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Chicago Homicide Dataset Series

Is age discrepancy a risk factor for intimate partner homicide?

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Over the past two decades, much research has investigated the patterns and predictors of intimate partner homicide — cases of people murdered by a spouse or ex-spouse, boyfriend or ex-boyfriend, girlfriend or ex-girlfriend, or common-law or ex-common-law spouse. In Chicago, Block and Christakos (1995) analyzed risk patterns associated with intimate partner homicide using the Chicago Homicide Dataset, which consists of archived data from 1965 to 1995. More recently, the Chicago Women's Health Risk Study (Block 2000a) combined lethal and non-lethal data on intimate partner violence to examine risk factors for death.

Other research suggests that the partners' age discrepancy is a predictor of intimate partner homicide. Several studies using U.S. and Canadian national-level data show that the rate of intimate partner homicide victimization is higher the greater the difference between the ages of the man and the woman (e.g., Daly & Wilson 1988; Mercy & Saltzman, 1989; Shackelford, 2000, 2001a, 2001b; Shackelford et al., 2000; Wilson & Daly, 1992, 1994; Wilson et al., 1993, 1995). Relative to their numbers in the general population, intimate partner homicide is more likely for couples with a large difference in age. This *Research Bulletin* examines intimate partner homicide victimization rates in the Chicago Homicide Dataset, for groups of couples with different degrees of partner age discrepancy.

Source of data

The Chicago Homicide Dataset is one of the largest and most detailed datasets on homicide in the United States. It has been collected and maintained for many years by the Illinois Criminal Justice Information Authority, in cooperation with the Crime Analysis Unit of the Chicago Police Department. The current analysis adds preliminary data for 1996, so that the dataset

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includes information on 24,609 homicides recorded by the Chicago police between 1965 and 1996.[1] We selected the 2,584 homicides in which the victim and offender were opposite-sex intimate partners (legal marriages, common-law marriages, boyfriend/girlfriend, ex-legal marriages, ex-common-law marriages, and ex-boyfriend/ex-girlfriend). After excluding the five homicides in which the age of either the victim or offender was not known, we analyzed 2,579 sets of heterosexual intimate partners in which either the woman or the man was killed, and the woman was at least 18 years old. The average age of women was 34.1 years, ranging from 18 to 84 years. The average age of men was 37.9 years, ranging from 16 to 90 years. The average age discrepancy between the intimate partners ranged from the woman being 34 years older than the man to the man being 51 years older than the woman.

Results

The results (see Figure 1) indicated that the population-based risk of intimate partner homicide victimization is significantly higher when the age discrepancy between the partners is greater. For example, the rate of intimate partner homicide for couples in which the woman is 16 or more years older than the man (21.41 per 100,000 couples per year) was four times higher than for couples with no age difference (5.25 per 100,000 couples per year). Similarly, the rate of intimate partner homicide for couples in which the man is 16 to 20 years older than the woman (23.99 per 100,000 couples per year) was about four and a half times higher than for couples with no age difference. Thus, couples with large age discrepancies are overrepresented among intimate partner homicides in Chicago, compared to what would be expected from their numbers in the population.

These results are based on an aggregate analysis of all homicide cases across the 32 years from 1965 to 1996, divided by 32 to estimate the number per annum, and then divided by the estimated population of couples with a given age discrepancy in 1980. This aggregate analysis, centered on the 1980 census year, utilizes the greater precision offered by larger numbers. However, because the Chicago population changed greatly during these 32 years, we were concerned that the population change might affect the results. Therefore, we also conducted three separate analyses, for the periods 1965-1974, 1975-1984, and 1985-1996, centered on the census years 1970, 1980, and 1990, respectively. The age discrepancy/homicide risk findings followed the same pattern within each of these three time periods as for the analysis of the entire 32 years.[2]

In addition, the risk pattern appears to be different for couples where the woman is older, versus couples where the man is older. In couples where the man is older than the woman, the risk of intimate partner homicide is not appreciably higher unless he is at least 16 years older than his partner (see Figure 1). We found that the last two categories (man older by 16 to 20 years, and man older by more than 20 years) had significantly elevated risk of intimate partner homicide, both in the 32-year aggregate and in each of the separate three decades. The risk for couples where the man was 16 to 20 years older was higher (23.8 per 100,000 couples per annum) than for couples where the man was at least 21 years older (14.98 per 100,000 couples per annum).

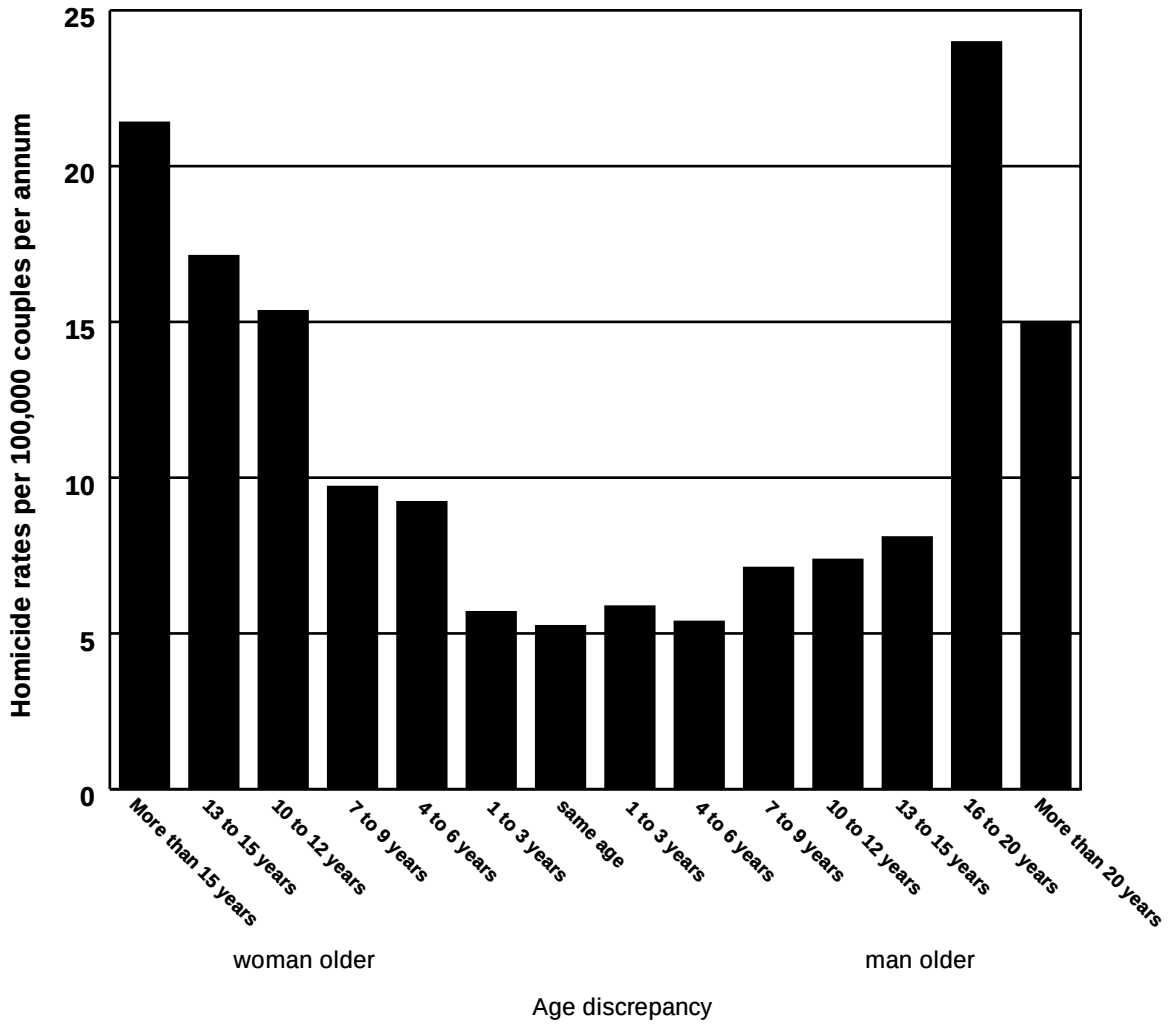
When the woman is older than the man, the risk of intimate partner homicide begins to be significantly higher when she is 10 years older (see Figure 1). This pattern is true within each of the three decades (1965-1974, 1975-1984 and 1985-1996). Consistently, the "jump" in risk occurs for couples where the woman is 10 to 12 years older, and the risk is as high or higher for couples where the woman is 13 to 15 years older or 16 or more years older. In the general population of Chicago, couples in which the woman is older than her partner are rare, compared to couples in which the man is older than the woman (see Table 1). However, the number of homicides within this relatively small group is much higher than their proportional representation in the population.

Discussion

This analysis of the 2,579 cases of homicide at the hands of an opposite-sex intimate partner, where the woman is at least 18 years old, and the age of both partners is known, from the Chicago Homicide Dataset, indicates that age discrepancy is associated with higher risk of intimate partner homicide. Why is greater age discrepancy between intimate partners associated with a higher risk that one partner will kill the other? If domestic violence advocates or other helping professionals are to use this research as a

Figure 1

Intimate partner homicide risk is highest for age-discrepant couples



basis for clinical or judicial decisions, it is vital to answer this question.

Perhaps a couple's age discrepancy is not directly related to lethal violence at all, but is related to some other "indirect" factor or factors that, in turn, are risk factors for intimate partner homicide. For example, partners with greater age discrepancy might be more likely to have stepchildren in the family, and the presence of stepchildren may be related to the risk of lethal violence. Another possible "indirect" factor might be the previous arrest record of the homicide offender. Partners with greater age discrepancy might be more likely to have a prior record, and a prior record may be associated with the risk of homicide. However, further research is needed to identify any indirect risk factor that might mediate between a partner's age discrepancy and the risk of intimate partner homicide.

A consideration raised by these results is that, unlike most other factors associated with fatal intimate partner violence, age discrepancy does not appear to be associated with *nonfatal* intimate partner violence. Wilson, Johnson, and Daly (1995) compared lethal to nonlethal risk patterns for violence against wives in

Method of Calculating Rates

To calculate rates of intimate partner homicide, we need population estimates for Chicago couples within each category of partner age discrepancy. Homicide rates can then be calculated by dividing the number of homicides in a particular age discrepancy category by the relevant population estimate. Because the required population estimates are not available from any city, state, or federal agency, we calculated these estimates using information gathered by the Chicago Women's Health Risk Study (CWHRS) (Block, 2000a, 2000b). The CWHRS dataset includes data provided by 683 women living in Chicago who were at least 18 years of age and had been in an intimate relationship with an opposite-sex partner in the past 12 months. These women were sampled from three medical centers (Cook County Hospital, Roseland Public Health Clinic, and Erie Family Health Center) as they entered the facility for any reason during the years 1995 and 1996. The sample sites were chosen because they are located in areas of the city with the highest rates of intimate partner homicide.

The CWHRS recorded the age of the woman and the age of her intimate partner. The women were also asked a series of questions about intimate partner violence in the past year (see Block, 2000a). There was no significant difference [t (672) < 1.00, p > .05] in the mean age discrepancy between the woman and her partner for women who had experienced violent abuse in the past year and women who had not. Therefore, we combined the two groups to arrive at the following figures for age discrepancy: The average age of CWHRS women was 31.2 years, ranging from 18 to 67 years. The average age of their intimate partner was 34.4 years, ranging from 16 to 73 years. The average age discrepancy between the intimate partners, calculated as the man's age minus the woman's age, was 3.2 years, ranging from –20 to 42 years. By comparison, among intimate couples in the Chicago Homicide Dataset, the average discrepancy between the intimate partners was 3.7 years, ranging from –34 years to 51 years.

For the analysis of age discrepancy and homicide, we used 14 categories of age discrepancy. Table 1 shows the proportions of women in the CWHRS who were in each category of partner age discrepancy. Using the proportions displayed in Table 1, we derived estimates of the number of women in the total Chicago population (in 1980) within each of the 14 categories of partner age discrepancy. To do this, we projected the CWHRS proportions onto the total number of women, 18 years and older, in Chicago, 1980 (information provided by the U.S. Census Bureau). We could not locate population estimates for Chicago women 18 years and older in an intimate relationship in the preceding 12 months, but justify use of the total population of women 18 years and older given that most women in this age group will have been involved in some type of intimate relationship in the preceding 12 months (see, e.g., Buss, 1994). We used these population estimates as the denominators to calculate rates of homicide for couples within categories of age discrepancy. Specifically, the rates were calculated by dividing the average frequency of homicides per year in each age discrepancy category by the relevant population estimate for each age discrepancy category. The resulting rates represent the number of homicides per year per 100,000 couples within each of 14 age discrepancy categories. This is the "population-based risk" of homicide as a function of the couple's age discrepancy. (See Table 2 for the data used to calculate rates.)

Table 1

Age discrepancy percents used to calculate rates

Age Discrepancy in CWHRS Data*	Number	Percent
Woman more than 15 years older than man	4	0.59
Woman 13 to 15 years older than man	5	0.74
Woman 10 to 12 years older than man	7	1.04
Woman 7 to 9 years older than man	18	2.67
Woman 4 to 6 years older than man	31	4.60
Woman 1 to 3 years older than man	87	12.91
Woman and man the same age	77	11.42
Man 1 to 3 years older than woman	164	24.33
Man 4 to 6 years older than woman	122	18.10
Man 7 to 9 years older than woman	66	9.79
Man 10 to 12 years older than woman	42	6.23
Man 13 to 15 years older than woman	27	4.01
Man 16 to 20 years older than woman	9	1.34
Man more than 20 years older than woman	15	2.23
Total	674	100.00

* Excludes nine cases in which the man's age was not known.

Source: CWHRS (see box, page 4).

Canada. The data showed that many factors, such as male sexual proprietariness, type of marital union, recent separation, age of wife, and age of husband are associated with both lethal and nonlethal violence against wives. However, age discrepancy was associated only with lethal violence.

Similarly, the Chicago Women's Health Risk Study (CWHRS) revealed that partner age discrepancy patterns were the same for women experiencing nonfatal intimate partner violence and a control group of women not experiencing violence (Block, 2000a). If it is true that age discrepancy is related to fatal intimate partner violence, but not related to nonfatal intimate partner violence, what could be the reason? Is there some attribute of age discrepancy that is related specifically to fatality?

One way in which age discrepancy in couples could be related to the chance that one partner will kill the other, even without past violence in the relationship, is found in CWHRS results. For some murdered women, the fatal attack was the first attack. In many of these homicides, the lethal incident happened when the man became furious and attacked her suddenly, often when the woman tried to leave the relationship or the man suspected or accused her of infidelity. Is this "male sexual proprietariness" more likely when the ages of the partners differ? In a second scenario seen in a few of the CWHRS homicides, one partner planned to kill

Table 2

Frequency of intimate partner homicides and populations estimates, Chicago, 1965-1996

Age-Discrepancy Category	Frequency of Homicides, 1965-1996*	Mean Frequency of Homicides per Year	Population estimates, Chicago, 1980**
Woman more than 15 years older than man	47	1.47	6,860.0
Woman 13 to 15 years older than man	47	1.47	8,575.0
Woman 10 to 12 years older than man	59	1.84	12,005.0
Woman 7 to 9 years older than man	96	3.00	30,870.0
Woman 4 to 6 years older than man	157	4.91	53,165.0
Woman 1 to 3 years older than man	272	8.50	149,205.1
Woman and man the same age	222	6.94	132,055.1
Man 1 to 3 years older than woman	529	16.53	281,260.2
Man 4 to 6 years older than woman	361	11.28	209,230.2
Man 7 to 9 years older than woman	258	8.06	113,190.1
Man 10 to 12 years older than woman	170	5.31	72,030.1
Man 13 to 15 years older than woman	120	3.75	46,305.0
Man 16 to 20 years older than woman	118	3.69	15,373.6
Man more than 20 years older than woman	123	3.84	25,661.2
Total	2,579	80.59	1,155,911

* Age is missing for five of the 2,584 intimate partner homicide cases in the Chicago Homicide Dataset.

** Population estimates were calculated by applying the proportion of couples in each age discrepancy category in the CWHRS (Block, 2000b) to 1,155,911, which is the total population of women, 18 years and older, in Chicago in the 1980 census. We also conducted separate analyses of three time periods, 1965-1974, 1975-1984, and 1985-1996. Results were consistent across time periods.

the other, with an eye toward monetary gain. Are such homicides more likely with greater age discrepancy? Again, the answers must await further research.

Practical implications

Although many questions remain to be answered, this analysis of the Chicago Homicide Dataset represents a first step toward developing practical implications for implementation.

Though intimate partner homicide in general is rare, the risk of one partner killing the other is much higher among Chicago couples where the man is at least 16 years older than the woman or the woman is at least 10 years older than the man, compared to Chicago couples who are closer to each other in age. In other words, the risk of homicide is higher, relative to their numbers in the population, for age disparate couples.

The same result has been found in studies analyzing U.S. and Canadian national-level data. Therefore,

Chicago homicides are no exception to what appears to be the general rule. In addition, the relationship between age discrepancy and homicide risk followed the same pattern throughout the 1965-1996 time period in Chicago. This indicates that the pattern found in Chicago is "robust" over time and from one place to another.

Because we do not yet know why high age discrepancy between two intimate partners is associated with a higher risk of lethal violence, it is important to be cautious in applying this information to practical situations. It is clear, however, that the association does exist. Therefore, practitioners should not hesitate to include age discrepancy in their list of risk factors for intimate partner homicide. Specifically, practitioners might consider doing the following:

✔ Gather age information for both partners. Age information is simple and safe to gather, and non-intrusive. There is potential benefit and little risk or cost to asking people for this information.[3]

✔ Record the age information with a notation for level of risk. Risk is elevated when the man is at least 15 years older than the woman or the woman is at least 10 years older than the man.

✔ Use "elevated risk based on couple age discrepancy" as one risk factor, in addition to other screening and assessment tools for intimate partner violence. Until we know more about the interaction of age discrepancy with other couple characteristics, it should not be integrated into a screening or assessment instrument. For example, when discussing the results of the Campbell Danger Assessment (see Campbell, et al., 2000) with a woman, also let her know that her "couple age discrepancy" might place her in a higher risk category.■

Notes

[1] The Authority, working closely with the Chicago Police Department, is in the process of updating the Chicago Homicide Dataset through 2001.

[2] The separate analyses of these three time periods are available from the authors upon request.

[3] For people in an abusive situation, be sure to record the age of the abusive partner. This may not be the current intimate partner.

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