unmarried Black women:</u>          killed more with increases in state violation, exposure reduction, legal advocacy, police commitment, DA willingness, hotlines, relative education of Black women            killed less with police arrest and higher marriage rate    <u>Unmarried white women:</u>          killed less with warrantless arrest when p.o. violated            killed more with mandatory arrest when p.o. violated, DA specialization index, DA willingness, and increased divorce/separated rate    <u>Married white women:</u>          killed less with warrantless arrest when p.o. violated, and increases in legal advocacy/marriage rate            killed more with mandatory arrest when p.o. violated and DA willingness    <u>Unmarried Black men:</u>          killed less with warrantless arrest allowed for p.o. violation and increase in police arrest index, marriage rate increase, AFDC benefits increase</p>
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Table 2. Empirical Studies of Violence Against Women and Macro-Social Factors (continued)

<p>Dugan et al. (2000) (cont'd)</p>					<p>Unmarried Black men killed more with exposure reduction, DA Willingness and increase in relative education of Black women</p> <p>Married Black men killed less with increase in AFDC benefits</p> <p>Married Black men killed more with increases in marriage rate, divorce/separated rate, and relative education of Black women</p> <p>Unmarried white men killed less with increase in AFDS benefits</p> <p>Unmarried white men killed more with increase in divorce/separated rate</p> <p>Married white men killed less with mandatory arrest when p.o. violated</p> <p>Married white men killed more with police arrest index, DA willingness and increase in divorce/separated rate</p>
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Table 2. Empirical Studies of Violence Against Women and Macro-Social Factors (continued)

Grana (2001)	Not specific	32 states	IP Femicide	<p><u>Economic Stress and Inequality Variables</u></p> <p>% of population below poverty line unemployment rate median household income</p> <p><u>Criminal Justice Variables</u></p> <p>number of police officers per capita state standard of intervention therapy for batterers relationship between violent crime to IP femicide rates</p> <p><u>Social ecology Variables</u></p> <p>Population size (logged) % of population Black % population below poverty line % under 18 years old not living with 2 parents</p> <p><u>Instability Index</u></p> <p>% of teen mothers infant mortality rate % of population receiving Public Aid</p> <p><u>Provider Scale</u></p> <p>number of medical doctors per 100,000 population median teacher salaries</p> <p><u>Control variables</u></p> <p>% Black % young region (South/non-South)</p>	<p>Only size of state population is significant when age, race, region controlled</p> <p>Poorly designed study</p> <p>IP femicide not clearly defined</p>
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Table 2. Empirical Studies of Violence Against Women and Macro-Social Factors (continued)

<p>Frye and Wilt (2001)</p>	<p>1990 - 1997</p>	<p>58 NYC Neighborhood</p>	<p>IP and non-IP Femicide</p>	<p><u>Socioeconomic Index</u>          % employed          % in administrative or professional occupation          % with more than 12 years of school          % families not receiving Public Aid  <u>Social disorganization Index (poor internal consistency)</u>          % divorced          % female-headed households with children          % housing units vacant  <u>Ethnic heterogeneity Index</u>          1 minus sum of squared proportions (% Black, % white, % Latino)  <u>Control variables</u>          population size (logged to base 10)          population aged 15-29 years old</p>	<p>IP femicide increased whereas overall femicide decreased</p> <p>SES Index predicts IP and non-IP femicides</p> <p>Social disorganization more important predictor of non-IP femicide than IP femicide (when SES controlled, social disorganization factors do not predict)</p> <p>Ethnic heterogeneity not significant at all</p> <p>Missing data on relationships – only 56% of femicides categorized as IP or non-IP femicide (analyzed other 44% as non-IP)</p>
<p>Vieraitis and Williams (2002)</p>	<p>1990</p>	<p>158 cities</p>	<p>Femicide (disaggregated by race)</p>	<p><u>Gender socioeconomic inequality variables: economic, educational, occupational</u></p> <p>Absolute: Total women, Black women, white women</p> <p>% of women 25 years old and over who completed B.A.          % of women 15 years old and over employed full-time year round          median income for women 15 years old and over employed full-time          % of women 16 years old and over employed in executive, managerial, and administrative positions</p> <p>Relative: Ratios (women:men) of above variables</p>	<p>No significant gender equality measures for Black women</p> <p>No absolute measures significant for white or Black women when disaggregated</p> <p>Overall femicide rates higher in cities with higher % of employed women, higher % of women employed in elite occupa, and greater proportion of women:men employed full-time and in elite occupations, median income (as women's status increases, femicide rates increase = backlash)</p>

Table 2. Empirical Studies of Violence Against Women and Macro-Social Factors (continued)

Vieraitis and Williams (2002) (cont'd)				<p>Control variables:</p> <p>Population density</p> <p>Resource deprivation (income inequality – GINI Index, percentage of persons below poverty level, percentage of persons who are black, percent unemployment, and population change)</p> <p>Percentage of population ages 15-29</p> <p>Rate of divorced or separated</p>	<p>White women's femicide rates increase with greater proportion of women:men employed full-time, median income (backlash), divorce rate</p> <p>Increase in resource deprivation increases both white and Black women's femicide rates</p>
Whaley and Messner (2002)	1990-1994	91 cities	Homicide (gender disaggregated)	<p>Gender Equality Variables (socioeconomic):</p> <p>ratio of male:female median income</p> <p>% of males 16 years old and over:% of females 16 years old and over employed in civilian labor force</p> <p>% of those employed in workforce who are male</p> <p>% of executives, managers, and administrators who are male</p> <p>ratio of men aged 25 years old+ :women aged 25 years old+ with 4 or more years of college education</p> <p>Economic disadvantage variables – sex-specific</p> <p>GINI Index of income inequality</p> <p>% under poverty line</p> <p>Disorganization variables (calls them economic disadvantage variables) – sex-specific</p> <p>% Black population</p> <p>% unemployed</p> <p>Control variables (calls them social disorganization variables)</p> <p>population size</p> <p>residential instability (% who moved in last 5 years)</p> <p>% of divorced males</p> <p>region (south/non-south)</p>	<p>Gender equality positively associated with male-female and male-male killings in South, but negatively associated with male-male killings in non-South</p> <p>Sex-specific economic disadvantage strongly and positively associated with all 4 types of homicide in South and non-South</p> <p>% divorced males positively associated with male-female killings in South and female-male killings in non-South</p> <p>% young males had negative association with male-female and male-male killings in non-South</p> <p>population size positively associated with male-male killings in both South and Non-South</p>

Table 2. Empirical Studies of Violence Against Women and Macro-Social Factors (continued)

<p>Wells and DeLeon-Granado (2002)</p>	<p>1987 - 2000</p>	<p>58 Cal. counties</p>	<p>Homicide (Disaggregated by gender and race/ethnicity)</p>	<p><u>Criminal Justice response variables</u>                  domestic violence arrests                  domestic violence convictions  <u>DV Shelter Resources variable</u>                  Number of providers per group (race and gender)/100,000  <u>Control variables</u>                  12 dummy variables to control for unmeasured time-dependent effects                  non-IP homicide rate (when disaggregated, used disaggregated measures)                  urban-rural</p>	<p>No relationship between criminal justice intervention and overall IP femicide rate</p> <p>Increased urban shelter availability significantly decreases Latina femicide only (and homicide of African American men)</p> <p>Increased rural shelter availability significantly decreases aggregated IP femicide, but not white women femicide or male homicide</p> <p>Non-IP femicide not significantly associated with IP femicide</p> <p>Urban counties associated with greater femicide rates than rural counties</p>
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## CHAPTER 5 – METHODOLOGY

This research explores the relationships among gender inequality, racial inequality, class inequality, population structure, and femicide rates at the city level in the United States for the years 1998 through 2001. It relies on secondary data. The femicide data are gathered from the F.B.I.'s Supplementary Homicide Reports (SHR) and the Centers for Disease Control (CDC) while the macro-social structural data are derived from the U.S. Bureau of Census, Small Business Administration (SBA), and city internet websites. This chapter presents an overview of the methods and procedures of this study, including the research design, research questions, hypotheses, units of analysis, dependent variables, independent variables, and data analysis.

### Research Design

To study the relationships between the structural factors and the femicide rates, three theoretically-based predictive models are tested. The models examine social, economic, and political variables used in previous research (Avakame, 1999a; Avakame, 1999b; Bailey & Peterson, 1995; Blau & Blau, 1982; Breault & Kposawa, 1997; Brewer & Smith, 1995; Dugan et al, 1999; Dugan et al, 2000; Frye & Wilt, 2001; Gartner, 1990; Gartner et al, 1990; Gauthier & Bankston, 1997; Grana, 2001; Harer & Steffensmeier, 1992; Land et al., 1990; Marvell & Moody, 1999; Stout, 1990; Vierietis & Williams, 2002; Wells & DeLeon-Granados, 2002; Whaley & Messner, 2002). Model 1 represents the predictive effects of each of the structural variables, gender inequality, racial inequality, and class inequality, on the femicide rates, including overall rates and

race-specific rates. Model 2 represents the predictive effects of the intersection of gender, race, and class inequalities on the femicide rates as compared to gender inequality's predictive effect on the femicide rates. Model 3 tests population structure as a mediating factor between the predictors represented in Model 1 and the femicide rates (Baron & Kenny, 1986). Models 1, 2, and 3 are shown in Figure 1 below.

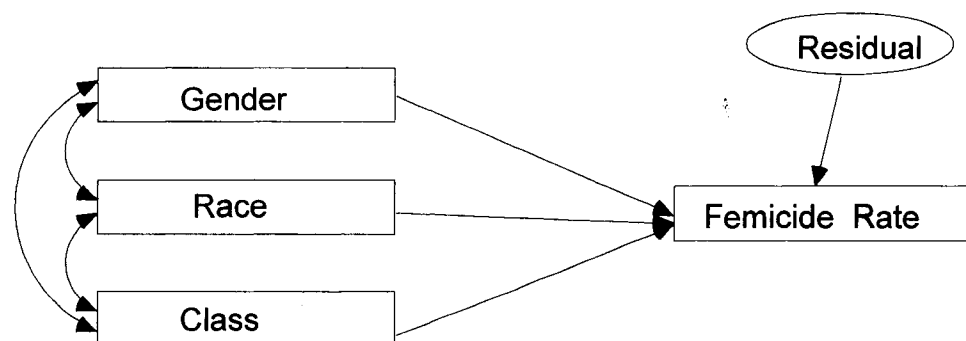
Figure 1.

Model 1 measures the predictive effects of gender inequality, racial inequality, and class inequality on the femicide rates.

Model 1.1 – overall femicide rate

Model 1.2 – femicide rate of black women

Model 1.3 – femicide rate of white women

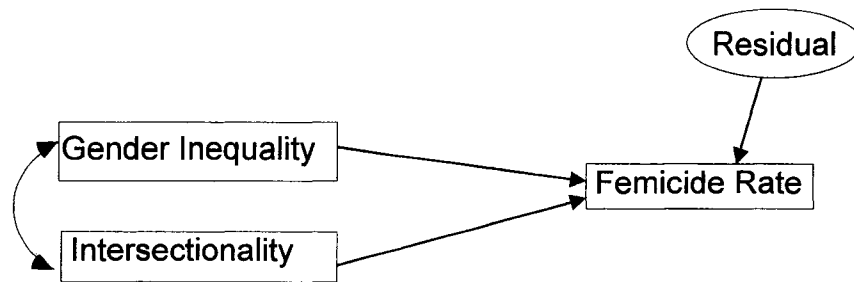


Model 2 measures the predictive effect of the intersection of gender, race, and class inequalities on the femicide rates as compared to the predictive effect of gender inequality on the femicide rates. Intersectionality is operationalized by multiplying together gender inequality, racial inequality, and class inequality, consistent with Wing's (2003) analysis.

Model 2.1 – overall femicide rate

Model 2.2 – femicide rate of black women

Model 2.3 – femicide rate of white women

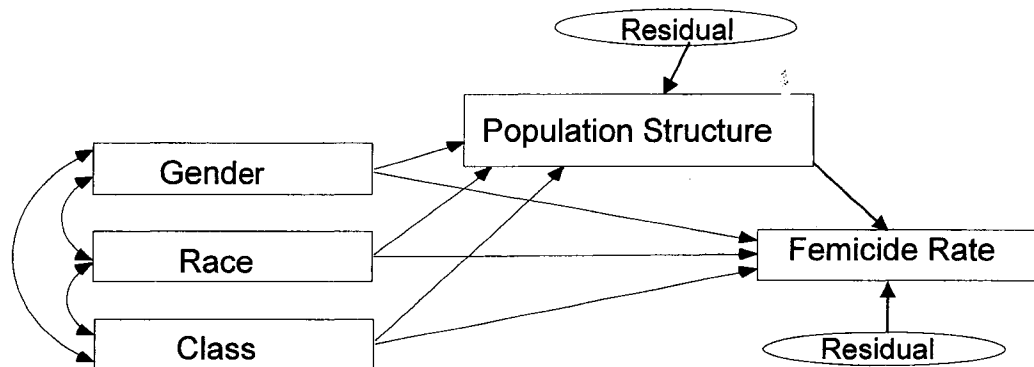


Model 3 measures the population structure as a possible mediator of the predictive effects of gender inequality, racial inequality, and class inequality on the femicide rate.

Model 3.1 – overall femicide rate

Model 3.2 – femicide rate of black women

Model 3.3 – femicide rate of white women



### Research Questions

1. Does gender inequality, racial inequality, and class inequality predict the overall femicide rate?
2. Does the ability of gender inequality, racial inequality, and class inequality to predict the femicide rate vary depending on the victim's race?
3. Does the intersectionality of gender inequality, racial inequality, and class inequality better predict an increase in the overall femicide rate than does gender inequality alone?

4. If so, does the ability of intersectionality to better predict the femicide rate differ depending on the victim's race?
5. Are the predictive effects of gender inequality, racial inequality, and class inequality mediated by a city's population structure?
6. Are the predictive effects of gender inequality, racial inequality, and class mediated differently for women of different races?

### Hypotheses

1. As gender inequality, racial inequality, and class inequality increase, the overall femicide rate will increase.
2. As gender inequality, racial inequality, and class inequality increase, the femicide rate of black women will increase.
3. As gender inequality, racial inequality, and class inequality increase, the femicide rate of white women will increase.
4. The intersection of gender inequality, racial inequality, and class inequality better predicts an increase in the overall femicide rate than does gender inequality alone.
5. The intersection of gender inequality, racial inequality, and class inequality better predicts an increase in the femicide rate of black women than does gender inequality alone.
6. The intersection of gender inequality, racial inequality, and class inequality better predicts an increase in the femicide rate of white women than does gender inequality alone.
7. A city's population structure will mediate the predictive effect of gender

- inequality, racial inequality, and class inequality on the overall femicide rate.
8. A city's population structure will mediate the predictive effect of gender inequality, racial inequality, and class inequality on the femicide rate of black women.
  9. A city's population structure will mediate the predictive effect of gender inequality, racial inequality, and class inequality on the femicide rate of white women.

### Units of Analysis

Homicide researchers have long debated whether states, counties, metropolitan areas (SMSAs), cities, or neighborhoods are the most theoretically relevant aggregation when considering the effects of structural factors on homicide (Bailey, 1984; Bursik, 1988; Messner, 1982; Parker, McCall, & Land, 1999; Rose & McClain, 1990). In line with those studies, femicide studies have used nations, states, counties, cities, and neighborhoods as units of analysis (Avakame, 1999a; Avakame, 1999b; Bailey & Peterson, 1995; Blau & Blau, 1982; Breault & Kposawa, 1997; Brewer & Smith, 1995; Dugan et al, 1999; Dugan et al, 2000; Frye & Wilt, 2001; Gartner, 1990; Gartner et al, 1990; Gauthier & Bankston, 1997; Grana, 2001; Marvell & Moody, 1999; Stout, 1990; Vierietis & Williams, 2002; Wells & DeLeon-Granados, 2002; Whaley & Messner, 2002) Regardless of the debate about the appropriate aggregation level for a structural analysis, recent studies have suggested that the level of aggregation is irrelevant since the statistical problems experienced by previous studies can be

corrected with proper methodological techniques of research design and modern statistics (Land et al., 1990; Parker et al., 1999).

This study uses cities as the units of analysis because they are the best social space in which to measure the relevant theoretical concepts with practically available data. Cities are coherent social units that are broad enough to insure that most homicides involve residents of the unit (Bailey, 1984; Bailey & Harries, 1990), but are more homogenous than SMSAs, counties, or states, which can vary greatly from one area to another (Bailey, 1984; Kovandzic et al., 1998). Higher levels of aggregation (e.g., states, SMSAs, etc.) can mask the actual variations in the variables being considered. Moreover, public policy, education, police protection and other institutional decisions relevant to the concepts in the present study are more often made at the city level than at the SMSA or neighborhood levels.

In addition, there is a greater variation in femicide rates across U.S. cities than is typically found among larger units of analysis. Also important is that reasonably available data exists for a broad, national sample of cities. The structural variables in this study are gathered from published census reports, business reports, and internet websites at the city level, which allows examination of all the variables across the social units. That information is not readily available on the neighborhood level for a broad national sample.

For those reasons, this study examines medium and large cities in the United States (population of 170,000 or greater) for the years 1998 to 2001. In 2000, there were 122 U.S. cities that had a population of 170,000 or more.

Although pertinent census, political, and business data were available for all 122 cities, not all of these cities reported homicide rates to the FBI. Moreover, only cities with a black population of two percent (2%) or more are included in the path models (see Messner & Golden, 1992; Peterson & Krivo, 1993; Sampson, 1987). By eliminating those cities lacking reported homicide data and those cities with less than a 2% black population, the results are more robust. Of the 122 cities in the original sample, 7 cities were deleted due to missing homicide data (see Table 3), and 9 cities were deleted because they had less than a 2% black population (see Table 4). The remaining 106 cities in this analysis are listed in Table 5.

**Table 3. U.S. Cities With Population of 170,000 or More Deleted From This Analysis of Femicide Rates Due to Missing Homicide Data (N = 7)**

Jacksonville, FL	St. Petersburg, FL
Hialeah, FL	Tampa, FL
Miami, FL	Omaha, NE
Orlando, FL	

**Table 4. U.S. Cities With a Population of 170,000 or More Deleted From This Analysis of Femicide Rates Due to a Black Population of Less Than 2% (N = 9)**

Scottsdale, AZ	Boise, ID
Glendale, CA	Laredo, TX
Huntington Beach, CA	Salt Lake City, UT
Santa Ana, CA	Spokane, WA
Honolulu, HI	

Table 5. U.S. Cities Used in This Analysis (N = 106)

Birmingham, AL	Columbus, GA	Akron, OH
Mobile, AL	Chicago, IL	Cincinnati, OH
Montgomery, AL	Fort Wayne, IN	Cleveland, OH
Anchorage, AK	Indianapolis, IN	Columbus, OH
Chandler, AZ	Des Moines, IA	Toledo, OH
Glendale, AZ	Wichita, KS	Oklahoma City, OK
Mesa, AZ	Lexington-Fayette, KY	Tulsa, OK
Phoenix, AZ	Louisville, KY	Portland, OR
Tucson, AZ	Baton Rouge, LA	Philadelphia, PA
Little Rock, AK	New Orleans, LA	Pittsburgh, PA
Anaheim, CA	Shreveport, LA	Providence, RI
Bakersfield, CA	Baltimore, MD	Knoxville, TN
Chula Vista, CA	Boston, MA	Memphis, TN
Fremont, CA	Worcester, MA	Nashville-Davidson, TN
Fresno, CA	Detroit, MI	Amarillo, TX
Long Beach, CA	Grand Rapids, MI	Arlington, TX
Los Angeles, CA	Minneapolis, MN	Austin, TX
Modesto, CA	St. Paul, MN	Corpus Christi, TX
Oakland, CA	Jackson, MS	El Paso, TX
Oxnard, CA	Kansas City, MO	Dallas, TX
Riverside, CA	St. Louis, MO	Fort Worth, TX
Sacramento, CA	Lincoln, NE	Garland, TX
San Bernadino, CA	Henderson, NV	Houston, TX
San Diego, CA	Las Vegas, NV	Irving, TX
San Francisco, CA	Reno, NV	Lubbock, TX
San Jose, CA	Jersey City, NJ	Plano, TX
Stockton, CA	Newark, NJ	San Antonio, TX
Aurora, CO	Albuquerque, NM	Chesapeake, VA
Colorado Springs, CO	Buffalo, NY	Newport News, VA
Denver, CO	New York City, NY	Norfolk, VA
Washington, DC	Rochester, NY	Richmond, VA
Atlanta, GA	Yonkers, NY	Virginia Beach, VA
Augusta- Richmond, GA	Charlotte, NC	Seattle, WA
	Durham, NC	Tacoma, WA
	Greensboro, NC	Madison, WI
	Raleigh, NC	Milwaukee, WI
	Winston-Salem, NC	

## Dependent Variables

Another important approach to femicide research is to disaggregate the victims based on race. While the total femicide rate may indicate overall lethal violence against women, disaggregation can give a richer, more meaningful measure of the relationships among various predictive factors (Flewelling & Williams, 1999). Since research shows that women of different races are affected differently by homicide, it is important to disaggregate femicide on the basis of race. The femicide rates among minority, young, and low socioeconomic status women are higher than for others, but researchers have yet to disentangle the multiple influences (McClain, 1982; Mercy & Saltzman 1989; Moracco et al., 1998). Moreover, community characteristics, not merely individual family characteristics, appear to have a significant impact on intimate partner violence among black people. Intimate partner violence in the black community has been found to be correlated with poverty, social class, and exposure to social stress (Oliver, 2000).

The femicide data are derived from the SHRs, as reported by the Inter-University Consortium for Political and Social Research (ICPSR), and the National Center for Health Statistics of the Centers for Disease Control (CDC) for the years 1998 to 2001. The SHR contains femicide data for all of the cities in the sample except for Washington, D.C., which is reported in the CDC. Both of these sources include data for black female and white female victims of homicide. The years 1998 to 2001 are chosen to correspond to the data for the structural variables.

Although there are well-documented limitations to using the SHR, they are the best available data for this study and are widely used (see Avakame, 1998; Bailey & Peterson, 1995; Browne, Williams & Dutton, 1999; Felson & Messner, 1996; Langford, Isaac & Kabat, 1998; Puzone et al., 2000; Riedel, 1999). Local law enforcement agencies provide the FBI with incident-level information for approximately 95% of all criminal homicides (murder and non-negligent manslaughter) in the United States (Williams & Flewelling, 1987). Although there is some underreporting of homicides, studies have shown that the SHR is reasonably accurate in the total number of homicides committed as well as supplementary information on the gender, race, age of offenders and victims, the circumstances, the weapons used, and the victim-offender relationships (Baller, Messner, Anselin & Deane, 2002; Fox, 1996; Riedel, 1999; Zahn & McCall, 1999).

One of the limitations affecting this study is that several of the cities in the sample did not report the Latino ethnicity of homicide victims during the years considered. Generally, the SHR reports race (e.g., black, white) as well as ethnicity (Hispanic, non-Hispanic) but many of the cities in this data set did not report the ethnicity of homicide victims. In addition, the femicide rates of Asian women and women of other races are not examined because there were so few reported femicides of these women that identifying any meaningful patterns would be difficult. For those reasons, this study disaggregates the femicide rates for only black women and white women. Moreover, the circumstances of the

femicide and the victim-offender relationship are not disaggregated in this analysis.

Another limitation is that some cities did not report homicides for all the years involved in this research. Williams and Flewelling (1987) suggest that using multiple years of data compensates for nonreporting in the SHR. Yearly fluctuations in the data can be minimized by averaging the rates (Krivo & Peterson, 1996; Messner & Golden, 1992; Parker & McCall, 1997, 1999; Shihedah & Flynn, 1996). Accordingly, femicide data in this study are gathered for four years, 1998 through 2001, then averaged and expressed on a per-year basis.

The overall femicide rates are calculated as follows:

$$\text{Overall femicide rate} = (I/P) \times 100,000/4,$$

where I = total number of reported incidents of murder and non-negligent manslaughter of women victims 16 years old and over, and P = the total population of women 16 years old and over in the city. The division by four creates the per year rate. Where there was missing data for one or more years, that year is eliminated and the divisor is appropriately altered.

For the femicide rates of black women, the following calculation is used:

$$\text{Black femicide rate} = (I/P) \times 100,000/4,$$

where I = total number of reported incidents of murder and non-negligent manslaughter of black women victims who are 16 years old and over, and P = the total population of black women 16 years old and over in the city.

For the femicide rate of white women, the following calculation as used:

White femicide rate =  $(I/P) \times 100,000/4$ ,

where I = total number of reported incidents of murder and non-negligent manslaughter of white women victims who are 16 years old, and over and P = the total population of white women 16 years old and over in the city.

Examination of the femicide rates reveals skewness and kurtosis.

Consistent with conventional practice, the femicide rates are transformed by adding a constant of 1.0 to the values, then taking their natural logarithms (see Land et al., 1990; Messner & Golden, 1992).

#### Independent variables

There are four macrostructural theoretical concepts incorporated as independent variables in this study: gender inequality, racial inequality, class inequality, and population structure. All of the independent variables are chosen on theoretical grounds and based on previous empirical research. The data for these measures are gathered from the Summary Files of the U.S. Bureau of Census, the Small Business Administration, and internet websites of all the cities in the sample based on 2000 data. All the data are available on-line.

#### Measuring Gender Inequality

Consistent with previous research, relative gender inequality is measured in this study. Relative measures reflect the relationship of women's status in society in contrast to men's status in society. The gender status factors used in this study include measures of education, income, poverty, occupational attainment, employment levels, business opportunities, and political power (Baron & Straus, 1984, 1987; Dobash & Dobash, 1979; Ellis & Beattie, 1983;

Peterson & Bailey, 1992; Stout, 1989; Sugarman & Straus, 1988; Yllö, 1983). To remain consistent in measuring inequality, some measures are expressed as the ratio of women relative to men while other measures are expressed as the ratio of men relative to women.

### Gender Socioeconomic Inequality

Important indicators of gender status are male-female differentials in education, employment, and income (U.S. Commission on Civil Rights, 1978). Accordingly, this study includes socio-economic measures of median income, unemployment, education, professional and managerial occupations, poverty, and business opportunities.

Since income is the most widely used measure of women's economic inequality, this analysis uses the median income of men working full-time relative to the median income of women working full-time. However, economic inequality is not only median income. Work patterns are also important. People with stable work histories feel that they have a place in the world. They have a grounded sense of self, family, and community. They feel responsible for their world. Unemployment is measured as the percent of women 16 years old and over in the civilian labor force who are unemployed relative to the percent of men 16 years old and over in the civilian labor force who are unemployed. This eliminates women who voluntarily choose to remain outside the labor force.

College education indicates a woman's potential for employment in high-status occupations. It is also an instrument for women (and men) to examine social realities and to challenge gender-based traditional role and power

differences. Educational attainment is operationalized as the percent of men 25 years and over with a college education relative to the percent of women 25 years and over with a college education. A college education includes a B.A. degree or higher.

Although professional and managerial occupations are a minority of all occupations in the United States, they are regarded as assuring middle-class status. They offer relatively greater autonomy, power, control, and rewards than do "nonprofessional" occupations (Sokoloff, 1992). Moreover, Schwartz (1992) suggests that progress at the upper occupational levels translates into progress for women in all occupations. Accordingly, this study measures the percent of men 16 years old and over who have a professional or managerial occupation relative to the percent of women 16 years old and over who have a professional or managerial occupation. Professional and managerial occupations in this study include management occupations, business and financial occupations, computer and mathematical occupations, architects, surveyors, cartographers, engineers, life scientists, physical scientists, lawyers, judges, magistrates, other judicial workers, physicians, and surgeons. Professional occupations not included in this study are those generally not considered as high prestige occupations, including nurses, paralegals, and teachers.

A poverty indicator is included to observe whether any increase in economic equality with men is offset by a disproportionate number of women living below the poverty level. Poverty is measured as the percent of women

living below the federal poverty level relative to the percent of men living below the federal poverty level.

One area where women have made some progress is in owning their own business. The Small Business Administration's Office of Women's Business Ownership operates approximately 100 Women's Business Centers, which offer training and counseling in management, marketing, and finance. They also give women access to the SBA's other programs and services (Small Business Administration, 2004). Accordingly, a measure of Small Business Administration Women's Centers is included as a dummy variable (yes = 0, no = 1).

#### Measuring Gender Political Inequality

Low representation in elected office is considered one of the factors maintaining inequality in other spheres of society. Women's rights advocates cite the lack of elective political power as a source of women's inability to change their lives or the laws affecting them (National Commission on the Observance of the International Women's Year, 1978). Women's relative political power is measured as the percent of City Council members who are men.

#### Measuring Racial Inequality

Some researchers have argued that variations in homicide rates are caused by social and economic factors that vary by race (Blau & Blau, 1982; Messner & Golden, 1992.) Since research shows that most homicide is intra-racial (Fox & Zawitz, 2003; Moracco, et al., 1998; Rennison, 2001), race-based disadvantage may affect the level of murders of black women. In turn, white racial privilege may affect the rates of murder of white women.

Mann (1995) argues that crime may be an adaptive response of black people to institutionalized racism, which is measured by the race-based disadvantage variables. In accordance with previous research, relative disadvantage is used in this study (Blau & Blau, 1982). This includes joblessness (unemployment and underemployment), median income, poverty, college education, professional and managerial occupations, and political power. To remain consistent in measuring inequality, some measures are expressed as whites relative to blacks and other measures are expressed as blacks relative to whites.

#### Measuring Racial Socioeconomic Inequality

Numerous studies about black violence have emphasized its connection to relative socio-economic advantage of one racial group over another racial group (Blau & Blau, 1982; Land et al., 1990). Important socio-economic indicators of increased violence in the black community include unemployment, underemployment, and marginal employment as well as few opportunities to acquire the education necessary to become gainfully employed (Mann, 1995). Joblessness (unemployment and marginal employment) and poverty have caused havoc among black people, including family disruption, disorganized communities, and ineffective public schools (Bell, 1992; Crutchfield, 1995). In this research, joblessness is operationalized as the percent of the black population 16 years old and over not in the labor force and in the civilian labor force, but unemployed, relative to the white population 16 years old and over not in the labor force and in the civilian labor force, but unemployed. Poverty is

measured as the percent of the black population living below the federal poverty level relative to the percent of the white population living below the federal poverty level.

The quality of a person's occupation affects his/her lifestyle and status in the community. Compared to other members of disadvantaged groups, those who achieve professional status have a greater opportunity to progress in life because they enjoy greater autonomy, power, control, and rewards (Crutchfield, 1995; Sokoloff, 1992). Racial disadvantage in professional and managerial occupations is measured as the percent of white men and women 16 years old and over who have a professional or managerial occupation relative to the percent of black men and women 16 years old and over who have a professional or managerial occupation. The same occupations used in the gender occupational variable are used in this racial occupational variable.

Education is an important factor for two reasons. Not only is it an essential requirement for entry into high-status occupations (Mann, 1995), but it also is a means of examining social realities and challenging role and power differences. In this analysis, educational inequality is the percent of white adults 25 years and over who have a college education (B.A. degree and higher) relative to the percent of black adults 25 years old and over who have a college education (B.A. degree or higher) (Messner & Golden, 1992).

Despite the necessity of education for high-status, high-paying employment, the average black man with a college degree earns significantly less than the average white man with the same education (Mann, 1995).

Therefore, it is necessary to look at median income levels as well as educational levels. Racial disparities in income are measured by the median income of the white population 16 years old and over working full-time relative to the median income of the black population 16 years old and over working full-time.

#### Measuring Racial Political Inequality

Mann (1995) argues that political power is necessary to change the destiny of black people so that low black representation in elected office maintains inequality in other spheres of society. Institutional improvements of social programs, the legal system and the criminal justice system are necessary for equal justice for black people. Yet, the political power continues to be concentrated in white men. To measure political inequality, this study includes a measure of the percent of City Council members who are white.

#### Measuring Class Inequality

Much criminological research has suggested that high homicide rates are related to economic stress, which is caused by unequal distribution of resources (Gartner, 1990; Daley & Wilson, 1988; Bonger, 1916; Durkheim, 1951; Kovandvic et al, 1998). Braithwaite (1981) argues that it is both the poverty of the poor and the wealth of the rich that contribute to crime. Moreover, recent theorists (Mann, 1995; Wilson, 1987) suggest that economic disparity between whites and blacks is more related to class than to race.

Stable, substantial employment is important not only for the economic advantages associated with a middle-class income, but also for the dignity, pride, and feelings of self-worth that come with being able to be responsible and to

support oneself and one's family. Because the American dream is based on attaining the good life, the failure to attain a high status can lead to anger, frustration, and violence (Bell, 1992; Mann, 1995).

To measure class inequality, this analysis examines economic class inequality by using the median income, employed labor force, and poverty level of the cities, and social class inequality by the level of college education. Because these variables measure equality, to avoid confusion when comparing the gender and race variables, which measure inequality, the class equality measures are multiplied by a constant of -1.0. This creates class inequality factors.

Median income is measured as the median income of the city's population 16 years old and over working full-time relative to the median income of the U.S. population 16 years old and over working full-time. Also used is the percent of the city's total population living at or above the federal poverty level relative to the U.S. total population living at or above the federal poverty level. Education is measured as the percent of the city's population 25 years old and over with a college education (B.A. degree and higher) relative to the U.S. population 25 years old and over with a college education (B.A. degree and higher). As a measure for employment levels, this analysis uses the percent of the city's total population employed in the labor force relative to the U.S. total population employed in the labor force.

## Measuring Population Structure

The initial intent of this study was to measure community instability as a possible mediator between the predictors of gender, race, and class inequality on the variance in the femicide rates. Because social disorganization theory uses a combination of economic factors and other destabilizing factors, the community instability factors proposed for this study were a city's population size, population density, vacant housing, renter-occupied housing, and female-headed households with children less than 18 years of age.

Land et al.'s (1990) population structure consists of population size and population density, which are often associated with an impersonal social climate that results in a lack of involvement and guardianship over the activities of neighbors (Williams & Flewelling, 1988). Accordingly, this study measures the city's population size relative to the U.S. population, divided by 10,000 to equalize numbers with the other variables when combined in an index, and density is measured as the city's population per square mile relative to the U.S. population per square mile, multiplied by 10 to equalize the numbers with the other variables when combined in an index.

Also related to destabilized communities are vacant housing and renter-occupied housing. Higher levels of owner-occupied housing are usually considered as increasing a community's efficacy. Renter-occupied housing is measured as the percent of the city's occupied housing that is renter-occupied relative to the percent of U.S. occupied housing that is renter-occupied. The

vacant housing measure is the percent of the city's total housing that is vacant relative to the percent of the U.S. total housing that is vacant.

A measurement of family disruption is female-headed households with children, which is operationalized in this study as the percent of the city's total households that are female-headed with children under 18 years old relative to the percent of U.S. total households that are female-headed with children under 18 years old.

I did not use the percentage divorced as a variable, as much social disorganization research has considered, because changing marriage patterns make the divorce rate an unreliable measure of the breakup of families. For an ever-growing number of Americans, especially young people, marriage is no longer the measure of a committed relationship. For instance, since the late 1980s, there has been a significant decline in the marriage rate among the black population (Bumpass & Sweet, 1989; Bumpass, Sweet & Cherlin, 1991). From 1960 to 1990, the number of black women aged 30 to 34 who had never married grew from 10% to 35% (Dickson, 1993).

After evaluating these community instability factors, the only variables included in the final mediator index are population size and population density, which are combined into a population structure index. The explanation for the development of this index occurs in the next section.

#### Creation of Indices

Regression analysis, which is the basis of path analysis, assumes that independent variables are uncorrelated with one another. Multicollinearity exists

when two variables are so highly correlated that it is difficult to separate their effects (Sykes, n.d.). It can be detected using various methods, including high bivariate correlations among independent variables and variance inflation factor (VIF) scores. First, the correlations among predictor variables are examined. Correlations greater than .60 suggest possible collinear problems. The data shows several high correlations: white:black education and white:black employment ( $r = .753$ ), white:black education and white:black median income ( $r = .723$ ), total education and total median income ( $r = .602$ ), total employment and total poverty ( $r = .861$ ), and population density and renter-occupied housing ( $r = .612$ ).

Next, I examine the variance inflation factor (VIF) scores when all or groups of predictor variables are included in the models. The VIF scores for population density, renter-occupied housing, white:black employment, white:black median income, total education, and total income variables are below 4.0, indicating their measurement of unique features of the cities in this sample (Kline, 1998). However, the VIF scores for white:black education, total poverty, and total employment variables are above 4.0, indicating that multicollinearity may be a problem.

To eliminate the effects of multicollinearity, principal components methods is used to combine the structural factors into composite scales, or indices (see Kline, 1998; Land et al., 1990). Principal components analysis is a factor analysis technique which identifies factors that explain the pattern of correlations

within a set of observed variables. The varimax rotation method is used to facilitate the interpretation (Greenberg, 1999a).

Based on the information from standard principal components methods, the variables are summed to create separate scale indices: gender inequality, race inequality, class inequality, and population structure, which are constructs of observed variables. A list of all variables used in this analysis, their descriptions, and their data sources are shown in Table 6.

For theoretical and statistical reasons, three variables are deleted from this analysis. Female-headed households with children under 18 years old, which loaded on the class inequality factor, is deleted from this study. Since it is sometimes used as a poverty measure, this variable could theoretically be a component of the class inequality score, but this study initially included this variable as a community instability measure. Rethinking this measure theoretically, I decided that this factor may not be an optimal measure of community instability. Recent research indicates that an increased number of female-headed households leads to a decline in black crime rates (LaFree, 1995) and has no effect on white juvenile homicide rates (Ousey, 2000). Further, many economically stable women may choose to live with their children without the presence of a man.

In addition, vacant housing is deleted. Not only did it load on the class inequality factor instead of the community instability factor, but theoretically, chronic vacant housing would be a better measure of community instability. However, data on chronic vacant housing are not readily available for this study.

Finally, the remaining community instability variables were population size, population density, and renter-occupied housing units. Without the variables that have been eliminated, the remaining variables are not theoretically succinct. To create a more robust measure, a population structure index consisting of population size and population density is used as the mediator variable.

**Table 6. Variables, Descriptions, and Sources Used in the Models of Predictors of Femicide**

All variables used in this analysis are listed below. A complete description of each data source is provided at the end of this list. Numbers after the comma refer to the table within a given reference from which data were taken.

<u>Variables</u>	<u>Descriptions</u>	<u>Sources</u>
Femicide Rate		1
		2
		3, P5
		3, P12A
		3, P12B
		3, QT - P1
		4, PCT3
	9, C-1	
Gender Inequality Index	A composite of:	
	Ratio of female to male unemployment	5, P43
	Ratio of female to male poverty	6, PCT142
		3, QT-P1
	Ratio of male to female median income	5, PCT47
	Ratio of male to female college education	6, P64
	Ratio of male to female in elite occupations	6, PCT86
	SBA Women's Centers	7
% of male City Council members	8	
Racial Inequality Index	A composite of:	
	Ratio of black to white unemployment	5, P150A and B
	Ratio of black to white poverty	3, QT-P3
		6, PCT142
	Ratio of white to black median income	5, PCT74 A and B
	Ratio of white to black college education	6, PCT64
	Ratio of white to black elite occupations	6, PCT86
% of City Council members who are white	8	

Class Inequality Index*	A composite of:	
	Ratio of city to U.S. median income*	5, P85
	Ratio of city to U.S. college education*	6, PCT64
	Ratio of city to U.S. poverty level*	6, PCT142
	Ratio of city to U.S. population employed*	5, P43

Population Structure Index	A composite of:	
	City:nation population density per square mile	10, C-1
	City's population: nation's population	2, PCT1

\* A constant of -1.0 is added to these variables to create inequality variables

#### List of Source References

1. Federal Bureau of Investigation's Supplementary Homicide Reports (SHR). 1998 – 2001. Available through ICPSR website: [www.umich.edu](http://www.umich.edu). Washington, D.C.: Government Printing Office.
2. Centers for Disease Control. Available through CDC website: [www.cdc.gov](http://www.cdc.gov).
3. U.S. Bureau of Census. 2000. Summary Files 1. Downloaded from [www.uscensus.gov](http://www.uscensus.gov). Washington, D.C.: Government Printing Office.
4. U.S. Bureau of Census. 2000. Summary Files 2. Downloaded from [www.uscensus.gov](http://www.uscensus.gov). Washington, D.C.: Government Printing Office.
5. U.S. Bureau of Census. 2000. Summary Files 3. Downloaded from [www.uscensus.gov](http://www.uscensus.gov). Washington, D.C.: Government Printing Office.
6. U.S. Bureau of Census. 2000. Summary Files 4. Downloaded from [www.uscensus.gov](http://www.uscensus.gov). Washington, D.C.: Government Printing Office.
7. Small Business Administration. Downloaded from [www.sba.gov/womeninbusiness](http://www.sba.gov/womeninbusiness).
8. City websites. Downloaded from [www.statelocalgov.net](http://www.statelocalgov.net).
9. U.S. Bureau of Census. County and City Data Book. 2000. Downloaded from [www.census.gov/statab/ccdb/cit1020r.txt](http://www.census.gov/statab/ccdb/cit1020r.txt).
10. U.S. Bureau of Census. County and City Data Book. 2000. Downloaded from [www.census.gov/statab/ccdb/cit1040a.txt](http://www.census.gov/statab/ccdb/cit1040a.txt).

## Data Analysis

A path analysis with manifest (observed) variables is used to test the hypotheses in this analysis. Initially, the data are tested for curvilinearity, outliers, and normality, in particular skewness and kurtosis. These steps are performed using the SPSS 11.0 software program and prepare the data set for model testing using AMOS 5.0.

### Normality

Path analysis, which is based on multiple regression techniques, assumes that sample data derive from a normally distributed population. Non-normal distributions can be detected by skew and kurtosis (Kline, 1998). Skewed distributions are asymmetrical because most of the cases are either below the mean (positive skew) or above the mean (negative skew). Kurtosis denotes a relative excess of cases in the distribution's tails relative to a normal curve.

There are no clear guidelines for the amount of non-normality that is problematic. Kline (1998) suggests that potential problems exist with a skew index of more than 3.0. Further, since absolute values of univariate kurtosis range from 8.0 to more than 20.0 for extreme kurtosis, Kline (1998) suggests that a kurtosis index  $> 10$  may suggest a problem and values  $> 20$  indicate a more serious problem.

If skewness and kurtosis statistics indicate non-normality, the data can be normalized by using a logarithmic transformation ( $\ln$ ). Preliminary analysis of these data indicated kurtosis for the white femicide rate, city size, and population density, as well as excessive skew for city size. Therefore, these factors, as well

as the overall femicide rates and black femicide rates, are transformed to their natural logged values, which are more compatible with the assumption of a normal distribution of the variables in this analysis.

### Outliers and Influential Cases

It is important to determine whether the results of the model estimates (be they significant or not) are unduly influenced by a small number of cases, which are called outliers. Outliers are cases with scores that vary considerably from the others. They alter the covariance matrix, which can impact the results by biasing the parameter estimates and associated standard errors and fit indices (Schumacker & Lomax, 1996). Although there is no absolute definition of an extreme outlier, scores more than three standard deviations from the means are generally considered to be outliers.

Several outliers were identified in this data set by using the statistical test of deviation from normality, Mahalanobis Distance Estimate, which shows how far the outlier is from the mean (Greenberg, 1999b; Schumacker & Lomax, 1996; Kline, 1998). Mahalanobis Distance Estimate measures how much a case's values on the independent variables differ from the average of all cases. A large Mahalanobis Distance identifies a case as having extreme values on one or more of the independent variables by using a chi-square analysis with the number of variables as the degrees of freedom (Kline, 1998).

If there are outliers in a data set, deletion of the outlier cases may enhance multivariate normality or, alternatively, the data can be run with and

without the outliers to determine their effect. If the results are dramatically different, both findings are reported (Schumacker & Lomax, 1996; Kline, 1998).

Based on the Mahalanobis Distance Estimates (using  $p < .001$  as a cut-off level) and boxplot inspections, these data contain several outliers. Therefore, elimination of four cities was considered: Anchorage, Alaska, Fremont, California, Plano, Texas, and Lincoln, Nebraska. The models were tested with and without these cities. Since there was no significant difference in most of the models between the data sets with outliers and without outliers, I report most of the results for the data set with outliers. In those few places where there are differences, the results are reported for both analyses.

#### Sample Size

Another consideration to maintain the accuracy of estimates and insure representativeness in path modeling is sample size. Although there are no absolute standards for the relationship between sample size and model complexity, several studies have agreed that 100 subjects is the minimum satisfactory sample size. Others require at least 5 or 10 subjects per variable or 10:1 subject/parameter ratio, which means that a model with 10 parameters should have a sample size of at least 100 cases (Kline, 1998; Schumacker & Lomax, 1996). In addition, the Hoelter's Critical N (CN) index indicates the adequacy of a sample size (Byrne, 2001). Based on these considerations, the sample size of 106 (102 without the outlier cities) in this study is an adequate sample size for the complexity of the models tested.

## Linearity

Linearity is an assumption of regression analysis. Using accepted diagnostic methods, such as scatterplots, histograms of standardized residuals, normal probability plots, and statistical equations (George & Mallery, 2003), the data in this analysis represent linear relationships.

## Descriptive Statistics

The next analysis of the data consists of descriptive statistics such as the means, standard deviations, minimum, maximum, and range of all the variables. Bivariate correlations are then examined for any associations among the variables.

## Path Analysis

After the data are screened, a recursive path analysis is performed by entering raw data into the AMOS 4.0 software program (Arbuckle & Wothke, 1995 - 1999), which creates a covariance matrix used for the analysis. Path analysis is a multivariate method that uses regression analysis to test predictive relationships among observed variables in a model (Greenberg, 1999b; Kline, 1998). It allows for the evaluation of entire models, which gives a perspective that is more macro-level than micro-level. In other words, the entire landscape can be viewed as a whole instead of merely seeing the individual details separately (Kline, 1998).

To involve a predictive relationship, a specified model must have the following:

1. X precedes Y in time.

2. The direction of the predictive relationships is correctly specified.
3. The relationship between X and Y continues to exist after common causes of both are held constant.
4. Variables are measured on at least an interval level (Greenberg, 1999b; Kline, 1998; Schumacker & Lomax, 1996).

There are several assumptions made in path analysis. It is assumed that all relationships between variables are linear,<sup>14</sup> there is a one-way predictive flow in the model, all variables are measured on an interval scale, and exogenous (independent) variables and error terms in the equation are uncorrelated (Kline, 1998; Schumacker and Lomax, 1996).<sup>15</sup> The assumptions hold for these data.

In these path analyses, maximum-likelihood estimation (MLE) is used to answer the research questions. The goal of maximum-likelihood estimation is to find the parameter values that would maximize the likelihood of observing the values actually observed (Greenberg, 1999c). This yields identical values of path coefficients as beta weights in multiple regression for just-identified recursive models and similar values for over-identified models (Kline, 1998).

There are several steps used in path analysis: theoretically-based model building and variable selection, model specification with the designation of path coefficients, model estimation, and testing the model fit (Kline, 1998).

### Model Building

The models tested are based on a theoretical framework that informed the selection of the variables, predictive paths, and hypothesized relationships

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<sup>14</sup> See earlier discussion on curvilinearity.

<sup>15</sup> In a recursive model, the disturbances are uncorrelated (Kline, 1998).

among the variables. The theories involved in this model are gender inequality, racial inequality, class inequality, intersectionality, and population structure.

### Model Specification

In a predictive model, model specification is needed to examine multiple variable relationships. It involves deciding which variables to include in the model and which variables are independent and dependent. In path analysis, the term “exogenous” variable is used instead of independent variable and the term “endogenous” variable is used instead of dependent variable. Since the causes of exogenous variables are unknown, they are not represented in the path model, which allows them the freedom to vary and covary. In contrast, endogenous variables are explained by other variables in the model, including their own disturbances (residuals) and are therefore not free to vary and covary (Kline, 1998). In turn, endogenous variables can explain additional endogenous variables, which also are not allowed to vary and covary.

Every endogenous variable has a disturbance, which is the variance in the endogenous variable that is unexplained by the other observed variables in the model. They represent all causes of the endogenous variable omitted from the model (Kline, 1998).

In this research, the exogenous variables are a gender inequality index, a race inequality index, a class inequality index, and an intersectionality index. The endogenous variables are a population structure index and the femicide rate. In addition, the population structure is a mediator (intervening variable) that

transmits some of the predictive effects of the exogenous variables on the femicide rates (Kline, 1998).

### Designation of Path Coefficients

The next step is to create the path coefficients for each of the paths in the model. The path coefficient shows the amount of expected change in the endogenous variable as a result of the change in the exogenous variable while controlling the remaining variables. Recursive models, in which the predictive flow is in one direction with no feedback loops, are used in this study.

Path models diagram how the exogenous variables influence the endogenous variables being studied. They are a graphic representation of a series of regression equations. Unlike multiple regression techniques, path analysis can distinguish three types of effects: direct effects, indirect effects, and total effects among the variables. A direct effect is the predictive effect of one variable directly on another. The two variables are connected by a straight line with a single arrowhead (Greenberg, 1999b). The statistical estimates of the direct effects are called path coefficients. This means that they control for any correlations among the other presumed causes of an endogenous variable (Kline, 1998). For example, in this study, the path coefficient or the direct effect of the gender inequality index on the femicide rates are corrected for the correlation of the race inequality index and the class inequality index on the femicide rates.

The indirect effects involve one or more intervening (mediating) variables that transmit part of the effect from a prior variable onto a subsequent variable.

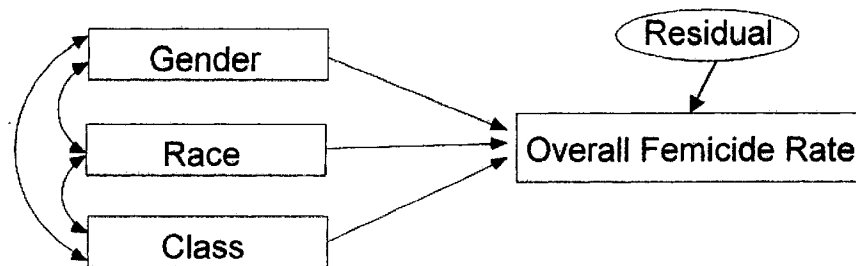
The indirect effect is computed by multiplying the involved direct effects. The total effect is the sum of direct effects and indirect effects (Schumacker & Lomax, 1996). The path model also shows the correlated, non-predictive relationships between the exogenous variables, which are shown by curved arrows with double arrowheads (Greenberg, 1999b).

Separate models represent path analyses with aggregated femicide rates and disaggregated racial subgroups. All of these models are recursive in that they are drawn only with unidirectional lines with no feedback loops in the model.

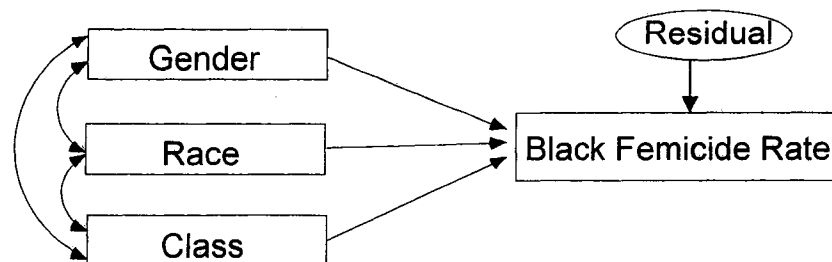
#### Model Estimation With Hypothesis Testing

The following are the models tested with the appropriate hypotheses for this study.

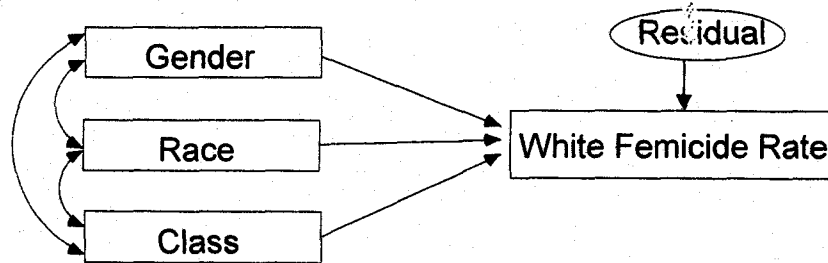
Hypothesis 1. As gender inequality, racial inequality, and class inequality increase, the overall femicide rates will increase.



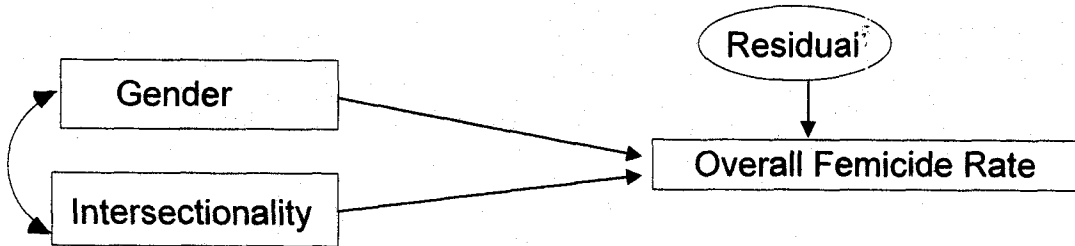
Hypothesis 2. As gender inequality, racial inequality, and class inequality increase, the femicide rates of black women will increase.



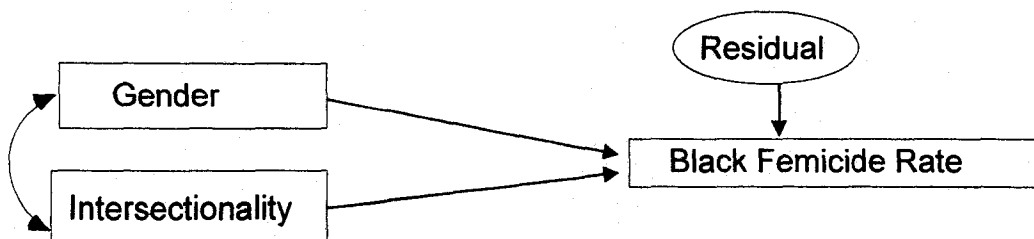
Hypothesis 3. As gender inequality, racial inequality, and class inequality increase, the femicide rates of white women will increase.



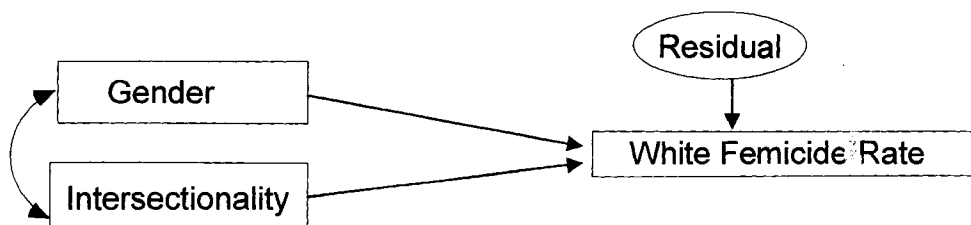
Hypothesis 4. The intersection of gender inequality, racial inequality, and class inequality better predicts an increase in the overall femicide rate than does gender inequality alone.



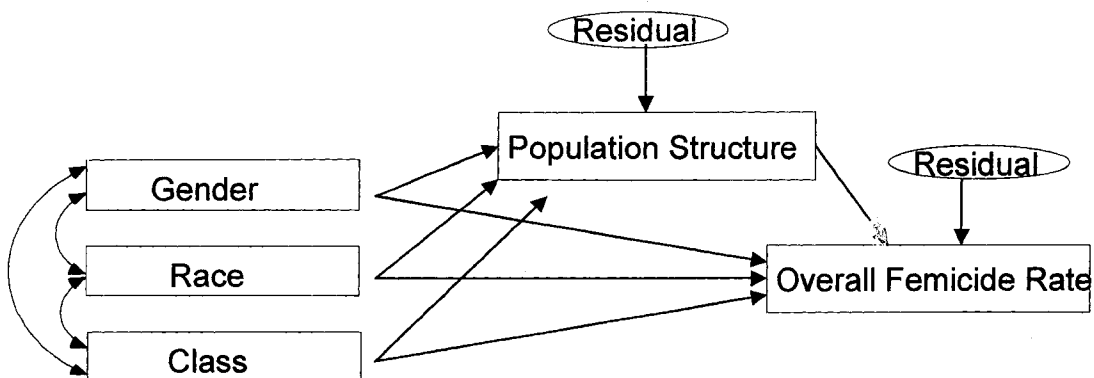
Hypothesis 5. The intersection of gender inequality, racial inequality, and class inequality better predicts an increase in the femicide rate of black women than does gender inequality alone.



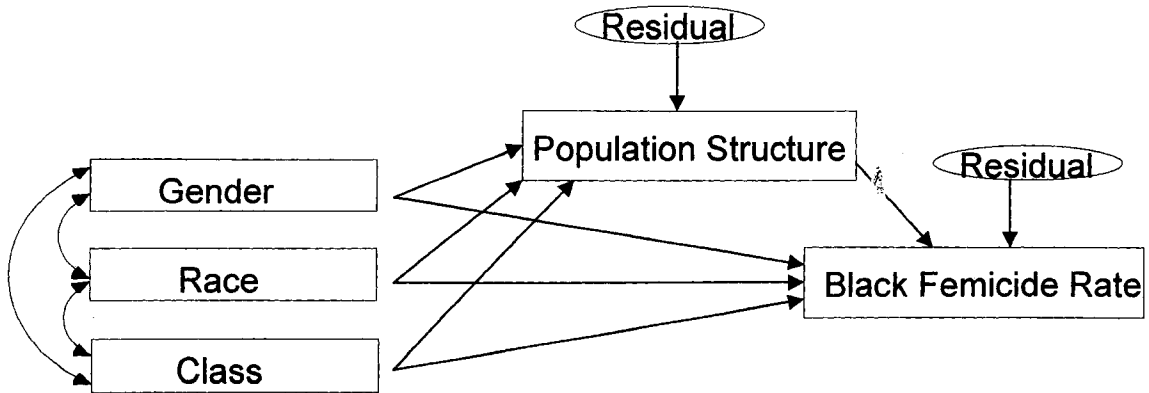
Hypothesis 6. The intersection of gender inequality, racial inequality, and class inequality better predicts an increase in the femicide rate of white women than does gender inequality alone.



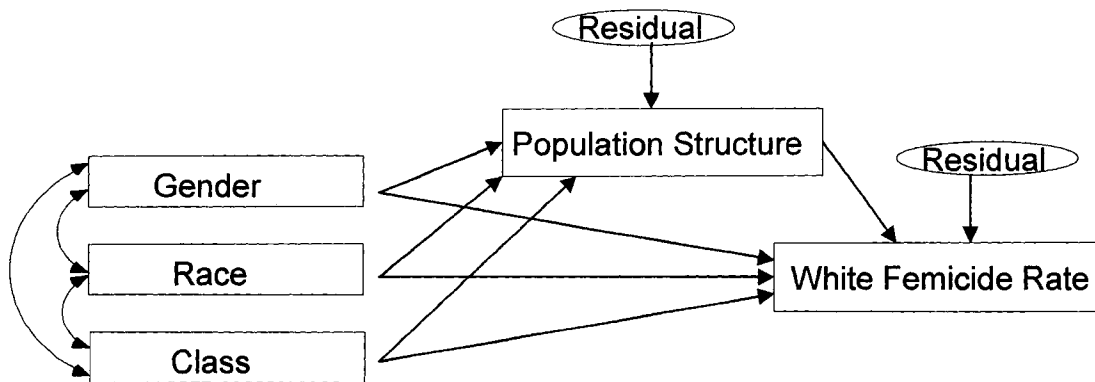
Hypothesis 7. A city's population structure will mediate the predictive effect of gender inequality, racial inequality, and class inequality on the overall femicide rates.



Hypothesis 8. A city's population structure will mediate the predictive effect of gender inequality, racial inequality, and class inequality on the femicide rates of black women.



Hypothesis 9. A city's population structure will mediate the effect of gender inequality, racial inequality, and class inequality on the femicide rates of white women.



### Testing the Model Fit

In a predictive model, the path coefficients can be tested for fit and significance. The overall path model fit to the data reflects any significant relationship between the original and reproduced correlation matrices (Schumacker & Lomax, 1996). Because there is no consensus on a single index of fit of a model, it is often recommended that researchers report several different fit indices due to their different properties (Rogers & Abbey-Hines, 1997). Incremental fit indices such as Normed Fit Index (NFI) and the Comparative Fit Index (CFI) assess a goodness of fit of a target model by comparing it to a baseline, null model where covariation among the measured variables is not allowed. These indices range from 0 to 1.0, with the null model equally zero, or the worst possible fit, and a 1.0 indicating perfect fit. In general, a fit value of .90 is considered a good fit, .80 an acceptable fit, and .70 or lower a poor fit (e.g., Byrne, 2001; Schumacker & Lomax, 1996). Although the NFI is frequently reported, the CFI is considered a better measure of goodness of fit because it considers the degrees of freedom for the models, which is preferable with small samples. Finally, the Goodness of Fit Index (GFI) is thought to be analogous to the proportion variance accounted for,  $R^2$ , in multiple regression. A GFI of 1.0 indicates perfect fit (see Hoyle, 1995; Schumacker & Lomax, 1996).

Statistical significance of path coefficients is measured by the Critical Ratio, which is interpreted as a z score. It is defined as

$$\text{C.R.} = \text{Covariance Estimates/Standard Error}$$

(Arbuckle & Wothke, 1995-1999; Schumacker & Lomax, 1996). A path coefficient is statistically significant at the .05 level (two-tailed) if the Critical Ratio value is  $> 1.96$ , at the .01 level (two-tailed) if the Critical Ratio is  $> \pm 2.58$ , and at the .001 level (two-tailed) if the Critical Ratio is  $> \pm 3.27$  (Byrne, 2001; Kline, 1998).

The results of these analyses are reported in the next chapter.

## CHAPTER 6 - RESULTS

### Introduction

This chapter provides detailed information of the model testing results in this study. First, basic descriptive statistics for all variables are presented to provide a summary of the characteristics of the sample. Following that, bivariate correlations are examined and then, the results of testing the hypothesized models are presented. These include the standardized path coefficients, statistical significance, and the overall goodness of fit for each of the path models.

### Descriptive analysis

The descriptive analysis of the data, which include the means, standard deviations, minimum, maximum, and range of all the variables, are analyzed using the SPSS 11.0 statistical package program. They are displayed in Table 7. Histograms of the femicide rates are presented in Figure 2.0. They show the means and standard deviations for all the variables.

Table 7. Descriptive Statistics For All Variables Used in Analysis (N= 106)

Variables	Mean	Std Dev	Skew	Kurtosis	Minimum	Maximum	Range
Overall							
Femicide Rate* <sup>a</sup>	1.67	.50	-.04	-.18	.26	2.87	2.61
White Femicide Rate* <sup>a</sup>	1.51	.46	.00	1.31	.0	2.91	2.91
Black Femicide Rate* <sup>a</sup>	2.17	.78	-1.48	2.22	.0	3.51	3.51
Female:Male Unemployment	1.04	.15	.47	.96	.74	1.58	.84
Female:Male Poverty	1.18	.08	1.42	3.73	.99	1.52	.53
SBA Women's Centers	.61	.49	-.47	-1.81	.00	1.00	1.00
Male:Female Income	1.27	.11	.59	.39	1.06	1.63	.58
Male:Female Education	1.13	.09	-.56	1.99	.76	1.35	.59
Male:Female Elite Occupation	1.49	.24	.11	.74	.81	2.20	1.39
Male Elected Officials	.70	.16	-.60	.83	.22	1.00	.78
White:Black Employment	1.15	.20	.38	1.56	.72	1.81	1.09
Black:White Poverty	2.34	.83	.82	2.34	.73	5.84	5.11
White:Black Income	1.26	.17	1.00	4.60	.70	2.02	1.32
White:Black Education	2.08	.84	.86	1.38	.86	5.20	4.34
White:Black Elite Occupation	1.93	.55	.81	1.18	.91	3.81	2.90
White Elected Officials	.75	.20	-.58	-.33	.22	1.00	.78
Total Income	-.97	.14	-1.91	6.45	-.68	-1.61	.93
Total Education	-1.08	.34	-.79	.80	-.37	-2.18	1.81
Total Poverty	-.95	.07	.09	-.61	-.81	-1.09	.28
Total							
Employment	-.98	.03	.90	.64	-1.03	-.89	.14
Renter	1.39	.28	.58	.58	.74	2.25	1.51
City Size*	2.54	.72	1.62	3.44	1.80	5.65	3.85
Density*	3.73	.76	-.36	2.18	.66	5.80	5.15

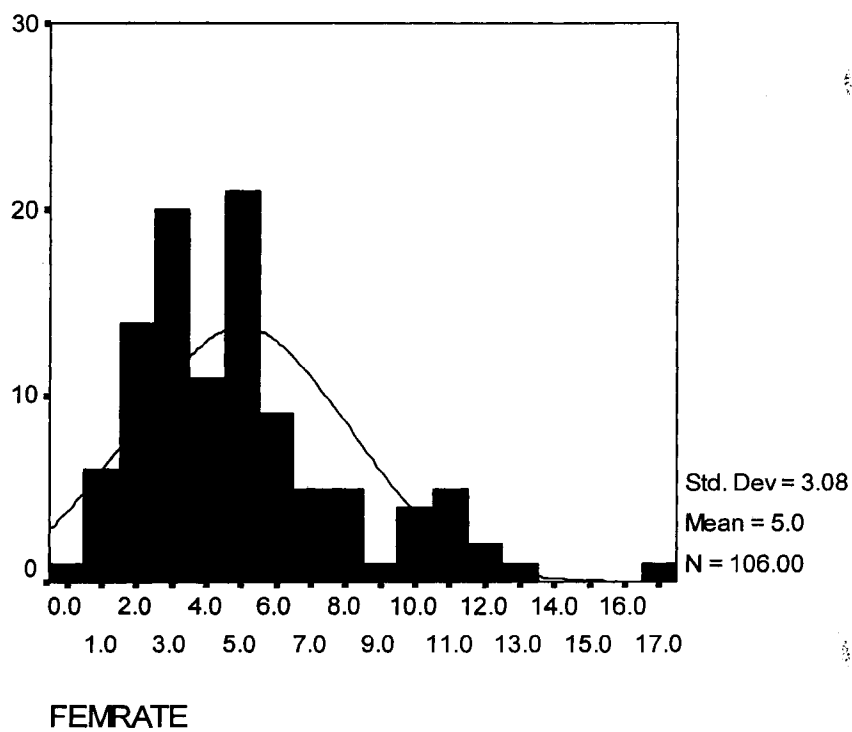
\* logged to correct for skewed distribution (l(n))

<sup>a</sup> a constant of - 1.0 is added to the femicide rates before logging

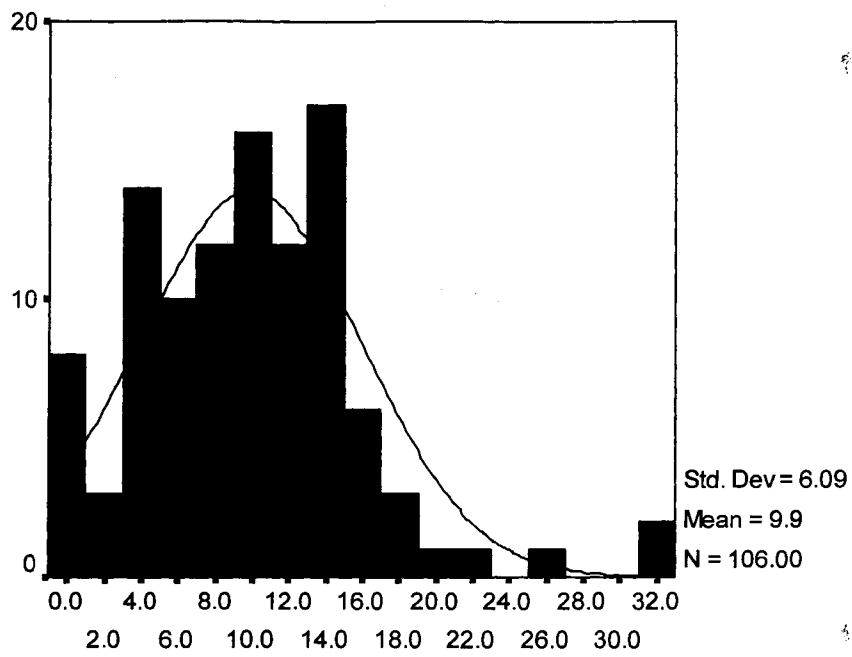
Inspection of these statistics indicates a sufficient range of values in the femicide rates as well as in the gender inequality, race inequality, class inequality, and population structure variables so that a meaningful comparison can be performed.

Figure 2. Histograms of the femicide rates.

### Overall Femicide Rate

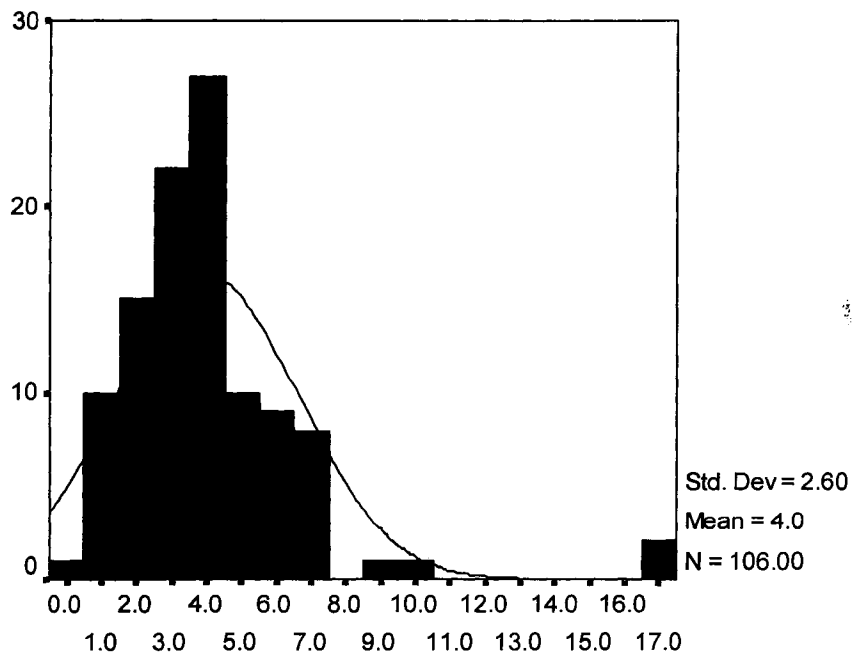


Femicide Rate of Black Women



BLRATE

Femicide rate of White Women



WHRATE

The mean levels of the femicide rates vary from 4.0/100,000 for white women to 9.9/100,000 for black women, indicating that the mean of the femicide rate for black women is 150% higher than for white women. Although these levels are consistent with other years and data sets (See Block; Greenfeld, et al., 1998; Moracco, Runyan, and Butts, 1998; Rosenfeld), they tend to mask the variation that exists across the cities in this analysis.

#### Bivariate Correlations

Pearson correlation coefficients are computed to test for any significant association between the structural variables and the femicide rates. These indicate correlation, not causation. Two zero-order correlation matrices are developed to examine the linear relationship between the variables used in this study. Table 8 includes the femicide rates and the endogenous variables, and Table 9 is a zero correlation matrix of all the endogenous variables.

Table 8. Zero Correlation Matrices For Femicide Rates With All Other Variables

	Overall femicide rate	Black femicide rate	White femicide rate
Overall femicide rate <sup>a</sup>	1		
Black femicide rate <sup>a</sup>	.564**	1	
White femicide rate <sup>a</sup>	.785**	.256**	1
Female:Male unemployment	-.121	-.033	-.057
Female:Male poverty	.094	.063	.021
SBA Women's Centers	-.331**	-.337**	-.161
Male:female median income	.016	-.010	.004
Male:female education	-.046	-.041	.077
Male:female occupations	-.437**	-.197*	-.307**
Male City Council members	-.092	-.182	-.127
Black:white joblessness	.238*	.269**	.093
Black:white poverty	.291*	.298**	.157
White:Black median income	.173	.175	.042
White:Black education	.257**	.316**	.052
White:Black occupations	.424**	.304**	.117
White City Council members	-.590**	-.415**	-.341**
Total median income	.369**	.272**	.308**
Total college education	.316**	-.072	.501**
Total poverty	.513**	.290**	.453**
Total employment	.541**	.195*	.505**
Renter-occupied housing	.195*	.157	.190
Population density <sup>a</sup>	.000	-.055	.124
City size <sup>a</sup>	.203*	.241*	.230*

<sup>a</sup> variables logged (l(n))

\* correlation is significant at the 0.05 level (2-tailed)

\*\* correlation is significant at the 0.01 level (2-tailed)

The variables in Table 9 are as follows:

- V1 - Female:male unemployment
- V2 - Female:male poverty level
- V3 - Small Business Administration's Women's Centers
- V4 - Male:female median income
- V5 - Male:female college education
- V6 - Male:female elite occupations
- V7 - Male City Council members
- V8 - Black:white employment
- V9 - Black:white poverty level
- V10 - White:Black median income
- V11 - White:Black college education
- V12 - White:Black elite occupations
- V13 - White City Council members
- V14 - Total city median income: total national median income
- V15 - Total city college education: total national college education
- V16 - Total city poverty level: total national poverty level
- V17 - Total city employment level: total national employment level
- V18 - Renter-occupied housing
- V19 - Population density (logged)
- V20 - City size (logged)

Table 9. Zero Correlation Matrix For All Exogenous Variables Used in Path Analysis

	V1	V2	V3	V4	V5	V6	V7	V8	V9	V10	V11	V12	V13	V14	V15	V16	V17	V18	V19	V20
V1	1																			
V2	.360**	1																		
V3	.021	-.005	1																	
V4	.128	.255**	.022	1																
V5	.122	-.127	.090	.292**	1															
V6	-.046	.020	.307**	.068	.210*	1														
V7	-.069	-.024	.158	.019	.153	.144	1													
V8	-.212*	.179	-.098	-.239*	-.342**	-.215*	-.001	1												
V9	.032	.424**	-.009	.257**	-.260**	-.140	.039	.535**	1											
V10	-.080	.136	-.156	.061	-.219*	-.083	.048	.472**	.530**	1										
V11	-.194*	.122	-.179	-.239*	-.311**	-.184	.032	.753**	.436**	.723**	1									
V12	-.088	.115	-.151	.061	-.126	-.051	-.044	.098	.279**	.170	.167	1								
V13	.055	.077	.243*	.030	.207*	.489**	.304**	-.184	-.224*	-.152	-.187	-.505**	1							
V14	-.016	.088	-.078	.015	-.063	-.334**	.118	.045	.225*	.132	.102	.299**	-.247*	1						
V15	-.039	.000	.037	-.023	.040	-.398**	.100	-.007	.036	.062	-.016	-.153	-.104	.602**	1					
V16	-.069	-.019	-.323**	-.082	-.130	-.481**	.004	.105	.096	.019	.099	.365**	-.487**	.518**	.464**	1				
V17	-.138	-.009	-.249*	-.077	-.066	-.531**	-.033	.122	.061	-.005	.081	.250**	-.506**	.356**	.533**	.861**	1			
V18	-.126	-.093	-.318**	-.196*	-.160	-.324**	-.015	.113	-.053	-.024	.098	.155	-.288**	-.084	-.052	.566**	.475**	1		
V19	-.060	-.170	-.175	-.115	-.007	-.280**	-.002	.127	-.091	-.042	.038	-.174	-.084	-.179	.063	.375**	.386**	.612**	1	
V20	-.174	-.219	.311**	-.113	.149	-.057	-.123	.087	-.098	-.036	.063	-.004	-.128	-.133	-.060	.151	.143	.293**	.375**	1

\* correlation is significant at the 0.05 level (2-tailed)

\*\* correlation is significant at the 0.01 level (2-tailed)

In cities where women have more power (business, occupational, educational, and political) as a gender, the femicide rates are higher. A higher overall femicide rate is significantly and negatively associated with fewer SBA business opportunities ( $r = -.331$ ) and less women employed in professional and managerial occupations ( $r = -.437$ ). When disaggregated by race, the results for the black femicide rate are similar: Small Business Administration Women's Centers ( $r = -.337$ ) and male:female occupations ( $r = -.197$ ). For the white femicide rate, the only significant association is with male:female occupations ( $r = -.307$ ).

In addition, there are non-significant negative associations between fewer women with college educations and higher overall femicide rates ( $r = -.046$ ) and black femicide rates ( $r = -.041$ ).<sup>16</sup> Similarly, women are murdered at a higher rate when more women are unemployed: overall femicide rates ( $r = -.121$ ), black femicide rates ( $r = -.033$ ), white femicide rates ( $r = -.057$ ).

There is also a non-significant association between more women being elected to local City Councils and higher overall femicide rates ( $r = -.092$ ), black femicide rates ( $r = -.182$ ), and white femicide rates ( $r = -.127$ ). These associations represent a backlash predictive effect against women gaining power in society.

Women are murdered at higher rates in cities where women earn less and live in poverty more. These, however, are not significant associations. Higher poverty levels of women are positively associated with the overall femicide rates ( $r = .094$ ), black femicide rates ( $r = .063$ ), and white femicide rates ( $r = .021$ ).

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<sup>16</sup> There is a positive, but non-significant association with the white femicide rates ( $r = .077$ ).

Declines in women's earnings have a very small association with femicide rates: overall femicide rates ( $r = .016$ ), the black femicide rates ( $r = .010$ ), and white femicide rates ( $r = .004$ ).

Several of the race inequality factors have a positive significant association with the overall and black femicide rates, but not with the white femicide rates. This indicates that the overall and black femicide rates are higher when there are higher levels of racial inequality in a city. This, however, does not necessarily indicate causation. As there is more racial inequality for black people in joblessness, poverty, education, and occupational levels, there is a significant positive association with the overall femicide rates ( $r = .238$ ,  $r = .291$ ,  $r = .257$ ,  $r = .424$ , respectively) and black femicide rates ( $r = .269$ ,  $r = .298$ ,  $r = .316$ ,  $r = .304$ , respectively). The white femicide rates also had positive, but non-significant associations with these factors ( $r = .093$ ,  $r = .157$ ,  $r = .052$ ,  $r = .117$ , respectively). In addition, there are positive, but non-significant associations between racial inequalities in median incomes and the overall femicide rates ( $r = .173$ ), black femicide rates ( $r = .175$ ), and white femicide rates ( $r = .042$ ).

In contrast, there are significant, negative associations between the percent of white City Council members and all of the femicide rates, which indicates that more white City Council members is associated with lower femicide rates: overall femicide rates ( $r = -.590$ ), black femicide rates ( $r = -.415$ ), and white femicide rates ( $r = -.341$ ). This could indicate that a higher percent of white City Council members occurs when a city has several significant changes, and not just the race of City Council members. It could also mean that this is a poor

indicator of a city's racial inequality level. Further study is warranted to try to disentangle the meaning of this finding.

The class inequality factors have a positive and significant association with all of the femicide rates, with the exception of college education and the black femicide rates. As a city's median income declines in relation to the national median income, the overall femicide rates ( $r = .369$ ), black femicide rates ( $r = .272$ ), and white femicide rates ( $r = .308$ ) increase. As poverty in the city rises, so do the overall femicides rates ( $r = .513$ ), the black femicide rates ( $r = .290$ ), and the white femicide rates ( $.453$ ). Likewise, the overall femicide rates ( $r = .541$ ), black femicide rates ( $r = .195$ ), and white femicide rates ( $r = .505$ ) increase with the decline of the city's level of total employment level. In addition, as the city's college education level declines in relation to the nation's level, the overall femicide rates ( $r = .316$ ) and the white femicide rates ( $r = .501$ ) increase. However, the black femicide rates declines ( $r = -.072$ ), but not significantly, with the decline in the city's college educational levels.

There is a significant and positive association between a city's size and all the femicide rates: overall femicide rates ( $r = .203$ ), black femicide rates ( $r = .241$ ), and white femicide rates ( $r = .230$ ). Finally, there is no significant association between any of the femicide rates and a city's population density.

Although these correlations give a snapshot of the relationships between individual factors, they are too simplistic for a more complex multilayered understanding of the relationships among these factors. For that, path analysis is used in this study.

## Path Analysis

A multivariate analysis is necessary to determine whether these bivariate patterns hold when other variables are considered. Therefore, after the data are screened, a recursive path analysis is performed by entering raw data into the AMOS 4.0 software program (Arbuckle and Wothke, 1995-1999), which creates a covariance matrix used for the analysis. Path analysis is a multivariate method that uses regression analysis to test predictive relationships among observed variables in a model (Greenberg, 1999b; Kline, 1998). It allows for the evaluation of entire models, which gives a perspective that is more macro-level than micro-level. In other words, the entire landscape can be viewed as a whole instead of merely seeing the individual details separately (Kline, 1998).

### Model Estimation and Fit Analysis

Each of the models is just-identified (have equal numbers of observations and parameters) and, therefore, perfectly fit the data (Kline, 1998). The Normed Fit Index (NFI), the Comparative Fit Index (CFI), and the Goodness of Fit Index (GFI) are all 1.0, which indicates a perfect fit. Maximum-likelihood estimate (MLE) is used for the analysis of these data. For just-identified recursive path models, the MLE yields estimates of direct predictive effects identical to Ordinary Least Squares (OLS) multiple regression. Interpretation of estimates of path coefficients and disturbance variances is the same for MLE and OLS multiple regression (Kline, 1998).

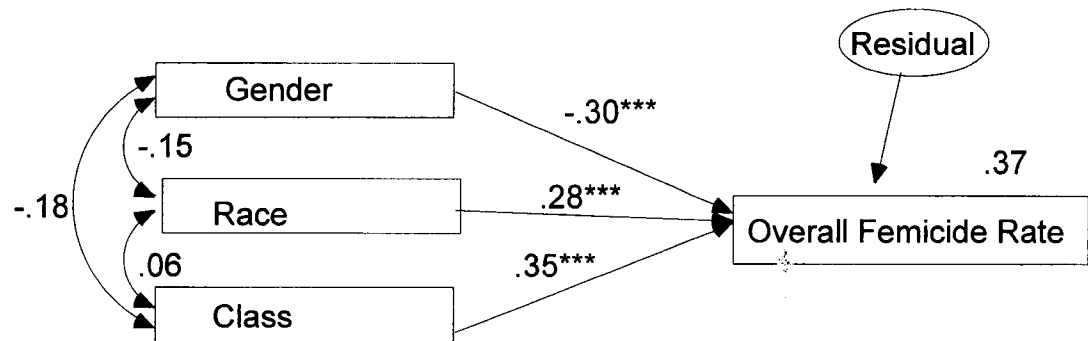
## Significance Testing

Statistical significance is indicated by the Critical Ratio Index, which is interpreted as a z score. Therefore, significance at the .05 level (two-tailed) is indicated if the Critical Ratio is  $> \pm 1.96$ , at the .01 level (two-tailed) if the Critical Ratio is  $> \pm 2.58$ , and at the .001 level (two-tailed) if the Critical Ratio is  $> \pm 3.27$ .

## Hypotheses Testing

The results of the analyses are presented for each hypothesis tested.

Hypothesis 1. As gender inequality, racial inequality, and class inequality increase, the overall femicide rates will increase. Standardized path coefficients are used because they are on the same scale of measurement, which makes them useful in determining the relative importance among the variables in a given sample (Schumacker & Lomax, 1996).



- \* significant at the .05 level
- \*\* significant at the .01 level
- \*\*\* significant at the .001 level

Hypothesis 1 is confirmed for the racial inequality and class inequality indices, but not for the gender inequality index. This analysis finds that a higher racial inequality index and a higher class inequality index are significant,

moderate predictors of higher overall femicide rates. The overall femicide rate is predicted to increase by .28 standard deviations given an increase in racial inequality of one (1) standard deviation when controlling gender and class inequalities. The overall femicide rate is predicted to increase by .35 standard deviations given an increase of one (1) standard deviation in the class inequality index, when controlling gender inequality and racial inequality. These results are in accordance with the gender inequality and racial inequality theories.

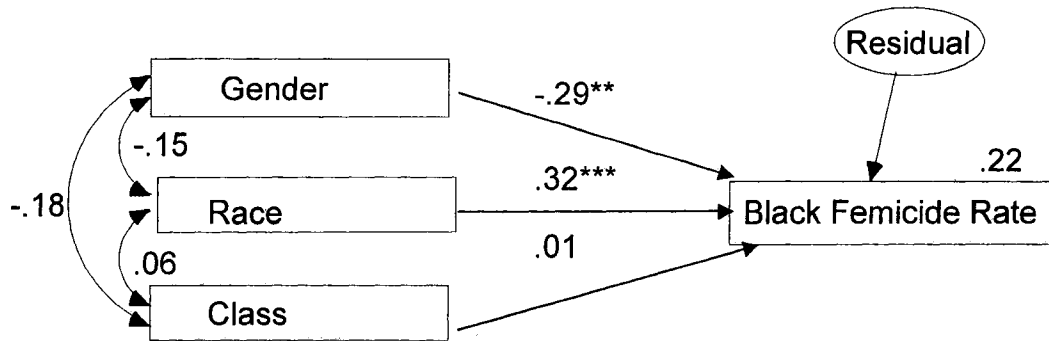
In contrast, the gender inequality index is a significant predictor of a lower overall femicide rate, which indicates a backlash effect. The overall femicide rate is expected to decline by .30 standard deviations given an increase in the gender inequality index of one (1) standard deviation when controlling racial and class inequalities. Gender backlash occurs when the advancement of women is considered a threat to male dominance, and violence is used to eliminate that threat (Vieraitis & Williams, 2002). When a man's normative goal of power and control is threatened, his frustrated attempts to achieve those goals may lead to severe, and sometimes lethal, attempts to regain control (Dugan et al., 2000; Wells & DeLeon-Granados, 2004). According to gender backlash theory, men are resistant to women gaining greater status in society. In response to the higher status of women, men attempt to reestablish domination. Therefore, the cities with the greatest gender inequality may be the safest for women since the dominant status of men is not threatened (Russell, 1975). The gender backlash results are in accordance with previous studies that found that social structural gender equality is associated with higher femicide rates (Avakame, 1999; Bailey

& Peterson, 1995; Brewer & Smith, 1995; Whaley & Messner, 2002). All of the indices are significant, moderate predictors.

The squared multiple correlation improves the understanding of the theoretical importance of the proposed path models by assessing the amount of variance for each endogenous variable that can be explained by the predictor variables (Arbuckle & Worthe, 1995-1999). In this path model, the gender inequality, race inequality, and class inequality factors account for 37% of the variance in the overall femicide rate, which means that a city's level of gender, race, and class inequality accounts for more than one-third of the variance in its femicide rate.

This model supports Crenshaw's (1991) intersectionality theory and Wing's (2003) multiplicative identity theory, which suggest that gender, race, and class oppression are significant parts of women's lives. Although gender, race, and class are analyzed separately, this model indicates that each of these inequalities is a significant predictor of the variance in a city's overall femicide rate. Greater racial and class inequality predicts a higher overall femicide rate whereas greater gender inequality predicts a lower overall femicide rate. Although this model does not test the interlocking nature of these oppressions, it does show their relationships to each other.

Hypothesis 2. As gender inequality, racial inequality, and class inequality increase, the femicide rate of black women will increase. Standardized path coefficients are used in this model (Schumacker & Lomax, 1996).



Hypothesis 2 is confirmed for the racial inequality index only. A city's femicide rate for black women is higher when racial inequality is greater in the city as compared to other cities, but is lower as gender inequality rises. In other words, less black women are murdered in cities where black people gain a higher racial status, but more black women are murdered in cities where women enjoy a higher gender status. There is no effect as the city's overall class status changes.

In this model, the gender, race, and class inequality indices account for almost one-fourth (22%) of the variance in the black femicide rate. The black femicide rate is expected to increase by .32 standard deviations given an increase in racial inequality of one (1) standard deviation when controlling gender and class inequalities. Therefore, racial inequality is a significant, moderate predictor of the increase in the black femicide rate.

The black femicide rate is expected to decline by .29 standard deviations given an increase in the gender inequality index of one (1) standard deviation when controlling racial and class inequalities. This indicates that a city's level of gender inequality is a significant, moderate predictor of the black femicide rate. If the status of all women is high in a city (compared to other cities), the black femicide rate will also be higher in that city, indicating a backlash against black women.

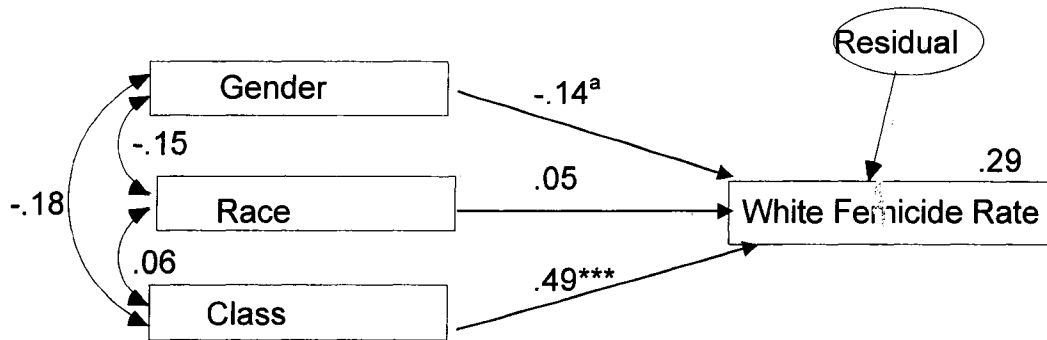
The black femicide rate is predicted to increase by .01 standard deviations given an increase in class inequality of one (1) standard deviation when controlling gender and racial inequalities. This predictive effect is not significant and may be a spurious association. If not spurious, the overall socio-economic class affluence of a city, as compared to other cities, does not predict the femicide rate of black women.

This model gives some support to the intersectionality theory. It indicates that gender inequality and racial inequality, albeit in opposite directions, are significant predictors of a city's murder rate of black women, but a city's overall class status is not a predictor. To be clear, the class inequality index measures a city's overall level of socio-economic health, regardless of the racial makeup of the city, whereas the racial inequality index includes social and economic variables.<sup>17</sup> This means that the femicide rates of black women are predicted by the level of a city's social and economic inequality of black people relative to white people, but not by a city's overall class status relative to other cities.

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<sup>17</sup> The racial inequality index also includes a political inequality variable.

Hypothesis 3. As gender inequality, racial inequality, and class inequality increase, the femicide rate of white women will increase (standardized path coefficients).



<sup>a</sup> approaches significance

Hypothesis 3 is confirmed for the gender inequality index and the class inequality index. While the gender inequality index is a small, nearly significant predictor of lower white femicide rates, the class inequality index is a large, significant predictor of higher white femicide rates. As the city's overall class environment declines (compared to other cities), more white women are murdered. However, as the city's gender inequality level increases (compared to other cities), fewer white women are murdered. The predictors in this model account for 29% of the variance in the femicide rate for white women.

The white femicide rate is predicted to increase by .49 standard deviations given an increase in the class inequality index of one (1) standard deviation when controlling for gender and racial inequalities. The white femicide rate is expected to decline by .14 standard deviations as the gender inequality index increases by one standard deviation and to increase by .05 standard deviations when the race

inequality index increases by one (1) standard deviation, but these predictive effects are not significant.

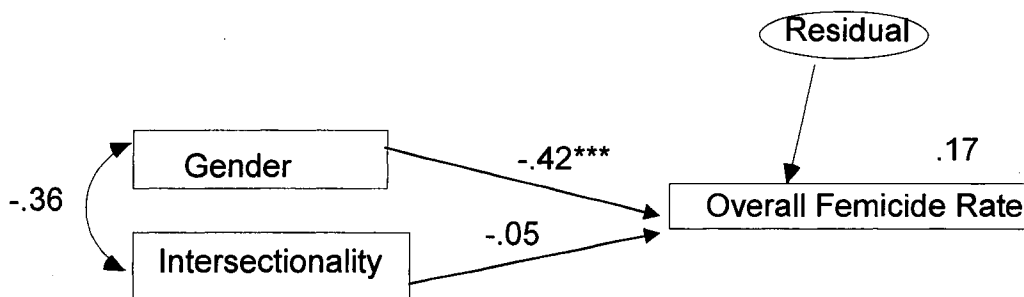
This model gives limited support to the intersectionality theory as it applies to white women. A city's level of gender inequality (as compared to other cities) has a small backlash effect on the femicide rate of white women. Moreover, a city's higher racial inequality marginally predicts a higher femicide rate for white women, which means that white women are not significantly protected by their racial status.<sup>18</sup> Because this is a cross-sectional study of the years 1998 to 2001, any prior significant effect of racial inequality or gender inequality may have been eliminated or narrowed after many years of the civil rights and women's rights movements. However, the murder rate of white women is significantly predicted by a city's overall class status (compared to other cities), which means that fewer white women are murdered in more affluent cities. This finding warrants further research of the effects of class inequality on the murder rates of white women.

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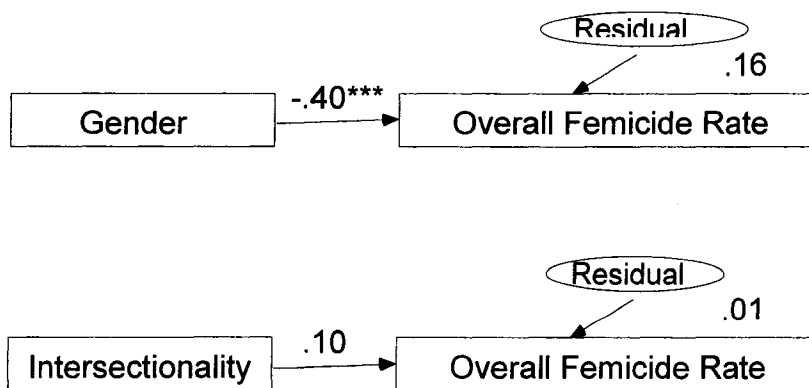
<sup>18</sup> This small effect may indicate a spurious relationship.

Hypothesis 4. The intersection of gender inequality, racial inequality, and class inequality better predicts an increase in the overall femicide rate than does gender inequality alone. Intersectionality is operationalized by multiplying gender inequality, racial inequality, and class inequality, as consistent with Wing's (2003) multiplicative identity theory, which is an extension of the Crenshaw's intersectionality theory. Standard path coefficients are analyzed in this model (Schumacker & Lomax, 1996).

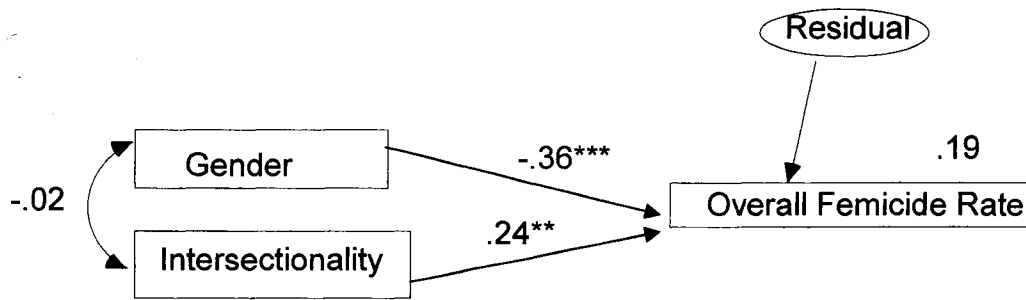
Full 106 city data set:



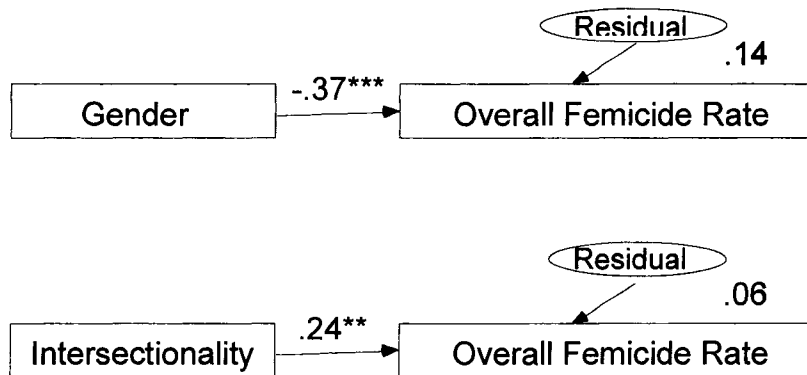
Alternative model separates the gender inequality index from the intersectional inequality index (full data set of 106 cities):



Data set without outliers (102 cities):



Alternative model separates the gender inequality index from the intersectional inequality index (data set without outliers - 102 cities):



The results of this analysis differ depending on whether the outlier cities are included. Both data sets indicate a significant gender backlash effect on the variance in the overall femicide rate, but the intersectionality inequality index significantly predicts the overall femicide rate only for the data set that excludes the outlier cities. The overall femicide rate declines by .42 (full data set) and .36 (data set without outliers) standard deviations as the gender inequality index increases by one standard deviation, controlling intersectionality. For the data set without outliers, the overall femicide rate increases by .24 standard deviations as the intersectionality inequality index increases by one standard deviation, when controlling the gender inequality index, but declines by .05 standard

deviations as the intersectionality inequality index increases by one standard deviation.

The only difference when the model is disaggregated is that the intersectional inequality index predicts the overall femicide rate in all models, although it is significant only for those in the data set without the outlier cities.

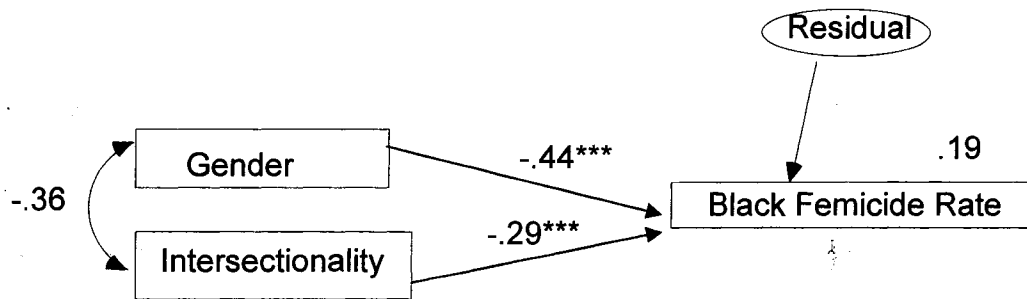
Hypothesis 4 is confirmed for the data set without outliers. Both indices are significant predictors of the overall femicide rate. Intersectionality is a significant positive predictor of the variance in a city's femicide rate whereas gender inequality remains a significant negative predictor of the femicide rate. A city with greater interlocking inequalities (gender inequality multiplied by racial inequality multiplied by class inequality) will have higher overall femicide rates. In contrast, more gender inequality predicts lower overall femicide rates. Stated another way, when the interlocking gender, race, and class statuses are higher, the overall femicide rates are higher, but when the city's gender status is higher, its overall femicide rates is higher, which shows a backlash effect. This could indicate that more women are murdered when men attempt to reestablish their gender domination, but there is not corresponding effort to reestablish the multiple dominations of gender, race, and class. Moreover, less than one-fifth of the variance in the overall femicide rate is explained by this model.<sup>19</sup>

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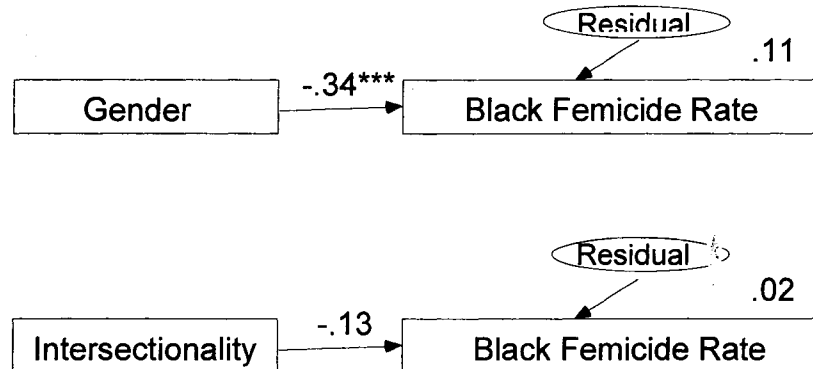
<sup>19</sup> In the disaggregated model, only 1% of the variance of the overall femicide rate is explained by intersectionality.

Hypothesis 5. The intersection of gender inequality, racial inequality, and class inequality better predicts an increase in the femicide rate of black women than does gender inequality alone. Standardized path coefficients are analyzed in this model (Schumacker & Lomax, 1996).

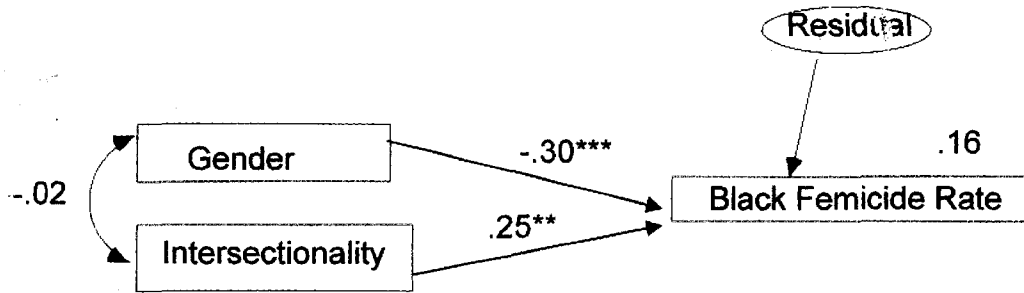
Full 106 city data set:



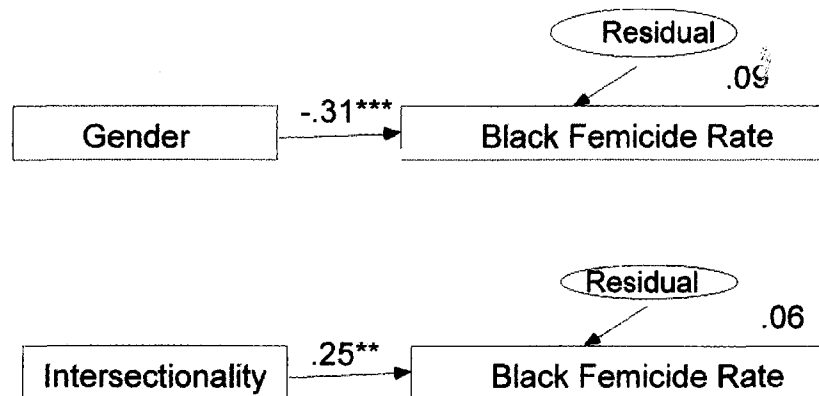
Alternative model separates the gender inequality index from the intersectional inequality index (full data set of 106 cities):



Data set without outliers (102 cities):



Alternative model separates the gender inequality index from the intersectional inequality index (data set without outliers - 102 cities):



Hypothesis 5 is confirmed for the data set without outliers. The black femicide rate is expected to decline by .44 (full data set) and .30 (data set without outliers) standard deviations as the gender inequality index increases by one standard deviation, controlling for intersectionality. In contrast, the black femicide rate of the data set without outliers is predicted to increase by .25 standard deviations as the intersectionality inequality index increases by one standard deviation, controlling the gender inequality index. In the full data set, the black femicide rate is predicted to decline by .29 standard deviations as the intersectionality inequality index increases by one standard deviation, controlling

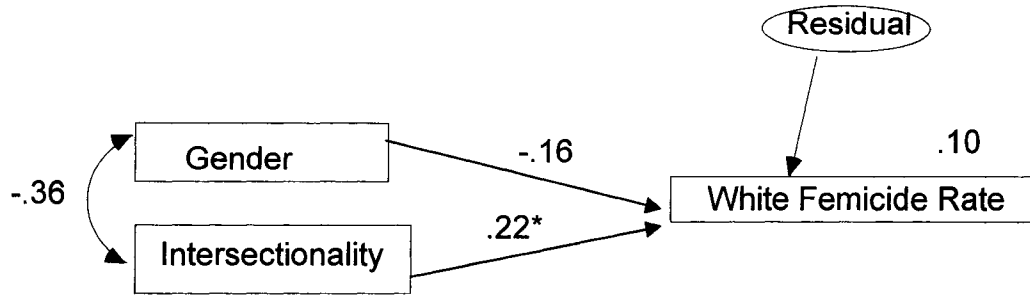
the gender inequality index. There is almost no difference between the two models involving the data set without outliers.

For the data set without the outliers, these results are substantially the same as in Hypothesis 4. Intersectionality is a significant positive predictor of the variance in a city's black femicide rate whereas gender inequality remains a significant negative predictor of the black femicide rate. Therefore, greater intersectional inequality predicts a higher femicide rate for black women while higher gender inequality predicts a lower femicide rate for black women.

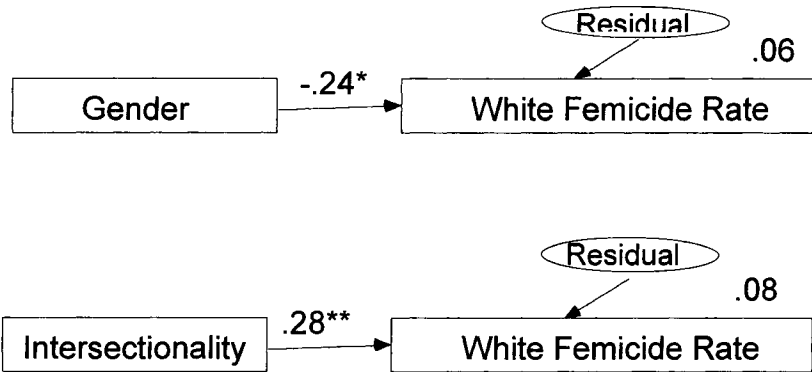
Although 16% of the variance in the black femicide rate is explained by this model, intersectional inequality accounts for 6% of the variance. This is a small, but significant explanation of the fluctuations in the black femicide rates.

Hypothesis 6. The intersection of gender inequality, racial inequality, and class inequality better predicts an increase in the femicide rate of white women than does gender inequality alone. Standardized path coefficients are analyzed (Schumacker & Lomax, 1996).

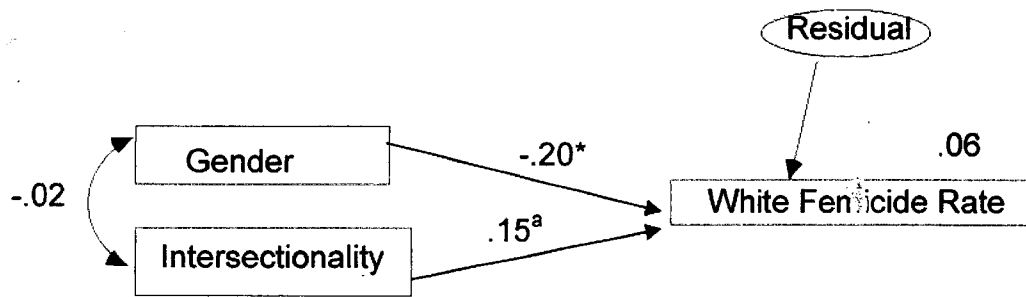
Full 106 city data set:



Alternative model separates the gender inequality index from the intersectional inequality index (full data set of 106 cities):

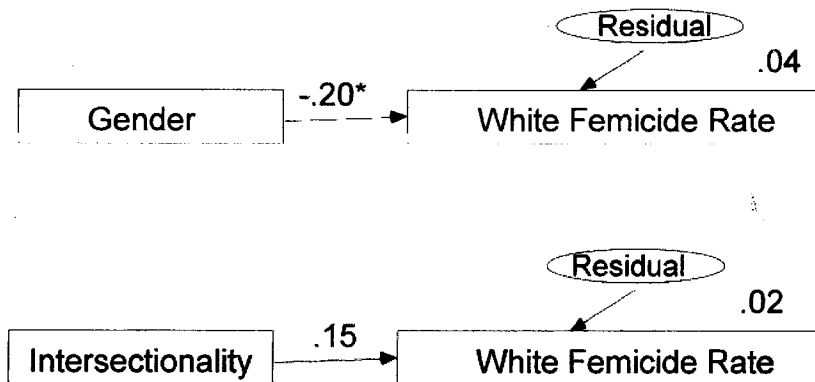


Data set without outliers (102 cities):



<sup>a</sup> approaching significance

Alternative model separates the gender inequality index from the intersectional inequality index (data set without outliers - 102 cities):



Hypothesis 6 is confirmed. The white femicide rate is predicted to decline by .16 (full data set) and .20 (data set without outliers) standard deviations as the gender inequality index increases by one standard deviation, when controlling intersectionality. The white femicide rate is expected to increase by .22 (full data set) and .15 (data set without outliers) standard deviations as the intersectionality inequality index increases by one standard deviation, when controlling the gender inequality index.

These results support the intersectionality theory. Intersectionality is a significant positive predictor of the variance in a city's white femicide rate

whereas gender inequality is a negative predictor of the white femicide rate. In other words, a higher white femicide rate is predicted for those cities with greater intersectional inequality, but lower gender inequality. The intersectionality and gender backlash theories are supported by this model. Although the results of these models are similar, the full data set shows the most significance. In that sample, intersectional inequality accounts for 8% of the variance in the white femicide rate. While important, it is a small minority of factors that explain the variations in the white femicide rates among the cities in the sample.

Hypothesis 7. A city's population structure will mediate the predictive effect of gender inequality, racial inequality, and class inequality on the overall femicide rate. Indirect standardized predictive effects and total standardized predictive effects are interpreted as path coefficients (Kline, 1998). Standardized predictive effects are analyzed in this model (Schumacker & Lomax, 1996).

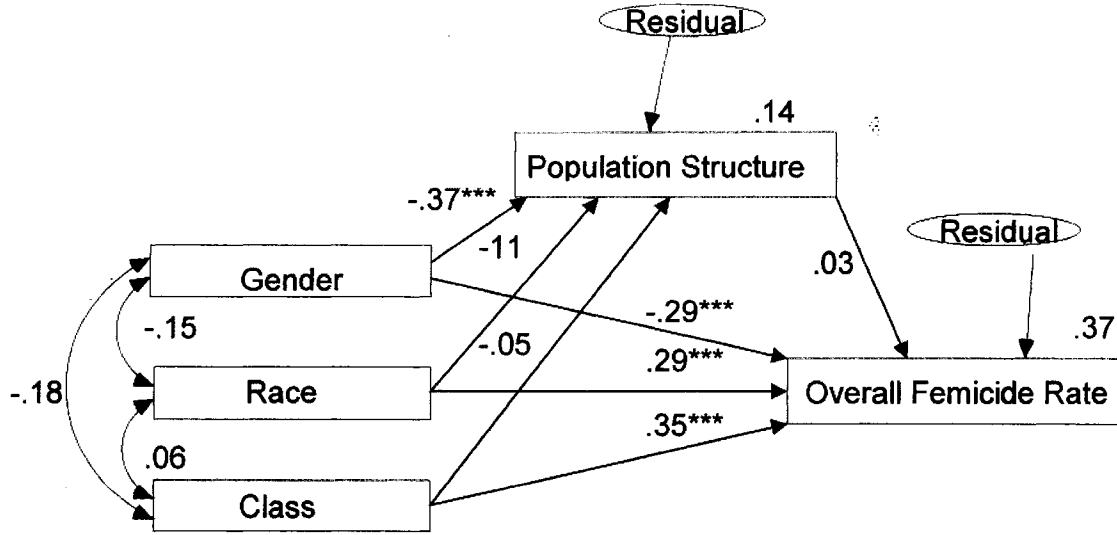


Table 10. Decomposition of Standardized Predictive Effects For Overall Femicide Rate

Predictive Variable	Endogenous Variable	
	Population Structure	Femicide Rate
<u>Gender</u>		
Direct effect	$-.37^{***}$	$-.287^{**}$
Indirect effect via Population Structure	-	$-.013$
Total effect	-	$-.30^{**}$
<u>Race</u>		
Direct effect	$-.11$	$.288^{**}$
Indirect effect via Population Structure	-	$-.004$
Total effect	-	$.285^{**}$
<u>Class</u>		
Direct effect	$-.05$	$.351^{***}$
Indirect effect via Population Structure	-	$-.002$
Total effect	-	$.349^{***}$

Hypothesis 7 is not confirmed since the population structure is not a mediator of any of the predictors in this model. A mediator would exist if an indirect effect between a predictor and the femicide rate is significant, but the direct effect of that same predictor on the femicide rate is not significant. In this model, none of the indirect effects is significant. A significant indirect effect exists when both the direct effect of the predictor on the population structure is significant and the direct effect of the population structure on the femicide rate is significant (Cohen, 1983; Kline, 1998).

Hypothesis 8. A city's population structure will mediate the predictive effect of gender inequality, racial inequality, and class inequality on the femicide rate of black women. Standardized path coefficients are analyzed in this model (Schumacker & Lomax, 1996).

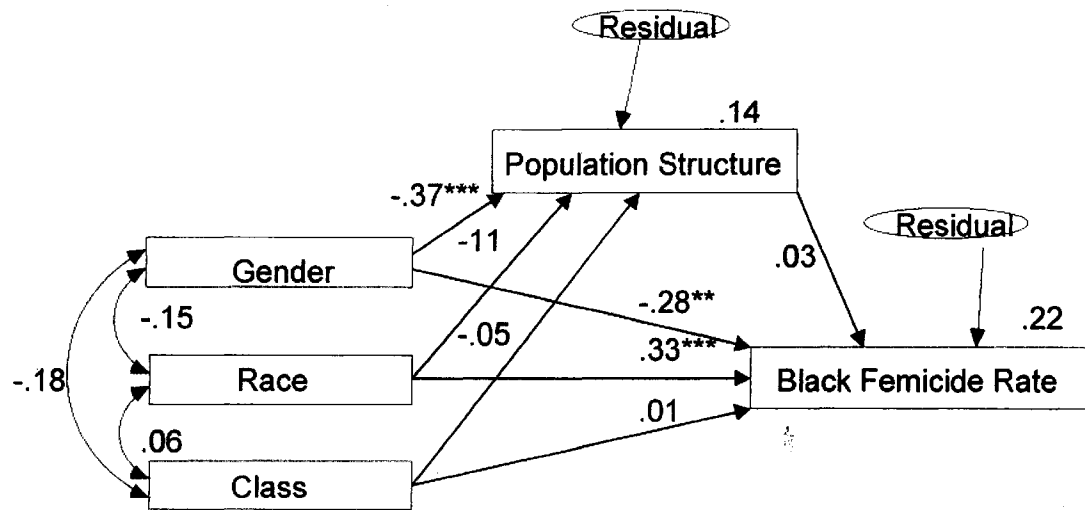


Table 11. Decomposition of Standardized Predictive Effects For Black Femicide Rate

Predictive Variable	Endogenous Variable	
	Population Structure	Femicide Rate
<u>Gender</u>		
Direct effect	$-.37^{***}$	$-.278^{**}$
Indirect effect via Population Structure	-	$-.011$
Total effect	-	$-.289^{**}$
<u>Race</u>		
Direct effect	$-.11$	$.327^{***}$
Indirect effect via Population Structure	-	$-.003$
Total effect	-	$.324^{***}$
<u>Class</u>		
Direct effect	$-.05$	$.007$
Indirect effect via Population Structure	-	$-.0016$
Total effect	-	$.006$

Hypothesis 8 is not confirmed since the population structure is not a mediator between any of the predictors and the black femicide rate. This is substantially the same result as for Hypothesis 7.

Hypothesis 9. A city's population structure will mediate the predictive effect of gender inequality, racial inequality, and class inequality on the femicide rate of white women. Standardized path coefficients are analyzed in this model (Schumacker & Lomax, 1996).

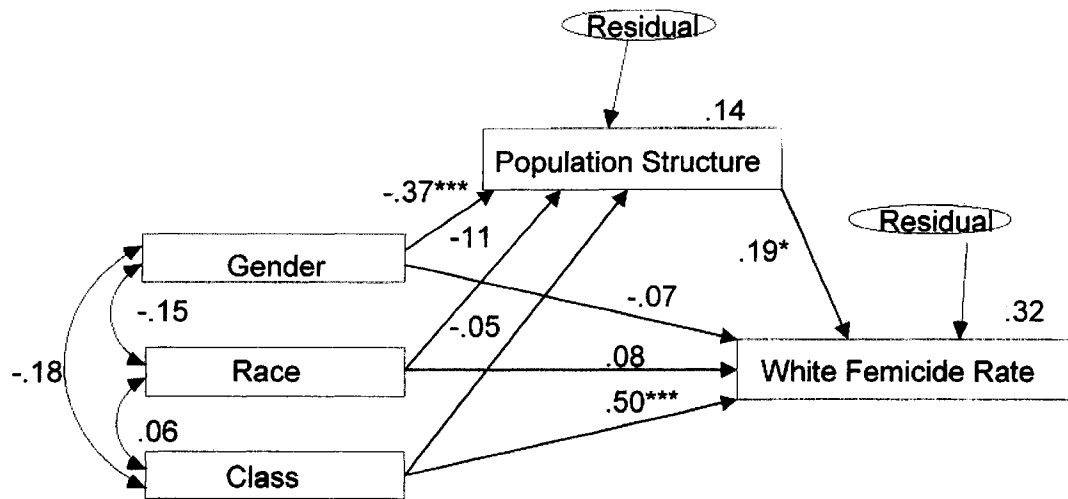


Table 12. Decomposition of Standardized Predictive Effects For White Femicide Rate

Predictive Variable	Endogenous Variable	
	Population Structure	Femicide Rate
<u>Gender</u>		
Direct effect	-.37***	-.071
Indirect effect via Population Structure	-	-.07*
Total effect	-	-.141
<u>Race</u>		
Direct effect	-.11	.076
Indirect effect via Population Structure	-	-.021
Total effect	-	.054
<u>Class</u>		
Direct effect	-.05	.50***
Indirect effect via Population Structure	-	-.01
Total effect	-	.492

Hypothesis 9 is confirmed for the gender inequality index only. A city's population structure mediates the predictive effect of the gender inequality index on the white femicide rate, so that the white femicide rate declines by a total of .141 standard deviations when the gender inequality index increases by one standard deviation and both the racial and class inequality indices are controlled. In this model, the indirect predictive effect of the gender inequality index on the white femicide rate through the population structure is significant because both the direct effect of the gender inequality index on the population structure and the direct effect of the population structure on the white femicide rate are significant. Since the indirect effect of the gender inequality index on the white femicide rate is significant, but the direct effect of the gender inequality index on the white femicide rate is not significant, the population structure index is a mediator variable in this model (Cohen, 1983; Kline, 1998). The mediating effect is to enhance the backlash effect of gender inequality on the white femicide rate.

#### Summary

Higher levels of race inequality and class inequality predict a higher overall femicide rate, but higher levels of gender inequality predict a lower overall femicide rate. This supports the gender backlash, racial inequality, and economic inequality theories. For the race-specific femicide rates, gender inequality has a backlash predictive effect for both the black femicide rate and the white femicide rate. In addition, higher levels of racial inequality predict a higher femicide rate for black women, but a city's overall class status (as compared to other cities) has no significant predictive effect. In contrast, a city's

higher class status, as compared to other cities, predicts a higher femicide rate for white women, but greater racial inequality has no significant predictive effect. The results confirm that the levels of a city's gender, race, and class inequality predict the variances in the femicide rates of both black women and white women. Furthermore, intersectional inequality (as measured by multiplying the gender, race, and class inequality indices) significantly predicts the fluctuations in the femicide rates.

Moreover, the population structure mediates the predictive effect of gender inequality on the white femicide rate, but not on the black femicide rate. There is no other mediating predictive effect.

## CHAPTER 7

### DISCUSSION

This study tests whether the intersectionality theory can be used to empirically predict variations in the femicide rates across medium and large U.S. cities. It addresses femicide as a social phenomenon by examining the macro-social structural factors that predict the femicide rates of black women and white women. This research is one of many efforts to develop a complex view of violence against women grounded in the feminist perspective that women's lives are shaped by the interconnection of the multiple oppressions of gender, race, and class.

This approach has evolved over many years. During the abolitionist movement, black female abolitionists built a collective feminist consciousness that integrated their experiences as black women with aspects of gender inequality they shared with white women (Taylor, 1998; Truth, 1972). Later, the General Federation of Colored Women's Clubs organized around the dual oppressions of race and gender (St. Pierre Ruffin, 2004). That point of view reemerged in the 1960s and 1970s when feminists of color rejected the idea that women of color must decide whether they are more discriminated by racial oppression or gender inequality. Their position is that the multiple, interlocking oppressions of race, gender, and class, and not gender alone, race alone, or class alone, shape the identity, status, and life experiences of women of color (Beale, 1970; Cade, 1970; Combahee River Collective, 1983; Davis, 1983; hooks, 1989; Lindsay, 1970; Lorde, 1984; Reid, 1976; Vidal, 1971).

Several theorists, such as Collins (1990) and Crenshaw (1991), applied this outlook to explain violence against women of color. Crenshaw created the term “intersectionality” to describe how the interconnecting aspects of women’s complicated lives sometimes merge in violence. According to the intersectionality perspective, gender inequality intersects with other structures of power and oppression, such as racial inequality and class exploitation, to explain violence against women of color. Wing (2003) suggests that the identities of women of color be multiplied together, not added together, to create a holistic identity when analyzing discrimination against them. Women live within social contexts where their attitudes and behavior are a response to community situations so that the community’s characteristics and structures affect their risk of becoming a homicide victim.

The concept of intersectionality has been applied to white women, who also experience multiple oppressions. Although racial oppression is not experienced by white women, they do experience privilege based on their race. Fine and Weis (1998) have explored the role of violence in the lives of poor and working-class white women.

The first model in this study measures gender inequality, racial inequality, and class inequality as potential predictors of the variances in overall femicide rates, black femicide rates, and white femicide rates. Each of these constructs is comprised of several variables based on previous research. The second model compares the predictive effects of intersectionality and gender inequality on the variances in overall femicide rates, black femicide rates, and white femicide

rates. Intersectionality is operationalized by multiplying together gender inequality, racial inequality, and class inequality in accordance with Wing's (2003) multiplicative identity theory. The final model measures whether a city's population structure mediates between the structural predictors and the femicide rates.

This study draws from previous studies that have studied the effects of social structural factors on rape, violence against wives, and femicide. Generally, those studies tested gender equality theory, which suggests that violence against women will decline as women's status in society increases. Stated differently, greater gender inequality should lead to increased violence against women. However, some studies found that there was a more complicated relationship between the status of women in society and the levels of violence against women. Instead of reducing violence against women, increased gender equality resulted in more violence, possibly due to men feeling threatened by the growing equality of women (Whaley & Messner, 2002). This gender backlash theory asserts that increased gender equality can result in increased violence due to men fearing that the improvement in women's status would threaten their own social power. Men may use violence to maintain dominance over women who want to be more independent of men (Russell, 1975; Whaley, 2001; Whaley & Messner, 2002). Backlash can also be explained as the response to increased stress and conflict created by pro-woman policies and programs. When a man's normative goal of power and control is threatened, his frustrated attempts to achieve those goals may lead to severe, and

sometimes lethal, attempts to regain control (Dugan, Nagin, & Rosenfeld, 2000; Wells & DeLeon-Granados, 2004).

Violence against women studies have had inconsistent results. No two studies used the same variables measured in the same way. By changing the variables, even slightly, the outcomes differed. Inconsistent findings in aggregate level homicide research have been attributed to collinearity problems (see Land et al., 1990). To avoid these problems, this study uses principal components analysis to create indices of the structural factors. Although using this methodological technique limits the ability to explore the effects of structural inequality as separate independent variables, it produces diverse components that reflect theoretical constructs in each of the femicide models.

Another problem with prior studies is that they have focused only on limited socio-economic variables to the exclusion of political or legal variables to measure women's status in society. Moreover, none of these studies considered the interconnections between gender inequality, racial inequality, and class inequality.

This study uses indices of gendered socio-economic and political variables, which measure different aspects of women's lives. It also measures socio-economic and political racial inequality as well as class inequality in an effort to explain the integration of several areas of women's lives. The earlier conflicting studies highlight the problem of compartmentalizing women's lives. Focusing on a small slice of gender inequality distorts the bigger picture. This

study is merely the beginning of disentangling the various areas of women's lives as they may lead to the risk of becoming a homicide victim.

Before discussing the results from the path analyses, problems with the data need to be addressed. Initially, this study was to investigate the femicide rates of white women, black women, Latinas, Asian women, and Native American women. While the total femicide rate may indicate overall lethal violence against women, disaggregation of homicide into more specific and homogenous subgroups improves our understanding of significant factors related to homicide victimization (Flewelling & Williams, 1999). Because women of different races are differently situated in society and differently affected by homicide, disaggregation of the femicide rates by race is a way to better understand the patterns of femicide (Messner & Rosenfeld, 1999). The femicide rates among minority, young, and low socioeconomic status women are higher than for others, but researchers have yet to disentangle the multiple influences (McClain, 1982; Mercy & Saltzman 1989; Moracco et al., 1998). Disaggregation was possible for only black women and white women in this study. First, the numbers of murdered Asian and Native American women were too few to be able to conduct a meaningful aggregate-level analysis. Further, the femicide rate of Latinas could not be explored because several cities in the sample did not report the ethnicity of the victims. Those cities included Philadelphia, Chicago, and New York, which have significant numbers of Latinas. Because of those data problems, this study investigates only the femicide rates of black women and white women.

## Conclusions

The conclusions of this research supplement the existing literature and contribute to a more complete understanding of the complexity of femicide as a social phenomenon. This analysis finds that intersectionality predicts the variances in the overall femicide rates as well as the femicide rates of both black women and white women. Cities that have greater intersectional inequality (as compared to other cities) have higher femicide rates.

In addition, higher overall femicide rates are predicted by a city's higher levels of racial inequality and class inequality (as compared to other cities), but a lower level of gender inequality. In other words, the overall femicide rate is greatest in those cities that have high levels of racial discrimination, and low class status, but where women have gained a higher gender status (as compared to other cities). These significant, moderate predictors account for 37% of the variance in the overall femicide rates. The findings support the gender backlash, racial inequality, and economic inequality theories.

When the structural factors are examined more closely, there are substantial differences between the predictors of the black femicide rates and the predictors of the white femicide rates. This study finds that more black women and white women are murdered in cities where women have gained greater gender status compared to other cities. This indicates a backlash against women gaining a higher status in society. In other words, higher femicide rates may be a result of men using violence against women who are becoming more independent of men.

In addition, greater racial inequality in a city (compared to other cities) predicts higher overall and black femicide rates, but has little effect on the white femicide rate. This supports the racial inequality theory, which suggests that greater racial inequality means higher homicide rates for black people. The findings also suggest that white women are not protected by their racial status.

A city with a lower socio-economic class status (as compared to other cities) will have higher overall and white femicide rates, but there is no effect on black femicide rates. To be clear, the class inequality index measures a city's overall level of socio-economic status compared to other cities, regardless of race, whereas the racial inequality index includes social and economic variables. This means that the femicide rate of black women is predicted by the level of social and economic inequality of a city's black population relative to its white population, but not by a city's overall class status relative to the class status of other cities. A possible explanation for these findings may be that the racial composition of most of these cities may be predominantly white, so that a city's class status may be more relevant to the white femicide rate than to the black femicide rate. This suggests a need for further research on the effect of class, both economic and social, on femicide rates.

Finally, a city's population structure is a mediating factor for only gender inequality as a predictor of the white femicide rate in that it shrinks the backlash effect. There are no other mediating effects in this study.

## Contributions to the Research

This study fills a void in the homicide literature, specifically in the femicide literature, by adding to the research in several ways. Until recently, empirical homicide studies have almost exclusively focused on men, either as perpetrators or victims. When women have been studied in relation to homicide, those studies have largely been descriptive studies or have focused on women as offenders. Even empirical research on intimate partner homicide, which disproportionately affects women, has not generally been disaggregated by the victim's gender.

This study contributes to the literature by continuing a line of research that examines the structural effects of gender inequality, racial inequality, and class inequality on femicide rates. The most significant way this study contributes to the knowledge about women's homicide victimization is that it takes a multi-institutional focus. It examines the relationship among the femicide rates, gender inequality, racial inequality, class inequality, and population structure in a path analysis. None of the previous studies has examined these inequalities in a single model.

Crenshaw (1991) states that women of color intersect differently with gender, race, and class than do white women so that their experiences with violence are different. This study supports that idea. While intersectional inequality and gender inequality predict the variations in the femicide rates of both black women and white women, albeit in opposite directions, a city's greater racial inequality (as compared to other cities) predicts higher black femicide

rates, with little or no effect on white femicide rates, and a city's lower class status (as compared to other cities) predicts higher overall femicide rates and white femicide rates, with little or no effect on black femicide rates.

This research reinforces the idea that women face multiple oppressions that may lead to their murder. Research focusing on gender oppression alone has obscured the reality of women's complicated lives. Greater racial oppression of black women, including economic, social, and political discrimination, and greater class oppression of white women are predictors of higher femicide rates. A woman's social context combines interconnecting systems of power (patriarchy, racial hierarchy, and capitalism) and oppression (sexism, racism, and classism). Oppression is more than a lack of equal rights. Hierarchical power relations create and maintain a society where those people with greater power control those with lesser power. In a society where wealthy white men hold the power, women are devalued, black people are considered dispensable, and working class people<sup>20</sup> are relegated to the lower rungs of society. U.S. society embodies a stratified system that maintains a social climate within which violence against women is a manifestation of the power relations between men and women, between white people and black people, and between the wealthy and working people.

Gender backlash, which results in more women being murdered as women gain greater gender status, indicates that our society needs to go beyond

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<sup>20</sup> Working class people are those who work for a living by selling their labor to an employer. This group has also been called middle-class, which is an imprecise term that is over-used as a description of a wide variety of people at disparate economic levels.

equal rights for women. While women have gained greater access to college and better jobs, the message of current popular culture is that women cannot, and should not, have it all. Instead, women are told that they must choose between having a family and a career, and a traditional family with traditional gender roles is more acceptable. Moreover, popular films, advertising, and music videos tell men and women that women exist to be sex objects. Even violence against women is rampant in popular culture.

Our society needs to establish that violence against women is not acceptable behavior. There should be a zero-tolerance policy against all violence against women, which includes sexual harassment, acquaintance rape, and the portrayal of women as sex objects. Social hierarchies cannot condone violence against women if the level of femicides are to decline.

Yet, gender hierarchical relations are only one part of the femicide puzzle. The more racial inequality in a city, the higher the femicide rate of black women. White women are neither helped nor hindered by changes in a city's level of racial discrimination against the black population, which indicates that they do not experience protection based on their racial status. According to Crenshaw (1991), racism is linked to patriarchy to the extent that racism denies men of color the power and privilege enjoyed by white men. This may explain why the black femicide rate is higher in those cities where women gain greater status than men but black people experience higher levels of racial discrimination. Since most femicides are intraracial (Blau & Blau, 1982; Parker, 2001; LaFree,

1999; Moracco et al, 1998), most black women are murdered by black men, who may be threatened by the rising status of women while being held down socially, economically, and politically by racial oppression. Oliver (2000) suggests that blocked opportunities lead many black men to direct their anger against society toward their intimate partners.

To address the high levels of black women being murdered, a comprehensive social policy that promotes racial equality for black women and black men relative to white women and white men will begin to eliminate the social, economic, and political disparities between black people and white people, which in turn should result in lower femicide rates for black women.

Cities with a lower overall class status (as compared to other cities), regardless of racial makeup, have higher white femicide rates. The level of black femicides is not affected by changes in a city's class status. These findings suggest that white men, who are the majority of perpetrators against white women (Blau & Blau, 1982; Parker, 2001; LaFree, 1999; Moracco et al, 1998), may be more oppressed by class status than helped by racial privilege. To lessen the number of white women who are murdered, a city's social and economic health must improve. More jobs, better jobs, less poverty, and more people graduating from college should lead to fewer murders of white women.

#### Limitations of the study

There are several limitations in this study. First, the cross-sectional design does not allow for a distinction between short-term and long term consequences of changes in a city's gender, race, and class statuses. It only

allows for a snapshot comparison among cities during a four-year period. Just as the results of longitudinal rape studies (Bailey, 1999; Whaley, 2001) suggest that there may be a more complicated relationship between gender status and rape rates, longitudinal femicide studies should improve our understanding of the murder of women.

Another limitation is that this study does not include the femicide rates of Latinas because several cities in the sample did not report the Latino ethnicity of homicide victims during the years considered. Generally, the SHR reports race (e.g., black, white) as well as ethnicity (Hispanic, non-Hispanic), but several cities in this sample did not report the ethnicity of homicide victims. In addition, the femicide rates of Asian and Native American women are not examined because there were so few reported femicides of these women that identifying any meaningful patterns would be difficult in this aggregate-level analysis.

Further, some cities did not report homicides for all the years involved in this research. To alleviate that problem, the femicide data are gathered for four years, 1998 through 2001, then averaged and expressed on a per-year basis. Nevertheless, the homicide data may not be totally reliable.

Another important limitation is that the circumstances of the femicides and the victim-offender relationships are not disaggregated in this analysis. Disaggregation is important because the predictors of femicides of women murdered by intimate partners may be different from predictors of femicides of women by family members or friends or strangers. To more fully understand

femicide, the victim-offender relationships, motivations, and circumstances need to be investigated.

This research highlights the problem of empirically testing intersectionality, which is a theoretical construct that emerged from critical legal discourse. Wing (2003) suggests that the interconnecting oppressions be multiplied together to create a holistic identity. Although this multiplicative approach, which was used in this research, is preferable to an additive approach, it masks any nuanced patterns that may exist. Possibly using a different statistical methodology, such as hierarchical linear modeling, may allow for a more complete analysis.

Finally, the results of this study may not be generalizable to smaller cities, suburban areas, or rural areas. Instead, they can only be interpreted as applying to the cities in this sample.

#### Suggestions for Future Research

More research and discussion concerning the effect of interlocking oppressions on femicide rates will advance this area of study. This research is only the beginning of the effort to disentangle the multi-faceted relationships among gender, race, class, and femicide.

Future research needs to include longitudinal studies as well as studies that disaggregate femicide by victim-offender relationships and by the motivations of the perpetrators. Longitudinal studies may allow for a greater refinement of analyzing the short-term and long-term social conditions that explain the complexities of femicide. Further, by examining the differences and

similarities among the types of femicide, researchers may gain a better understanding of femicide, promoting more effective policies (e.g., types of programs, services, and interventions to be developed).

An important area of future research is to explore alternative statistical methodologies to empirically test how the multiple oppressions women experience are related to femicide. Criminal justice research will be enhanced by the development of alternative methods that explain these macro-level social structural factors that relate to the levels of femicide.

While this research is an important piece of the femicide puzzle, it is only the beginning of the process of understanding the predictors, causes, and risks of femicide.

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