


International Labour Office **ILO** International Council of Nurses **ICN**
World Health Organisation **WHO** Public Services International **PSI**

Joint Programme on
Workplace Violence in the Health Sector

WORKPLACE VIOLENCE IN THE HEALTH SECTOR
COUNTRY CASE STUDIES RESEARCH INSTRUMENTS

RESEARCH PROTOCOL -
SAMPLE DESIGN

GENEVA 2003

ILO/ICN/WHO/PSI Workplace Violence in the Health Sector
Research Protocol - ANNEX II

General Guidelines for Sample Design

To the greatest extent possible, we would like to encourage researchers to use sampling designs that ensure the generalizability of results internationally and within a given country.

For analysis purposes and in order to draw conclusions about different settings and different professional groups within those settings, we need to consider how many respondents are required per category.

The proposed sample design includes multiple steps in order to reduce response bias. This sampling design will be carried out in different stages and usually involves more than one sampling method (multi-stage sampling).
The Steering Committee has decided to sample tertiary, secondary and primary health care services. Thus the study will include hospitals, health centres, home visits and ambulance services, etc (see research protocol page 3)**.** For the purpose of this document "health facilities" will refer to this full range of services. It has been jointly decided that for the purposes of this study one urban setting at minimum will be utilized. If additional data from rural settings can be obtained, this would be of great value.

The different stages of sampling methodology are described below.

Methodology

Stage one:
Listing and description of health facilities at the research site (chosen urban area)

The local researcher needs to obtain information concerning the following to provide context for the study within the chosen urban area (research site).

1. the number of health facilities in both public (governmental) and private (non-governmental or for profit) sectors within the research site (e.g. major city) need to be identified. This may be obtained from government annual report or local health administration.
2. a detailed (but brief) description of the breakdown of facilities and the overall context of health care provision within the research site. This description should include the types of health services that are available, the types of facilities available, urban/ rural breakdown of facilities (if relevant) and information concerning the type of financing.
3. as much as possible, a description the overall context of health care provision within the country (maximum one page).

Stage two:

(1) Stratification of listed health facilities
In order to provide the best chance for generalizability, health care facilities should be categorized. Stratifying a sample allows the researcher to increase precision by grouping categories within the sample into more homogeneous sets. Standardized definitions of categories are important regarding generalizability and comparability of results.

During this stage there will be three levels of stratification with each level being divided into groups of strata based on specific categories:

1. size of the health care facility/service
2. level of care provided
3. location of the facility (rural/urban).

It is important for local researchers to have a clear understanding of the categorizations for each level of stratification. The categories for levels of care are described in Annex 1.

Definitions of other categories used (size of health facilities) should be included in sample proposal. This will allow for comparison between the health services in different country case studies. Categories of size must however be defined according to the local context.

(2) Sampling
Out of each category (strata) should be chosen a minimum number of health facilities, at least one from levels of care 1 and 2 and five from levels 3 - 5. The ideal would be to choose them randomly. In reality it may be necessary to focus on facilities which allow access for the research activity (survey). The chosen health facilities within the sample are called study units.

Stage three:

Sampling health sector personnel (target population) within chosen study units
- using a stratified random sampling method –

(1) Listing of target population (health sector personnel)
At each chosen study unit (health facility or source of service providing ambulatory or home care), the number of workers should be listed. Facilities may have a provisional list of personnel working in that particular facility. As much as possible, the researcher should obtain an accurate and complete list of the target population.

(2) Stratification of target population (grouping personnel)
Listed personnel in the chosen study units should be categorized according to professional groups. For example nurses/ receptionists/ physicians/guards/etc. should be separated out into groups. The personnel categories are provided on page 3 of the research protocol. There may be a need to adapt these categories according to the local context.

(3) Sampling stratified target population
A separate simple random sample (SRS) can then be selected from each group.

Please note:
For facilities or services that have large numbers of employees, a sample of at least 10% should be taken from each category of worker.
For small facilities or services with few personnel (up to 10 persons) all listed workers should be included in the sample.

Sample size:

This study needs to assess the prevalence of workplace violence in the health sector and the difference between groups of health workers. Using group sampling will ensure a balanced representation of the different staff categories in the health sector.

The desirable sample size will be determined by the expected variation in the data. The more varied the data are, the larger the sample size needs to be to obtain an adequate level of accuracy in generalizing the results.

Statistic experts recommend having 1000 participants from each country to ensure a statistically significant number of responses given the range of variables under investigation. For certain countries this may be difficult to achieve within the given time frame and resources. Researchers are asked to propose the sample size which is realistic and provide a justification for designing a smaller sample.

Glossary

Study population: All persons working in the health sector within a chosen urban area (research site), regardless of whether they work in the public or private sector. Health workers include all those working in facilities and those who provide care in other settings (home care, ambulance services, satellite clinics, etc.).

Target population: All health personnel working in the chosen study units.

Study unit: every chosen health facility and health service within the sample. In this proposal, health facilities are inclusive of all venues where care is provided, including home care and ambulatory care centres.

Annex 1

Definitions of Categories for Health Facilities and Health Services according to Level of Care Provided

The breakdown by level of care provided for the purposes of stratification is the following:

1. Major referral hospitals of a major city (Tertiary level):
    - This category of facility has the most specialized staff and technical equipment.
2. Regional and district hospitals (Secondary level):
    - This category of facility has fewer specialties than referral hospitals, but still has some differentiated care.
3. Health care centres, clinics, community health posts, ambulance services (if independent from hospitals), outreach services (home care) (Primary level)
    - This category of facility covers a greater variety of facilities compared to the more specialized levels.
4. Rehabilitation centres, long-term care facilities.
5. General practitioners offices, other independent health care professionals

Note: Categories by size of health facility must be defined according to local context.