Annals of Epidemiology 25 (2015) 668-673

Contents lists available at ScienceDirect

Annals of Epidemiology

journal homepage: www.annalsofepidemiology.org

Original article U.S. spousal homicide rates by racial composition of marriage

John M. Roberts Jr, PhD*

Department of Sociology, University of Wisconsin-Milwaukee, Milwaukee

ARTICLE INFO

Article history: Received 6 October 2014 Received in revised form 14 April 2015 Accepted 20 April 2015 Available online 7 May 2015

Keywords: Homicide Spouses Health status disparities United States

ABSTRACT

Purpose: American spousal homicide rates persistently and substantially vary by racial composition of the married couple. Analyses examined different racial couple types' spousal homicide rates in light of nonspousal homicide victimization and offending rates and couple types' average social, demographic, and economic characteristics.

Methods: Analyses used 2003 to 2007 spousal homicide data from Supplementary Homicide Reports for which missing data have been multiply imputed. Current Population Survey data provided estimates of the number and average characteristics of different couple types. Log-linear models related couple types' differing spousal homicide rates to different race-sex groups' general rates of homicide victimization and offending and couple types' average characteristics.

Results: Among couple types with at least 50,000 couples, annual rates of male-on-female spousal homicide ranged from 0.95 to 8.76 per 100,000 couples; for female-on-male spousal homicide, this range was 0.13 to 2.29. Rates somewhat reflect different race-sex groups' nonspousal homicide activity, but with greater gender disparity and an excess of spousal homicide in some couple types. The association between victim's and offender's race is parsimoniously described by models using couple types' average characteristics (proportion with female's education exceeding the male's, proportion in central cities, and relative frequency).

Conclusions: General homicidal-violence reduction strategies may partly apply to spousal homicide, but specifically targeted efforts are required too. Interventions must address different couple types' particular social, economic, and cultural experiences.

© 2015 Elsevier Inc. All rights reserved.

Introduction

Homicide between heterosexual spouses is a long-standing international public health concern [1–7]. In the United States, spousal homicide is a substantial component of intimate partner homicide [8,9], with differences between legal marriages and informal cohabitations in homicide rates and characteristics likely narrower than before [10,11]. Recent decades have seen important changes in American spousal homicide's scope and nature, including reduced overall rates and increased ratios of female to male victims [12]. However, one persistent feature is that spousal homicide rates still vary substantially across different combinations of husband's and wife's race. For example, 1979 to 1981 estimates for Chicago and the entire United States indicated that women's spousal homicide victimization rate in both-black marriages was

E-mail address: jmrob@uwm.edu.

http://dx.doi.org/10.1016/j.annepidem.2015.04.004 1047-2797/© 2015 Elsevier Inc. All rights reserved. about four to seven times greater than women's victimization rate in both-white marriages [1,13]. Newer data (2003–2007) in the following text show a similar difference. Understanding and responding to the spousal homicide problem requires deeper investigation of these disparities.

This article considers American rates of spousal homicide in couples of different racial compositions, describing these rates and reporting on statistical analyses addressing two key questions regarding spousal homicide's racial disparities. First, do homicide rates in different kinds of couples reflect general rates of homicide offending and victimization in the partners' groups? Race-sex groups differ substantially in their nonspousal homicide offending and victimization rates, and perhaps spousal homicide's observed variability by racial combination is simply a manifestation of these more general differences. If not, it is important to examine how spousal homicide rates in different couple types depart from overall patterns of homicide involvement for different race-sex groups. Second, what is the nature of the association between victim's and offender's race in spousal homicide? Women in different racial groups have different patterns of spousal homicide victimization and offending across the various categories of husband's race. How





CrossMark

The author received no financial support for this research, and there are no potential conflicts of interest.

 $[\]ast$ Corresponding author. Department of Sociology, University of Wisconsin-Milwaukee, PO Box 413, Milwaukee, WI 53201. Tel.: +1-414-229-6944; fax: +1-414-229-4266.

are these patterns structured, and do they reflect variability in the aggregate social, demographic, and economic characteristics of different racial couple types? Analyses for this research question explore whether such factors can account for the observed association between victim's and offender's race.

Methods

Data

The Supplementary Homicide Reports (SHRs) of the Federal Bureau of Investigation's Uniform Crime Reporting System are a key source of incident-level homicide data in the United States [14]. Participating police agencies report information on each of their jurisdiction's homicides, including, if known, the victim's and offender's demographic characteristics and the victim-offender relationship, and incident circumstances. Agencies' participation in the Reporting System is voluntary, but very widespread: In 2007, participating police agencies covered about 95% of the U.S. population [15]. SHR data therefore intend to provide a virtually complete record of homicides known to police in the United States, and national homicide rates derived from SHR can be adjusted for this minor undercoverage [16]. In this respect, SHR can reasonably be regarded as population data rather than a sample, and its national time trend corresponds closely with the homicide trend implied by mortality records [17]. SHR has long been widely used in criminological research [18].

Still, it has also long been recognized that SHR data are imperfect [19]. Some apparently participating agencies report data to the Federal Bureau of Investigation only intermittently, or incompletely [16,18]. Research in Massachusetts comparing SHR and other data sources found that some intimate partner homicides were not represented in SHR at all [20], although matching can also fail due to data entry discrepancies. This and other work also found instances of miscoding of victim-offender relationship, or of classification of intimate partner incidents as unknown victim-offender relationship, in raw SHR data [20-22]. Offender's race is also subject to misclassification or missingness in SHR [20,23]. In data of national scope, there is no feasible strategy for identifying and correcting misclassification of victim-offender relationship or race, but missing (unknown) data can be addressed with imputation strategies. This is important because victim-offender relationship was missing in 45% of 2003 to 2007 SHR cases, and offender's race was missing in 34%.

In Fox and Swatt's version of 1976 to 2007 SHR data, missing data on all variables have been multiply imputed [24] to create five completed SHR data sets [16,25]. Under the multiple imputation method, the imputed value for a given missing observation could differ across the different imputed data sets. As some incidents' data therefore vary across the five completed SHR data sets, analysis of multiply imputed data must address this variability [24]. I extracted completed data for 2003 to 2007, noting the victim's sex and the victim's and offender's race (white, black, Native American, Asian or Pacific Islander, or other; SHR data do not indicate Hispanic ethnicity) for homicides between heterosexual spouses. Fox and Swatt's imputed data categorized some variables more coarsely than in the original SHR, as successful imputation can be challenging when variables include relatively rare categories [16]. The coarser "intimate" category grouped "spouse" with categories such as "boyfriend/girlfriend" in the imputed data, and the coarser racial categorization was {white, black, other}. The present study required identification of spousal homicides in the different racial combinations, which in turn required some of this lost detail on relationship and race. I adjusted imputed values to distinguish spouses from others (boyfriends, girlfriends, or ex-spouses) in the "intimate" category and Asians from Native Americans in the "other" race category. (The Supplementary Material describes this in detail.) This yielded tables of spousal homicide counts classified by victim's and offender's sex and race; each of the five completed data sets yielded such a table, for five in all. The total numbers of spousal homicides in these tables ranged from 3983 to 4053. Imputed values of "spouse" for missing victim-offender relationships contributed about 19% of these totals, with the remaining 81% identified as spousal homicides in the original SHR data.

I obtained the numbers of married couples in different racial combinations by averaging national estimates from the March 2003, 2005, and 2007 Current Population Surveys (CPSs), excluding couples in which a spouse reported a multiracial identity. CPS data also provided estimates of aggregate characteristics of different couple types. I considered six characteristics suggested by previous research as potentially related to aspects of spousal or intimate partner homicide [26–28]. These included (i) the proportion of couples with male aged 30 years or younger, (ii) the proportion in which the male had not completed secondary education, (iii) the proportion in which the male's education was less than the female's, (iv) the proportion living in central cities, and, as an economic measure, (v) the proportion whose household's received public assistance food stamps. (I smoothed the estimated proportions from CPS because some racial combinations have few sampled couples.) Also, I measured (vi) a couple type's relative frequency by comparing its observed number of couples to that expected solely from the different racial groups' total numbers of married men and women. Excesses or deficits were represented by interaction terms in a saturated log-linear model [29] for the marriage data. From the entire 2003 to 2007 imputed SHR data, I counted nonspousal (i.e., excluding spousal incidents) homicide victimizations and offenses for each racial group's adult (18 years and older) men and women and transformed the counts into rates via census estimates of the various racial groups' adult (18 years and older) male and female populations. The Supplementary Material gives more details on these data.

Statistical analysis

I produced a descriptive table of spousal homicide rates in different couple types, based on average counts in the five data sets created by multiple imputation of missing data. For statistical analyses, I applied the Poisson log rate models [29] in the following text to spousal homicide count tables. Models address the two main research goals by relating nonspousal homicide victimization and offending rates to different couple types' spousal homicide rates and by examining the association between victim's and offender's race.

Analyses must consider not one but five tables of spousal homicide counts, from the five data sets created by multiple imputation. I assessed model fit via Meng and Rubin's method [30] for *P*-values from analysis of the five completed data sets, also adapting it for comparing nested models. (Tables report models' average likelihood ratios across these five data sets.) Unlike the usual case of incompletely classified data, here the imputed tables have slightly varying totals, from variability in multiple imputation of missing victim-offender relationships. However, an adjustment for this (Supplementary Material) made no practical difference.

Models for the first research question consider spousal homicide patterns in light of race-sex groups' general homicide victimization and offending rates. h_{ij} represents the expected number of spousal homicides involving a (race-sex) category *i* victim and a category *j* offender, whereas N_{ij} represents the total number of type {*i*, *j*} married couples ($N_{ij} = N_{ji}$). The exposure (offset) term log N_{ij} implies a "log rate" interpretation of the models [29]. Baseline model 0 unrealistically expects the same rate in every couple type:

$$\log h_{ii} = \log N_{ii} + \lambda \tag{0}$$

Download English Version:

https://daneshyari.com/en/article/3443798

Download Persian Version:

https://daneshyari.com/article/3443798

Daneshyari.com