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# Because Everyone Counts, everyone should be counted—Elusive Population, Gender-based Violence, and Maternal Death "Counting those who should be counted" [1]

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[1] The text is presented without formal editing.

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***Introduction***

1. Population Census, usually conducted at national level once every ten years, yields data that serve as the bench mark against which change by time and effort could be measured, when time series are available. Measurement of change of the population composition and characteristics is made possible by means of another round of census (usually 10 years after) and inter-censal successive household sample surveys. This measurement is also calibrated by other sources of information and statistics, mainly from Administrative Records and other statistical approaches. Statistically speaking, a Census is a household sample survey of the size of 100 per cent of the households.

***Population Integrated Information System***

2. The planning and implementation of a Population Census is the most exhaustive, complex and costly statistical operation a country undertakes. However, it provides the golden opportunity to reorganize and strengthen the national statistical systems. Of paramount importance, is to place the census at the heart of a "Population Integrated Information System-PIIF". PIIF should comprise Census, Household Successive Sample Surveys, Administrative Records, and statistical approaches. Examples of relevant Administrative Records include records of incidents and services of health; education; employment; migration; civil registration/vital statistics (usually covering birth, death, marriage, divorce, and address); marriage (family formation); divorce (family dissolution); police and court (legal) cases dealing with gender/women issues; cases of violence against women; changes of property ownership/holdership including agriculture holdership particularly from men to women and vice versa; and other human rights violations reported to clinics and/or police, etc…

3. Reorganizing and/or strengthening national statistical systems is a major undertaking by itself. The process should ensure timely, cost-effective, and quality data and information that yields Levels, Trends and Differentials for each of the issues covered. This implies availability of quality statistics by sex, age, small geographic area and special population socio-economic and ethnic groups. Of paramount importance is to ensure the full utilization and exploitation of these results by planners, academia, NGOs, private sector and international organizations. This means that the needs for data and information by these groups should be known during the planning of each data collection undertaking and should be met. One recommended approach is to institutionalize forae for "data users-data producers" dialogue—an arrangement that often than not is ignored. Also ignored is the "Total Quality" and the processes by which data is evaluated for completeness and accuracy, analyzed, disseminated and utilized. Global, sectoral and

geographic population projections should be facilitated. Data by small geographic area and by special socio-economic and ethnic groups, including internally displaced persons (IDP's) and forced migrants is so critical for planning purposes and for humanitarian response. Special attention should be given to Civil Defense requirements of the census. This is very important for data utilization in the formulation of "Disaster Response and Recovery" plan.

4. One of census utilities and products is to construct a sampling frame(s)—both geographic (Geospatial) and listings of households (i.e.; double sampling frame). Probability samples could be drawn from these frames. No matter how robust the design of the probability sample is, a sample represents only the sampling frame from which it was drawn. As such, special care must be exercised in the planning and implementation of the Population Census in ensuring full coverage of all agglomerations, households and individuals without duplication and/or omission. This total quality assurance is extremely hard to realize. Global record of census undertaking is yet to record a single census with 100 per cent completeness in developed or developing countries alike. Another key product of a population and housing census is the "Electoral Register" for democratic processes such as local and national elections.

5. In addition to the traditional hard to reach population groups that usually suffer from census undercount or omission such as nomads, homeless, illegal migrants, legally wanted, female infants, people with disabilities, internationally or nationally hunted, we have population groups that are not officially recognized in most countries and cultures. These are the untraditional households (untraditional families) yet to be recognized, counted and classified by census. Undercount and even omission of the vulnerable and disadvantaged group(s) are exacerbated when a census is undertaken during conflict or natural disaster—an undertaking that should be avoided. This is particularly important as other robust and localized means or approaches for collecting data for purposes of relief plans and activities do exist.

***Development Dilemma***

6. Development agents agree that development efforts should be aimed first and foremost at the disadvantage areas-- communities and individuals. Sound development programme designs require utilization of statistics and information (quantitative and qualitative) about the location, size, composition and characteristics of the disadvantage people coupled with robust causality analysis. However, those are the same people that census and consequently household sample surveys, often than not, fail to adequately cover/capture. This situation presents a real dilemma to planners aiming at narrowing the gap between the haves and the have nots, or in other words those who are trying to ensure progress towards achieving the MDGs and other development goals, including human rights. Harnessing technology, such as Satellite Photography, Remote Sensing Imagery, Aerial photography (Ricky and aerial search) and GPS, coupled with help from local NGO's contribute in a major way to effective and sound zoning and delineation of enumeration districts and areas; hence, a better likelihood of reaching the un-reached.

***And how about counting the dead?***

7. In absence of reliable and valid death registration in most developing countries (i.e.; Civil Registration/vital statistics for direct estimation of mortality), Demographers resorted to indirect methods for estimating death rates, including child and maternal mortality. Data related to deaths in a household are collected in population census and probability proportionate to size household sample surveys such as WFS, DHS and WHS. Nonetheless, the quality of the results from indirect technique is contingent on the probability of occurrence of the variable being measured. While indirect method might be sufficient for estimating crude death rate, it remains highly deficient for estimating maternal mortality. This is simply due to the low probability of maternal death occurrence from a statistical point of view. Measured against 100,000 live births, annual maternal deaths as high as 1,800 remain considered a rare event from a statistical/probability point of view. Accordingly, only very large samples (Very expensive) would likely capture maternal death in a country. To settle with manageable sample size and consequently affordable cost, the sisterhood (more advanced siblinghood approach) was introduced to maximize the return of smaller sample size. Still, the quality of the results left much to be desired. This dilemma prompted statisticians to think of an extremely large probability sample to capture maternal deaths more accurately but without spending huge amounts of money to just collect data on maternal deaths. Essentially, the idea was to use the census to collect information/data on maternal deaths within the enumerated households. To this effect, few countries attempted to collect data on maternal deaths from the Population Census. Specifically, under the general mortality module of the census, deaths that occurred in the household within the previous 12 or 24 months where registered by sex and age. Deaths for women 15-49 (in some cases both the lower and upper limits where extended say 12 and 54) where probed further to find if that death was related to pregnancy or delivery? If affirmative, these incidents formed a frequency for a maternal death.

8. While this approach may present an improvement over the sisterhood/siblinghood methods, it remains subject to criticism by seasoned Census takers and probability experts. This criticism entails two arguments. The first relates to the fact that usually the disadvantage and marginalized population groups, where the likelihood of maternal death occurrence would be higher, are subject to under count or even complete omission by the census. The second argument relates to the fact that enumerators during the census most likely would not exercise sufficient probing to establish with confidence a maternal death.

9. A more refined and valid approach is going back to basics. Keeping in mind the inherit problem of under count in censuses, special effort should be made to ensure a more complete coverage of agglomerations, households and individuals that are traditionally hard to reach. This can be aided by use of the appropriate technologies available and the information available to local NGOs. Furthermore, keeping in mind that one of census outputs is the creation of sampling frames—general or specialized, census planners should aim at creating a special sampling frame for maternal and neonatal mortality dedicated survey. In this context, we need to establish a frame for households with a suspected maternal/neonatal death for further field investigation. Specifically, in

the census, we use the general mortality module of deaths in the household within the past 12 or 24 months by age and sex of the deceased household member. Then we list all households with a reported death of a woman between the age15 and 49 (or expanded lower and upper limits). This established frame is to be used in a dedicated survey to probe in more detail the condition under which this female had died. The choice here is to have a 100 per cent sample covering all households included in this sampling frame or a well representative sample of lesser size, preferably a "Probability proportionate to size".

10. Under this approach, the full name of the deceased woman, her age at time of death, and marital status should be recorded. In addition, special questions (probing) should be asked to establish with validity if this woman's death was believed to be related to maternity. This approach is destined to yield more accurate data than the previously described one.

11. This approach should be subjected to validation of the results. One statistical test I wish to advance is a simple Qui-square test. The name of this test will be "Census-Civil Registration Maternal Death record completeness check". You are right! Yes we try to calibrate the return of this field enquiry with the available Civil Registration Record. This is why special care in recording the full name of the deceased woman is required. The outcome of computer names match between the Civil Registration and the Survey would be:

- Maternal deaths captured by both the Sample survey and the Civil Registration;
- Maternal deaths captured by the Sample survey but not captured by the Civil Registration; and
- Maternal deaths captured by the Civil Registration but not by the Sample survey.

Using the above information will yield the maternal deaths that were not captured by either the Sample Survey or the Civil Registration System.

12. This test will not only provide validation and correction to the estimator, but more importantly will advice planners on the improvements needed for both sample surveys as well as the Civil Registration system. Improving the management of the Civil Registration System should be placed high on national agenda. The United Nations collectively (Specialized agencies, Programmes and Funds) should continue providing support to Civil Registration/Vital statistics (CR/VS) in developing countries. CR/VS improvements should also include training agents on better recording of cause of death. Jordan, I understand, has been working with the Center for Disease Control (CDC) in Atlanta, Georgia, USA for better capture of maternal and neonatal deaths with much encouraging results.

***Then how about counting incidents of Gender-based Violence?***

13. Generation of timely and reliable data on violations of human rights has gained much demand following the 1990's decade of Global Conferences particularly the Child Rights Convention, ICPD, Women Conference and the World Summit. This importance was re-echoed by the MD/MDGs.

14. While there is a consensus among countries on the Child's rights (males and females) and its content, there is much less of consensus on the content of Gender-based Violence, including violations against women. In light of this fact, it is important for statistical purposes to have a broad, yet clear, definition and classification of what constitutes a GBV/violation against women—the broader the better and covering life cycle. This is particularly important since all forms of violations against women must be eliminated. Elimination of violations is a complex process dealing with the individual, power structure within the household, the family, the community, the country, region and the globe. As most of these violations are tolerated and perpetuated by individuals, including women, and sanctioned by cultural norms and values, raising awareness against these practices and lobbying for legal frameworks and social mobilization required evidence-based policy dialogue—or simply data on the scope, content and cost of these violations.

15. Statistical methods for capturing discrimination against the girl child in education enrolment at primary schools do exist and data are available. Likewise, methods for capturing health services availability, accessibility, confidentiality, acceptability, and affordability and utility for girls and women, including the elderly also do exist (World Fertility Survey, Demographic and Health Survey, World Health Survey, Health Administrative Records, qualitative studies respect opinions of women on the quality of care, etc….This means that data on the non availability etc… can be derived.

16. An improved methodology to capture maternal deaths is illustrated above. Maternal morbidity can be captured by the World Health Survey and clinical records.

17. Girl infanticide and induced abortion of the girl embryo can best be measured by age-sex tabulation of returns of the census and or household demographic surveys as well as birth and death records (Civil Registration/Vital Statistics). However, I strongly recommend using the Birth History/Pregnancy History module of the World Fertility Survey and the World Health Survey to investigate the outcome of each and every pregnancy (Fetal wastage). Pregnancy history should be cross tabulated by socio-economic characteristics of the woman and household head to yield a better understanding of the factors influencing the practice.

18. Violations involving bodily bruises/cuts as well as joint and bone injuries light to severe requiring medical attention are usually recorded at clinics and emergency room in cases where medical intervention is sought. Accordingly, collating these data are possible, especially after providing the health cadre with specific training on how to spot and report these violations. However, attacks on girls and women that are caused by a family member are rarely reported to police. Even when medical staff members are mandated to inform the police, the victim claims to have had sustained a fall or a domestic accident. Scared of shame and discrimination by family and society, most rape crimes go unreported. STDs and HIV infections caused by the husband are still considered a normal outcome of being married. Likewise, violations of economic rights of girls and women particularly those related to inheritance also go un-noticed.

19. Psychological violations are so devastating in nature with long-felt consequences. While trained eye may capture the signs of a battered woman, it is so difficult to capture those women suffering from psychological trauma.

20. Violations against girls and women are much more varied and common in all societies. Statistical systems rarely consider addressing these violations or collecting, in a systematic manner, data on these violations. NGOs working in the field lack the technical and methodological skills to help capture these incidents.

21. Based on the above, we need to consider the following:

- Violations against the female are varied, common, tolerated and remain unspoken of;
- Women fear reporting violations;
- Statistical systems do not attach priority to studying violations against women;
- Health reporting deals with the medical aspects of the treatment, not with the legal;
- Women cover-up real causes of injuries in fear of stigma and humiliation;
- Evidence shows that the same women are willing to share their story with a trusted counselor provided confidentiality is assured and maintained and the family member attacker would not be persecuted by law.

22. Accordingly, a two-prong methodology to collect information on the scope and content of Physical and Psychological violations against women could be prescribed as follows:

**First**: Using a household probability sample for administering the GVB Module of the Demographic and Health survey type. Data generated by these means remain way under estimating the scope and does not address all content of violations.

**Second:** Catchment's area like clinic/emergency room, followed by Snow balling technique. This approach does not rely on probability sampling. Rather, it depends on collecting key information from willing women visiting PHC Clinics or FP/RH Clinics. The examining health worker can establish if the girl/woman has been subjected to FMC/FGM, or other bodily harm. The data generated through a structured questionnaire follows the "Qualitative" stream rather than the "Quantitative" approach. Women awaiting health services could be approached by the Study Team member at the clinic gaining the trust, respect and confidence of the patient and seeking her permission to discuss, in confidence, some issues about her quality of life. A Key question would be "if you know a woman who is suffering from violence". This leads the data collection as the topic is about a "third person". This approach proved to be more successful in capturing key qualitative data respect the spread of violence, its causes and consequences. An added element would be to seek the help of this woman by inviting you to visit her at home where she would invite her sisters/relatives, or neighbors for a group focused discussion on the issue of GBV.

As most researchers prefer to establish levels, trends and differentials, the level of incidents could be measured by stating that X number of women interviewed reported that they know of a woman or person that is violated based of her/his gender. The kinds of violations reported are so much % called a bad name; some much % hit by a stick, etc…

age groups distribution is as follows…. Urban so much, rural so much, with no education so much, with primary education so much, etc….,

***Conclusion:***

23. Incidents of STDs/HIV/AIDs, Maternal Mortality and Morbidity, Induced Abortion of the Female Fetus, Drug Users, Captive Females, FGM/FGC, and all other forms of GBV can not be accurately captured by the established probability sample surveys or the existing administrative records alone.

24. This situation requires harmonization of innovative approaches that are based one thorough knowledge and expertise of social science, culture of shame/fear, gender, mathematical statistics, and Design and implementation of quantitative and qualitative studies, including snow-balling techniques and focused group Discussions.

25. Ideally, collecting solid information about incidents of GBV should depend on:

- Clear definition of what constitute a GBV;
- Availability of enhancing environment and support from Governmental and Civil Society Organizations;
- Possibility of conducting "Validation" study(ies) through the existing records (i.e.; medical, police, court, cause of disability, cause of death, etc…);
- Possibility of conducting Focused Group Discussion(s), including claim holder's testimonies;
- Support by and analysis of "Special Interest Groups"; and
- Cooperation from "Gate Holders" and "Duty Bearers", including testimonies; and
- Charting of sound harmonized data collection approach(es).