The 'Dirty War Index:' A new tool to identify rates of prohibited or undesirable war outcomes

December 16 2008

Researchers in this week's *PLoS Medicine* present a new tool called the "Dirty War Index (DWI)" based on the laws of war, a tool which identifies rates of prohibited or highly undesirable ("dirty") war outcomes, such as torture, child injury, and civilian death.

The researchers, Madelyn Hsiao-Rei Hicks (Institute of Psychiatry, King's College London, UK) and Michael Spagat (Royal Holloway College, University of London, Egham, UK), argue that the new tool can help document, analyze, and prevent harmful effects of armed conflicts on populations. The DWI, they say, explicitly links these "dirty" outcomes to international humanitarian laws and exposes rates of unacceptable combat outcomes (high DWI values) from different weapons or combatant groups.

The DWI is a ratio and is calculated as: (number of "dirty" cases/total number of cases) x 100. The best possible DWI value is 0, indicating that the objectionable outcome is identified in no measured cases. The worst possible DWI value is 100, indicating that the objectionable outcome is identified in 100% of measured cases.

Hicks and Spagat give several examples of DWIs calculated for actual armed conflicts, such as a DWI that measures the proportion of civilian deaths in the Colombian civil conflict from 1988-2005. This DWI is calculated as (number of civilians killed/total number of civilians and

opponent combatants killed) x 100. Using data from the Conflict Analysis Resource Center (www.cerac.org.co/home_english.htm) on unopposed attacks where responsibility for deaths is clear, they find that illegal paramilitaries killed 6,944 civilians and 41 combatant opponents, a DWI of 99; guerillas killed 2,498 civilians and 2,946 combatant opponents, a DWI of 46, and government forces killed 539 civilians and 659 combatant opponents, a DWI of 45. These DWIs for this conflict, say the authors, "show that paramilitaries are the 'dirtiest' in terms of proportion of civilians constituting their victims of unopposed attacks."

Any DWI rate above 0, they say, for prohibited actions or war crimes is unacceptable, and eliminating violations is imperative. DWIs for undesirable outcomes are less straightforward. "The highly undesirable outcome of civilian harm," they say "is not prohibited by laws of war if combatants do everything feasible to distinguish between civilians and military targets (the principle of distinction), if they attempt to minimize incidental harm to civilians, and if they intend to avoid harming civilians in excess of anticipated military goals (the principle of proportionality)." Nevertheless, they argue that high DWI values for undesirable outcomes indicate extreme destruction, signal the need for close scrutiny, and may suggest war crimes.

The authors argue that since DWIs give ratios, rather than absolute numbers, they "lend themselves to comparisons over time, between wars, between weapons, and between warring combatant groups to identify better versus worse performers."

Hicks and Spagat's paper is accompanied by two expert commentaries about the DWI, one that explores the public health uses and one that lays out statistical limitations.

Egbert Sondorp (Conflict and Health Programme, London School of Hygiene and Tropical Medicine, UK), who was uninvolved in developing

the tool, says that the novelty of the DWI is "its expression of public health findings as a ratio, in combination with a link to a specific international humanitarian law." A whole range of DWIs can be constructed, says Sondorp, "from rape to the use of prohibited weapons to the use of child soldiers, as long as acts counter to humanitarian law can be counted."

In a second expert commentary, Nathan Taback (Dalla Lanna School of Public Health, University of Toronto, Canada), also uninvolved in developing the tool, examines statistical issues, feasibility, and interpretation of the DWI. Some of the statistical issues he discusses are the potential for selection bias (i.e. using a biased sample), the problem of missing data, and the problem of "censoring" (i.e. when the value of an observation is only partially known).

Citation: Hicks MH-R, Spagat M (2008) The Dirty War Index: A public health and human rights tool for examining and monitoring armed conflict outcomes. PLoS Med 5(12): e243. doi: 10.1371/journal.pmed.0050243 medicine.plosjournals.org/perl … journal.pmed.0050243

Source: Public Library of Science