PATTERN OF INJURIES AMONG VILLAGERS IN PADANG TERAP DISTRICT, KEDAH

MBBS PHASE III A
SESSION 2004/05, CLASS 2002/07
COMMUNITY RESIDENCY PROGRAMME
INTRODUCTION

Injuries:

- Major public health problem worldwide
- Cause potential life loss in both children and adults
- 3rd leading cause of admission in government hospitals and clinics in Malaysia

OBJECTIVES

- To understand various type and pattern of injuries among rural population
- To study the socio-demographic characteristics of the injuries
- To compare home and road injuries at the rural area
- To recommend control measures for further injury prevention
MATERIALS & METHODS

- Cross-sectional study: 4 assigned villages
- Households selected using simple random sampling (ballot)
- Sample size: 197 households
- Canvasser method using prepared questionnaire
- Interviewing head of household/cases who had injuries 1 year prior to the date of survey
- Data analysis: SPSS 11.0

ERRORS & LIMITATIONS

- Study sample was limited to 4 villages
- Villages were assigned (not randomly selected)
- Hence may not be representative of the population
- Failure to pretest questionnaire to the similar population
- Recall bias & language barriers (Siamese community)
- Human errors in data entry and analysis
RESULTS

History of Injury

- Yes: 15.4% (151)
- No: 84.6% (829)

N = 980

Places of Injuries

- Home: 42%
- Road: 38%
- Workplace: 15%
- School: 3%
- Others: 2%

N = 151
RESULTS

Home Injuries According to Age Group

- 64% children (< 12 years old)
- 23% adult (21 - 59 years old)
- 11% elderly (> 60 years old)
- 2% adolescent (13 - 20 years old)

N = 65

Road Injuries According to Age Group

- 43% adult
- 40% children
- 12% adolescent
- 5% elderly

N = 57
RESULTS

Location of Home Injuries

<table>
<thead>
<tr>
<th>Location</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>bathroom</td>
<td>7.7</td>
</tr>
<tr>
<td>kitchen</td>
<td>35.4</td>
</tr>
<tr>
<td>living room</td>
<td>3.1</td>
</tr>
<tr>
<td>bedroom</td>
<td>1.5</td>
</tr>
<tr>
<td>compound</td>
<td>52.3</td>
</tr>
</tbody>
</table>

N = 65
RESULTS

Type of Home Injuries

<table>
<thead>
<tr>
<th>Type of Injuries</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>falls</td>
<td>50.8</td>
</tr>
<tr>
<td>cuts</td>
<td>35.4</td>
</tr>
<tr>
<td>burns &amp; scalds</td>
<td>7.8</td>
</tr>
<tr>
<td>choking</td>
<td>1.5</td>
</tr>
<tr>
<td>poisoning</td>
<td>1.5</td>
</tr>
<tr>
<td>machine/ object</td>
<td>1.5</td>
</tr>
<tr>
<td>drowning/near drowning</td>
<td>0</td>
</tr>
<tr>
<td>others</td>
<td>1.5</td>
</tr>
</tbody>
</table>

N = 65
RESULTS

Types Of Road Users Involved In Road Injuries

<table>
<thead>
<tr>
<th>Types of Road User</th>
<th>Percentage (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motorist driver</td>
<td>14</td>
</tr>
<tr>
<td>Motorist occupant</td>
<td>5.3</td>
</tr>
<tr>
<td>Motorcycle rider</td>
<td>31.6</td>
</tr>
<tr>
<td>Pillion</td>
<td>21.1</td>
</tr>
<tr>
<td>Cyclist</td>
<td>24.5</td>
</tr>
<tr>
<td>Pedestrian</td>
<td>3.5</td>
</tr>
</tbody>
</table>

N = 57
RESULTS

Distribution Of Home And Road Injuries According To Age Group

Home injuries = 65, Road injuries = 57, N= 122
RESULTS

Distribution Of Gender According To Home And Road Injuries

Home injuries = 65, Road injuries = 57, N= 122, p < 0.05
RESULTS

Distribution of Minor and Major Injuries According to the Home and Road Injuries

<table>
<thead>
<tr>
<th></th>
<th>Severity</th>
<th>Minor</th>
<th>Major</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Home Injuries</td>
<td>Frequency</td>
<td>51</td>
<td>9</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>85</td>
<td>15</td>
<td>100</td>
</tr>
<tr>
<td>Road Injuries</td>
<td>Frequency</td>
<td>31</td>
<td>23</td>
<td>54</td>
</tr>
<tr>
<td></td>
<td>%</td>
<td>57</td>
<td>43</td>
<td>100</td>
</tr>
</tbody>
</table>

(minor injuries: minor cut, minor bruises and sprain muscles/joints)

(major injuries: major haematoma, internal injuries, open wound cuts, lacerations, fracture, dislocation and head contusion)

(p<0.05)
RESULTS

Distribution Of Home And Road injuries According To Site Of Injuries (Body Parts)

Site of injuries (body parts)

Home injuries = 65, Road injuries = 57, N= 122
RESULTS

Distribution Of Home Injuries and Road Injuries According To Time

Home injuries = 65, Road injuries = 57, N= 122

Morning: 0600-1200    Evening: 1600-2000
Afternoon: 1200-1600   Night: 2000-0600
RESULTS

Distribution of Home and Road Injuries According to Severity of Injury

<table>
<thead>
<tr>
<th>Severity of Injury</th>
<th>Percentage</th>
<th>Home</th>
<th>Road</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-treatment</td>
<td>80</td>
<td>47.4</td>
<td>31.6</td>
</tr>
<tr>
<td>Consultation without admission</td>
<td>18.5</td>
<td>15.8</td>
<td></td>
</tr>
<tr>
<td>Admitted &amp; recovered without complications</td>
<td>1.5</td>
<td>3.5</td>
<td></td>
</tr>
<tr>
<td>Disability/handicapped rehabilitated</td>
<td>1.8</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Death</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Home injuries = 65, Road injuries = 57, N= 122
RESULTS

Distribution Of Home And Road Injuries According To Place Of Seeking Treatment

Home injuries = 65, Road injuries = 57, N= 122
DISCUSSION

- 15% (151 cases) of the sample had a history of injury one year prior to the survey
- Home and road injuries occurred more frequent compared to other type of injuries
- Majority (64%) of home injuries involved children
  - Less anticipation of danger by children
  - Parents’ negligence
- Most home injuries occurred in the compound
  - Majority of the samples were children
  - Rural children involved in outdoor activities (higher risk of injury)
- Falls account for the highest number of home injuries
  - Houses are elevated on stilts or split levels
  - Uneven flooring in house and compound
  - Limited space which is multi-serving
DISCUSSION

- Road injuries 2\textsuperscript{nd} after home injuries
  - Low traffic in the district
  - Places of work closer to homes (less traveling)
- Most road users involved in accidents were motorcyclists
  - Low economic status – motorcycle more affordable
  - Higher risk of injury – lack of safety measures
- There is significant difference in the gender involved in home and road injuries
  - Females: home injuries because majority are housewives involved in house chores
  - Males: road injuries because majority of road users in villages are males who travels to work
DISCUSSION

- The nature of home injuries tend to be minor compared to road injuries
- Extremities being the commonest site injured
  - Protective reflex actions in anticipating and impending impact to shield from injury during fall
- For home injuries most occurred in the morning and afternoon
  - Housewives busy with house chores
  - Children lack of supervision because parents are busy
- For road injuries most occurred in the evening and night
  - Children come out to cycle in the evening
  - Poorly lit road predisposed to road accidents at night
CONCLUSION

- Children being the commonest age group involved in injuries
- Majority of injuries occurred at home and road
- The commonest type of home injuries was fall
- The majority of road injuries involved motorcyclist
- Home injuries tend to be more minor whereas, road injuries tend to be more severe
- Extremities being the commonest site injured

RECOMMENDATIONS

- A safe home environment
- Close supervision by principal care providers
- Safe and well-maintained playground by local authorities
- Upgrading the road conditions and providing street lights in the rural area
- Education/awareness at school and village level
REFERENCES


