Ongoing research projects involving rural communities

I. WHO-Handbook for the documentation of interpersonal violence prevention programmes

The World Health Organisation's World Report on Violence and Health (WRVH) addresses the magnitude of global mortality and morbidity due to interpersonal violence. Global mortality data for 2000 show that, of the approximately 5.8 million people who died from injuries, 1.6 million died as a result of violence, an overall age-adjusted rate of 28.8/100,000 population. The violence death rate in low-to-middle income countries (LMIC) is more than twice that of high-income countries (HIC).

What the WRVH found lacking, especially for LMIC, was systematic information on interpersonal violence prevention programmes. In response to this finding, the World Health Organisation commissioned a handbook with instructions on how to identify and document interpersonal violence prevention programmes in communities and countries around the world, but especially in LMIC. This "Handbook for the Documentation of Interpersonal Violence Prevention Programmes" was compiled by a group of experts in the field of violence prevention, among others, the MRC-Unisa Crime, Violence and Injury Lead Programme. The Handbook will be launched soon and will then be piloted in selected LMIC of which South Africa is one.

It is hoped that by actively identifying and documenting interpersonal violence prevention programmes, a clearer picture of the intervention strategies, target groups and attempts at evaluation on the part of prevention programmes will be developed. Once identified, these practices can be described and collated into easily accessible compendiums for dissemination through documents, scientific networks and data-bases that will allow for multiple search options and the internet.

Purposes of the project:

The first purpose of this project is to provide easy access to existing knowledge and experience from violence prevention programmes in countries and contexts where many such programmes exist, but few are systematically described in writing. Prevention practitioners can learn from the experiences and successes of others and in this way accelerate the development of their own programmes.

The second purpose is therefore to help identify programmes that have been proven to be effective or which have a strong likelihood of being effective for use in policy formulation. It is anticipated that this purpose will be served through the ultimate creation of databases at global, regional, and national level.

The third purpose is to provide programme managers with some guidelines and criteria against which they can evaluate their own interventions. Many of the programmes for violence prevention that show evidence of effectiveness are from HIC. There is a lack of data about programmes, both with and without evidence of effectiveness, from LMIC, and consequently a need to develop this database from diverse socioeconomic, geographical and cultural settings.

II. Home visitation programme for the prevention of childhood injury

In South Africa there is a lack of effective, replicable and contextually congruent childhood injury prevention interventions. Internationally, Home Visitation Programmes (HVPs) have been found effective in childhood injury prevention.

Please note

The MRC-Unisa Crime, Violence and Injury Lead Programme will be contacting NGO's, research institutes, state departments and other relevant organisations known for their involvement in programmes for the prevention of interpersonal violence from May to August this year by e-mail, telephone calls and/or written letters. The aim would be to draw up a list of programmes for the prevention of interpersonal violence that can be documented using the criteria discussed in the Handbook.

We would greatly appreciate your cooperation in our attempt to help create an appropriate database of programmes to assist in the drive towards preventing interpersonal violence worldwide

HVPs are multi-focused interventions that focus on the home, due to the high rates of child injuries within the home sphere. The interventions include multiple strategies, including education, implicit enforcement, product demonstrations and environmental modifications to reduce and control childhood injuries. The Crime, Violence and Injury Lead Programme has been developing a HVP since 2001. In 2003, this intervention and its assessment components were piloted in four sites South Africa. The HVP comprises eight sections, each of which serve the goal of developing a replicable HVP for childhood injury prevention in South Africa. In addition to these components other activities have been conducted, such as mobilisation of community stakeholders and neighbourhood mapping. Some detail of the HVP is presented below.

i. HVP Intervention implementation

Team Preparation: The HVP was piloted in four sites, namely Nomzamo in the Western Cape, and Vlakfontein, Slovo Park and Eldorado Park in Gauteng. This involved the expansion of each of the local safety promotion teams, with volunteer participation expanding across the four sites. The safety teams received training on basic injury prevention, interview skills, and the use of the questionnaire for evaluation of the HVP. The safety teams were also taken on teambuilding programmes to promote team cohesion.

Intervention Implementation: The HVP pilot was implemented over 10 weeks. The first week of the pilot was directed at a first contact and briefing of all participating households. The next two weeks consisted of the baseline data collection, followed by the HVP intervention, which was implemented over five weeks. Each week had a designated injury topic for the home visits and the relevant training, e.g. on burns, falls, poisoning, traffic injury, and an overview of child development.

ii. Injury, household risk and safety attitude assessment

A study sample from each neighbourhood comprised 90 randomly selected households (approximately 10% of the defined community). Half of these households were assigned to the intervention, and half to a control group. The pre- and post-assessment of participating households included a questionnaire administered by the safety teams. The pilot provides an initial indication of the impact of the HVP on childhood unintentional injury, household injury risks and parental safety attitudes and knowledge. The pre-assessment data indicate that risks related to specifically poisons and burns were prevalent in the communities.

It is expected that the post-assessment data will provide some information about the impact of the HVP in terms of burns, falls, and poisoning risks within the communities.

iii. Home visitor attribute assessment

The aim of the home visitor attributes study was to develop and implement an assessment battery that would provide information on various attributes of individuals participating as home visitors in the HVP. The specific attributes measured included demographic characteristics, volunteer membership, safety beliefs, self-esteem, needs and interests, personality characteristics, injury knowledge and safety promotion skills. Initial findings have been useful in identifying the areas where home visitors required additional training prior to the implementation of the HVP. Further analysis and research is required to assess whether or not specific home visitor attributes are related to their performance and commitment to the programme, as this will ultimately impact on the outcome of the HVP.

iv. Process evaluation

The research team in both Cape Town and Johannesburg monitored the implementation of the HVP pilot via a number of mechanisms, e.g. weekly notes on field issues, interviews with trainers, the completion of training evaluation sheets after every sessions, debriefing notes, selected home visits, and a focus group discussion with site coordinators. This data are currently being analysed. Initial indications suggest a generally effective pilot, but with occasional difficulties related to fieldworker coordination, communication, and home-visit monitoring.

v. Neighbourhood social attributes assessment

The objective of this assessment is to identify whether selected social descriptors of neighbourhoods may be associated with positive HVP outcomes, i.e. decreased childhood injury, injury risk levels, and increased safety awareness of families. There is an increasing consensus that various neighbourhood attributes may play a significant role in preventing injuries. The Neighbourhood Social Attributes Assessment will examine any associations between collective efficacy, social control, social disorder, and HVP outcomes. The instrumentation for this assessment was finalised and was piloted in Nomzamo and Slovo Park.

vi. Systematic photographic assessment

This study is directed at the identification of household structural, environmental and product child injury risks in and around the home. The study involves the systematic visual examination, analysis and documentation of the interior and immediate perimeter of homes in Vlakfontein, a neighbourhood participating in the HVP. The study specifically investigates unintentional childhood injury risks and will provide one of the indicators to monitor the impact of the HVP.

vii. Costing of the HVP

This component of the HVP aims to discover whether the intervention is effective in relation to its cost. This component will involve three phases: costing of the preparation for the implementation (for example training and team capacitation), costing of the implementation (including travel cost and cost for printing and supplying demonstration materials) and a cost-benefit analysis (which will indicate whether the intervention is effective in relation to its cost and therefore feasible for replication).

As can be seen from the above components, the development of a HVP is complex and labour intensive. However, at the conclusion of the intervention, it is hoped that HVPs will be replicated across South Africa to reduce the burden of injury on children in low-income contexts.

An overview of The Rural Injury Surveillance Study (RISS II)

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INTRODUCTION

During 1991 the MRC's National Trauma Research Programme (NTRP) (as the CVI Lead Programme was previously called) completed the Cape Metropolitan Study (CMS). This detailed survey was conducted at both public and private health treatment points and state mortuary services within the Cape Metropole. It developed and tested a questionnaire, sampling procedures and the methodology for processing and analysing trauma data. It was shown that one person in every ten sought treatment for fresh trauma annually (CMS, 1990).

Until then most South African injury studies focused largely on urban areas. Although there is reason to believe that rural injury epidemiology differ from that in urban areas, there is a worldwide dearth of rural injury data. The CMS concept was employed, adapted and extended and in 1992 the Rural Injury Surveillance Study (RISS I) (Western Cape) was launched to survey rural areas.

Results from RISS I showed that the rural injury profile was largely similar to the urban area in Cape Town. Violence accounted for the majority (54.5%) of injuries. These were mostly sustained through assault and were also largely alcohol-related. 'Domestic' injuries (i.e. injuries sustained in the home) accounted for one-quarter of all cases and were largely due to falls. Traffic cases accounted for 10% of cases and work-related injuries accounted for 3.3% (De Wet et. al., 1994).

In 2000 the second phase of the Rural Injury Surveillance Study (RISS II) was deployed. A selected three towns (Hermanus, Vredenburg and Worcester) were surveyed. However, during this study state as well as private hospitals, general practitioners and mortality data were included. Further additions to the questionnaire were descriptive detail about the perpetrators of violence and mortality data. (RISS II Report, 2004 unpublished).

METHODS

The study population included all patients (2997 cases) who attended the trauma units of the private and state medical institutions in Hermanus, Vredenburg and Worcester during 8 November – 6 December 1999; as well as from 5 June – 4 July 2000. All fatal cases (429 cases) recorded over a nine-month period (1 November 1999 – 31 July 2000) were included. Data were also collected from general practitioners (GPs) but the investigators failed to get overall co-operation. For the purpose of this article no results from GPs are included. All figures in this article reflect projected annual figures.

For non-fatal cases each patient was interviewed by:

- A field worker using a specially constructed interview questionnaire;
- Alcohol usage was assessed using self-report (patient was asked whether he/she had consumed alcohol prior to their injury or by using clinical judgement in unconscious or uncooperative patients); and
- Drug usage was assessed by self-report.

For fatal cases

- A field worker retrieved data from mortuary dockets using a modified interview questionnaire.

RESULTS

State hospitals

An expected annual total of 16254 patients are seen at the trauma units of the three state hospitals (Hermanus N = 3678; Vredenburg N = 3486; Worcester N = 9090). Nearly 60% of the patients who attended the state hospital trauma units were injured due to violence.

In summary;

- patients were predominantly young coloured[1] males;
- most of the injuries occurred due to violence;
- 60% of violence-related injuries were caused by sharp objects;
- the most common scenes of injury were the road and in and around the house;
- half of traffic-related injuries involved passengers while nearly one-third involved pedestrians;

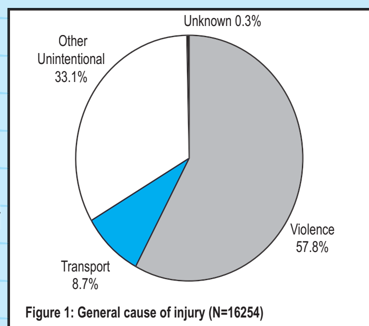

Figure 1: General cause of injury (N=16254)

- cars were involved in two-thirds and minibus taxis in 16.3% of the collisions;
- falls (essentially those that occurred on a level) accounted for most of the other unintentional injuries;
- injuries occurred mostly after hours and on weekends;
- most injuries involved the upper and lower extremities;
- three-quarters of all of the patients could have been treated at a smaller hospital;
- most patients were transported to the trauma units by ambulance or private vehicle;
- patients' injuries were relatively minor in nature - few of them were left with significant long-term disability;
- more than one-third of injuries were alcohol-related; and
- very few respondents reported drug use at the time of injury.

Private hospitals

An expected annual total of 1728 patients are seen at the trauma units of the three private hospitals (Hermanus N= 486; Vredenburg N= 708; Worcester N= 540). During the study period private hospitals treated more general unintentional injuries than traffic or violence cases combined. Traffic injuries accounted for one-third of cases while violence accounted for 15% of injuries. On average patients were largely white, male and just over the age of 30 years.

To summarise, private hospital results showed that:

- the patients were predominantly young white males;
- most of the injuries occurred due to other unintentional causes (i.e. falls, machinery, chemicals, caught between objects);
- most of the patients who were involved in traffic collisions were passengers and drivers (NB. Motor vehicle collision cases are usually treated at private hospitals);
- injuries occurred mostly after hours and on weekends;
- sixty percent of the patients were transported to this facility by private vehicle while one-third were transported by ambulance;
- most injuries involved the upper and lower extremities;
- more than half of the patients could have gone to a smaller hospital;
- patients' injuries were relatively minor in nature - few of them were left with significant long-term disability;
- more patients were unemployed (35%) than employed (27%);
- of the employed cases nearly 60% of the patients required more than a week or less off work while the rest one-third required less than one-week or no time off; and
- more than one in ten cases were alcohol-related.

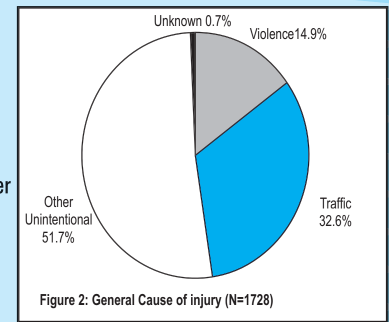

Figure 2: General Cause of injury (N=1728)

Rural Mortuaries

A total of 572 cases were recorded for the three state mortuaries in Hermanus, Vredenburg and Worcester.

To summarise, mortuary results showed that:

- the male-female ratio of victims was 4:1;
- homicide accounted for nearly half of all deaths;
- sharp objects were the major external cause of injury;

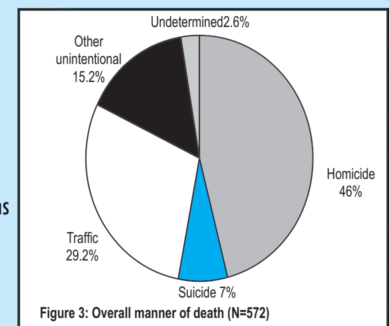

Figure 3: Overall manner of death (N=572)

- most of the patients who were involved in traffic collisions were pedestrians;
- there were high levels of alcohol among pedestrians and driver fatalities (81.8% of pedestrians and 52.4 % of drivers had positive BAC levels);
- injuries occurred mostly after hours and on weekends;
- three-quarters of victims died on the scene;
- there was on under-reporting on perpetrators of violence in the dockets;
- over two-thirds of cases tested positive for alcohol; and
- nine in ten cases were state hospital trauma cases.

CONCLUSION

This synopsis showed that there is not much difference between the epidemiology of injuries of urban and rural areas of the Western Cape. This is, however, one isolated study and further investigation is needed to delineate the rural injury burden of South Africa as a whole.

References

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3. Donson H, et. al.,eds.(2004). Rural Injury Surveillance Report 1999-2000. MRC-UNISA Crime Violence & Injury Lead Programme. Tygerberg, South Africa.
4. Matzopoulos R (Ed). A profile of fatal injuries in South Africa 2001: Third annual report of the National Injury Mortality Surveillance System (NIMSS) 2000. MRC/UNISA Crime, Violence and Injury Lead Programme Technical Report, December 2002.

1. The author wishes to repeat the paragraph from the NIMSS 2001 report (Matzopolous, 2002) regarding the use of terms such as 'African', 'Coloured', 'Asian' and 'White'. The author recognises that 'population group' is a social construction that served particular racist political purposes, prior to 1994.