

Understanding Homicide Dynamics: The Role of Victim-Offender Relationships and the Event Circumstances across Demographic Groups

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This study investigates how the victim-offender relationship relates to the circumstances under which homicides occur, with the main focus on variations within gender, race, and age categories. To achieve these research objectives, we analyzed over forty years of data from the FBI's Supplementary Homicide Reports (1976–2017), reported by the U.S. law enforcement agencies. The findings that emerged in this study show that offenders are more likely to kill victims of the same gender when taking into account the victim-offender relationships. Furthermore, this study shows that black offenders are more likely to kill acquaintances and intimate partners whereas white offenders demonstrated a higher likelihood of committing homicide against family members. Notably, the critical age category for homicides that occurred between family members was 21 to 30.

Keywords: Homicide, victim-offender relationship, homicide circumstances, gender, race, age.

Introduction

Victim-offender relationships (VOR) are key factors in the formation of criminal investigative strategies and the effectiveness of investigations. Investigators' assessments of VOR may determine early investigative actions and the deployment of resources. For example, a crime scene that suggests the perpetrator was admitted into a home and stabbed the victim from behind with little struggle or defensive action may suggest to investigators a much different suspect than if the crime scene suggests the perpetrator broke into the home and stabbed a struggling victim who incurred several defensive wounds. An appreciation of VOR can help shape investigations and enhance our understanding of crime.

Since the 1990s, homicides in which the relationship between the victim and offender is unknown have become the largest category of cases in the United States. During this period, for cases where the relationship is known, 22% of victims were killed by strangers (Cooper & Smith, 2011). Additionally, there is a consensus that there is a strong link between intimate partner violence and homicide (Fox & Allen, 2014; Garcia et al., 2007). It is also commonly accepted that women are much more

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likely to kill an intimate partner than are male offenders (Jordan et al., 2012). Cooper and Smith's (2011) study suggests that among cases in which the relationship between the victims and offenders are known, the victim is more than twice as likely to be an acquaintance of the offender rather than an intimate partner. Homicides between acquaintances are also more likely to involve weapons than homicides between intimate partners and family members (Cooper & Smith, 2011). In more recent studies, it is suggested that the victim-offender relationship in domestic-related homicides also affect the media attention (Wong et al., 2021). Domestic-related homicides that involve family members or intimate partners, are often underreported in the media unless they involve extreme circumstances or public figures. These cases are often reported briefly, if at all, which can contribute to underrepresentation of certain types of violence in public discourse (Sorenson & Wilson, 2020; Avalos et al., 2024; Correia & Neves, 2024).

In the current study, we examine the circumstances under which homicides are most likely to occur, with a particular emphasis on the relationship between victims and offenders. We investigate how different types of relationships—such as intimate partners, family members, acquaintances, or strangers—shape the context and dynamics of fatal incidents. This includes exploring factors such as situational triggers that vary by relationship type. Additionally, we analyze how demographic characteristics of the offenders, including age, gender, and race, intersect with these relationships and circumstances, influencing both the likelihood and nature of homicide.

Homicide and Age

Age has been among the most widely studied variables for its influence upon crime rates, and there has been a longtime consensus amongst criminologists that a disproportionate number of crimes are committed by young offenders (Kanazawa, 2003; Brown & Males, 2011; Brame & Piquero, 2003; Cuervo, Villanueva, Gonzales, Carrion, & Busquets, 2015). In a study of homicide data for the United States from 1990-2008, Cooper & Smith (2011) found that young adults, aged 18-24, consistently had the highest rates of offending, and that those rates increased during that period of study. Uniform Crime Report (UCR) data for 2018 also show that more than 51% of homicide victims were between the ages of 17 and 34, while nearly 64% of known homicide suspects fell within that same age range (Federal Bureau of Investigation [FBI], 2018). An early longitudinal study conducted by Decker (1993) shows that the victim's age was within five years of the suspect's age in 45% of cases, the victim was more than five years older in 33% of cases, and more than five years younger 21% of the time (Decker, 1993). Studies have indicated an overall increase in gang-related homicides in recent decades, and that nearly a quarter of gang-related homicide victims are under the age of 18 (Cooper & Smith, 2011). While most gang homicides and domestic homicides occur between suspects and victims similar in age, most killings of small children (age 5 and under) or the elderly (age 65 or older) do not. Furthermore, research shows that 86% of homicides of small children are committed by either a parent or a male acquaintance. Elderly

victims are more likely than younger victims to be killed during the commission of a felony offense such as burglary or robbery (Cooper & Smith, 2011).

Homicide and Gender

As with age, the gender of both the suspects and the victims in homicide cases has also been widely studied. UCR data show that, of the 11,749 homicides reported in the United States in 2018 in which the gender of the suspect was known, nearly 88% were committed by males. Those same data show that, of the 14,094 homicides reported in which the gender of the victim was identified, more than 77% of the victims were male (FBI, 2018). A consensus found in several studies holds that women who commit homicide often target an intimate partner (most commonly a man, and often an abuser), while this is much less common amongst male offenders (Jordan, Clark, Pritchard, & Charnigo, 2012; Jurik & Winn, 1990). A study of homicides in St. Louis found that 82% of the cases in which women killed men involved either intimate partners (59%) or acquaintances (23%) (Decker, 1993). Furthermore, research shows that male offenders are much more likely than women to kill acquaintances or strangers than someone involved in intimate relations (Haynie & Armstrong, 2006). Cooper and Smith (2011) found that while women are more likely to be the victims of intimate partner and sex-related homicides, men are the victims in nearly 95% of all drug-related homicides. Research also shows that women who kill are more likely to use a weapon or to catch their victims (most commonly males) incapacitated, while male offenders are more likely to use sheer physical force against their victims (Jurik & Winn, 1990).

Moreover, research indicates that women, overall, commit a relatively small proportion of homicides compared to men, but when female-perpetrated homicides do occur, they often have distinct characteristics and contexts. Female offenders are more likely than men to kill intimate partners or family members, and their actions are frequently linked to situations of reactive violence or prolonged abuse, rather than predatory or instrumental violence, which is common in male perpetration (Jurik & Winn, 1990; Crosland et al., 2025). Studies of specific offender subgroups, such as female sexual homicide offenders, demonstrate meaningful variation in victim-offender relationships, racial patterns, and offense circumstances, suggesting that women's lethal violence is not homogeneous but shaped by situational and demographic factors (Chan et al., 2024). Furthermore, research from comparative analyses shows that female homicide offenders are often socioeconomically marginalized, and may have histories of psychological distress or abuse, which can influence both motives and legal outcomes (Turanjanin, 2025). These gendered patterns underscore the importance of examining female-perpetrated homicides on their own terms rather than assuming they mirror male offending dynamics.

Homicide and Race

Homicide data in the United States has consistently shown that young black males are more likely to be involved in homicides, as either victims or offenders, than young Hispanic males or young white males, who are the least likely (Phillips, 2002). Rogers, Rosenblatt, Hummer, and Krueger (2001) in their study found that the risk of homicide mortality decreases with age more for blacks than for whites. They also found that, while blacks are 7.7 times more likely than whites to be killed at age 18, they are only 1.4 times more likely to be killed by age 75. This shows that as age increases, the probability of getting killed decreases. Moreover, in the United States, it is most common for homicide victims and offenders to be of the same race (Avdija, Gallagher, & Woods, 2021). Between 1980 and 2008, about 84% of white victims were killed by whites, and 93% of black victims were killed by blacks (Cooper & Smith, 2011). According to Light and Ulmer (2016), two explanations for the racial disparity in homicide statistics were gun availability and the size of the crime-prone population within each demographic. Statistics also indicate that while approximately 90% of friend or acquaintance homicides occur within the same race, more than 25% of stranger homicides are interracial (Cooper & Smith). This is consistent with Decker's (1993) study that shows white homicides are more likely to occur between those whose relationships are more intimate, while black homicides more commonly occur between those whose relationships are more distant (Decker, 1993).

Furthermore, prior research indicates that race differences in homicide victimization and offending are influenced not only by individual behaviors but also by broader structural factors. Socioeconomic disadvantage, residential segregation, limited access to quality education, and concentrated poverty can increase exposure to violent environments and opportunities for criminal behavior (Sampson & Wilson, 1995; Peterson & Krivo, 2010). Additionally, systemic inequalities in policing, employment, and social services also contribute to persistent disparities in homicide rates among racial groups (Peterson & Krivo, 2010). Neighborhood social disorganization, including weak social cohesion and limited informal social control, have been linked to higher homicide rates, particularly in predominantly minority communities (Sharkey, 2018). Structural racism, such as discriminatory housing policies and labor market inequities, further exacerbates these disparities by constraining life opportunities and increasing vulnerability to violence (Clear, 2007). Understanding these structural factors is essential for interpreting patterns in victim-offender relationships and developing interventions that address the root causes of racial disparities in homicide.

Current Study

As stated in the introduction, this study examines four outcomes associated with victim-offender relationships in homicide cases. We focused the analyses around two main objectives. The first objective of this study is to examine if there is a difference between the circumstances in which homicides occur and the

relationship between the victim and the offender. In other words, we attempt to answer the following question: under what circumstances are certain types of homicides more likely to occur? The second objective focuses on examining the victim-offender relationship and the influence of the offender's gender, race, and age.

Methodology

The Data

In this study, we examined the entire forty years database (1976 to 2017) of the FBI's supplementary homicide reports (SHR) that were reported by the law enforcement agencies across the United States. Although these data come with many limitations, still the FBI's SHRs provide more detailed homicide reports than the Uniform Crime Reports (UCR), which are basic summaries of cases. The SHR includes demographic data for individual cases and for both victims and offenders (BJS, 2014; Pizarro & Zeoli, 2013). The analyses in this study are based on 769,753 total homicide cases that were reported and recorded by the FBI.¹ The actual data set includes information for 513,863 offenders and 757,801 victims in total. The homicide victims included in these reports ranged in age from less than 1 year old to 99 years old ($M = 32.8$, $S.D. = 16.13$). Most of the homicide victims (68%) were less than 37 years of age. By race, 49.9 % of the victims were white, 47%1% were black, 1.4% Asian or Pacific Islanders, 0.7% were Native Americans or Alaskan Natives, and for 1.1% of the victims, the race was not reported or recorded. By gender, 77.4% of homicide victims were males and 22.4% were females. For 0.2% of the cases, the gender was not reported. Those cases were coded as missing data. The average age for the known homicide offenders, on the other hand, was 30.9 ($S.D. = 12.93$), which is slightly younger than the average age of homicide victims. Most of the known offenders (68%) were less than 34 years of age. By race, 34.5% were white, 33.9% were black, 0.9% were Asian or Pacific Islanders, 0.6% were Native Americans or Alaskan Natives, and for 30.4% of the cases, the race of offenders was recorded as unknown. By gender, 87.7% of known offenders were males and 12.3% were females. For 29.4% of the offenders, the gender was unknown, which means that a significantly large number of homicide cases are never solved (Avdija & Akgul, 2020). For research purposes, it is noteworthy that the SHR reports offer categorical data only, which comes with an inherited limitation in terms of the type of analysis that one can perform on these data.

For this study, the categorical data were re-coded into dichotomous variables with *Yes/No* response categories. The age variables for the offenders were re-coded into seven categories each. Furthermore, for the current study, we were particularly interested in examining nine types of circumstances during which homicides took

¹Approximately 30% of all homicide cases are never solved by the police in the USA, which means that the gender, race, and age of offenders for those unsolved cases remain unknown (Avdija et. al, 2021). In this research article, we did not include missing cases in the analyses because, by definition, those cases involve unknown offenders for which we cannot draw associative or inferential conclusions.

place. Namely, arson, robbery, burglary, rape, gang-related homicides (e.g., gangland killings and juvenile gang killings), drug offenses, and homicides that occurred during brawl due to the influence of alcohol or narcotics. The rest of the circumstances (e.g., crime types) were not included in the analysis. Also, it is worth mentioning that the analyses in this study include cases for which the information was available. Cases that had missing information or had partial information were included only for the portion of the information that was available for analysis. For example, cases in which the offender's gender was unknown were not factored into the total because, by definition, that information was missing.

Measures of the Variables

The dependent variables in this study were the annual homicide cases combined for a period of forty years. This included both instrumental homicides and expressive homicide cases. For the correlates of homicides in this study, we included three groups of variables. In the first group, we included nine types of circumstances in which homicides occurred, each with a significantly large number of cases. Those circumstances were arson-related homicides (n=4,581), burglary-related homicides (n=6,400), robbery-related homicides (n=59,716), rape-related homicides (n=4,191), gangland-related homicides (n=4,845), juvenile gang-related homicides (n=24,040), drug-deal-gone bad homicides (e.g., drug offenses, n=28,823), and homicides that occurred as the result of brawls due to the influence of alcohol (n = 16,143), or narcotics (n=5,149). All these variables were re-coded dichotomously with Yes, *coded 1*, and No, *coded 0* response categories.

The independent variables that we included in the analyses were the offender's race, offender's gender, and offender's age. The race was coded categorically using the following categories: American Indian or Alaskan Natives, *coded 1*, Asian or Pacific Islanders, *coded 2*, Blacks, *coded 3*, Whites, *coded 4*, and race unknown, *coded 5*. Gender was coded dichotomously with 1 for males and 0 for females, and age was measured in continuous years. However, age as a continuous variable did not serve a useful purpose for the cross-tabulation analysis, so we decided to re-code it into seven categories: 0-14 (1.2%) *coded 1*, 15-20 (20.5%) *coded 2*, 21-30 (37.4%) *coded 3*, 31-40 (20.9%) *coded 4*, 41-50 (11.1%) *coded 5*, 51-60 (5.3%) *coded 6*, and 61-99 (3.5%) *coded 7*. This re-coding allowed us to examine patterns in the data more systematically across different age groups. After conducting preliminary analyses using frequency counts for these age categories, we observed that some categories contained disproportionately high or low numbers of cases, which could potentially bias subsequent analyses. To address this issue and achieve a more balanced distribution across categories, we decided to organize the age variables into increments of 10 years (with the exceptions of the first two categories). This approach ensured that each age category contained a more comparable number of cases, improving the reliability and interpretability of our frequency-based analyses.

The third group of variables defines the relationship between homicide victims and the offender. We included fourteen types of victim-offender relationships in this study. These fourteen variables can be further classified into four sub-categories; namely, intimate relationship, acquaintance, friends/neighbors, and strangers.

However, the analyses are computed and reported for each of the fourteen variables independently. The main reason for not grouping these types of relationships was to develop a more comprehensive and accurate estimate of the effects of the victim-offender relationship on homicide cases, which were measured in the form of differences within-groups and between-groups. Most prior studies have grouped victim-offender relationships into four groups (Fridel & Fox, 2019; Pizarro & Zeoli, 2013; Liqun Cao, Hou, & Bu Huang, 2007; Decker, 1993; Kennedy & Silverman, 1990; Kratcoski, 1990). Some studies have even grouped them as dichotomies with only two groups, e.g., non-strangers vs. strangers (Messner & Tardiff, 1986) or primary vs. secondary (Smith & Parker, 1980; Drawdy & Myers, 2003). This will not do enough justice to the accuracy of within-group differences. Our study, therefore, offers a much broader list of categories that prior studies seem to have ignored so far.

Results

Homicide Cases by the Circumstance

Table 1 presents the results from the cross-tabulation analyses examining the type of victim-offender relationship and nine different types of circumstances in which homicides occurred. The data in Table 1 show that homicide killings between family members (i.e., when the victim is a brother, sister, son, daughter, father, mother, husband, or wife) are more likely to occur when the offender is under the influence of alcohol or narcotics. In fact, most homicide killing between family members are notably related to brawls due to the influence of alcohol. For instance, the influence of alcohol is responsible for 74.6% of the cases in which the wife kills her husband, 62.9% of the cases in which the husband kills his wife, 62.4% of the cases in which a brother or a sister kills his/her brother, and 38% of the cases in which a son or daughter kills the father. There is also a high percentage of homicide killings between family members that occur during an arson circumstance. On the other hand, when the victim is an acquaintance, a homicide is more likely to occur during a robbery (28.2%), also when a drug-deal goes bad (28.8%), or during brawls due to the influence of alcohol (20.9%). Furthermore, the data in Table 1 show that an offender is more likely to kill a friend (22.5%) or neighbor (38.9%) during a robbery or when he/she is under the influence of alcohol (33.5% and 14.5% respectively) compared to other types of circumstances. When the victim was a stranger, 60.5% of the homicide killings occurred during a robbery, 7.8% during a drug deal, and 11.1% were juvenile gang killings.

Table 1. *Examining Victim-Offender Relationship vs. the Type of Circumstances*

Homicide Victims	The Circumstance (Crime Type) During which Homicide Occurred									Total
	Arson	Influence of alcohol	Influence of narcotics	Burgle	Gang killings	Juvenile gang killings	Narcotic drug laws	Rape	Robbery	
Acquaintance	2.2%	20.9%	6.7%	3.2%	3.3%	4.0%	28.8%	2.7%	28.2%	100%
Boyfriend	3.0%	59.4%	8.4%	7.8%	0.0%	0.3%	9.9%	1.2%	10.1%	100%
Girlfriend	7.6%	39.2%	13.4%	8.4%	0.8%	0.3%	12.0%	9.5%	8.8%	100%
Brother	9.8%	62.4%	6.5%	2.8%	0.7%	0.2%	10.7%	0.4%	6.5%	100%
Sister	35.8%	16.3%	8.1%	8.1%	0.8%	0.8%	6.5%	10.6%	13.0%	100%
Son	37.9%	28.8%	19.1%	1.9%	0.0%	0.3%	9.1%	0.8%	2.2%	100%
Daughter	57.2%	12.8%	12.4%	0.8%	0.8%	0.0%	8.8%	6.4%	0.8%	100%
Father	10.7%	38.0%	9.7%	5.0%	0.7%	0.3%	7.3%	1.0%	27.3%	100%
Mother	24.3%	18.1%	14.4%	4.5%	0.0%	0.0%	7.0%	2.1%	29.6%	100%
Husband	7.1%	74.6%	5.2%	3.4%	0.2%	0.0%	4.7%	2.2%	2.5%	100%
Wife	13.0%	62.9%	7.2%	5.8%	1.2%	0.2%	6.5%	1.6%	1.6%	100%
Friend	1.9%	33.5%	6.2%	2.0%	2.0%	2.7%	26.6%	2.7%	22.5%	100%
Neighbor	11.1%	14.5%	1.7%	16.6%	0.5%	0.5%	3.7%	12.7%	38.9%	100%
STRANGER	1.6%	7.1%	1.2%	5.9%	2.1%	11.1%	7.8%	2.8%	60.5%	100%
Total Cases	2195	12973	3322	3934	2027	5945	13954	2426	35557	82333
Total %	2.7%	15.8%	4.0%	4.8%	2.5%	7.2%	16.9%	2.9%	43.2%	100%

Note: Row data – the data are compared for each row. Chi-Square = 29590.53, df = 104, p < .000

Homicide Cases by the Offender's Gender

The data in Table 2 answer the question: is there a relationship between the offender's gender and the outcome of homicide cases based on the victim-offender relationship? The cross-tabulation analyses in Table 2 show that gender is a deciding factor in the outcome of homicide cases. The comparison within the offender's gender shows that most homicide offenders were males (87.7%) and only 12.3% were females. When taking the victim-offender relationship into account, the most notable differences by gender are cases in which the brother kills his brother (91%) or his sister (80.9%) compared to cases in which the sister kills her brother (9%) or her sister (19.1%). These are followed by cases in which the son kills his father (89.2%) or his mother (83.7%) compared to cases in which the daughter kills her father (10.8%) or her mother (16.3%), and cases in which the father kills his son (60.4%) or his daughter (52%) compared to cases in which the mother kills her son (39.6%) or her daughter (48%). This means that fathers are more likely to kill their sons than daughters (9.4% difference); mothers are more likely to kill their daughters than their sons (9.6% difference). Brothers are more likely to kill their brothers than their sisters (9.1% difference), and sisters are more likely to kill their sisters than their brothers (10.1% difference). Additionally, sons are more likely to kill their fathers than their mothers (5.5% difference); and daughters are more likely to kill their mothers than their fathers. Moreover, 92.7% of homicide cases involving acquaintances as victims are committed by male offenders. Likewise, 96.6% of homicide cases in which the victims were strangers were committed by male offenders. What is predictive about these research results is the cross-gender expectation. Research shows that most offenders kill victims of the opposite gender, male offenders especially (Chan, 2013; Petrosky et. al., 2017). This is true when one takes into account gender only. However, when examining this difference within

the victim-offender relationship (i.e., homicides that occur between family members), there is evidence to suggest that female offenders are more likely to kill female victims, and vice versa. In other words, offenders tend to kill more victims within their own gender when taking into account the victim-offender relationship.

Table 2. *Examining Victim-Offender Relationship vs. Offender's Gender*

Homicide Victims	Within Relationship Comparison			Within Gender Comparison		
	Offender's Gender		Total	Offender's Gender		Total
	Female	Male		Female	Male	
Acquaintance	22.4%	40.0%	37.8%	7.3%	92.7%	100.0%
Boyfriend	17.4%	0.1%	2.2%	95.9%	4.1%	100.0%
Girlfriend	0.3%	5.5%	4.9%	0.7%	99.3%	100.0%
Brother	1.2%	1.8%	1.7%	9.0%	91.0%	100.0%
Sister	0.6%	0.4%	0.4%	19.1%	80.9%	100.0%
Son	9.6%	2.1%	3.0%	39.6%	60.4%	100.0%
Daughter	8.7%	1.3%	2.2%	48.0%	52.0%	100.0%
Father	1.2%	1.4%	1.4%	10.8%	89.2%	100.0%
Mother	1.7%	1.3%	1.3%	16.3%	83.7%	100.0%
Husband	23.8%	0.1%	3.0%	98.0%	2.0%	100.0%
Wife	0.3%	8.1%	7.2%	0.4%	99.6%	100.0%
Friend	4.4%	7.0%	6.7%	8.1%	91.9%	100.0%
Neighbor	1.3%	2.1%	2.0%	8.1%	91.9%	100.0%
STRANGER	7.1%	28.9%	26.2%	3.4%	96.6%	100.0%
Total Cases	48900	347470	396370	48900	347470	396370
Total %	100.0%	100.0%	100.0%	12.3%	87.7%	100.0%

Note: Percent (%) in Rows: The percentage that each cell represents within a table row. SPSS calculates the row percentage for each cell by dividing the cell count by the row total. Percent (%) in Columns: The percentage that each cell represents within a table column. SPSS calculates the column percentage for each cell by dividing the cell count by the column total. In Table 2, the percents for columns that represent the offender's gender "*Within Relationship Comparisons*" should be read in columns; whereas for the offender's gender "*Within Gender Comparison*" should be read in rows. (Chi-Square = 174384.70, df = 13, $p < .000$).

Homicide Cases by the Offender's Race

Existing research on cross-race relationships shows that offenders are more likely to target victims within their own race (Avdija et al., 2020; Cooper & Smith, 2011; Pallone & Hennessy, 2000). However, these studies did not look at the race differences within the victim-offender relationships. Thus, one of the objectives of this study is to answer the question: is there a relationship between the offender's race and the outcome of homicide cases based on the victim-offender relationship? To address this objective, the cross-tabulation analyses (between-races comparisons) are presented in Table 3, and (within-race comparisons) in Table 4. When comparing the cross-race effect on the victim-offender relationship in homicide cases (see Table 3), it becomes obvious that only two races are responsible for most homicide cases; namely whites (48.5%) and blacks (44.9%). Asians/Pacific Islanders (1.3%) and American Indians or Alaskan Natives (0.8%) represent a very small percentage of offenders involved

in homicide cases in the United States relative to the types of relationships that are included in this study.

When comparing homicides that occurred between family members in Table 3, the percentages are much higher for white offenders than for black offenders. For instance, black offenders are more likely to commit homicides when the victim is a boyfriend (64.4%) or an acquaintance (54.2%) than white offenders (32.3%, 41.5% respectively). On the other hand, whites are more likely to kill their fathers (69.6%), mothers (74.4%), wives (71.3%), sons (60.7%) and daughters (60%) than black offenders and offenders from the other races. Thus, the relationship type significantly correlates with the racial distribution of offenders in this homicide dataset.

Table 3. *Examining Victim-Offender Relationship vs. Offender's Race (between races comparison)*

Homicide Victims		Offender's Race					Total
		American Indian or Alaskan Native	Asian or Pacific Islander	Black	Unknown	White	
Acquaintance		1.0%	0.9%	54.2%	2.5%	41.5%	100.0%
Boyfriend		1.4%	0.7%	64.4%	1.2%	32.3%	100.0%
Girlfriend		1.0%	1.4%	46.3%	1.4%	49.8%	100.0%
Brother		1.8%	0.9%	43.8%	1.1%	52.5%	100.0%
Sister		1.4%	2.9%	34.0%	1.2%	60.5%	100.0%
Son		0.9%	2.1%	34.8%	1.5%	60.7%	100.0%
Daughter		1.1%	2.4%	34.9%	1.6%	60.0%	100.0%
Father		1.1%	1.2%	27.2%	0.9%	69.6%	100.0%
Mother		0.7%	1.9%	21.9%	1.1%	74.4%	100.0%
Husband		0.8%	1.0%	40.6%	1.0%	56.6%	100.0%
Wife		0.6%	2.2%	24.7%	1.3%	71.3%	100.0%
Friend		1.2%	1.3%	41.0%	2.1%	54.4%	100.0%
Neighbor		0.7%	0.8%	37.1%	1.2%	60.1%	100.0%
STRANGER		0.5%	1.4%	41.5%	11.0%	45.6%	100.0%
Total cases		3488	5146	184264	18438	199375	410711
Total %		0.8%	1.3%	44.9%	4.5%	48.5%	100.0%

Note: Row Data – the data are compared for each row. *Note:* Row % represents data within offender's relationships (e.g., cross-race comparison) – the data are compared for each row. (Chi-Square = 32185.51, df = 52, $p < .000$).

Table 4 presents the within-race distributions of homicide victim-offender relationships by offender's race (e.g., American Indian or Alaskan Native, Asian or Pacific Islander, Black, Unknown, and White). Each column in the table sums to 100%, indicating the proportion of homicide cases for each offender's race that fall into each relationship category (e.g., acquaintance, stranger, spouse, family). In Table 4, the examination of homicides within the victim-offender relationship by race (within-race comparison) shows that for nearly half of all homicide cases involving black offenders, the victims were acquaintances (44.9%), followed by strangers (25.9%), and then friends (5.9%). For white offenders, on the other hand, 31.8% of the victims were acquaintances, 26.2% were strangers, 10.2% of the victims were wives, and 7.3% were friends. For Asian/Pacific Islanders, 26.2% of the victims were acquaintances, 30.2% were strangers, 12% of the victims were

wives, and 7% were friends. For American Indian/Alaskan Natives, 42% of the victims were acquaintances, 18% were strangers, 9% were friends, and 4.5% of the victims were wives. Overall, these results show that, for all racial groups, a substantially large number of homicide victims were acquaintances (37.2% total, with the range scores from 20.7% to 49.9%), followed by strangers (27.9%) and wives (6.9%).

These data patterns suggest that, while non-intimate relationships (e.g., acquaintance, stranger) dominate homicide linkages across racial groups, white offenders in this dataset have a somewhat greater relative share of homicides in intimate or domestic categories (e.g., wife, girlfriend, etc.) and familial roles (e.g., son, daughter) than do black offenders. Conversely, black-offender homicides are more heavily concentrated in non-intimate relationships (e.g., acquaintance, strangers) than those of white offenders.

Table 4. *Examining Victim-Offender Relationship vs. Offender's Race (within race comparison)*

Homicide Victims		Offender's Race					Total
		American Indian or Alaskan Native	Asian or Pacific Islander	Black	Unknown	White	
Acquaintance		42.0%	26.2%	44.9%	20.7%	31.8%	37.2%
Boyfriend		3.7%	1.3%	3.1%	0.6%	1.4%	2.2%
Girlfriend		5.6%	5.4%	4.9%	1.5%	4.9%	4.7%
Brother		3.5%	1.2%	1.6%	0.4%	1.8%	1.6%
Sister		0.7%	0.9%	0.3%	0.1%	0.5%	0.4%
Son		3.2%	4.9%	2.3%	1.0%	3.6%	2.9%
Daughter		2.8%	4.1%	1.7%	0.8%	2.7%	2.2%
Father		1.7%	1.3%	0.8%	0.3%	1.9%	1.4%
Mother		1.1%	1.9%	0.6%	0.3%	2.0%	1.3%
Husband		2.7%	2.4%	2.6%	0.6%	3.4%	2.9%
Wife		4.5%	12.0%	3.8%	2.0%	10.2%	6.9%
Friend		9.0%	7.0%	5.9%	3.0%	7.3%	6.5%
Neighbor		1.7%	1.3%	1.6%	0.5%	2.4%	2.0%
STRANGER		18.0%	30.2%	25.9%	68.3%	26.2%	27.9%
Total cases		3488	5146	184264	18438	199375	410711
Total %		100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Note: The data are compared for each column. Note: Column % represents data within offender's race (e.g., total number of homicides within victim-offender relationship vs. specific race) – the data are compared in each column. (Chi-Square = 32185.51, df = 52, $p < .000$).

Homicide Cases by the Offender's Age

Table 5 presents the data for the offender's age and the outcome of homicide cases based on the victim-offender relationship. The cross-age comparison in Table 4 shows that the most representative age category is 21 to 30 with 36.9% total. This means that 36.9% of all homicides were committed by offenders age 21 to 30. The second age category was 31 to 40 with 21.5%, followed by the 15 to 20 age category with 19.6%. When comparing the cross-age effect by the type of relationship, the most critical age category for homicides that occur between family members is 21 to 30. The data in Table 5 show that a father or mother is more likely to kill her/his

son (40.3%) or daughter (46.9%) when the offender is between the ages of 21 and 30 years old. Likewise, a son or a daughter is more likely to kill his/her father (35%) or mother (30.2%) when the offender is between the ages of 21 to 30 years old. On the other hand, the husband is more likely to kill his wife when the offender is between the ages of 31 and 40 years old (27.5%), which is the highest of all age categories. The wife is also more likely to kill her husband around the same age category (31.6%) compared to all other age categories. Furthermore, the data show that there is a linear decrease in the likelihood of homicide occurrence against mother/father after the offender reaches the age of 30. The same type of linear decrease by age is observed in all types of relationships.

The oldest age category (61 to 99 years old) is small in almost every relationship category, except in the wife-homicides. The data in Table 5 show that this age category represents 17.2% of all wife-homicides, which is relatively large percentage compared to other categories. This suggests that among offender ages 61 or older, spousal (wife) homicide is a non-negligible fraction of their relational offense pattern.

The overall observed patterns in Table 5 align with the established criminological understandings of the age-crime curve, which typically peaks in late adolescence and young adulthood and declines thereafter (Moffitt, 1993; Farrington, 1986; Ray & Jones, 2023; Steffensmeier et al, 2025). Younger offenders dominate violent crime and homicide involvement, particularly in non-intimate settings or among acquaintances and strangers.

Table 5. *Examining Victim-Offender Relationship vs. Offender's Age (between age groups comparison)*

Homicide Victims	Offender's Age							Total
	0 to 14	15 to 20	21 to 30	31 to 40	41 to 50	51 to 60	61 to 99	
Acquaintance	0.9%	21.8%	39.7%	20.5%	10.0%	4.6%	2.5%	100.0%
Boyfriend	0.2%	10.6%	38.9%	28.8%	15.5%	4.8%	1.3%	100.0%
Girlfriend	0.1%	7.8%	35.4%	28.2%	17.5%	8.1%	3.0%	100.0%
Brother	6.3%	19.3%	32.4%	20.1%	12.3%	6.4%	3.3%	100.0%
Sister	15.2%	23.1%	23.4%	12.8%	8.9%	8.5%	8.1%	100.0%
Son	0.4%	13.6%	40.3%	20.7%	11.5%	6.9%	6.4%	100.0%
Daughter	0.5%	15.2%	46.9%	22.4%	8.9%	3.6%	2.5%	100.0%
Father	4.6%	29.2%	35.0%	18.1%	8.9%	3.4%	0.7%	100.0%
Mother	3.1%	19.8%	30.2%	20.6%	14.6%	8.7%	2.9%	100.0%
Husband	0.0%	2.7%	26.2%	31.6%	22.0%	11.3%	6.1%	100.0%
Wife	0.0%	0.8%	17.4%	27.5%	23.0%	14.0%	17.2%	100.0%
Friend	2.8%	21.7%	36.5%	20.0%	10.6%	5.4%	3.0%	100.0%
Neighbor	2.6%	15.8%	27.7%	20.9%	14.2%	9.4%	9.4%	100.0%
STRANGER	0.9%	27.2%	40.4%	19.0%	7.7%	3.0%	1.8%	100.0%
Total	4304	74983	141424	82322	43928	21280	14580	382821
	1.1%	19.6%	36.9%	21.5%	11.5%	5.6%	3.8%	100.0%

Note: Row % represents data within the offender's relationships (e.g., between age groups comparison) – the data are compared for each row. (Chi-Square = 55367.51, df = 78, $p < .000$).

When examining the total number of homicides within the victim-offender relationship by the specific age category in Table 6, offenders age 14 or younger are more likely to kill acquaintances (30.9%), friends (17%), and strangers (19.6%) than all other age categories combined. Similar behavior is observed among offenders age 15 to 20 and 21 to 30. For offenders ages 31 and older, killing their wives is their third-largest probability, with percentages ranging from 9.4% to 33.1%. Interestingly enough, there is a linear increase in the percentage of homicides involving wives as victims. In other words, as an offender's age increases, the probability of killing his wife increases linearly. Furthermore, across most offender age categories (except for the oldest), acquaintance is the most frequent relationship type. Specifically, 42.4% of homicides committed by offenders aged 15 to 20 were acquaintance killings; 41.1% for those aged 21 to 30; and 36.4% for those aged 31 to 40. Even for the older groups (41 to 50 and 51 to 60), acquaintance remains dominant at 33.3% and 31.4%, respectively. Only among offenders aged 61 to 99 does wife-homicide surpass acquaintance (33.1% wife vs 24.8% acquaintance).

The decline in stranger-homicides with age that we see in Table 6 may reflect a contraction of offender social scope or opportunity. That is, as individuals age, they may engage less in risky social mobility, have smaller social circles, or commit fewer aggressive encounters outside familiar networks (Mata et al., 2011; Bruine de Bruin et al., 2019; Walker et al., 2000). These life-course dynamics could reduce the likelihood of lethal conflict with strangers, and as such, we see a decline in stranger-homicides by age.

Table 6. *Examining Victim-Offender Relationship vs. Offender's Age (within age groups comparison)*

Homicide Victims	Offender's age							Total
	0 to 14	15 to 20	21 to 30	31 to 40	41 to 50	51 to 60	61 to 99	
Acquaintance	30.9%	42.4%	41.1%	36.4%	33.3%	31.4%	24.8%	38.2%
Boyfriend	0.3%	1.2%	2.4%	3.1%	3.1%	2.0%	0.8%	2.3%
Girlfriend	0.6%	2.0%	4.8%	6.5%	7.6%	7.2%	4.0%	5.0%
Brother	9.7%	1.7%	1.5%	1.6%	1.9%	2.0%	1.5%	1.7%
Sister	5.5%	0.5%	0.3%	0.2%	0.3%	0.6%	0.9%	0.4%
Son	1.1%	2.1%	3.3%	2.9%	3.1%	3.8%	5.1%	3.0%
Daughter	1.0%	1.8%	2.9%	2.4%	1.8%	1.5%	1.5%	2.3%
Father	5.8%	2.1%	1.4%	1.2%	1.1%	0.9%	0.3%	1.4%
Mother	3.7%	1.4%	1.1%	1.3%	1.7%	2.1%	1.0%	1.3%
Husband	0.1%	0.4%	2.2%	4.5%	5.9%	6.2%	4.9%	3.1%
Wife	0.1%	0.3%	3.5%	9.4%	14.7%	18.5%	33.1%	7.3%
Friend	17.0%	7.5%	6.7%	6.3%	6.3%	6.6%	5.4%	6.8%
Neighbor	4.8%	1.7%	1.6%	2.0%	2.6%	3.5%	5.1%	2.1%
STRANGER	19.6%	34.9%	27.5%	22.2%	16.8%	13.8%	11.8%	25.1%
Total Cases	4304	74983	141424	82322	43928	21280	14580	382821
Total %	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Note: Column % represents data within the offender's age (e.g., the total number of homicides within the victim-offender relationship vs. specific age category) – the data are compared in each column. (Chi-Square = 55367.51, df = 78, $p < .000$).

Discussion

This study sought to examine the differences between the types of circumstances in which homicides occur as affected by the victim-offender relationship. It also examined the differences within-gender, within-race, and within-age categories in homicide cases based on the victim-offender relationship. Based on the research findings of this study, several concluding statements can be drawn connecting circumstances in which homicides occur, the types of victim-offender relationships, and offenders' demographic characteristics.

Circumstance: The current study shows that when the victim is a stranger or a neighbor/friend, the homicide is most likely to occur during a robbery, with more than two-thirds of the cases associated with this type of circumstance. The second-highest number of homicides for these two victim categories occurred during the brawls due to the influence of alcohol or narcotics. Perhaps these findings make more sense for homicides involving neighbors or friends as victims during incidents when the offender is under the influence of alcohol or narcotics, but it is not easy to understand why someone would kill a neighbor or a friend during a robbery incident. It is not surprising, however, to observe the influence of alcohol on homicide involvement. In fact, Kuhns, Exum, Clodfelter, and Bottia's (2013) study shows that about half of all homicide offenders were under the influence of alcohol when they committed the offense. Furthermore, this study shows that three-fourth of homicide killings between family members were notably related to brawls due to the influence of alcohol. For instance, the influence of alcohol was responsible for most of the cases in which the wife killed her husband or the husband killed his wife, cases in which a brother or a sister killed the brother, and cases in which a son or daughter killed the father.

Gender: The results of the current study show that offenders are more likely to kill victims within their own gender when making this comparison within the victim-offender relationship. This means that fathers are more likely to kill their sons than their daughters; mothers are more likely to kill their daughters than their sons. Brothers are more likely to kill their brothers than their sisters, and sisters are more likely to kill their sisters than their brothers. Additionally, sons are more likely to kill their fathers than their mothers; and daughters are more likely to kill their mothers than their fathers. These results do not concur with some of the prior studies, which show evidence that offenders are more likely to kill victims of the opposite gender (Chan, 2013; Petrosky, Blair, Betz, et. al., 2017; Greenfield & Rand, 1992; U.S. BJS, 2023)

Race: In a large number of prior studies, the victim's race in homicide cases has been studied from the profiling perspective by focusing on who is most likely to become the victim of a homicide (Avdija et al., 2021). In this regard, research shows that blacks are, by far, more likely to become victims of homicide when compared to whites and other races (Sampson & Lauritsen, 1997; Riddell et al., 2018; UCR, 2019). However, this does not mean black victims of homicides are killed by white offenders. The existing research on cross-race relationships shows that offenders are more likely to target victims within their own race (Avdija, et al., 2021; Cooper & Smith, 2011; Pallone & Hennessy, 2000). Nonetheless, these types

of studies did not look at the race differences within the victim-offender relationships. The current study, thus, adds to the existing literature by examining the differences between the offender's race and the outcome of homicide cases based on victim-offender relationships. When comparing homicides that occur amongst family members, the current study shows that the percentages are much higher for the white offenders than for the black offenders. This study shows that whites are more likely to kill their parents, wives, sons, and daughters compared to black offenders and offenders from other races. Conversely, black offenders are more likely to commit homicides when the victim is an acquaintance or a significant other compared to white offenders.

Age: The current study shows that age is an important factor in homicide cases. This study shows that more than one-third of all homicides were committed by offenders age 21 to 30. The second age category was 31 to 40, followed by the 15 to 20 age category. A notable finding that emerged in this study is the observed trend change in the homicides against parents. The analyses show that there is a linear decrease in the likelihood of homicide occurrences against mother/father after the age of 30. On the other hand, there is a linear increase in the percentage of homicides involving wives as victims, which is consistent with prior research on this topic (Kratcoski & Walker, 1988; Bourget et al., 2010; Shaw et al., 2012). In other words, as an offender's age increases, the probability of killing his wife increases linearly. Romantic partner homicides (girlfriend, boyfriend) also gain relative prominence in midlife; though it never surpassed spousal or acquaintance categories. Familial and child-victim homicides remained relatively stable and modest in share across all age groups, with slight increases in some categories in the oldest age strata.

In conclusion, the analyses that we presented here represent a small, but useful, piece of empirical evidence that sheds some light on the importance of victim-offender relationship in homicide cases. What makes this study unique is its use of a comprehensive database of homicide cases comprising approximately three-quarters of a million incidents and covering an extended period of time. The size and scope of this dataset allow for more robust and reliable analyses than are typically possible with smaller samples. In contrast, many prior studies have relied on sampled data with relatively small numbers of cases, which can limit generalizability of their research findings. Nonetheless, this study has its own limitations. Thus, we acknowledge that this is a retrospective study and it was largely depended on the availability of adequate police records that were reported and recorded by the FBI's Uniform Crime Report. Second, this research is not intended to examine the cause/effect relationship between variables. Instead, it focused on the associative relationship between variables. Another limitation that we acknowledge here is the weaknesses found within the UCR reporting program itself. There are too many issues associated with how the data are reported and recorded by the UCR, and thus we cannot verify the accuracy of homicide cases that are included in the analysis. Further, the Supplementary Homicide Reports (SHR) provide detailed data on homicides reported by U.S. law enforcement, but participation is voluntary, leading to gaps and underrepresentation in some areas. SHR data include basic victim and offender demographics, weapon type, and victim-offender relationship, but omit important contextual information such as motive or prior conflict. Additionally, incomplete or inconsistent recording of demographic variables limit the ability to

fully analyze patterns and disparities in homicide. However, this is one of the limitations that all researchers acknowledge about using SHR/UCR data. In this regard, we advise readers to consider the unavoidable flaws of the UCR data and judge them for what they are when interpreting the results of this study.

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