

The National Index of Violence and Harm
— a project of the Manchester College Peace Studies Institute —
2002 Index released on November 24, 2004

1. Introduction

The *National Index of Violence and Harm* is constructed to measure levels of violence and harm to individuals in the United States in a given year compared to levels observed in 1995. The Index indicates changes from year to year; it does not attempt to determine an absolute level of violence in any given year. Two different indices are included: personal and societal. The value for each index is relative to the baseline year 1995, which is indexed at 100%. The personal index includes measures of both interpersonal and intrapersonal violence and harm, while the societal index includes institutional and structural measures. The personal scale consists of seven individual variables, and the societal scale consists of twelve, for a total of 19 individual variables. Some of these variables are made up of several indicators; for example, “Deaths From Substance Abuse” includes measures related to smoking, alcohol, and other drugs.

2. Conceptual Background

We are using a concept of violence as defined by some academics which encompasses various types and components such as interpersonal, structural, institutional, physical, and psychological. However, we limit the definition to harm inflicted upon humans; for example, we do not include harm to the environment except as it might affect humans (such as air pollution). Using the definition by Iadacola and Shupe (1998), violence is an action or structural arrangement that results in physical or non-physical harm to one or more persons. Such actions or hierarchies need to be purposely done, perpetuated, or condoned (e.g., accidents causing harm are excluded). However, violence occurs whether harm is intended or not, whether the action is justified or not, can be psychological, and need not be recognized by the perpetrator or the receiver of the harm.

We have divided violence into two scales, personal and societal, with each of these having two parts. Personal violence includes both interpersonal (Variables 1–5: homicide, sexual offenses, battery, robbery, and reckless behavior) and intrapersonal (Variables 6 & 7: suicide/self-injury and deaths from substance abuse). Iadacola and Shupe (1998) define personal violence as “violence that occurs between people acting *outside* the role of agent or representative of a social institution.”

Societal violence includes both institutional violence and structural violence. “Institutional violence is violence that occurs by the action of societal institutions and their agents. Institutional violence is violence by individuals whose actions are governed by the roles that they are playing in an institutional context,” according to Iadacola and Shupe (1998). Variables 8 & 9 (harm caused by correctional systems and law enforcement) represent violence by the institution of the government. Variables 10 & 11 (including air pollution, injuries from products, and occupational injuries and fatalities) are measures of violence by corporations. Variables 12 & 13 (domestic violence and child abuse/neglect) are acts of violence that occur within the institution of the family.

The second part of societal violence is structural violence, measured by Variables 14–19, all of which represent violence that comes about because of the structure or hierarchies of United States society. Iadacola and Shupe's (1998) definition of structural violence is "violence that occurs in the context of establishing, maintaining, extending, reducing or as a consequence of the hierarchical ordering of categories of people in a society." Social negligence represents basic human needs which are left unaddressed by society at large. We have defined "basic" needs to include food, housing, health care and education, and have incorporated related measures of unmet need. Infant mortality and life expectancy, while not direct indicators of structural violence, provide general indicators of the quality of life and health care that is provided through the overall organization of society. Hate crimes occur due to prejudice and enmity between various social and ethnic groups. Employment discrimination is a measure of active bias on the part of those with economic/decision-making power against groups with lesser power. Poverty disparity measures imbalances in the poverty levels between different sub-populations such as racial, age, and gender groups. Gang membership is used as a marker for those who are deprived of basic family and community resources (or are otherwise disenfranchised from the mainstream culture) and are thus less likely to benefit from societal improvements in education, employment, health care, economics, etc.

3. Index Development

Principally using references by Iadacola and Shupe (1998 *Violence: Inequality and Human Freedom*) and by Chasin (1997 *Inequality and Violence in the United States*), we worked toward conceptualizing overall categories and possible individual variables to include within each. A large list of potential variables and indicators (suicide, domestic violence, etc.) was constructed, within the categories of interpersonal, intrapersonal, institutional, and structural violence. Various professionals, mainly in the social sciences and some with a particular interest in or expertise in violence, were solicited for feedback, principally by use of relevant list-servs. They were asked to rate each variable on whether it should be included in the scale. Suggestions for additional variables/indicators were also solicited and a search was then conducted for valid, yearly, and national measures for those variables which were highly rated or otherwise seemed interesting to pursue (e.g., a good measure was sought to show harmful/insufficient aspects of our health system; lack of health insurance was chosen). Input was also obtained from experts in specific areas during this process of selecting measures (for example, health professionals or those involved with corporate accountability projects). From this, the process moved to another round of discussions among our research team, obtaining additional feedback, and more refining.

4. Methodology

Some variables are a combination of several indicators (e.g., deaths from substance abuse includes figures relevant to deaths due to alcohol, tobacco, and drug abuse). There are also occasional double countings of some figures in the overall scale (e.g., sexual violence is counted in the personal violence scale, but some sexual violence occurs as domestic violence, which is also counted as institutional family violence). This happens when the action can be considered in two different ways.

Additionally, we are concerned more with changes from year to year, rather than establishing an absolute level of violence for a particular year. Therefore, even if an occasional variable or indicator might be considered by some to be undermeasured because of lack of full reporting, this is not a concern as long as that under reporting occurs yearly and consistently, which is our assumption. We chose 1995 to be our baseline year as that was the year in which many of our statistical measures first became available.

We have made corrections for population growth. This is to ensure that, for example, the measure for homicides does not increase one year merely because there are more people who might kill or be killed. However, we correct for overall population, rather than population changes in specific age groups that might be more prone to particular types of violence.

Finally, as noted, we sought measures that are valid, annual, and national, trying to use direct measures of harm, when available. When this was not possible for conceptual variables we thought important, we used measures that represented markers of particular types of harm if they met the above criteria (yearly, etc.) as long as empirically they were linked to harm in that area of concern. For example, we used the variable of air pollution because of evidence linking it to ill effects on health, and we used abuse/misconduct by law enforcement as a marker of the negative impact of government toward citizens. We excluded some conceptual variables we would have liked to use for want of measures which fit our criteria. We gained feedback from various sources, but, in the end, it was our research group's own call, and we recognize differences of opinion on various aspects of the Index. There can be no perfect, scientific index in an area such as "violence" with different definitional, political/value, and methodological perspectives. For example, we realize that some people will feel that legal abortion should be included in the index and its calculations. Those wishing annual figures for abortion can go to <http://www.cdc.gov/mmwr>, a web page provided by the Centers for Disease Control. Detailed discussion of the variable definitions is provided in *National Index of Violence and Harm: Definitions and Sources* (see attachment or the Index web site www.manchester.edu/links/ViolenceIndex).

5. Index Calculations

The Personal and Societal Indices were calculated in an *Excel* spreadsheet. Separate sheets provide detailed calculations for each year, 1995 through 2002 (see attached sheets or the Index web site). The Personal Index is computed as the arithmetic mean of the indices for Variables 1 through 7, giving each variable equal weight. Individual variable indices are computed as a percentage of the variable's 1995 baseline value. (Thus all index values for 1995 are defined to be 100.) As mentioned earlier, some variables consist of several indicators (e.g., Variable 7 - Deaths from Substance Abuse). In such cases the variable index is the mean of the indices for the individual indicators. From these procedures the relative weighting of variables and indicators can be inferred. For example, in constructing the Personal Index, Variables 1–6 each contributes one seventh of the index while Indicators 7a–c each contributes one twenty-first (i.e., one third of the remaining seventh).

The Societal Index is calculated in similar fashion, as the mean of the indices for Variables 8–19, with numerous variables consisting of several indicators. Index values have also been computed for the various categories (e.g., Interpersonal, Government); however, these category indices are not used in the actual calculations of the two overall indices.

The column “Unadjusted” contains the raw data for each variable. Those data that need to be adjusted per the U.S. population (see *National Index of Violence and Harm: Definitions and Sources*) are divided by the population figure (in 100,000s) indicated, with the result appearing in the “Adjusted Data” column. The indexed value (relative to 1995) is computed under “Indicator Index” and subsequently these values are averaged in the columns “Variable Index” and “Overall Index.”

In addition to the annual detail sheets, the *National Index of Violence and Harm: 1996–2002 Summary* displays changes in the variable and overall indices over the entire period of study.

6. Changes from the 2001 Index

Each year some revisions to the Index are made to reflect revised figures from our data sources or changes in variable definition.

U.S. Population

Revised Census Bureau figures for the July 1st populations in 2000 and 2001 have been used. These changes did not impact the patterns previously observed in the 1995–2001 data.

Variables 1, 2a, 3a and 4: Crime Index Variables

The 2001 figures were updated with final values provided in the 2002 *Uniform Crime Report*.

Variable 8b: Nonviolent Incarceration

In prior years we used the number of state and federal prisoners incarcerated for nonviolent offenses. However this data has been released progressively later by the U.S. Justice Department. To help expedite release of the Index we have redefined the variable to be the number of sentenced inmates held in state correctional institutions for nonviolent offenses as of December 31st of the prior year. The trend seen in the prior 1995-2001 data is still evident using the new variable definition.

Variable 9a: Deaths by Police Intervention

The final 2001 figure provided by the Centers for Disease Control has been incorporated.

Variables 10c: Pollution Emitted

The EPA revised these data for all years prior to 2002. These new figures are reflected in the 2002 Index. Significant downward trends previously observed for these indicators are still present in the revised data.

Variable 11c: Occupational Fatalities

The final 2001 figure provided by Bureau of Labor Statistics has been incorporated. Previous findings were not affected by this change.

Variable 14b: Hunger

This indicator previously reflected only “Requests for Emergency Food” as published by the U.S. Conference of Mayors. It has been subdivided to also include “Food Insecurity” as defined by the U.S. Department of Agriculture. The existing indicator had increased substantially each year and stood at an indexed value of 233.1% in 2001, having a significant impact on the overall Index. While this change does not invalidate the prior upward trend in hunger, we believe it will provide a more robust measure and also reduce the disproportionate impact this indicator has had. Furthermore, we have adjusted the figures for emergency food requests to include cities experiencing no change or a decrease in emergency requests; these had previously been omitted by our source.

Variable 14d: Homelessness

Similar to Variable 14b, we have adjusted the figures for emergency shelter requests to include

cities experiencing no change or a decrease in emergency requests; these had previously been omitted by our source.

Variable 15a: Infant Mortality

The CDC's revised 2001 value has been incorporated. Previous findings were not affected by this change.

Variable 18: Poverty Disparity

Small changes have been incorporated in prior years' data reflecting the 2002 Census Bureau report. Previous findings were not affected by these changes.

Variable 19: Gang Membership

An incorrect value was used in 2001 and has been corrected. Previous findings were not affected by these changes.

7. 2002 Findings

Indices at all levels (overall, category, variable and indicator) were analyzed for consistent trends over the seven-year study period. The column "Corr." in the *1996-2002 Summary* provides Spearman's rank correlation for each index versus time (i.e., year). Values for the baseline year, 1995, are omitted since all these are indexed at 100%. As indices do not represent data sampled from a given population, use of Spearman's rank correlation (r_s), while somewhat less powerful than Pearson's correlation, is more theoretically sound. The column "Sig." indicates whether the trend over time, as represented by the correlation, is considered statistically significant at the .05 (*) and .01 (**) levels. Statistical significances were determined using two-tailed probability values, as provided by *SPSS, Version 12.0*. In this context statistical significance indicates that the index values are ordered over time (either in an increasing or decreasing fashion) to a degree that is unlikely to occur solely due to chance (i.e., in the presence of only random fluctuations in the data).

As observed in the 2001 release, many variables/indicators show statistically significant trends. We emphasize that a "significant trend" does not necessarily imply a significant *difference* between the 1995 and 2002 values. For example, while smoking deaths (Variable 7a) only increased 2.4% from 1995 to 2002, as this increase was fairly consistent over time the *trend* is considered significant. On the other hand, people experiencing pollution (Variable 10a) decreased 19.8% during the study period but, due to its erratic movements, the variable does not display a statistically significant trend.

A number of interesting observations are made from this analysis. The Personal Index experienced a 13.5% decline from 1995 to 2002. While actually increasing slightly in both 2001 and 2002, it still shows a significant downward trend (with Spearman's rank correlation of $r_s = -0.874$), as do six of its seven constituent variables (all except deaths from substance abuse which has been increasing). However most of these six variables (particularly sexual offenses and suicide) leveled off or increased slightly in 2001 and 2002. We also note that the interpersonal category has a downward trend deemed significant (with rank correlation of -1.000). However the intrapersonal category, which had previously exhibited a significant downward trend, has increased in two consecutive years, primarily due to a large increase in deaths due to illicit drugs which have gone up by 29% from 2000 to 2002.

In contrast to the long-term decreases in personal violence the overall Societal Index had remained fairly stable from 1995 to 2001, with the indexed value ranging from 97.4 to 100.4. However in 2002 this index has dropped substantially from 100.3 to 95.3. Closer examination of the data suggests two reasons. First, each of the four societal categories (government, corporate, family and structural) did in fact decrease in 2002, with Government no longer exhibiting a positive trend. However a large part of the overall decrease can be attributed to just two variables: Law Enforcement Abuse/Misconduct (Variable 9a) and Hate Crimes (Variable 16). Charges brought against law enforcement dropped from 97 to 59 in 2002 while hate crimes decreased from 12,020 to 9,222. It should be noted in 2001 hate crimes increases dramatically in the wake of the September 11th attacks, rocketing up from an indexed value of 89.5 to 107.2 (with 12,020 victims in 2001 compared to just 9,924 in 2000). Somewhat surprisingly, in 2002 this index dropped to 81.5 (9,222 victims), a low since we began tracking data in 1995. In fact, if 2001 were omitted we would continue to see a very consistent reduction in hate crimes from 1995 through 2002. However, due to the anomaly of 2001 this overall trend is not deemed statistically significant.

While poverty disparity overall had decreased consistently since 1995 it increased slightly in 2002. Class disparity continues to climb while the decrease in racial disparity may have bottomed out. Furthermore, in 2002 one was 162% more likely to be in poverty if Black, Hispanic or Asian (versus non-Hispanic White), 23% more likely if female (versus male), and 58% more likely if under 18 years of age (versus 18 or over). See the 2002 detail sheet for these specific data. It should also be noted that the high school drop-out rate which had been very stable at an indexed value of between 79 and 88 dropped from 87.4 to 62.0 in just one year.

There were several categories or variables which had exhibited a downward trend from 1995 through 2001, but increased in 2002, though not enough to invalidate the statistical significance of the overall trend. These were:

- Personal Index
- Sexual Offenses
- Reckless Behavior
- Suicide/Self-Injury

- Infant Mortality/Life Expectancy
- Infant Mortality
- Poverty Disparity
- Poverty Disparity - Race
- Poverty Disparity - Age

Conversely, one variable decreased in 2002, but maintained its overall statistically significant upward trend.

- Nonviolent Incarceration

It is also interesting to observe that numerous variables and categories have decreased (or increased) consistently during all years covered in the study, indicated by perfect positive (+) or perfect negative (-) correlations.

- Interpersonal (-)
- Ambient Pollution (-)
- Pollution Emitted (-)
- Consumers/Employees (-)
- Occupational Injury/Illness (-)
- Homelessness (+)

8. The Index Graphic

A graphic is provided to represent the levels of violence and harm in the United States as measured by the Personal and Societal Indices. The heights of the bars display whether violence is increasing or decreasing from year to year. The graphic comparing years 1995 through 2002 (see Index web site) demonstrates the consistent decrease in the Personal Index through 2001 when it began to inch upward, and the relative stability of the Societal Index, until 2002 when a sharp decrease was observed. Time plots of individual variables are available at the Index web site. These graphs are also included with the Index summary.

9. Index Authors

The *National Violence of Index and Harm* was originally authored in 1999-2000 by the following research team:

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Visit the *National Index of Violence and Harm* web site at
www.manchester.edu/links/ViolenceIndex

12. References

- Chasin, Barbara H. 1997. *Inequality and Violence in the United States*. Atlantic Highlands, NJ: Humanities Press.
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