DOMESTIC VIOLENCE AND HOMICIDE ANTECEDENTS*

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This paper is divided into three sections. The first section describes the nature and extent of homicides between family members, including some information on trends since 1966. The second section describes the extent of nonlethal violence within the family and its connection to homicide. The final section views intrafamily violence from a public health perspective, and discusses the implications for primary prevention.

Intrafamily Homicide in the United States

The public image of homicide tends to focus on the type of wanton killing featured by the press and television—someone shot in the course of a robbery or a sadistic killer who attacks a stranger with no apparent motive. In fact, such killings are only a relatively small proportion of homicides. In about 80% of the cases, the victims and assailants were known to each other before the murder, and in a substantial proportion of the cases they are members of the same family. For the United States in 1984, 24% of all murder victims were related to their assailant.† This percentage has fluctu-

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†This figure was derived from data given in *Crime in the United States, 1984.*[12] It differs from the figures given there (in the table headed "Circumstances by Relationship, 1984") because of a difference in the method of treating the 25.8% of homicides in which the relationship between victim and assailant was not known. This difference became apparent when the 1966 to 1984 intrafamily homicide percentages were plotted. The percentage dropped sharply in 1977, and remained at that lower level since then. The decline was due to a change by the UCR in the method of computing the percentages. For purposes of this paper, the percentages from 1977 on were recomputed using the same method as before 1977. The resulting figures show no important change between 1966 and 1984 in the percentage of homicides involving members of the same family as victim and offender.

ated within a relatively narrow range (from 22.4 to 28.8%) since the FBI first started reporting data on intrafamily homicide in 1962, even though the total number of homicides has changed drastically in this period.

Overall intrafamily homicide rates. Although the intrafamily homicide percentage is an interesting and important statistic, there are at least three other statistics which need to be considered: the homicide rate, the number of deaths and the relative distribution of homicides among various family relationships such as wives killed by husbands, children killed by parents, etc. None of these other statistics are reported in the annual Uniform Crime Reports. However, it was possible to use Uniform Crime Reports to estimate these statistics, and the results are described and interpreted below.

These calculations produce an estimate of 4,408 intrafamily homicides in the United States in 1984. These 4,408 cases produce an intrafamily homicide rate of 1.86 per 100,000 population. Although this is a much lower rate than that for murders of unrelated persons (6.04 in 1984), it is high by comparison with other countries. In fact, just the family fraction of the United States intrafamily homicide rate is greater than the rate for all homicides which occurred in many countries with a low homicide rate. Denmark, for example, had a rate of 0.64 per 100,000 in 1969, England and Wales had a combined murder and manslaughter rate of 0.93 in 1972 and Germany a rate of 1.26 in 1972.[1]

Specific family relationships. Intrafamily homicide covers a great many different types of relationships, and it is important to know if these differ from each other. For example, is the rate of children killed by parents higher than of parents killed by children? Table I allows us to compare the number of deaths and the homicide rate for several different family relationships for 1984.

Spouse murders. The first row of Table I shows that more than two thousand murders of a spouse occurred in 1984, and that spouse-murders were almost half (48%) of the intrafamily homicides which occurred in 1984, making them the most frequent type of intrafamily victim-offender relationship.

The second and third rows of Table I show that many more wives were killed by husbands than husbands killed by wives—roughly one third to two thirds, as shown by the figures in parenthesis on the second column. The fact that wives kill husbands at only one third the rate that husbands kill wives is consistent with the lower level of violence by women in all spheres of life. At the same time, the fact that women commit 38% of the spouse murders, compared to only 14% of the nonfamily homicides, and only 13% of the

TABLE I. NUMBER AND RATE OF HOMICIDE BY RELATIONSHIP OF VICTIM TO OFFENDER, 1984*

Assailant	*Victim*	*Number*	*Percent†*	*Rate per 100,000 pop.‡*
Spouse	Spouse	2116**	48.0	0.89
Husband	Wife	1310	(62.0)	0.55
Wife	Husband	806	(38.0)	0.34
Parent	Daughter or son	730**	16.6	0.31
Parent	Daughter	327	(45.0)	0.14
Parent	Son	403	(55.0)	0.17
Child	Parent	504**	11.4	0.21
Child	Mother	202	(40.0)	0.09
Child	Father	302	(60.0)	0.13
Child	Sibling	403**	9.1	0.17
Child	Brother	327	(81.0)	0.14
Child	Sister	76	(19.0)	0.03
Other family relationships		655	14.9	0.28

*Computed from data from Federal Bureau of Investigation.[12]

**These numbers are the sum of the two which follow.

†The first percentage in each set of three is the percent of all intrafamily homicides. The figures in parentheses are the percent of the number marked with an ** in the column giving the number of homicides.

‡Rather than computing rates per 100,000 total population, it would be preferable to compute rates which are specific to each category of family member. This could be done for spouses, since the number of married couples is known. Therefore, instead of dividing by the 1984 population to obtain a rate of 0.89 per 100,000 population, it would be possible to divide by 53,831,000—the number of married couples in the population. This produces a homicide rate of 3.93 per 100,000 couples. The difficulty is that for a rate such as this to be meaningful, it needs to be compared with other population-specific rates. That could answer questions such as how does the rate per 100K spouses compare with the rate per 100K parents, or with the rate for nonfamily homicides. Unfortunately, with the exception of the rate for spousal homicides, none of the other more specific rates can be computed because relevant denominators are not available. For example, as noted in the text, the UCR data on fathers and mothers is not restricted to parents of minor children. Consequently, the more specific denominator would be everyone with a parent alive at the beginning of the year. But that statistic is not available.

aggravated assaults, shows that within the family women are much more violent than they are outside the family. The violence of women within the family (as contrasted to their relative nonviolence outside the family) will also be shown later in this paper for assaults which do not end in death. A previous paper[30] analyzes the reasons why women are much more violent within the family. Time available only permits me to say that one reason is self-defense or retaliation: women are rarely assaulted outside the family, whereas this is a common occurrence within the family.

Child murders. The term "child," as used in this paper, refers to a family relationship, not an age group, because Uniform Crime Reports data combines homicides of minor children and adult children. To remind readers of this, "child" will be put in quotation marks from time to time.

Murder of a son or daughter by a parent was the second most frequent type of intrafamily homicide. The 730 murders of sons and daughters which occurred in 1984 were 16.6% of the intrafamily murders that year.

The figures in parenthesis in the second column of Table I show that there was no important difference in the proportion of male and female "children" killed. However, an important question that cannot be answered with published data is whether there are important differences between fathers and mothers. On the one hand, women have the overwhelming (often the exclusive) responsibility for child care. The combination of the stress involved in this responsibility and the greater "time at risk" probably accounts for the higher rates of child abuse by mothers than fathers. On the other hand, many of the "children" killed were adults and the greater child care responsibilities of women do not place them at greater risk of killing adult children. Moreover, since male rates of every type of violence are much higher than rates for women, more of these "children" might have been killed by fathers than mothers. A study of 51 fatal child abuse cases in Georgia[20] is consistent with this because it found a much higher rate of fatal child abuse committed by fathers.

Parent murders. Just over 500 parents were murdered by a son or daughter (who could be either a minor or an adult) in 1984, and this was 11.4% of the intrafamily homicides. As in the case of murders of children, the Uniform Crime Reports do not indicate the sex of the "child" who carried out the murder. We only know that fathers are somewhat more likely to be killed by a child than mothers. However, for the reasons just given, we suspect that sons committed many more of these homicides than daughters.

Sibling murders. About 400 persons were murdered by a sibling in 1984. In sharp contrast to children murdered by parents—who were about equally divided between sons and daughters—those killed by a sibling were overwhelmingly males (81%). Again, the sex of the murderer is not available from published data, but because of their generally higher rates for all types of violence, we suspect that those who killed a sibling were most often males.

Other intrafamily homicides. All other family relationships together account for 655 (or 15% of intrafamily) homicides. Our data do not provide information on subdivisions within this category of intrafamily homicide.

Trends in the Number and Rate of Intrafamily Homicide

Trend in deaths and death rate. Perhaps the most fundamental statistic of all is the number of people who die at the hands of other family members.

Figure 1*a* shows the trend in intrafamily homicide since 1966. There was an almost continual increase from 1966 through 1980. However, after reaching a peak of 5,778 deaths in 1980, there has been an almost equally consistent decrease over the past four years. My estimate for 1984 is that about 4,408 people were killed by another member of their own family. Although this represents a substantial and important reduction from the peak figure, it still constitutes a large number of presumably avoidable deaths. The increase to 1980 and subsequent decline shown in Figure 1*a* for the absolute number of homicide deaths is also shown in Figure 1*b* for the homicide rate.

It is not possible to include in this paper an adequate analysis of the factors that may account for the increase in family homicides during the 1960s and 70s and the decrease since about 1980.* All that can be said at this point is that the decrease in intrafamily homicides is part of a broader trend. Actually, in a certain sense, it is leading the trend. The overall homicide rate in the United States has declined from a rate of 10.2 per 100,000 in 1980 to a rate of 7.9 per 100,000 in 1984—a 22.5% decrease since 1980. The rate for nonfamily homicides decreased from 7.6 to 6.0 per 100,000—a 20.4% decrease. The decrease in the family homicide rate was greater than either of these—a 26.6% reduction.

Whatever the reasons, the decrease in family homicides since 1980 is an important development. The decrease has continued each year since 1980, it applies to the homicide rate as well as to the absolute number of deaths and the decrease in both the number and the rate is substantial. A change of this magnitude needs to be understood, and this is the main objective of research I am now conducting.

*However, the following list at least identifies some of the factors: 1) An increasing proportion of youth in the population during the 1960s and 1970s and a decrease in this youthful population bulge since then. However, age is only part of the explanation, and perhaps only a small part, as shown by the fact that even when age-standardized mortality rates are computed[11] there were large increases during this period. 2) Continued poverty among the black population, the sector of the population with the highest homicide rates. 3) High unemployment, known to be strongly associated with homicide[5]. 4) Racial discrimination and extremely high unemployment rates among young black males, which produces an explosive combination of economic frustration and boredom. 5) A heightened sense of relative deprivation on the part of the low income population, especially the low income black population, resulting in feelings of frustration and anger on the part of those who previously accepted their lot. 6) Weakened legitimacy of the established social order. For a variety of reasons, the public lost confidence in established social institutions, ranging from the family to the presidency. 7) The rise in one-parent families and, especially in the black population, a vast increase in the proportion of children raised by unmarried teenage mothers. 8) A tremendous increase in gun ownership, which greatly increases mortality from the type of interpersonal disputes which characterize about 80% of homicides. 9) A legitimation of violence stemming from many sources, including: the Viet Nam war,[1,18] the urban protest riots, assassinations and the bombardment of detailed portrayals of violence in movies and television.[12]

This list is not meant to be exhaustive, and the empiric evidence on which it is based is not adequate.

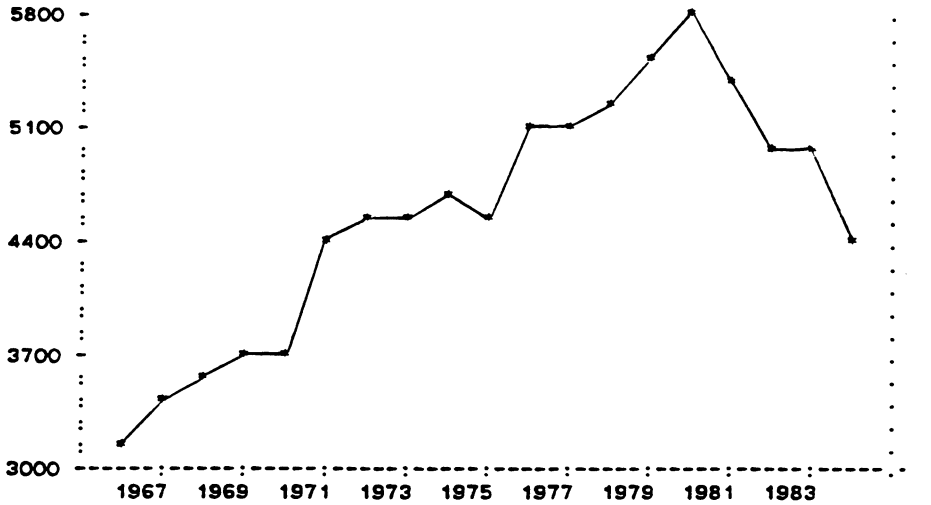

Fig. 1*a*. Estimated *number* of intrafamily homicides, 1966-1984.

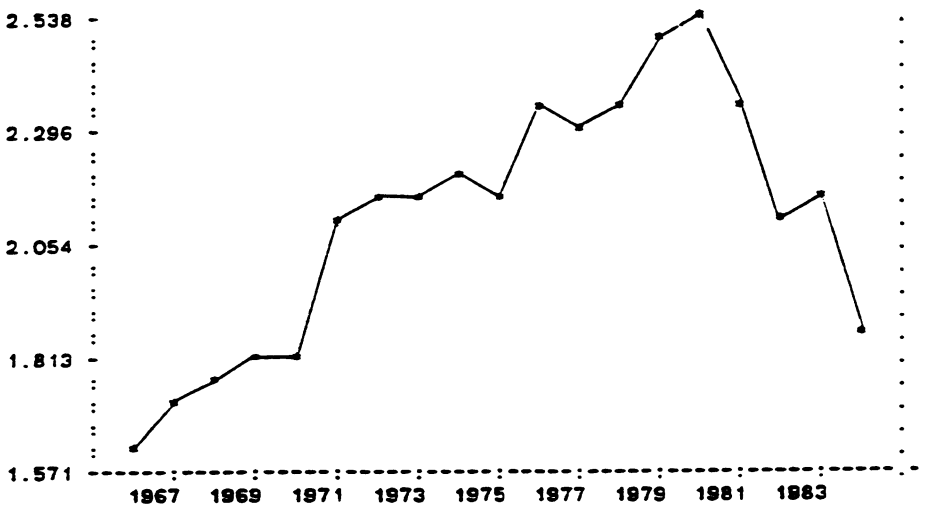

Fig. 1*b*. Estimated *rate* of intrafamily homicide, 1966-1984

Trends in the Distribution and Rate of Intrafamily Homicide

Murder of spouses. We have seen that in 1984 murder of a spouse was by far the largest category of intrafamily homicide. Presumably, this represents typical situations. To see if that is the case, the percentage of

spouse murders was plotted in Figure 2*a*. This shows that spousal murders hovered around half of all intrafamily homicides during this 19-year period, but with a tendency for the percentage to have decreased.*

Percentages such as those in Figure 2*a* can be misleading because they ignore, as they are intended to, changes in the absolute number and rate.** Figure 2*b* therefore presents the trend in the spouse homicide *rate* from 1966 to 1984, which shows that the spousal part of the intrafamily homicide rate follows a pattern very similar to the trend for the overall intrafamily homicide rate (shown earlier in Figure 1*b*).

Other family relationships. Was there an equally large decrease in the homicide rate for other victim-offender relationships within the family? Since the overall decline in rates begins with 1980, we examined the plots for the five-year period from 1980 through 1984 for such a trend. Rather than burden the paper with additional plots, the information can be summarized by means of time series correlations. For example, the decrease in spousal homicides since 1980 shown in Figure 2*b* can be expressed as a correlation between year and spousal homicide rate of -0.94. Similar sharp declines occurred for murders of a brother or sister by a sibling (-0.79) and for "other family relationships" homicides (-0.96). However, during this five-year period of dramatic decrease in most categories of intrafamily homicide, there was no decrease in murders of "children" by parents or in murders of parents by "children" (as shown by their respective correlation with year of 0.02

*A more pronounced decrease would have been evident if Figure 2*a* included data for earlier years.[10] (Table 3.2) For 1963, the earliest year in the Curtis series, 31% of homicides were intrafamily.

The decline in the percent of intrafamily homicides probably reflects a tendency for the rate of intrafamily homicide to be more stable over time than the nonfamily homicide rate. Thus, as the total homicide rate increased during the period from 1963 to 1980, the intrafamily proportion declined, even though there was no absolute decline.

This same principle probably helps to account for many of the large differences between cities in the intrafamily homicide proportion and for the differences between nations. Wolfgang's pioneer study in Philadelphia[37] found that 24.7% of the homicides occurring between 1948 and 1952 were intrafamily, which is not far from the national figure, just as the overall homicide rate for Philadelphia was not far from the national average during those years. On the other hand, in Miami, which has an extremely high homicide rate (32.7 per 100,000 in 1980), the intrafamily homicide percentage was only 6.7% in 1980. Finally, Denmark provides an example at the other extreme. The Danish homicide rate is extremely low, but an amazingly large proportion of those few homicides, 57%, occur within the family.[10] (Table 3.3)

**Percentages such as those in Figure 2 can also be misleading for other reasons. One is the difficulty in establishing the marital status of victims and offenders, particularly in low income black neighborhoods where nonmarital cohabitation is frequent. Since the homicide rate is also high in such areas, this can have an important effect on the statistics. With the data available at that time, Wolfgang[37] concluded that the problem was "almost insurmountable...[and made] no attempt to analyze rates...according to marital status." Since the addition of the "Supplemental Homicide Report" to the Uniform Crime Reports system, this problem has probably lessened. However, even with the use of that report, there may have been changes in the method or care with which police record family relationships. Consequently, it is important to keep in mind the possibility that these changes in police practices, rather than real changes in the incidence of spousal homicide, could produce the trends shown in Figure 2.

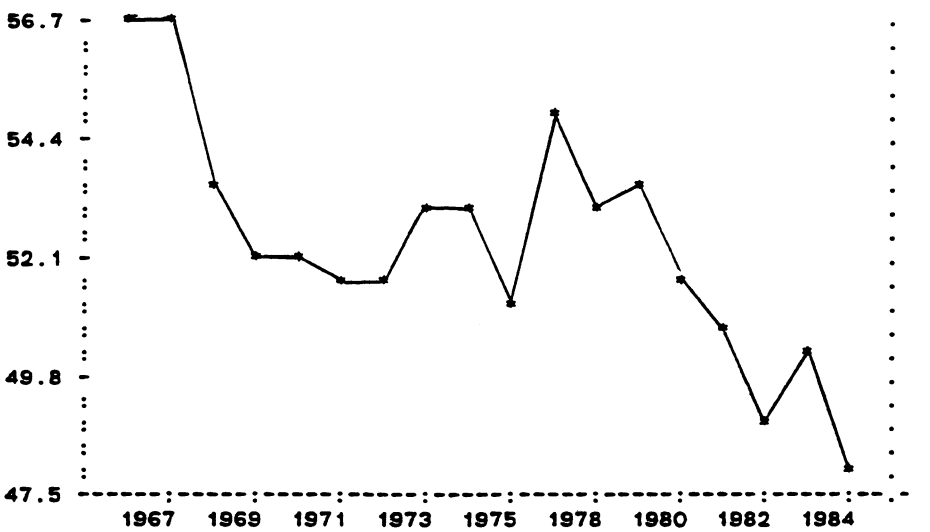

Fig. 2*a*. Percent that spouse murders are of all intrafamily homicides

and -0.04).

Summary on intrafamily homicide. This analysis has presented a series of statistics on different aspects of intrafamily homicide which have not been available previously. The main findings revealed by these new statistics can be summarized as follows:

A total of 4,408 intrafamily homicides occurred in 1984, of which about half were murders of spouses. Of the spouses killed, two thirds were wives. Sizeable numbers of murders occurred between other family members, including 730 sons and daughters killed by parents in 1984, 505 parents killed by a son or daughter, 433 persons killed by a brother or sister and 655 other relationships. Intrafamily homicides increased from just over 3,000 cases in 1966 to a peak of 5,777 cases in 1980, and then declined steadily to 4,408 cases in 1984. The intrafamily homicide rate ranged from 1.62 per 100,000 in 1962 to a peak of 2.54 per 100,000 in 1980, and then declined year by year to a rate of 1.86 per 100,000 population in 1984. The homicide rate for just the intrafamily fraction of homicides is much higher than the rate for all homicides in such countries as England, Denmark and Germany. The decrease in intrafamily homicides from 1980 to 1984 is pronounced for murder of spouses, for murders of siblings and for "other family relationship" murders. However, murders of "children" (which includes both minor and adult children) by parents and of parents by "children" remain at their 1980 peak.

Nonlethal Violence Within the Family*

The statistics just presented on the nature and extent of intrafamily homicide clearly indicate that, at least in the extreme, intrafamily violence is a major source of premature mortality. However, for a variety of reasons, it is one which we have come to accept, even though it accounts for more years of potential life lost than many other avoidable deaths. In 1980 for example, cancer was responsible for a loss of 39,500 years of potential life among men aged 25 to 44, and in 1984 AIDS was responsible for a loss of 32,300 years. But homicides resulted in a loss of 174,600 years of potential life,[9] including 43,700 years lost due to intrafamily homicides.

A key issue is whether this large loss of life is really avoidable, and, if so, whether public health workers can make a contribution to that end. In this section of the paper I shall present evidence from several studies which indicate that nonlethal intrafamily violence is a major source of morbidity and an important precursor of mortality. Thus, intrafamily homicides are not unpredictable events. Of course, inexplicable killings by previously nonviolent family members do occur, and they make headlines. But it is partly because they are so rare that they make headlines. The day-to-day reality is that most family murders are prefaced by a long history of assaults. In short, there is time for life-saving intervention, and the final section of this paper will present some of the research evidence on which such interventions can be based.

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*The term "violence" (and even more, "family violence") is used in such widely varying ways that, except in cases of homicide, it is essential for anyone writing on this topic to inform readers of how the term is used. For purposes of this paper, "violence" refers to *physical* violence, defined as an act carried out with the intention of causing physical pain or injury to another person. Obviously, simply stating the definition does not address the difficult conceptual issues surrounding attempts to define and measure violence. These issues are covered in other papers, and especially, in Gelles and Straus[15] and in Straus.[28] However, there is one aspect of this definition that needs explanation—the focus on acts rather than injuries as the defining element.

The definition just given identifies violence as an act, not as an injury. Since physicians are concerned with the treatment of injuries, there may be a tendency to define violence in those terms. Despite this, I think it is important to define violence and abuse in terms of acts committed, not injuries, for the following reasons.

It is consistent with the legal definition, for example, that an aggravated assault is defined as an attack intended to kill or to cause serious injury, irrespective of whether the shot or the knife misses (as is usually the case).

As just suggested, most assaults do *not* result in injuries that require medical attention. Whether there is an injury or not is strongly influenced by irrelevant or random processes, such as the size, experience and skill of the assailant; the angle at which someone knocked down happens to fall, or whether there is a protrusion; or agility in escaping the assault. For example, two children in a family I studied were assaulted about equally often. The older of the two had severe welts and the younger did not. The only difference is that the younger of the two consistently tried to escape and was much more skilled in escaping.

Defining violence or abuse in terms of injury creates theoretical and methodological confusion by confounding the cause (the assault) with one of the effects (injury).

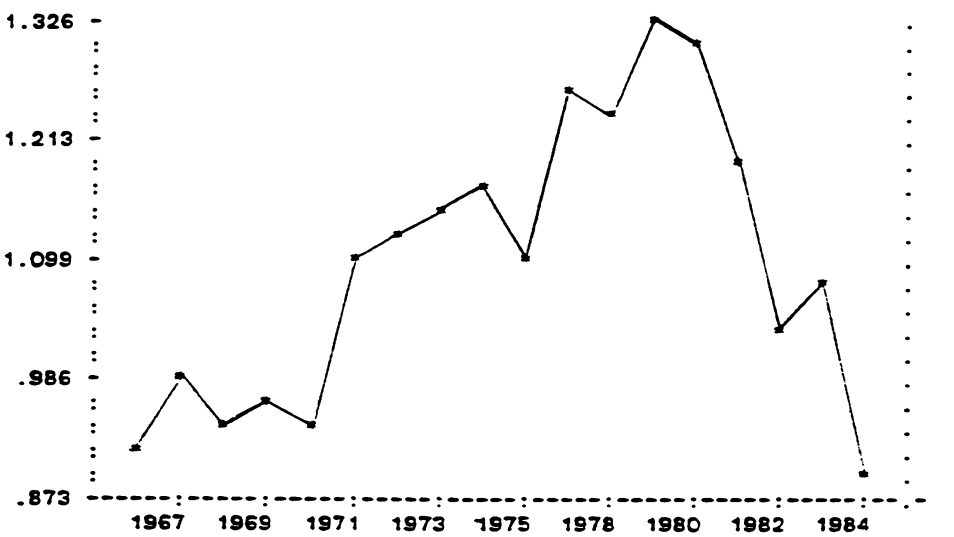

Fig. 2*b*. Spouse-murders per 100,000 population

High incidence and prevalence rates. The study of a nationally representative sample of 2,143 families conducted 10 years ago[32] is the only source of epidemiological data for a large and representative sample of American families. We are now in the process of replicating and extending that study. My guess is that the new study, like the original study, will show extremely high incidence rates for child abuse and spouse abuse. The original study revealed a minimum annual incidence rate for spouse abuse of 16 per 100 couples (not per 100,000) and for child abuse a minimum of 14 per 100 children. That translates to about 8.6 million spouses and 8.8 million children assaulted each year. The details are in Table II.

Many resulting injuries. Despite the publicity given to domestic violence during the past few years, few people, including few physicians, realize that family violence is a public health problem of major importance. Let us look at some of the evidence, starting with a survey by Stark et al.[27] of patients at a large metropolitan hospital: 21% of all women who use the emergency surgical service were battered, and almost half of all injuries presented by women to the emergency surgical service occurred in the context of abuse. One in four women who attempt suicide were battered (for black women the figure is one out of two).

More recent work by Stark and Flitcraft suggests that the figures are even greater for pregnant women: not one out of five, but two out of three preg-

TABLE II. ANNUAL INCIDENCE RATES FOR VIOLENCE IN A NATIONALLY REPRESENTATIVE SAMPLE OF 2,143 FAMILIES, AND UNITED STATES ESTIMATES BASED ON THESE RATES*

Type of intrafamily violence	*Rate per 100 couples or children*	*Number assaulted each year†*
A. Violence between husband and wife		
Any violence during the year (slap, push, etc.)	16	8,600,000
Severe violence† (kick, punch, stab, etc.)	6	3,200,000
Any violence by the husband	12	6,500,000
Severe violence by the husband	4	2,200,000
Any violence by the wife	12	6,500,000
Severe violence by the wife	5	2,700,000
B. Violence by parents		
Any hitting of child during the year	Near 100% for young child‡	
Severe violence (''child abuse'')	14	8,800,000
Very severe violence[11]	3.5	2,200,000
Any violence against 15-17 year olds	34	3,800,000
Severe violence against 15-17 year olds	6	700,000
Very severe violence against 15-17 year olds	3.4	400,000
C. Violence by children		
Any violence against a brother or sister	80	50,200,000
Severe violence against a brother or sister	53	33,300,000
Any violence against a parent	18	9,700,000
Severe violence against a parent	9	4,800,000
D. Violence by children age 15-17		
Any violence against a brother or sister	64	7,200,000
Severe violence against a brother or sister	36	4,000,000
Any violence against a parent	10	1,100,000
Severe violence against a parent	3.5	400,000

*The data are from Straus, Gelles and Steinmetz.[32] Violence is defined as an act carried out with the intention of causing physical pain or injury to another person. See Gelles and Straus[15] and Straus[28] for further explication. The data on violence in this table were obtained using the *Conflict Tactics Scale.*[28] This instrument is designed to obtain data on how often each item in a list of violent acts occurred during the previous year. The list ranges from slapping and throwing things to stabbing and shooting.

**Based on 1982-1983 population figures.

†Severe violence refers to assaultive acts included in the *Conflict Tactics Scales* which go beyond pushing, slapping and throwing things, and which therefore carry a high risk of causing an injury serious enough to require medical attention. This includes kicking, punching, beating up, stabbing, shooting.[28]

‡See Straus[31] (Figure 13-4) for rates in one-year intervals.

[11]This is the same list of violent acts as ''severe violence,'' but omits ''hit with an object'' because many people consider hitting a child with an object such as a belt or hair brush to be legitimate physical punishment. Thus, the list is limited to acts on which there is virtually complete agreement that they constitute child abuse, e.g., kicking, punching, biting, beating up, stabbing, shooting.[28]

nant emergency room trauma patients are victims of family violence. This is consistent with the data first reported by Gelles[14] which suggests that violence against women may actually increase during pregnancy. Not surprisingly, Stark et al.[27] found that abused women have had more miscarriages than other women.

Findings from a representative sample of 1,793 women in Kentucky[26] indicate that injuries inflicted by a male partner resulted in 4.41 physician visits per year per 100 women, of which 66% were emergency room or other hospital visits. A survey of 1,210 women in Texas found a 1% per annum rate of injuries which required medical treatment.[33] (Table 28) Extrapolating the mean of the Kentucky and Texas rates to the United States, I estimate that about a million and a half women each year receive medical attention because of an assault by a male partner, of which almost a million were hospital visits.

A mental health problem. Evidence suggests that intrafamily violence has major adverse effects on mental health. Carmen, Rieker and Mills,[7] for example, report that almost half of a sample of 188 female psychiatric patients had histories of physical or sexual abuse at the hands of another member of their family. However, this study, and all other studies so far located of mental health consequences,[17] lacks a case-control comparison group. Comparison groups are needed because more than half of all married women have probably been hit by their husbands at least once during the course of their marriage.[32] (p.48) Therefore, the 50% rate found for psychiatric patients might not differ from the general public.

Nonlethal violence frequently precedes homicide. A tabulation of homicide cases in Kansas city found that the police "...had responded to disturbance calls at the address of homicide victims or suspects at least once in the 2 years before the homicide in 90 percent of the cases, and five or more times in the 2 years before the homicide in 50 percent of the cases."[4] Browne's study of 42 battered women who had killed their husbands[6] found a long history of serious assaults and many injuries, including threats of being killed by the husband. These studies indicate that intrafamily homicide is typically just one episode in a long standing syndrome of violence.

Intrafamily Violence from a Public Health Perspective

The importance of a preventative approach is all too obvious in the case of homicide, but the need is just as great in the case of nonlethal violence. There are two reasons for this: Nonlethal violence is a frequent antecedent of homicide, and no matter how extensive the treatment services for battered

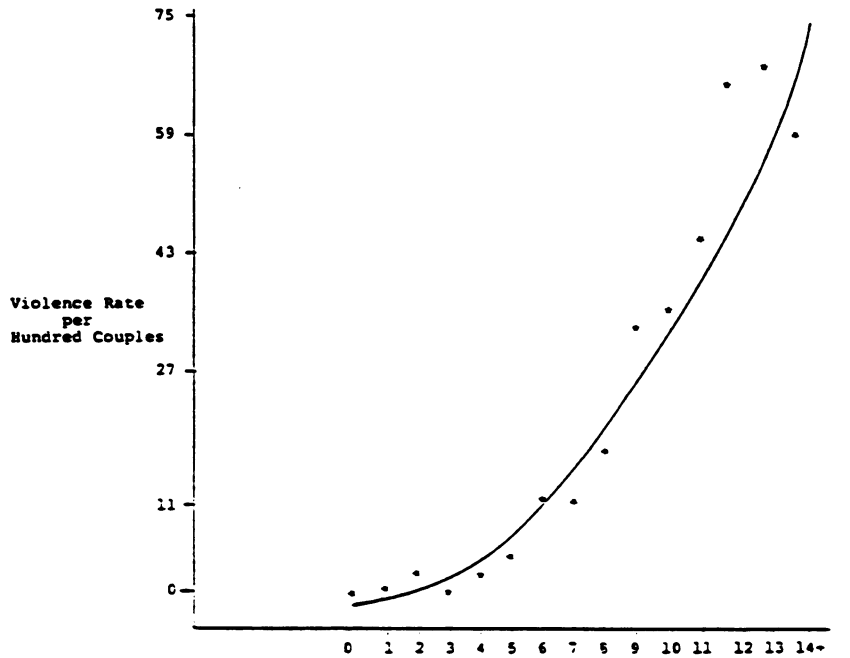

Fig. 3. Couple violence rate by checklist score. Reproduced by permission from Straus, M.A., Gelles, R.J. and Steinmetz, S.K.: *Behind Closed Doors: Violence in the American Family*. New York, Doubleday, 1980.

children and battered wives, the underlying conditions will continue to generate new cases. Our epidemiological survey shows that child protective services and shelters for battered women treat only a small fraction of the cases: there are at least eight times more abused children than come to public attention, and many times more abused spouses than are aided by shelters. There is little chance of increasing treatment services to deal with anywhere near the full population suffering from intrafamily violence. Even if such services were to become available, it would be an endless process because of the constant production of new cases.

Primary Prevention of Domestic Violence and Homicide

Granted the importance of prevention, is there anything that can be done within a medical context? Physicians, in their role as physicians, can do little about such causal factors as racial discrimination and unemployment. However, a wide range of risk factors have been identified, and a substantial number of them have been confirmed across two or more studies.[17] Thus, there is a knowledge base which meets minimal scientific standards to serve on

which to build public health prevention work. Possibilities are illustrated by the Straus et al. national survey, which identified 25 risk factors for spouse abuse.[32] Figure 3 shows that with each additional risk factor, the probability of spouse abuse increased at an accelerating rate. Couples with none, one or two of these risk factors have a near zero probability of violence during a one-year period. From there, the chance of a violent incident occurring gradually increases with each additional risk factor up to eight risk factors. Couples with six to eight of the risk factors have about a one in 10 chance of violence. The probability of violence then climbs precipitously with each additional risk factor until those with 12 or more have about a two out of three chance of violence during the year.

These findings are based on a large and nationally representative sample of American families, but they are retrospective rather than prospective. A prospective study is needed to see whether the risk factors have temporal predictive validity. However, in my opinion, public health programs aimed at prevention of violence do not have to wait the many years before the results of a prospective study becomes available. This is because a number of the risk factors represent aspects of the family and society—such as early marriage, unwanted children, lack of skills in child management and social isolation—which need remedial action even if they have no impact on intrafamily violence.*

Dangers in a Public Health Approach to Intrafamily Violence

I also need to point out that there are at least two reasons to be cautious about involving medical agencies and professionals in primary prevention of family violence, despite the fact that it is a major contributor to morbidity and mortality.

Exceeding public expectations. The first danger arises because many of the basic underlying causes of family violence are not characteristics which the public recognizes as health-related. For example, one of the most important risk factors summarized in Figure 3 is "male dominance in family decisions." However, the public thinks of equality between husband and wife as a religious or moral problem, not a health problem. So the down-side of making prevention of intrafamily violence a health issue is the possibility

*In addition, a number of the interventions are consistent with the type of interventions suggested by studies of the etiology of criminal behavior in general. Although the book by Wilson and Herrnstein[35] emphasizes the biological determinants of criminal behavior, most of the interventions they suggest on the basis of an extremely comprehensive review of the research are similar to those mentioned in this paper: head start, more attention to public health, reducing family violence, including removing children from violent families.

of alienating and antagonizing the public and therefore of undercutting support for public health work in general.

In view of the problem just mentioned, I suggest that only a limited subset of risk factors should be put on the public health agenda, and that these be risk factors most likely to be accepted by the public as health related. Fortunately, even this limited subset constitutes a large and important agenda. Here are some of the risk factors for which I see at least a reasonable chance of public acceptance as appropriate domains of the health professions: early marriage and/or child bearing, unwanted or large numbers of children, premature and handicapped children, use of physical punishment in child rearing and marital conflict.

Of course, even this agenda may encounter public support and public relations problems. Some of the problems grow out of conflicting attitudes and behavior in respect to sex, as indicated by the sexualization of advertisements for almost everything, coexisting with the fact that television networks will not accept public service announcements about contraception. Contraceptive programs for sexually active teenagers encounter great opposition although this is the age group whose life chances are most adversely affected by an unintended pregnancy.

Medicalization of a social problem. A number of sociologists have also identified problems connected with "medicalizing" deviant behavior.[8,38] Conrad defines medicalization as "...defining behavior as a medical problem or illness and mandating or licensing the medical profession to provide some type of treatment for it. Examples include alcoholism, drug addiction, and treating violence as a genetic or brain disorder." The negative aspects of medicalizing behavior problems include harm to individuals through stigmatizing labels, such as labeling a child as hyperkinetic; usurpation of social control functions by a particular profession (and one which, furthermore, is untrained to deal with social issues); and diversion of attention and remedial action from the social conditions which produce the deviant behavior.

The position taken in this paper, however, is the reverse. It advocates the sociologicalization of a medical problem, not the medicalization of a social problem. Although a small percentage of violent behavior (perhaps 0.1%) is traceable to a genetic or brain disorder, violence is primarily a behavior which reflects a certain set of social conditions and behavioral patterns learned under those conditions. Public health programs to reduce morbidity and mortality can and should be directed to altering some of those social con-

ditions. This does not greatly differ from the public health efforts that drastically reduced the incidence of tuberculosis long before TB vaccination became available.[25]

Child abuse prevention experiment. Although I have identified several risk factors within the domain of public health and likely to make important contributions to reducing homicide deaths (to say nothing of nonlethal injuries), I also pointed out that the epidemiologic evidence is entirely retrospective. An appropriate next step is a demonstration project embodying several of these prevention steps. In addition to the benefit to target area population, the type of program to be outlined will, if successful, also provide the prospective evidence needed before undertaking more extensive programs.

The design I suggest involves selecting three or more communities as the focus of a child abuse prevention program and three or more communities to serve as comparison groups. The nature of the prevention work is well outlined in the literature on the etiology of child abuse and would include:* family planning services, including materials; home health visitors after all births, the frequency of such visits adjusted to the number of risk factors present; parent education programs, especially programs which provide alternatives to the use of physical punishment; accessible and affordable day care or other child care facilities which provide respite for parents, education for parents and socialization opportunities for children; family support services including crisis care and hotlines, homemaker helpers, etc., with special attention to families of children with special needs; and peer support and peer counseling groups to help parents with child management problems.

Measures. In addition to being an experiment with random assignment to treatments, the second distinctive characteristic of this study would be that the effects are measured by morbidity and mortality rates rather than by official reports of child abuse or survey data on child abuse.

Morbidity and mortality rates have important advantages over reports of child abuse because to child protective agencies the latter are confounded with so many other factors, such as reporting effort and the social class of the client[16,22,34] as to be almost useless for epidemiologic research. Self-report survey data conducted within the framework of a study of family problems

*Each of the items in this list is also consistent with the idea of "sociologicalizing" a public health approach to prevention of morbidity and mortality from intrafamily violence because each of the items are focused on changing life-style patterns.

(such as my own national survey) have less serious biases of this type, but the problem remains. The most accurate data of all might be obtained by a survey focused on the health of children because children are an almost universal human concern, and their health and injuries are an everyday focus of conversation. Consequently, a survey asking respondents for information on the health problems of their children may be the least threatening and most accurate way to gather data on the incidence of child abuse.

The measurement procedure would be to administer something like the Child Health Supplement to the 1981 National Health Interview Survey before the experiment starts, and at yearly intervals thereafter. Pretest data will provide the needed morbidity base rates and post-tests will provide data to test the hypothesis that the prevention program has improved child health in the communities which had the benefit of the child abuse prevention program. Important supplemental data could also be obtained by comparing base rates for emergency room visits with emergency room usage data after the start of the program and by comparing child mortality data before and after the experiment.

Cost-benefit analysis. Finally, if the results do show a reduction in morbidity and/or mortality in the experimental communities, this can be translated into dollar cost savings that go well beyond the immediate cost of medical care. The largest savings will come from the reduced cost of welfare services, of education for "special needs" children, of juvenile crime and detention and of adult crime and detention—all of which are known to be associated with child abuse.[21] (Chap. 10) Such estimates of cost saved are extremely important because prevention programs of the type just outlined are expensive. Valuable and humane as they are, their chances of implementation on a broad basis are extremely low unless it can be shown that they save money as well as lives.

Secondary Prevention

In addition to the primary prevention role just outlined, the medical professions can also make an important contribution to secondary prevention. By secondary prevention I mean steps to prevent reccurrence of family violence. Here the medical professions are in a particularly advantageous position because of two factors: case identification and public trust.

Case identification. Although fewer than 5% of physically abused children and spouses suffer injuries serious enough to require medical attention, in absolute terms the numbers are very large. The evidence cited earlier sug-

gests that about a million and a half battered women require medical care each year. At least an equal number of cases can be assumed for children who require medical attention because of injuries inflicted by a parent. Almost all of these injuries are presented to the attending physician or nurse as having some origin other than intrafamily assault. However, it would not be difficult to develop a brief and practical (in the sense of accepted by patients) set of diagnostic criteria to identify a large percentage of the cases caused by intrafamily assault.[3,13,27]

It may take no more than embedding the crucial questions in a diagnostic interview. For example, the National Health Interview Survey questions on accident or injury start by identifying the nature of the injury. Subsequent questions ask where the accident happened and whether a vehicle was involved. Our experience with the Conflict Tactics Scale[28] indicates that by starting with nonthreatening questions of this type one can gradually address the key issue of whether the injury was caused by another person and who that person was. If this is correct, medical facilities offer an exceptional opportunity to identify cases in need of immediate help and also cases for secondary prevention.

Public trust. Despite growing complaints about the medical profession, the level of public confidence remains high. I am convinced that if the health professions were to take the initiative, they could make a tremendous contribution to the reduction of child abuse and spouse abuse—perhaps more than any other profession. The basic problem is that, rather than taking an active role, the health professions have tended to ignore or deliberately to avoid family violence. The recent book on *Injuries: Causes, Control Strategies, and Public Policy*,[24] for example, includes only half a page on child abuse and nothing at all on spouse abuse. Like the public, the medical profession has tended to treat family violence as a private family matter, just as smoking was once viewed only as a matter of individual taste. But by recognizing and reconceptualizing intrafamily violence as the enormous threat to health that it actually is, the public will accept it as a legitimate sphere of the health professions. It is instructive to remember that only 20 years ago health professionals took little or no interest in smoking. But these issues have been reconceptualized from their previous status as a matter of individual taste to matters of direct health relevance. And the public has responded. I think they would also respond to a medical approach to family violence, and that this could make a major contribution to the reduction of homicide mortality.

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