METHODOLOGIES TO MEASURE THE GENDER DIMENSIONS OF CRIME AND VIOLENCE

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I. Introduction

Worldwide concern over violence as an issue of social justice, public health and, increasingly, of economic development, has brought this debate onto the agendas of governments, donor agencies and civil society alike. Prevalence rates of violence, as measured by indicators such as homicide, crime victimization and domestic assault, reveal that levels of violence vary widely across locales, countries and regions. The Latin American and Caribbean region demonstrates the highest rates of homicide and crime victimization in the world, several times that of rates in Asia, Europe/Central Asia, and the Middle East/North Africa (Fajnzylber et al., 1998). For Latin America, an estimated 3 percent of disability adjusted life years (DALYs) is lost due to violence; however, this figure varies widely, with homicide and assault rates in extremely violent countries such as Colombia accounting for up to 25 percent of DALY calculations (DANE 1997). In the public sphere, crime has become a fact of everyday life in cities, affecting urban dwellers' choices regarding transportation, work, school, consumption and leisure activities. In the private sphere, violence is equally pervasive, where from 25 to 69 percent of women in the Americas have been abused by their partners (Population Reports, 1999) and prevalence of child abuse reaches 65 percent in countries such as Chile (Larraín, 1994; WHO 1999a).

This variability indicates that violent behavior is modifiable and therefore preventable, presenting the challenge of developing the means to measure violence as a first step in the design, implementation and evaluation of key policy and program interventions to reduce violence. There is a growing need for a standardized tool, accurate across communities and countries, capable of measuring levels of violence both as baseline data and for monitoring information. Indeed, results from recent studies have applied a victimization survey methodology intended to create a municipal-level composite index to pinpoint violent areas for targeted policy interventions, using homicide rates, police statistics, and crime victimization surveys as the key monitoring indicators of violence.

This paper argues that, however useful the results of such interventions might be, the chosen measures of crime and violence underestimate certain types of violence, particularly non-economic violence, and key dimensions of violence, particularly gender and age. Complementary methodologies are therefore necessary for a more holistic understanding of the complexities of urban violence. The following section presents two conceptual tools for understanding violence manifestations and causality which provide a structure to the discussion of crime and violence measurement issues. Section III will provide a critical examination of crime and violence indicators, focusing on the ways that underreporting and misclassification contribute to a skewed picture of violence. Sections IV and V review quantitative and qualitative methodologies used in violence research, with lessons learned from research experiences in the Americas. The final section concludes with a discussion of the methodological implications for the development of "first round" crime and violence monitoring surveys and possible "second round" studies to assess the dynamics of violence characteristics, causality and intervention.

II. A conceptual framework for understanding violence

Violence is both highly complex and context specific; for urban dwellers in Latin America, violence is often viewed as an inevitable fact of life. To begin to structure an understanding of the complexities of urban violence, this paper will refer to two conceptual tools, one that attempts to categorize the myriad forms of violence and the other that presents an integrated framework for the multiple causes of violence.

The first is a proposed typology of violence, which makes a threefold distinction between political, economic and social violence. Instead of focusing on specific acts, injuries or victimized populations, this typology categorizes violence in terms of the primary motivating factor, either conscious or unconscious, for gaining or maintaining political, economic, or social power through force or violence. Table 1 defines and summarizes some common types of violence according to this categorization. These categories are deliberately broad, and are not necessarily mutually exclusive in terms of specific violent acts committed; instead, they represent a continuum along which violent acts are perpetrated for complex, often multiple reasons. They also represent the types of violence most often experienced by poor urban communities.

Table 1: Typology of violence

Category of violence	Definition	Manifestation
Political	The commission of violent acts motivated by a desire, conscious or unconscious, to obtain or maintain political power.	Guerrilla conflict; paramilitary conflict; political assassinations; armed conflict between political parties.
Economic	The commission of violent acts motivated by a desire, conscious or unconscious, for economic gain or to obtain or maintain economic power.	Street crime; carjacking; robbery; drug trafficking; kidnapping; assaults made during the commission of economic crimes.
Social	The commission of violent acts motivated by a desire, conscious or unconscious, for social gain or to obtain or maintain social power.	Interpersonal and domestic violence, such as spouse, child, and elder abuse; sexual assault of women and children; arguments that get out of control; violent conflict stemming from, for example, ethnic, gender or age differences.

Source: Moser and Shrader 1999

A guerrilla group, for example, may kidnap a local official to make an ideological statement, an act of violence with clear political motivations. The same group may later kidnap a wealthy landowner to generate revenue as a form of economic violence. A youth gang member's initiation rite includes committing armed robbery as a form of social violence; another youth assaults a victim on the street and steals her money as a form of economic violence. Violence on an interpersonal level -- a man beating his wife or neighbors in hostile argument – is often an issue of social dominance. Race riots and "ethnic cleansing" are examples of social violence with clear overtones of economic violence (i.e. looting merchants, targeting public institutions for destruction) and political violence (i.e. combatants establishing rape camps, government destruction of cultural heritage). Violence between antagonistic ethnic or religious groups, for example, often

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has a clear political component; however, the underlying social tensions are frequently ignored in the search for peace, and therefore may be doomed to failure.
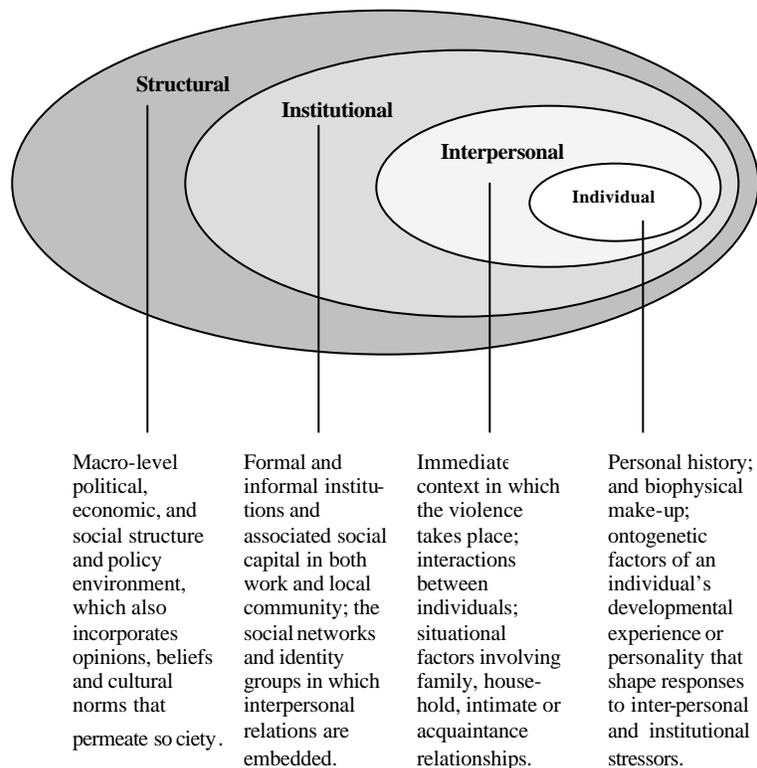
Based as it is on the principal motivations for using violent force, this typology suggests that not all indicators of violence will measure equally the prevalence or impact of different types of violence. The typology further highlights the need for different approaches to violence reduction based on participants' differing motivations and explains in part why interventions to reduce one type of violence may not yield results in relation to other types of violence.

Violence is multifaceted not only because of the different categories that are present, but also because of its multicausality. Empirical evidence indicates that all individuals are not equally violent, that communities vary in their intensity of violent conflict, and that across societies violence tolerance levels differ. Circumstances relating to the individual, the family, the community, and the broader national context

Figure 1. An integrated framework for violence causality

Structural	Institutional	Interpersonal	Individual
Macro-level political, economic, and social structure and policy environment, which also incorporates opinions, beliefs and cultural norms that permeate society.	Formal and informal institutions and associated social capital in both work and local community; the social networks and identity groups in which interpersonal relations are embedded.	Immediate context in which the violence takes place; interactions between individuals; situational factors involving family, household, intimate or acquaintance relationships.	Personal history; and biophysical make-up; ontogenetic factors of an individual's developmental experience or personality that shape responses to inter-personal and institutional stressors.

Source: Moser and Shrader 1999

combine together to play a role in violence perpetration or victimization. It is therefore useful to refer to a framework that integrates the various levels of violence causality, referred to here as the ***structural, institutional, interpersonal*** and ***individual*** levels. This framework, illustrated in Figure 1, recognizes the mutually reinforcing role played by factors at different levels of causality. Drawing on the so-called "ecological model"[1], it seeks to demonstrate that no one level or cause is singly deterministic or wholly

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[1] First used to explain social psychology and human development (Bronfenbrenner 1977), several researchers have applied the "ecological model" to elucidate the complexities of violence etiology. Used variously to analyze child abuse (Belsky 1980), wife batterers (Dutton 1988; Edelson and Tolman 1992), sexual coercion (Brown 1995) and violence against women (Heise, forthcoming), the ecological model is a multi-level framework that incorporates biophysical, psychological and social factors at the individual level as well as those external factors that act upon the individual.

explanatory but, when combined with one or more additional causal variables, may yield a situation where someone commits, or is victimized by, violent acts. Furthermore, it illustrates how exposure to certain types of violence, such as intrahousehold violence or racism, can be a precursor to other types of violence. Applications of this framework are not necessarily confined to a single manifestation of violence, nor do they focus primarily on fomenting factors or risk factors for violence victimization or perpetration. The integrated framework is sufficiently flexible to identify the pre-determinants of political, economic and social violence without reducing the analysis to an assessment of a sole cause of any single type of violence.

III. Measurements of crime and violence: Key indicators and their limitations

The primary sources of data used in creating indicators for researching crime and violence are homicide rates, crime statistics, and victimization surveys. Homicide rates, expressed as the number of intentional deaths per 100,000 inhabitants, are a key indicator because they measure an extreme endpoint of violent engagements that is homogenous across societal and national boundaries. Because of the finality of death and the difficulty of "hiding a body," homicide appears to be less subject to underestimation or misinterpretation than are other indicators of physical and psychological injury or property loss.

Crime rates, as well as homicides, are based primarily on criminal justice statistics from police and medical forensic specialists.[2] Statistics on violent crime, including assault, armed robbery, and rape, are highly dependent upon the quality of the data collected. Particularly in developing countries, underreporting of many crimes, coupled with limited capacity of information monitoring systems, thwart criminologists' efforts to accurately measure crime waves or predict correlates for violence. To offset the skewed nature of crime statistics, victimization surveys often supplement police reports to assess actual crime levels and estimate rates of underreporting. Standardized in many settings, these surveys ask whether family or household members have been the victim of a criminal act during a recent fixed period of time, usually the past 1, 6 or 12 months. Rates of victimization are reported per 1,000 persons or households. The surveys often probe the context of the crime, including whether there were witnesses, the relationship to the perpetrator, and so on.

While useful for gauging economic crimes and intentional deaths, these data sources nevertheless present only a partial picture of violent behavior. The limitations of these indicators are explored in greater detail below.

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[2] In Latin America, forensic medical specialists such as coroners are part of the judicial system and not the health sector. This arrangement can contribute to misinterpretation or mishandling of information.

3.1. Homicide rates

Many criminologists assume a positive correlation between rates of homicide and rates of other types of violent crime, reinforced by the tendency in the literature to conflate homicide with other types of violent crime, particularly where crime statistics are incomplete. Table 2 shows that national level data for many countries do indeed demonstrate that where homicides are high, assaults are as well.

However, there are indications that reported rates of homicide and social violence are not necessarily unequivocally and positively correlated. Countries such as Australia, Canada and Japan have relatively lower rates of homicide but demonstrate relatively high rates of social violence, particularly sexual assault and spouse abuse of women. The lack of developing countries in this category may be due more to the fact that data for all three types of violence are generally unavailable, rather than a trend notable only in developed countries.

At the other end of the spectrum, countries such as Colombia report high rates of homicide and low rates of violence against women. The fluctuations in directionality suggest several interpretations: methodological improvements in data collection, as happened in Canada for rape statistics, resolved many factors relating to underreporting, while similar improvements were not introduced in measuring wife battering. In countries such as Japan, wife beating is normative and accepted, whereas homicide, especially with firearms, is not. In

Table 2. Comparative rates of homicide, rape and wife battering. Selected countries.

Country	Homicide[/a]	Rape[/b]	Wife battering[/c]
Latin America and the Caribbean			
Antigua/Barbados	NA	NA	30
Bahamas	83.09	78.04	NA
Brazil	18.50	NA	NA
Chile	2.4	6.87	60
Colombia	71.64	5.11	18.8
Costa Rica	8.41	8.9	54
Ecuador	18.48	8.34	60
Guatemala	NA	NA	49
Jamaica	27.72	42.87	NA
Mexico	17.58	NA	50
Nicaragua	21.94	30.75	52
Panama	6.38	11.22	NA
Paraguay	NA	NA	13.9
Uruguay	5.82	NA	NA
Other countries			
Australia	3.59	78.6	25
Belgium	3.11	8.89	25
Canada	1.87	108.32	29
Japan	1.02	1.29	58.7
Netherlands	1.11	8.84	20.8
Norway	0.78	8.87	25
Sweden	9.53	20.64	NA
U.K.	1.01	8.68	25
U.S.	6.46	39.27	22.15

/a = reported number of intentional homicides per 100,000; sources are Fifth United Nations Survey of Crime Trends and Operations of Criminal Justice Survey and Fajnzylber et al. (1998) based on WHO data.

/b = reported number of rapes per 100,000; sources are Fifth United Nations Survey of Crime Trends and Operations of Criminal Justice Survey.

/c = lifetime prevalence of moderate to severe physical abuse by an intimate partner; sources are Heise, 1994 and Population Reports, 1999.

extreme cases such as Colombia, excessive homicide coupled with poor data collection techniques on violence against women contribute to a skewed picture of violent behavior. While homicide rates remain the best indicator for lethal violence, its usefulness as a predictor for other types of non-lethal violence is still unclear. This points to the need to adopt more refined and appropriate methodologies for assessing other types of violence. Furthermore, the variability among countries indicates that these behaviors can be modified, but that interventions designed to reduce homicide may not reduce non-lethal intrahousehold or interpersonal violence.

The gender differential for violent crime victimization is a further indication that homicide may be an ineffective proxy for assessing family violence and sexual assault. Throughout the Americas, the vast majority of homicide victims are men. Yet homicide as a choice of indicator may overestimate male impact: men are socialized to resort to violence and to be confrontational, behavior that could put them at greater risk for being murdered. Women, socialized to be less confrontational and less likely to use deadly force, may tend to demonstrate self-preservation behavior in a potentially violent situation. This gendered behavioral response may explain in part the lower mortality rates among women but higher rates of non-fatal outcomes among women in relation to violence.

While it is true that with homicide statistics, one may not be able to "hide the body," one can disguise the intentionality of homicide through misclassification of the cause of death. For example, when the category 'unknown' is available as a listing for cause of death registered homicides can be underestimated by 200 to 300 percent, as the mayor of Rio de Janeiro recently discovered (Lodoño and Guerrero, forthcoming, referenced by A. Concha Eastman, 1998). Recent studies from the U.S. indicate that for decades a significant proportion of child homicide cases have been misdiagnosed as Sudden Infant Death Syndrome (Firstman and Talan, 1997; Lewis 1998). Although studies have shown that a significant number of pregnant women are victims of spouse abuse (Valdez and Shrader 1990; Shrader 1992; Ellsberg et al. 1997), that battering increases during pregnancy (McFarlane et al.1992; Valdez-Santiago and Sanin-Aguirre 1996.) and that pregnant women are severely beaten, including in the abdomen (Valdez and Shrader 1990; Shrader 1992), intentional deaths among the population of pregnant women or those who are up to 42 days postpartum are usually aggregated as 'maternal mortality'.

Often limitations in information systems do not allow for the identification of underlying interpersonal, institutional or structural causes of homicide. Anecdotal evidence from coroners' reports indicate that there are deaths where domestic violence is an obvious contributory factor, but there is no way to note this on file nor pursue an arrest (McKay 1996). Investigations of homicides due to political violence are further complicated by issues of security and access to information, where informants and investigators alike may be at risk. Data such as the relationship between the offender and victim, circumstances surrounding death, and previous history of violence or domestic abuse would allow policymakers to differentiate between political, economic and social violence or other categorization for correlates.

3.2. Crime statistics

Crime statistics tend to conflate two types of behavior – criminal and violent – when in fact some violence is not crime and some crime is not violence. Crime statistics only assess criminalized violent behavior, thereby underestimating violence that is legally or normatively sanctioned, such as rape in marriage, battering, corporal punishment of minor children, psychological abuse, and sexual harassment in public or at work. Even murder is not a value-free act: until very recently, most Latin American jurisprudence did not criminalize the killing of a woman by her husband if he found her *in flagrante delicto* with another man.[3] Moreover, many crime reports include property crimes that do not involve violent acts – burglary, larceny, auto theft – thereby skewing crime statistics where monitoring systems are not sensitive enough to disaggregate crimes by the use or non-use of physical force or coercion.

Crime statistics, notoriously underreported, are further compromised when data gleaned from police reports are incomplete due to limitations in information monitoring systems. Where impunity is high, crime victims are less likely to report to the police, assuming that the judicial response will be inadequate. The incentive of documenting insurance claims contributes to higher rates of reporting of economic crimes. For crimes with a high social stigma attached to victimization, for instance rape or battering, the reported rates are low. A U.S. study showed that between 2 and 8 percent of sexual abuse against women was reported, compared to 62 percent of all assaults and 83 percent of all robberies (Koss 1992). In Latin America, approximately 5 percent of adult sexual abuse victims (Heise 1994) report to authorities. Female victims of spouse abuse similarly underreported: 15 percent of battered women in Nezahualcoyotl, Mexico (Shrader 1992), 20 percent of battered women in San José, Costa Rica (CEFEMINA 1994), 14 percent of battered women in León, Nicaragua (Ellsberg et al. 1996) and 29 percent of battered women in Santiago, Chile (Larraín Heiremans 1994) report to authorities. For political violence, particularly human rights abuses, the obstacles to reporting are formidable, where threats from the state, guerrilla, or paramilitary forces impede due process and contribute to excessive levels of impunity. Offenders appear to be more likely to commit, and victims less likely to report, violent crimes when there is a low probability of being arrested, convicted or of serving a sentence (Fajnzylber et al. 1998).

Misclassification of crime statistics presents a further challenge to measurement. In addition to justifiable errors, inadequate training, or poor information systems, there are instances where violent crimes are systematically miscoded as lesser offenses. For example, in several U.S. cities where "community policing" programs have been put into

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[3] Discussions of "cultural relativism" beg the methodological question as to whether outside researchers may study behaviors operationalized as "violent" or "abusive" when these same behaviors are not culturally or legally defined as violent or abusive. The reification of culture does not justify the absence of an ethical perspective; instead, this line of inquiry favors the use of multidisciplinary approaches proposed herein. An application of a human rights framework to an analysis of crime and violence clearly indicates that these behaviors are abusive violations of human rights as set forth by the Universal Declaration of Human Rights, the Interamerican Convention for the Prevention, Sanction and Eradication of Violence Against Women, and the Declaration of the Rights of the Child, to which all but two American States are signatories.

place, the pressure on police to demonstrate declines in violent crimes leads to misclassification of assaults – especially armed robbery and sexual assaults – as burglaries and to report other violent crimes as misdemeanors.

Limitations in data analysis hinder efforts to identify and understand the larger context in which violent crimes are committed. Most analyses of crime statistics look at only offender data or only victimization data in isolation; the findings are rarely cross-matched and contextual data (i.e. alcohol or drug use, victim-offender relationship) are rarely reported (Chilton 1995).

3.3. Victimization surveys

Victimization surveys increasingly provide a significant contribution to the understanding of how people experience violence. Usually couched in terms of "crime" victimization, these surveys are effective at eliciting responses to economic crimes or crimes outside the home, but are less effective in measuring other types of violence. From the presentation of the study and obtaining informed consent, to the ordering and context of questionnaire items, to the training of interviewers, the structure of many of these surveys creates barriers to disclosure about intimate partner or family violence. Additional barriers exist for probing issues of political violence, creating severe limitations for survey research in this area.

Recent attempts to improve even the more methodologically rigorous crime surveys reveal that for decades violent crimes, particularly regarding social and economic violence, have been significantly underreported. The 1993 Statistics Canada national survey of violence against women found 51 percent of Canadian women had experienced physical or sexual abuse, a significant increase in prevalence attributable in part to appropriately trained interviewers and more sensitive indicators (Johnson and Sacco, 1995.) In the U.S., the 1992 National Crime Victim Survey (NCVS) questionnaire was redesigned in three significant ways: first, by adding questions to let respondents know that the interviewer was interested in a broad spectrum of incidents, not just those involving weapons, severe violence or violence perpetrated by strangers; second, by applying new methods of cueing respondents about potential experiences with victimizations to increase the range of incident types reported to interviewers; and third, by using behavior-specific wording to replace criminal justice terminology to make the questions more understandable (Bachman and Saltzman 1995). With these modifications, the NCVS revealed an average 57 percent increase for violent crimes, including 157 percent increase for rape, a 75 percent increase for simple assault, and a 23 percent increase for aggravated assault (Kinderman et al. 1997). The new method demonstrated a larger impact on the estimates for non-stranger crimes, attempted crimes, and crimes not reported to the police, than on stranger, completed or reported crimes (Kinderman et al. 1997)

Crime victimization surveys underestimate the chronicity of intrahousehold violence. Whereas most violent crime between strangers represents an acute episode, household violence often entails repeat victimization or the implied constant threat of violence. The pervasiveness of the threat of domestic abuse would not be captured by

assessments of the number of times in a month someone felt at risk. Furthermore, the focus on one-, six- or twelve-month victimization underestimates the impact of domestic violence on women, where psychological sequela for severe abuse is similarly debilitating, irrespective of the point in time when the abuse occurred. Women who are severely physically abused, whether two years ago or twenty, demonstrate the same rates of physical and psychological morbidity, and are significantly more at risk than either women who are not battered or women who experience less severe abuse (Ellsberg, 1999).

Crime victimization surveys seek to identify incipient community crime waves and individual characteristics associated with becoming a target for crime, yet the focus on victim characteristics may be mislaid. Identifying these characteristics will establish not 'causal factors' but at best possible 'risk factors' for certain types of crime. Risk factors need to be modifiable for policy interventions to work; it is therefore not useful to find that, for instance, women in union are at greater risk for spouse abuse than are men in union or women not in union. As an absurd extreme, the relevant policy interventions would recommend that victims change their sex or change their marital status. Furthermore, analyses of crime victim surveys can read as "victim blaming" when the focus might better be on looking at perpetrators' characteristics and motivations. This shift is particularly true for economic and social crime, less feasible for researching political violence. In the end, the citizenry at risk for violence victimization can only modify their behavior to a certain degree before they tire of having the onus of change on themselves and not on those culpable for the violence or responsible for protecting public safety, security and welfare. Crime surveys may identify correlates rather than causes of violence, but these are only useful if structural and institutional factors are identified along with individual and interpersonal factors, to allow for both behavioral and environmental modification to reduce risk.

IV. Quantitative methodologies to measure non-economic violence

As noted above, many manifestations of conflict, particularly social and political violence, are resistant to traditional measures of crime and violence. However, several quantitative research methods, including prevalence and sentinel surveys, service statistics, and opinion polling, have generated findings on all types of violence, and at various causal levels. This section will review survey research to date on types of social violence underestimated by traditional sources, as well as additional sources of quantitative data where violence is underreported.

4.1. Prevalence surveys

Quantitative methods to assess political violence are inevitably *post hoc*, and frequently replicate sentinel survey methodologies with interned refugees as study populations. The problems with randomization of sampling, disclosure, and confidentiality inherent to population-based survey research on political violence limit the availability of useful examples from Latin America, therefore prevalence surveys on political violence are not reviewed here. There are, however, many examples of quantitative methodologies that more accurately assess the prevalence and social

dynamics of a wide range of social violence manifestations, including intrahousehold violence, violence against women, and child abuse.

- *Intrahousehold violence and violence against women.* Until recently, many social scientists thought that survey research on violence against women was not feasible, particularly in developing countries. Female respondents were thought to be too ashamed or afraid to discuss their experiences of domestic violence or that the ethical considerations of women's safety and emotional impact exceeded the utility of the research. Worldwide experience has shown, however, that women are receptive to participation in this type of research, will disclose in great detail their experiences of abuse, and often derive a benefit from participating in the interview process (Shrader 1995; INRVAW 1998). Over the last decade, the framing of violence reduction policies has shifted from a criminal justice perspective to incorporate a public health perspective, where intentional injuries and homicides, like communicable diseases, are preventable (Rosenberg and Mercy 1991). The health burden of violence against women in both industrialized and developing countries has been clearly demonstrated (Heise 1994; Population Reports, 1999); it is therefore clear that national-level population and reproductive health surveys play a role assessing prevalence rates of violence against women.

  The best known of these are the Demographic and Health Surveys (DHS), large multi-country surveys designed to generate cross-national data on reproduction, contraception and child health. Conducted in over 50 developing countries to date among women 15-49, these surveys have become the single greatest source of demographic and health information available worldwide. Several recent DHS studies have included items to gauge intimate partner violence in an effort to measure its impact on reproductive decision making and behavior (see Box 1).

  While capturing some key national level data and allowing for limited comparison with reproductive health findings, these initial attempts to "piggy-back" partner violence modules onto existing DHS surveys appear to have consistently underestimated prevalence of abuse. In the 1990 Colombia DHS, for example, at that time the country with the world's highest homicide rate demonstrated an 18.8 percent battering prevalence rate, the lowest in the Americas. Accepted by some Colombian *violentólogos* as evidence that different types of violence have distinct roots and causes (Rubio 1998), a more likely interpretation is that the DHS methodology was inadequate for assessing domestic violence (Kishor 1996; Ochoa 1998). In hindsight DHS analysts agree that several factors, including item wording, interviewer training, and sampling probably contributed to underestimates of prevalence rates. For example, gateway questions were often limited by the context of questionnaire items leading up to this question and the wording of the item, which cued respondents to certain types of behavior (i.e. abuse by current partner) and excluded others (i.e. violence from previous partner or other family or household member). Failure to specify a time

frame for abuse confused attempts to disaggregate lifetime prevalence from one-year point prevalence or childhood abuse from adult abuse. Additionally, the use of a sample frame that only included currently married women underestimated prevalence rates by excluding women of other marital statuses who experience higher rates of partner abuse, such as divorced and separated women (Kishor 1996).

Box 1. Sample wording of DHS survey items

Phillipines (1993)

Now I want to talk with you about something that can be difficult to discuss. Sometimes during difficult times tensions develop within our relationships and we may have misunderstandings and arguments. Sometimes these quarrels can be very painful. Has anyone close to you, that is a family or friend, ever hit, slapped, kicked, or tried to hurt you physically?

Colombia (1990)

During the fighting, does (did) your husband or partner ever beat you?

Colombia (1995)

Has your husband/companion ever beaten you?

Uganda (n.d.)

Sometimes men and women have serious misunderstandings or arguments. I would like to talk about the ways people behave during such times. Some men and women actually beat, slap, kick, or physically harm their partners. Has your husband/partner ever actually beaten, slapped, kicked or physically harmed you?

Egypt (1995)

From the time that you were married has anyone ever beaten you?

Source: Kishor 1996.

This type of survey research is much more successful when it is designed specifically to assess violence, rather than as an added module or inserted battery of questions. Nevertheless, violence against women survey research does require certain considerations in interviewer training techniques, fieldwork management and informed consent processes (Shrader 1995; WHO 1999b). Population based surveys from Mexico, Nicaragua, Chile, and elsewhere have found that concerns regarding data quality and the ethics of mandatory reporting are mitigated when the methodology explicitly incorporates these issues (Valdez and Shrader 1992; Granados Shiroma 1996; Ellsberg et al. 1996; Morrison and Orlando 1999).

A further method-ological consideration is the questionnaire design. Significant challenges emerge when researchers attempt to operationalize the complex dynamics of domestic abuse, particularly regarding behavioral, cognitive and affective concepts. In quantifying battering, there are various, often conflicting, criteria for determining physical, psychological or sexual abuse in an intimate relationship. Cultural definitions vary widely across communities and countries, where behavior in one community is considered abusive but in another is not. Although now modified in some Latin American countries, legal definitions often do not recognize domestic assault or conjugal rape. Moreover, while many women will acknowledge being the target of violent behavior, they often do not identify the behavior as abusive. These conflicting definitions have implications for the way that survey interviewers introduce the topic and pose questions regarding intimate partner

violence, with the need to create a balance between a subjective acknowledgement of victimization (i.e. "Has your husband ever raped you?") and an objective conclusion that violence has occurred (i.e. "Has your husband ever made you have sexual relations when you did not want to?").

One of the most frequently used survey instruments for assessing domestic violence is the Conflict Tactics Scale (CTS) and its 1996 revised version (CTS2).[4] Applied in over 20 countries, the CTS2 creates five scales that measure conflict negotiation skills, psychological aggression, physical assault, sexual coercion, and injury (see Table 3). Frequency of each act over the last year is recorded, and the last four measures include subscales to assess severity of abuse as well (Straus et al. 1996).

The theoretical basis for the CTS2 is conflict theory, which assumes that conflict is an inevitable part of all human association, whereas violence as a tactic to deal with conflict is not. The CTS2 asks respondents to answer a series of questions regarding the quality and frequency of conflict resolution behavior within the respondent's intimate relationship. Respondents are asked about non-violent and abusive behavior, both directed towards and received by their intimate partner. The CTS2 measures concrete acts and events, and is not intended to measure attitudes, causes or consequences (Straus et al. 1996).

A criticism of the CTS2 has been that it measures violence out of context and does not assess the meaning of a violent act within a conflictive encounter, for example, the inherent status subordination between a violent polygamous man and his second common-law wife. A second critique relates to its symmetry in measurement, whereby the CTS2 assigns equal weight to violent behavior that is not equivalent. For example, a woman may punch her spouse in the chest as a defensive gesture to his abuse; her much larger and stronger husband punches her in the face as part of ongoing abuse. Both punches are recorded equivalently, although their potential for injury are not equal. Despite these acknowledged limitations, the CTS2 is an extremely useful instrument when used in conjunction with other measures of context, causality and consequence as provided in expanded questionnaires.

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[4] For brevity's sake, this paper refers only to the CTS2; however, these observations are based in large part on applications of the CTS and are applicable to that version as well.

Table 3. The Revised Conflict Tactics Scale (CTS2)

		Negotiation Scale Items
Question number	Subscale	Item
1	Emotional	I showed my partner I cared even though we disagreed
13	Emotional	Showed respect for my partner's feelings about an issue
39	Emotional	Said I was sure we could work out a problem
3	Cognitive	Explained my side of a disagreement with my partner
59	Cognitive	Suggested a compromise to a disagreement
77	Cognitive	Agreed to try a solution to a disagreement my partner suggested

		Psychological Aggression Scale Items
Question number	Subscale	Item
5	Minor	Insulted or swore at my partner
35	Minor	Shouted or yelled at my partner
49	Minor	Stomped out of the room or house or yard during a disagreement
67	Minor	Said something to spite my partner
25	Severe	Called my partner fat or ugly
29	Severe	Destroyed something belonging to my partner
65	Severe	Accused my partner of being a lousy lover
69	Severe	Threatened to hit or throw something at my partner

		Physical Assault Scale Items
Question number	Subscale	Item
7	Minor	Threw something at my partner that could hurt
9	Minor	Twisted my partner's arm or hair
17	Minor	Pushed or shoved my partner
45	Minor	Grabbed my partner
53	Minor	Slapped my partner
21	Severe	Used a knife or gun on my partner
27	Severe	Punched or hit my partner with something that could hurt
33	Severe	Choked my partner
37	Severe	Slammed my partner against a wall
43	Severe	Beat up my partner
61	Severe	Burned or scalded my partner on purpose
73	Severe	Kicked my partner

		Sexual Coercion Scale Items
Question number	Subscale	Item
15	Minor	Made my partner have sex without a condom
51	Minor	Insisted on sex when my partner did not want to (but did not use physical force)
63	Minor	Insisted my partner have oral or anal sex (but did not use physical force)
19	Severe	Used force (like hitting, holding down, or using a weapon) to make my partner have oral or anal sex
47	Severe	Used force (like hitting, holding down, or using a weapon) to make my partner have sex
57	Severe	Used threats to make my partner have oral or anal sex
75	Severe	Used threats to make my partner have sex

		Injury Scale Items
Question number	Subscale	Item
11	Minor	Had a sprain, bruise, or small cut because of a fight with my partner
71	Minor	Felt physical pain that still hurt the next day because of a fight with my partner
23	Severe	Passed out from being hit on the head by my partner in a fight
31	Severe	Went to a doctor because of a fight with my partner
41	Severe	Needed to see a doctor because of a fight with my partner, but I didn't
55	Severe	Had a broken bone from a fight with my partner

- *Childhood sexual abuse and physical abuse of children.* Similar research interest has been growing regarding intrahousehold violence against children, particularly physical and sexual abuse. Fraught with many of the same challenges as violence against women survey research, quantitative assessments of child abuse are further complicated by the vulnerable developmental stage of the respondents and the ethical obligations of reporting abuse of minor children. Much of the research relies on sampling of a captive population, such as children seeking health clinic or social welfare services. Many studies rely on adult respondents' recollections of childhood experiences, but as memories fade over time reporting tends to focus on the more extreme instances of child abuse, thereby possibly minimizing the subtleties of violent dynamics so instrumental for designing interventions (WHO 1999a). For these and other reasons, child sexual and physical abuse is especially difficult to gauge in a survey setting, and research methodologies other than surveys may be more appropriate. A modified CTS has been used to assess child abuse, often in a clinical rather than a survey setting.

- *Perpetrators of violence.* To date much of the research and policy focus has been on violence victimization, with an eye to developing service interventions that may reduce further victimization. Increasingly, however, policy makers and program designers recognize the need for more information on perpetrators of violence if they are to introduce effective prevention strategies that stop people from becoming violent. As with many aspects of violence survey research, disclosure by perpetrators is an issue, especially when the respondent acknowledges that his or her behavior is morally reprehensible or legally sanctioned. However, in some settings survey research of perpetrators can be effective, particularly in societies where social violence manifestations such as wife beating, infidelity, sexual harassment and male aggression are normative. For example, in a reproductive health survey of Bolivian couples that included items for both male and female partners on conflict and decisionmaking, researchers were surprised at the significant numbers of men who self-disclosed as spouse abusers (Zambrana 1996; Barnett 1998). A household survey on violence in seven Latin American cities found that 6.5 percent of men and 2.8 percent of women reported having hit a non-family member in the past year, 6 percent of respondents (no gender difference) reported having hit their partner in the last year, and 15 percent of men and 24 percent of women had hit a child in the last month (Orpinas 1999).

  The original design of the CTS2 is to administer the scales to both men and women, usually as distinct sample populations, but also administered to couples. Because of its focus on concrete acts, the symmetry of measurement between sexes, and the mixed order of items to minimize cueing respondents on greater or lesser degrees of violence, the CTS2 has been an effective survey instrument in identifying batterers. Limitations arise in the analysis of CTS2 findings, where symmetry in measurement is misinterpreted as

symmetry in behavior. Many CTS2 results demonstrate that women are equally violent as men, yet empirical evidence shows that the consequences of male violence, in terms of death and injury, are decidedly asymmetrical.

To offset the concern about perpetrators' self-disclosure in a face-to-face interview situation, self-administered questionnaires are sometimes used, and indeed disclosure rates do increase. Written questionnaires are often impractical in communities with high levels of functional illiteracy; in impoverished communities in industrialized countries, audio surveys of male at-risk youth have been used successfully for self-disclosure of violent offenses, child sexual abuse victimization, non-normative sexual behaviors and other sensitive topics. Nevertheless, clearly there are methodological and resource constraints associated with obtaining perpetrator data.

Prevalence rates of domestic abuse have a powerful demonstration effect, presenting in stark descriptive statistics the widespread impact of what is essentially an invisible health and development issue. Despite their utility, few countries in the Americas have established municipal- or national-level population-based prevalence rates of family violence; longitudinal data are virtually non-existent. Given the growing evidence of the role that family violence plays in future violent behavior, including perpetration of and victimization by political, economic and social violence, this research gap may undermine the success of policy and program interventions conceived with insufficient information on the dynamics of intrahousehold violence and violence against women.

Prevalence surveys, by design, necessarily focus on individual and interpersonal factors influencing violent behavior. Less effective in assessing institutional and structural factors, prevalence surveys may be complemented by quantitative sources such as service statistics and opinion polls to develop a more integrated picture of the dynamics of violence in a particular urban setting.

4.2. Service statistics

Service statistics refer to those data collected by service institutions, usually from health, education, social welfare, police, and criminal justice agencies, both governmental and non-governmental, on any of a wide array of variables: sociodemographic profiles of those seeking services; types of services requested and/or utilized; chronicity of service demand; referral needs; and so on. The quality of such data is highly variable: many public and non-profit sector institutions do not have integrated information systems, established intake protocols, or the capacity for interinstitutional cross-referencing. Nevertheless, service statistics can provide an alternative source of crime and violence data that assesses levels of underreporting, prevalence rates among certain subpopulations, early detection of crime waves, and the sectoral or institutional impacts of violence in terms of resource utilization and costs. Service statistics can be useful for measuring political, economic and social violence at the institutional level; indeed, service statistics from the criminal justice sector, reviewed extensively above, are the principle indicators in crime reports for much of economic violence victimization.

Service statistics from additional institutions, both public and private, can provide triangulation of information.

- *Health sector.* The health effects of violence have been extensively documented and health care providers are in a unique position to identify victims of political, economic and social violence who suffer significant psychological or physical trauma. Some hospitals are including violence data in their intake protocols, to try to contextualize injuries beyond the immediate diagnosis of trauma. Furthermore, because many vulnerable populations seek primary care health services such as prenatal and well-baby care, health care providers can play a proactive role in identifying potential or actual victims of violence. Because of the trust relationship between provider and patient, many of the latter will disclose details of victimization that they would never report to criminal justice authorities.

- *Education sector.* Service statistics from the educational sector are by and large underutilized, yet because of their important access to youth, educational service providers could play a greater role in the identification, assessment and referral of youth at risk for violence victimization and perpetration. Many of the risk markers for school desertion are similar to risk markers for delinquency, child abuse, drug and alcohol abuse, and other self-destructive behaviors.

- *NGO sector.* Throughout Latin America, non-governmental organizations (NGOs) increasingly provide health, community education, and social welfare services to vulnerable and underserved populations. Many specifically focus on the special needs of hard-to-reach populations such as battered women, at-risk youth, the homeless and internally displaced, and therefore have unique access to information from populations that may not seek public sector support. NGO data can cover a range of political, economic and social violence issues, looking at both offenders and victims, and gauging the levels of underreporting. Notoriously underfunded, most NGOs do not have the resource capacity to collect and analyze anything but the most basic of service statistics.

- *Workplace.* Less well documented is the impact that violence has on the workplace, especially on worker productivity. Violence on the streets and on public transportation impedes workers' ability to get to and from their jobs. Violence in the home that results in injury and stress reduces the capacity to work, especially among women who are disproportionately the victims of domestic abuse. Increasingly, it is in the interest of employers to keep tabs on the impact that economic and social violence, as well as associated behaviors such as drug and alcohol consumption, has on their workforce. Not only a source of service statistics, employment-based data can serve as an effective venue for interventions to reduce risk behaviors and promote non-violent, non-destructive behaviors.

A limitation of service statistics is that sampling is not random, therefore generalizations regarding violence behavior cannot be made to the larger population. However, depending on the effectiveness of the information monitoring system, these data present the opportunity to assess at the institutional level issues relating to violence causality, including the supply, demand, and quality of services, and the levels of interinstitutional coordination. Additionally, service statistics may act as a bellwether for early detection of localized urban crime waves or increases in violent behaviors in the communities they serve.

4.3. KAP studies and opinion polling

While prevalence studies look at individual and interpersonal factors and service statistics delineate institutional factors, other quantitative methods look at structural factors relating to violence causality and interventions that generally focus on assessing social norms and the overall cultural milieu. The most common of these are knowledge, attitude, and practice (KAP) surveys and opinion polls, an example of which is the Pan American Health Organization's ACTIVA study, recently undertaken as a large-scale survey on violence in selected cities in the Americas and including crime victimization, perpetration, and opinion data. The ACTIVA study sample consisted of 10,821 respondents between the ages of 18 and 70 from Salvador de Bahia and Rio de Janeiro in Brazil; Cali, Colombia; Caracas, Venezuela; San Jose, Costa Rica; San Salvador, El Salvador; and Santiago, Chile.[5] The study reports percentages of victimization from urban violence ranging from 15 percent in San Jose to 38.5 percent in San Salvador. With the exception of San Salvador, armed robbery was the most frequent kind of victimization. In Cali, Salvador and Rio de Janeiro, the percentages of victims of assaults or physical blows were the highest, ranging from 7.2 percent in Cali to 5.1 percent in Rio. The study showed that levels of victimization in the cities studied were not only very different in terms of magnitude, but also the type of victimization, confirming that urban violence is context specific.

The results of the ACTIVA study indicate that age, gender and alcohol consumption are the variables most clearly associated with victimization: men, younger people and people who consume alcohol are groups with the highest levels of victimization from violence. In Caracas and San Salvador, victimization of urban violence was observed more frequently in lower income groups than in other income groups. In Cali, Caracas and San Jose, the possession of firearms increased the level of victimization from violence (Cruz 1999; Orpinas 1999). Not surprisingly, the ACTIVA study found the following variables were associated with intimate partner violence: socioeconomic level (the fewer the economic resources, the greater the violence), gender (women reported both using and receiving more violence than did men, although the severity of violence was dissimilar, with men using and women receiving more severe violence), age (there was more violence among the 18-24 age group), marital status (more violence between unmarried persons), history of childhood abuse and excessive alcohol consumption (Moreno Martín 1999).

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[5] The ACTIVA study also included Madrid, Spain; findings related to this city are not reported here.

The ACTIVA study also looked at correlates between attitudes toward violence and aggressive behavior. Lack of self-efficacy for alternatives to violence was strongly correlated with spouse abuse and corporal punishment of children in all the cities. In other words, people who reported using aggression were less likely to feel confident that they could solve conflicts without violence. Prevalence of physical violence toward nonfamily members significantly increased as the frequency of binge drinking increased and, furthermore, was higher among those who owned or wanted to own a firearm, perceived the efficacy of the police as "bad/very bad", and preferred dictatorship over democracy. The attitude that corporal punishment is necessary to rear children was associated with aggression toward the respondent's child; similarly, attitudes that supported slapping a spouse were associated with the respondent's physical aggression toward his or her partner (Orpinas 1999).

Interestingly, public perception does not necessarily mirror actual crime rates. For example, opinion polls in Uruguay and Costa Rica, countries with relatively low levels of violent crime, indicate that citizens' perceived rates of violence are much higher than actual rates. Furthermore, their risk of violence victimization is disproportionately low compared to actual indicators of homicide and assault. This disparity may be explained in part by the use of homicide as the primary or sole measure of violence, and that perceptions may reflect a concern with robberies, assaults, and domestic disputes that often go unreported. Perception data are poor explanatory variables for causality because the tend to be highly subjective: crime victims perceive greater levels of violence and deficiency in public services than do respondents who have not been victimized.

Nevertheless, dissemination of perceptions and opinions, especially results from poorly-designed surveys, may have a disproportionately negative impact on overall efforts to reduce violence. Sociologists in Colombia note that recently reported opinion findings have contributed to a negative civic climate and pessimism regarding the peace process in that country's protracted guerrilla conflict.

Macrolevel analyses of some quantitative survey data may yield insight into violent dynamics at the institutional or structural levels, including for example correlates of poverty, inequality and impunity (Fajnzylber et al. 1998), human capital and productivity (Morrison and Orlando 1999) and social capital (Lederman et al. 2000). However, qualitative methodologies may be more appropriate for delineating the complexities and particularities of violence in a given urban setting. The following section describes recent research experience using qualitative methods that emphasize the perspectives of victims, communities and institutions regarding violence and the ways in which these methodologies might complement the findings from homicide data, crime victimization surveys, and service statistics.

V. Qualitative methodologies and participatory approaches to measuring violence

The utility of combining qualitative and quantitative methods for researching innovative issues has been clearly demonstrated in the field of violence studies. Applications of qualitative and participatory methods can be used to test the reliability

and robustness of the crime index, verifying on the ground that the quantitative measures of crime and violence are reflective of the reality experienced by poor urban communities. Qualitative findings can also provide insight into the causes of index ratings collected longitudinally and help generate hypotheses regarding the dynamics of violent behavior at the microlevel. Finally, qualitative data allow for the design of policy and program initiatives that incorporate the participation of affected populations, communities and institutions, rather than relying solely on top-down approaches derived from non-participatory survey data.

Qualitative methods are most effectively used in the assessment of perceptions regarding violence causality, impacts, and recommendations for solutions and are not appropriate for generating nationally representative data on prevalence and magnitude of violence victimization. With the focus on bringing to light the knowledge and experiences of populations often marginalized from the research process, qualitative methods can elucidate a wide range of research interests, especially the experiences of victims of violence, collective community perceptions, and the level of response and integration of formal and informal institutions. Drawbacks of qualitative studies are cost-effectiveness, reseacher subjectivity and sample bias (Miles and Huberman, 1994).

The following qualitative methods are described briefly here according to the violence research topics for which they seem especially well-suited. However, their flexibility in application makes them useful in a wider array of situations as well.

5.1. Victims' identification of issues, priorities, and solutions

Understanding the perspective of the victims of violence – the factors they perceive contribute to their experiences of violence, their priorities for violence reduction, and their recommendations for action – is a key contribution of qualitative research. Several qualitative methods can be used to detail the complexities and interrelated factors at the individual and interpersonal levels, engaging victims in a participatory process from which they often derive benefits.

- *In-depth interviews.* With its open-ended format, the in-depth interview technique generates rich data from individuals, in either single or multiple sessions, allowing the researcher time to establish a rapport with the informant and pursue in detail thoughts, descriptions and relationships between important information. In-depth interviews are useful for researching all types of violence, but particularly issues of political and social violence, which are often characterized by repeat, chronic, long term victimization within a wider context of fear and terrorization. In-depth interviews are the cornerstone of humans rights documentation and as a data collection method have been used successfully throughout the world to generate informational descriptive reports on myriad manifestations of political violence. In documenting social violence such as spouse or child abuse, in-depth interviews can generate life history data that include the complex details of violence both in the informant's family of origin and current household situation, as well as other types of violence experienced in

other contexts. It is perhaps the most appropriate method for collecting data on the most sensitive topics, such as sexual abuse and torture.

- *Genograms:* The genogram is a tool that can be used to visually document family and household structure and a range of information about its members. The genogram is drawn in a manner similar to a family tree, using a range of symbols to represent general information about different members of the family or household, such as age, sex, date of birth or death. Additional symbols can depict family and household structure over several generations (such as blended families, marriage dissolutions, and polygamous relationships) and more complex information such as major life events, the quality of family interactions, repetitive illnesses or patterns of violence (see Figure 2).

Figure 2. Commonly used genogram symbols
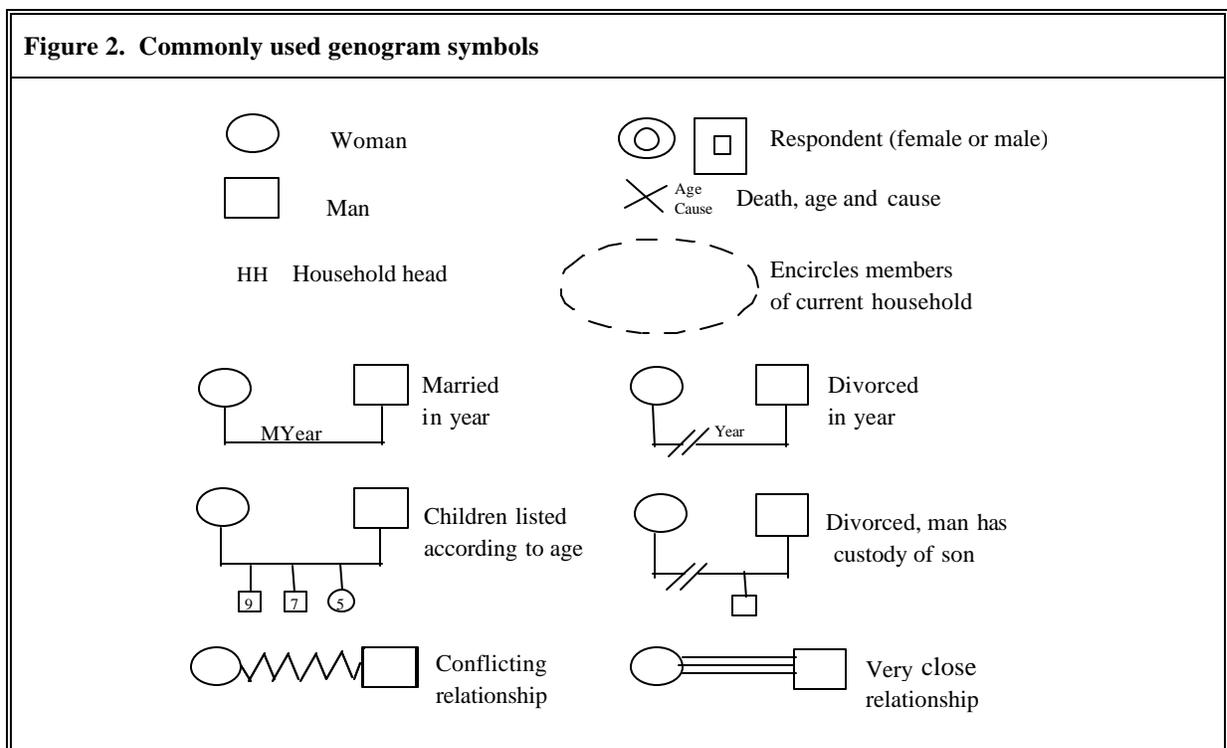
Source: Watts and Shrader 1998.

Genograms can be used in conjuction with surveys (Rábago et al. 1989; Watts et al. 1997; Krishna and Shrader 1999) or as a method of information triangulation in qualitative studies (Shrader and Sagot 1999).   For both applications, a draft genogram is drawn together by interviewer and respondent, probing on information regarding the respondent's household structure and family composition. The genogram is then later referred back to during the course of the interview to integrate further information on family violence dynamics and other topics of interest. For example, Q74 of a violence questionnaire asks whether the respondent's husband has ever kicked, punched, bitten or slapped her. Her

affirmative response would be recorded as *V74* next to the husband's genogram symbol to indicate that he is a perpetrator of violence mentioned in Q74. If he has also punched the informant's son, and the incident was witnessed by a neighbor, *expV74* would be written next to the son's symbol, and *sawV74* written next to the neighbor. If someone had actively supported the abuse, *helpV74* would be written next to the symbol for that person.

Figure 3 illustrates how genogram symbols may be cued to specific variables on a questionnaire. The informant, born in 1956, is married and lives with her husband (who is head of the household), their eight children, and her husband's brother. She has had two other children who have died – a boy at seven months and a girl at age 14. Her husband also has a second common-law wife who does not live with them; she lives with her 3-year-old son by the informant's husband. He has been violent towards the informant in various ways that were probed on the questionnaire and recorded on the genogram. His violence toward her included threatening her with physical violence (*V70*), humiliating her (*V72*), punching her, and kicking her (*V74*). During one of her pregnancies he refused to buy clothes for the baby (*V100*), and physically assaulted her (*V97*), including hitting her in the stomach (*V98*). He has also threatened to assault his other wife (*ExpV70*). The threats of violence and humiliation were either encouraged or supported by her father-in-law (*HelpV70, Help V72*). Neighbors witnessed the informant being humiliated and threatened (*SawV70, SawV72, SawV98*), but did not see the physical assaults.

Figure 3. Sample domestic violence genogram used with survey questionnaire

Source: Watts and Shrader 1998.

The genogram helps clarify complex responses regarding violence dynamics, and is especially useful among populations with limited literacy and

numeracy skills. The graphic depiction of the family tree often mirrors the ways in which these populations conceptualize their kin relationships. The use of figures instead of words or survey boxes is more familiar and accessible; an interesting by-product is that respondents often request to create a copy of their genogram for their own use.

In the analysis phase of the research, genograms can serve as a tool for organizing and cross-referencing information, particularly voluminous amounts of qualitative data. Field tested extensively in Central and South America and elsewhere to document social violence (Shrader and Sagot 1999; Watts and Shrader 1998), the genogram could be modified for identification of political and economic violence victimization as well. For example, additional codes and symbols may be created to denote violence at the hands of gangs, paramilitary, government forces, or criminal elements. Depending on level of detail in the research setting, the genogram can illustrate community, household, family and individual victimization regarding kidnappings, disappearances, armed assaults, witnessing violence and so on.

- *Verbal autopsies:* Derived from the sisterhood method of maternal mortality identification[6], verbal autopsies are a series of in-depth interviews conducted with people close to a homicide victim to determine the details and provide the context of the victim's lifestyle and circumstances surrounding his or her death. In femicide studies from the U.S. and Costa Rica, systematic review of all female deaths and subsequent verbal autopsies revealed that some deaths that were clearly homicides or suicides had been misclassified. In most cases, violence and abuse were contributing causes of death, though infrequently acknowledged as such. Interestingly, in many developing countries the most complete source and thorough reporting of femicide data are often crime tabloids.   Verbal autopsies have been used successfully with victims of political violence as well to uncover the circumstances surrounding summary executions, assassinations, and disappearances.

5.2. Community identification of issues, priorities, and solutions

At the institutional and structural level, it is important to gauge community norms and perceptions regarding violence for a more holistic understanding of the ways in which political, economic, and social violence variously reinforce one another and erode the social fabric of urban communities.

- *Focus groups:* Evolving from psychotherapeutic group therapy modules, later adapted for market research methods, focus group techniques are a powerful and relatively cost-efficient way to gauge consensus on collective norms and

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[6]   The sisterhood method of measuring maternal mortality is based on demographic and health survey data collected from a nationally representative sample of women of reproductive age. Each respondent is asked whether she has had a sister die due to maternal causes; weighted estimates are then used to calculate a country's aggregate maternal mortality rate. This method is often a more accurate reflection of maternal death rates rather than relying solely on registered maternal deaths which are frequently underreported in developing country contexts.

perceptions, as well as uncovering dissenting opinions. More structured than a group interview format, focus groups are increasingly being used as formative research in the design of survey instruments and to generate complementary data to deepen the understanding of survey findings regarding complex social phenomena not easily captured by quantitative methods. In violence research, focus groups, both single sex and mixed, are an excellent forum for determining cultural norms, attitudes and perceptions regarding violence victimization and contributing factors. Besides transcript data, focus groups provide the forum for several other types of qualitative analyses discussed below, including listing, ranking and scoring, Venn diagrams, flow charts, time lines, and so on.

Focus groups are usually inappropriate for asking about participants' direct experiences with violence, due to the lack of confidentiality and privacy. This is not a hard and fast rule, however. In researching social violence experiences, including sexual, psychological and physical abuse of women, participants will often disclose personal experiences in a focus group context. Even perpetrators will self disclose, often influenced by the gender dynamic of the focus group structure. When the moderator is male, male participants will reveal in detail not only more extreme opinions regarding the subordination of women, but will go so far as to compare modifications of their methods of wife beating to avoid newly-legislated penalties for abuse (Quiroz and Carcedo 1997; Ellsberg 1996). This type of information should not be an expectation of the research method, however.

While social violence topics are amenable to focus group research, discussions of political violence are unrealistic with this method. In countries such as Guatemala that have experienced extensive political violence, researchers comment about the "culture of silence" that persists, often impeding the success of focus groups and other types of interview processes (Aguilar Thiessen 1996).

- *Participatory Rural Appraisal/Participatory Urban Appraisal:* Participatory Rural Appraisal (PRA) and Participatory Urban Appraisal (PUA), whose tools and techniques are summarized in Table 4, emphasize local knowledge and enable local people to make their own appraisals, analyses, and plans. The reliability of PRA/PUA findings is maximized through method triangulation – using a variety of techniques and sources to investigate the same key issues to verify results. This type of qualitative research stresses in-depth investigation in a small number of communities and uses purposive sampling to identify study communities considered representative of the research topic, and within them undertaking the PRA/PUA with a sufficient number of individuals and groups to be representative of that community (Chambers 1997; Moser and Holland 1997).

  The PRA/PUA methodology demonstrates the ways in which participatory techniques can enhance policy formulation and identification of possible interventions regarding violence, poverty and social institutions. In contrast to top-down planning approaches from outsiders, the PRA/PUA encourages bottom-up design of interventions. For example, a PUA study in Jamaica, applied as part

Table 4. Elements of Participatory Rural Appraisal and Participatory Urban Appraisal Methodologies

PRA/PUA Tool	Description of technique	Examples of issues raised in violence studies
TRANSECT WALKS	Research team systematically walks through community with local guides and analysts, as a way of 'breaking the ice' by establishing a visible presence and reducing suspicion among community members; also helps to orient research team who, through asking questions, observing situations and noting geographic and other key markers, become familiar with research area. Transects take many forms: vertical, loop, combing, along a watercourse, and so on.	Encourages community participants to get involved in research and raise issues, both spatial (i.e identifying gang turf boundaries, drug trafficking sites, prostitution, alcohol vendors) and non-spatial (i.e. ways in which community participation contributes to violence prevention and reduction).
MAPPING AND MODELLING	Participants' draw maps of their community, highlighting locally-identified resources, landmarks, and key characteristics, using locally available materials. Spatial characteristics and community assets may include services, local leaders, environmental characteristics, etc. Focus on appraising community assets ('what the community does have') rather than on needs assessment ('what the community does not have'). Can lead to household listing and well-being ranking, transects and linkage diagrams.	Discussion generated regarding variations in community perceptions and norms. Identification of areas of greater or lesser vulnerability (i.e. violent households; areas with no street lights; transportation bottlenecks that facilitate or mitigate violence victimization). Location of land mines or other arms; areas of 'perverse' or 'negative' impacts of social capital such as bars, drug dealing and prostitution.
LISTING	Classification of problems and issues as perceived by different groups within the community. Generation by community members of dreams and solutions to resolve these problems.	Specific types of violence perceived by different groups, aggregated to show the frequency with which each type of violence was mentioned. Characteristics of wealth and well-being (e.g. "those who 'have it' and those who 'don't have it'"). Characteristics of local level institutions and resources available to deal with community violence.
RANKING AND SCORING	Community assessment of priorities listed and ranked in order of perceived importance. May be accomplished through matrix ranking, pile sorts, or consensus. (e.g. location of police stations; wealth of different households within a street).	Prevalence and importance of different types of violence, weapons, employment. Prioritization of responses to violence: institutional, community, household, individual. Wealth or well-being ranking as it relates to violence victimization and vulnerability.

PRA/PUA Tool	Description of technique	Examples of issues raised in violence studies
SEASONAL CALENDARS	Trend analysis of activities of importance to the community, such as planting, harvesting, or migration, that occur cyclically and over longer periods of time (i.e. monthly, seasonally, yearly).	Trend analysis of violence in general or specific types of violence, by day of the week, month, season or year. Activity schedule; seasonality analysis of police harassment, gang warfare, domestic violence, political cycles, or varying sources of income generation (i.e. legal versus illegal).
TIME LINES	Chronologies of events, listing major local events with approximate dates; participants' accounts of the past, of how customs, practices and norms have changed over time. May chronicle demographic, environmental, political or any type of trend or change.	Perceptions of significant changes or trends over time within the community or of community characteristics relating to different types of violence and its intensity. For example, in post-conflict situations, the ways in which war, demobilization and reconstruction have affected other types of violence; the willingness of women to tolerate abuse by their intimate partners; growth of gangs and drugs in certain areas.
LINKAGE DIAGRAMS	Participants create graphic representations of flows, connections and causality. These versatile diagrams have been used for the analysis of sequences, marketing, nutrient flows on farms, migration, social contact, and impacts of interventions and trends.	Analysis of violence and its relationship, either causal, consequential or bidirectional, to issues raised by participants; these may include unemployment, area stigma, household and family composition, adolescence pregnancy, lack of education, availability of weapons, abuse of alcohol and drugs.
INSTITUTIONAL DIAGRAMS	Also called Venn or roti diagrams, this technique use shapes and symbols placed on a surface to represent particular actors or institutions in the community. Participants select the size of the shape to indicate relative importance in the community (i.e. large circle for highly significant actors, small circle for less significant actors), then position these shapes relative to one another and to the community, with relative distances between them demonstrating relative access to the community (i.e. figures further away are more inaccessible, figures closer in are more accessible).	Often used to identify the perceived importance and effectiveness of local level institutions in violence prevention and deterrance. Can assist in prioritizing possible community resources and allies in violence interventions (i.e. schools, informal community leaders, sympathic judge) as well as explain why certain institutions are underutilized for violence interventions (i.e. police, health clinic).

Adapted from Chambers, 1997.

Findings from studies conducted in the LAC region incorporating PRA/PUA techniques, with violence as a primary or secondary research objective, drawn from: Ellsberg et al. 1997; Krishna and Shrader 1999; Moser and Holland 1997; Moser and McIlwaine 1999; Shrader and Sagot 1998.

of the design phase of the Jamaican Social Investment Fund, revealed that community perceptions often contradicted the perceptions of policy makers and program planners who were removed from the daily reality of violence. Politicians said that political violence, in the form of assassinations of political candidates and the arming of youth gangs during election season, was the most important violence issue to these communities. However, the PUA study showed that the communities' concerns lay elsewhere, and that gang warfare, drug violence and economic violence had a much greater impact on the quality of their lives and were therefore on the forefront of their priority list for action (Moser and Holland 1997). A study on social capital in Panama, using PRA/PUA techniques, found that communities consistently identified the presence of drug trafficking, alcohol sale, prostitution, and delinquent behavior as related to violence in the community. These and other manifestations of 'perverse social capital' were found to be widespread and readily identified in both urban and non-indigenous rural communities, though not in more dispersed and isolated rural indigenous communities (Krishna and Shrader 1999).

5.3. Formal and information institutions: Supply, demand, and quality of services

An analysis of institutional and structural factors that relate to violence can also include a review of the supply, demand and quality of services provided by formal and informal institutions working in the community. Such an analysis provides the larger context in which individuals operate in their efforts to mitigate the effects of violence and promote peaceful living conditions.

- *Ruta Crítica methodology:* As part of an institutional strengthening development project, the Pan American Health Organization conducted a multi-site qualitative study of women affected by family violence and the decision making process they carry out in their efforts to end the violence. This research, called the *Ruta Crítica* study, was conducted in fifteen communities in ten Latin American countries. One key research focus of the *Ruta Crítica* study was on the institutional responses and quality of services provided by the judicial, police, health, educational and NGO sectors to women affected by family violence. As with the PRA/PUA methodology, the triangulation of data collection techniques -- including the mapping of community assets, in-depth interviews with end-users, semi-structured interviewers with service providers, content analysis of institutional documents, and focus group interviews with community members -- strengthened the reliability of the research findings.

  Comparisons among responses from service providers and users revealed a wide discrepancy between these groups' perceptions of the effectiveness of the police, the hospital, and so on. Service providers were often surprised at the number of obstacles women faced in seeking assistance and were unaware of the impact that the lack of interinstitutional coordination, rampant corruption and gender-based stereotypes that exist within the judicial and police systems had on the quality of care. In an urban slum in Panamá, for example, judges' training did not address the fact that unsympathetic security guards blocked physical access to
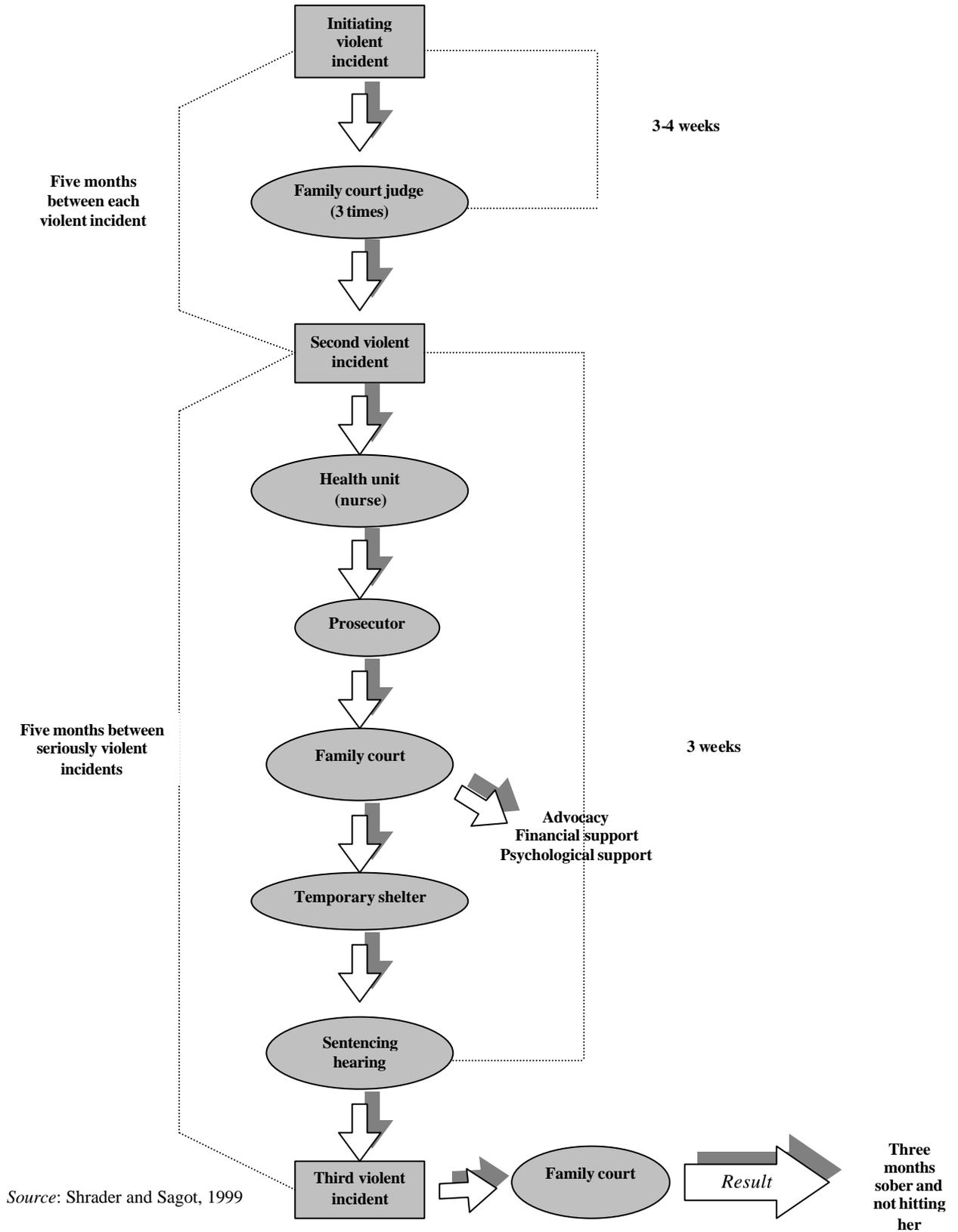
the courthouse to women who had facial bruises and unkempt clothing, citing their appearance as disrespect for the judicial institution. These findings focused the need for vertical as well as horizontal training on domestic abuse.

Women who had initiated the *ruta crítica* rarely began by seeking services from providers in formal sectors, such as health clinics or police. Instead, they initially relied on support from other women in the community. The *Ruta Crítica* study highlighted the need to strengthen community resources and capabilities of responding to battered women, especially the key roles played by family members, women's informal support networks, and allied health workers. In addition, the education sector was significantly underutilized both in its capacity to identify to violence victims and to reinforce public education messages regarding violence prevention. In Estelí, Nicaragua, for example, coalition-building among NGOs with similar interests in violence reduction was a key component to violence prevention, where battered women's organizations and health agencies worked with a men's group to target batterers as well as victims for interventions.

The *Ruta Critica* study provided not only a baseline measure of the supply, demand and quality of services for battered women, but also was an instrument around which the community collectively designed and pursued solutions to violence. An unanticipated benefit of the *Ruta Crítica* methodology was the impact the participatory nature of the research had on subsequent project design. A key component of the research was the convening of a community advisory board in each of the pilot communities. Comprised of community leaders from the health, education, legal and NGO sectors, the advisory board proved a valuable resource in vetting the research design, piloting the instruments, gaining access to the community and its social service institutions, and strengthening the legitimacy and longevity of the project. In setting up each local research advisory board, project staff were fortuitously sowing the seeds for future inter-institutional collaboration, dialog with civil society, and public awareness regarding violence. For communities such as Orange Walk, Belize, this advisory board represented the first time that public sector, NGO and community members had ever sat down together to discuss solutions for a problem which all acknowledged was a serious health and development issue (McKay et al. 1997; Shrader 1998; Shrader and Sagot 1999).

- *Flow charts or linkage diagrams.* Flow charts are the visual depiction of the relationship between and among different elements of a linear social process. The "flow" may indicate steps in decision making, a chronological sequence, or a hierarchy of activities that one or more individuals undertake. In the *Ruta Crítica* study, for example, flow charts were useful for illustrating the process that women went through as they sought services from various institutions. The flowchart presented in Figure 4 depicts the experience of one Salvadoran woman who attempted to resolve her situation of family violence. It highlights the actions leading up to the help-seeking process, the factors that inhibited and facilitated the process, the type and frequency of institutions to which she had recourse, and

Figure 4. Example of flow chart: *Ruta Crítica* itinerary

```
                    ┌─────────────┐
                    │  Initiating │ ················┐
                    │   violent   │                 │
                    │  incident   │                 │
                    └─────────────┘                 │
                      │                        3-4 weeks
                      ▼                             │
                  ╭─────────────╮                  │
  Five months     │ Family court│                  │
  between each     │   judge     │ ·················┘
  violent incident │  (3 times)  │
                  ╰─────────────╯
                      │
                      ▼
                    ┌─────────────┐
                    │Second violent│ ···············┐
                    │   incident  │                 │
                    └─────────────┘                 │
                      │                             │
                      ▼                             │
                  ╭─────────────╮                  │
                  │ Health unit │                  │
                  │   (nurse)   │                  │
                  ╰─────────────╯                  │
                      │                             │
                      ▼                             │
                  ╭─────────────╮                  │
                  │  Prosecutor │                  │
                  ╰─────────────╯                  │
                      │                             │
                      ▼                          3 weeks
  Five months         ╭─────────────╮             │
  between             │ Family court│──▶ Advocacy │
  seriously violent   ╰─────────────╯    Financial support
  incidents             │              Psychological support
                      ▼
                  ╭─────────────╮
                  │Temporary shelter│
                  ╰─────────────╯
                      │
                      ▼
                  ╭─────────────╮
                  │ Sentencing  │ ················┘
                  │  hearing    │
                  ╰─────────────╯
                      │
                      ▼
                  ┌─────────────┐      ╭──────────╮
                  │Third violent│──▶   │Family court│──▶ Result ──▶ Three months
                  │  incident   │      ╰──────────╯                 sober and
                  └─────────────┘                                   not hitting
                                                                    her
```

Source: Shrader and Sagot, 1999

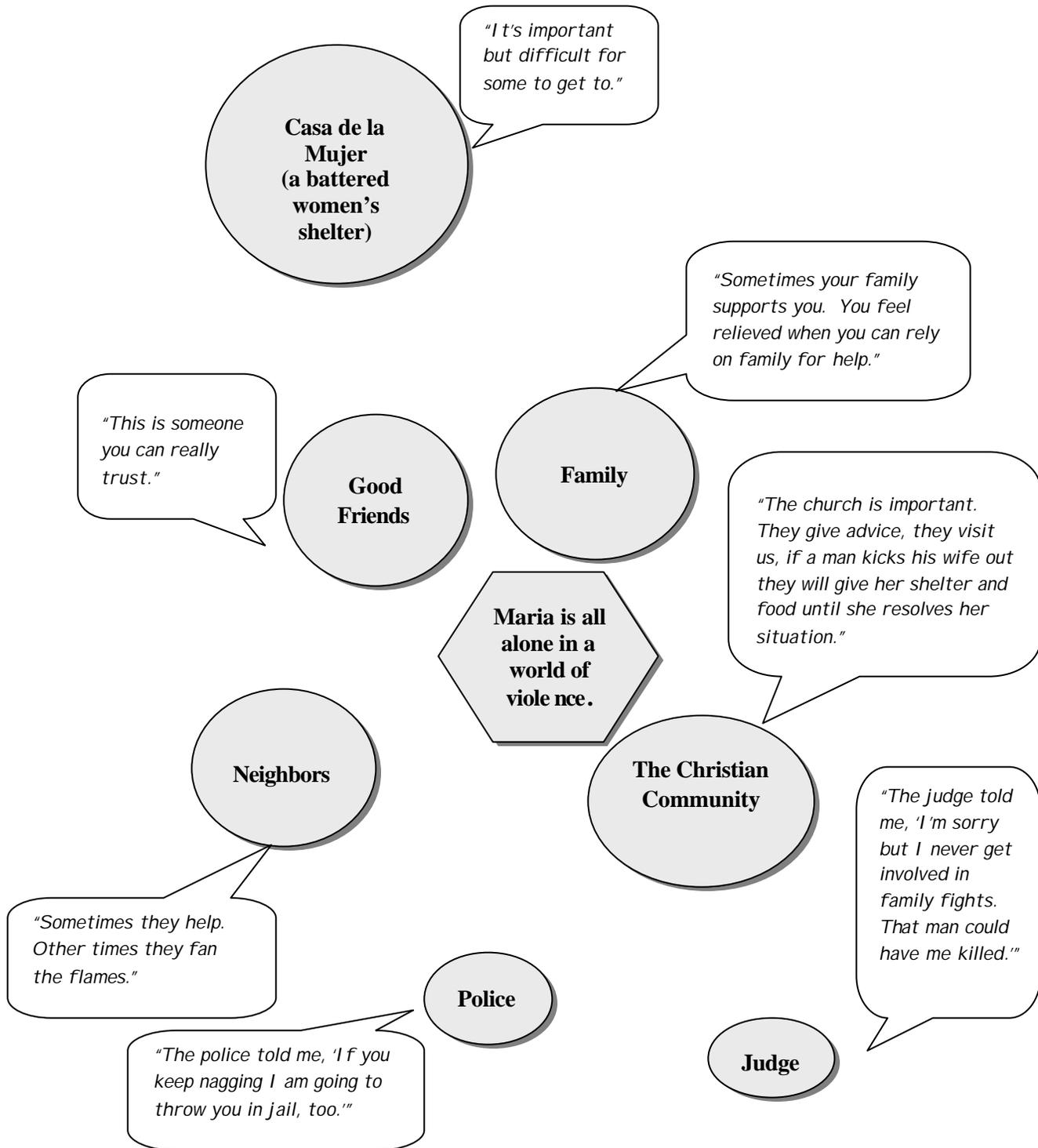*Measuring the Gender Dimensions of Crime and Violence*　　　　**29**

ultimately the outcome of this process. This type of flowchart supported graphically the frequent observation by informants that they had to continually seek services, that protection was not guaranteed at the first attempt, and that they needed to be persistent over many weeks and months in the face of potential or real violence from their partner. The information from this and other flowcharts reinforced messages to judges, lawyers, physicians and policymakers that, even in countries with laws in place to protect women, the policy decisions often do not get translated into improvements in day-to-day service delivery.

- ***Venn diagram.*** Another visual tool for conveying qualitative information on institutions is the Venn (or roti) diagram. Often generated through focus group discussions, Venn diagrams use shapes and symbols to represent particular actors or institutions in the community. The group participants select the size of the shape to indicate relative importance in the community (i.e. large circle for highly significant actors, small circle for less significant actors), then place these shapes on a surface, with relative distances between them demonstrating relative access to the community (i.e. figures further away are more inaccessible, figures closer in are more accessible).

  Figure 5 is an example of a Venn diagram regarding community resources available to battered women in a Nicaraguan community. The focus group was presented with the hypothetical situation of María, a woman "who is all alone in a world of violence." The group developed a consensus regarding the institutions and services that existed in the community to assist her, and the relative importance of each one. The battered women's shelter, represented by a large circle, was considered very important; the police and judge, depicted by small circles, were considered by the group to be less relevant. The octagonal figure representing María was then placed in the middle of the blackboard, and the group decided how accessible each institution was to María's situation. In this case, the group's perception is that the Christian community and her family are very accessible, while the battered women's shelter, police and judge are relatively inaccessible.

  An interesting analysis is to compare Venn diagrams generated by different focus groups stratefied by age, sex, or occupation. For example, the perceptions of a group of reproductive age women versus those of a group of judges regarding what services are important and how accessible they are in terms of distance or cost often vary widely, and serve to highlight institutional weaknesses and strengths, as well as unrecognized community assets and resources from informal institutions.

Figure 5.   Example of Venn diagram: Opinions of rural Nicaraguan women on services for battered women

"It's important but difficult for some to get to."

Casa de la Mujer (a battered women's shelter)

"Sometimes your family supports you. You feel relieved when you can rely on family for help."

"This is someone you can really trust."

Good Friends

Family

"The church is important. They give advice, they visit us, if a man kicks his wife out they will give her shelter and food until she resolves her situation."

Maria is all alone in a world of violence.

Neighbors

The Christian Community

"The judge told me, 'I'm sorry but I never get involved in family fights. That man could have me killed.'"

"Sometimes they help. Other times they fan the flames."

Police

"The police told me, 'If you keep nagging I am going to throw you in jail, too.'"

Judge

Source: Ellsberg, 1998.

VI. Implications for the design and use of a crime and violence monitoring index

Findings from the monitoring and surveillance composite index, based on homicides, crime statistics and victimization surveys and conducted every three-to-six months, will provide invaluable "first round" information to monitor crime trends and ideally to detect incipient crime waves as a warning mechanism for rapid intervention and prevention of criminal inertia. The results from such "first round" research will point to areas for more in-depth "second round" studies exploring causality, impact of interventions, and public opinion on crime and violence trends. Recommendations for strengthening the index and designing additional studies promote a multidisciplinary approach to violence research, including a wider definition of violence that encompasses the range of violent behaviors experienced by men, women and children.

As currently conceived, a composite index of homicide rates, victimization surveys and crime statistics will generate much-needed monitoring data at the municipal level to assist policy makers and urban planners in their efforts to curb crime and violence. These monitoring efforts have several operational limitations, however. First, monitoring data provide a "snapshot" of the crime and violence situation at any given point in any given community. Taken over time, these snapshots may identify changes or trends in crime and violence incidence. However, they still cannot say why a particular trend or change is occurring, and information on causal and contributory factors is critical to the design of effective interventions. Second, the monitoring index will be highly dependent on the quality of the data collected and somewhat skewed by the limitations of homicide data, crime statistics and victim surveys detailed above. In the best of circumstances, the input data can be "corrected" or may require information from additional sources for more accurate interpretation. Finally, the analysis of monitoring data may not allow urban planners to focus on the microlevel characteristics necessary for program interventions and evaluation. These limitations point to a need for additional indicators to strengthen the surveillance methods and possibly include complementary methodologies to monitor community participation and impact.

Additional quantitative indicators for the monitoring system could analyze crime and violence data by the three violence categories proposed by the conceptual framework by disaggregating results by political, economic, or social violence. This categorization would be especially useful for homicide data to evaluate whether homicide reduction interventions are equally effective for all types of violence. For example, additional items on autopsy reports, crime statistics and victimization surveys could provide insight into the perpetrator's motivation for the violence, albeit based on interpretations by victims, coroners, or other third parties. Additional small-scale verbal autopsies using a subsample of homicide victims would also yield similar information, though not necessarily applicable to the general population.

Looking at the four causal levels, crime surveillance systems often include some quantitative indicators for individual, interpersonal, institutional and structural factors. At the individual level, most monitoring research already includes basic sociodemographic data of victims. In addition, surveys might include sociodemographic data of perpetrators (as perceived by victims or service providers), as well as the use of

alcohol, drugs or firearms by the victim or perpetrator. At the interpersonal level, the relationship between victim and perpetrator would be a useful indicator. This relationship should be characterized to a sufficient degree of detail as to determine whether they were family or household members, had some other affective relationship, acquaintance relationship, or were strangers. Ideally, the data would be collected in such a way so as to allow cross-referencing of victim and perpetrator data.

"Second round" data collection on issues of particular interest could shed light on institutional and structural causes as well. At the institutional level, monitoring systems often propose looking at basic service statistics of health and social welfare agencies, crime characteristics (i.e. physical injuries sustained, weapons used, value of property loss, where crime takes place), victim and perpetrator characteristics, and whether the crime was reported. Other useful indicators may include: per capita police; per capita private security; presence of gangs in community; estimated number of gangs and gang members; level of organization of gangs (high, medium, low); existence and types of institutional services (supply, demand, quality); level of integration of institutions (formal and informal); and additional measures of social capital. At the structural level, indicators could be included to assess: levels of impunity as measured by the ratio of number of arrests to number of convictions; levels of corruption; indices of social exclusion such as racism, gender discrimination or area stigma; and the dynamics between violence and the access to and control of resources such as land, water, and wealth. In some urban settings, policy and program managers may want to consider including additional data collection and analysis to complement the findings from the index.

Recognizing the limitations of crime statistics and victims' surveys, monitoring and surveillance projects could build in research components that incorporate alternative sources of quantitative data to strengthen the index applications. At the local level, sources may include a watchdog group or research institute that collects more accurate, timely data on underreported crime and violence. A limitation of this approach is that not all cities will have similar sources, so inter-urban comparative analyses may not be possible. Another source is service statistics on victimization, not only from police and hospitals, but also clinics, non-governmental organizations, schools, and work sites. In many instances, there would be the need for improved data registry, unified protocols, and data integration to facilitate cross-referencing of information.

A modified CTS or adaptation of another survey instrument would generate useful household-level data on types of violence underrepresented by the index. Data on perpetrators of economic and social violence could be generated with small samples for surveys or in-depth interviews. Similarly, other small-scale focused surveys could be designed to assess social and/or political violence and their relationship to economic violence.

Many of the qualitative methods described earlier could be incorporated into a municipal level information system and would be useful for explaining in greater detail the relationships and causal links revealed by quantitative trend data. Mapping of crime and violence throughout neighborhoods provides visual confirmation of noted trends;

maps could also include additional information regarding community resources, formal and informal institutions, infrastructure, and other pertinent social or economic trends to provide an added dimension to understanding the dynamics of crime and violence. For instance, comparing the location of battered women's shelters and women's and children's police stations to the residential distribution of family violence incidences demonstrates whether service catchment areas actually have physical access to the services provided. Using the results of the monitoring system as a tool for community consultation, urban planners and policy makers could conduct community-based participatory focus groups and individual interviews to assess community perceptions and develop strong community support for interventions to reduce crime and violence in target neighborhoods.

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