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Aging and Homicide Rates

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ABSTRACT: There are no published studies concerning the effect of mortality rate on the rate of homicide by habitually violent offenders. On the basis of nation-wide statistics in Finland, the frequency of homicide is 61% lower among 50-year old males than among 30-year old males. However, when the 4.9-fold mortality of habitually violent offenders is taken into account, the homicide rate is only 43% lower among 50-year old males than among 30-year old males. This is an important issue in forensic psychiatry and that requires further attention, as age is used a predictive factor when assessing the risk of violent behavior.

KEYWORDS: forensic science, age, death, homicide rate, mortality, offender, violence

It is commonly known that the incidence of homicides and other violent acts decrease in the middle ages (1,2). One explanation for this could be that many of the violent offenders have personality disorders, of which symptoms are believed to improve in older age. Since a majority of violent offenses are committed by habitually violent offenders; i.e., "the violent few," (1), and because of the high mortality among these criminals (2), it is necessary to consider the mortality when calculating the decline of violent acts in older age. According to our knowledge, there are no published studies on homicide rates which would have taken the death rate of violent offenders into account.

In our earlier studies, we found the death rate among habitually violent male criminals to be 4.9-fold when compared with a normal male population between the ages of 30 to 50 (3). In this study, we tried to investigate what was the real incidence of committing homicides, or other violent offenses, as a function of age when mortality was taken into account.

Material and Methods

Homicide Rate Among Different Age Groups

Data on the homicide rate from an 8-year follow-up study (years 1984–1991), concerning 1005 homicide offenders in Finland aged 15–80 years (4), was used in our analysis to calculate homicide rate among different age groups (30 years old versus 50 years old subjects). The number of committed homicides by men aged 25–35

years (mean 30 years) was divided by the number of all men aged 25–35 years (392 937 men, ref. no. 5) and the number of committed homicides by men aged 45–55 years (mean 50 years) was divided by the number of all men aged 45–55 years in Finland (282 516 men, ref. no. 5).

Mortality

According to Finnish law, dangerous and violent recidivists can be kept under special security by a decision from the Prison Court (a special court in Finland). The study material (concerning mortality) consisted of 99 male criminals who were convicted by the Prison Court during the years 1971–1995. They all were violent offenders who had been prosecuted for murders, manslaughters and serious assaults. Of these, 42 were sentenced to a special security section because their dangerousness to others. The remaining 57 men were sentenced to normal prison facilities to serve their time. At first, the names of these men were collected from the records of the Prison Court. Their status (i.e., living or deceased) was checked from registers of the Finnish Population Register Center. We have previously calculated that the mortality among these dangerous prisoners was 18.1/1000/year (12 deaths/662 prison years) which is 4.9-fold when compared with the general population (3). Since being incarcerated in prison has a slight effect on mortality (3) we calculated the length of sentences among 99 habitually violent offenders and among all homicide offenders in Finland. The mean length of incarceration period among the 99 offenders in prison was 79.5 months, which is slightly longer than the mean length of sentences among all homicide offenders in Finland (about 60 months, ref. no. 6). We presumed in our calculations that the mortality among the 99 incarcerated offenders is a valid estimate for the mortality among all potential homicide offenders.

These two pieces of information (mortality and homicide rate among different age groups) were incorporated to calculate the real incidence of committing homicides as a function of age. This allowed us to estimate the influence of aging on homicide rates in Finland.

Results

During the eight-year follow-up period (years 1984–1991), there were 212 homicides committed by men aged 25–35 years (mean 30 years), when the homicide rate was 6.74/100 000/year (212/392 937 × 8 person years). During the same period, men aged 45–55 years (mean 50 years) committed 60 homicides, and the homicide rate was 2.65/100 000/year (60/282 516 × 8 person years). These figures indicate that homicide rate during this time was 61% lower among the 50 year-old than among the 30-year old males. As the mortality rate among dangerous violent recidivists (observed

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among 99 recidivists, see ref. no. 3) is 4.9-fold, compared to the normal population, it can be calculated that the homicide rate is 3.85/100 000/year among 45–55 years old males, when their higher mortality is taken into account. This means that the actual decrease in the homicide rate is 43% among 50-year old males when compared with 30-year old males.

Discussion

The observed mortality of violent offenders is surprisingly high. If about 50% of habitually violent offenders are dead before their 50's, there are not so many elderly potential killers left to commit new offenses. In addition to this, one must remember that many of the potential recidive offenders were incarcerated during the period 1984–1991. However, because it is quite improbable that the age (30-year old versus 50-year old) would significantly effect the length of the prison sentences (and the length of incapacitation period), it is unlikely that incarceration would have lead to bias in the homicide rate between the two age groups. By considering the higher mortality among violent offenders, when estimating the actual incidence of homicide among this population, it was discovered that the actual decrease in homicide rate between the age of 30 and the age of 50 years was 43%. The decrease of this magnitude implies that the aging itself also explains lower homicide rates in older age as presumed earlier (7–9). To our knowledge, this is the first study to show an effect of mortality of violent offenders on the rate of homicide. The mortality is an important factor that explains the observed decrease in the rate of violent offending in elderly offenders and it must be taken into account when age is used as a pre-

dictive factor in assessing the risk of forth coming violent behavior (10).

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